Plastic Bearings













iglide®
Plain Bearings

DryLin®
Linear Systems

igubal®
Spherical Bearings

igus®.com
Plastics for longer life.

2010

Contents

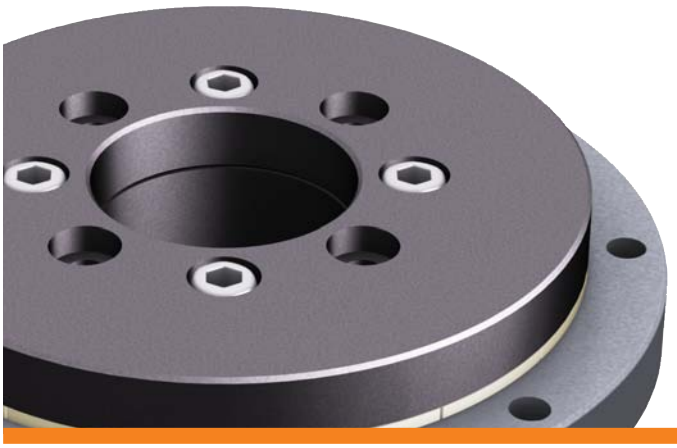


igus®: Plastics for longer life®

On the following pages you will find application examples, design specifications, and more than 7000 iglide®, 770 igubal®, and 1840 DryLin® parts, which are ready for delivery to you from stock. They are indexed to allow quick location.

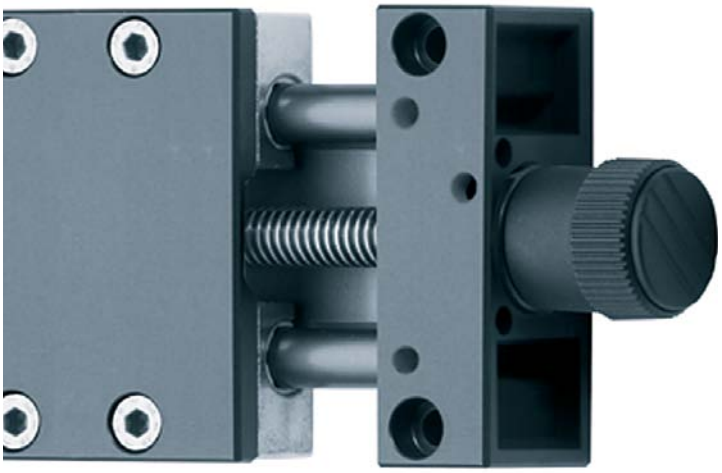
The most important innovations of this catalogue are:

- More selection in all product lines, includes selected specialists for food products, clean room, and noise reduction, etc.
- More accessories
- More solutions and practical tips
- More application examples
- “Quicklinks” for additional details on the Internet for your product (3D-CAD data, configurations, pdf downloads)



www.igus.com

This catalog by no means covers the entire igus® product range.
Visit our website **www.igus.com** to discover more products, new developments and benefit from our online range – 24 hours a day.

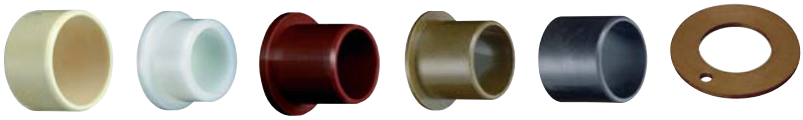




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The information in this catalog, and the data in the Design section in particular, is based on our current knowledge of the products described. No legally binding assurance in respect of characteristics or suitability for a application can be derived from it. igus® is unable to assume liability of any nature for damage, loss orinjury resulting from application of the products. We recommend that you always check suitability of the products for a specific intended application in a practically-oriented test. Please consult igus®. For reasons relating to ongoing technical developments, we reserve the right to implement technical modifications and improvement of the products at any time. Subject to printing errors.

The terms “igus”, “ReadyChain”, “ReadyCable”, “Chainflex”, “E-Chain”, “E-Chain-System”, “Energy Chain”, “Energy Chain System”, “E-Ketten”, “E-KettenSysteme”, “Flizz”, “Easy Chain”, “TwisterChain”, “igubal”, “iglidur”, “DryLin”, “manus” and “plastics for longer life” are legally protected trademarks for igus® GmbH/Cologne in the Federal Republic of Germany and, where applicable, in some other countries.

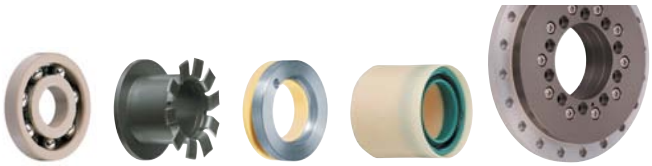
iglide®



Plastic plain bearings – economical, lubrication-free, maintenance-free, predictable. A choice of 28 different iglide® materials for bearings ranging from general purpose through FDA-compliant to high-temperature applications.

1

Additional iglide® products



Maintenance-free and lubrication-free plastic plain bearings in the most diverse special designs. Clip bearings for sheet metal, special flange bearings, slewing rings and Polysorb® disc springs – the special iglide® materials always offer low costs and provide long service life.

DryLin®



Plastic linear bearings for nearly all types of applications. Whether miniature or self-adjusting, whether round or angular, DryLin® linear bearings are maintenance-free, lubrication-free and can often be used as perfect substitutes for conventional, recirculating ball bearings and profile guides.

2

igubal®



Maintenance-free and lubrication-free spherical bearings in various designs and configurations. Whether as a rod end, pivot or flange bearing, igubal® suits all requirements and is more economical and lighter than conventional spherical bearings.

3

plastics for longe

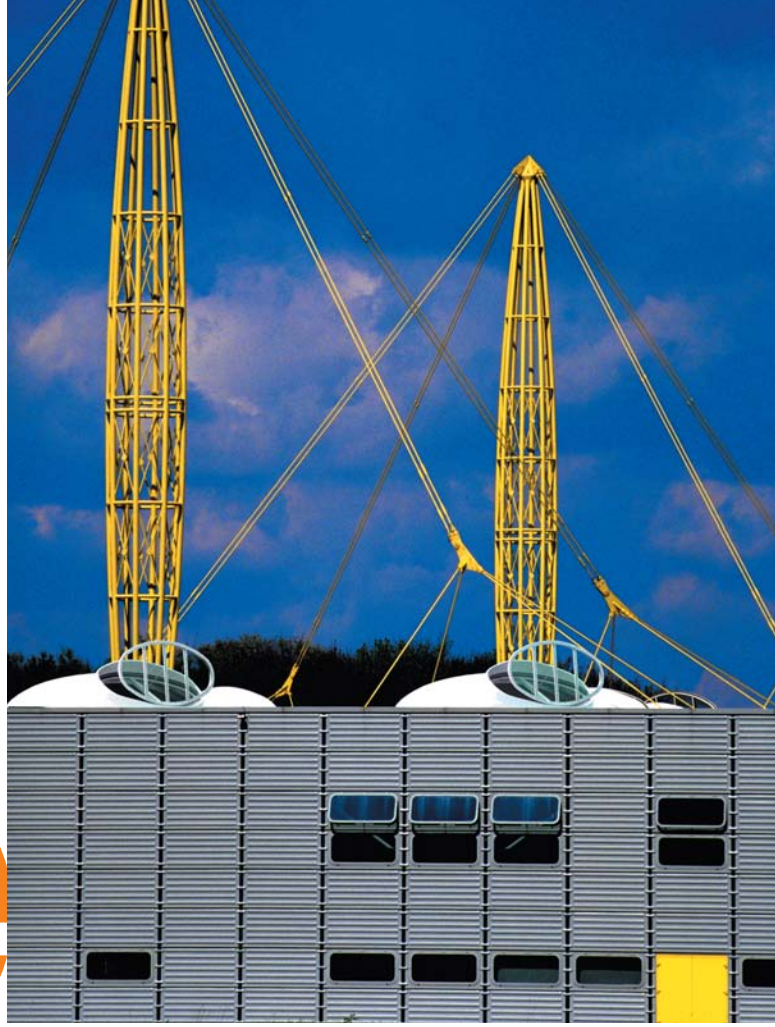


Plastics for longer life® –
make your machines more durable with plastics

No lubrication, less maintenance, lower costs, longer life cycles, always available from stock – these key principles apply to all igus® products, systems and services.

Tried and tested in terms of durability, friction properties and stability, igus® plastics are the technological core of the igus® range. This catalog lists more than 9,600 plastic bearing products available from stock from the smallest batch size upward.
We are looking forward to your phone call or e-mail.

er life



igus® headquarters in Cologne, Germany – research, development and production from a single location.

igus® is certified to ISO 9001:2000

igus® inc.
P.O. Box 14349
East Providence, RI 02914
401-438-2200
888-803-1895
sales@igus.com
www.igus.com

Orders can be placed until 8:00 Eastern standard time.
Phone: 888-803-1895

No minimum order quantity, no surcharges.
9,600 plastic bearings from stock.

No lubrication. No maintenance. No downtime.

No lubrication. No maintenance. No downtime.

Call for free samples and technical support or visit www.igus.com/email.asp

Longer life cycles, lower costs

Innovations with high-performance plastics

igus® plastic plain bearings® constitute the step from a simple plastic bearing to a tested, predictable and available machine component.
Our research is based on specific bearing properties – especially life cycle – achieved by continuous advancements in materials.

Predictable life cycle – no lubrication necessary

Lubrication-free operation is something every designer strives for.
igus® plastic plain bearings make this dream a reality. Decades of research and testing now permit precise calculations of a plastic plain bearing's life cycle.

Fit and forget – matching solutions from stock

- Innovative, quickly assembled and economical products
- Delivery from stock – lower inventory costs
- Large product selection – find the right solution for your application
- Time-saving tools on the Internet
- We deliver customized, ready-to-fit units
- Quick reaction customer service with many local representatives in United States, Canada, Mexico and worldwide.

igus® maintenance-free plastic plain bearings help improve your products and reduce costs at the same time.



Many sample applications can be found at:
www.igus.com/applicationcorner



Corrosion-free with igus®

Low weight, corrosion resistance as well as zero maintenance and lubrication achieve solutions for nearly all types of applications.
Fit and forget!



Resistant to dirt with igus®

Zero-maintenance and high dirt resistance are not the only advantages of DryLin®.
Longer life cycles – lower costs!



No maintenance with igus®

Various iglide® materials for a wide variety of operating conditions. Large program of dimensions compatible with nearly all environments.
Predictable life cycle!



No lubrication with igus®

The lubrication-free design of iglide® also permits its use in the food and pharmaceutical industries.
Don't wait any longer!

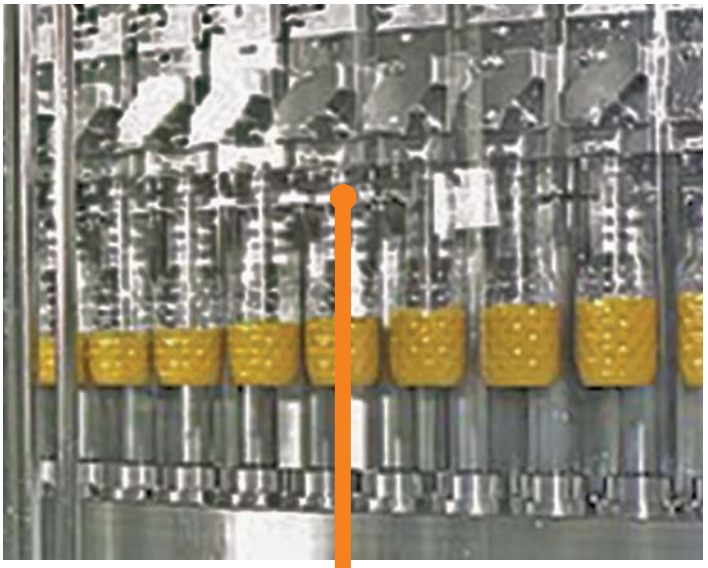
iglide® plain bearings

Excellent plastics, improved through precise additions of reinforcements and solid lubricants, tested thousands of times, and proved millions of times – that is iglide®.
Every year, igus® engineers develop more than 100 new plastic compounds and conduct more than 5,000 tests on maintenance-free plain bearings. Over the years, this has made it possible to establish a large database of plastics' tribological properties.

In addition to their general properties, every iglide® bearing material possesses a number of special features making it suitable for particular applications and requirements.



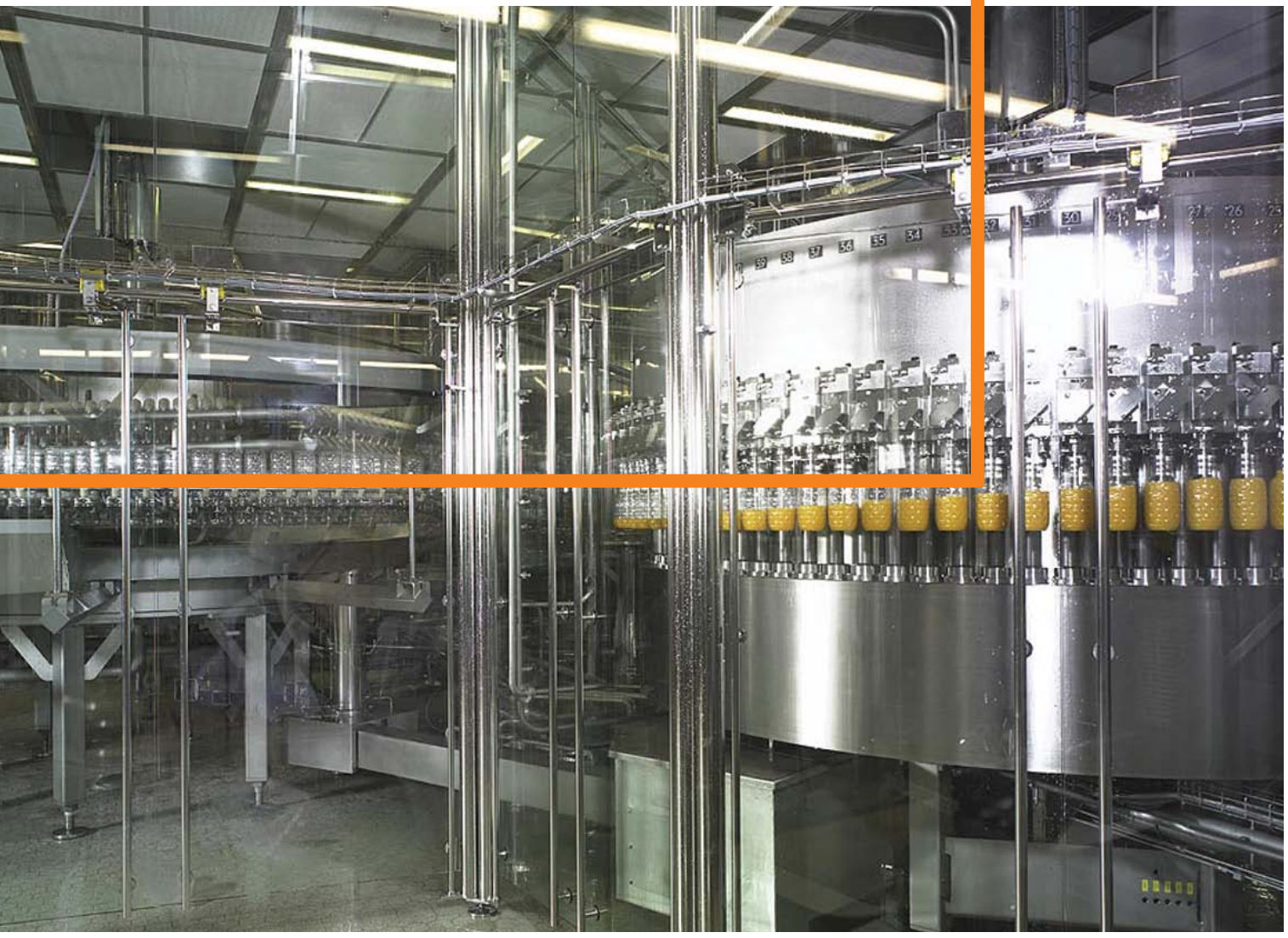
Part number:	Maximum static surface pressure (68°F)	Application temperature	Color	Coefficient of dynamic sliding friction against steel (μ)
iglide® J Plain bearings	5,075 psi	-58 °F / +194 °F	yellow	0.06-0.18



Practical example

KHS AG Abfüllanlagen (bottling systems)

igus® bearings and linear sliding films made of iglide® material, which meets all demands of aseptic filling, are used here.
Low adhesion and friction factors against different kinds of stainless steel, negligible moisture absorption, very good stability against PES-cleaners, lubricant-free, all of that means no contamination of products of the aseptic atmosphere.





Lifetime calculation online:
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Exciting applications can be viewed online at:
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Application examples: iglide®

Exciting applications can be viewed online ▶ www.igus.com/applicationcorner



iglide® Z



iglide® R



iglide® T500



iglide® H370



iglide® J



iglide® A200



iglide® L280

Roller coaster

Using iglide® Z bearings eliminated maintenance by 95% and reduced costs by 54%.





Spreaders

Using a special bearing design on this centrifugal arm significantly reduced manufacturing costs. iglide® is also maintenance-free and delivers high wear resistance.



Boat lifts

Unlike metal or bronze bearings, iglide® plastic bearings do not corrode in this underwater application. The self-lubricating bearings handle loads from 4,500 up to 66,000 pounds and also do not contaminate the water with grease, making it an environmentally-friendly solution.



Racecars

By using iglide® plastic bearings, the weight of the racecar was significantly reduced. The vehicle can reach higher speeds and because iglide® requires no lubrication, maintenance was virtually eliminated.



Tool changer machines

iglide® D offered an enormous cost savings when compared to metallic rolled bearings. iglide® D also has a low coefficient of friction and high wear resistance.



Farming equipment

A manufacturer of agricultural machinery replaced bronze bearings with iglide® J plastic bearings to eliminate corrosion and increase lifespan on its potato planter. Service life increased by 600% and iglide® costs the company 70-80% less than bronze.



Tubular bag machines

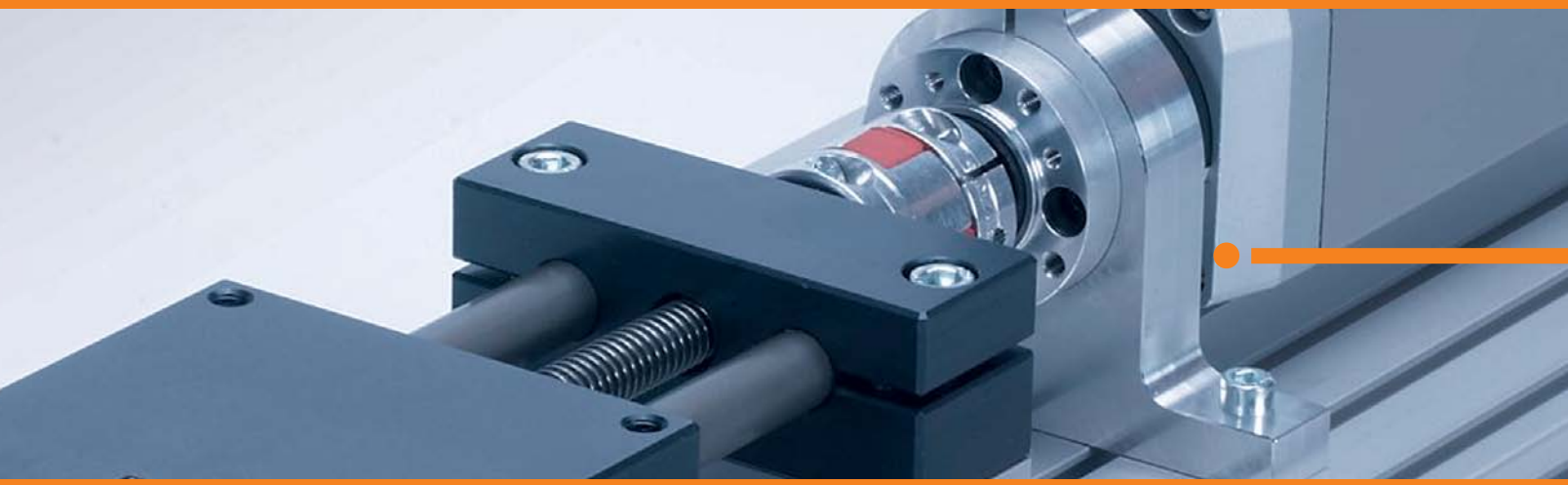
iglide® Z is used in the arms of this packaging machine. The bearings withstand operating temperatures of more than 320 degrees Fahrenheit and are wear-resistant.

DryLin® linear plain bearings and Leadscrew tables

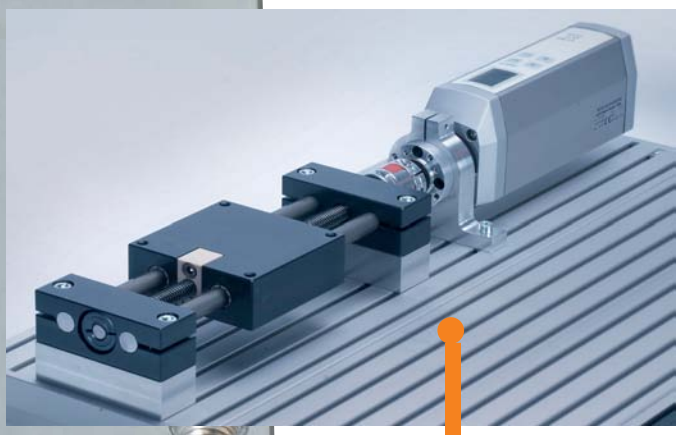
DryLin® linear plain bearings are an ideal alternative to traditional re-circulating ball bearing systems. These sliding plain bearings are made of high-performance polymers from igus®' iglide® series. DryLin® linear bearings can be used if dirt, dust or moisture is present, for short stroke applications, or if a lubrication-free solution is needed.

DryLin® linear slide tables are also designed for dry running. As a result, dust and dirt will not cling to the bearing surfaces. DryLin® linear bearings also have no minimum stroke-length restrictions, unlike re-circulating ball bearings. They deliver quiet operation and are corrosion-resistant.

igus® also offers flat, compact leadscrew linear tables for variable formats and handling tasks. The linear table is extremely rigid due to the hard-anodized aluminum shaft and is also made of igus®' high-performance iglide® polymers.



Part number:	Maximum static surface pressure	Operating temperature
HTS-12-AWM	630 lbf	-40°F/+194°F



Practical example

Electrical Servo Drives

For a wide variety of formats in printing, paper, packaging, transmission and wood processing systems, Festo demonstrates the use of the HTS DryLin® Leadscrew linear table in conjunction with its electrical servo drive.

reddot design award
winner 2006



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Application examples: DryLin®

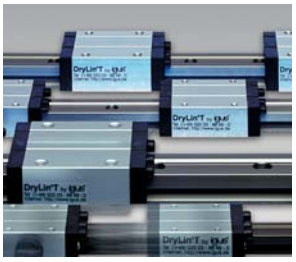
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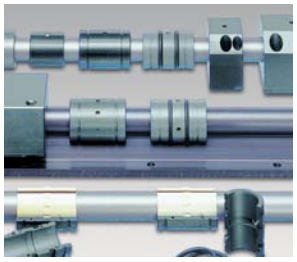
DryLin® N



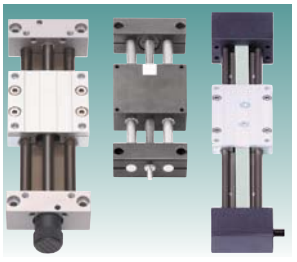
DryLin® W



DryLin® T



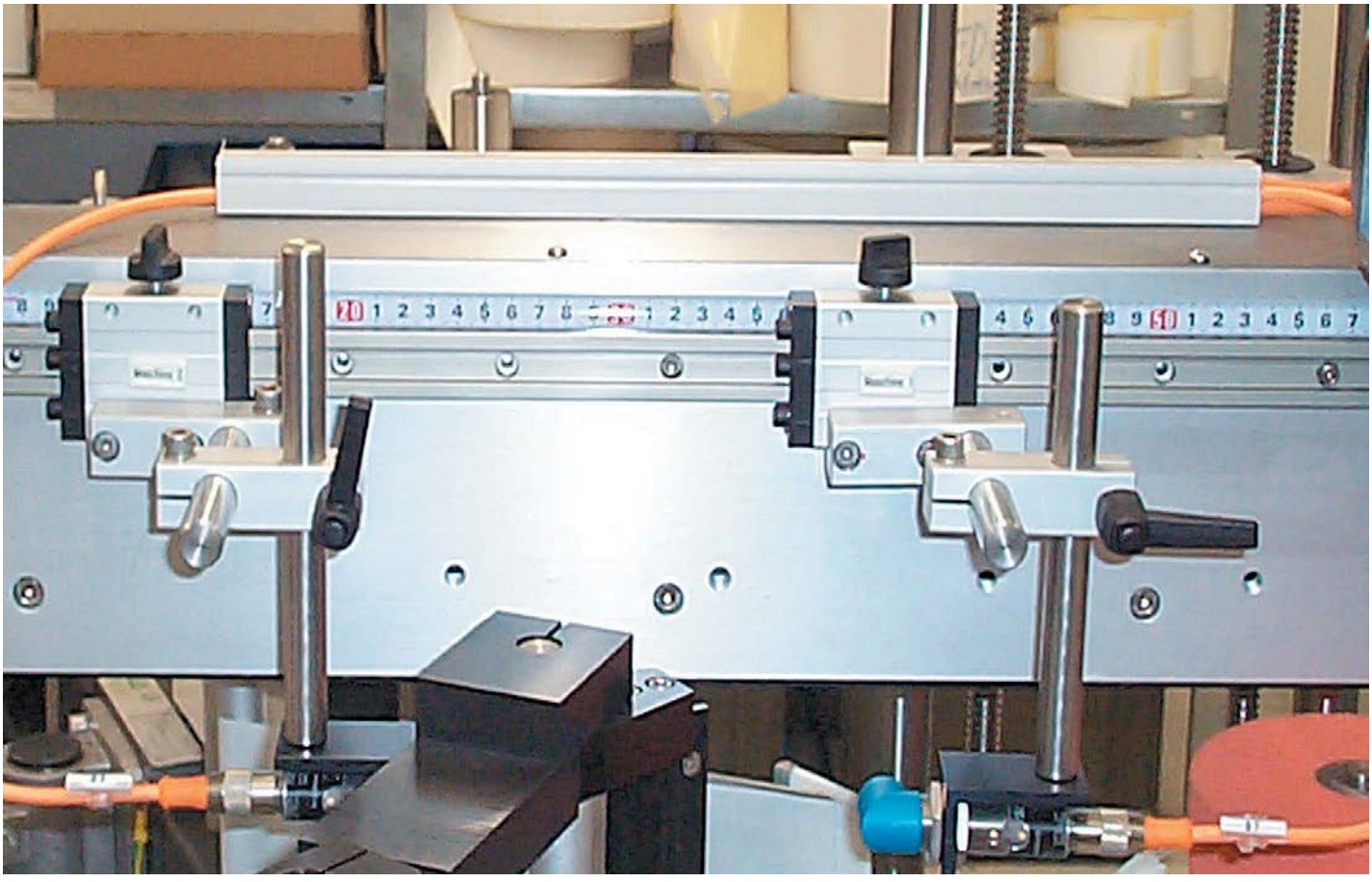
DryLin® R



DryLin® slide tables

Packaging technology: Label feeding system

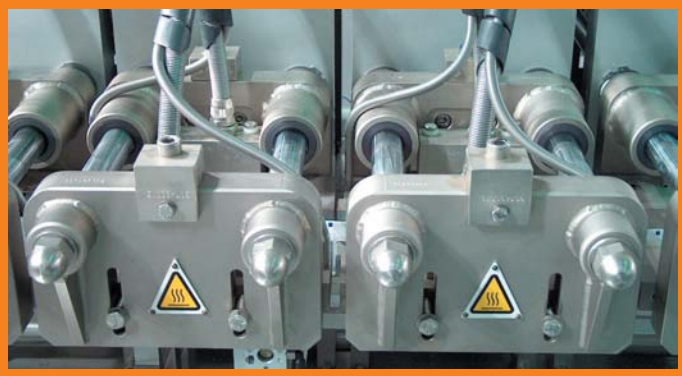
DryLin® T linear guides are dimensionally interchangeable with traditional re-circulating ball guides, but without the high costs. A further advantage is the availability of a manual clamping mechanism.





Bottle sealing machines

This machine seals champagne bottles with corks, aluminum caps and wire braid. DryLin® R linear bearings are lubrication-free, which is important in the food industry. DryLin® R is also impervious to the frequent cleaning and chemicals seen by the machine.



Form/fill/seal machines

DryLin® linear bearings are used to guide the tools of this form, fill and seal machine. The bearings are exposed to temperatures reaching 248 degrees Fahrenheit and are self-lubricating. The bearings are also resistant to the machine's corrosive cleaning agents, which minimizes downtime.



Machine tool technology: Door adjustment

DryLin® R linear bearings are used to guide the doors of this machine. The bearings are a huge cost savings and because they require no lubrication, flying chips do not cause downtime by getting stuck in the machine.



Packaging equipment

These packaging machines use DryLin® R sleeve bearings to reduce installation time. They are resistant to dust, dirt and water. DryLin® R is also maintenance-free and can reduce replacement part costs up to 90%.



Medical devices

DryLin® linear guide systems and DryLin® R linear bearings are used on this medical machine, which performs non-invasive treatment of chronic heel pain. With DryLin® linear bearings and guides, the company eliminated costly maintenance and the need for messy lubricants.



Aluminum window manufacturing

This machine manufactures aluminum window frames. A DryLin® HTS linear slide table is used to position the machine's milling heads. DryLin® HTS is lubrication-free, which prevents aluminum dust and chips from building up and causing downtime.

igubal® spherical bearings

igubal® spherical bearings are self-aligning components made entirely of high-performance plastics.

The igubal® series provides designers with a complete system of self aligning bearings: Rod ends, clevis joints, flange bearings, pivot bearings and pillow blocks.
Self-adjusting bearings are easy to fit, adaptable to wide angular ranges and have been used to replace special housings in many cases.
igubal® offers all the advantages of high-performance plastics, including dry-running capability combined with very good vibration dampening.

igubal® spherical bearings are insensitive to dirt, liquids, chemicals and fully corrosion-proof.
Bearings from the igubal® range are very light, compact and economical on two fronts:

- Low purchase price
- Low maintenance and installation costs



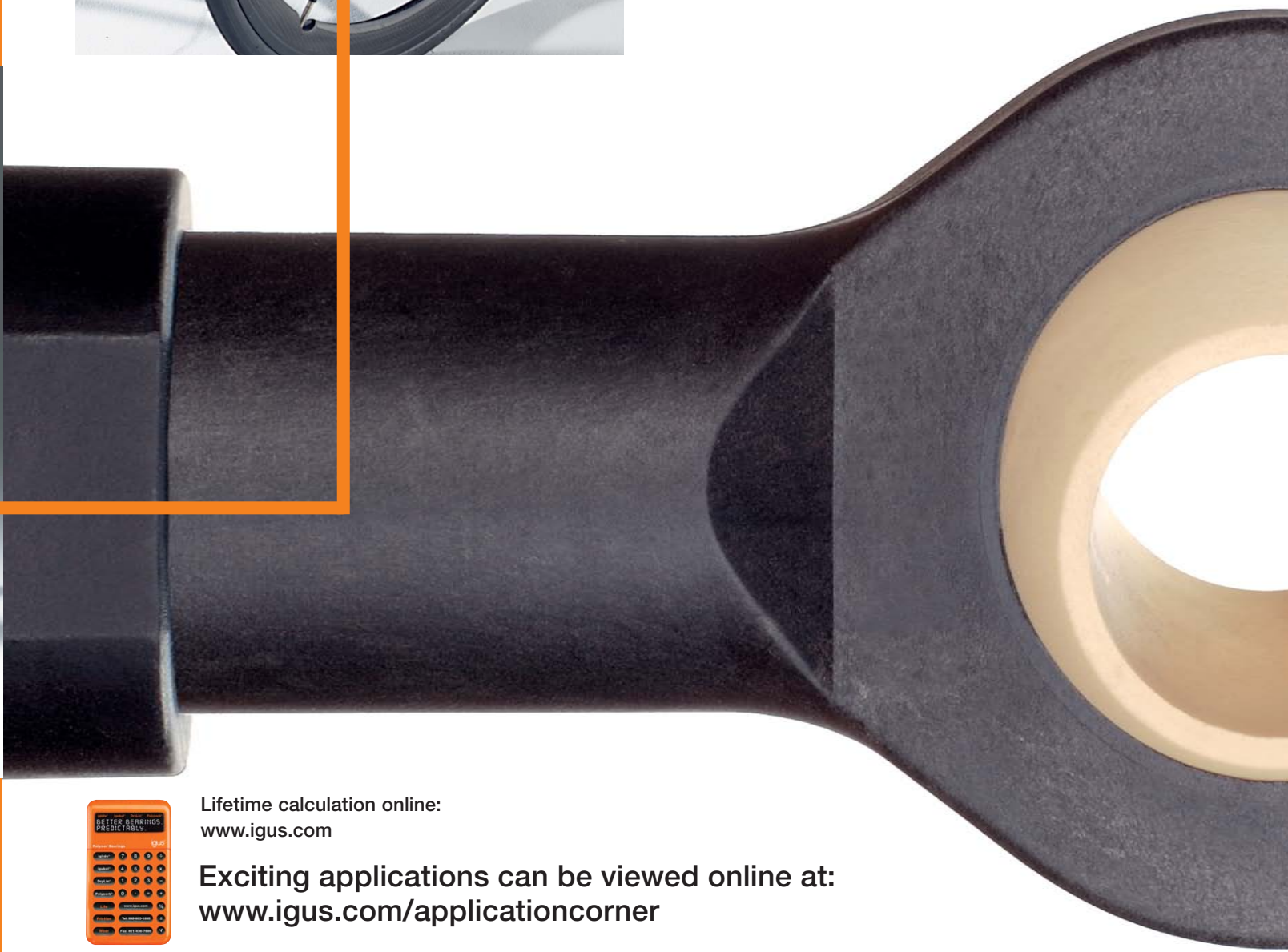
Part number:	Maximum static tensile load	Maximum transverse load	Minimum screw-in depth	Maximum tightening torque for internal thread	Maximum tightening torque for spherical ball
KBRM-08	470 lbf	157 lbf	.43 in.	88 lbf · inch	106 lbf · inch





Practical example

The reclining wheel's curve inclination is realized by means of rod ends in the journal link.
The high top speed and rapid acceleration are partly due to the rod ends' low weight. The bearing points do not require any elaborate sealing measures.



Lifetime calculation online:
www.igus.com

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Application examples: igubal®

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igubal® rod ends



igubal® clevis joints



igubal® pillow blocks



igubal® flange



igubal® spherical

Curtain wall louvers for stadiums

igubal® spherical bearings are used on the main assembly of these wall louvers. The bearings enable the slats, which are part of the wall louver, to swivel so airflow can be regulated inside the stadium. igubal® is maintenance-free and corrosion-resistant.





Research telescopes

igubal® spherical bearings are used to facilitate the movement of mirrors on this telescope. Smooth motion is achieved and magnetic interference is completely eliminated thanks to igubal® plastic bearings.



Basketball shooter

Students from Iowa State University used igubal® spherical bearings on a basketball shooter for children with Cerebral Palsy. The shooter uses igubal® flange and pillow blocks to enable the shooting mechanism to be pulled back with radial loads of 250 pounds.



Packaging machines

igubal® spherical bearings perform a high number of cycles without maintenance or lubrication. igubal® is also dirt- and dust-resistant and will not contaminate food handled by the machines.



Recreational vehicle steps

igubal® rod ends are used in the steps of this RV. They are maintenance-free and vibration-dampening.



Textile machinery

Self-aligning igubal® clevis joints are used to support the thread guide unit on this textile machine. Shock loads are no longer an issue and vibration is drastically reduced when compared to metal bearings.

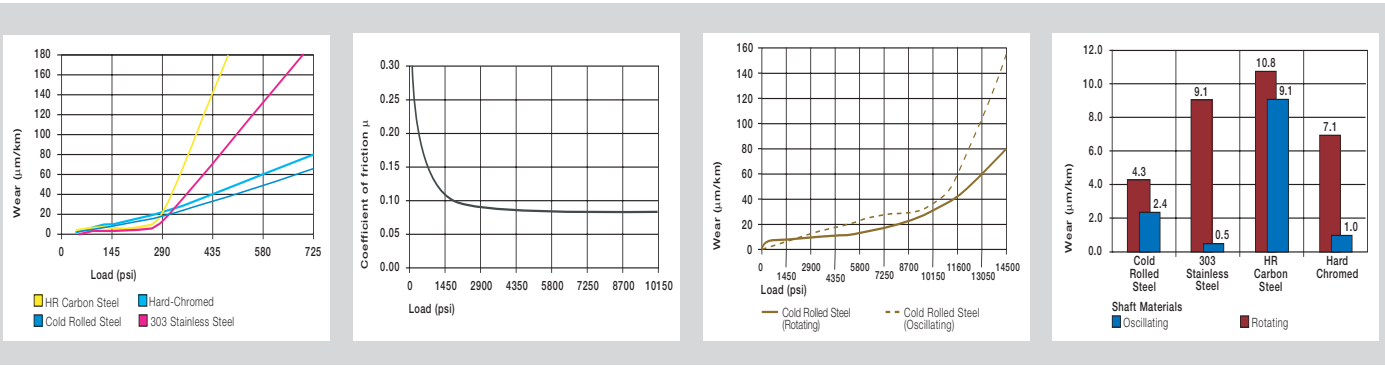


Baking machinery

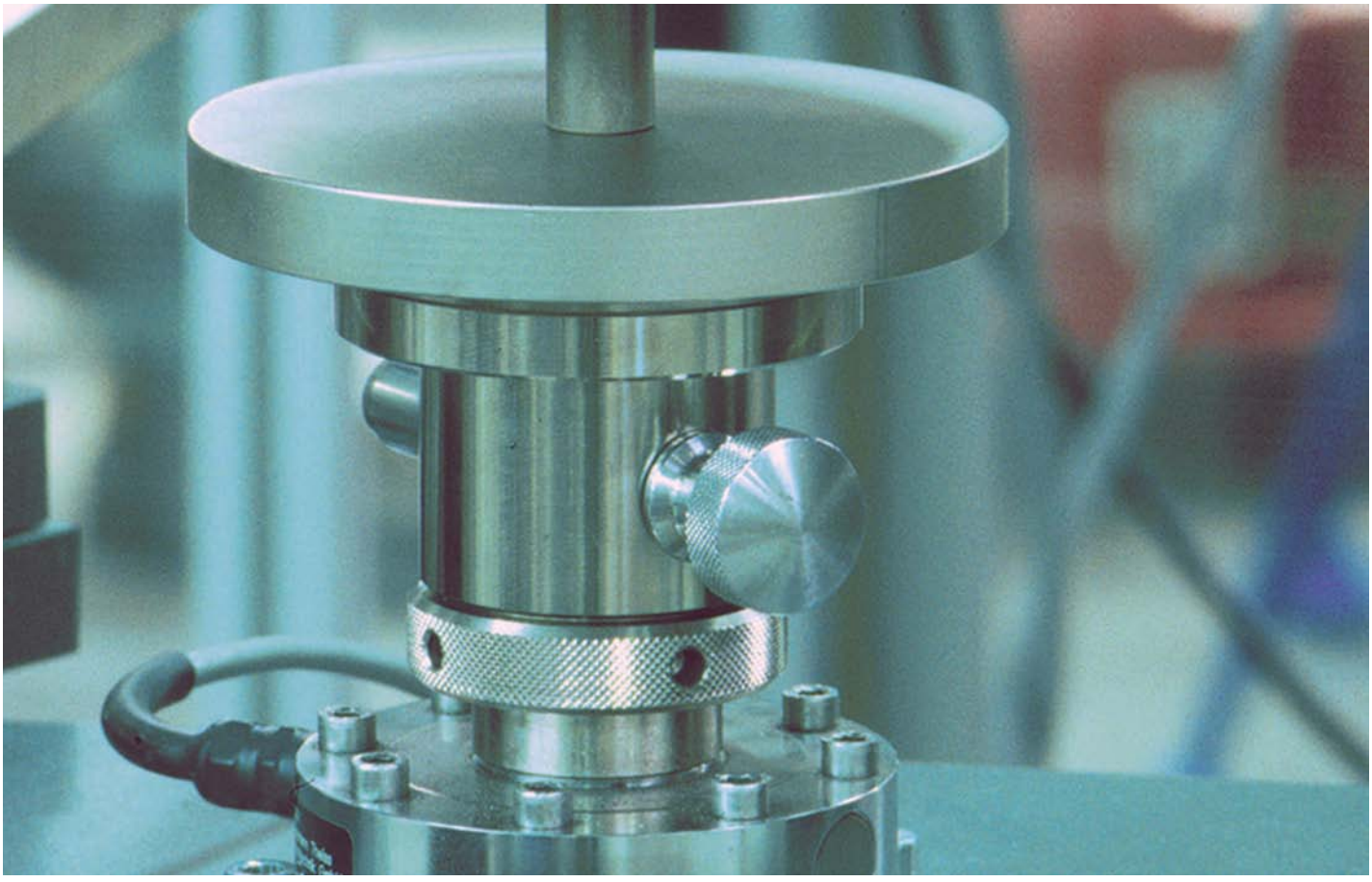
igubal® spherical bearings do not contaminate the chocolate processed by this machine because they are lubrication-free. igubal® is also corrosion-resistant and can be used in wash-down applications or anywhere moisture is present.

Quality from the igus® laboratory: Tested thousands of times, proven millions of times.

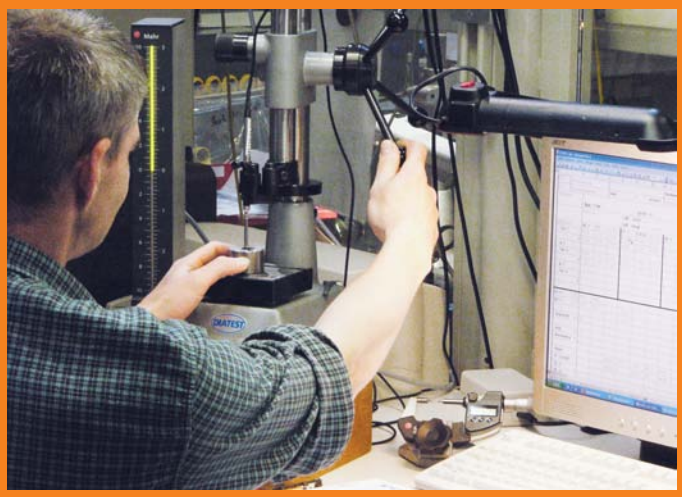
igus® has more than 40 years of experience in providing customers with plastic bearing solutions. Every year, igus® engineers develop more than 100 new plastic compounds and conduct more than 5,000 tests on its maintenance-free plastic plain bearings. Over the years, this has made it possible to establish a large database of plastics' tribological properties. In addition to their general properties, every iglide® bearing material possesses special features that make it suitable for particular applications and requirements. igus® bearings constitute the step from a simple plastic bearing to a tested, predictable and available machine component.



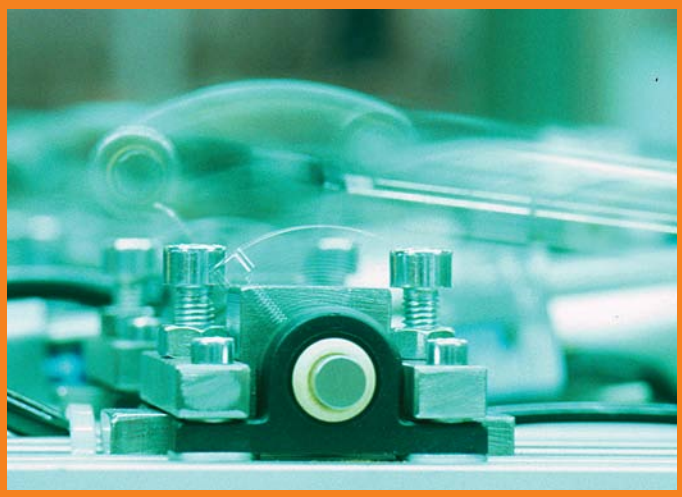
The results of more than 5,000 tests are added to our database annually.



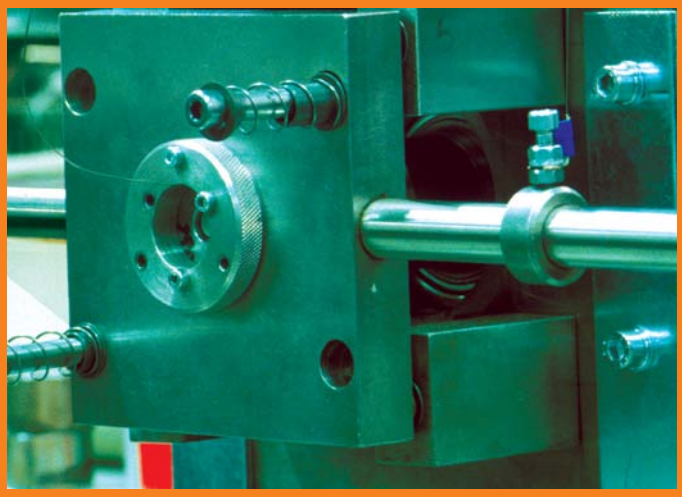
Product testing in action



igus® is committed to quality assurance.



Above is a test to determine the maximum running speed of an igubal® pillow block bearing.



This is an example of friction and abrasion measurement in a rotation test.



Pictured is a bench test for loads up to 21,755 psi and temperatures up to 482 degrees Fahrenheit.

The Application Corner

In addition to all the applications you have read about in this brochure, more examples and an extensive video library can be found in igus®' Application Corner at www.igus.com/applicationcorner.

igus® Inc. is proudly certified by the National Quality Assurance (NQA) against the provisions of ISO 9001:2000.
All products are tested and available from a single source.

Examples of test certificates and quality seals for igus® products:

... more by request.

Lubrication-free with igus® good for the environment and the wallet

Plastic bearings offer environmental benefits

Tribologically optimized iglide® plastic plain bearings from igus® require neither oil nor grease. They are lubrication-free, so no contaminants escape into the environment.
One billion gallons of industrial lubricants are consumed annually in the united states, of which and estimated 40 percent is released into the environment. This is becoming increasingly environmentally unacceptable and there is a growing need to find ‘green’ substitutes.
Due to continually advancing bearing technology, igus® is able to supply metal plain and rolling bearing alternatives more in line with environmental considerations for an increasing number of applications. The amount of oil used in plastics manufacturing is also very positive in comparison with aluminum and steel production. Whereas the energy from 16 quarts of oil is necessary to produce 1 quart of aluminum, and 1 quart of steel requires 12 quarts of oil, to produce 1 quart of plastic only needs an average of 1.9 quarts of oil. The production of plastics only makes up 4 percent of annual oil requirements globally.

Lubricant-free and light

The solid lubricants contained within iglide® polymer plain bearings are not the only ecologically valuable benefit. The lightweight bearings can also help to reduce fuel consumption and carbon dioxide output in vehicles or aircrafts, for example. The reduced weight leads to lower masses and subsequently lower energy consumption.
The high chemical resistance of plastic bearings is another positive ecological aspect because metals are often coated to achieve this effect. This takes place in environmentally unfriendly, high-energy zinc galvanizing baths.

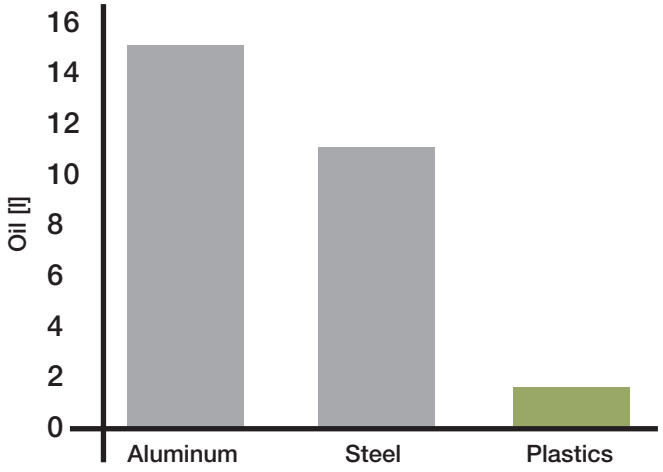


In contrast to metallic plain and rolling bearings, iglide® plastic plain bearings from igus® require no oil or grease





A study has found that nearly half of all machine lubricants used in Germany seep into soil, water or evaporate into the atmosphere. iglide® bearings require no lubrication, which would aid in solving this problem.



The energy required to produce one volume liter of material (converted to liters of oil). Source: Clausthal University of Technology

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www.igus.com/applicationcorner
For additional information about replacing bronze bearings, please visit:
www.igus.com/show_bronze.asp

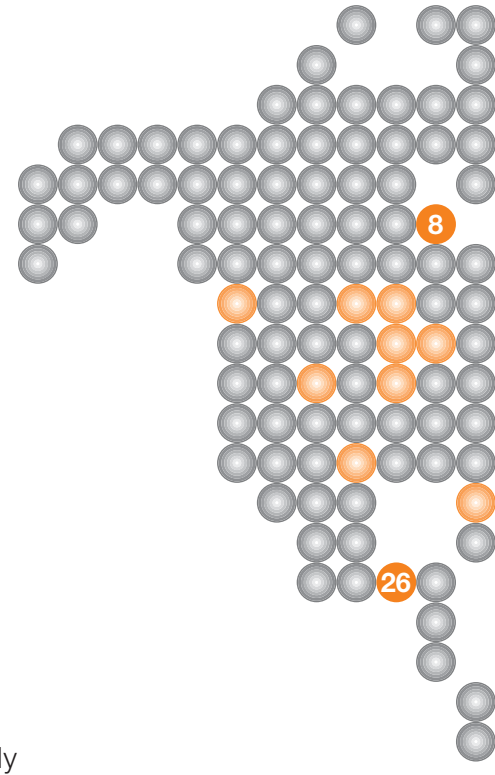








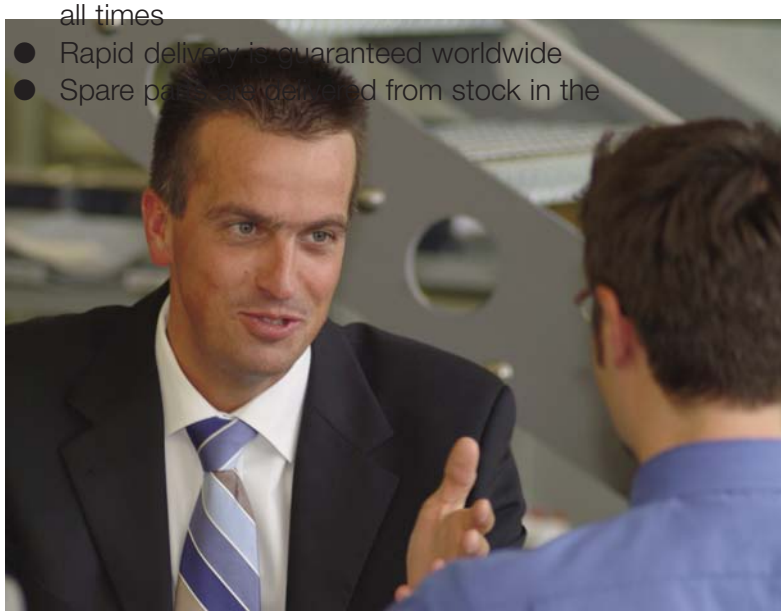
Individual consultation by igus® – via phone or on your premises

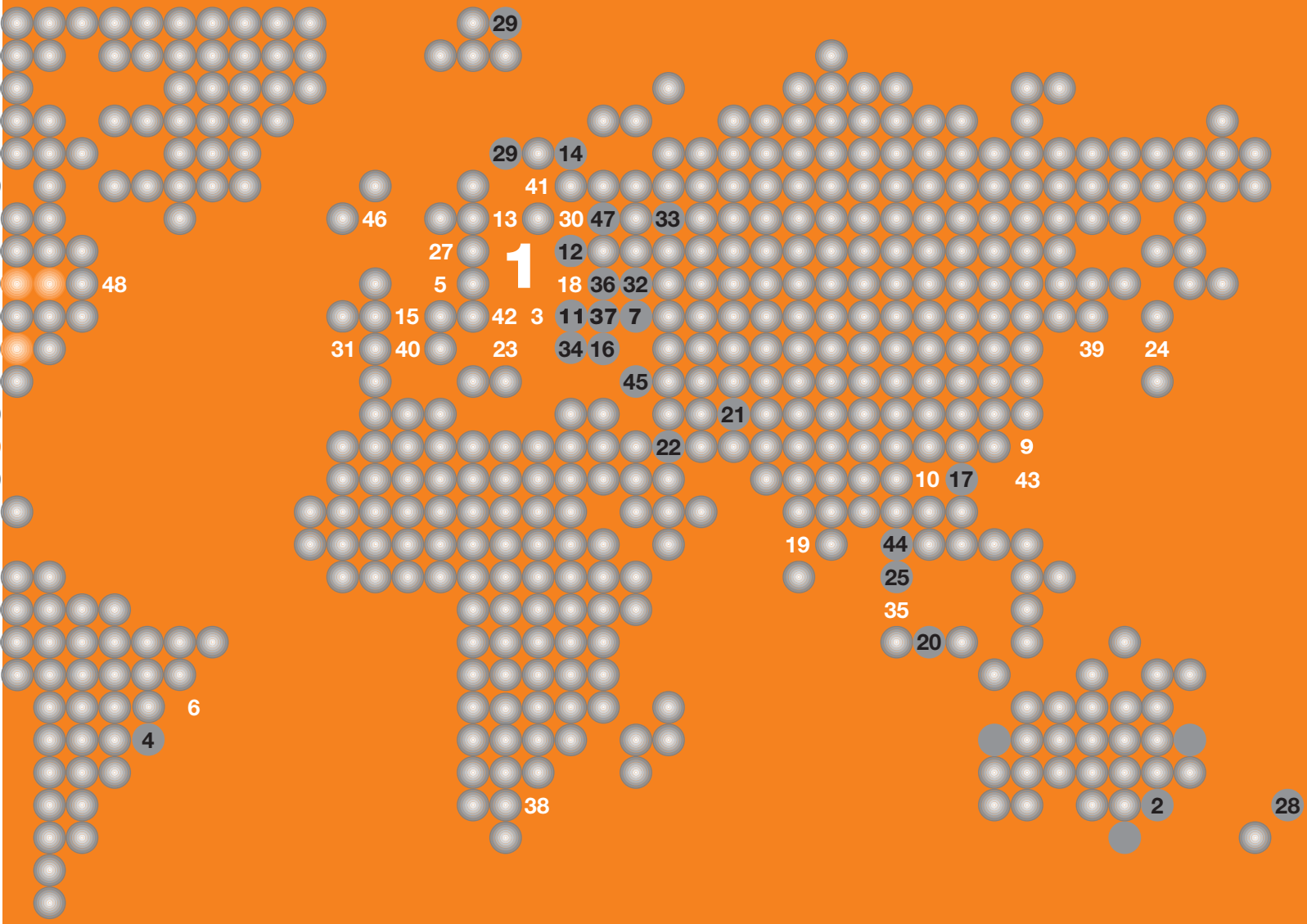


A large network of sales engineers are at your disposal in North America and worldwide.
We gladly provide consultation on your premises, supply assembly instructions and aids to installation sites, as well as measure installation spaces and register ambient conditions on location.

This has the following benefits for you:

- We are wherever you need us
- Numerous iglide® plastic bearing and Energy Chain® consultants remain at your disposal at all times
- Rapid delivery is guaranteed worldwide
- Spare parts are delivered from stock in the





1 Germany
2 Australia
3 Austria
4 Argentina
5 Belgium
6 Brazil
7 Bulgaria
8 Canada
9 China
10 China South
11 Croatia
12 Czech Republic
13 Denmark
14 Finland
15 France
16 Greece
17 Hong Kong
18 Hungary
19 India
20 Indonesia
21 Iran
22 Israel
23 Italy
24 Japan
25 Malaysia
26 Mexico
27 Netherlands
28 New Zealand
29 Norway/Iceland
30 Poland
31 Portugal
32 Romania
33 Russia
34 Serbia
35 Singapore
36 Slovakia
37 Slovenia
38 South Africa
39 South Korea
40 Spain
41 Sweden
42 Switzerland
43 Taiwan
44 Thailand
45 Turkey
46 United Kingdom
47 Ukraine
48 USA

All addresses on last page.

The igus® story from 1964 to now.

Innovation with plastics

The igus® story begins on October 15th, 1964 with Günter Blase in a double garage in Cologne-Mülheim. In its first 20 years, igus® operated as a supplier of intricate technical plastic components. In 1983, son Frank Blase started to concentrate on full products like Energy Chain Systems® and Polymer Bearings and established a separate marketing department. Between 1985 and 2006, igus® expanded from 40 to over 1,400 staff members distributed all over the world. igus® will continue to invest in expansion in the coming years. Modern materials have opened up further opportunities for innovative products.



Today: Automated plastic mass production



Today: Large tool development and production facility

1965
First iglide® Glider: Cone valve for "Pierburg"



1971
First Energy Chain® (series 20)



1979
First Energy Chain® Catalog, 2 pages



'65 '70 '75



Company founders Günter and Margret Blase in front of the "double garage" in 1964.

5 10

Staff

Products with line extensions

1980
First polymer plain bearing catalog of 8 pages



1989
First Chainflex® cable CF1



1989
E4-Tubes, to open from both sides



1991
xigus 1.0 Electronic catalog



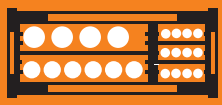
1993
Launch of DryLin® R



1994
Launch of igubal®



1995
ReadyChain, with the slogan Chain-Cable Guarantee

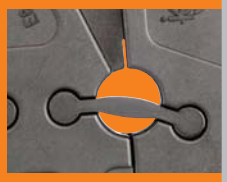


Chain-Cable Guarantee

1997
DryLin® T



2001
E6 chain



2001
DryLin® N



2003
Triflex® R



2003
DryLin® W



2006
LeviChain DryLin® ZLW



‘80 ‘85 ‘90 ‘95 ‘00 ‘05



1977: Relocation to “Locher Mühle” in Bergisch Gladbach



1994: Relocation to the new igus® factory in Cologne-Porz

27

1,100

160

8,000

1000

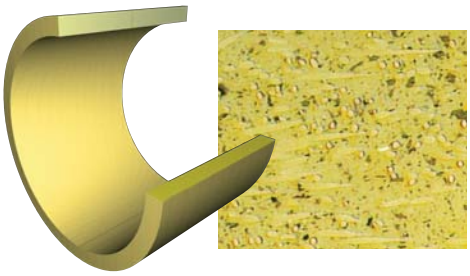
45,000

80,000

1400

Choosing the perfect iglide®

Plastics for longer life



High performance iglide® bearings are a viable, cost-effective alternative to metal, ball bearings, and bronze. They are fast becoming a standard choice for design engineers. Engineers are realizing that advanced synthetic compounds provide more design opportunities than traditional materials. Based on customer applications and requirements the igus® research and development team is continually developing new materials to meet these challenges. All iglide® maintenance-free bearings deliver superior performance, even in severe environments.

Very few basic materials can be modified and adapted, as well as thermoplastics. Thermoplastics can be produced with lubricants, they can be reinforced mechanically by the addition of technical fibers, or they can be varied by additional filling materials, especially in regard to friction and wear behavior.

The solid lubricants used in iglide® bearings are, as microscopic particles, embedded in millions of tiny chambers of the mostly fiber-reinforced material. From these chambers, the plain bearings release tiny amounts of solid lubricants during movement. The solid lubricants help to lower the coefficient of friction of the iglide® bearing. Since they are embedded in the tiny chambers, they cannot be pressed out. They are always there as soon as the bearing or the shaft is set in motion. Because iglide bearings are self-lubricating, an external lubricant is not necessary.

For those simple applications or when you want to replace a bronze bearing, and your application requires:

- ➤ either thick or thin walled bearing
- ➤ a cost effective bearing
- ➤ ability to handle low loads (up to a max static surface pressure of 5075 psi)
- ➤ handling of edge loads
- ➤ high vibration dampening
- ➤ low coefficient of friction
- ➤ no corrosion

INDUSTRIES

- Agriculture
- Packaging
- Office Furniture
- Medical
- Fitness Equipment
- Consumer

and many more

	 iglide® M250	 iglide® R
Max. moisture absorption		
at 73°F/50% rh	1.40%	0.20%
Max. long term temperature	176°F	194°F
Best motion	Rotational / Oscillating	Rotational / Oscillating
Shaft materials	Case hardened steel	Case hardened steel
	Chrome plated case hardened steel	Chrome plated case hardened steel
	440 Stainless - 303 Stainless	440 Stainless - 303 Stainless
	Hard anod aluminum	Hard anod aluminum
	Cold rolled steel	Cold rolled steel
Coefficient of friction	.10 to .30	.08 to .26
Max. permissible static		
surface pressure (PSI)	2,901	3,335
Max PV	3,400	8,700

bearing for your application.

Better bearings are predictable



Visit **www.igus.com** and click on the Predictability Calculator for a direct link to the iglide® Expert System

Each year, igus® engineers develop more than one hundred new plastic compounds and test maintenance-free plain bearings in more than 5,000 experiments. Through many years of research and testing, igus has been able to make its bearings predictable. In recent years igus has compiled an extensive database of the tribological properties of plastics. This database makes it possible for us to better assess the overwhelming number of applications in advance, to calculate the expected service life, and provide our customers with confidence during use.

What design engineers need more than ever is predictability, reliability and speed. With the help of igus' online Expert System, in just a few minutes engineers can reliably determine which bearing best suits their application and receive a service life analysis based on empirical test results.

From start to finish, igus® is here for you

igus design technicians are ready to assist you with every step from design to production. Our highly trained experts are available by phone or e-mail and free on-site demonstrations and evaluations are always encouraged. Please visit our Web site at www.igus.com for detailed technical information, 3D CAD drawings ready for download and to use our Predictability Expert Systems.

Send us a request for free test samples and xiglide CD-ROM, then place your order from over 9,600 standard dimensions or special parts.



1-888-803-1895
www.igus.com
Plastics for Longer Life



iglide® J



iglide® GLW

0.30%	1.30%
194°F	212°F
Rotational / Oscillating / Linear	Rotational / Oscillating
Case hardened steel	Case hardened steel
Chrome plated case hardened steel	Chrome plated case hardened steel
440 Stainless - 303 Stainless	440 Stainless - 330 Stainless
Hard anod aluminum	Hard anod aluminum
Cold rolled steel	Cold rolled steel
.08 to.18	.10 to .24
5,075	11,600
9,700	8,600

We reserve the right to make changes & corrections without notice. Every effort has been made to provide accurate technical & product information. The company disclaims responsibility for any error or omission regarding technical & product information published.

For those more demanding applications or when you want to replace a metal backed teflon lined bearing or an expensive fiber wound bearing, and your application requires:

- ➤ thin walled bearing
- ➤ a cost effective bearing
- ➤ ability to handle medium to high loads
- ➤ low water absorption or use under water
- ➤ high wear resistance
- ➤ low coefficient of friction
- ➤ no corrosion

INDUSTRIES

- Automation
- Cylinders / pneumatic
- Lifting equipment
- Marine
- Printing / copy machine
- Automotive

  and many more





	iglide® G300	iglide® L280
Max. moisture absorption		
at 73°F/50% rh	0.70%	1.30%
Max. long term temperature	266°F	194°F
Best motion	Rotational / Oscillating	Rotational / Oscillating / Linear
Shaft materials	Case hardened steel	Case hardened steel
	Chrome plated case hardened steel	Chrome plated case hardened steel
	440 Stainless - 330 Stainless	440 Stainless - 330 Stainless
	Hard anod aluminum	Hard anod aluminum
	Cold rolled steel	Cold rolled steel
Coefficient of friction	.08 to .15	.08 to .23
Max. permissible static		
surface pressure (PSI)	11,600	8,700
Max PV	12,000	6,600

For those highly technical applications or when you want to replace a metal backed teflon lined bearing or an expensive fiber wound bearing, and your application requires:

- ➤ thin walled bearing
- ➤ a very high load capcity
- ➤ very high operating temperatures
- ➤ linear movement under high loads
- ➤ high chemical resistance and no corrosion
- ➤ high loads and vibration dampening capabilities

INDUSTRIES

- Pumps
- Construction
- Valves
- Amusement rides

  and many more





	iglide® T500	iglide® Z
Max. moisture absorption		
at 73°F/50% rh	0.10%	0.30%
Max. long term temperature	482°F	482°F
Best motion	Rotational / Oscillating / Linear	Oscillating
Shaft materials	Chrome plated case hardened steel	Case hardened steel
	440 Stainless	Chrome plated case hardened steel
	330 Stainless	440 Stainless - 303 Stainless
		Hard anod aluminum
Coefficient of friction	.09 to .27	.06 to .14
Max. permissible static		
surface pressure (PSI)	21,750	21,750
Max PV	37,700	24,000

	 iglide® P	 iglide® Q	 iglide® H370
	<0.2%	0.90%	<0.1%
	266°F	275°F	392°F
	Rotational / Oscillating / Linear	High loads / Oscillating	Rotational / Oscillating
	Case hardened steel	Case hardened steel	Case hardened steel
	440 Stainless	Chrome plated case hardened steel	Chrome plated case hardened steel
	303 Stainless	Hard anod aluminum	440 Stainless
	Hard anod aluminum	Cold rolled steel	303 Stainless
			Hard anod aluminum
	.06 to.21	.05 to .15	.07 to .17
	7,250	14,500	10,875
	11,000	16,000	21,000

For those applications requiring FDA approval when you want to replace a metal backed teflon lined bearing or; a nylon/glass composition bearing or; a bronze bearing, and your application requires:

- ➤ FDA approval
- ➤ direct contact with food or pharmaceuticals
- ➤ low speeds
- ➤ quiet running

INDUSTRIES

- Medical
- Packaging
- Food manufacturing / preparation and many more

	 iglide® A200
Max. moisture absorption	
at 73°F/50% rh	1.50%
Max. long term temperature	146°F
Best motion	Rotational / Oscillating
Shaft materials	Case hardened steel
	Chrome plated case hardened steel
	440 Stainless
	303 Stainless
	Hard anod aluminum
Coefficient of friction	.10 to .40
Max. permissible static	
surface pressure (PSI)	2,610
Max PV	2,900

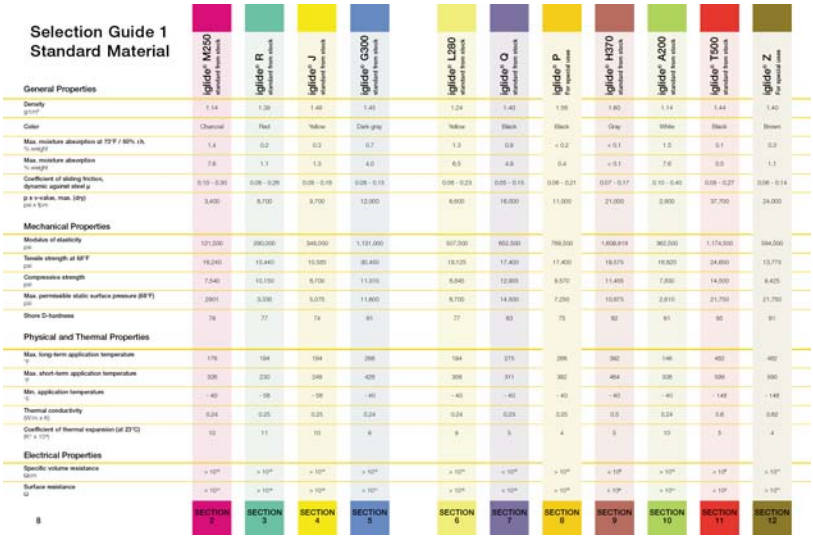


Visit **www.igus.com** and click on the Predictability Calculator for a direct link to the iglide® Expert System

1-888-803-1895
www.igus.com

Using the Quick Selection Guides

The pre-selection according to the properties enables you to subsequently concentrate on the correct choice of material.



Catalog Legend

Price Index

The price index gives you the possibility of making price comparisons of similar sizes within the igus® range of products.

Low Price Category

Medium Price Category

Higher Price Category

Icons

The icons on the side of the pages in this catalog provide orientation help. The arrows point towards the additional information.

Advantages and Disadvantages

Metric Sizes

Technical Information

Inch Sizes

Symbols

The following symbols help you to understand how to use the iglide® catalog

Is suitable for

Is less suitable for

➤ Reference to more information in another section

RoHS

IGUS products shown within this catalog are RoHS compliant according to 2002/95/EC (ROHS).
For further information please refer to our websiTe
www.igus.com/RoHS.asp

iglide® Analysis Worksheet

Please enter as much data as possible. If you prefer other measuring units, cross out the given unit and write yours next to it. Most applications questions can be answered with just a partial amount of data. Please call us if you have any questions (Tel: 1-888-803-1895). This worksheet may be faxed to us at 401-438-7680.

Application (What is the actual function of the bearing? _____

_____

_____

_____

Main advantage you are looking for? _____

_____

_____

_____

What problems can igus® solve?_____

_____

_____

_____

Industry: _____

New Design: Yes ☐ No ☐

Currently Using:_____

Estimated Annual Usage:_____

Machine Function:_____

_____

Required Life:_____

Testing Period:_____

Testing Parameters: _____

_____

_____

_____

iglide® Type: Sleeve ☐ Flange ☐ Thrust Washer ☐

Bearing ID (D1): _____

Bearing OD (D2): _____

Flange OD (D3):_____

Bearing Length (B1/S):_____

Flange Thickness (B2): _____

Shaft Diameter/Tolerance: _____

Shaft Material: _____

Shaft Surface Finish:_____

Shaft Hardness:_____

Housing Bore/Tolerance: _____

Housing Material: _____

Type of Motion:

Rotational: Yes ☐ No ☐ RPM: _____

Oscillating: Yes ☐ No ☐ Degrees: _____

Linear: Yes ☐ No ☐ Stroke: _____

Max. Application Temperature: _____

Speed (FPM):_____

Load or PSI:_____

Edge Loading: Yes ☐ No ☐

Exposure to Shock: Yes ☐ No ☐

Intermittent Service: Yes ☐ No ☐

Turn on time: _____

Standstill time_____

Outdoor Use: Yes ☐ No ☐

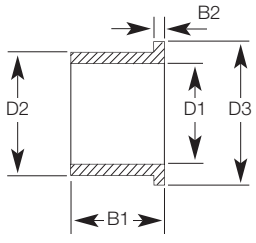
Contact w/Water: Yes ☐ No ☐

Contact w/Chemicals: Yes ☐ No ☐

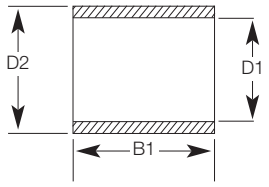
Lubrication: Yes ☐ No ☐

FDA Approval: Yes ☐ No ☐

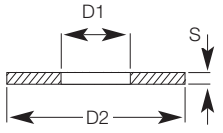
Flange



Sleeve



Thrust Washer



Selection Guide 1
Standard Material

	iglide® M250 standard from stock	iglide® R standard from stock	iglide® J standard from stock	iglide® GLW standard from stock	iglide® G300 standard from stock
General Properties					
Density g/cm³	1.14	1.39	1.49	1.36	1.45
Color	Charcoal	Red	Yellow	Black	Dark gray
Max. moisture absorption at 73°F / 50% r.h. % weight	1.4	0.2	0.3	1.3	0.7
Max. moisture absorption % weight	7.6	1.1	1.3	5.5	4.0
Coefficient of sliding friction, dynamic against steel μ	0.10 - 0.30	0.08 - 0.26	0.06 - 0.18	0.10 - 0.24	0.08 - 0.15
p x v-value, max. (dry) psi x fpm	3,400	8,700	9,700	8,600	12,000
Mechanical Properties					
Modulus of elasticity psi	121,500	290,000	348,000	1,116,500	1,131,000
Tensile strength at 68°F psi	16,240	10,440	10,585	34,075	30,450
Compressive strength psi	7,540	10,150	8,700	10,730	11,310
Max. permissible static surface pressure (68°F) psi	2901	3,335	5,075	11,600	11,600
Shore D-hardness	79	77	74	78	81
Physical and Thermal Properties					
Max. long-term application temperature °F	176	194	194	212	266
Max. short-term application temperature °F	338	230	248	320	428
Min. application temperature °F	- 40	- 58	- 58	- 40	- 40
Thermal conductivity (W/m x K)	0.24	0.25	0.25	0.24	0.24
Coefficient of thermal expansion (at 23°C) (K^{-1} x 10^{-5})	10	11	10	17	9
Electrical Properties					
Specific volume resistance Ωcm	> 10^{13}	> 10^{12}	> 10^{13}	> 10^{11}	> 10^{13}
Surface resistance Ω	> 10^{11}	> 10^{12}	> 10^{12}	> 10^{11}	> 10^{11}
	SECTION 2	SECTION 3	SECTION 4	SECTION 5	SECTION 6

iglide® L280 standard from stock	iglide® Q standard from stock	iglide® P standard from stock	iglide® H370 standard from stock	iglide® A200 standard from stock	iglide® T500 standard from stock	iglide® Z standard from stock
1.24	1.40	1.58	1.60	1.14	1.44	1.40
Yellow	Black	Black	Gray	White	Black	Brown
1.3	0.9	< 0.2	< 0.1	1.5	0.1	0.3
6.5	4.9	0.4	< 0.1	7.6	0.5	1.1
0.08 - 0.23	0.05 - 0.15	0.06 - 0.21	0.07 - 0.17	0.10 - 0.40	0.09 - 0.27	0.06 - 0.14
6,600	16,000	11,000	21,000	2,900	37,700	24,000
507,500	652,500	768,500	1,609,919	362,500	1,174,500	348,000
18,125	17,400	17,400	19,575	16,820	24,650	13,775
8,845	12,905	9,570	11,455	7,830	14,500	9,425
8,700	14,500	7,250	10,875	2,610	21,750	21,750
77	83	75	82	81	85	81
194	275	266	392	146	482	482
356	311	392	464	338	599	590
- 40	- 40	- 40	- 40	- 40	- 148	- 148
0.24	0.23	0.25	0.5	0.24	0.6	0.62
9	5	4	5	10	5	4
$> 10^{13}$	$< 10^{15}$	$> 10^{13}$	$< 10^{5}$	$> 10^{13}$	$< 10^{5}$	$> 10^{11}$
$> 10^{12}$	$< 10^{12}$	$> 10^{12}$	$< 10^{5}$	$> 10^{12}$	$< 10^{3}$	$> 10^{11}$
SECTION 7	SECTION 8	SECTION 9	SECTION 10	SECTION 11	SECTION 12	SECTION 13

Selection Guide 2
Specialist Material

The following list of materials is available upon request Please call your iglide® Sales technician for more information 1-888-803-1895

General Properties	iglide® A180	iglide® A290	iglide® A500	iglide® B	iglide® C	iglide® D
Density g/cm³	1.46	1.41	1.28	1.15	1.1	1.40
Color	White	White	Brown	Gray	White	Green
Max. moisture absorption at 73°F / 50% r.h. % weight	0.2	1.7	0.3	1.0	1.0	0.3
Max. moisture absorption % weight	1.3	7.3	0.5	6.3	6.9	1.1
Coefficient of sliding friction, dynamic against steel μ	0.05 - 0.23	0.13 - 0.40	0.26 - 0.41	0.18 - 0.28	0.17 - 0.25	0.08 - 0.26
p x v-value, max. (dry) psi x fpm	8,800	6,500	8,000	4,200	2,800	7,700
Mechanical Properties						
Modulus of elasticity psi	333,580	1,276,300	522,100	253,800	275,571	290,075
Tensile strength at 68°F psi	12,763	36,200	20,300	7,900	8,700	10,400
Compressive strength psi	11,300	13,100	n.d.	n.d.	n.d.	10,150
Max. permissible static surface pressure (68°F) psi	2,900	10,100	17,400	5,800	5,800	3,330
Shore D-hardness	76	88	83	69	72	78
Physical and Thermal Properties						
Max. long-term application temperature °F	194	284	482	212	266	194
Max. short-term application temperature °F	230	356	572	266	428	230
Min. application temperature °F	- 40	-40	- 148	- 40	- 40	- 58
Thermal conductivity (W/m x K)	0.25	0.24	0.24	0.24	0.24	0.25
Coefficient of thermal expansion (at 23°C) (K^{-1} x 10^{-5})	11	7	9	12	9	11
Electrical Properties						
Specific volume resistance Ωcm	> 10^{12}	> 10^{11}	> 10^{14}	> 10^{10}	> 10^{10}	> 10^{14}
Surface resistance Ω	> 10^{11}	> 10^{11}	> 10^{13}	> 10^{9}	> 10^{9}	> 10^{14}

iglide® F	iglide® H	iglide® H1	iglide® H2	iglide® H4	iglide® J200	iglide® T220	iglide® UW	iglide® UW500	iglide® V400
1.25	1.64	1.53	1.69	1.79	1.72	1.28	1.52	1.49	1.51
Black	Gray	Cream	Brown	Brown	Dark Gray	White	Black	Black	White
1.8	< 0.1	0.1	< 0.1	0.1	0.2	0.3	0.2	0.1	0.1
8.4	0.3	0.3	0.2	0.2	0.7	0.5	0.8	0.5	0.2
0.10 - 0.39	0.07 - 0.20	0.06 - 0.20	0.07 - 0.30	0.08 - 0.25	0.11 - 0.17	0.20 - 0.32	0.22 - 0.5	0.20 - 0.36	0.15 - 0.20
9,700	39,000	22,800	16,500	9,400	8,600	8,000	8,600	10,000	14,000
1,682,400	1,812,900	406,000	1,494,000	1,087,700	406,000	261,000	392,300	2,320,500	652,600
37,700	25,300	7,900	30,450	17,400	8,412	9,400	13,000	37,700	13,700
14,200	11,700	11,300	15,805	n.d.	6,230	7,970	n.d.	18,850	6,800
15,200	13,053	11,600	15,950	9,400	3,330	6,520	5,800	20,305	6,520
84	87	77	88	80	70	76	78	86	74
284	392	392	392	392	194	212	194	482	392
356	464	464	464	464	248	320	230	599	464
- 40	- 40	- 40	- 40	- 40	- 58	- 40	- 58	- 148	- 58
0.65	0.60	0.24	0.24	0.24	0.24	0.24	0.60	0.60	0.24
12	4	6	4	5	8	11	6	4	3
$< 10^{3}$	$> 10^{5}$	$< 10^{12}$	$> 10^{15}$	$< 10^{13}$	$> 10^{8}$	$> 10^{10}$	$> 10^{5}$	$> 10^{9}$	$> 10^{12}$
$< 10^{2}$	$> 10^{2}$	$< 10^{11}$	$> 10^{14}$	$< 10^{11}$	$> 10^{8}$	$> 10^{10}$	$> 10^{5}$	$> 10^{9}$	$> 10^{12}$

CUSTOM

iglide® Custom Bearings
Yes, we do.





Well over a billion iglide® plastic plain bearings have already been supplied by igus®. The majority are standard sizes, but that does not solve every application. We also produce special solutions with lifetime calculation and with iglide® advantages:

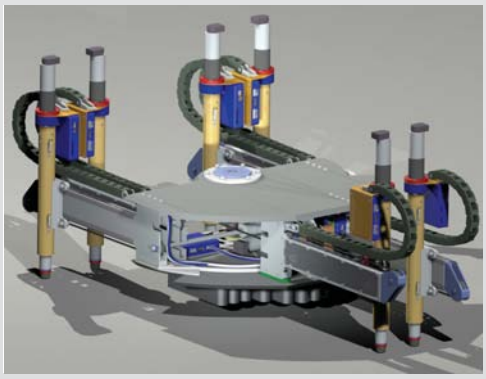
- Maintenance-free
- Self-lubricating
- Low Friction
- Wear resistant

Online Lifetime Calculation
www.igus.com

Y.E.S.

Young Engineers Support Program

The Y.E.S. Program is designed to foster the mechanical design ideas of students and to educate them on the merits and benefits of plastic components. Through Y.E.S. igus® has reached out to students, competitions and engineeering programs from across the United States, Canada and Mexico.



A team from Canada used Energy Chain® while building a walking robot.

For more information, contact igus® at 1-800-521-2747 or visit www.igus.com/yesprogram



A FIRST team used iglide® bearings in the mechanum wheels of its robot.

Through the Y.E.S. Program, igus®:

- ✓ offers free product donations to students, engineers and professors for use in various design competitions, school projects and engineering curriculums;
- ✓ supports the visions of various engineering competitions by donating products, technical support and other resources;
- ✓ revitalizes students' interest in engineering; and
- ✓ aids in making the unique design ideas of students and engineers a reality.

Y.E.S. Facts

- ✓ The Y.E.S. Program is open to students of all ages and grade levels, as well as teams and engineers competing in robotic competitions.
- ✓ The Y.E.S. Program has sponsored additional competitions such as FIRST, BEST, MATE ROV, DARPA, Challenge X and the SAE Collegiate Design Series.
- ✓ The Y.E.S. Program offers lecture engagements presented by bearings and cable carrier experts at schools and universities across the United States, Canada and Mexico.
- ✓ Students have the opportunity to see their accomplishments featured on the Y.E.S. website by submitting information about the unique application, how they used igus products and pictures.



Igus has sponsored URI mini baja teams since 2004. Shown here: the 2005 team

manus

The North American Plastic Bearing Design Contest



Igus® brought together a panel of experts in science and engineering to uncover and honor the top engineering designs using plastic bearings in new and ingenious ways. The winning applications were chosen from more than 60 entries based on creativity, technical advancement and economic impact. See more applications online at www.manus.igus.com.



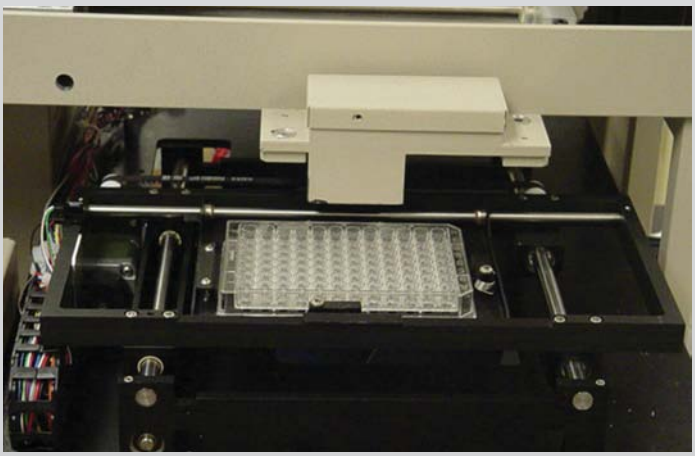
Six Flags Theme Parks Rollercoaster

The world's only 4th dimensional rollercoaster needed a lubrication-free, maintenance-free bearing due to tight space restrictions. High loads were also a factor, as well as high flexibility to provide the high level of vibration dampening essential for optimal performance. Iglide® Z not only met these requirements, but significantly reduced costs by more than 50 percent and virtually eliminated maintenance.



Harriston Industries Agricultural Machinery

Iglide® J replaced bronze bearings on the company's potato planter, which continually experienced high wear and premature failure due to very abrasive conditions. High salt content in the air was also causing corrosion and seizure. Iglide® J eliminated corrosion and increased lifespan by 500-600 percent at a cost 70-80 percent lower.



Nova Biomedical Medical Device

The company chose to use DryLin® R bearings on its two-axis tray and both DryLin® R and DryLin® N linear slides on its three-axis probe. Repetitive motion, saltwater contamination, high temperatures and the crucial need for accurate positioning prompted Nova to try DryLin®. The bearings also needed to be lubrication-free to prevent contamination. DryLin's low-cost and ease-of-use were the determining factors.

Design Engineering with iglide®



iglide®

iglide® Plain bearings	
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iglide® Plain Bearings



- high dimensional accuracy
- high compressive strength
- good heat dissipation
- low heat relaxation
- maintenance-free
- high dirt resistance
- corrosion resistance
- high vibration dampening
- very low tendency to creep

Plain Bearings Last a Long Time at Low Cost

igus® develops materials that are well-suited to the different requirements of maintenance-free plain bearings:

1. Plain bearings must be able to handle high loads over an extended period of time.
2. Maintenance-free plain bearings should have low coefficients of friction.
3. Plain bearings should have low wear rates to increase life span.

Both in material development as well as in the construction of bearings, former disadvantages of plastics can be greatly reduced. Thus, iglide® plain bearings are thin walled and some materials have especially high thermal conductivity. Both features function to rapidly dissipate heat and thus directly increase the load capacity of the bearing.



Picture 1.1: Every designer's dream: A calculable plain bearing made of high-performance plastics

The Traditional Solution is:

Hard shells with soft coating. Each lubricated bearing works according to this principle, and likewise a number of maintenance-free bearings, that are equipped with special slide layers. However, this soft slide layer is not strong enough. For high loads, compression across edges or oscillations, it becomes removed.

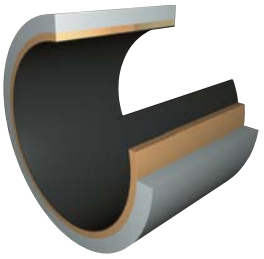


Figure 1.2: The traditional solution, bearing shells made of layers with lubricants and/or coating.

iglide® Plain Bearings Function Differently

One component of the iglide® materials acts for each function of the bearing:

- The **base plastics** are responsible for the resistance to wear
- **Fibers and filling materials** reinforce the bearing so that high forces or edge loads are possible
- **Solid lubricants**, lubricate the bearing independently and prevent friction of the system

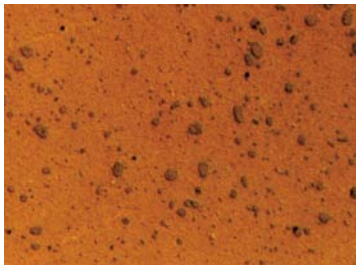


Picture 1.3: iglide® plain bearings: Exactly the right bearing for every application

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Base Plastics and Technical Fibers

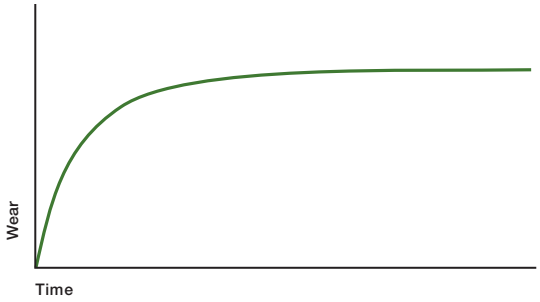
The radial pressure, with which the bearings are loaded, is received by the plastic base material. In the contact area, this material provides shaft support. The plastic base material ensures the lubricants do not receive a surface pressure that is too high. The base material is also reinforced by technical fibers or filling materials. These additional materials stabilize the bearing especially for cases of continuous stress.



Picture 1.5: Base plastics without reinforcing materials with solid lubricants, magnified 200 times, dyed.

The Start-up Phase

In the starting phase, the shaft and the iglide® plain bearing become mated to one another. During this phase, the surfaces of both partners are fitted to each other. The specific loading of the system drops since the contact surfaces of the shaft and bearing expand during the start-up. At the same time, the rate of wear decreases and approaches a linear curve. In this phase, the coefficients of friction continue to change, until finally assuming a value that is for the most part constant.



Graph 1.1: During the start-up phase, the rate of wear drops greatly.

Compressive Strength

The load of a plain bearing is expressed by the surface pressure (psi). For this purpose, the radial load is determined on the projected surface of the bearing.

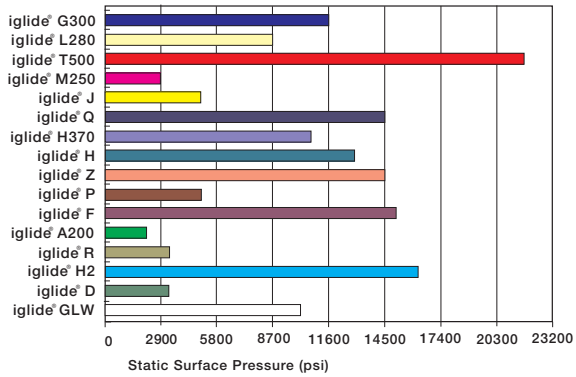
Radial bearing:
p = F / (d1 x b1)

For thrust bearings, the load is produced accordingly.

Axial bearing:
p = F / ($d2^2$ - $d1^2$) x π / 4

in this process:

F	load in lbs
d1	bearing inner diameter in inches (mm)
b1	bearing length in inches (mm)
d2	Outer diameter of the bearing in inches (mm)



Graph 1.2: Permissible average static surface pressure at 68°F

Permissible Average Surface Pressure

A comparative value of the iglide® material is the permissible average static surface pressure (p) at 68°F. The values of the individual iglide® plain bearings differ greatly on this point. The value (p) indicates the limit of the load of a plain bearing. The plain bearing can carry this load permanently without damage. The given value applies to static operation, only very slow speeds up to 1.97 fpm are tolerated under this load. Higher loads than those indicated are possible if the duration of the load is short. For a few minutes, the load can be more than doubled, depending on the material. Please call us if you have questions.

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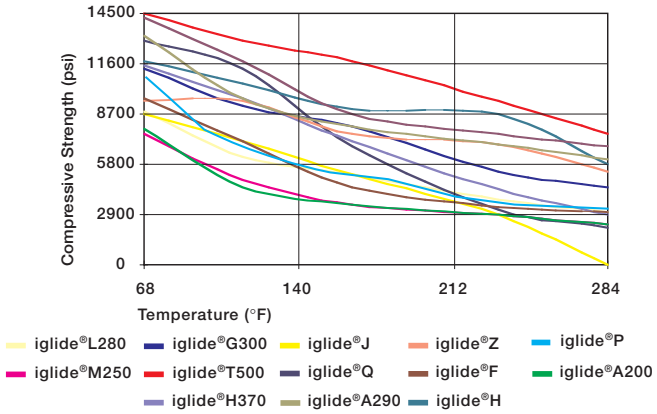
iglide® Plain Bearings

Pressure and Temperature

Graph 1.3 shows the permissible static surface pressure (p) of the iglide® plain bearing versus the temperature.
When using the plain bearing, the bearing temperature can be higher than the ambient temperature, due to friction. Take advantage of the opportunity presented by the predictability of the iglide® plain bearing to record these effects in advance, or determine the effective temperatures in the test.



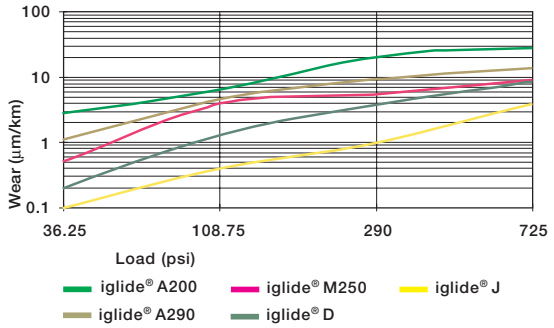
Picture 1.6: Testing of the compressive strength of iglide® plain bearings



Graph 1.3: Compression resistance of iglide® plain bearings as a result of temperature

Pressure and Speed

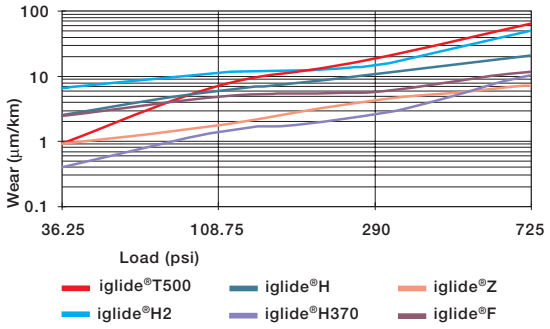
With decreasing radial load on the plain bearing, the permissible surface speed increases. The product of the load (p) and the speed (v) can be understood as a measurement for the frictional heat of the bearing
This relationship is shown by the p x v-graph that is the first in the respective chapter for each iglide® material.



Graph 1.5: Wear of iglide® plain bearings under low loads

Pressure and Wear

The load of the plain bearing has an effect on the wear of the bearing. The following graphs show the wear behavior of the iglide® bearing materials. It is easily recognized that for each load, there is an optimal plain bearing available.

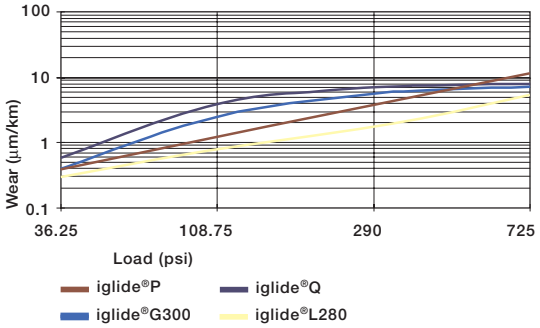


Graph 1.6: Wear of iglide® plain bearings under low loads

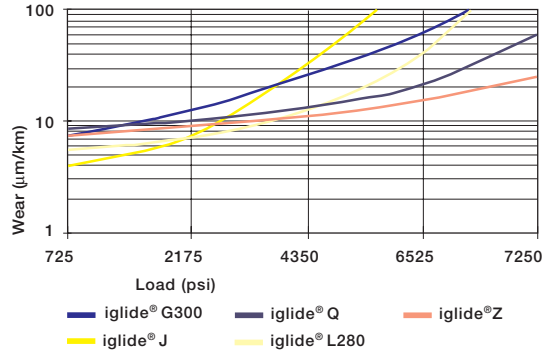
Pressure and Coefficient of Friction

With increasing load, the coefficient of friction of the plain bearing typically decreases. In this context, shaft materials and surfaces are also significant.

➤ Coefficients of Friction, Page 1.17



Graph 1.4: Wear of iglide® plain bearings under low loads



Graph 1.7: Wear of iglide® plain bearings under medium and high loads

Surface Speed

For plain bearings, the revolution speeds always matter. The absolute rotational speed is not decisive, instead it's the relative speed between the shaft and the bearing.
The surface speed is expressed in feet per minute (fpm) and calculated from the rotational speed with the adjacent formula.

Rotations:

$$v = \frac{rpm \times d1 \times 3.14}{12} = fpm$$

Oscillating movements:

$$v = \frac{4ab}{360} \times \frac{3.14d}{12} = (fpm)$$

in the process:

a = angle of motion either side of the mean position in degrees
d1 = Shaft diameter in inches, if mm convert to inches prior to calculation
b = Frequency in cycle per minute
d = inner diameter in inches, if mm convert to inches prior to calculation

Permissible Surface Speeds

iglide® plain bearings were primarily developed for low to average running speeds in continuous operation.
Table 1.1 shows the permissible surface speed of iglide® plain bearings for rotating, oscillating, and linear movements.
These surface speeds are limit values assuming minimum pressure loading of the bearing. In practice, these limit values are rarely reached due to an inverse relationship between load and speed. Each increase of the pressure load leads unavoidably to a reduction of the allowable surface speeds and vice versa.
The limit of the speed is measured by the bearing temperature. This is also the reason why different running speeds can occur for the different movement types. For linear movements, more heat can be dissipated via the shaft, since the bearing uses a longer surface area on the shaft.

	Continuous			Short Term		
Material	Rotating	Oscillating	Linear	Rotating	Oscillating	Linear
iglide® G300	197	295	787	393	492	984
iglide® L280	197	295	787	492	590	1181
iglide® T500	295	590	984	689	787	1969
iglide® M250	157	157	492	393	393	984
iglide® J	295	295	1574	590	590	1969
iglide® Q	197	197	984	393	393	1181
iglide® H370	236	246	787	295	295	984
iglide® H	197	295	590	295	393	787
iglide® Z	295	590	984	689	787	1181
iglide® P	197	295	590	393	492	787
iglide® F	157	197	590	295	295	984
iglide® A200	147	147	492	295	295	787
iglide® R	295	295	1574	590	590	1969
iglide® H2	177	236	492	197	295	590
iglide® D	295	295	1574	590	590	1969
iglide® GLW	157	197	492	197	197	590

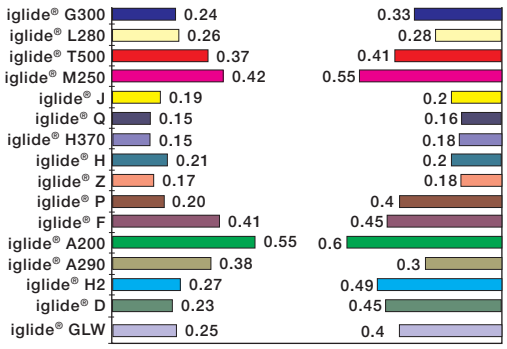
Table 1.1: Surface speeds of the iglide® plain bearing in fpm

Surface Speed and Wear

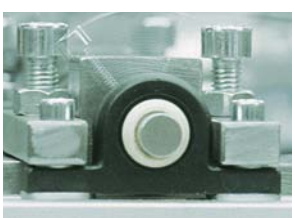
Considerations about the permissible surface speeds should also include the wear resistance of the plain bearing. High running speeds automatically bring correspondingly high wear rates with them.

Surface Speed and Coefficient of Friction

The coefficient of friction of plain bearings is a result of the surface speed in practice. High surface speeds have a higher coefficient of friction, than low surface speeds. Graph 1.8 shows this relationship in the example of a Cold Rolled Steel shaft with a load of 102 psi with 30 and 59 fpm.



Graph 1.8: Coefficients of friction of iglide® materials for different surface speeds



Picture 1.7: Experiments on wear and coefficient of friction using the example of an igubal® pillow block bearing



Picture 1.8: Determining the maximum surface speeds of an igubal rod end bearing at high rotational speeds

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P x V-value

For plain bearings, the product is given a new value depending on the specific load (p) and the surface speed (v).

The p x v value can be considered a measure of the frictional heat and can be used as an analytical tool to answer questions concerning the proper application of a plain bearing. For this purpose, the actual p x v value is a function of the shaft material of the ambient temperature and the operating time.

Material	Thermal Conductivity (W/m x k)
Steel	46
Aluminum	204
Gray cast iron	58
303 Stainless	16
Ceramics	1.4
Plastics	0.24

Table 1.2: Heat conductivity values of shaft or housing materials

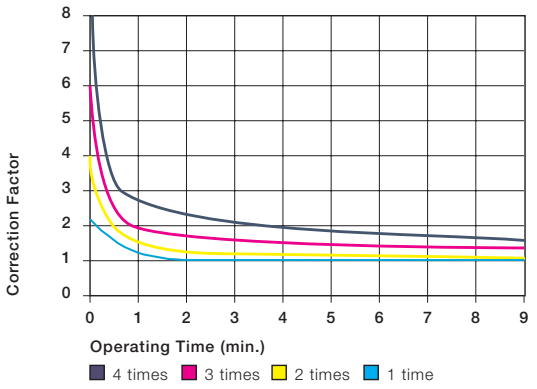
$$p \times v = \frac{(K1 \times \pi \times \lambda k \times \varnothing T)}{\mu \times s} \quad \frac{(K2 \times \pi \times \lambda s \times \varnothing T)}{\mu \times b1 \times 2} \times 10^{-3}$$

Where:

K1, K2 = constant for heat dissipation (K1 = 0.5, K2 = 0.042)
s = bearing wall thickness in mm
b1 = bearing length in mm
μ = coefficient of friction
λs = thermal conductivity of the shaft
λk = thermal conductivity of the bearing
∅T = $(T_a - T_u)$
T_u = ambient temperature
T_a = Maximum application temperature

Correction Factor

The tolerated p x v value can be increased in intermittent operation if the bearing temperature never reaches the maximum limit because of the short operating time. Tests have shown that this is true for operating times below 10 minutes. An important qualifier here is the ratio of the operating time and pause intervals. It is known that long pauses make a greater contribution to re-cooling. The different curves of graph 1.9 represent different ratios (3x means that the pause lasts three times longer than the operating time).



Graph 1.9: Correction factor for p x v-value

Lubrication

Although iglide® plain bearings are designed to run dry, they are quite compatible with customary oils and greases. A single lubrication during the installation improves the start-up behavior and the coefficient of friction, thus reducing the frictional heat. Due to this effect, the permissible loads for plain bearings can be increased by lubrication. Numerous results from lubricated applications are available from experiments. Please contact us if necessary.
Table 1.3 shows the correction factors for p x v value using lubrication.

Lubrication	Correction factor
Dry run	1
During installation	1.3
Continuous, grease	2
Continuous, water	4
Continuous, oil	5

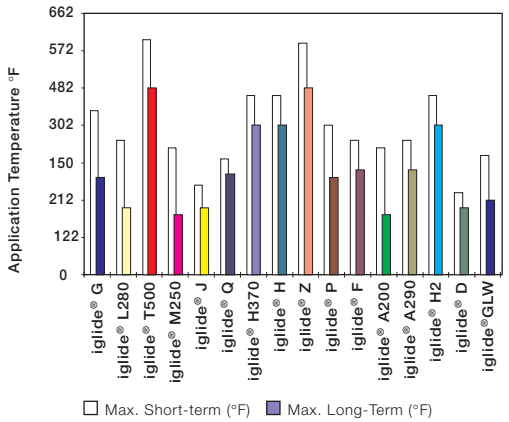
Table 1.3: Correction of the tolerated p x v-value by lubrication



Picture 1.9: Testing the properties of plastic bearings

Temperature

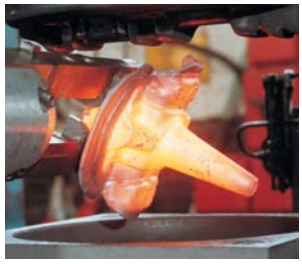
Plain bearings made of high-performance plastics are usually underestimated at higher temperatures. Who would believe that bearings made of plastic could be used up to over 572°F? Data is often found in the literature about the continuous use temperature. The continuous use temperature is the highest temperature, which the plastic can withstand for a period of time without a reduction in the tensile strength of the material above or below a prespecified value. Please note, these standardized test results have limited application, since bearings are almost always under load.
The material wear limits, based on application temperature are made informative.



Graph 1.10: Comparison of the continuous and short-term upper application temperatures

Application Temperatures

The minimum application temperature is the temperature below which the material is so rigid and hard that it becomes too brittle for standard applications. The maximum continuous application temperature is the temperature which the material can endure without the properties changing considerably.
The maximum, short-term application temperature is the temperature above which the material becomes so soft, that it can only withstand small external loads. “Short-term” is defined as a time period of a few minutes. If the plain bearings are moved axially or axial forces occur, there is more opportunity for the bearing to lose pressfit. In these cases, axial securing of the bearing is necessary in addition to being pressfit.
Table 1.6 shows the maximum ambient temperatures to which the plain bearings can be exposed for a short-term. If these temperatures are realized, the bearings may not be additionally loaded. In fact, a relaxation of the bearings can occur at these temperatures, even without an additional load. Thus it is necessary to ensure that the bearing cannot slide out of the bore. This is achieved by changing the bore construction or additionally securing the bearing.



Picture 1.10: iglide® T500 plain bearing in hard friction setting at high temperatures in foundries

Material	Lower application Temperature (°F)
iglide® G300	- 40
iglide® L280	- 40
iglide® T500	- 148
iglide® M250	- 40
iglide® J	- 58
iglide® Q	- 40
iglide® H370	- 40
iglide® H	- 40
iglide® Z	- 148
iglide® P	- 40
iglide® F	- 40
iglide® A200	- 40
iglide® R	- 50
iglide® H2	- 40
iglide® D	- 58
iglide® GLW	- 40

Table 1.4: Lower application temperature of the iglide® materials

Material	Securing mechanism provided starting at (°F)
iglide® G300	212
iglide® L280	140
iglide® T500	275
iglide® M250	140
iglide® J	140
iglide® Q	122
iglide® H370	212
iglide® H	264
iglide® Z	293
iglide® P	194
iglide® F	221
iglide® A200	122
iglide® R	140
iglide® H2	248
iglide® D	140
iglide® GLW	212

Table 1.5: Additional securing of the iglide® plain bearing required starting at the temperature

Material	Maximum, short-term ambient temperature (°F)
iglide® G300	428
iglide® L280	392
iglide® T500	599
iglide® M250	392
iglide® J	284
iglide® Q	392
iglide® H370	500
iglide® H	500
iglide® Z	590
iglide® P	392
iglide® F	446
iglide® A200	392
iglide® R	284
iglide® H2	230
iglide® D	122
iglide® GLW	176

Table 1.6: Maximum ambient temperature, short-term, without loading

Temperature and Load

The compressive strength of plain bearings decreases as temperature increases. During this process, the materials react very differently from another, iglide® T500, for example, still accepts loads of 10,150 psi even at temperatures of 392°F.



Picture 1.11: Material tests are possible up to 482°F

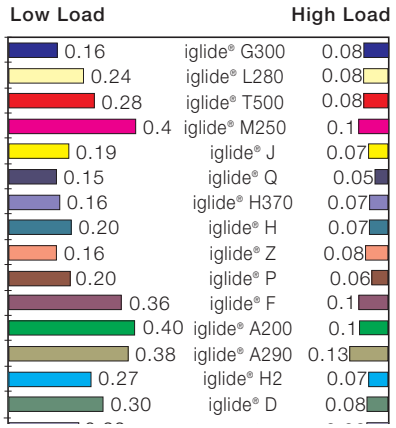
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Coefficient of Thermal Expansion

The thermal expansion of plastics is approximately 10 to 20 times higher when compared to metals. In addition to this, it also acts non-linearly in plastics. The coefficient of thermal expansion of the iglide® plain bearing is a significant reason for the required play in the bearing. At the given application temperature, seizing of the bearing to the shaft does not occur at high temperatures. The coefficient of thermal expansion of iglide® plain bearings were examined for significant temperature ranges and the results are given in the individual materials tables, at the start of each chapter.



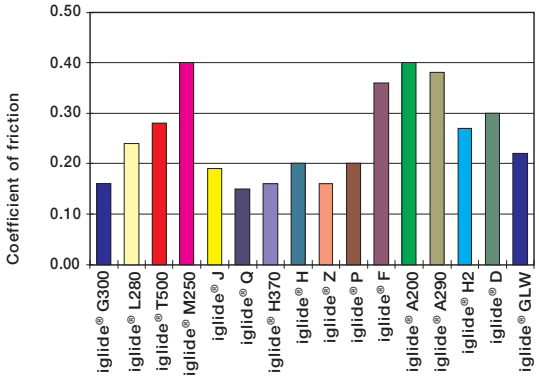
Graph 1.11: Frictional values of iglide® materials under different loads

Coefficient of Friction

iglide® plain bearings are self-lubricating by the addition of solid lubricants. The solid lubricants lower the coefficient of friction of the plain bearings and thus increase the wear resistance. The coefficient of friction measurement

$F_R = \mu \times F$

Depending on whether an application is starting from a stopped position or the movement is in progress and needs to be maintained. A choice is made between static friction coefficient and the dynamic friction coefficient.

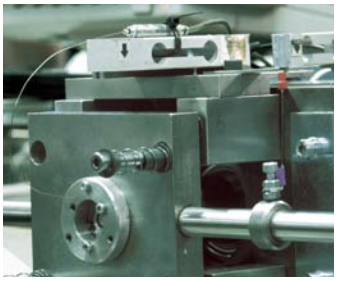


Graph 1.12: Coefficients of friction of the iglide® plain bearings for the recommended surface roughness and low load, p=108.75 psi

Coefficients of Friction and Surfaces

At study here is the relationship between coefficients of friction and surface roughness of shaft materials. It is clearly shown that the amount of friction is composed of different factors. If the shaft is too rough, abrasion levels play an important role. Small areas of unevenness that can interlock with each other must be worn off the surface.

When the surfaces are too smooth, however, higher adhesion results, i.e. the surfaces adhere to each other. Higher forces are necessary to overcome the adhesion, which results from an increased coefficient of friction. Stick-slip can be the result of a large difference between static and dynamic friction and of a higher adhesive tendency of mating surfaces. Stick-slip also occurs due to intermittent running behavior and can result in loud squeaking. Stick-slip thus represents a cause for malfunction of plain bearings. Over and over again, it is observed that these noises do not occur or can be eliminated with rough shafts. Thus for applications that have a great potential for stick-slip - slow movements, large resonance of the housings - attention must be paid to the optimal roughness of the shafts.

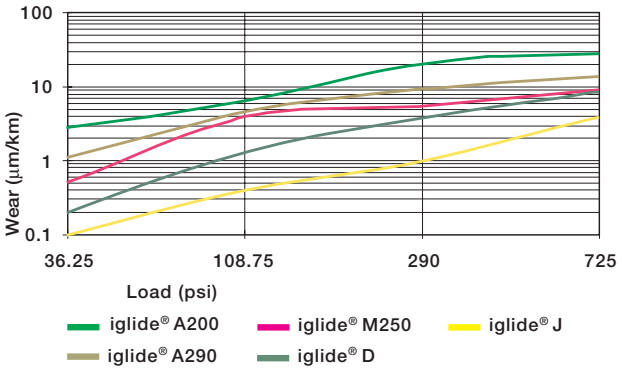


Picture 1.12: Friction experiments in the igus® laboratory

Wear Resistance

Due to the fact that the wear of machine parts is a function of so many different influences, it is difficult to make general statements about the wear behavior. Therefore, in numerous experiments, the wear is of primary importance as a measurement parameter. In testing, it has become clear what variances are possible between different material pairings. For given loads and surface speeds, the wear resistance can easily vary by a factor of 10 between materials pairings that run well together.

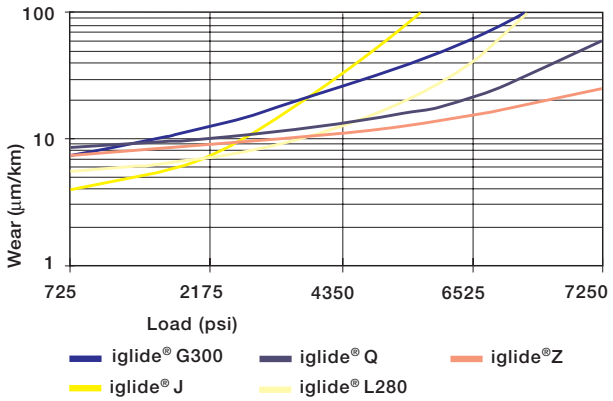
➤ Shaft materials, Page 1.11



Graph 1.13: Wear of iglide® plain bearings for small loads, shaft: Cold Rolled Steel, v=19.7 fpm

Wear and Load

Different loads greatly influence the bearing wear. Among the iglide® plain bearings, certain materials are specialized for low loads. While others are better suited for high or extremely high loads. With a hardened, ground shaft, iglide® J can be characterized as the most wear-resistant bearing material for low loads. iglide® Q, on the other hand, is specialized for extreme loads.



Graph 1.14: Wear of iglide® plain bearings for medium and high loads, shaft: Cold Rolled Steel, v=19.7 fpm

Wear and Temperature

Within wide temperature ranges, the wear resistance of the iglide® plain bearings shows little change. In the maximum temperature range, however, the temperature increases and the wear of the plain bearing increases exponentially.
The table on the following page compares the “wear limits”. One particular exception is represented by iglide® T500. The wear resistance of iglide® T500 increases greatly as temperature increases and reaches the optimum wear resistance at a temperature of 320°F . Then resistance decreases again, gradually.

Material	Wear Limit (°F)	Material	Wear Limit (°F)
iglide® G300	248	iglide® Z	392
iglide® L280	248	iglide® P	212
iglide® T500	410	iglide® F	266
iglide® M250	176	iglide® A200	176
iglide® J	128	iglide® R	248
iglide® Q	176	iglide® H2	248
iglide® H370	302	iglide® D	128
iglide® H	248	iglide® GLW	212

Table 1.7: Wear limits of iglide® plain bearings

Wear During Abrasive Dirt Accumulation

Special wear problems frequently occur if abrasive dirt particles get into the bearing. iglide® plain bearings can clearly improve the operating time of machines and systems in these situations. The high wear resistance of the materials and the self-lubrication process provide for the highest service lifetime. Because no oil or grease is on the bearing, dirt particles can not penetrate as easily into the bearing. The largest portion simply falls away from the bearing thus limiting potential damage. If however, a hard particle penetrates into the bearing area, then an iglide® plain bearing can absorb this particle. The foreign body becomes embedded in the wall of the bearing. Up to a certain point, operation can be maintained at optimal levels even when there is extreme dirt accumulation.
However, it’s not just hard particles that can damage bearings and shafts. Soft dirt particles such as, for example, textile or paper fibers, are frequently the cause for increased wear. In this instance, the dry running capability and the dust resistance of the iglide® plain bearings go into action. In the past, they were able to help save costs in numerous applications.



Picture 1.16: High wear resistance: plain bearing in contact with sand

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iglide® Plain Bearings

Wear and Surfaces

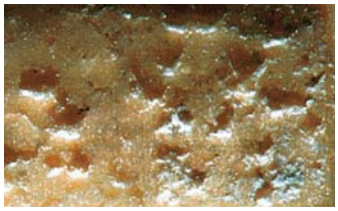
Shaft surfaces are important for the wear of bearing systems. Similar to the considerations for coefficients of friction, a shaft can be too rough in regard to the bearing wear, but it can also be too smooth. A shaft that is too rough acts like a file and during movement separates small particles from the bearing surface. For shafts that are too smooth, however, higher wear can also occur. An extreme increase in friction results due to adhesion. The forces that act on the surfaces of the sliding partner can be so large that regular material blow-outs occur.
It is significant to note that wear by erosion is non-linear. Moreover, it is subject to chance and can not be accurately predicted in advance.

Shaft Materials

The shaft is, next to the plain bearing itself, the most important parameter in a bearing system. It is in direct contact with the bearing, and like the bearing, it is affected by relative motion. Fundamentally, the shaft is also worn, however, modern bearing systems are designed so that the wear of the shafts is so small that it can not be detected with traditional methods of measurement technology.

Shafts can be distinguished and classified according to their hardness and according to the surface roughness. The effect of the surface is described on the preceding pages:

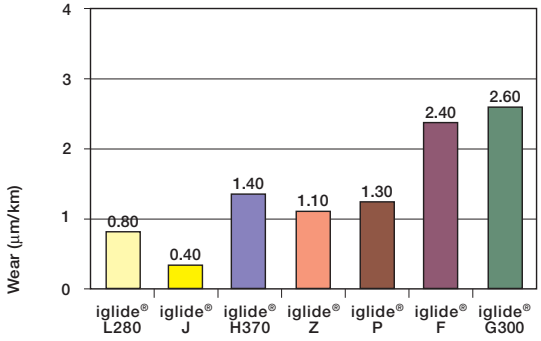
➤ Coefficients of friction, Page 1.8
➤ Wear resistance, Page 1.9



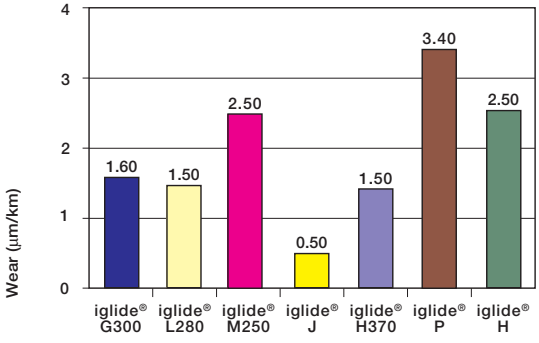
Picture 1.13: Erosion damage due to shafts that are too smooth



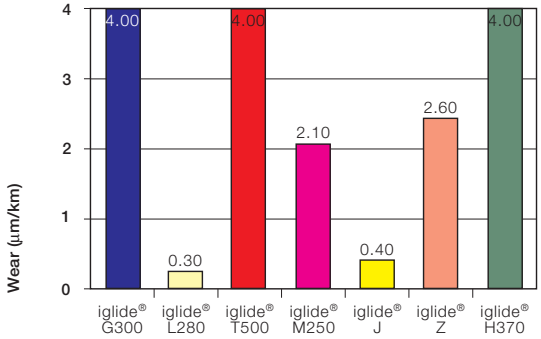
Picture 1.17: Wear experiments with aluminum shafts



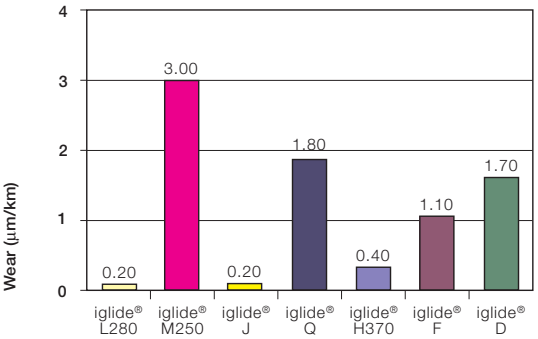
Graph 1.14: Wear with shaft Cold Rolled Steel, p = 108.75 psi, v = 98 fpm, Ra = 8 rms



Graph 1.16: Wear with shaft HR Carbon Steel, p = 108.75 psi, v = 98 fpm Ra = 8 rms



Graph 1.15: Wear with shaft 303 Stainless Steel, p = 108.75 psi, v = 98 fpm Ra = 8 rms



Graph. 1.17: Wear with hard-chromed shaft, p = 108.75 psi, v = 98 fpm, Ra = 8 rms

Shaft Materials (Continued)

The hardness of the shaft also plays an important role. When the shafts are less hard, the shaft is smoothed during the break-in phase. Abrasive points are worn off and the surface is rebuilt. For some materials, this effect has positive influences, and the wear resistance of the plastic bearing increases.

In the following graphs, the most common shaft materials are listed and the iglide® materials that are best suited are compared. For easier understanding, the scaling of the wear axis is the same in all graphs.

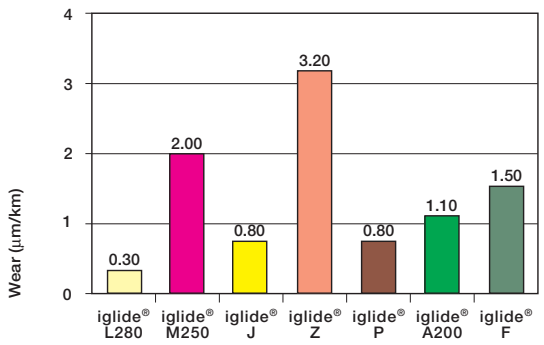
Especially impressive is the small wear results of the systems with hard-chromed shafts. This very hard, but also smooth shaft acts beneficially on the wear behavior in many bearing pairs. The wear of many iglide® plain bearings is lower on this shaft than on any other shafting partner tested. However, it should be pointed out that because of the typically small surface roughness, the danger of stick-slip on hard-chromed shafts is especially high.

Such an overwhelmingly positive influence is not as readily available in the other shaft materials.
For example, with shafts made of 303 Stainless with low loads, good to very good values can be obtained with the right bearing material. However, it must also be stated that no other shaft material produces a larger variance in wear among the bearing materials. For materials such as 303 Stainless Steel, therefore, the selection of suitable bearing materials is especially important.

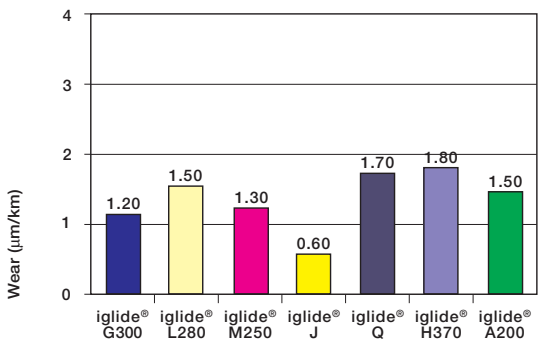
Other soft shaft materials, obtain a slightly different view with different bearing materials. With machining steel, the wear values of the seven best iglide® bearing materials are in a narrow range between 0.6 and 1.8. For many other shafts, the influence of the shaft materials is much larger, resulting in a difference, up to 10 times, between the best and the worst of the bearings tested.

If the shaft that you have chosen for your application is missing in this overview, please call us. The test results give only a sample of the existing data. All of the results given were obtained under the same loads and speeds:

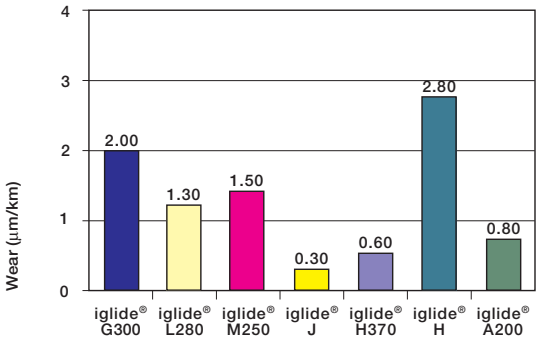
All of the results shown were made with the loads p = 108.75 psi and v = 98 fpm. You can call us for the data for other p x v combinations.



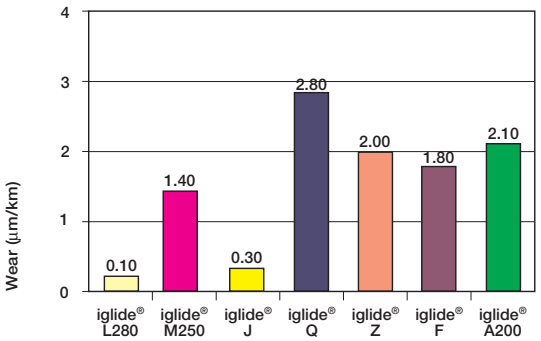
Graph 1.18: Wear with a silver steel shaft, p=108.75 psi, v=98 fpm, Ra=8 rms



Graph 1.20: Wear with a machining steel shaft, p=108.75 psi, v = 98 fpm, Ra = 8 rms



Graph 1.19: Wear with an aluminum shaft, p=108.75 psi, v=98 fpm, Ra=8 rms



Graph 1.21: Wear with shaft X90, p = 108.75 psi, v = 98 fpm, Ra = 8 rms

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Chemical Resistance

iglide® plain bearings can come into contact with many chemicals during their use. This contact can lead to changes of the structural properties. The behavior of plastics toward a certain chemical is dependent on the temperature, the length of exposure, and the type and amount of the mechanical loading. If iglide® plain bearings are resistant against a chemical, they can be used in these media. Sometimes, the surrounding media can even take on the role of a lubricant.

With the most resistant iglide® material, the iglide® T500, the medium can even be hydrochloric acid. All iglide® plain bearings can be used in greatly diluted acids and diluted lyes. Differences can result at higher concentrations or higher temperatures.

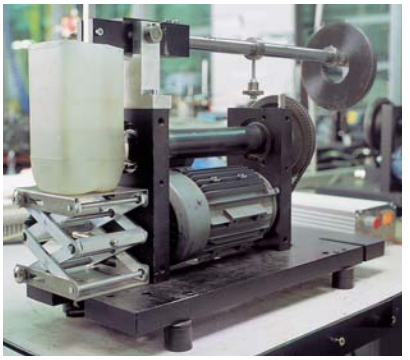
For all iglide® plain bearings, their resistance against traditional lubricants applies in the same way. Therefore plain bearings may also be used lubricated. However, in dirty environments, a traditional lubricant can decrease the wear resistance when compared to running dry.

The following overview should quickly assist you:
If it is not completely clear in a design application which of the different chemicals can occur or in which concentration, plain bearings made out of iglide® T500 should be used. They have the best resistance and are only attacked by a few concentrated acids. You'll find a detailed list of chemical resistances in the rear of the catalog

➤ Chemical resistance, Page 1.16

Material	Diluted Acids	Diluted Lyes	Alcohol	Solvents
iglide® G300	-	+	0	0
iglide® L280	-	+	0	0
iglide® T500	+	+	+	+
iglide® M250	-	0	0	0
iglide® J	0	+	0	0
iglide® Q	0	0	0	0
iglide® H370	+	+	+	+
iglide® H	+	+	+	+
iglide® Z	+	+	+	+
iglide® P	0	0	0	0
iglide® F	0	0	0	0
iglide® A200	-	0	0	0
iglide® R	-	+	0	0
iglide® H2	+	+	+	+
iglide®D	0	+	0	0
iglide® GLW	-	+	0	0

Table 1.8: Chemical resistance



Picture 1.18: Rotational testing stand for underwater and/or chemicals

Use in the Food Industry

For the special requirements made of machines and systems for producing food and pharmaceuticals, the iglide® product line offers two specially developed bearing materials. The material of the iglide® A200 bearing has approval of the FDA.

However, there are also a number of other iglide® materials that can be used without hesitation, since their material contents are physiologically harmless. This applies especially for iglide® M250, iglide® H, iglide® Q, and iglide® L280 and iglide® T500.

For all other iglide® plain bearings, direct contact with food should be avoided.

High-Energy Radiation

A comparison of the resistance to radioactive radiation is shown in the adjacent graph. By a wide margin, iglide® T500 and iglide® Z are the most resistant material.

Material	Radiation resistance
iglide® T500, Z	1 x 10^5 Gy
iglide® A200, M250	1 x 10^4 Gy
iglide® P	5 x 10^2 Gy
iglide® G300, R, J, L280, F, Q, D	3 x 10^2 Gy
iglide® H, H2	2 x 10^2 Gy
H370	

Table 1.9: Comparison of the radiation resistance of iglide® plain bearings

UV Resistance

Plain bearings can be exposed to constant weathering when they are used outside. The UV resistance is an important measure and indicates whether a material is attacked by UV radiation. The effects can extend from slight changes in color to brittleness of the material. A comparison of the materials to each other is shown in the following table. The results show that iglide® plain bearings are suitable for outside use. Only for a few iglide® materials are any changes expected.

Material	Points UV resistance
iglide® G300	+++++
iglide® L280	+++
iglide® T500	+++++
iglide® M250	++++
iglide® J	+++
iglide® Q	++
iglide® H370	+++++
iglide® H	++
iglide® Z	+++++
iglide® P	+++++
iglide® F	+++++
iglide® A200	++++
iglide® R	+++++
iglide® H2	+
iglide® D	+++++

Table 1.10: UV resistance of iglide® plain bearings

Vacuum

iglide® plain bearings can be used in a vacuum to a limited extent. Only a small amount of outgassing takes place. In most iglide® plain bearings, the outgassing does not change the material properties.

Electrical Properties

In the product line of the maintenance-free, self-lubricating iglide® plain bearings, there are both insulating as well as electrically conductive materials. The most important electrical properties are given in detail in the individual material descriptions. The adjacent table compares the most important electrical properties of iglide® plain bearings.

The iglide® plain bearings not mentioned here are electrically insulating. Please observe that for some materials the properties can be changed by the material's absorption of moisture. In experiments, it should be tested whether the desired properties are also stable when the conditions are changing.

Material	Surface resistance (Ω)
iglide® F	1.5 x 10^1
iglide® H	8.8 x 10^1
iglide® H370	2.8 x 10^3
iglide® T500	6.9 x 10^2

Table 1.11: Electrical properties of conductive iglide® plain bearings

iglide® Plain Bearings

Tolerances and Measurement System

The installation dimensions and tolerances of the iglide® plain bearings are a function of the material and wall thicknesses. For each material, the moisture absorption and the thermal expansion are imperative. Plain bearings with low moisture absorption can be obstructed when there is a minimal amount of tolerance. For wall thickness, the rule is: The thicker the bearings are, the larger the tolerances must be.

Thus, different tolerance classes exist for iglide® plain bearings:
Within these tolerances, iglide® plain bearings can operate in the permissible temperature range and in humidity conditions up to 70% according to the installation recommendations. Should higher air moisture levels be present, or the bearing is operated under water, our application advice is available to help you use your bearings correctly.

Dimensions in Microns (1000ths of a mm)

Dimensions	mm	1 / =3		>3 / =6		>6 / = 10		> 10 / = 18		> 18 / = 30		> 30 / = 50		> 50 / = 80	
H 7	mm	+0	+10	+0	+12	+0	+15	+0	+18	+0	+21	+0	+25	+0	+30
E 10	mm	+14	+54	+20	+68	+25	+83	+32	+102	+40	+124	+50	+150	+60	+180
F 10	mm	+6	+46	+10	+58	+13	+71	+16	+86	+20	+104	+25	+125	+30	+150
D 11	mm	+20	+80	+30	+105	+40	+130	+50	+160	+65	+195	+80	+240	+100	+290
f 6	mm	-6	-12	-10	-18	-13	-22	-16	-27	-20	-33	-25	-41	-30	-49
d 13	mm	-20	-160	-30	-210	-40	-260	-50	-320	-65	-395	-80	-470	-100	-560
h 6	mm	-0	-6	-0	-8	-0	-9	-0	-11	-0	-13	-0	-16	-0	-19
h 7	mm	-0	-10	-0	-12	-0	-15	-0	-18	-0	-21	-0	-25	-0	-30
h 9	mm	-0	-25	-0	-30	-0	-36	-0	-43	-0	-52	-0	-62	-0	-74
h 13	mm	-0	-140	-0	-180	-0	-220	-0	-270	-0	-330	-0	-390	-0	-460

Dimensions in inches

Dimensions	inch	0.0393"/=.1181"		>0.1181"/=0.23622"		>0.2362"/=0.3937"		>0.3937"/=.7086"	
H 7	inch	+0.0000	+0.0004	+0.0000	+0.0005	+0.0000	+0.0006	+0.0000	+0.0007
E 10	inch	+0.0006	+0.0021	+0.0008	+0.0027	+0.0010	+0.0033	+0.0013	+0.0040
F 10	inch	+0.0002	+0.0018	+0.0004	+0.0023	+0.0005	+0.0028	+0.0006	+0.0034
D 11	inch	+0.0008	+0.0031	+0.0012	+0.0041	+0.0016	+0.0051	+0.0020	+0.0063
f 6	inch	-0.0002	-0.0005	-0.0004	-0.0007	-0.0005	-0.0009	-0.0006	-0.0011
d 13	inch	-0.0008	-0.0063	-0.0012	-0.0083	-0.0016	-0.0102	-0.0020	-0.0126
h 6	inch	-0.0000	-0.0002	-0.0000	-0.0003	-0.0000	-0.0004	-0.0000	-0.0004
h 7	inch	-0.0000	-0.0004	-0.0000	-0.0005	-0.0000	-0.0006	-0.0000	-0.0007
h 9	inch	-0.0000	-0.0010	-0.0000	-0.0012	-0.0000	-0.0014	-0.0000	-0.0017
h 13	inch	-0.0000	-0.0055	-0.0000	-0.0071	-0.0000	-0.0087	-0.0000	-0.0106

Dimensions	inch	> 0.7086"/=1.18111"		>1.1811"/=1.9685"		>1.9685"/=3.1496"	
H 7	inch	+0.0000	+0.0008	+0.0000	+0.0010	+0.0000	+0.0012
E 10	inch	+0.0016	+0.0049	+0.0020	+0.0059	+0.0024	+0.0071
F 10	inch	+0.0008	+0.0041	+0.0010	+0.0049	+0.0012	+0.0059
D 11	inch	+0.0026	+0.0077	+0.0031	+0.0094	+0.0000	+0.0000
f 6	inch	-0.0008	-0.0013	-0.0010	-0.0016	-0.0012	-0.0019
d 13	inch	-0.0026	-0.0156	-0.0031	-0.0185	0.0000	0.0000
h 6	inch	-0.0000	-0.0005	-0.0000	-0.0006	-0.0000	-0.0007
h 7	inch	-0.0000	-0.0008	-0.0000	-0.0010	-0.0000	-0.0012
h 9	inch	-0.0000	-0.0020	-0.0000	-0.0024	-0.0000	-0.0029
h 13	inch	-0.0000	-0.0130	-0.0000	-0.0154	-0.0000	-0.0181

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Testing Methods

iglide® plain bearings are pressfit bearings for bores set to our recommendations. This pressfitting of the bearing affixes the bearing in the housing, and the inner diameter of the plain bearing is also formed upon pressfit.

The bearing test is performed when the bearing is installed in a bore with the minimum specified dimension; both using an indicating caliper and a Go No-Go gauge.

- the “Go-Side” of the Go-No-Go gauge, pressfit into the bore, must pass easily through the bearing
- With the 3 point probe, the inner diameter of the bearing after pressfit must lie within the prescribed tolerance on the measurement plane, See Figure 3.

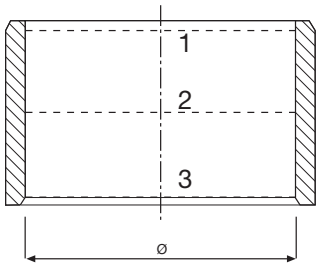


Figure 3: The position of the measurement planes (x=.02 inches)



Picture 1.19: Measurement of the inner diameter of a pressfit plain bearing

Machining

iglide® plain bearings are delivered ready-to-install. The extensive product line makes it possible to use a standard dimension in most cases. If for some reason, a subsequent machining of the plain bearing is necessary, the table above left shows the machining standard values.

The subsequent machining of the bearing surfaces is to be avoided if possible. Higher wear rate is most often the result. An exception is the iglide® M250, which is very suitable for secondary machining. In other iglide® plain bearings, disadvantages of a sliding surface machining can be counteracted by lubrication during installation.

Process	Turning	Boring	Milling
Cutting material	SS	SS	SS
Forward feed (mm)	0.1…0.5	0.1…0.5	to 0.5
Tool orthogonal clearance	5…15	10…12	
Tool orthogonal rake	0…10	3…5	
Cutting speed (m/min)	656…1640	164…328	to 3281

Table 1.12: Guidelines for machining

Installation

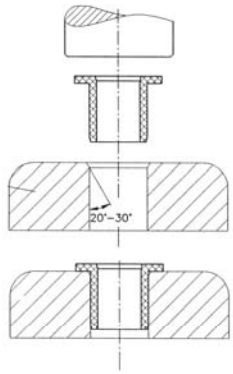
iglide® plain bearings are produced oversized as standard program. The inner diameter adjusts only after being pressfit in the proper housing bore with a recommended tolerance. The before pressfit oversized dimension can be up to 2% of the inner diameter. In this manner, the secure pressfitting of the bearing is achieved. Axial or radial shifts in the housing are also prevented.

The bore in the housing should be finished in the recommended tolerance for all bearings and be smooth, flat, and chamfered when possible.

The installation is done using an arbor press. The use of centering or calibrating pins can cause damage to the bearing and create a larger amount of clearance.



Picture 1.20: The installation



Picture 1.21: Section view: pressfit of the bearing

Adhesion

Adhering of the bearing is normally not necessary. If the pressfit of the bearing could be lost because of high temperatures, the use of a plain bearing having a higher temperature resistance is recommended.

If however, the securing of the bearing by adhesives is planned, individual tests are necessary in each case. The transfer of successful results to other application cases is not possible.

iglide® Plain Bearings - Chemical Resistance Table

Chemicals, iglidur®	A200, C, G, GLW, igumid G, L100, L250, M250, W300	A500, X, UW500	A290, F	T220	Z	P	A180, J200, R, UW	J	D	Q	V400	H H2 H370 H4	PEP	B
Acetaldehyde (aqueous), 40%	o	+	o	x	x	x	+	+	x	o	x	x	o	x
Acetamide (aqueous), 50%	+[1]	+	+[1]	x	x	x	+	+	x	+[1]	x	x	+[1]	x
Acetic acid, 2%	x	+	+[1]	x	+	x	x	x	x	o	+	+	x	–
Acetic acid, 10%	x	+	o	+	+	x	+	o	x	o	+	+	o	–
Acetic acid, 90%	–	o	–	–	+	–	–	–	–	–	+	+	–	–
Acetone	+	+	o	–	+	–	+	+	x	+	+	+	+	x
Acrylnitrile	+	+	+	x	x	x	x	+	x	+	x	x	+	x
Aluminium chloride (aqueous), 10%	o	+	o	+	x	o	o	o	o	o	x	+	o	x
Aluminium cleaner	–	+	–	x	x	x	x	x	–	–	x	o	–	x
Aluminium sulphate (aqueous), 10%	o	+	o	+	+	o	o	o	o	o	x	+	o	x
Allyl alcohol	o	+	o	+	+	x	x	+	x	+	x	+	+	x
Ammonia gas	o	+	o	x	x	x	x	x	x	x	x	+	x	x
Ammonium (aqueous), 10%	+[1]	+	+[1]	x	+	x	+	x	x	o	x	+	x	x
Ammonium carbonate (aqueous), 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	x
Ammonium chloride (aqueous), 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	x
Amyl acetate	+	+	+	x	+	x	x	x	x	+	x	+	x	x
Amyl alcohol	+	+	+	+	o	x	+	+	+	+	x	+	+	x
Aniline (sat'd. aqueous)	o	+	o	x	x	x	o	o	x	o	x	+	o	x
Anisole	+	+	+	x	o	x	x	x	x	+	x	+	x	x
Antimony trichloride (aqueous), 10%	–	+	x	x	x	x	x	x	x	o	x	x	x	–
Barium chloride (aqueous), 10%	o	+	x	+	+	+	+	+	+	+[1]	x	+	+[1]	x
Barium sulphate (aqueous), 10%	o	+	x	+	+	+	+	+	+	+[1]	x	+	+[1]	x
Benzaldehyde	o	+	o	x	x	x	+	o	x	o	x	o	o	x
Benzene	+	+	+	–	+	–	o	o	–	x	x	+	x	–
Benzoic acid (aqueous), 3%	o	+	o	+	+	x	o	o	x	o	x	x	o	x
Benzyl alcohol	o	+	o	x	o	x	+	o	x	o	x	x	o	x
Bitumen	o	+	o	x	+	x	+	o	x	o	x	x	o	x
Bleaching solution	–	+	x	–	+	–	–	–	–	o	x	x	–	–
Bleaching solution (aqueous), 10%	–	+	x	–	+	–	–	–	–	o	x	+	–	–
Boric acid (aqueous), 10%	o	+	x	–	+	–	+	+	–	+[1]	x	x	+[1]	x
Brake fluid	o	+	x	x	+	x	o	o	x	+	+	+	o	x
Brandy vinegar	o	+	o	x	+	x	x	o	x	o	x	+	o	x
Bromine (aqueous), 25%	–	+	–	x	o	–	–	–	–	–	x	–	–	–
Butanol	+	+	+	+	o	x	+	+	x	+	x	+	+	–
Butter	+	+	+	+	+	x	+	+	x	+	x	+	+	o
Butyl acetate	+	+	o	o	+	o	+	o	x	o	x	+	o	x
Butylglycol	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Butyric acid	o	+	o	+	+	x	+	x	x	x	x	+	x	x
Butyrolactone	o	+	x	x	+	x	x	x	x	o	x	x	x	x
Calcium chloride (sat'd. solution)	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	x
Camphor	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Carbon disulphide	+	+	+	x	x	x	x	+	x	+	x	+	+	x
Carbon tetrachloride	+	+	+	–	o	–	o	o	x	+	x	o	o	x
Carnallite (aqueous)	x	+	+	x	+	x	x	x	x	+	x	x	x	x
Catechol	o	+	o	x	+	x	x	x	x	o	x	x	x	x
Caustic soda (aqueous), 50%	o	+	o	x	+	x	x	o	x	x	x	x	x	x
Chlorinated hydrocarbon	+	+	+	x	o	–	x	x	–	+	x	+	x	x
Chlorine gas	–	–	x	–	x	–	–	–	–	–	+	–	–	–
Chlorine water (sat'd. solution)	–	+	x	–	o	–	–	–	–	o	+	x	–	–
Chloroacetic acid (aqueous), 10%	–	+	x	–	x	–	–	–	–	–	x	x	–	–
Chlorobenzene	o	+	+	–	+	–	o	+	–	+	x	+	+	–
Chlorobromomethane, 98%	o	+	o	x	x	x	x	x	x	o	x	x	x	x
Chloroform	–	+	o	x	o	–	–	–	–	–	x	o	–	x
Chlorosulphuric acid (aqueous)	–	–	o	x	+	x	–	x	x	o	x	–	x	x

Resistance classification: **+** resistant; **o** conditionally resistant; **–** not resistant; **x** no data available

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Chromic acid, 10%	o	+	o	o	o	–	–	–	–	–	+	–	–	x
Chromic acid (aqueous), 1%	–	+	o	x	o	x	o	o	x	o	+	–	o	x
Citric acid (aqueous), 10%	+[1]	+	+[1]	+	+	x	+	+	x	o	x	+	o	x
Citric acid (conc. solution)	o	+	o	x	+	x	x	o	x	–	x	o	–	x
Cooking fat	+	+	+	x	+	x	x	+	x	+	x	+	+	o
Cooking oils	+	+	+	x	+	x	x	+	x	+	x	+	+	o
Copper sulphate (sat'd. solution)	o	+	o	x	+	x	x	o	x	o	x	+	o	x
Copper sulphate, 0.5%	o	+	o	x	+	x	+	+	+	o	x	+	o	x
Cresol	–	+	–	x	+	x	x	x	x	–	x	+	x	x
Cyclohexane	+	+	+	+	+	–	+	+	–	+	x	+	+	–
Cyclohexanol	o	+	o	x	+	x	+	o	x	o	x	+	o	x
Decahydronaphthalene	+	+	+	o	+	–	+	+	–	+	x	+	+	–
Dibutyl phthalate	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Dichloroethylene	x	+	x	x	+	–	–	o	–	x	x	+	x	x
Diesel	+	+	+	+	+	x	+	+	x	+	x	+	+	–
Diesel oil	+	+	x	x	+	x	x	+	x	+	x	+	+	–
Diethylether	o	+	+	x	+	x	o	+	x	+	x	x	+	x
Dimethylformamide	+	+	+	+	+	x	+	+	x	+	+	+	+	x
Dioctyl phthalate	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Dioxane	+	+	+	+	+	x	o	o	x	+	x	+	o	x
Ethanol (aqueous), 96%	o	+	o	–	o	–	+	o	+	o	+	+	o	o
Ethyl acetate	+	+	+	–	+	–	+	+	x	+	x	x	+	x
Ethylene chloride	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Ethylene diamine	+	+	+	x	+	x	+	+	x	+	+	o	+	x
Ethylene glycol (aqueous), 95%	o	+	o	+	+	x	+	+	x	o	+	+	o	x
Fat, cooking fat	+	+	+	x	+	x	x	+	x	+	x	+	+	o
Ferrous chloride (aqueous), 5%	o	x	o	x	+	x	+	x	x	o	x	+	x	x
Ferrous chloride (aqueous), 10%	o	+	o	x	x	x	x	x	x	o	x	x	x	x
Ferrous chloride (sat'd. aqueous)	o	x	o	x	+	x	+	x	x	o	x	+	x	x
Ferrous sulfide, 10%	o	+	o	x	+	x	x	x	x	o	x	x	x	x
Fluorinated hydrocarbons	+	+	x	x	o	x	x	+	x	+	x	+	+	x
Formaldehyde (aqueous), 30%	+[1]	+	+[1]	+	+	x	+	+	x	+[1]	x	+	+[1]	x
Formamide	o	+	o	x	+	x	+	+	x	o	x	x	o	x
Formic acid (aqueous), 2%	–	o	x	+	+	o	o	–	–	–	x	+	–	–
Formic acid, 90%	–	x	–	x	x	–	–	–	–	–	x	o	–	–
Furfurol	o	+	x	+	+	x	+	+	x	+	x	+	+	x
Fusel oil	+	+	+	x	+	x	x	x	x	+	x	+	x	–
Gear oil by Esso	o	+	o	x	+	–	–	–	–	+	+	+	–	–
Glycerine	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Glycol	o	+	o	+	+	x	+	o	x	o	x	+	o	x
Heating oil	+	+	+	+	+	x	+	+	x	+	x	+	+	–
Heptane	+	+	+	+	+	–	+	+	–	+	x	+	+	–
Hexane	+	+	+	+	+	–	+	+	–	+	+	+	+	–
Hydraulic oils	+	+	+	x	+	x	+	+	x	+	x	+	+	–
Hydrobromic acid, 10%	–	+	x	o	+	–	–	–	–	x	x	o	–	–
Hydrochloric acid, 2%	–	o	x	–	+	–	o	–	–	o	+	o	–	–
Hydrochloric acid, 10%	–	+	–	o	+	–	–	–	–	–	+	–	–	–
Hydrochloride (aqueous)	o	–	o	x	x	x	x	x	x	o	x	x	x	x
Hydrofluoric acid (aqueous), 4%	–	+	–	–	x	–	–	–	–	–	–	–	–	–
Hydrogen peroxide, 1%	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+	+[1]	x
Hydrogen peroxide, 30%	–	+	–	x	x	x	–	o	–	–	x	–	–	–
Hydrogen sulphide (sat'd. solution)	+[1]	+	x	x	+	x	x	x	x	+[1]	x	+	x	x
Hydroquinone	–	+	x	+	+	x	x	x	x	o	x	x	x	–
Indian Ink	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+	+[1]	x

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Chemicals, iglidur®	A200, C, G300, GLW, igumid G, L100, L250, M250, L280	A500, T500, UW500	A290, F	T220	Z	P	A180, J200, R, UW	J	D	Q	V400	H H2 H370 H4	PEP	B
Ink, colour	+[1]	+	+[1]	+	+	x	+	+	x	+[1]	x	+	+[1]	x
Iodine tincture, 3%	–	+	x	x	+	x	x	x	x	o	x	+	x	–
Iron-III-chloride (aqueous), acidic	–	x	x	x	+	–	–	–	–	o	x	+	–	–
Iron-III-chloride (aqueous), neutral, 10%	+[1]	o	o	x	+	x	o	o	o	x	x	+	x	x
Iron-II-cyanide, 30%	o	+	x	x	+	x	x	x	x	x	x	x	x	x
Iron-III-cyanide, 30%	o	x	o	x	+	x	x	x	x	x	x	x	x	x
Isooctane	+	+	+	+	+	–	+	+	–	+	x	+	+	–
Isopropyl alcohol	+	+	+	+	o	x	+	+	x	o	x	+	o	x
Isopropyl ether	+	+	+	x	+	x	x	x	x	+	x	x	x	x
Lead acetate (aqueous), 10%	o	+	o	x	+	x	+	+	+	o	x	x	o	x
Lead oxide (fine dust)	x	x	x	x	+	x	x	–	–	x	x	x	–	x
Lead stearate	+	+	+	x	+	x	x	x	x	+	x	+	x	x
Linseed oil	+	+	+	+	+	x	+	+	x	+	x	+	+	–
Lithium bromide (aqueous), 50%	o	+	o	x	+	x	x	+	x	o	x	x	o	x
Magnesium chloride (aqueous), 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	+
Magnesium hydroxide (aqueous)	+[1]	+	+[1]	x	+	x	x	+	x	x[1]	x	+	x[1]	x
Maleic acid (conc. solution)	–	+	x	x	+	x	x	x	x	o	x	+	x	–
Malonic acid (conc. solution)	o	+	o	x	+	x	x	x	x	o	x	+	x	x
Manganese sulphate (aqueous), 10%	o	+	o	x	+	x	x	x	x	o	x	+	x	x
Mercuric chloride, 6%	–	+	–	x	x	x	x	–	x	–	x	o	–	–
Mercury	+	+	+	x	+	x	o	o	x	+	x	+	o	x
Methanol	o	+	o	+	o	x	+	+	+	o	x	o	o	+
Methyl acetate	+	+	+	o	+	o	o	o	x	+	x	+	o	x
Methycyclohexane	–	+	x	x	x	x	x	x	x	x	x	+	x	x
Methylene chloride	o	x	o	–	o	–	o	o	–	o	+	+	o	x
Methyl-ethyl-ketone	+	+	+	–	+	–	o	o	x	+	x	+	o	x
Milk	+[1]	+	+[1]	+	+	x	+	+	+	+[1]	x	+	+[1]	x
Milk acid (Lactic acid), 90%	o	+	o	x	+	x	+	x	x	o	x	+	x	x
Mineral fertiliser, dry	x	+	o	x	+	x	x	x	x	+	x	+	x	x
Mineral fertiliser, moist	x	+	–	x	+	x	x	x	x	o	x	+	x	x
Mineral oil	+	+	+	+	+	x	+	+	x	+	+	+	+	–
Molykote lubricating grease	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Naphthalene	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Nitric acid (aqueous), 0.1%	–	+	x	x	+	–	x	o	–	o	+	–	o	–
Nitric acid (aqueous), 0.5%	–	+	–	x	+	–	–	–	–	–	+	–	–	–
Nitrobenzene	o	+	o	+	x	–	o	o	–	o	+	o	o	x
Nitrogen fertiliser, dry (white)	x	+	+	x	+	x	x	x	x	+	x	x	x	x
Nitrogen fertiliser, moisture saturated (white)	x	+	+	x	+	x	x	x	x	+	x	x	x	x
Nitromethane	o	+	o	x	+	–	x	x	–	x	x	o	x	x
Nut oil	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Oil, cooking oil	+	+	+	+	+	x	+	+	x	+	x	+	+	o
Oil, lubricating oil	+	+	+	x	+	x	x	+	x	+	x	+	+	–
Oleic acid	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Oleum (oil)	–	–	–	–	o	–	–	–	–	–	x	–	–	–
Olive oil	+	+	+	+	+	x	+	+	x	+	x	+	+	o
Oxalic acid (aqueous), 10%	o	+	o	+	+	x	x	x	x	o	x	x	x	x
Ozone	–	+	x	–	+	–	–	–	–	o	x	–	–	–
Paraffin oil	+	+	+	+	+	–	+	+	–	+	x	+	+	–
Perchloric acid, 10%	x	+	o	x	+	x	x	x	x	o	x	x	x	x
Perchloroethene	o	+	o	x	+	o	x	o	x	o	x	+	o	x
Petrol	o	+	o	+	+	–	+	o	–	o	+	+	o	–
Petroleum ether	+	+	+	+	+	–	+	+	–	+	x	+	+	x
Phenol, 75%	–	o	–	–	+	–	–	–	–	–	x	+	–	–

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Phenol (aqueous), 6%	–	x	x	–	+	–	–	–	–	–	x	+	–	–
Phenol, molten	–	x	–	–	+	–	–	–	–	–	x	–	–	–
Phenylethyl alcohol	o	+	x	x	o	x	x	x	x	+	x	+	x	x
Phosphoric acid (aqueous), 0.3%	o	+	x	+	+	–	+	+	–	o	x	o	o	x
Phosphoric acid (aqueous), 3%	o	+	x	+	+	–	+	+	–	o	x	o	o	x
Phosphoric acid (aqueous), 10%	–	+	–	+	+	–	+	–	–	–	x	–	–	x
Phthalic acid (conc. solution)	o	+	o	+	+	x	+	x	x	o	x	o	x	x
Polyester resin (with styrene)	+	+	+	x	+	x	o	+	x	+	x	+	+	x
Potash	+	+	+	x	+	x	x	x	x	+	x	+	x	x
Potassium acetate (aqueous), 50%	x	+	+	x	+	x	x	x	x	+	x	+	x	x
Potassium bichromate (aqueous), 5%	o	+	o	x	+	x	x	o	x	o	x	x	o	x
Potassium bromide (aqueous), 10%	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+[1]	+	x
Potassium carbonate (aqueous), 60%	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+[1]	+	x
Potassium chloride (aqueous), 90%	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+[1]	+	x
Potassium hydroxide solution, 10%	+[1]	+	+[1]	x	+	x	x	o	x	x	x	+	x	x
Potassium hydroxide solution, 20%	o	+	o	x	+	x	x	–	x	x	x	+	–	x
Potassium nitrate (aqueous), 10%	+[1]	+	+[1]	+	+	x	+	+	+	+[1]	x	+[1]	+	+
Potassium permanganate (aqueous), 1%	–	+	x	+	+	x	+	x	x	o	x	–	x	–
Potassium silicate (aqueous)	+[1]	+	+[1]	x	+	x	x	x	x	+[1]	x	x[1]	x	x
Potassium sulphate (sat'd. solution)	+[1]	+	+[1]	x	+	x	x	+	+	+[1]	x	+[1]	+	x
Propane gas	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Propanol	+	+	+	+	o	x	+	+	x	+	x	o	+	x
Pyrocatechol (aqueous), 6%	–	+	x	x	+	x	x	x	x	x	x	x	x	–
Pyridine	+	+	+	x	+	x	o	o	x	+	x	+	o	x
Resorcin	–	+	–	x	x	x	x	–	x	–	x	o	–	–
Salicylic acid	+	+	+	o	+	–	–	–	–	+	x	+	–	x
Sebum	+	+	+	x	+	–	o	+	–	+	x	+	+	–
Silicon hydrogen fluoride, 10%	x	+	o	x	x	x	x	–	x	o	x	x	–	x
Silicone oils	+	+	+	x	+	x	x	+	x	+	+	+	+	x
Silver nitrate	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+	+[1]	x
Soap solutions	+[1]	+	+[1]	+	+	x	+	+	x	+[1]	x	+	+[1]	x
Soda ash solution, 10%	+[1]	+	+[1]	+	+	x	+	+	x	+[1]	x	+	+[1]	x
Sodium acetate (aqueous), 46.5%	+[1]	+	+[1]	x	+	x	x	x	x	+[1]	x	+	x	x
Sodium bicarbonate solution, 10%	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Sodium bisulphate (aqueous), 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	x
Sodium bromide (aqueous), 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	+
Sodium carbonate, 5%	+[1]	+	+[1]	x	+	x	x	x	x	+[1]	x	+	x	x
Sodium carbonate (aqueous), 21.5%	+[1]	+	+[1]	x	+	x	x	x	x	+[1]	x	+	x	x
Sodium carbonate (aqueous), 50%	+[1]	+	+[1]	x	+	x	x	x	x	+[1]	x	+	x	x
Sodium chloride (sat'd. solution)	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	+
Sodium hydroxide solution, 10%	–	+	x	–	+	–	+	o	–	o	+	+	o	–
Sodium hypochlorite	o	+	o	x	x	x	o	o	x	o	x	o	o	x
Sodium nitrate (aqueous), 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	+
Sodium sulphate, 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	+
Sodium sulphite, neutral, 2%	+[1]	+	+[1]	x	+	x	x	o	o	+[1]	x	+	o	x
Sodium thiosulphate, 10%	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	x	+	+[1]	x
Styrene	+	+	+	x	+	–	o	+	–	+	x	+	+	–
Sulphur	+	+	+	+	+	x	+	+	x	+	x	+	+	x
Sulphur acid, 2%	–	+	x	+	+	–	–	–	–	o	+	–	–	–
Sulphur acid, 10%	–	+	–	o	+	–	–	–	–	–	+	–	–	–
Sulphuric acid (conc.), 98%	–	–	–	–	o	–	–	–	–	–	–	–	–	–
Tar	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Tartaric acid	o	+	x	x	+	x	x	+	x	+	x	+	+	x
Tetrahydrofurane (solvent)	+	+	+	x	+	x	–	o	x	+	+	+	o	x

Resistance classification: **+** resistant; **o** conditionally resistant; **–** not resistant; **x** no data available

[1] The bearings are not chemically attacked by these substances. However, there may be a dimensional change due to moisture absorption.

iglide® Plain Bearings - Chemical Resistance Table - Troubleshooting Guide

Chemicals, iglidur®	A200, C, G300, GLW, igumid G, L100, L250, M250, L280	A500, T500, UW500	A290, F	T220	Z	P	A180, J200, R, UW	J	D	Q	V400	H H2 H370 H4	PEP	B
Tetraline	+	+	+	+	+	–	+	+	–	+	x	+	+	x
Thionyl chloride	o	+	o	x	x	x	–	x	x	o	x	x	x	x
Toluene	+	+	+	x	+	–	o	+	–	+	+	+	+	–
Transformer oil	+	+	+	+	+	x	+	+	x	+	x	+	+	–
Trichloroethylene	o	+	o	x	+	–	o	–	–	o	x	o	–	x
Triethanolamine, 90%	+[1]	+	+[1]	+	+	x	+	+	x	+[1]	x	+	+[1]	x
Trisodiumphosphate, 90%	+[1]	+	+[1]	x	+	x	x	x	x	+[1]	x	+	x	x
Urea	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Vaseline	o	+	+	x	+	x	o	+	x	+	x	+	+	o
Vinyl chloride	+	+	+	x	x	–	x	+	–	+	x	+	+	x
Violet oil	+	+	+	x	+	x	x	+	x	+	x	+	+	x
“Washing machine cleaner (Phosphoric acid and nitric acid)”	o	+	o	+	+	x	+	–	x	o	x	+	–	x
Water – sea, river, and spring water	+[1]	+	+[1]	+	+	+	+	+	+	+[1]	+	+	+[1]	o
Water-glass	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+	+[1]	x
Water vapour	–	+	x	–	+	–	x	x	x	o	o	+	x	–
Wax, molten	+	+	+	x	+	x	x	+	x	+	x	+	+	x
White spirit	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Wine	+[1]	+	+[1]	+	+	x	+	+	x	+[1]	x	+	+[1]	x
Xylene	o	+	+	o	+	–	o	+	–	+	x	+	+	x
Zinc chloride (aqueous), 10%	o	+	o	x	+	x	+	+	+	–	x	+	–	x
Zinc oxide	+	+	+	x	+	x	x	+	x	+	x	+	+	x
Zinc sulphate (aqueous), 10%	+[1]	+	+[1]	x	+	x	x	+	x	+[1]	x	+	+[1]	x

Resistance classification: **+** resistant; **o** conditionally resistant; **–** not resistant; **x** no data available

[1] The bearings are not chemically attacked by these substances. However, there may be a dimensional change due to moisture absorption.

The data was determined using laboratory specimens or based on comparisons with similar chemicals. Therefore, this data can only act as a reference. The chemical resistance of actual parts should be tested under application conditions. All data given concerns the chemical resistance at room temperature. Other temperatures may lead to different classifications of the chemical resistance. The data is based on our current knowledge. Future discoveries may lead to changes in the classification of the chemical resistance.

Troubleshooting

In spite of careful manufacturing and assembly of the bearings, variances and questions regarding the recommended installation dimensions and tolerances can result.
For this reason, we have compiled a list of the most frequent reasons for variance. In many cases, with this troubleshooter, the reasons for the variances can be found quickly.

Symptom	Action/Solution
Bearing is oversized before pressfit	Check dimensions only after pressfit
Removal of material when pressed into housing	Add chamfer to housing bore, check bore size
Bearing is over/under sized after pressfit	Check housing bore dimension, check housing bore material Softer
	bore materials (plastic, aluminum can expand upon pressfit
Operating Clearances are too large/small	Check ID of bearing after press, housing bore, shaft diameter
Bearing noise/squeak	Check shaft surface finish/ Possibly roughen shaft
Bearing wears, material deposits on shaft	Operating clearance may be too small/ Increase clearance
Chattering noise	Operating clearance too large, excessive speed/Reduce speed and operating clearance
Shaft wear	Shaft material too soft/ Change shaft material or hardness, switch
	to alternative iglide material
Bearing seizes on shaft	Operating clearances too small, temperature or moisture may be causing materlal expansion
Loss of pressfit	Bearings overheated/ Axial secure bearing into housing or select alternative material grade

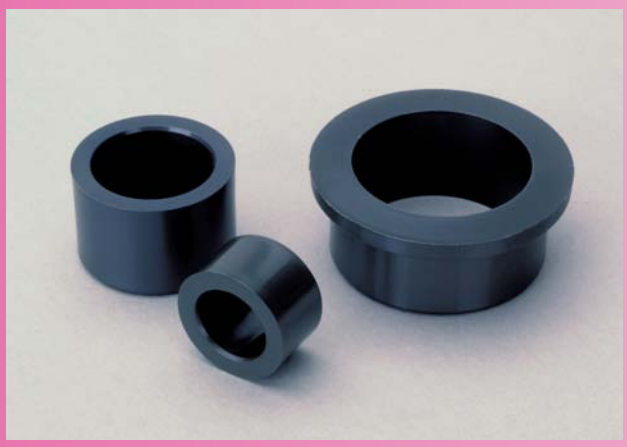
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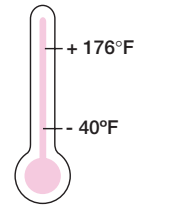
iglide® M250
Thick and Rugged

- Excellent vibration dampening
- Resistant to edge loading
- High impact resistance
- Thick walled according to DIN 1850
- Dirt can become embedded for shaft protection



iglide® M250 - Plain Bearings

Price Index



3 Styles
More than 600 Dimensions
Inner Diameters
From 1/8 - 2-1/4 in. (1 - 75 mm)

Structure of the Part Number:

M S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust Washer)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material

When to use the iglide® M250 plain bearing:

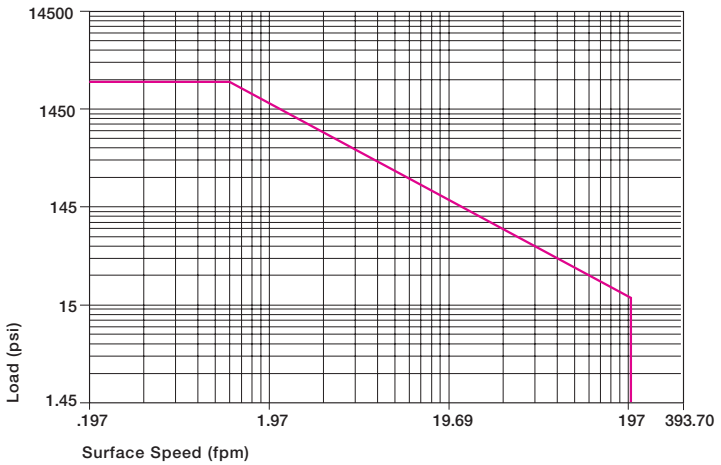
- When the bearings are exposed to high amounts of dirt
- When high vibration dampening is necessary
- For low to average speeds
- For edge loads
- When mechanical reaming of the ID is necessary

When not to use the iglide® M250 plain bearing:

- When very high precision is necessary
  ➤ iglide® P
- For very smooth shafts
  ➤ iglide® J
- When high moisture is present
  ➤ iglide® R

Table 2.1 - Material Table

General Properties	Unit	iglide® M250	Testing Method
Density	g/cm³	1.14	
Color		charcoal	
Max. moisture absorption at 73°F / 50% r.h.	% weight	1.4	DIN 53495
Max. moisture absorption	% weight	7.6	
Coefficient of friction, dynamic against steel	µ	0.1 - 0.3	
p x v value, max. (dry)	psi x fpm	3,400	
Mechanical Properties			
Modulus of elasticity	psi	121,500	DIN 53457
Tensile strength at 68°F	psi	16,240	DIN 53452
Compressive strength	psi	7,540	
Permissible static surface pressure (68°F)	psi	2,901	
Shore D-hardness		79	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	176	
Max. application temperature, short-term	°F	338	
Min. application temperature	°F	-40	
Thermal conductivity	W/m x K	0.24	ASTM C 177
Coefficient of thermal expansion	$K^{-1} \times 10^{-5}$	10	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{13}$	DIN IEC 93
Surface resistance	Ω	$> 10^{11}$	DIN 53482



Graph 2.1: Permissible p x v value for iglide® M250 running dry against a steel shaft, at 68°F

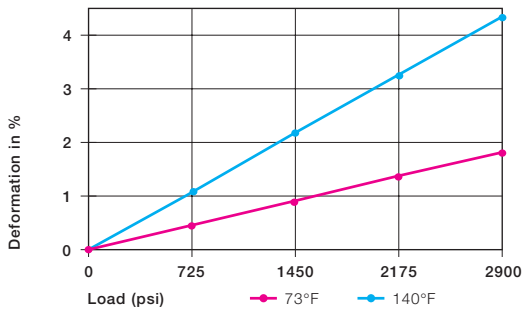
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The self-lubricating plain bearings made of iglide® M250 are defined by their impact strength, vibration dampening, and wear resistant properties. They excel in applications in which vibration dampening is necessary, for example, in fitness and packaging machines. Since they are additionally able to absorb dirt, they are also suited for agricultural machines and garden appliances.

Compressive Strength

iglide® M250 plain bearings can withstand radial loads of a maximum 2900 psi. The material deformation is below 2% at room temperature. Compared with other iglide® materials, iglide® M250 bearings are highly elastic. By this elasticity, they are able to yield very well, but retain their original shape again. Plastic deformation is minimal up to the permissible surface pressure.

➤Compressive Strength, Page 1.3



Graph 2.2: Deformation under load and temperature

Permissible Surface Speeds

iglide® M250 is manufactured standard as a thick walled bearing. iglide® M250 is best suited for low to medium surface speeds. The maximum permissible speed for dry running applications is 157 fpm (rotating) or 393 fpm (linear).

➤ Surface Speed, Page 1.5
➤ P x V value, Page 1.6

fpm	Rotating	Oscillating	Linear
Continuous	157	118	492
Short-term	393	275	984

Table 2.2: Maximum surface speeds

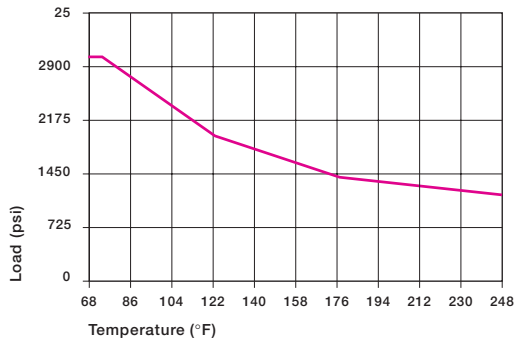
Temperatures

The maximum permissible short-term temperature is 338°F. However, iglide® M250 plain bearings may only be exposed to this temperature without any additional load. The long-term permissible application temperature is 176°F. This is also the location of the wear limit, i.e. the temperature at which the wear increases exponentially.

➤ Applications Temperatures, Page 1.7

iglide® M250	Application Temperature
Minimum	- 40°F
Max. long-term	+ 176°F
Max. short-term	+ 338°F

Table 2.3: Temperature limits for iglide® M250



Graph 2.3: Recommended maximum permissible static surface pressure of iglide® M250 as a result of the temperature

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iglide® M250 - Plain Bearings

Installation Tolerances

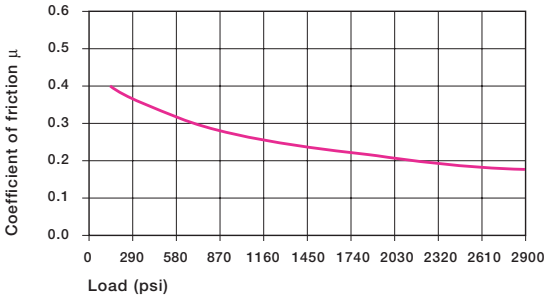
iglide® M250 plain bearings require a relatively large amount of clearance for optimal operation. This ensures that the bearing remains reliable during temperature expansion and water absorption.
This clearance, which would not be acceptable for a metallic plain bearing, allows for the iglide® M250 to reveal its best qualities, such as wear resistance and maintenance-free operation. The disadvantages of the clearance are minimized by the vibration dampening properties. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

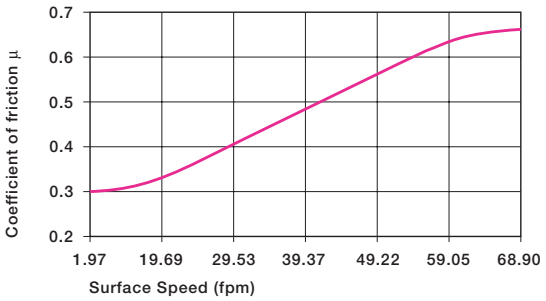
Friction and Wear

The coefficient of friction μ of a plain bearing is among other things, influenced by the surface speed and the load. If the load stays constant, then the coefficient of friction increases with increasing speed (see Graph 2.4).
On the other hand, an increase in the load at constant speed can result in a reduction in the coefficient of friction (see Graph 2.5).
Friction and wear are also greatly dependent on the surface of the shaft. If you observe the coefficient of friction, then the most favorable shaft finish for iglide® M250 bearings is Ra = 24 rms.

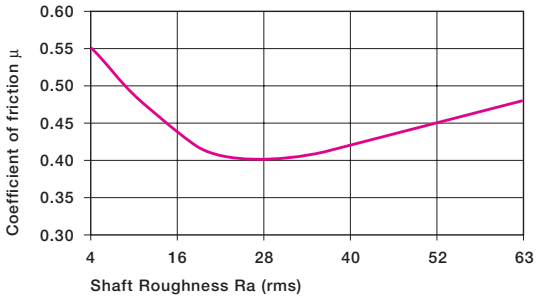
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9



Graph 2.5: Coefficient of friction of iglide® M250 as a result of the load, v = 1.97 fpm



Graph 2.4: Coefficient of friction of iglide® M250 as a result of the surface speed; p = 108 psi



Graph 2.6: Coefficient of friction for iglide® M250 as a result of the shaft surface (shaft Cold Rolled Steel)

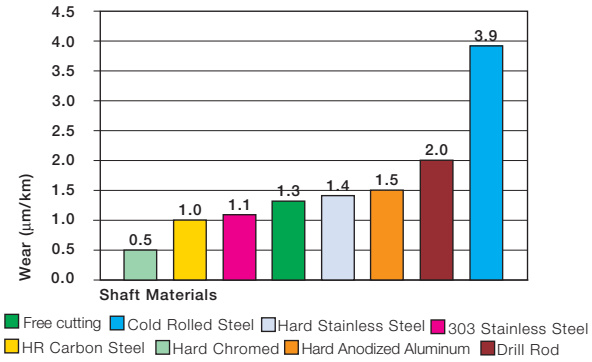
iglide® R	Dry	Grease	Oil	Water
Coefficient of Friction μ	0.18 - 0.40	0.09	0.04	0.04

Table: Coefficients of friction iglide® M250 against steel (Ra = 40 rms, 50 HRC)

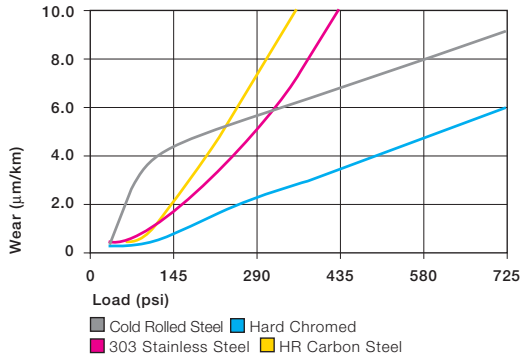
Shaft Materials

Graph 2.7 to 2.9 show results of testing different shaft materials with plain bearings made of iglide® M250.
Up to loads of 290 psi, the shaft material plays a relatively small role for rotational movements. Graph 2.7 best illustrates which shaft materials are best suited for smaller loads.
If the load increases, the wear of a bearing clearly increases. Therefore, a suitable shaft material must be considered for higher loads. These are hardened shafts, such as, for example, Cold Rolled Steel or hard-chromed shafts.
Graph 2.9 makes it clear that iglide® M250 is considerably better for rotational than for oscillating operation. However, it must be mentioned that in oscillating movements, often the vibrations that act on the bearings are especially high. Here, iglide® M250 can utilize its special dampening properties. In our test, these vibrations are excluded so that the comparison between rotation and oscillating operation is captured first.

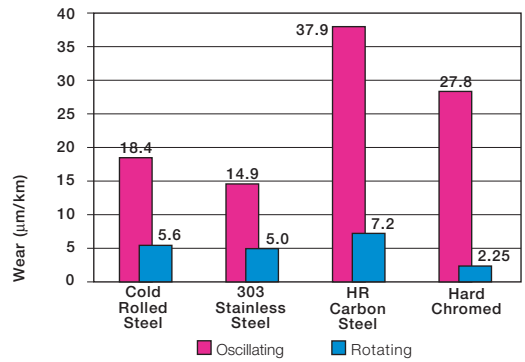
➤ Shaft Materials, Page 1.11



Graph 2.7: Wear for iglide® M250, rotating with different shaft materials, p = 108 psi, v=98 fpm



Graph 2.8: Wear of iglide® M250 with different shaft materials in rotational operation



Graph 2.9: Wear for oscillating and rotating applications with different shaft materials at p = 290 psi

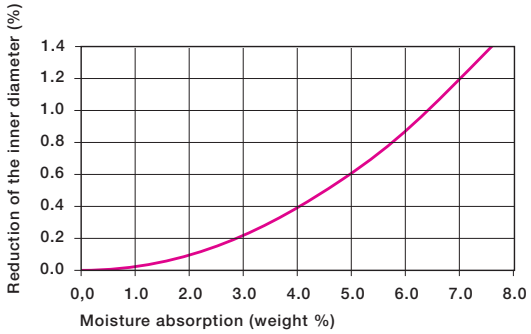
Chemical Resistance

iglide® M250s plain bearings have a good resistance to chemicals. They are resistant to most lubricants. They are not affected by most weak organic and inorganic acids
The moisture absorption of iglide® M250 plain bearings is approximately 1.4% in standard atmosphere. The saturation limit in water is 7.5%. This must be taken into account along with other applicable conditions.

➤ Chemical Resistance, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Resistant
Strong acids	Conditionally Resistant
Weak lyes	Resistant
Strong lyes	Conditionally Resistant

Table 2.5: Chemical resistance iglide® M250



Graph 2.10: Effect of moisture absorption on iglide® M250 plain bearings

iglide® M250 - Plain Bearings

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Radiation Resistance

Plain bearings made from iglide® M250 can be used conditionally under radioactive radiation. They are resistant to radiation up to a radiation intensity of 1000 Gy.

UV Resistance

iglide® M250 plain bearings are permanently resistant to UV radiation.

Vacuum

In a vacuum environment, the iglide® M250 plain bearing releases moisture as vapor. The relatively high moisture absorption of the bearing allows only limited use in the vacuum.

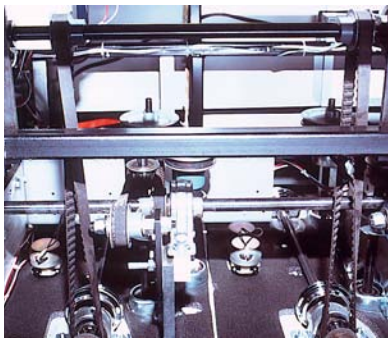
Electrical Properties

iglide® M250 plain bearings are electrically insulating.

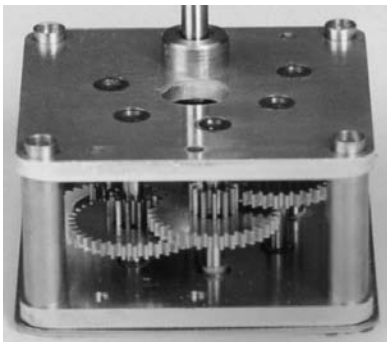
iglide® M250	
Specific volume resistance	> 10^{13} Ωcm
Surface resistance	> 10^{11} Ω

Table 2.6: Electrical properties of iglide® M250

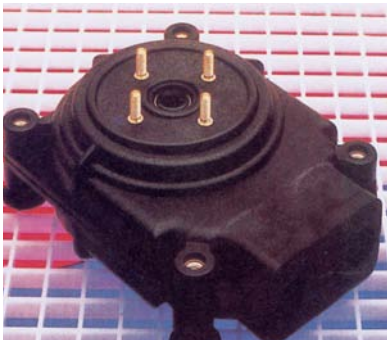
Application Examples



Picture 2.1: Paper dust in this mail sorting device always led to an early malfunction of the previous bearings used. Problem solved.



Picture 2.2: Precision mechanical gears need plain bearings with especially universal properties



Picture 2.3: In this analytical pump, sewage water is tested with chemicals and floating particles



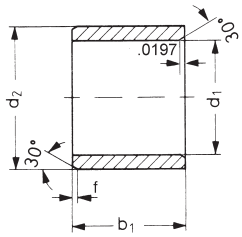
Picture 2.4: Corrosion resistance and vibration dampening are reasons for using M250 as a wheel bearing in lawn mowers



Picture 2.5: iglide® M250 in agricultural machines: dirt, weather, impact stress, and edge loading are factors

iglide® M250 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

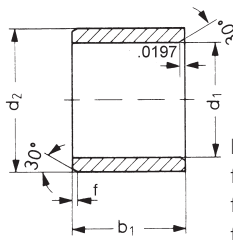
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
MSI-0203-02	1/8	3/16	1/8	.1280	.1262	.1880	.1875	.1250	.1241
MSI-0203-04	1/8	3/16	1/4	.1280	.1262	.1880	.1875	.1250	.1241
MSI-0204-02	1/8	1/4	1/8	.1280	.1262	.2515	.2510	.1250	.1241
MSI-0204-03	1/8	1/4	3/16	.1280	.1262	.2515	.2510	.1250	.1241
MSI-0204-04	1/8	1/4	1/4	.1280	.1262	.2515	.2510	.1250	.1241
MSI-0204-06	1/8	1/4	3/8	.1280	.1262	.2515	.2510	.1250	.1241
MSI-0304-04	3/16	1/4	1/4	.1905	.1887	.2515	.2510	.1875	.1866
MSI-0304-06	3/16	1/4	3/8	.1905	.1887	.2515	.2510	.1875	.1866
MSI-0304-08	3/16	1/4	1/2	.1905	.1887	.2515	.2510	.1875	.1866
MSI-0305-02	3/16	5/16	1/8	.1905	.1887	.3140	.3135	.1875	.1866
MSI-0305-03	3/16	5/16	3/16	.1905	.1887	.3140	.3135	.1875	.1866
MSI-0305-04	3/16	5/16	1/4	.1905	.1887	.3140	.3135	.1875	.1866
MSI-0305-05	3/16	5/16	5/16	.1905	.1887	.3140	.3135	.1875	.1866
MSI-0305-06	3/16	5/16	3/8	.1905	.1887	.3140	.3135	.1875	.1866
MSI-0305-08	3/16	5/16	1/2	.1905	.1887	.3140	.3135	.1875	.1866
MSI-0405-03	1/4	5/16	3/16	.2539	.2516	.3140	.3135	.2500	.2491
MSI-0405-04	1/4	5/16	1/4	.2539	.2516	.3140	.3135	.2500	.2491
MSI-0405-06	1/4	5/16	3/8	.2539	.2516	.3140	.3135	.2500	.2491
MSI-0405-08	1/4	5/16	1/2	.2539	.2516	.3140	.3135	.2500	.2491
MSI-0406-02	1/4	3/8	1/8	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0406-03	1/4	3/8	3/16	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0406-04	1/4	3/8	1/4	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0406-05	1/4	3/8	5/16	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0406-06	1/4	3/8	3/8	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0406-08	1/4	3/8	1/2	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0406-10	1/4	3/8	5/8	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0406-12	1/4	3/8	3/4	.2539	.2516	.3765	.3760	.2500	.2491
MSI-0506-03	5/16	3/8	3/16	.3164	.3141	.3765	.3760	.3125	.3116
MSI-0506-04	5/16	3/8	1/4	.3164	.3141	.3765	.3760	.3125	.3116
MSI-0506-06	5/16	3/8	3/8	.3164	.3141	.3765	.3760	.3125	.3116
MSI-0506-08	5/16	3/8	1/2	.3164	.3141	.3765	.3760	.3125	.3116
MSI-0507-03	5/16	7/16	3/16	.3164	.3141	.4390	.4385	.3125	.3116
MSI-0507-04	5/16	7/16	1/4	.3164	.3141	.4390	.4385	.3125	.3116
MSI-0507-05	5/16	7/16	5/16	.3164	.3141	.4390	.4385	.3125	.3116
MSI-0507-06	5/16	7/16	3/8	.3164	.3141	.4390	.4385	.3125	.3116
MSI-0507-08	5/16	7/16	1/2	.3164	.3141	.4390	.4385	.3125	.3116
MSI-0507-10	5/16	7/16	5/8	.3164	.3141	.4390	.4385	.3125	.3116
MSI-0507-12	5/16	7/16	3/4	.3164	.3141	.4390	.4385	.3125	.3116
MSI-0607-04	3/8	7/16	1/4	.3789	.3766	.4390	.4385	.3750	.3741
MSI-0607-06	3/8	7/16	3/8	.3789	.3766	.4390	.4385	.3750	.3741
MSI-0607-08	3/8	7/16	1/2	.3789	.3766	.4390	.4385	.3750	.3741

iglide® M250 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

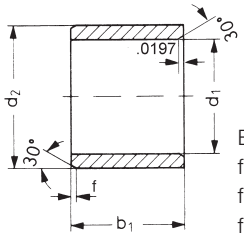
Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
MSI-0608-03	3/8	1/2	3/16	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0608-04	3/8	1/2	1/4	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0608-05	3/8	1/2	5/16	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0608-06	3/8	1/2	3/8	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0608-08	3/8	1/2	1/2	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0608-10	3/8	1/2	5/8	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0608-12	3/8	1/2	3/4	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0608-16	3/8	1/2	1	.3789	.3766	.5015	.5010	.3750	.3741
MSI-0709-06	7/16	9/16	3/8	.4422	.4395	.5635	.5625	.4375	.4365
MSI-0709-08	7/16	9/16	1/2	.4422	.4395	.5635	.5625	.4375	.4365
MSI-0810-04	1/2	5/8	1/4	.5047	.5020	.6260	.6250	.5000	.4990
MSI-0810-05	1/2	5/8	5/16	.5047	.5020	.6260	.6250	.5000	.4990
MSI-0810-06	1/2	5/8	3/8	.5047	.5020	.6260	.6250	.5000	.4990
MSI-0810-08	1/2	5/8	1/2	.5047	.5020	.6260	.6250	.5000	.4990
MSI-0810-10	1/2	5/8	5/8	.5047	.5020	.6260	.6250	.5000	.4990
MSI-0810-12	1/2	5/8	3/4	.5047	.5020	.6260	.6250	.5000	.4990
MSI-0810-16	1/2	5/8	1	.5047	.5020	.6260	.6250	.5000	.4990
MSI-1012-04	5/8	3/4	1/4	.6297	.6270	.7510	.7500	.6250	.6240
MSI-1012-06	5/8	3/4	3/8	.6297	.6270	.7510	.7500	.6250	.6240
MSI-1012-08	5/8	3/4	1/2	.6297	.6270	.7510	.7500	.6250	.6240
MSI-1012-10	5/8	3/4	5/8	.6297	.6270	.7510	.7500	.6250	.6240
MSI-1012-12	5/8	3/4	3/4	.6297	.6270	.7510	.7500	.6250	.6240
MSI-1012-16	5/8	3/4	1	.6297	.6270	.7510	.7500	.6250	.6240
MSI-1012-26	5/8	3/4	15/8	.6297	.6270	.7510	.7500	.6250	.6240
MSI-1013-06	5/8	13/16	3/8	.6297	.6270	.8135	.8125	.6250	.6240
MSI-1013-08	5/8	13/16	1/2	.6297	.6270	.8135	.8125	.6250	.6240
MSI-1013-10	5/8	13/16	5/8	.6297	.6270	.8135	.8125	.6250	.6240
MSI-1013-12	5/8	13/16	3/4	.6297	.6270	.8135	.8125	.6250	.6240
MSI-1013-16	5/8	13/16	1	.6297	.6270	.8135	.8125	.6250	.6240
MSI-1113-12	11/16	13/16	3/4	.6921	.6894	.8135	.8125	.6875	.6865
MSI-1113-14	11/16	13/16	7/8	.6921	.6894	.8135	.8125	.6875	.6865
MSI-1113-16	11/16	13/16	1	.6921	.6894	.8135	.8125	.6875	.6865
MSI-1214-06	3/4	7/8	3/8	.7559	.7525	.8760	.8750	.7500	.7490
MSI-1214-12	3/4	7/8	3/4	.7559	.7525	.8760	.8750	.7500	.7490
MSI-1214-16	3/4	7/8	1	.7559	.7525	.8760	.8750	.7500	.7490
MSI-1214-24	3/4	7/8	11/2	.7559	.7525	.8760	.8750	.7500	.7490
MSI-1216-06	3/4	1	3/8	.7559	.7525	1.0010	1.0000	.7500	.7490
MSI-1216-08	3/4	1	1/2	.7559	.7525	1.0010	1.0000	.7500	.7490
MSI-1216-10	3/4	1	5/8	.7559	.7525	1.0010	1.0000	.7500	.7490
MSI-1216-12	3/4	1	3/4	.7559	.7525	1.0010	1.0000	.7500	.7490
MSI-1216-16	3/4	1	1	.7559	.7525	1.0010	1.0000	.7500	.7490
MSI-1216-20	3/4	1	1 1/4	.7559	.7525	1.0010	1.0000	.7500	.7490

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® M250 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

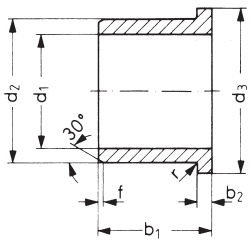
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
MSI-1216-24	3/4	1	1 1/2	.7559	.7525	1.0010	1.0000	.7500	.7490
MSI-1316-08	13/16	1	1/2	.8184	.8151	1.0010	1.0000	.8126	.8116
MSI-1416-12	7/8	1	3/4	.8809	.8775	1.0010	1.0000	.8750	.8740
MSI-1416-16	7/8	1	1	.8809	.8775	1.0010	1.0000	.8750	.8740
MSI-1416-24	7/8	1	1 1/2	.8809	.8775	1.0010	1.0000	.8750	.8740
MSI-1418-08	7/8	1 1/8	1/2	.8809	.8775	1.1260	1.1250	.8750	.8740
MSI-1418-12	7/8	1 1/8	3/4	.8809	.8775	1.1260	1.1250	.8750	.8740
MSI-1418-16	7/8	1 1/8	1	.8809	.8775	1.1260	1.1250	.8750	.8740
MSI-1418-24	7/8	1 1/8	11/2	.8809	.8775	1.1260	1.1250	.8750	.8740
MSI-1618-12	1	1 1/8	3/4	1.0059	1.0025	1.1260	1.1250	1.0000	.9990
MSI-1618-16	1	1 1/8	1	1.0059	1.0025	1.1260	1.1250	1.0000	.9990
MSI-1618-24	1	1 1/8	1 1/2	1.0059	1.0025	1.1260	1.1250	1.0000	.9990
MSI-1620-08	1	1 1/4	1/2	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MSI-1620-10	1	1 1/4	5/8	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MSI-1620-12	1	1 1/4	3/4	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MSI-1620-16	1	1 1/4	1	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MSI-1620-24	1	1 1/4	1 1/2	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MSI-1620-32	1	1 1/4	2	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MSI-1822-16	1 1/8	1 3/8	1	1.1309	1.1275	1.3760	1.3750	1.1250	1.1240
MSI-1822-24	1 1/8	1 3/8	1 1/2	1.1309	1.1275	1.3760	1.3750	1.1250	1.1240
MSI-2024-12	1 1/4	1 1/2	3/4	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MSI-2024-16	1 1/4	1 1/2	1	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MSI-2024-22	1 1/4	1 1/2	1 3/8	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MSI-2024-24	1 1/4	1 1/2	1 1/2	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MSI-2024-40	1 1/4	1 1/2	2 1/2	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MSI-2226-16	1 3/8	1 5/8	1	1.3844	1.3782	1.6255	1.6245	1.3750	1.3740
MSI-2428-12	1 1/2	1 3/4	3/4	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
MSI-2428-16	1 1/2	1 3/4	1	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
MSI-2428-24	1 1/2	1 3/4	1 1/2	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
MSI-2428-40	1 1/2	1 3/4	2 1/2	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
MSI-2630-16	1 5/8	1 7/8	1	1.6350	1.6282	1.8755	1.8745	1.6250	1.6240
MSI-2832-08	1 3/4	2	1/2	1.7594	1.7531	2.0005	1.9995	1.7500	1.7490
MSI-2832-12	1 3/4	2	3/4	1.7594	1.7531	2.0005	1.9995	1.7500	1.7490
MSI-2832-16	1 3/4	2	1	1.7594	1.7531	2.0005	1.9995	1.7500	1.7490
MSI-2832-24	1 3/4	2	1 1/2	1.7594	1.7531	2.0005	1.9995	1.7500	1.7490
MSI-2832-40	1 3/4	2	2 1/2	1.7594	1.7531	2.0005	1.9995	1.7500	1.7490
MSI-3236-16	2	2 1/4	1	2.0100	2.0032	2.2505	2.2495	2.0000	1.9990
MSI-3236-24	2	2 1/4	1 1/2	2.0100	2.0032	2.2505	2.2495	2.0000	1.9990
MSI-3236-32	2	2 1/4	2	2.0100	2.0032	2.2505	2.2495	2.0000	1.9990
MSI-3236-40	2	2 1/4	2 1/2	2.0100	2.0032	2.2505	2.2495	2.0000	1.9990
MSI-4852-16	3	3 1/4	1	3.0114	3.0039	3.2505	3.2495	3.0000	2.9990

iglide® M250 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

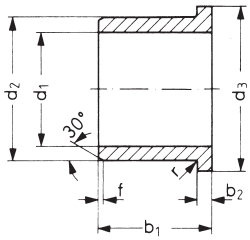
Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
MFI-0203-02	1/8	3/16	1/8	.3125	.032	.1280	.1262	.1885	.1880	.1250	.1241
MFI-0203-04	1/8	3/16	1/4	.3125	.032	.1280	.1262	.1885	.1880	.1250	.1241
MFI-0204-02	1/8	1/4	1/8	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
MFI-0204-03	1/8	1/4	3/16	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
MFI-0204-04	1/8	1/4	1/4	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
MFI-0204-06	1/8	1/4	3/8	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
MFI-0204-12	1/8	1/4	3/4	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
MFI-0304-04	3/16	1/4	1/4	.375	.032	.1905	.1887	.2515	.2510	.1875	.1866
MFI-0304-06	3/16	1/4	3/8	.375	.032	.1905	.1887	.2515	.2510	.1875	.1866
MFI-0304-08	3/16	1/4	1/2	.375	.032	.1905	.1887	.2515	.2510	.1875	.1866
MFI-0305-03	3/16	5/16	3/16	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
MFI-0305-04	3/16	5/16	1/4	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
MFI-0305-05	3/16	5/16	5/16	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
MFI-0305-06	3/16	5/16	3/8	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
MFI-0305-08	3/16	5/16	1/2	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
MFI-0405-02	1/4	5/16	1/8	.4375	.032	.2539	.2516	.3140	.3135	.2500	.2491
MFI-0405-03	1/4	5/16	3/16	.4375	.032	.2539	.2516	.3140	.3135	.2500	.2491
MFI-0405-04	1/4	5/16	1/4	.4375	.032	.2539	.2516	.3140	.3135	.2500	.2491
MFI-0405-06	1/4	5/16	3/8	.4375	.032	.2539	.2516	.3140	.3135	.2500	.2491
MFI-0405-07	1/4	5/16	7/16	.4375	.032	.2539	.2516	.3140	.3135	.2500	.2491
MFI-0405-08	1/4	5/16	1/2	.4375	.032	.2539	.2516	.3140	.3135	.2500	.2491
MFI-0405-12	1/4	5/16	3/4	.4375	.032	.2539	.2516	.3140	.3135	.2500	.2491
MFI-0406-02	1/4	3/8	1/8	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0406-03	1/4	3/8	3/16	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0406-04	1/4	3/8	1/4	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0406-05	1/4	3/8	5/16	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0406-06	1/4	3/8	3/8	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0406-08	1/4	3/8	1/2	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0406-10	1/4	3/8	5/8	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0406-12	1/4	3/8	3/4	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
MFI-0506-02	5/16	3/8	1/8	.500	.032	.3164	.3141	.3765	.3760	.3125	.3116
MFI-0506-04	5/16	3/8	1/4	.500	.032	.3164	.3141	.3765	.3760	.3125	.3116
MFI-0506-06	5/16	3/8	3/8	.500	.032	.3164	.3141	.3765	.3760	.3125	.3116
MFI-0506-08	5/16	3/8	1/2	.500	.032	.3164	.3141	.3765	.3760	.3125	.3116
MFI-0506-15	5/16	3/8	15/16	.500	.032	.3164	.3141	.3765	.3760	.3125	.3116
MFI-0507-03	5/16	7/16	3/16	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
MFI-0507-04	5/16	7/16	1/4	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
MFI-0507-05	5/16	7/16	5/16	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
MFI-0507-06	5/16	7/16	3/8	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
MFI-0507-08	5/16	7/16	1/2	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
MFI-0507-10	5/16	7/16	5/8	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
MFI-0507-12	5/16	7/16	3/4	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116

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iglide® M250 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

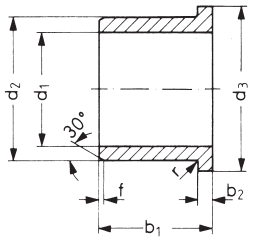
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
MFI-0607-04	3/8	7/16	1/4	.5625	.032	.3789	.3766	.4390	.4385	.3750	.3741
MFI-0607-06	3/8	7/16	3/8	.5625	.032	.3789	.3766	.4390	.4385	.3750	.3741
MFI-0607-08	3/8	7/16	1/2	.5625	.032	.3789	.3766	.4390	.4385	.3750	.3741
MFI-0608-02	3/8	1/2	1/8	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-03	3/8	1/2	3/16	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-04	3/8	1/2	1/4	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-05	3/8	1/2	5/16	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-06	3/8	1/2	3/8	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-08	3/8	1/2	1/2	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-10	3/8	1/2	5/8	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-12	3/8	1/2	3/4	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-16	3/8	1/2	1	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0608-17.5	3/8	1/2	1 3/32	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
MFI-0709-06	7/16	9/16	3/8	.687	.062	.4422	.4395	.5635	.5625	.4375	.4365
MFI-0709-08	7/16	9/16	1/2	.687	.062	.4422	.4395	.5635	.5625	.4375	.4365
MFI-0810-02	1/2	5/8	1/8	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-0810-04	1/2	5/8	1/4	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-0810-05	1/2	5/8	5/16	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-0810-06	1/2	5/8	3/8	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-0810-08	1/2	5/8	1/2	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-0810-10	1/2	5/8	5/8	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-0810-12	1/2	5/8	3/4	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-0810-16	1/2	5/8	1	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
MFI-1012-06	5/8	3/4	3/8	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
MFI-1012-08	5/8	3/4	1/2	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
MFI-1012-10	5/8	3/4	5/8	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
MFI-1012-12	5/8	3/4	3/4	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
MFI-1012-16	5/8	3/4	1	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
MFI-1012-24	5/8	3/4	1 1/2	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
MFI-1013-08	5/8	13/16	1/2	1.063	.156	.6297	.6270	.8135	.8125	.6250	.6240
MFI-1013-10	5/8	13/16	5/8	1.063	.156	.6297	.6270	.8135	.8125	.6250	.6240
MFI-1013-12	5/8	13/16	3/4	1.063	.156	.6297	.6270	.8135	.8125	.6250	.6240
MFI-1013-16	5/8	13/16	1	1.063	.156	.6297	.6270	.8135	.8125	.6250	.6240
MFI-1214-06	3/4	7/8	3/8	1.125	.062	.7559	.7525	.8760	.8750	.7500	.7490
MFI-1214-08	3/4	7/8	1/2	1.125	.062	.7559	.7525	.8760	.8750	.7500	.7490
MFI-1214-12	3/4	7/8	3/4	1.125	.062	.7559	.7525	.8760	.8750	.7500	.7490
MFI-1214-16	3/4	7/8	1	1.125	.062	.7559	.7525	.8760	.8750	.7500	.7490
MFI-1214-24	3/4	7/8	1 1/2	1.125	.062	.7559	.7525	.8760	.8750	.7500	.7490
MFI-1216-08	3/4	1	1/2	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
MFI-1216-10	3/4	1	5/8	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
MFI-1216-12	3/4	1	3/4	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
MFI-1216-16	3/4	1	1	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490

iglide® M250 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

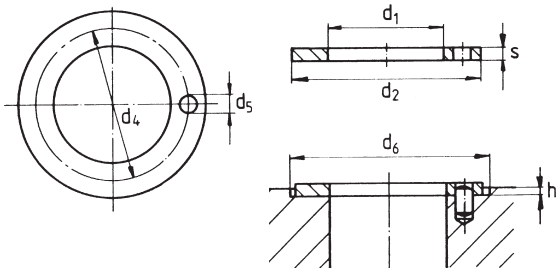
Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
MFI-1216-24	3/4	1	1 1/2	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
MFI-1216-32	3/4	1	2	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
MFI-1416-12	7/8	1	3/4	1.250	.062	.8809	.8775	1.0010	1.0000	.8750	.8740
MFI-1416-16	7/8	1	1	1.250	.062	.8809	.8775	1.0010	1.0000	.8750	.8740
MFI-1416-24	7/8	1	1 1/2	1.250	.062	.8809	.8775	1.0010	1.0000	.8750	.8740
MFI-1418-08	7/8	1 1/8	1/2	1.375	.156	.8809	.8775	1.1260	1.1250	.8750	.8740
MFI-1418-12	7/8	1 1/8	3/4	1.375	.156	.8809	.8775	1.1260	1.1250	.8750	.8740
MFI-1418-16	7/8	1 1/8	1	1.375	.156	.8809	.8775	1.1260	1.1250	.8750	.8740
MFI-1418-24	7/8	1 1/8	1 1/2	1.375	.156	.8809	.8775	1.1260	1.1250	.8750	.8740
MFI-1618-03	1	1 1/8	3/16	1.375	.062	1.0059	1.0025	1.1260	1.1250	1.0000	.9990
MFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0059	1.0025	1.1260	1.1250	1.0000	.9990
MFI-1618-16	1	1 1/8	1	1.375	.062	1.0059	1.0025	1.1260	1.1250	1.0000	.9990
MFI-1618-24	1	1 1/8	1 1/2	1.375	.062	1.0059	1.0025	1.1260	1.1250	1.0000	.9990
MFI-1620-08	1	1 1/4	1/2	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MFI-1620-10	1	1 1/4	5/8	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MFI-1620-12	1	1 1/4	3/4	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MFI-1620-16	1	1 1/4	1	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MFI-1620-24	1	1 1/4	1 1/2	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
MFI-2024-07	1 1/4	1 1/2	7/16	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MFI-2024-12	1 1/4	1 1/2	3/4	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MFI-2024-16	1 1/4	1 1/2	1	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MFI-2024-24	1 1/4	1 1/2	1 1/2	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
MFI-2226-12	1 3/8	1 5/8	3/4	1.875	.125	1.3781	1.3759	1.6255	1.6245	1.3750	1.3740
MFI-2226-16	1 3/8	1 5/8	1	1.875	.125	1.3781	1.3759	1.6255	1.6245	1.3750	1.3740
MFI-2428-12	1 1/2	1 3/4	3/4	2.000	.125	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
MFI-2428-16	1 1/2	1 3/4	1	2.000	.125	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
MFI-2428-24	1 1/2	1 3/4	1 1/2	2.000	.125	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
MFI-2630-16	1 5/8	1 7/8	1	2.125	.125	1.6350	1.6282	1.8755	1.8745	1.6250	1.6240
MFI-2832-12	1 3/4	2	3/4	2.250	.125	1.7595	1.7531	2.0005	1.9995	1.7500	1.7490
MFI-2832-16	1 3/4	2	1	2.250	.125	1.7595	1.7531	2.0005	1.9995	1.7500	1.7490
MFI-2832-24	1 3/4	2	1 1/2	2.250	.125	1.7595	1.7531	2.0005	1.9995	1.7500	1.7490
MFI-3236-16	2	2 1/4	1	2.500	.125	2.0100	2.0032	2.2500	2.2512	2.0000	1.9990
MFI-3236-24	2	2 1/4	1 1/2	2.500	.125	2.0100	2.0032	2.2500	2.2512	2.0000	1.9990
MFI-3236-32	2	2 1/4	2	2.500	.125	2.0100	2.0032	2.2500	2.2512	2.0000	1.9990

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iglide® M250 - Thrust Washer, Inch

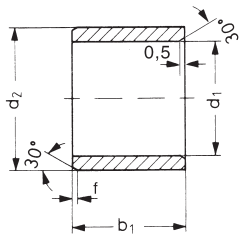




Part Number	d1(nominal)	d1		d2		s
		Max.	Min.	Max.	Min.	
MTI-04	1/4	.2609	.2550	.6200	.6094	.0900
MTI-05	5/16	.3271	.3189	.6874	.6767	.0900
MTI-06	3/8	.3850	.3780	.7409	.7394	.0900
MTI-08	1/2	.5101	.5030	.8200	.8070	.0900
MTI-10	5/8	.6371	.6300	1.0000	.9870	.0940
MTI-12	3/4	.7675	.7600	1.0630	1.0500	.0940
MTI-16	1	1.0200	1.0100	1.5000	1.4843	.1250
MTI-20	1 1/4	1.2998	1.2900	2.1400	2.1220	.0980
MTI-24	1 1/2	1.6000	1.5500	2.6000	2.5500	.1250

iglide® M250 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

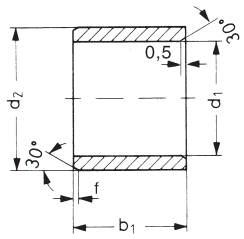
Part Number	d1	d1-Tolerance After Pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
MSM-0103-02	1.0	+0.020 +0.080	3.0	2.0	1.080	1.020	3.080	3.000	1.000	.975
MSM-0104-02	1.5	+0.020 +0.080	4.0	2.0	1.580	1.520	4.012	4.000	1.500	1.475
MSM-0205-01	2.0	+0.020 +0.080	5.0	1.0	2.080	2.020	5.012	5.000	2.000	1.975
MSM-0205-02	2.0	+0.020 +0.080	5.0	2.0	2.080	2.020	5.012	5.000	2.000	1.975
MSM-0205-03	2.0	+0.020 +0.080	5.0	3.0	2.080	2.020	5.012	5.000	2.000	1.975
MSM-0206-03	2.5	+0.020 +0.080	6.0	3.0	2.580	2.520	6.012	6.000	2.500	2.475
MSM-0305-03	3.0	+0.020 +0.080	5.0	3.0	3.080	3.020	5.012	5.000	3.000	2.975
MSM-0305-04	3.0	+0.020 +0.080	5.0	4.0	3.080	3.020	5.012	5.000	3.000	2.975
MSM-0306-03	3.0	+0.020 +0.080	6.0	3.0	3.080	3.020	6.012	6.000	3.000	2.975
MSM-0306-04	3.0	+0.020 +0.080	6.0	4.0	3.080	3.020	6.012	6.000	3.000	2.975
MSM-0407-03	4.0	+0.030 +0.105	7.0	3.0	4.105	4.030	7.015	7.000	4.000	3.970
MSM-0407-04	4.0	+0.030 +0.105	7.0	4.0	4.105	4.030	7.015	7.000	4.000	3.970
MSM-0407-06	4.0	+0.030 +0.105	7.0	6.0	4.105	4.030	7.015	7.000	4.000	3.970
MSM-0408-04	4.0	+0.030 +0.105	8.0	4.0	4.105	4.030	8.015	8.000	4.000	3.970
MSM-0408-06	4.0	+0.030 +0.105	8.0	6.0	4.105	4.030	8.015	8.000	4.000	3.970
MSM-0508-04	5.0	+0.030 +0.105	8.0	4.0	5.105	5.030	8.015	8.000	5.000	4.970
MSM-0508-05	5.0	+0.030 +0.105	8.0	5.0	5.105	5.030	8.015	8.000	5.000	4.970
MSM-0508-08	5.0	+0.030 +0.105	8.0	8.0	5.105	5.030	8.015	8.000	5.000	4.970
MSM-0509-05	5.0	+0.030 +0.105	9.0	5.0	5.105	5.030	9.015	9.000	5.000	4.970
MSM-0509-08	5.0	+0.030 +0.105	9.0	8.0	5.105	5.030	9.015	9.000	5.000	4.970
MSM-0608-10	6.0	+0.030 +0.105	8.0	10.0	6.105	6.030	8.015	8.000	6.000	5.970
MSM-0609-06	6.0	+0.030 +0.105	9.0	6.0	6.105	6.030	9.015	9.000	6.000	5.970
MSM-0610-02	6.0	+0.030 +0.105	10.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
MSM-0610-04	6.0	+0.030 +0.105	10.0	4.0	6.105	6.030	10.015	10.000	6.000	5.970
MSM-0610-06	6.0	+0.030 +0.105	10.0	6.0	6.105	6.030	10.015	10.000	6.000	5.970
MSM-0610-08	6.0	+0.030 +0.105	10.0	8.0	6.105	6.030	10.015	10.000	6.000	5.970
MSM-0610-10	6.0	+0.030 +0.105	10.0	10.0	6.105	6.030	10.015	10.000	6.000	5.970
MSM-0611-04	6.0	+0.030 +0.105	11.0	4.0	6.105	6.030	11.018	11.000	6..000	5.970
MSM-0612-06	6.0	+0.030 +0.105	12.0	6.0	6.105	6.030	12.018	12.000	6.000	5.970
MSM-0612-10	6.0	+0.030 +0.105	12.0	10.0	6.105	6.030	12.018	12.000	6.000	5.970
MSM-0710-05	7.0	+0.040 +0.13	10.0	5.0	7.130	7.040	10.015	10.000	7.000	6.964
MSM-0710-08	7.0	+0.040 +0.130	10.0	8.0	7.130	7.040	10.015	10.000	7.000	6.964
MSM-0710-10	7.0	+0.040 +0.130	10.0	10.0	7.130	7.040	10.015	10.000	7.000	6.964
MSM-0711-16	7.0	+0.040 +0.130	11.0	16.0	7.130	7.040	10.015	10.000	7.000	6.964
MSM-0810-06	8.0	+0.040 +0.130	10.0	6.0	8.130	8.040	10.015	10.000	8.000	7.964
MSM-0810-08	8.0	+0.040 +0.130	10.0	8.0	8.130	8.040	10.015	10.000	8.000	7.964
MSM-0810-10	8.0	+0.040 +0.130	10.0	10.0	8.130	8.040	10.015	10.000	8.000	7.964
MSM-0811-06	8.0	+0.040 +0.130	11.0	6.0	8.130	8.040	10.015	10.000	8.000	7.964
MSM-0811-08	8.0	+0.040 +0.130	11.0	8.0	8.130	8.040	10.015	10.000	8.000	7.964
MSM-0811-12	8.0	+0.040 +0.130	11.0	12.0	8.130	8.040	10.015	10.000	8.000	7.964
MSM-0812-04	8.0	+0.040 +0.130	12.0	4.0	8.130	8.040	12.018	12.000	8.000	7.964
MSM-0812-06	8.0	+0.040 +0.130	12.0	6.0	8.130	8.040	12.018	12.000	8.000	7.964

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iglide® M250 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

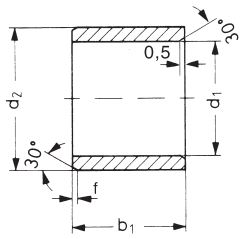
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
MSM-0812-08	8.0	+0.040 +0.130	12.0	8.0	8.130	8.040	12.018	12.000	8.000	7.964
MSM-0812-10	8.0	+0.040 +0.130	12.0	10.0	8.130	8.040	12.018	12.000	8.000	7.964
MSM-0812-12	8.0	+0.040 +0.130	12.0	12.0	8.130	8.040	12.018	12.000	8.000	7.964
MSM-0814-06	8.0	+0.040 +0.130	14.0	6.0	8.130	8.040	14.018	14.000	8.000	7.964
MSM-0814-10	8.0	+0.040 +0.130	14.0	10.0	8.130	8.040	14.018	14.000	8.000	7.964
MSM-0912-14	9.0	+0.040 +0.130	12.0	14.0	9.130	9.040	12.018	12.000	9.000	8.964
MSM-1014-06	10.0	+0.040 +0.130	14.0	6.0	10.130	10.040	14.018	14.000	10.000	9.964
MSM-1014-08	10.0	+0.040 +0.130	14.0	8.0	10.130	10.040	14.018	14.000	10.000	9.964
MSM-1014-10	10.0	+0.040 +0.130	14.0	10.0	10.130	10.040	14.018	14.000	10.000	9.964
MSM-1014-16	10.0	+0.040 +0.130	14.0	16.0	10.130	10.040	14.018	14.000	10.000	9.964
MSM-1016-06	10.0	+0.040 +0.130	16.0	6.0	10.130	10.040	16.018	16.000	10.000	9.964
MSM-1016-08	10.0	+0.040 +0.130	16.0	8.0	10.130	10.040	16.018	16.000	10.000	9.964
MSM-1016-10	10.0	+0.040 +0.130	16.0	10.0	10.130	10.040	16.018	16.000	10.000	9.964
MSM-1016-16	10.0	+0.040 +0.130	16.0	16.0	10.130	10.040	16.018	16.000	10.000	9.964
MSM-1016-50	10.0	+0.040 +0.130	16.0	50.0	10.130	10.040	16.018	16.000	10.000	9.964
MSM-1214-15	12.0	+0.050 +0.160	14.0	15.0	12.160	12.050	14.018	14.000	12.000	11.957
MSM-1214-20	12.0	+0.050 +0.160	14.0	20.0	12.160	12.050	14.018	14.000	12.000	11.957
MSM-1216-15	12.0	+0.050 +0.160	16.0	15.0	12.160	12.050	16.018	16.000	12.000	11.957
MSM-1216-20	12.0	+0.050 +0.160	16.0	20.0	12.160	12.050	16.018	16.000	12.000	11.957
MSM-1218-08	12.0	+0.050 +0.160	18.0	8.0	12.160	12.050	18.018	18.000	12.000	11.957
MSM-1218-10	12.0	+0.050 +0.160	18.0	10.0	12.160	12.050	18.018	18.000	12.000	11.957
MSM-1218-15	12.0	+0.050 +0.160	18.0	15.0	12.160	12.050	18.018	18.000	12.000	11.957
MSM-1218-20	12.0	+0.050 +0.160	18.0	20.0	12.160	12.050	18.018	18.000	12.000	11.957
MSM-1416-085	14.0	+0.050 +0.160	16.0	8.5	14.160	14.050	16.018	16.000	14.000	13.957
MSM-1416-10	14.0	+0.050 +0.160	16.0	10.0	14.160	14.050	16.018	16.000	14.000	13.957
MSM-1416-15	14.0	+0.050 +0.160	16.0	15.0	14.160	14.050	16.018	16.000	14.000	13.957
MSM-1416-20	14.0	+0.050 +0.160	16.0	20.0	14.160	14.050	16.018	16.000	14.000	13.957
MSM-1416-29	14.0	+0.050 +0.160	16.0	29.0	14.160	14.050	16.018	16.000	14.000	13.957
MSM-1418-20	14.0	+0.050 +0.160	18.0	20.0	14.160	14.050	18.018	18.000	14.000	13.957
MSM-1420-10	14.0	+0.050 +0.160	20.0	10.0	14.160	14.050	20.021	20.000	14.000	13.957
MSM-1420-15	14.0	+0.050 +0.160	20.0	15.0	14.160	14.050	20.021	20.000	14.000	13.957
MSM-1420-20	14.0	+0.050 +0.160	20.0	20.0	14.160	14.050	20.021	20.000	14.000	13.957
MSM-1517-10	15.0	+0.050 +0.160	17.0	10.0	15.160	15.050	17.018	17.000	15.000	14.957
MSM-1517-15	15.0	+0.050 +0.160	17.0	15.0	15.160	15.050	17.018	17.000	15.000	14.957
MSM-1521-10	15.0	+0.050 +0.160	21.0	10.0	15.160	15.050	21.021	21.000	15.000	14.957
MSM-1521-15	15.0	+0.050 +0.160	21.0	15.0	15.160	15.050	21.021	21.000	15.000	14.957
MSM-1521-20	15.0	+0.050 +0.160	21.0	20.0	15.160	15.050	21.021	21.000	15.000	14.957
MSM-1521-23	15.0	+0.050 +0.160	21.0	23.0	15.160	15.050	21.021	21.000	15.000	14.957
MSM-1618-12	16.0	+0.050 +0.160	18.0	12.0	16.160	16.050	18.018	18.000	16.000	15.957
MSM-1618-20	16.0	+0.050 +0.160	18.0	20.0	16.160	16.050	18.018	18.000	16.000	15.957
MSM-1620-20	16.0	+0.050 +0.160	20.0	20.0	16.160	16.050	20.021	20.000	16.000	15.957
MSM-1620-25	16.0	+0.050 +0.160	20.0	25.0	16.160	16.050	20.021	20.000	16.000	15.957

iglide® M250 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

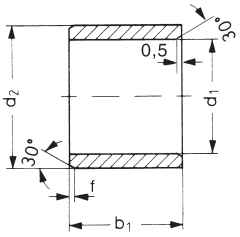
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
MSM-1620-30	16.0	+0.050 +0.160	20.0	30.0	16.160	16.050	20.021	20.000	16.000	15.957
MSM-1622-12	16.0	+0.050 +0.160	22.0	12.0	16.160	16.050	22.021	22.000	16.000	15.957
MSM-1622-15	16.0	+0.050 +0.160	22.0	15.0	16.160	16.050	22.021	22.000	16.000	15.957
MSM-1622-16	16.0	+0.050 +0.160	22.0	16.0	16.160	16.050	22.021	22.000	16.000	15.957
MSM-1622-20	16.0	+0.050 +0.160	22.0	20.0	16.160	16.050	22.021	22.000	16.000	15.957
MSM-1622-25	16.0	+0.050 +0.160	22.0	25.0	16.160	16.050	22.021	22.000	16.000	15.957
MSM-1824-12	18.0	+0.050 +0.160	24.0	12.0	18.160	18.050	24.021	24.000	18.000	17.957
MSM-1824-20	18.0	+0.050 +0.160	24.0	20.0	18.160	18.050	24.021	24.000	18.000	17.957
MSM-1824-30	18.0	+0.050 +0.160	24.0	30.0	18.160	18.050	24.021	24.000	18.000	17.957
MSM-2023-15	20.0	+0.065 +0.195	23.0	15.0	20.195	20.065	23.021	23.000	20.000	19.948
MSM-2023-20	20.0	+0.065 +0.195	23.0	20.0	20.195	20.065	23.021	23.000	20.000	19.948
MSM-2025-14	20.0	+0.065 +0.195	25.0	14.0	20.195	20.065	25.021	25.000	20.000	19.948
MSM-2025-20	20.0	+0.065 +0.195	25.0	20.0	20.195	20.065	25.021	25.000	20.000	19.948
MSM-2025-30	20.0	+0.065 +0.195	25.0	30.0	20.195	20.065	25.021	25.000	20.000	19.948
MSM-2026-12	20.0	+0.065 +0.195	26.0	12.0	20.195	20.065	26.021	26.000	20.000	19.948
MSM-2026-15	20.0	+0.065 +0.195	26.0	15.0	20.195	20.065	25.021	25.000	20.000	19.948
MSM-2026-20	20.0	+0.065 +0.195	26.0	20.0	20.195	20.065	25.021	25.000	20.000	19.948
MSM-2026-30	20.0	+0.065 +0.195	26.0	30.0	20.195	20.065	25.021	25.000	20.000	19.948
MSM-2226-15	22.0	+0.065 +0.195	26.0	15.0	22.195	22.065	26.021	26.000	22.000	21.948
MSM-2228-10	22.0	+0.065 +0.195	28.0	10.0	22.195	22.065	28.021	28.000	22.000	21.948
MSM-2228-15	22.0	+0.065 +0.195	28.0	15.0	22.195	22.065	28.021	28.000	22.000	21.948
MSM-2228-20	22.0	+0.065 +0.195	28.0	20.0	22.195	22.065	28.021	28.000	22.000	21.948
MSM-2228-30	22.0	+0.065 +0.195	28.0	30.0	22.195	22.065	28.021	28.000	22.000	21.948
MSM-2430-15	24.0	+0.065 +0.195	30.0	15.0	24.195	24.065	30.025	30.000	24.000	23.948
MSM-2430-20	24.0	+0.065 +0.195	30.0	20.0	24.195	24.065	30.025	30.000	24.000	23.948
MSM-2430-30	24.0	+0.065 +0.195	30.0	30.0	24.195	24.065	30.025	30.000	24.000	23.948
MSM-2528-12	25.0	+0.065 +0.195	28.0	12.0	25.195	25.065	28.021	28.000	25.000	24.948
MSM-2528-20	25.0	+0.065 +0.195	28.0	20.0	25.195	25.065	28.021	28.000	25.000	24.948
MSM-2530-20	25.0	+0.065 +0.195	30.0	20.0	25.195	25.065	30.025	30.000	25.000	24.948
MSM-2530-30	25.0	+0.065 +0.195	30.0	30.0	25.195	25.065	30.025	30.000	25.000	24.948
MSM-2530-40	25.0	+0.065 +0.195	30.0	40.0	25.195	25.065	30.025	30.000	25.000	24.948
MSM-2532-12	25.0	+0.065 +0.195	32.0	12.0	25.195	25.065	32.025	32.000	25.000	24.948
MSM-2532-20	25.0	+0.065 +0.195	32.0	20.0	25.195	25.065	32.025	32.000	25.000	24.948
MSM-2532-30	25.0	+0.065 +0.195	32.0	30.0	25.195	25.065	32.025	32.000	25.000	24.948
MSM-2532-35	25.0	+0.065 +0.195	32.0	35.0	25.195	25.065	32.025	32.000	25.000	24.948
MSM-2532-40	25.0	+0.065 +0.195	32.0	40.0	25.195	25.065	32.025	32.000	25.000	24.948
MSM-2630-20	26.0	+0.065 +0.195	30.0	20.0	26.195	26.065	30.025	30.000	26.000	25.948
MSM-2632-30	26.0	+0.065 +0.195	32.0	30.0	26.195	26.065	32.025	32.000	26.000	25.948
MSM-2734-20	27.0	+0.065 +0.195	34.0	20.0	27.195	27.065	34.025	34.000	27.000	26.948
MSM-2734-30	27.0	+0.065 +0.195	34.0	30.0	27.195	27.065	34.025	34.000	27.000	26.948

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Sleeve Bearing, MM





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f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

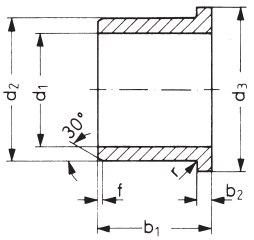
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
MSM-2734-40	27.0	+0.065 +0.195	34.0	40.0	27.195	27.065	34.025	34.000	27.000	26.948
MSM-2833-20	28.0	+0.065 +0.195	33.0	20.0	28.195	28.065	33.025	33.000	28.000	27.948
MSM-2836-20	28.0	+0.065 +0.195	36.0	20.0	28.195	28.065	36.025	36.000	28.000	27.948
MSM-2836-30	28.0	+0.065 +0.195	36.0	30.0	28.195	28.065	36.025	36.000	28.000	27.948
MSM-2836-40	28.0	+0.065 +0.195	36.0	40.0	28.195	28.065	36.025	36.000	28.000	27.948
MSM-3035-20	30.0	+0.065 +0.195	35.0	20.0	30.195	30.065	35.025	35.000	30.000	29.948
MSM-3035-40	30.0	+0.065 +0.195	35.0	40.0	30.195	30.065	35.025	35.000	30.000	29.948
MSM-3038-20	30.0	+0.065 +0.195	38.0	20.0	30.195	30.065	38.025	38.000	30.000	29.948
MSM-3038-30	30.0	+0.065 +0.195	38.0	30.0	30.195	30.065	38.025	38.000	30.000	29.948
MSM-3038-40	30.0	+0.065 +0.195	38.0	40.0	30.195	30.065	38.025	38.000	30.000	29.948
MSM-3040-40	30.0	+0.065 +0.195	40.0	40.0	30.195	30.065	40.025	40.000	30.000	29.948
MSM-3240-20	32.0	+0.080 +0.240	40.0	20.0	32.240	32.080	40.025	40.000	32.000	31.948
MSM-3240-30	32.0	+0.080 +0.240	40.0	30.0	32.240	32.080	40.025	40.000	32.000	31.948
MSM-3240-40	32.0	+0.080 +0.240	40.0	40.0	32.240	32.080	40.025	40.000	32.000	31.948
MSM-3542-50	35.0	+0.080 +0.240	42.0	50.0	35.240	35.080	42.025	42.000	35.000	34.948
MSM-7580-60	75.0	+0.100 +0.290	80.0	60.0	75.290	75.100	80.025	80.000	75.000	74.948

iglide® M250 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

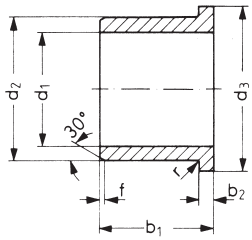
Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0,14	Max.	Min.	Max.	Min.	Max.	Min.
MFM-0103-02	1.0	+0.020 +0.080	3.0	5.0	2.0	1.00	1.080	1.020	3.080	3.000	1.000	.975
MFM-0104-02	1.5	+0.020 +0.080	4.0	6.0	2.0	1.00	1.580	1.520	4.012	4.000	1.500	1.475
MFM-0205-03	2.0	+0.020 +0.080	5.0	8.0	3.0	1.50	2.080	2.020	5.012	5.000	2.000	1.975
MFM-0206-03	2.5	+0.020 +0.080	6.0	9.0	3.0	1.50	2.580	2.520	6.012	6.000	2.500	2.475
MFM-0306-04	3.0	+0.020 +0.080	6.0	9.0	4.0	1.50	3.080	3.020	6.012	6.000	3.000	2.975
MFM-0408-04	4.0	+0.030 +0.105	8.0	12.0	4.0	2.0	4.105	4.030	8.015	8.000	4.000	3.970
MFM-0408-06	4.0	+0.030 +0.105	8.0	12.0	6.0	2.0	4.105	4.030	8.015	8.000	4.000	3.970
MFM-0408-08	4.0	+0.030 +0.105	8.0	12.0	8.0	2.0	4.105	4.030	8.015	8.000	4.000	3.970
MFM-0509-05	5.0	+0.030 +0.105	9.0	13.0	5.0	2.0	5.105	5.030	9.015	9.000	5.000	4.970
MFM-0509-06	5.0	+0.030 +0.105	9.0	13.0	6.0	2.0	5.105	5.030	9.015	9.000	5.000	4.970
MFM-0509-08	5.0	+0.030 +0.105	9.0	13.0	8.0	2.0	5.105	5.030	9.015	9.000	5.000	4.970
MFM-0610-04	6.0	+0.030 +0.105	10.0	14.0	4.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
MFM-0610-06	6.0	+0.030 +0.105	10.0	14.0	6.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
MFM-0610-10	6.0	+0.030 +0.105	10.0	14.0	10.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
MFM-0611-04	6.0	+0.030 +0.105	11.0	4.0	14.0	2.5	6.105	6.030	11.018	11.000	6.000	5.970
MFM-0612-06	6.0	+0.030 +0.105	12.0	14.0	6.0	3.0	6.105	6.030	12.018	12.000	6.000	5.970
MFM-0612-10	6.0	+0.030 +0.105	12.0	14.0	10.0	3.0	6.105	6.030	12.018	12.000	6.000	5.970
MFM-0711-08	7.0	+0.040 +0.130	11.0	15.0	8.0	2.0	7.130	7.040	11.018	11.000	7.000	6.964
MFM-0811-05	8.0	+0.040 +0.130	11.0	13.0	5.0	2.0	8.130	8.040	11.018	11.000	8.000	7.964
MFM-0811-08	8.0	+0.040 +0.130	11.0	13.0	8.0	2.0	8.130	8.040	11.018	11.000	8.000	7.964
MFM-0812-06	8.0	+0.040 +0.130	12.0	16.0	6.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
MFM-0812-08	8.0	+0.040 +0.130	12.0	16.0	8.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
MFM-0812-12	8.0	+0.040 +0.130	12.0	16.0	12.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
MFM-0814-06	8.0	+0.040 +0.130	14.0	18.0	6.0	3.0	8.130	8.040	14.018	14.000	8.000	7.964
MFM-0814-10	8.0	+0.040 +0.130	14.0	18.0	10.0	3.0	8.130	8.040	14.018	14.000	8.000	7.964
MFM-081416-06	8.0	+0.040 +0.130	14.0	16.0	6.0	3.0	8.130	8.040	14.018	14.000	8.000	7.964
MFM-081416-10	8.0	+0.040 +0.130	14.0	16.0	10.0	3.0	8.130	8.040	14.018	14.000	8.000	7.984
MFM-0914-06	9.0	+0.040 +0.130	14.0	19.0	6.0	2.0	9.130	9.040	14.018	14.000	9.000	8.964
MFM-0914-10	9.0	+0.040 +0.130	14.0	19.0	10.0	2.0	9.130	9.040	14.018	14.000	9.000	8.964
MFM-0914-14	9.0	+0.040 +0.130	14.0	19.0	14.0	2.0	9.130	9.040	14.018	14.000	9.000	8.964
MFM-1014-10	10.0	+0.040 +0.130	14.0	19.0	10.0	2.0	10.130	10.040	14.018	14.000	10.000	9.964
MFM-1014-14	10.0	+0.040 +0.130	14.0	17.5	14.0	1.0	10.130	10.040	14.018	14.000	10.000	9.964
MFM-1014-19	10.0	+0.040 +0.130	14.0	17.5	19.0	1.0	10.130	10.040	14.018	14.000	10.000	9.964
MFM-1014-24	10.0	+0.040 +0.130	14.0	17.5	24.0	1.0	10.130	10.040	14.018	14.000	10.000	9.964
MFM-1014-34	10.0	+0.040 +0.130	14.0	17.5	34.0	1.0	10.130	10.040	14.018	14.000	10.000	9.964
MFM-101420-12	10.0	+0.040 +0.130	14.0	20.0	12.0	2.0	10.130	10.040	14.018	14.000	10.000	9.964
MFM-1016-08	10.0	+0.040 +0.130	16.0	22.0	8.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
MFM-1016-10	10.0	+0.040 +0.130	16.0	22.0	10.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
MFM-1016-16	10.0	+0.040 +0.130	16.0	22.0	16.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
MFM-101620-06	10.0	+0.040 +0.130	16.0	20.0	6.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
MFM-101620-10	10.0	+0.040 +0.130	16.0	20.0	10.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
MFM-1216-10	12.0	+0.050 +0.160	16.0	22.0	10.0	2.0	12.160	12.050	16.018	16.000	12.000	11.957

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QuickSpec: www.igus.com/qs/iglide.asp

iglide® M250 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

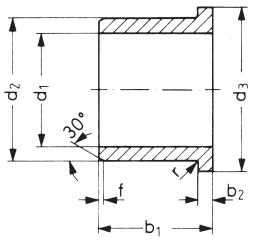
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
MFM-1216-20	12.0	+0.050 +0.160	16.0	22.0	20.0	2.0	12.160	12.050	16.018	16.000	12.000	11.957
MFM-1218-08	12.0	+0.050 +0.160	18.0	24.0	8.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
MFM-1218-10	12.0	+0.050 +0.160	18.0	22.0	10.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
MFM-1218-12	12.0	+0.050 +0.160	18.0	24.0	12.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
MFM-1218-15	12.0	+0.050 +0.160	18.0	22.0	15.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
MFM-1218-20	12.0	+0.050 +0.160	18.0	22.0	20.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
MFM-1420-07	14.0	+0.050 +0.160	20.0	25.0	7.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957
MFM-1420-10	14.0	+0.050 +0.160	20.0	25.0	10.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957
MFM-1420-15	14.0	+0.050 +0.160	20.0	25.0	15.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957
MFM-1420-20	14.0	+0.050 +0.160	20.0	25.0	20.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957
MFM-1521-10	15.0	+0.050 +0.160	21.0	27.0	10.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
MFM-1521-15	15.0	+0.050 +0.160	21.0	27.0	15.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
MFM-1521-20	15.0	+0.050 +0.160	21.0	27.0	20.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
MFM-1521-25	15.0	+0.050 +0.160	21.0	27.0	25.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
MFM-1618-12	16.0	+0.050 +0.160	18.0	24.0	12.0	1.0	16.160	16.050	18.021	18.000	16.000	15.957
MFM-1622-12	16.0	+0.050 +0.160	22.0	28.0	12.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
MFM-1622-15	16.0	+0.050 +0.160	22.0	28.0	15.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
MFM-1622-20	16.0	+0.050 +0.160	22.0	28.0	20.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
MFM-1622-25	16.0	+0.050 +0.160	22.0	28.0	25.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
MFM-1824-08	18.0	+0.050 +0.160	24.0	30.0	8.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
MFM-1824-12	18.0	+0.050 +0.160	24.0	30.0	12.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
MFM-1824-18	18.0	+0.050 +0.160	24.0	30.0	18.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
MFM-1824-20	18.0	+0.050 +0.160	24.0	30.0	20.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
MFM-1824-30	18.0	+0.050 +0.160	24.0	30.0	30.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
MFM-202628-12	20.0	+0.060 +0.195	26.0	12.0	28.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
MFM-2026-15	20.0	+0.060 +0.195	26.0	32.0	15.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
MFM-2026-20	20.0	+0.060 +0.195	26.0	32.0	20.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
MFM-2026-30	20.0	+0.060 +0.195	26.0	32.0	30.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
MFM-2228-15	22.0	+0.060 +0.195	28.0	34.0	15.0	3.0	22.195	22.065	28.021	28.000	22.000	21.948
MFM-2228-20	22.0	+0.060 +0.195	28.0	34.0	20.0	3.0	22.195	22.065	28.021	28.000	22.000	21.948
MFM-2228-30	22.0	+0.060 +0.195	28.0	34.0	30.0	3.0	22.195	22.065	28.021	28.000	22.000	21.948
MFM-2430-15	24.0	+0.065 +0.195	30.0	36.0	15.0	3.0	24.195	24.065	30.025	30.000	24.000	23.948
MFM-2430-20	24.0	+0.065 +0.195	30.0	36.0	20.0	3.0	24.195	24.065	30.025	30.000	24.000	23.948
MFM-2430-30	24.0	+0.065 +0.195	30.0	36.0	30.0	3.0	24.195	24.065	30.025	30.000	24.000	23.948
MFM-2532-12	25.0	+0.065 +0.195	32.0	38.0	12.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
MFM-2532-15	25.0	+0.065 +0.195	32.0	38.0	15.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
MFM-2532-20	25.0	+0.065 +0.195	32.0	38.0	20.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
MFM-2532-30	25.0	+0.065 +0.195	32.0	38.0	30.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
MFM-2532-40	25.0	+0.065 +0.195	32.0	38.0	40.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
MFM-2734-20	27.0	+0.065 +0.195	34.0	40.0	20.0	4.0	27.195	27.065	34.025	34.000	27.000	26.948
MFM-2734-30	27.0	+0.065 +0.195	34.0	40.0	30.0	4.0	27.195	27.065	34.025	34.000	27.000	26.948

iglide® M250 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
MFM-2734-40	27.0	+0.065 +0.195	34.0	40.0	40.0	4.0	27.195	27.065	34.025	34.000	27.000	26.948
MFM-2836-20	28.0	+0.065 +0.195	36.0	42.0	20.0	4.0	28.195	28.065	36.025	36.000	28.000	27.948
MFM-2836-30	28.0	+0.065 +0.195	36.0	42.0	30.0	4.0	28.195	28.065	36.025	36.000	28.000	27.948
MFM-2836-40	28.0	+0.065 +0.195	36.0	42.0	40.0	4.0	28.195	28.065	36.025	36.000	28.000	27.948
MFM-3035-20	30.0	+0.065 +0.195	35.0	44.0	20.0	4.0	30.195	30.060	35.025	35.000	30.000	29.948
MFM-3038-20	30.0	+0.065 +0.195	38.0	44.0	20.0	4.0	30.195	30.065	28.025	38.000	30.000	29.948
MFM-3038-30	30.0	+0.065 +0.195	38.0	44.0	30.0	4.0	30.195	30.065	28.025	38.000	30.000	29.948
MFM-3038-40	30.0	+0.065 +0.195	38.0	44.0	40.0	4.0	30.195	30.065	28.025	38.000	30.000	29.948
MFM-3240-20	32.0	+0.080 +0.240	40.0	46.0	20.0	4.0	32.240	32.080	40.025	40.000	32.000	31.938
MFM-3240-30	32.0	+0.080 +0.240	40.0	46.0	30.0	4.0	32.240	32.080	40.025	40.000	32.000	31.938
MFM-3240-40	32.0	+0.080 +0.240	40.0	46.0	40.0	4.0	32.240	32.080	40.025	40.000	32.000	31.938

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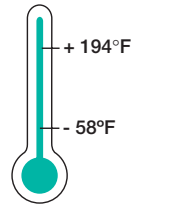
iglide® R
The Low Cost Bronze Alternative

- Very low moisture absorption
- Low wear at high speeds
- Highly cost-effective
- Maintenance-free
- Self-lubricating



iglide® R - Plain Bearings

Price Index



2 Styles
Inner Diameters
From 3/16 - 2 in. (6.0 - 20 mm)

When to use iglide® R plain bearings:

- If high wear resistance at low load is required
- If low friction at dry operation is needed
- If a highly cost-effective bearing is desired
- If edge loads occur
- If you are looking for low ater absorption
- If PTFE and silicone are prohibited in the application

When not to use iglide® R plain bearings:

- When high pressure loads occur
  ➤ iglide® G300
- When temperatures occur that are constantly greater than 194°F
  ➤ iglide® T500
- When best wear resistance is required
  ➤ iglide® J

Table 3.1 - Material Table

General Properties	Unit	iglide® R	Testing Method
Density	g/cm³	1.39	
Color		Dark Red	
Max. moisture absorption at 73°F / 50% r.h.	% weight	0.2	DIN 53495
Max. moisture absorption	% weight	1.1	
Coefficient of friction, dynamic against steel	µ	0.08 - 0.26	
p x v value, max. (dry)	psi x fpm		
Mechanical Properties			
Modulus of elasticity	psi	290,000	DIN 53457
Tensile strength at 68°F	psi	10,440	DIN 53452
Compressive strength	psi	10,150	
Permissible static surface pressure (68°F)	psi	3,335	
Shore D-hardness		77	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	194	
Max. application temperature, short-term	°F	230	
Min. application temperature	°F	-58	
Thermal conductivity	W/m x K	.25	ASTM C 177
Coefficient of thermal expansion	$K^{-1} \times 10^{-5}$	11	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{12}$	DIN IEC 93
Surface resistance	Ω	$> 10^{12}$	DIN 53482

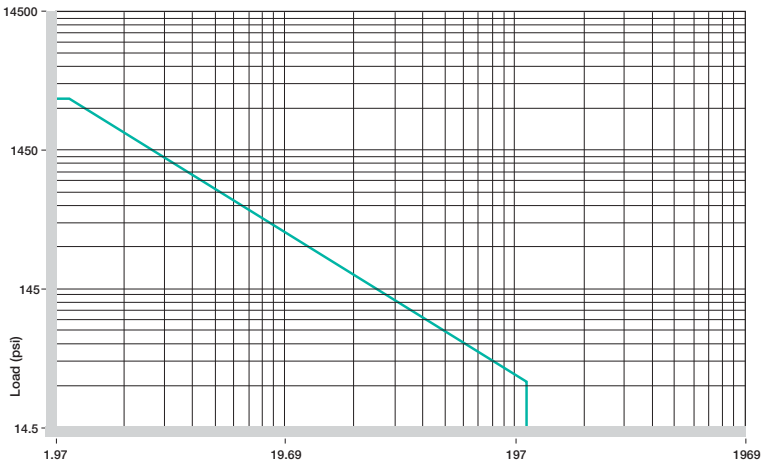
Structure of the Part Number:

R S I - 0 2 0 3 - 0 3
d1 d2 b1

Dimension: I - Inch (in 1/16")
M - Metric (in mm)

Type: S - Sleeve
F - Flange

Material



Graph 3.1: Permissible p x v value for iglide® R running dry against a steel shaft, at 68°F

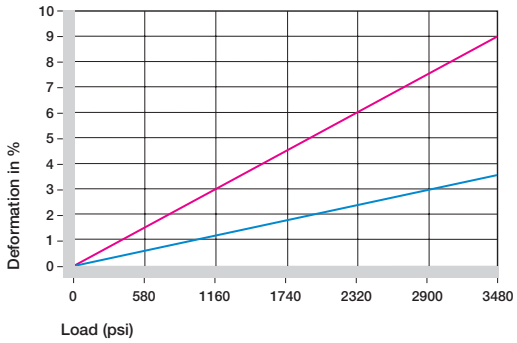
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In the development of iglide® R as a bearing material, high performance and a very low price were the top requirements. In particular, low coefficients of friction were needed at high speeds in the dry run. Plain bearings made of iglide® R are designed with support from a combination of solid lubricants. The iglide® R material achieves excellent low coefficients of friction while running dry, and it runs for the most part stick-slip free.

Compressive Strength

iglide® R plain bearings were developed mainly for low to average radial loads. The Graph 3.2 shows the elastic deformation of iglide® R for radial loads. At the maximum permissible load of 3335 psi, the deformation is approximately 3%. Plastic deformation is not detectable up to this value. However, it is also a result of the cycle time.

➤ Compressive Strength, Page 1.3



Graph 3.2: Deformation under load and temperature

Permissible Surface Speeds

iglide® R plain bearings are used at high surface speeds. For linear movements, short-term speeds up to 32.8 ft/s are permissible. Please note that the given maximum values can only be achieved at the lowest pressure loads. These values show the speed at which friction causes a temperature increase to the continued use temperature limit.

➤ Surface Speed, Page 1.5
➤ p x v value, Page 1.6

fpm	Rotating	Oscillating	Linear
Continuous	157	118	689
Short-term	236	196	984

Table 3.2: Maximum surface speeds

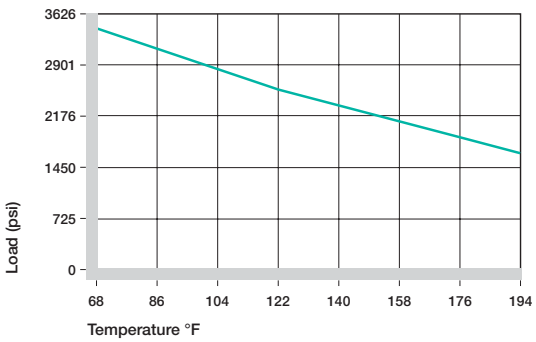
Temperatures

The maximum permissible short-term temperature is 230°F, and the long-term application temperature is 194°F. With increasing temperatures, the compression resistance of iglide® R plain bearings decreases. Graph 3.3 shows this relationship. The ambient temperatures prevalent in the bearing system also have an effect on the bearing wear. With increasing temperatures, the wear increases.

➤ Application Temperatures, Page 1.7

iglide® R	Application Temperature
Minimum	- 58°F
Max. long-term	+ 194°F
Max. short-term	+ 230°F

Table 3.3: Temperature limits for iglide® R



Graph 3.3: Recommended maximum permissible static surface pressure of iglide® R as a result of the temperature

Installation Tolerances

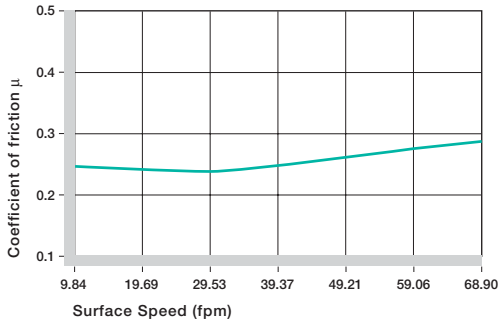
iglide® R plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

Friction and Wear

Similar to wear resistance, the coefficient of friction decreases with increasing load. In contrast, higher speeds have little effect on the coefficient of friction of iglide® R plain bearings. iglide® R is especially suited for applications in which high p x v values are predominantly caused by the high speed, and not as much by the surface pressure. The coefficient of friction of iglide® R plain bearings depends greatly on the shaft roughness. In the Ra range between 16-24 rms, the coefficient of friction reaches its optimal value. For values above and below this range, the friction of the bearing system increases quickly. Other shaft materials can be used without a large loss. Even with non metallic shafts, good results were obtained in tests. Ceramic and plastic shafts can also be used.

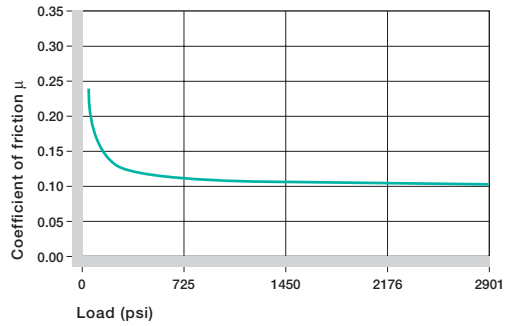
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9



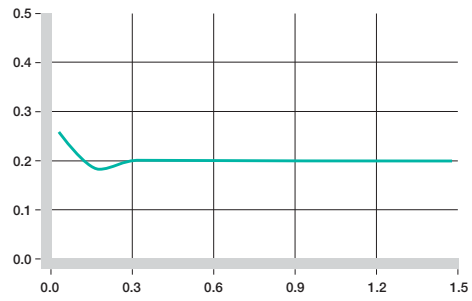
Graph 3.4: Coefficient of friction of iglide® R as a result of the surface speed; p = 108 psi

iglide® R	Dry	Grease	Oil	Water
Coefficient of Friction µ	0.06 - 0.26	0.09	0.04	0.04

Table 3.4: Coefficients of friction iglide® R against steel (Ra = 40 rms, 50 HRC)



Graph 3.5: Coefficient of friction of iglide® R as a result of the load, v = 1.97 fpm



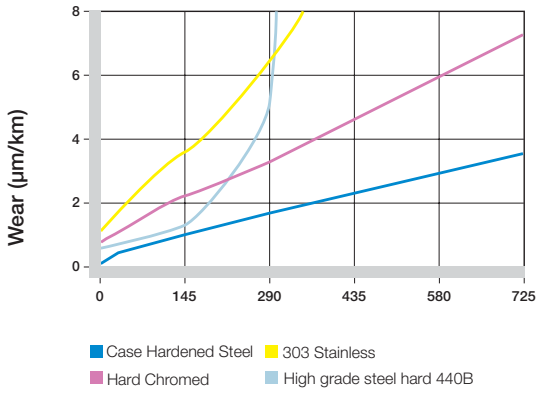
Graph 3.6: Coefficient of friction for iglide® R as a result of the shaft surface (shaft Cold Rolled Steel)

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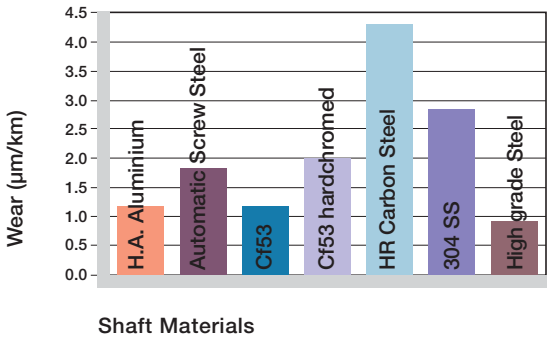
Shaft Materials

Graph 3.7 to 3.9 show results of testing different shaft materials with plain bearings made of iglide® R.
In the low load range, the 440B, hard anodized aluminum, 1050 case hardened steel, free cutting and hard chromed shafts are the most suitable shafting partners for iglide® R plain bearings. At higher loads, the hardened shafts such as 440B and 1050 case hardened steel are recommended.

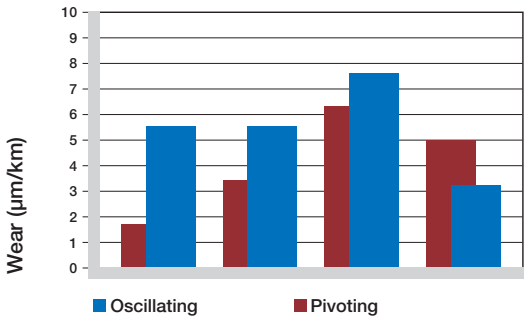
➤ Shaft Materials, Page 1.11



Graph 3.8: Wear of iglide® R with different shaft materials in rotational operation



Graph 3.7: Wear for iglide® R, rotating with different shaft materials, p = 108 psi, v=98 fpm



Graph 3.9: Wear for oscillating and rotating applications with different shaft materials at p = 290 psi

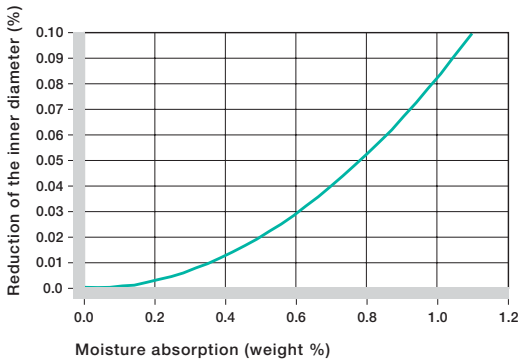
Chemical Resistance

iglide® R plain bearings are resistant to very weak acids, diluted lyes, fuels and all types of lubricants.
The moisture absorption of iglide® R plain bearings is approximately 0.2% in standard atmosphere. The saturation limit in water is 1%. This low moisture absorption allows for design in wet environments.

➤ Chemical Table, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Conditionally Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Conditionally Resistant
Strong lyes	Not Resistant

Table 3.5: Chemical resistance iglide® R



Graph 3.10: Effect of moisture absorption on iglide® R plain bearings

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iglide® R - Plain Bearings

Radiation Resistance

Plain bearings made from iglide® R are resistant to radiation up to an intensity of 3 x 10^2 Gy.

UV Resistance

iglide® R plain bearings are resistant to UV radiation, but the tribological properties are lessened with permanent exposure.

Vacuum

In a vacuum environment, iglide® R plain bearings release gases. It is only possible to use iglide® R in vacuum to a limited extent.

Electrical Properties

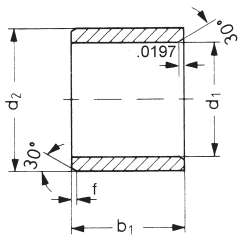
iglide® R plain bearings are electrically insulating

iglide® R	
Specific volume resistance	> 10^{12} Ωcm
Surface resistance	> 10^{12} Ω

Table 3.6: Electrical properties of iglide® R

iglide® R - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

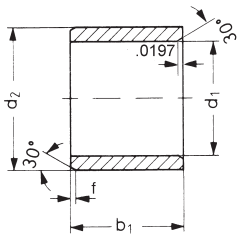
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
RSI-0305-03	3/16	5/16	3/16	1.915	.1886	.3128	.3122	.1874	.1862
RSI-0305-04	3/16	5/16	1/4	1.915	.1886	.3128	.3122	.1874	.1862
RSI-0305-06	3/16	5/16	3/8	1.915	.1886	.3128	.3122	.1874	.1862
RSI-0305-08	3/16	5/16	1/2	1.915	.1886	.3128	.3122	.1874	.1862
RSI-0406-04	1/4	3/8	1/4	.2551	.2516	.3766	.3760	.2500	.2486
RSI-0406-05	1/4	3/8	5/16	.2551	.2516	.3766	.3760	.2500	.2486
RSI-0406-06	1/4	3/8	3/8	.2551	.2516	.3766	.3760	.2500	.2486
RSI-0406-10	1/4	3/8	5/8	.2551	.2516	.3766	.3760	.2500	.2486
RSI-0406-12	1/4	3/8	3/4	.2551	.2516	.3766	.3760	.2500	.2486
RSI-0507-04	5/16	7/16	1/4	.3177	.3142	.4393	.4386	.3126	.3112
RSI-0507-05	5/16	7/16	5/16	.3177	.3142	.4393	.4386	.3126	.3112
RSI-0507-06	5/16	7/16	3/8	.3177	.3142	.4393	.4386	.3126	.3112
RSI-0507-08	5/16	7/16	1/2	.3177	.3142	.4393	.4386	.3126	.3112
RSI-0507-10	5/16	7/16	5/8	.3177	.3142	.4393	.4386	.3126	.3112
RSI-0507-12	5/16	7/16	3/4	.3177	.3142	.4393	.4386	.3126	.3112
RSI-0608-04	3/8	1/2	1/4	.3799	.3764	.5017	.5010	.3748	.3734
RSI-0608-06	3/8	1/2	3/8	.3799	.3764	.5017	.5010	.3748	.3734
RSI-0608-08	3/8	1/2	1/2	.3799	.3764	.5017	.5010	.3748	.3734
RSI-0608-10	3/8	1/2	5/8	.3799	.3764	.5017	.5010	.3748	.3734
RSI-0608-12	3/8	1/2	3/4	.3799	.3764	.5017	.5010	.3748	.3734
RSI-0608-16	3/8	1/2	1	.3799	.3764	.5017	.5010	.3748	.3734
RSI-0810-08	1/2	5/8	1/2	.5063	.5020	.6257	.6250	.5000	.4983
RSI-0810-10	1/2	5/8	5/8	.5063	.5020	.6257	.6250	.5000	.4983
RSI-0810-12	1/2	5/8	3/4	.5063	.5020	.6257	.6250	.5000	.4983
RSI-0810-16	1/2	5/8	1	.5063	.5020	.6257	.6250	.5000	.4983
RSI-1012-06	5/8	3/4	3/8	.6311	.6268	.7508	.7500	.6248	.6231
RSI-1012-08	5/8	3/4	1/2	.6311	.6268	.7508	.7500	.6248	.6231
RSI-1012-10	5/8	3/4	5/8	.6311	.6268	.7508	.7500	.6248	.6231
RSI-1012-12	5/8	3/4	3/4	.6311	.6268	.7508	.7500	.6248	.6231
RSI-1012-16	5/8	3/4	1	.6311	.6268	.7508	.7500	.6248	.6231
RSI-1214-06	3/4	7/8	3/8	.7577	.7526	.8756	.8748	.7500	.7480
RSI-1216-12	3/4	1	3/4	.7577	.7526	1.0008	1.0000	.7500	.7480
RSI-1216-16	3/4	1	1	.7577	.7526	1.0008	1.0000	.7500	.7480
RSI-1216-20	3/4	1	1 1/4	.7577	.7526	1.0008	1.0000	.7500	.7480
RSI-1216-24	3/4	1	1 1/2	.7577	.7526	1.0008	1.0000	.7500	.7480
RSI-1416-12	7/8	1	3/4	.8799	.8766	1.0008	1.0000	.8750	.8730
RSI-1416-16	7/8	1	1	.8799	.8766	1.0008	1.0000	.8750	.8730
RSI-1416-24	7/8	1	1 1/2	.8799	.8766	1.0008	1.0000	.8750	.8730
RSI-1418-10	7/8	1 1/8	5/8	.8825	.8774	1.1295	1.1287	.8748	.8728
RSI-1418-12	7/8	1 1/8	3/4	.8825	.8774	1.1295	1.1287	.8748	.8728
RSI-1418-16	7/8	1 1/8	1	.8825	.8774	1.1295	1.1287	.8748	.8728
RSI-1418-24	7/8	1 1/8	1 1/2	.8825	.8774	1.1295	1.1287	.8748	.8728

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iglide® R - Plain Bearings
Sleeve Bearing, Inch





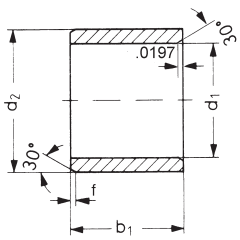
Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1) Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
RSI-1618-12	1	1 1/8	3/4	1.0077	1.0026	1.1295	1.1287	.8748	.8728
RSI-1618-22	1	1 1/8	1 3/8	1.0077	1.0026	1.1295	1.1287	.8748	.8728
RSI-1620-10	1	1 1/4	5/8	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RSI-1620-12	1	1 1/4	3/4	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RSI-1620-16	1	1 1/4	1	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RSI-1620-20	1	1 1/4	1 1/4	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RSI-1620-24	1	1 1/4	1 1/2	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RSI-2024-16	1 1/4	1 1/2	1	1.2594	1.2531	1.5010	1.5000	1.2500	1.2476
RSI-3236-16	2	2 1/4	1	2.0114	2.0039	2.2512	2.2500	2.0000	1.9971
RSI-3236-32	2	2 1/4	2	2.0114	2.0039	2.2512	2.2500	2.0000	1.9971

iglide® R - Plain Bearings - Low Clearance
Sleeve Bearing, Inch





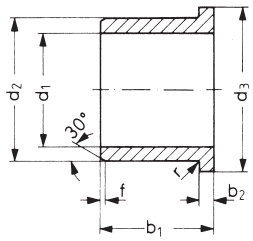
Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1) Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
RLCSI-1214-16	3/4	7/8	1	.7549	.7516	.8756	.8748	.7500	.7480

iglide® R - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

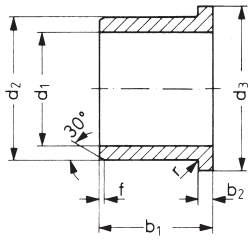
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
RFI-0305-03	3/16	5/16	3/16	.370	.047	.1915	.1886	.3131	.3125	.1874	.1962
RFI-0305-04	3/16	5/16	1/4	.370	.047	.1915	.1886	.3131	.3125	.1874	.1962
RFI-0305-06	3/16	5/16	3/8	.370	.047	.1915	.1886	.3131	.3125	.1874	.1962
RFI-0305-08	3/16	5/16	1/2	.370	.047	.1915	.1886	.3131	.3125	.1874	.1962
RFI-0406-04	1/4	3/8	1/4	.560	.047	.2551	.2516	.3756	.3750	.2500	.2486
RFI-0406-05	1/4	3/8	5/16	.560	.047	.2551	.2516	.3756	.3750	.2500	.2486
RFI-0406-06	1/4	3/8	3/8	.560	.047	.2551	.2516	.3756	.3750	.2500	.2486
RFI-0406-08	1/4	3/8	1/2	.560	.047	.2551	.2516	.3756	.3750	.2500	.2486
RFI-0406-10	1/4	3/8	5/8	.560	.047	.2551	.2516	.3756	.3750	.2500	.2486
RFI-0406-12	1/4	3/8	3/4	.560	.047	.2551	.2516	.3756	.3750	.2500	.2486
RFI-0507-04	5/16	7/16	1/4	.560	.062	.3177	.3142	.4381	.4374	.31265	.3112
RFI-0507-05	5/16	7/16	5/16	.560	.062	.3177	.3142	.4381	.4374	.31265	.3112
RFI-0507-06	5/16	7/16	3/8	.560	.062	.3177	.3142	.4381	.4374	.31265	.3112
RFI-0507-08	5/16	7/16	1/2	.560	.062	.3177	.3142	.4381	.4374	.31265	.3112
RFI-0507-10	5/16	7/16	5/8	.560	.062	.3177	.3142	.4381	.4374	.31265	.3112
RFI-0507-12	5/16	7/16	3/4	.560	.062	.3177	.3142	.4381	.4374	.31265	.3112
RFI-0607-04	3/8	15/32	1/4	.687	.046	.3801	.3766	.4694	.4687	.3750	.3736
RFI-0608-04	3/8	1/2	1/4	.625	.062	.3801	.3766	.5017	.5010	.3750	.3741
RFI-0608-06	3/8	1/2	3/8	.625	.062	.3801	.3766	.5017	.5010	.3750	.3741
RFI-0608-08	3/8	1/2	1/2	.625	.062	.3801	.3766	.5017	.5010	.3750	.3741
RFI-0608-10	3/8	1/2	5/8	.625	.062	.3801	.3766	.5017	.5010	.3750	.3741
RFI-0608-12	3/8	1/2	3/4	.625	.062	.3801	.3766	.5017	.5010	.3750	.3741
RFI-0608-16	3/8	1/2	1	.625	.062	.3801	.3766	.5017	.5010	.3750	.3741
RFI-0708-04	7/16	1/2	1/4	.750	.046	.4429	.4386	.5319	.5312	.4366	.4349
RFI-0708-08	7/16	1/2	1/2	.750	.046	.4429	.4386	.5319	.5312	.4366	.4349
RFI-0809-03	1/2	19/32	3/16	.875	.046	.5063	.5020	.5944	.5937	.4990	.4980
RFI-0809-04	1/2	19/32	1/4	.875	.046	.5063	.5020	.5944	.5937	.4990	.4980
RFI-0809-08	1/2	19/32	1/2	.875	.046	.5063	.5020	.5944	.5937	.4990	.4980
RFI-0810-04	1/2	5/8	1/4	.875	.062	.5063	.5020	.6257	.6250	.5000	.4983
RFI-0810-06	1/2	5/8	3/8	.875	.062	.5063	.5020	.6257	.6250	.5000	.4983
RFI-0810-08	1/2	5/8	1/2	.875	.062	.5063	.5020	.6257	.6250	.5000	.4983
RFI-0810-10	1/2	5/8	5/8	.875	.062	.5063	.5020	.6257	.6250	.5000	.4983
RFI-0810-12	1/2	5/8	3/4	.875	.062	.5063	.5020	.6257	.6250	.5000	.4983
RFI-0810-16	1/2	5/8	1	.875	.062	.5063	.5020	.6257	.6250	.5000	.4983
RFI-0812-0210	1/2	3/4	7/32	1.000	.125	.5047	.5020	.7508	.7500	.5000	.4983
RFI-0812-08	1/2	3/4	1/2	1.000	.125	.5047	.5020	.7508	.7500	.5000	.4983
RFI-0812-12	1/2	3/4	3/4	1.000	.125	.5047	.5020	.7508	.7500	.5000	.4983
RFI-0812-16	1/2	3/4	1	1.000	.125	.5047	.5020	.7508	.7500	.5000	.4983

iglide® R - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

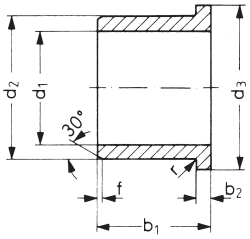
Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
RFI-1012-06	5/8	3/4	3/8	1.000	.062	.6313	.6270	.7508	.7500	.6250	.6233
RFI-1012-08	5/8	3/4	1/2	1.000	.062	.6313	.6270	.7508	.7500	.6250	.6233
RFI-1012-10	5/8	3/4	5/8	1.000	.062	.6313	.6270	.7508	.7500	.6250	.6233
RFI-1012-12	5/8	3/4	3/4	1.000	.062	.6313	.6270	.7508	.7500	.6250	.6233
RFI-1012-16	5/8	3/4	1	1.000	.062	.6313	.6270	.7508	.7500	.6250	.6233
RFI-1216-08	3/4	1	1/2	1.250	.156	.7577	.7526	1.0008	1.0000	.7500	.7480
RFI-1216-12	3/4	1	3/4	1.250	.156	.7577	.7526	1.0008	1.0000	.7500	.7480
RFI-1216-16	3/4	1	1	1.250	.156	.7577	.7526	1.0008	1.0000	.7500	.7480
RFI-1216-20	3/4	1	1 1/4	1.250	.156	.7577	.7526	1.0008	1.0000	.7500	.7480
RFI-1216-24	3/4	1	1 1/2	1.250	.156	.7577	.7526	1.0008	1.0000	.7500	.7480
RFI-1418-10	7/8	1 1/8	5/8	1.375	.156	.8825	.8774	1.1258	1.1250	.8748	.8728
RFI-1418-12	7/8	1 1/8	3/4	1.375	.156	.8825	.8774	1.1258	1.1250	.8748	.8728
RFI-1418-16	7/8	1 1/8	1	1.375	.156	.8825	.8774	1.1258	1.1250	.8748	.8728
RFI-1418-24	7/8	1 1/8	1 1/2	1.375	.156	.8825	.8774	1.1258	1.1250	.8748	.8728
RFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0077	1.0026	1.1258	1.1250	1.0000	.9980
RFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0077	1.0026	1.1258	1.1250	1.0000	.9980
RFI-1618-20	1	1 1/8	1 1/4	1.375	.062	1.0077	1.0026	1.1258	1.1250	1.0000	.9980
RFI-1620-10	1	1 1/4	5/8	1.500	.188	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RFI-1620-12	1	1 1/4	3/4	1.500	.188	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RFI-1620-16	1	1 1/4	1	1.500	.188	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RFI-1620-20	1	1 1/4	1 1/4	1.500	.188	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RFI-1620-24	1	1 1/4	1 1/2	1.500	.188	1.0077	1.0026	1.2510	1.2500	1.0000	.9980
RFI-2024-16	1 1/4	1 1/2	1	1.750	.200	1.2594	1.2531	1.5049	1.5039	1.2500	1.2476
RFI-2428-12	1 1/2	1 3/4	3/4	2.000	.125	1.5094	1.5031	1.7585	1.7575	1.5000	1.4976
RFI-3236-12	2	2 1/4	3/4	2.500	.125	2.0114	2.0039	2.2591	2.2579	2.0000	1.9971
RFI-3236-24	2	2 1/4	1 1/2	2.500	.125	2.0114	2.0039	2.2591	2.2579	2.0000	1.9971
RFI-3236-32	2	2 1/4	2	2.500	.125	2.0114	2.0039	2.2591	2.2579	2.0000	1.9971

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iglide® R - Plain Bearings - Low Clearance Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

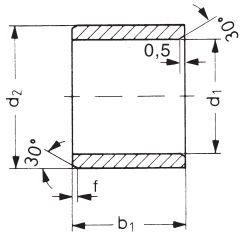
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
RLCFI-1214-07	3/4	7/8	7/16	1.125	.062	.7549	.7516	.8756	.8748	.7500	.7480
RLCFI-1214-08	3/4	7/8	7/16	1.125	.062	.7549	.7516	.8756	.8748	.7500	.7480
RLCFI-1214-12	3/4	7/8	7/16	1.125	.062	.7549	.7516	.8756	.8748	.7500	.7480
RLCFI-1214-16	3/4	7/8	7/16	1.125	.062	.7549	.7516	.8756	.8748	.7500	.7480
RLCFI-1416-07	7/8	1	7/16	1.250	.062	.8789	.8756	1.0005	.9997	.8740	.8720
RLCFI-1416-12	7/8	1	7/16	1.250	.062	.8789	.8756	1.0005	.9997	.8740	.8720
RLCFI-1416-20	7/8	1	7/16	1.250	.062	.8789	.8756	1.0005	.9997	.8740	.8720
RLCFI-2022-09	1 1/4	1 13/32	9/16	1.687	.078	1.2547	1.2508	1.4108	1.4098	1.2488	1.2464

iglide® R - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

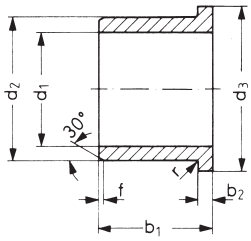
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance After Pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
RSM-0506-05	5.0	+0.020 +0.068	6.0	5.0	5.068	5.020	6.012	6.000	5.000	4.970
RSM-0506-07	5.0	+0.020 +0.068	6.0	7.0	5.068	5.020	6.012	6.000	5.000	4.970
RSM-0608-06	6.0	+0.020 +0.068	8.0	6.0	6.068	6.020	8.015	8.000	6.000	5.970
RSM-0610-08	6.0	+0.020 +0.068	10.0	8.0	6.068	6.020	10.015	10.000	6.000	5.970
RSM-0810-10	8.0	+0.025 +0.083	10.0	10.0	8.083	8.025	10.015	10.000	8.000	7.964
RSM-1012-05	10.0	+0.025 +0.083	12.0	5.0	10.083	10.025	12.018	12.000	10.000	9.964
RSM-1012-10	10.0	+0.025 +0.083	12.0	10.0	10.083	10.025	12.018	12.000	10.000	9.964
RSM-1012-15	10.0	+0.025 +0.083	12.0	15.0	10.083	10.025	12.018	12.000	10.000	9.964
RSM-1214-12	12.0	+0.032 +0.102	14.0	12.0	12.102	12.032	14.018	14.000	12.000	11.957
RSM-1416-10	14.0	+0.032 +0.102	16.0	10.0	14.102	14.032	16.018	16.000	14.000	13.957
RSM-1416-15	14.0	+0.032 +0.102	16.0	15.0	14.102	14.032	16.018	16.000	14.000	13.957
RSM-1618-15	16.0	+0.032 +0.102	18.0	15.0	16.102	16.032	18.018	18.000	16.000	15.957
RSM-1820-25	18.0	+0.032 +0.102	20.0	25.0	18.102	18.032	20.021	20.000	18.000	17.957
RSM-2023-15	20.0	+0.040 +0.124	23.0	15.0	20.124	20.040	23.021	23.000	20.000	19.948
RSM-2023-20	20.0	+0.040 +0.124	23.0	20.0	20.124	20.040	23.021	23.000	20.000	19.948
RSM-3034-25	30.0	+0.040 +0.124	34.0	25.0	30.124	30.040	34.025	34.000	30.000	29.948

iglide® R - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance After Pressfit in Ø H7	d2	b1 h13	d3 d13	b2 -0.14	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
RFM-0608-06	6.0	+0.020 +0.068	8.0	6.0	12.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
RFM-0810-05	8.0	+0.025 +0.083	10.0	5.0	15.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
RFM-0810-10	8.0	+0.025 +0.083	10.0	10.0	15.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
RFM-1012-09	10.0	+0.025 +0.083	12.0	9.0	18.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
RFM-1012-10	10.0	+0.025 +0.083	12.0	10.0	18.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
RFM-1012-18	10.0	+0.025 +0.083	12.0	18.0	18.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
RFM-1214-12	12.0	+0.032 +0.102	14.0	12.0	20.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
RFM-1416-17	14.0	+0.032 +0.102	16.0	17.0	22.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
RFM-1618-17	16.0	+0.032 +0.102	18.0	17.0	24.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
RFM-1622-12	16.0	+0.032 +0.102	22.0	12.0	24.0	3.0	16.102	16.032	22.021	22.000	16.000	15.957
RFM-2023-21	20.0	+0.040 +0.124	23.0	21.0	30.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948

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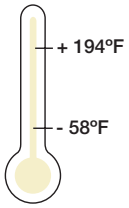
iglide® J
The Fast-and-Slow Motion Specialist

- Low wear against different shaft materials
- Low coefficients of friction
- Vibration dampening
- Good chemical resistance
- Best performance behavior with soft shaft materials
- Low moisture absorption



iglide® J - Linear Plain Bearing

Price Index



3 Styles
More than 517 Dimensions
Inner Diameters
From 1/8 - 1-5/8 in. (2.5 - 75 mm)

When to use iglide® J plain bearings:

- When very low coefficients of friction are necessary
- When a cost effective bearing for low pressure loads is needed
- For high speeds
- For high wear resistance

When not to use iglide® J plain bearings:

- When high pressure loads occur
  ➤ iglide® G300, iglide® L280
- When temperatures occur that are greater than 248°F for a short-term
  ➤ iglide® G300

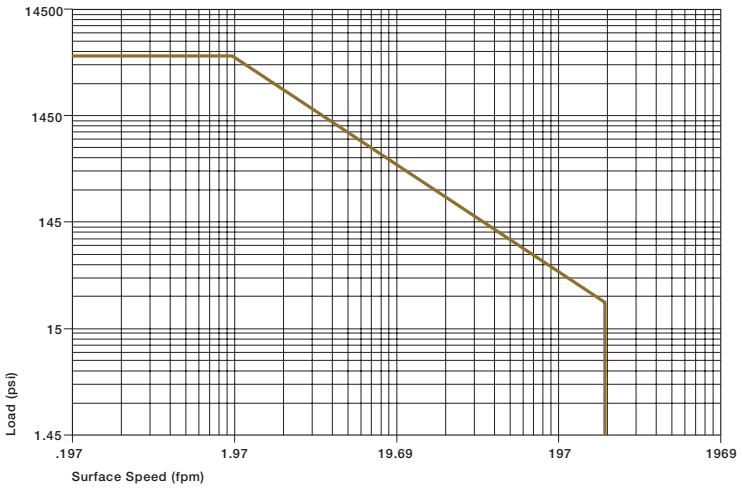
Table 4.1 - Material Table

General Properties	Unit	iglide® J	Testing Method
Density	g/cm³	1.49	
Color		yellow	
Max. moisture absorption at 73°F/50% r.h.	% weight	0.3	DIN 53495
Max. moisture absorption	% weight	1.3	
Coefficient of friction, dynamic against steel	µ	0.06 - 0.18	
p x v value, max. (dry)	psi x fpm	9700	
Mechanical Properties			
Modulus of elasticity	psi	348,000	DIN 53457
Tensile strength at 68°F	psi	10,585	DIN 53452
Compressive strength	psi	8,700	
Permissible static surface pressure (68°F)	psi	5,075	
Shore D-hardness		74	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	194	
Max. application temperature, short-term	°F	248	
Min. application temperature	°F	-58	
Thermal conductivity	W/m x K	0.25	ASTM C 177
Coefficient of thermal expansion (at 73°F)	$K^{-1} \times 10^{-5}$	10	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{13}$	DIN IEC 93
Surface resistance	Ω	$> 10^{12}$	DIN 53482

Structure of the Part Number:

J S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust Washer)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material



Graph 4.1: Permissible p x v value for iglide® J running dry against steel shaft, at 68°F

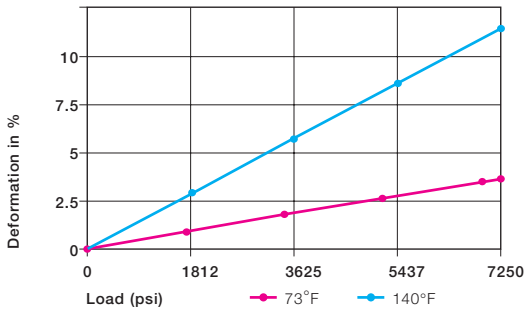
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The iglide® J plain bearings are designed for the lowest coefficients of friction while running dry and their low stick-slip tendency.

Compressive Strength

With a maximum permissible surface pressure of 5075 psi, iglide® J plain bearings are not suited for extreme loads. Shown in Graph 4.2 is the elastic deformation of iglide® J for radial loads. At the maximum permissible load of 5075 psi, the deformation is less than 2.5%.

➤ Compressive Strength, Page 1.3



Graph 4.2: Deformation under load and temperature

Permissible Surface Speeds

The low coefficient of friction and the extremely low stick-slip tendency of iglide® J plain bearings are especially important at very low speeds. However, iglide® J material can also be used for high speeds of over 197 fpm. In both cases,the static friction is very low and stick-slip does not occur.
The maximum values given in Table 4.2 can only be achieved at the lowest pressure loads. At the given speeds, friction can cause a temperature increase to maximum permissible levels. In practice, though, this temperature level is rarely reached, due to varying application conditions.

➤ Surface Speed, Page 1.5
➤ p x v value, Page 1.6

fpm	Rotating	Oscillating	Linear
Continuous	295	216	1574
Short-term	590	216	1968

Table 4.2: Maximum surface speeds

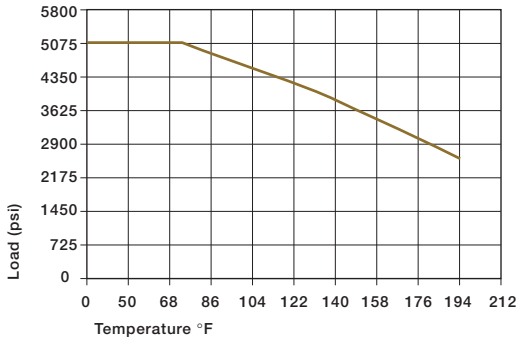
Temperatures

iglide® J plain bearings can be used between -58°F and 194°F; the short-term maximum permissible temperature is 248°F. Graph 4.3 shows that the compressive strength of iglide® J plain bearings decreases with increasing temperatures. Also, the wear increases significantly above 176°F

➤ Application Temperatures, Page 1.7

iglide® J	Application Temperature
Minimum	-58 °F
Max., long-term	+194 °F
Max,, short-term	+248 °F

Table 4.3: Temperature limits for iglide® J



Graph 4.3: Recommended maximum permissible static surface pressure of iglide® J as a result of the temperature

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iglide® J - Linear Plain Bearing

Installation Tolerances

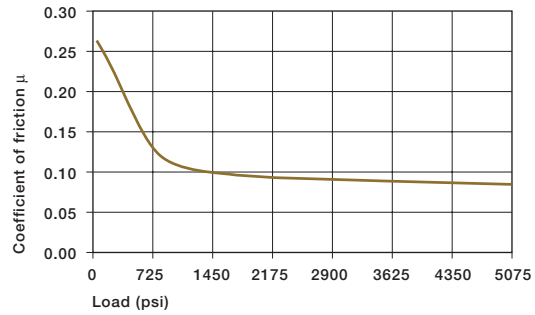
iglide® J plain bearings are designed to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing methods, Page 1.15

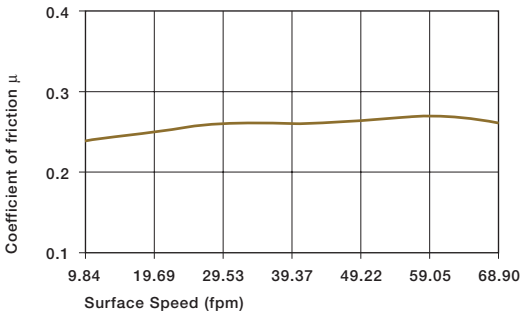
Friction and Wear

Graph 4.5 shows the coefficients of friction for different loads. The coefficient of friction level is very good for all loads with iglide® J.
Friction and wear are also dependent, to a large extent, on the shafting partner. With increasing shaft roughness, the coefficient of friction also increases.
The best case is a ground surface with an average roughness Ra = 4 to 12 rms.

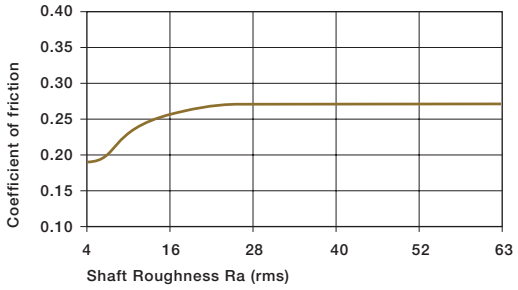
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9



Graph 4.5: Coefficient of friction of iglide® J as a result of the load, v = 1.97 fpm



Graph 4.4: Coefficient of friction of iglide® J as a result of the surface speed; p = 108 psi



Graph 4.6: Coefficient of friction of iglide® J as a result of the shaft surface (shaft Cold Rolled Steel)

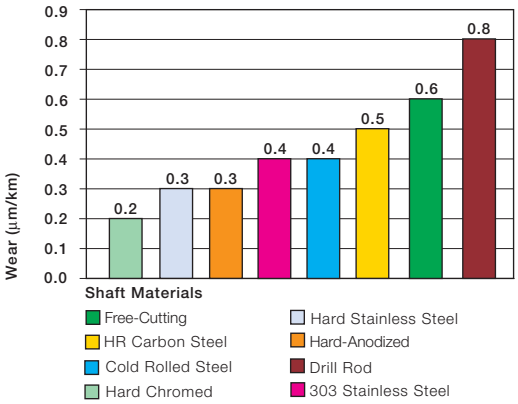
iglide® J	Dry	Grease	Oil	Water
Coefficient of Friction µ	0.06 - 0.18	0.09	0.04	0.04

Table 4.4: Coefficients of friction for iglide® J against steel (Ra = 40 rms, 50 HRC)

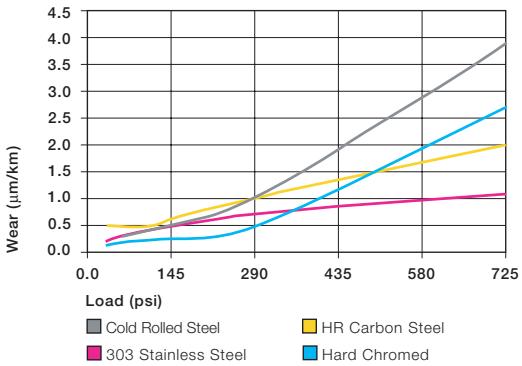
Shaft Materials

Graph 4.7 and 4.9 show results of testing different shaft materials with plain bearings made of iglide® J.
If iglide® J plain bearings are used in rotational applications with loads under 290 psi, several shaft materials are suitable. A Hard Chromed shaft provides the lowest wear in this range. When compared to most iglide® materials, iglide® J has very low wear results at low loads with all shaft materials tested.
Also, for increasing loads up to 725 psi, the wear resistance of iglide® J is excellent. Especially suitable is the combination of 303 stainless steel.
In oscillating operation with Cold Rolled Steel and HR Carbon Steel, the wear of iglide® J is slightly higher than for rotation. For oscillating movements with loads of 290 psi, iglide® J performs best with Cold Rolled Steel shaft.
As Graph 4.9 shows, the difference in wear between rotation and oscillating movements is most significant for 303 stainless steel shafts.
If the shaft material you plan to use is not contained in this list, please contact us.

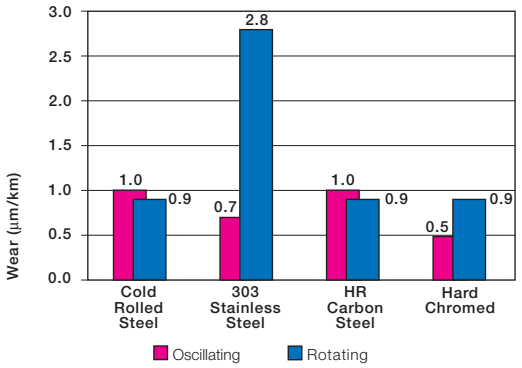
➤ Shaft Materials, Page 1.11



Graph 4.7: Wear of iglide® J, rotating application with different shaft materials, p = 108 psi, v = 98 fpm



Graph 4.8: Wear of iglide® J, rotating application with different shaft materials, depending on load



Graph 4.9: Wear for oscillating and rotating applications with different shaft materials under constant load p = 290 psi

Chemical Resistance

iglide® J plain bearings are resistant to diluted lyes and very weak acids, as well as fuels and all types of lubricants. The low moisture absorption also permits use in wet or damp environments. Plain bearings made of iglide® J are resistant to common cleaning agents used in the food industry.
The moisture absorption of iglide® J plain bearings is 0.3% in standard atmosphere. The saturation limit in water is 1.3%. These values are so low that possible design changes due to absorption are only necessary in extreme cases.

➤ Chemical Resistance, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally resistant
Strong acids	Not Resistant
Weak lyes	Resistant
Strong lyes	Conditionally Resistant

Table 4.5: Chemical resistance of iglide® J



Graph 4.10: Effect of moisture absorption on iglide® J plain bearings

iglide® J - Linear Plain Bearing

Radiation Resistance

Plain bearings made from iglide® J are resistant to radiation up to an intensity of 3 x 10^2 Gy.

UV-Resistance

iglide® J plain bearings become discolored under UV radiation. However, hardness, compressive strength and the wear resistance of the material do not change.

Vacuum

When used in a vacuum environment, the iglide® J plain bearings release moisture as a vapor. Therefore, only dehumidified bearings made of iglide® J are suitable for the vacuum environment.

Electrical Properties

iglide® J plain bearings are electrically insulating.

iglide® J	
Specific volume resistance	> 10^{13} Ωcm
Surface resistance	> 10^{12} Ω

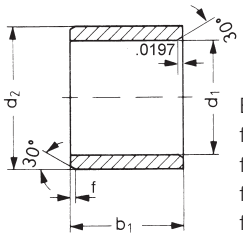
Table 4.6: Electrical properties of iglide® J

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iglide® J - Linear Plain Bearing
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

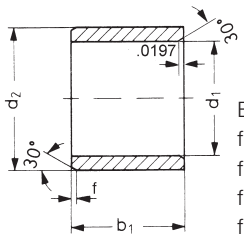
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
JSI-0204-04	1/8	1/4	1/4	.1280	.1262	.2515	.2510	.1250	.1241
JSI-0204-06	1/8	1/4	3/8	.1280	.1262	.2515	.2510	.1250	.1241
JSI-0304-06	3/16	1/4	3/8	.1905	.1886	.2506	.2500	.1865	.1858
JSI-0304-08	3/16	1/4	1/2	.1905	.1886	.2506	.2500	.1865	.1858
JSI-0305-05	3/16	5/16	5/16	.1905	.1887	.3140	.3135	.1875	.1866
JSI-0305-06	3/16	5/16	3/8	.1905	.1887	.3140	.3135	.1875	.1866
JSI-0305-08	3/16	5/16	1/2	.1905	.1887	.3140	.3135	.1875	.1866
JSI-0405-04	1/4	5/16	1/4	.2539	.2516	.3140	.3135	.2500	.2491
JSI-0405-06	1/4	5/16	3/8	.2539	.2516	.3140	.3135	.2500	.2491
JSI-0405-08	1/4	5/16	1/2	.2539	.2516	.3140	.3135	.2500	.2491
JSI-0406-04	1/4	3/8	1/4	.2539	.2516	.3765	.3760	.2500	.2491
JSI-0406-08	1/4	3/8	1/2	.2539	.2516	.3765	.3760	.2500	.2491
JSI-0406-12	1/4	3/8	3/4	.2539	.2516	.3765	.3760	.2500	.2491
JSI-0406-16	1/4	3/8	1	.2539	.2516	.3765	.3760	.2500	.2491
JSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
JSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
JSI-0506-12	5/16	3/8	3/4	.3148	.3125	.3753	.3747	.3115	.3106
JSI-0507-06	5/16	7/16	3/8	.3164	.3141	.4390	.4385	.3125	.3116
JSI-0507-08	5/16	7/16	1/2	.3164	.3141	.4390	.4385	.3125	.3116
JSI-0507-10	5/16	7/16	5/8	.3164	.3141	.4390	.4385	.3125	.3116
JSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
JSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
JSI-0608-03	3/8	1/2	3/16	.3787	.3764	.5006	.5000	.3750	.3736
JSI-0608-06	3/8	1/2	3/8	.3787	.3764	.5006	.5000	.3750	.3736
JSI-0608-08	3/8	1/2	1/2	.3787	.3764	.5006	.5000	.3750	.3736
JSI-0608-10	3/8	1/2	5/8	.3787	.3764	.5006	.5000	.3750	.3736
JSI-0708-08	7/16	17/32	1/2	.4406	.4379	.5019	.5010	.4375	.4366
JSI-0709-06	7/16	19/32	3/8	.4406	.4379	.5632	.5625	.4375	.4366
JSI-0809-06	1/2	19/32	3/8	.5047	.5020	.5941	.5934	.5000	.4983
JSI-0809-08	1/2	19/32	1/2	.5047	.5020	.5941	.5934	.5000	.4983
JSI-0809-12	1/2	19/32	3/4	.5047	.5020	.5941	.5934	.5000	.4983
JSI-0809-16	1/2	19/32	1	.5047	.5020	.5941	.5934	.5000	.4983
JSI-0810-04	1/2	5/8	1/4	.5047	.5020	.6260	.6250	.5000	.4990
JSI-0810-08	1/2	5/8	1/2	.5047	.5020	.6260	.6250	.5000	.4990
JSI-0810-12	1/2	5/8	3/4	.5047	.5020	.6260	.6250	.5000	.4990
JSI-0910-26	9/16	21/32	1 5/8	.5655	.5627	.6566	.6559	.5615	.5605
JSI-1011-08	5/8	23/32	1/2	.6280	.6253	.7192	.7184	.6240	.6230
JSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230

iglide® J - Linear Plain Bearing
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

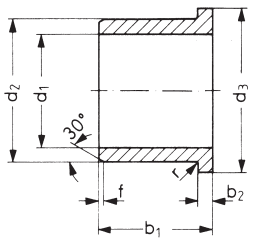
Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
JSI-1011-14	5/8	23/32	7/8	.6280	.6253	.7192	.7184	.6240	.6230
JSI-1011-20	5/8	23/32	1 1/4	.6280	.6253	.7192	.7184	.6240	.6230
JSI-1012-04	5/8	3/4	1/4	.6297	.6270	.7510	.7500	.6250	.6240
JSI-1012-06	5/8	3/4	3/8	.6297	.6270	.7510	.7500	.6250	.6240
JSI-1012-08	5/8	3/4	1/2	.6297	.6270	.7510	.7500	.6250	.6240
JSI-1012-12	5/8	3/4	3/4	.6297	.6270	.7510	.7500	.6250	.6240
JSI-1012-16	5/8	3/4	1	.6297	.6270	.7510	.7500	.6250	.6240
JSI-1214-08	3/4	7/8	1/2	.7541	.7505	.8755	.8747	.7491	.7479
JSI-1214-12	3/4	7/8	3/4	.7541	.7505	.8755	.8747	.7491	.7479
JSI-1214-16	3/4	7/8	1	.7541	.7505	.8755	.8747	.7491	.7479
JSI-1216-12	3/4	1	3/4	.7559	.7525	1.0010	1.000	.7500	.7490
JSI-1216-16	3/4	1	1	.7559	.7525	1.0010	1.000	.7500	.7490
JSI-1315-15	13/16	15/16	15/16	.8174	.8141	.9383	.9375	.8125	.8105
JSI-1315-18	13/16	15/16	1 1/8	.8174	.8141	.9383	.9375	.8125	.8105
JSI-1416-12	7/8	1	3/4	.8791	.8757	1.0005	.9997	.8741	.8729
JSI-1418-12	7/8	1 1/8	3/4	.8809	.8775	1.1258	1.1250	.8750	.8740
JSI-1418-24	7/8	1 1/8	1 1/2	.8809	.8775	1.1258	1.1250	.8750	.8740
JSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1250	.9991	.9979
JSI-1618-24	1	1 1/8	1 1/2	1.0041	1.0007	1.1255	1.1250	.9991	.9979
JSI-1620-12	1	1 1/4	3/4	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
JSI-1620-16	1	1 1/4	1	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
JSI-1620-24	1	1 1/4	1 1/2	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
JSI-1822-16	1 1/8	1 3/8	1	1.1327	1.1276	1.3760	1.3750	1.1250	1.1240
JSI-2022-14	1 1/4	1 3/8	7/8	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
JSI-2024-24	1 1/4	1 1/2	1 1/2	1.2600	1.2532	1.5005	1.4995	1.2500	1.2490
JSI-2426-32	1 1/2	1 5/8	2	1.5100	1.5032	1.6568	1.6558	1.4988	1.4972
JSI-2428-24	1 1/2	1 3/4	1 1/2	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
JSI-2832-20	1 3/4	2	1 1/4	1.7547	1.7507	2.0010	2.0000	1.7500	1.7476

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iglide® J - Linear Plain Bearing
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

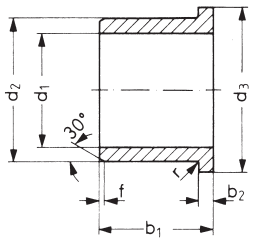
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
JFI-0204-06	1/8	1/4	3/8	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
JFI-0304-02	3/16	1/4	1/8	.375	.032	.1905	.1887	.2515	.2510	.1865	.1858
JFI-0304-04	3/16	1/4	1/4	.375	.032	.1905	.1887	.2503	.2497	.1865	.1858
JFI-0304-06	3/16	1/4	3/8	.375	.032	.1905	.1877	.2503	.2497	.1865	.1858
JFI-0304-08	3/16	1/4	1/2	.375	.032	.1905	.1887	.2503	.2497	.1865	.1858
JFI-0305-06	3/16	5/16	3/8	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
JFI-0305-08	3/16	5/16	1/2	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
JFI-0405-04	1/4	5/16	1/4	.430	.032	.2539	.2516	.3122	.3128	.2481	.2490
JFI-0405-06	1/4	5/16	3/8	.430	.032	.2539	.2516	.3122	.3128	.2481	.2490
JFI-0405-12	1/4	5/16	3/4	.430	.032	.2539	.2516	.3122	.3128	.2481	.2490
JFI-0406-03	1/4	3/8	3/16	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
JFI-0406-04	1/4	3/8	1/4	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
JFI-0406-08	1/4	3/8	1/2	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
JFI-0506-04	5/16	3/8	1/4	.500	.032	.3148	.3125	.3753	.3747	.3115	.3106
JFI-0506-06	5/16	3/8	3/8	.500	.032	.3148	.3125	.3753	.3747	.3115	.3106
JFI-0506-08	5/16	3/8	1/2	.500	.032	.3148	.3125	.3753	.3747	.3115	.3106
JFI-0507-08	5/16	7/16	1/2	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
JFI-0607-06	3/8	15/32	3/8	.687	.046	.3775	.3750	.4691	.4684	.3740	.3731
JFI-0607-08	3/8	15/32	1/2	.687	.046	.3775	.3750	.4691	.4684	.3740	.3731
JFI-0608-03	3/8	1/2	3/16	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
JFI-0608-04	3/8	1/2	1/4	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
JFI-0608-06	3/8	1/2	3/8	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
JFI-0608-08	3/8	1/2	1/2	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
JFI-0809-04	1/2	19/32	1/4	.875	.046	.5040	.5000	.5941	.5934	.4990	.4980
JFI-0809-06	1/2	19/32	3/8	.875	.046	.5040	.5000	.5941	.5934	.4990	.4980
JFI-0809-08	1/2	19/32	1/2	.875	.046	.5040	.5000	.5941	.5934	.4990	.4980
JFI-0810-04	1/2	5/8	1/4	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
JFI-0810-08	1/2	5/8	1/2	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
JFI-0810-10	1/2	5/8	5/8	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
JFI-0810-12	1/2	5/8	3/4	.875	.062	.5047	.5020	.6260	.6250	.5000	.4990
JFI-1011-06	5/8	23/32	3/8	.937	.046	.6280	.6253	.7192	.7184	.6250	.6233
JFI-1011-08	5/8	23/32	1/2	.937	.046	.6280	.6253	.7192	.7184	.6250	.6233
JFI-1011-12	5/8	23/32	3/4	1.000	.046	.6295	.6268	.7192	.7184	.6250	.6233
JFI-1012-08	5/8	3/4	1/2	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
JFI-1012-12	5/8	3/4	3/4	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
JFI-1012-16	5/8	3/4	1	1.000	.062	.6297	.6270	.7510	.7500	.6250	.6240
JFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7505	.8755	.8747	.7491	.7479
JFI-1214-09	3/4	7/8	9/16	1.125	.062	.7541	.7505	.8755	.8747	.7491	.7479
JFI-1214-10	3/4	7/8	5/8	1.125	.062	.7541	.7505	.8755	.8747	.7491	.7479
JFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7505	.8755	.8747	.7491	.7479
JFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7505	.8755	.8747	.7491	.7479

iglide® J - Linear Plain Bearing
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

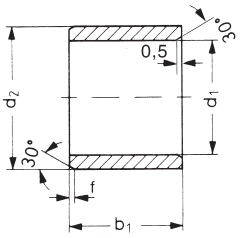
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
JFI-1216-12	3/4	1	3/4	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
JFI-1216-16	3/4	1	1	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
JFI-1416-12	7/8	1	3/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
JFI-141618-11	7/8	1	11/16	1.125	.062	.8807	.8774	1.0010	1.0000	.8750	.8740
JFI-1418-24	7/8	1 1/8	1 1/2	1.375	.156	.8809	.8775	1.1260	1.1250	.8750	.8740
JFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
JFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
JFI-1620-12	1	1 1/4	3/4	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
JFI-1620-16	1	1 1/4	1	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
JFI-1620-24	1	1 1/4	1 1/2	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
JFI-2024-16	1 1/4	1 1/2	1	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
JFI-2024-24	1 1/4	1 1/2	1 1/2	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
JFI-2428-16	1 1/2	1 3/4	1	2.000	.125	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
JFI-2428-24	1 1/2	1 3/4	1 1/2	2.000	.125	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
JFI-2630-16	1 5/8	1 7/8	1	2.125	.125	1.6350	1.6282	1.8755	1.8745	1.6250	1.6240
JFI-3236-16	2.0	2 1/4	1	2.500	.125	2.0100	2.0032	2.2505	2.2495	2.0000	1.9990

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iglide® J - Linear Plain Bearing
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

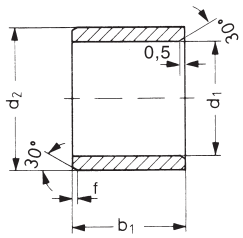
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
JSM-0104-02	1.5	+0.020 +0.080	4.0	2.0	1.580	1.520	4.012	4.000	1.500	1.475
JSM-0205-02	2.0	+0.020 +0.080	5.0	2.0	2.080	2.020	5.012	5.000	2.000	1.975
JSM-0206-02	2.5	+0.020 +0.080	6.0	2.5	2.080	2.020	6.012	6.000	2.000	1.975
JSM-0304-05	3.0	+0.014 +0.054	4.5	5.0	3.054	3.014	4.512	4.500	3.000	2.975
JSM-0304-09	3.0	+0.014 +0.054	4.5	9.0	3.054	3.014	4.512	4.500	3.000	2.975
JSM-0305-04	3.0	+0.020 +0.080	5.0	4.0	3.080	3.020	5.012	5.000	3.000	2.975
JSM-0308-04	3.0	+0.020 +0.080	8.0	4.0	3.080	3.020	8.015	8.000	3.000	2.975
JSM-0308-05	3.0	+0.020 +0.080	8.0	5.0	3.080	3.020	8.015	8.000	3.000	2.975
JSM-0405-04	4.0	+0.020 +0.068	5.5	4.0	4.068	4.020	5.512	5.500	4.000	3.970
JSM-0405-08	4.0	+0.020 +0.068	5.5	8.0	4.068	4.020	5.512	5.500	4.000	3.970
JSM-0507-046	5.0	+0.020 +0.068	7.0	4.6	5.068	5.020	7.015	7.000	5.000	4.970
JSM-0507-05	5.0	+0.020 +0.068	7.0	5.0	5.068	5.020	7.015	7.000	5.000	4.970
JSM-0507-10	5.0	+0.020 +0.068	7.0	10.0	5.068	5.020	7.015	7.000	5.000	4.970
JSM-0507-15	5.0	+0.020 +0.068	7.0	15.0	5.068	5.020	7.015	7.000	5.000	4.970
JSM-0607-08	6.0	+0.010 +0.058	7.0	8.0	6.058	6.010	7.015	7.000	6.000	5.970
JSM-0607-12.5	6.0	+0.010 +0.058	7.0	12.5	6.058	6.010	7.015	7.000	6.000	5.970
JSM-0607-14	6.0	+0.010 +0.058	7.0	14.0	6.058	6.010	7.015	7.000	6.000	5.970
JSM-0608-043	6.0	+0.020 +0.068	8.0	4.3	6.058	6.020	7.015	8.000	6.000	5.970
JSM-0608-06	6.0	+0.020 +0.068	8.0	6.0	6.068	6.020	8.015	8.000	6.000	5.970
JSM-0608-10	6.0	+0.020 +0.068	8.0	10.0	6.068	6.020	8.015	8.000	6.000	5.970
JSM-0609-06	6.0	+0.030 +0.105	9.0	6.0	6.105	6.030	9.015	9.000	6.000	5.970
JSM-0610-10	6.0	+0.030 +0.105	10.0	10.0	6.105	6.030	10.015	10.000	6.000	5.970
JSM-0709-09	7.0	+0.025 +0.083	9.0	9.0	7.083	7.025	9.015	9.000	7.000	6.964
JSM-0810-04	8.0	+0.025 +0.083	10.0	4.0	8.083	8.025	10.015	10.000	8.000	7.964
JSM-0810-06	8.0	+0.025 +0.083	10.0	6.0	8.083	8.025	10.015	10.000	8.000	7.964
JSM-0810-08	8.0	+0.025 +0.083	10.0	8.0	8.083	8.025	10.015	10.000	8.000	7.964
JSM-0810-10	8.0	+0.025 +0.083	10.0	10.0	8.083	8.025	10.015	10.000	8.000	7.964
JSM-0810-12	8.0	+0.025 +0.083	10.0	12.0	8.083	8.025	10.015	10.000	8.000	7.964
JSM-0810-16	8.0	+0.025 +0.083	10.0	16.0	8.083	8.025	10.015	10.000	8.000	7.964
JSM-0812-10	8.0	+0.040 +0.130	12.0	10.0	8.130	8.040	12.018	12.000	8.000	7.964
JSM-0812-12	8.0	+0.040 +0.130	12.0	12.0	8.130	8.040	12.018	12.000	8.000	7.964
JSM-1012-05	10.0	+0.025 +0.083	12.0	5.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1012-06	10.0	+0.025 +0.083	12.0	6.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1012-08	10.0	+0.025 +0.083	12.0	8.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1012-10	10.0	+0.025 +0.083	12.0	10.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1012-11	10.0	+0.025 +0.083	12.0	11.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1012-12	10.0	+0.025 +0.083	12.0	12.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1012-15	10.0	+0.025 +0.083	12.0	15.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1012-20	10.0	+0.025 +0.083	12.0	20.0	10.083	10.025	12.018	12.000	10.000	9.964
JSM-1014-10	10.0	+0.040 +0.130	14.0	10.0	10.130	10.040	14.018	14.000	10.000	9.964

iglide® J - Linear Plain Bearing
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

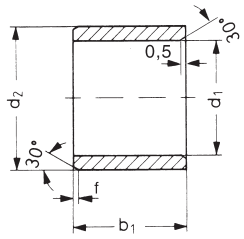
Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	after pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
JSM-1014-16	10.0	+0.040 +0.130	14.0	16.0	10.130	10.040	14.018	14.000	10.000	9.964
JSM-1214-06	12.0	+0.032 +0.102	14.0	6.0	12.102	12.032	14.018	14.000	12.000	11.957
JSM-1214-08	12.0	+0.032 +0.102	14.0	8.0	12.102	12.032	14.018	14.000	12.000	11.957
JSM-1214-09	12.0	+0.032 +0.102	14.0	9.0	12.102	12.032	14.018	14.000	12.000	11.957
JSM-1214-10	12.0	+0.032 +0.102	14.0	10.0	12.102	12.032	14.018	14.000	12.000	11.957
JSM-1214-15	12.0	+0.032 +0.102	14.0	15.0	12.102	12.032	14.018	14.000	12.000	11.957
JSM-1216-12	12.0	+0.050 +0.160	16.0	12.0	12.160	12.050	16.018	16.000	12.000	11.957
JSM-1216-17	12.0	+0.050 +0.160	16.0	17.0	12.160	12.050	16.018	16.000	12.000	11.957
JSM-1416-05	14.0	+0.032 +0.102	16.0	5.0	14.102	14.032	16.018	16.000	14.000	13.957
JSM-1416-08	14.0	+0.032 +0.102	16.0	8.0	14.102	14.032	16.018	16.000	14.000	13.957
JSM-1416-10	14.0	+0.032 +0.102	16.0	10.0	14.102	14.032	16.018	16.000	14.000	13.957
JSM-1416-15	14.0	+0.032 +0.102	16.0	15.0	14.102	14.032	16.018	16.000	14.000	13.957
JSM-1416-20	14.0	+0.032 +0.102	16.0	20.0	14.102	14.032	16.018	16.000	14.000	13.957
JSM-1416-25	14.0	+0.032 +0.102	16.0	25.0	14.102	14.032	16.018	16.000	14.000	13.957
JSM-1418-18	14.0	+0.032 +0.102	18.0	18.0	14.102	14.032	18.018	18.000	14.000	13.957
JSM-1517-12	15.0	+0.032 +0.102	17.0	12.0	15.102	15.032	17.018	17.000	15.000	14.957
JSM-1517-20	15.0	+0.032 +0.102	17.0	20.0	15.102	15.032	17.018	17.000	15.000	14.957
JSM-1618-10	16.0	+0.032 +0.102	18.0	10.0	16.102	16.032	18.018	18.000	16.000	15.957
JSM-1618-12	16.0	+0.032 +0.102	18.0	12.0	16.102	16.032	18.018	18.000	16.000	15.957
JSM-1618-15	16.0	+0.032 +0.102	18.0	15.0	16.102	16.032	18.018	18.000	16.000	15.957
JSM-1618-20	16.0	+0.032 +0.102	18.0	20.0	16.102	16.032	18.018	18.000	16.000	15.957
JSM-1620-16	16.0	+0.050 +0.160	20.0	16.0	16.160	16.050	20.021	20.000	16.000	15.957
JSM-1622-16	16.0	+0.050 +0.160	22.0	16.0	16.160	16.050	22.021	22.000	16.000	15.957
JSM-1622-20	16.0	+0.050 +0.160	22.0	20.0	16.160	16.050	22.021	22.000	16.000	15.957
JSM-1820-15	18.0	+0.032 +0.102	20.0	15.0	18.102	18.032	20.021	20.000	18.000	17.957
JSM-1820-20	18.0	+0.032 +0.102	20.0	20.0	18.102	18.032	20.021	20.000	18.000	17.957
JSM-2022-20	20.0	+0.040 +0.124	22.0	20.0	20.124	20.040	22.021	22.000	20.000	19.948
JSM-2022-30	20.0	+0.040 +0.124	22.0	30.0	20.124	20.040	22.021	22.000	20.000	19.948
JSM-2023-15	20.0	+0.040 +0.124	23.0	15.0	20.124	20.040	23.021	23.000	20.000	19.948
JSM-2023-20	20.0	+0.040 +0.124	23.0	20.0	20.124	20.040	23.021	23.000	20.000	19.948
JSM-2023-25	20.0	+0.040 +0.124	23.0	25.0	20.124	20.040	23.021	23.000	20.000	19.948
JSM-2026-06	20.0	+0.065 +0.195	26.0	6.0	20.124	20.040	26.021	26.000	20.000	19.948
JSM-2026-20	20.0	+0.065 +0.195	26.0	20.0	20.124	20.040	26.021	26.000	20.000	19.948
JSM-2026-25	20.0	+0.065 +0.195	26.0	25.0	20.124	20.040	26.021	26.000	20.000	19.948
JSM-2026-30	20.0	+0.065 +0.195	26.0	30.0	20.124	20.040	26.021	26.000	20.000	19.948
JSM-2427-25	24.0	+0.040 +0.124	27.0	25.0	24.124	24.040	27.021	27.000	24.000	23.948
JSM-2427-46	24.0	+0.040 +0.124	27.0	46.0	24.124	24.040	27.021	27.000	24.000	23.948
JSM-2528-12	25.0	+0.040 +0.124	28.0	12.0	25.124	25.040	28.021	28.000	25.000	24.948
JSM-2528-20	25.0	+0.040 +0.124	28.0	20.0	25.124	25.040	28.021	28.000	25.000	24.948
JSM-2528-30	25.0	+0.040 +0.124	28.0	30.0	25.124	25.040	28.021	28.000	25.000	24.948

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QuickSpec: www.igus.com/qs/iglide.asp

iglide® J - Linear Plain Bearing
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

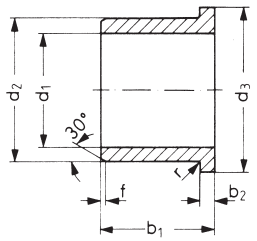
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
JSM-2528-60	25.0	+0.040 +0.124	28.0	60.0	25.124	25.040	28.021	28.000	25.000	24.948
JSM-2532-25	25.0	+0.065 +0.195	32.0	25.0	25.195	25.065	32.025	32.000	25.000	24.948
JSM-2532-35	25.0	+0.065 +0.195	32.0	35.0	25.195	25.065	32.025	32.000	25.000	24.948
JSM-2630-20	26.0	+0.065 +0.195	30.0	20.0	26.195	26.065	30.025	30.000	26.000	25.948
JSM-2832-20	28.0	+0.065 +0.195	32.0	20.0	28.195	28.065	32.025	32.000	28.000	27.948
JSM-2836-29	28.0	+0.065 +0.195	36.0	29.0	28.195	28.065	36.025	36.000	28.000	27.948
JSM-3034-20	30.0	+0.040 +0.124	34.0	20.0	30.124	30.040	34.025	34.000	30.000	29.948
JSM-3034-25	30.0	+0.040 +0.124	34.0	25.0	30.124	30.040	34.025	34.000	30.000	29.948
JSM-3034-30	30.0	+0.040 +0.124	34.0	30.0	30.124	30.040	34.025	34.000	30.000	29.948
JSM-3038-40	30.0	+0.065 +0.195	38.0	40.0	30.195	30.065	38.025	38.000	30.000	29.948
JSM-3236-20	32.0	+0.050 +0.150	36.0	20.0	32.150	32.050	36.025	36.000	32.000	31.938
JSM-3236-30	32.0	+0.050 +0.150	36.0	30.0	32.150	32.050	36.025	36.000	32.000	31.938
JSM-3236-40	32.0	+0.050 +0.150	36.0	40.0	32.150	32.050	36.025	36.000	32.000	31.938
JSM-3539-20	35.0	+0.050 +0.150	39.0	20.0	35.150	35.050	39.025	39.000	35.000	34.938
JSM-3539-30	35.0	+0.050 +0.150	39.0	30.0	35.150	35.050	39.025	39.000	35.000	34.938
JSM-3539-40	35.0	+0.050 +0.150	39.0	40.0	35.150	35.050	39.025	39.000	35.000	34.938
JSM-3640-45	36.0	+0.050 +0.150	40.0	45.0	36.150	36.050	40.025	40.000	36.000	35.938
JSM-4044-30	40.0	+0.050 +0.150	44.0	30.0	40.150	40.050	44.025	44.000	40.000	39.938
JSM-4044-35	40.0	+0.050 +0.150	44.0	35.0	40.150	40.050	44.025	44.000	40.000	39.938
JSM-4044-40	40.0	+0.050 +0.150	44.0	40.0	40.150	40.050	44.025	44.000	40.000	39.938
JSM-5055-30	50.0	+0.050 +0.150	55.0	30.0	50.150	50.050	55.030	55.000	50.000	49.938
JSM-5055-50	50.0	+0.050 +0.150	55.0	50.0	50.150	50.050	55.030	55.000	50.000	49.938
JSM-5560-60	55.0	+0.060 +0.180	60.0	60.0	55.180	55.060	60.030	60.000	55.000	54.926
JSM-6065-60	60.0	+0.060 +0.180	65.0	60.0	60.180	60.060	65.030	65.000	60.000	59.926
JSM-7580-60	75.0	+0.060 +0.180	80.0	60.0	75.180	75.060	80.030	80.000	75.000	74.926

iglide® J - Linear Plain Bearing
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

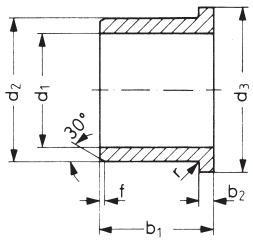
Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
JFM-0304-05	3.0	+0.014 +0.054	4.5	7.5	5.0	0.75	3.054	3.014	4.512	4.500	3.000	2.975
JFM-0405-03	4.0	+0.020 +0.068	5.5	9.5	3.0	0.75	4.068	4.020	5.512	5.000	4.000	3.970
JFM-0405-06	4.0	+0.020 +0.068	5.5	9.5	6.0	0.75	4.068	4.020	5.512	5.000	4.000	3.970
JFM-0408-04	4.0	+0.030 +0.105	8.0	12.0	4.0	2.0	4.105	4.030	8.015	8.000	4.000	3.970
JFM-0507-03	5.0	+0.020 +0.068	7.0	11.0	3.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
JFM-0507-05	5.0	+0.020 +0.068	7.0	11.0	5.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
JFM-0608-04	6.0	+0.020 +0.068	8.0	12.0	4.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
JFM-0608-06	6.0	+0.020 +0.068	8.0	12.0	6.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
JFM-0608-08	6.0	+0.020 +0.068	8.0	12.0	8.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
JFM-0608-10	6.0	+0.020 +0.068	8.0	12.0	10.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
JFM-0610-10	6.0	+0.030 +0.105	10.0	14.0	10.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
JFM-0810-05	8.0	+0.025 +0.083	10.0	15.0	5.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
JFM-0810-06	8.0	+0.025 +0.083	10.0	15.0	6.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
JFM-0810-07	8.0	+0.025 +0.083	10.0	15.0	7.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
JFM-0810-08	8.0	+0.025 +0.083	10.0	15.0	8.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
JFM-0810-10	8.0	+0.025 +0.083	10.0	15.0	10.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
JFM-081014-10	8.0	+0.025 +0.083	10.0	14.0	10.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
JFM-081016-11	8.0	+0.025 +0.083	10.0	16.0	11.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
JFM-0812-05	8.0	+0.040 +0.130	12.0	16.0	5.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
JFM-0812-06	8.0	+0.040 +0.130	12.0	16.0	6.0	2.0	8.115	8.025	12.018	12.000	8.000	7.964
JFM-0812-30	8.0	+0.040 +0.130	12.0	16.0	30.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
JFM-101215-035	10.0	+0.025 +0.083	12.0	15.0	3.5	1.0	10.083	10.025	12.018	12.000	10.000	9.964
JFM-1012-05	10.0	+0.025 +0.083	12.0	18.0	5.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
JFM-1012-09	10.0	+0.025 +0.083	12.0	18.0	9.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
JFM-1012-10	10.0	+0.025 +0.083	12.0	18.0	10.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
JFM-1012-12	10.0	+0.025 +0.083	12.0	18.0	12.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
JFM-1012-15	10.0	+0.025 +0.083	12.0	18.0	15.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
JFM-1012-18	10.0	+0.025 +0.083	12.0	18.0	18.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
JFM-1014-14	10.0	+0.040 +0.130	14.0	17.5	14.0	2.0	10.130	10.0410	14.018	14.000	10.000	9.964
JFM-101420-12	10.0	+0.040 +0.130	14.0	20.0	12.0	2.0	10.130	10.040	14.018	14.000	10.000	9.964
JFM-1016-10	10.0	+0.040 +0.130	16.0	22.0	10.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
JFM-1016-16	10.0	+0.040 +0.130	16.0	22.0	16.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
JFM-1113-05	11.0	+0.032 +0.102	13.0	18.0	5.0	1.0	11.102	11.032	13.018	13.000	11.000	10.964
JFM-1214-05	12.0	+0.032 +0.102	14.0	20.0	5.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
JFM-1214-07	12.0	+0.032 +0.102	14.0	20.0	7.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
JFM-1214-09	12.0	+0.032 +0.102	14.0	20.0	9.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
JFM-121418-10	12.0	+0.032 +0.102	14.0	18.0	10.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
JFM-1214-12	12.0	+0.032 +0.102	14.0	20.0	12.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
JFM-1214-15	12.0	+0.032 +0.102	14.0	20.0	15.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
JFM-1218-08	12.0	+0.050 +0.160	18.0	24.0	8.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
JFM-1218-12	12.0	+0.050 +0.160	18.0	24.0	12.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
JFM-1218-20	12.0	+0.050 +0.160	18.0	22.0	20.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957

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Fax 1-401-438-7680

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Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
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Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
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>10	to	18	-0 /-270
>18	to	30	-0 /-330
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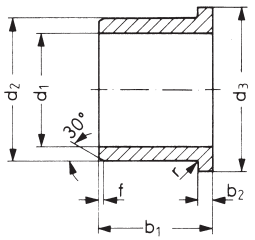
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
JFM-1416-03	14.0	+0.032 +0.102	16.0	22.0	3.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
JFM-1416-10	14.0	+0.032 +0.102	16.0	22.0	10.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
JFM-1416-12	14.0	+0.032 +0.102	16.0	22.0	12.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
JFM-1416-17	14.0	+0.032 +0.102	16.0	22.0	17.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
JFM-141822-20	14.0	+0.032 +0.102	18.0	22.0	20.0	2.0	14.102	14.032	18.018	18.000	14.000	13.957
JFM-1420-20	14.0	+0.050 +0.160	20.0	25.0	20.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957
JFM-1517-09	15.0	+0.032 +0.102	17.0	23.0	9.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
JFM-1517-12	15.0	+0.032 +0.102	17.0	23.0	12.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
JFM-1517-17	15.0	+0.032 +0.102	17.0	23.0	17.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
JFM-1521-20	15.0	+0.050 +0.160	21.0	27.0	20.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
JFM-1618-17	16.0	+0.032 +0.102	18.0	24.0	17.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
JFM-1622-12	16.0	+0.050 +0.160	22.0	28.0	12.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
JFM-1622-15	16.0	+0.050 +0.160	22.0	28.0	15.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
JFM-1622-20	16.0	+0.050 +0.160	22.0	28.0	20.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
JFM-1622-25	16.0	+0.050 +0.160	22.0	28.0	25.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
JFM-1719-09	17.0	+0.032 +0.102	19.0	25.0	9.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
JFM-1719-21	17.0	+0.032 +0.102	19.0	25.0	21.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
JFM-1820-04	18.0	+0.032 +0.102	20.0	26.0	4.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
JFM-1820-12	18.0	+0.032 +0.102	20.0	26.0	12.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
JFM-1820-22	18.0	+0.032 +0.102	20.0	26.0	22.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
JFM-1922-36	19.0	+0.040 +0.124	22.0	26.0	36.0	1.0	19.124	19.040	22.021	22.000	19.000	18.957
JFM-2023-11	20.0	+0.040 +0.124	23.0	30.0	11.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
JFM-2023-15.5	20.0	+0.040 +0.124	23.0	30.0	15.5	1.5	20.124	20.040	23.021	23.000	20.000	19.948
JFM-2023-21	20.0	+0.040 +0.124	23.0	30.0	21.5	1.5	20.124	20.040	23.021	23.000	20.000	19.948
JFM-202530-15	20.0	+0.065 +0.195	25.0	30.0	15.0	2.5	20.195	20.065	25.021	25.000	20.000	19.948
JFM-2026-15	20.0	+0.065 +0.195	26.0	32.0	15.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
JFM-2026-20	20.0	+0.065 +0.195	26.0	32.0	20.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
JFM-2026-25	20.0	+0.065 +0.195	26.0	32.0	25.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
JFM-2026-30	20.0	+0.065 +0.195	26.0	32.0	30.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
JFM-222532-08	22.0	+0.040 +0.124	25.0	32.0	8.0	1.5	22.124	22.040	25.021	25.000	22.000	21.948
JFM-2430-30	24.0	+0.040 +0.124	30.0	36.0	30.0	3.0	24.124	24.040	30.021	30.000	24.000	23.948
JFM-2528-06	25.0	+0.040 +0.124	28.0	35.0	6.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
JFM-2528-14.5	25.0	+0.040 +0.124	28.0	35.0	14.5	1.5	25.124	25.040	28.021	28.000	25.000	24.948
JFM-2528-21	25.0	+0.040 +0.124	28.0	35.0	21.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
JFM-2532-20	25.0	+0.065 +0.195	32.0	38.0	20.0	4.0	25.195	25.065	32.021	32.000	25.000	24.948
JFM-2532-25	25.0	+0.065 +0.195	32.0	38.0	25.0	4.0	25.195	25.065	32.021	32.000	25.000	24.948
JFM-2532-40	25.0	+0.065 +0.195	32.0	38.0	40.0	2.0	25.195	25.065	32.021	32.000	25.000	24.948
JFM-3034-20	30.0	+0.040 +0.124	34.0	42.0	20.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
JFM-3034-26	30.0	+0.040 +0.124	34.0	42.0	26.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
JFM-3038-20	30.0	+0.065 +0.195	38.0	44.0	20.0	4.0	30.195	30.065	38.025	38.000	30.000	29.948
JFM-3038-30	30.0	+0.065 +0.195	38.0	44.0	30.0	4.0	30.195	30.065	38.025	38.000	30.000	29.948
JFM-3038-36	30.0	+0.065 +0.195	38.0	44.0	36.0	4.0	30.195	30.065	38.025	38.000	30.000	29.948

PDF: www.igus.com/pdf/iglide.asp
Specs/CAD/RFQ: www.igus.com/iglide.asp
RoHS info: www.igus.com/RoHS.asp

iglide® J - Linear Plain Bearing
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

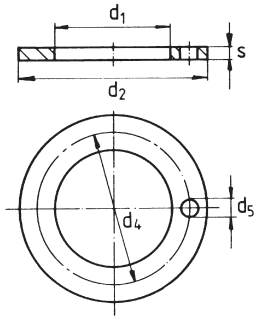
Length Tolerance (b1)

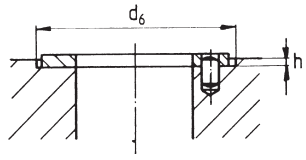
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Part Number	d1[1)]	d1-Tolerance After Pressfit in Ø H7	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
				d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
JFM-3539-12	35.0	+0.050 +0.150	39.0	47.0	12.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
JFM-3539-16	35.0	+0.050 +0.150	39.0	47.0	16.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
JFM-3539-26	35.0	+0.050 +0.150	39.0	47.0	26.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
JFM-4044-20	40.0	+0.050 +0.150	44.0	52.0	20.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
JFM-4044-30	40.0	+0.050 +0.150	44.0	52.0	30.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
JFM-4044-40	40.0	+0.050 +0.150	44.0	52.0	40.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
JFM-4550-20	45.0	+0.050 +0.150	50.0	58.0	20.0	2.0	45.150	45.050	50.025	50.000	45.000	44.938
JFM-4550-50	45.0	+0.050 +0.150	50.0	58.0	50.0	2.0	45.150	45.050	50.025	50.000	45.000	44.938
JFM-5055-50	50.0	+0.050 +0.150	55.0	63.0	50.0	2.0	50.150	50.050	55.030	55.000	50.000	54.926
JFM-556082-30	55.0	+0.060 +0.180	60.0	82.0	30.0	2.0	55.180	55.060	60.030	60.000	55.000	54.926
JFM-5560-50	55.0	+0.060 +0.180	60.0	68.0	50.0	2.0	55.180	55.060	60.030	60.000	55.000	54.926
JFM-6065-50	60.0	+0.060 +0.180	65.0	73.0	50.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
JFM-7075-50	70.0	+0.060 +0.180	75.0	83.0	50.0	2.0	70.180	70.060	75.030	75.000	70.000	69.926

iglide® J - Linear Plain Bearing
Thrust Washer, MM







Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d2	s	d4	d5	h	d6
	0.3	-0.3	-0.05	-0.12 +0.12	+0.375 +0.125	+0.2 0.2	+0.12
JTM-1224-015	12.0	24.0	1.5	18.0	1.5	1.0	24.0
JTM-2036-015	20.0	36.0	1.5	28.0	3.0	1.0	36.0

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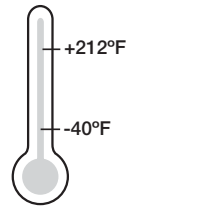
iglide® GLW - Strong and Reasonably Priced

- Diverse applications with static loads
- Maintenance-free
- Cost-effective
- Resistant to dirt
- Resistant to vibrations



iglide® GLW - Plain Bearings

Price Index



When to use iglide® GLW plain bearings:

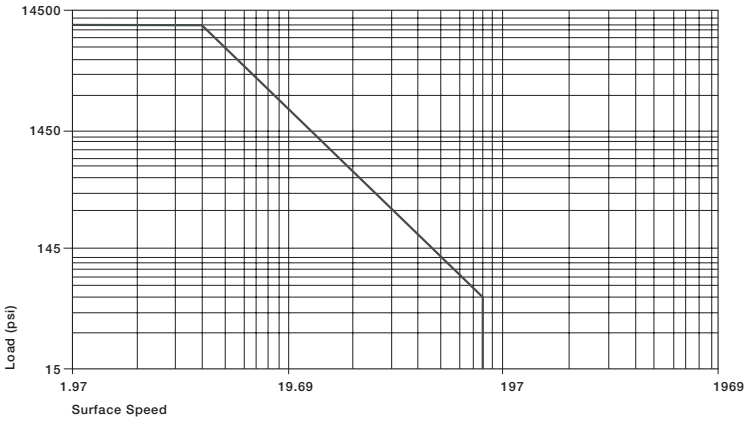
- When you need an economical all-around bearing for mass production
- For high, primarily static loads
- For low to medium speeds
- When the bearing should be suitable for different shafts

When not to use iglide® GLW plain bearings:

- When mechanical reaming of the wall surface is necessary
  ➤ iglide® M250
- For primarily dynamic loads,
  ➤ iglide® G300
- When the highest wear resistance is necessary
  ➤ iglide® L280
- When temperatures occur that are constantly greater than 266°F
  ➤ iglide® T500, F

Table 5.1: Material Data

General Properties	Unit	iglide® GLW	Testing Method
Density	g/cm³	1.36	
Color		black	
Max moisture absorption at 73°F/50% r.h.	% weight	1.3	DIN 53495
Max. moisture absorption	% weight	5.5	
Coefficient of friction, dynamic against steel	µ	0.10 - 0.24	
p x v value, max. (dry)	psi x fpm	8,600	
Mechanical Properties			
Modulus of elasticity	psi	1,116,500	DIN 53457
Tensile strength at 68°F	psi	34,075	DIN 53452
Compressive strength	psi	10,730	
Permissible static surface pressure (68°F)	psi	11,600	
Shore D-hardness		78	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	212	
Max. short-term application temperature	°F	320	
Min. application temperature	°F	-40	
Thermal conductivity	W/m x K	0.24	ASTM C 177
Coefficient of thermal expansion (at 73°F)	$K^{-1} \times 10^{-5}$	17	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{11}$	DIN IEC 93
Surface resistance	Ω	$> 10^{11}$	DIN 53482



Graph 5.1: Permissible p x v values for iglide® GLW running dry against a steel shaft, at 68°F

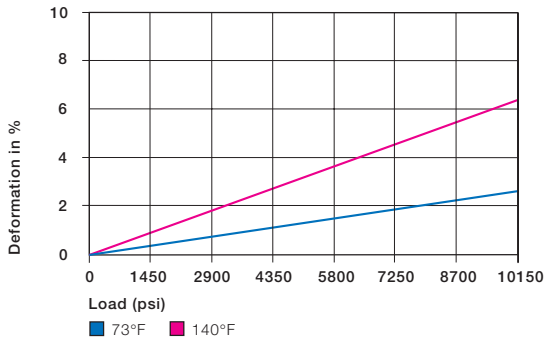
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Internet: http://www.igus.com
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With plain bearings made of iglide® GLW, we can offer our customers an alternative to iglide® G300 for mass-production applications. With similar characteristic values as iglide® G300 plain bearings, iglide® GLW plain bearings are recommended for primarily static loads. For these applications, where the dynamic properties of iglide® G300 are virtually unnecessary, they present a very cost-effective alternative.

Compressive Strength

Graph 5.2 shows the elastic deformation of iglide® GLW for radial loads. At the maximum permissible load of 10,150 psi at room temperature, the deformation is less than 3%. At this load, a plastic deformation is minimal. However, it is also a result of the cycle time.

➤ Compressive Strength, Page 1.12



Graph 5.2: Deformation under load and temperature

Permissible Surface Speeds

iglide® GLW was developed for low to average surface speeds. In constant operation, a maximum 157 fpm (rotating) or 492 fpm (linear) is permitted. Please note that the maximum values shown in the table are only possible at the lowest pressure loads. In practice, these values are rarely reached, due to the temperature increasing over the maximum permitted value.

➤ Surface Speed, Page 1.14
➤ p x v value, Page 1.15

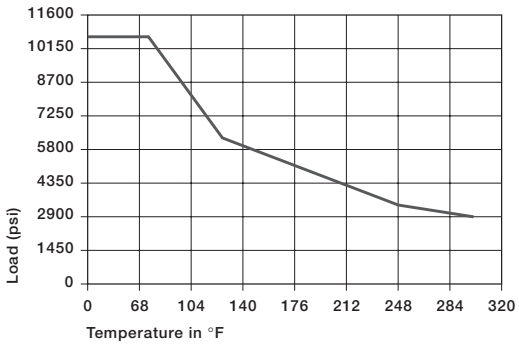
fpm	Rotating	Oscillating	Linear
Continuous	157	196	492
Short-term	196	196	590

Table 5.2: Maximum surface speeds

Temperatures

The surrounding temperatures affect the properties of plain bearings to a large extent. With a maximum permissible short-term temperature of 320°F, it is possible to subject iglide® GLW plain bearings to a heat treating process, provided they are not additionally loaded. With increasing temperatures, the compressive strength of iglide® GLW plain bearings decreases. Graph 5.3 shows this relationship.
With increasing temperatures in the bearing system, the wear also increases.

➤ Application temperatures, Page 1.16



Graph 5.3: Recommended maximum permissible static surface pressure of iglide® GLW as a result of the temperature

iglide® GLW	Application Temperature
Minimum	-22°F
Max. long-term	+212°F
Max. short-term	+320°F

Table 5.3: Temperature limits for iglide® GLW

Installation Tolerances

iglide® GLW plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

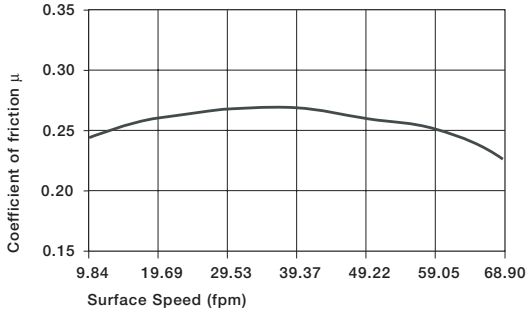
Friction and Wear

Similar to wear resistance, the coefficient of friction μ also changes with the load. It is of interest that the coefficient of friction μ decreases with increasing load. This relationship explains the excellent suitability of iglide® GLW plain bearings for high loads.
Friction and wear are also dependent, to a large degree on the shafting partner. Shafts that are too smooth increase both the coefficient of friction and the wear of the bearing. A ground surface with an average roughness Ra between 4 and 8 rms is best suited.

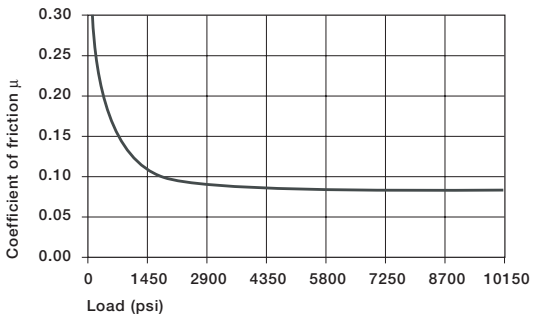
➤ Coefficients of friction and surfaces, Page 1.8
➤ Wear Resistance, Page 1.9

iglide® GLW	Dry	Grease	Oil	Water
Coefficient of Friction μ	0.10 - 0.24	0.09	0.04	0.04

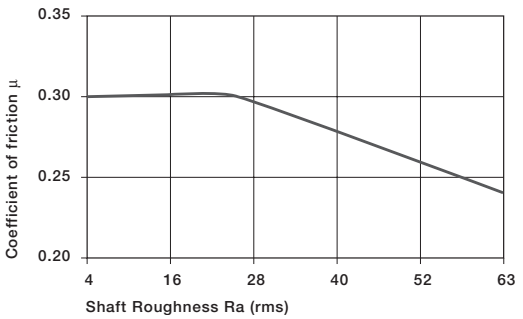
Table 5.4: Coefficients of friction for iglide® GLW against steel (Ra = 40 rms, 50 HRC)



Graph 5.4: Coefficient of friction of iglide® GLW as a result of the surface speed p = 108 psi (shaft Cold Rolled Steel)



Graph 5.5: Coefficient of friction of iglide® GLW as a result of the shaft surface v = 1.97 fpm (shaft Cold Rolled Steel)

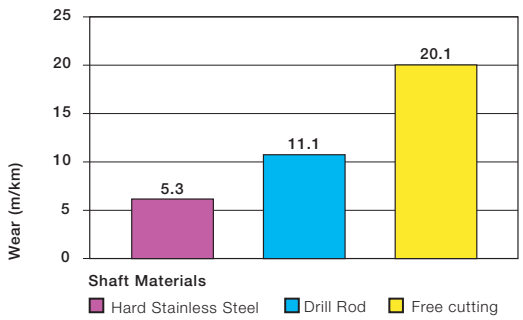


Graph 5.6: Coefficient of friction and wear as a result of the shaft surface

Shaft Materials

The following tables show test results with different shaft materials, combined with plain bearings made of iglide® GLW

➤ Shaft Materials, Page 1.11



Graph 5.7: Wear with different shaft materials (p = 108 psi; v = 98 fpm)

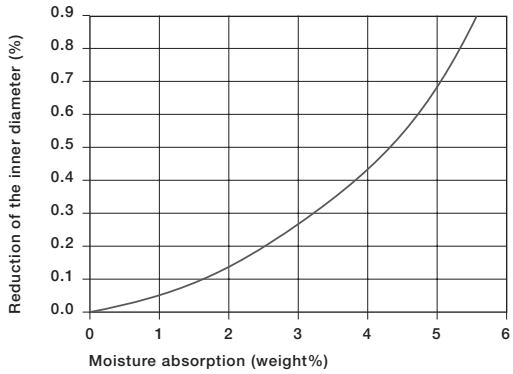
Chemical Resistance

iglide® GLW plain bearings have a good resistance to chemicals. They are resistant to most lubricants. iglide® GLW is not attacked by most organic and inorganic acids. The moisture absorption of iglide® GLW plain bearings is approximately 1% in standard atmosphere. The saturation limit in water is 5%. This must be taken into account along with other applicable conditions.

➤ Chemical Table, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketone	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Conditionally Resistant
Strong lyes	Conditionally Resistant

Table 5.5: Chemical resistance of iglide® GLW



Graph 5.8: Effect of moisture absorption on iglide® GLW plain bearings

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iglide® GLW - Plain Bearings

Radiation Resistance

Plain bearings made from iglide® GLW are resistant to radiation up to an intensity of 3×10^2 Gy.

UV-Resistance

iglide® GLW plain bearings are permanently resistant to UV radiation.

Vacuum

In a vacuum environment, iglide® GLW plain bearings release gases. Use in a vacuum should be tested beforehand.

Electrical Properties

iglide® GLW plain bearings are electrically insulating.

iglide® GLW	
Specific volume resistance	$> 10^{11}$ Ωcm
Surface resistance	$> 10^{11}$ Ω

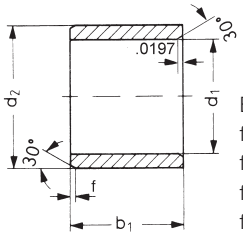
Table 5.6: Electrical properties of iglide® GLW

Availability

Plain bearings made from iglide® GLW are manufactured per order. Please inquire about applications with high parts quantities of plain bearings made of iglide® GLW as an alternative to iglide® G300.

iglide® GLW - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

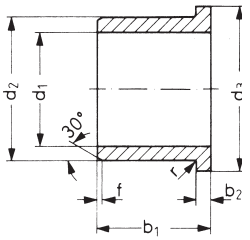
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
GLWSI-0203-04	1/8	3/16	1/4	.1269	.1251	.1878	.1873	.1243	.1236
GLWSI-0304-04	3/16	1/4	1/4	.1892	.1873	.2503	.2497	.1865	.1858
GLWSI-0304-06	3/16	1/4	3/8	.1892	.1873	.2503	.2497	.1865	.1858
GLWSI-0304-08	3/16	1/4	1/2	.1892	.1873	.2503	.2497	.1865	.1858
GLWSI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
GLWSI-0405-06	1/4	5/16	3/8	.2521	.2498	.3128	.3122	.2490	.2481
GLWSI-0405-08	1/4	5/16	1/2	.2521	.2498	.3128	.3122	.2490	.2481
GLWSI-0506-04	5/16	3/8	1/4	.3148	.3125	.3753	.3747	.3115	.3106
GLWSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
GLWSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
GLWSI-0506-12	5/16	3/8	3/4	.3148	.3125	.3753	.3747	.3115	.3106
GLWSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
GLWSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
GLWSI-0607-12	3/8	15/32	3/4	.3773	.3750	.4691	.4684	.3740	.3731
GLWSI-0608-08	3/8	1/2	1/2	.3783	.3760	.5015	.5010	.3750	.3741
GLWSI-0809-08	1/2	19/32	1/2	.5030	.5003	.5941	.5934	.4990	.4980
GLWSI-0809-12	1/2	19/32	3/4	.5030	.5003	.5941	.5934	.4990	.4980
GLWSI-0809-16	1/2	19/32	1	.5030	.5003	.5941	.5934	.4990	.4980
GLWSI-1011-08	5/8	23/32	1/2	.6280	.6253	.7192	.7184	.6240	.6230
GLWSI-1011-10	5/8	23/32	5/8	.6280	.6253	.7192	.7184	.6240	.6230
GLWSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230
GLWSI-1011-16	5/8	23/32	1	.6280	.6253	.7192	.7184	.6240	.6230
GLWSI-1214-06	3/4	7/8	3/8	.7541	.7507	.8755	.8747	.7491	.7479
GLWSI-1214-08	3/4	7/8	1/2	.7541	.7507	.8755	.8747	.7491	.7479
GLWSI-1214-12	3/4	7/8	3/4	.7541	.7507	.8755	.8747	.7491	.7479
GLWSI-1214-16	3/4	7/8	1	.7541	.7507	.8755	.8747	.7491	.7479
GLWSI-1214-20	3/4	7/8	1 1/4	.7541	.7507	.8755	.8747	.7491	.7479
GLWSI-1416-08	7/8	1	1/2	.8791	.8757	1.0005	.9997	.8741	.8729
GLWSI-1416-12	7/8	1	3/4	.8791	.8757	1.0005	.9997	.8741	.8729
GLWSI-1416-16	7/8	1	1	.8791	.8757	1.0005	.9997	.8741	.8729
GLWSI-1618-08	1	1 1/8	1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GLWSI-1618-12	1	1 1/8	3/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GLWSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GLWSI-1618-24	1	1/8	1 1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GLWSI-2022-16	1 1/4	1 13/32	1	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GLWSI-2022-20	1 1/4	1 13/32	1 1/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GLWSI-2022-24	1 1/4	1 13/32	1 1/2	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GLWSI-2224-20	1 13/32	1 1/2	1 1/4	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
GLWSI-2224-24	1 13/32	1 1/2	1 1/2	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
GLWSI-3639-32	2 1/4	2 7/16	2	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489

iglide® GLW - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

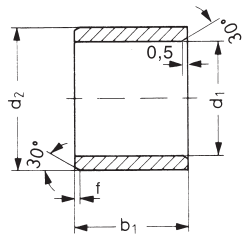
Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
GLWFI-0304-06	3/16	1/4	3/8	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
GLWFI-0405-06	1/4	5/16	3/8	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
GLWFI-0506-06	5/16	3/8	3/8	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GLWFI-0506-08	5/16	3/8	1/2	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GLWFI-0506-12	5/16	3/8	3/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GLWFI-0607-06	3/8	15/32	3/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GLWFI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GLWFI-0607-12	3/8	15/32	3/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GLWFI-0708-08	7/16	1/2	1/2	.750	.046	.4406	.4379	.5316	.5309	.4365	.4355
GLWFI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GLWFI-0809-10	1/2	19/32	5/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GLWFI-0809-12	1/2	19/32	3/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GLWFI-0809-16	1/2	19/32	1	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GLWFI-0810-08	1/2	5/8	1/2	.875	.062	.5040	.5013	.6260	.6250	.5000	.4990
GLWFI-0810-10	1/2	5/8	5/8	.875	.062	.5040	.5013	.6260	.6250	.5000	.4990
GLWFI-0810-12	1/2	5/8	3/4	.875	.062	.5040	.5013	.6260	.6250	.5000	.4990
GLWFI-0810-16	1/2	5/8	1	.875	.062	.5040	.5013	.6260	.6250	.5000	.499
GLWFI-1011-08	5/8	23/32	1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GLWFI-1011-10	5/8	23/32	5/8	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GLWFI-1011-12	5/8	23/32	3/4	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GLWFI-1011-16	5/8	23/32	1	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GLWFI-1214-06	3/4	7/8	3/8	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
GLWFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
GLWFI-1214-10	3/4	7/8	5/8	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
GLWFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
GLWFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
GLWFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GLWFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GLWFI-1820-12	1 1/8	1 1/4	3/4	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
GLWFI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GLWFI-2022-24	1 1/4	1 13/32	1 1/2	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GLWFI-2426-16	1 1/2	1 21/32	1	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GLWFI-3235-16	2	2 3/16	1	2.625	.093	2.0052	2.0011	2.1883	2.1871	1.9981	1.9969

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iglide® GLW - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

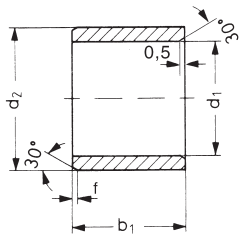
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GLWSM-0304-03	3.0	+0.014 +0.054	4.0	3.0	3.054	3.014	4.012	4.000	3.000	2.970
GLWSM-0304-06	3.0	+0.014 +0.054	4.0	3.0	3.054	3.014	4.012	4.000	3.000	2.970
GLWSM-0405-06	4.0	+0.020 +0.068	5.0	6.0	4.068	4.020	4.012	4.000	4.000	3.970
GLWSM-0405-08	4.0	+0.020 +0.068	5.0	8.0	4.068	4.020	4.012	4.000	4.000	3.970
GLWSM-0506-05	5.0	+0.020 +0.068	6.0	5.0	5.068	5.020	6.012	6.000	5.000	4.970
GLWSM-0507-05	5.0	+0.020 +0.068	7.0	5.0	5.068	5.020	7.015	7.000	5.000	4.970
GLWSM-0507-08	5.0	+0.020 +0.068	7.0	8.0	5.068	5.020	7.015	7.000	5.000	4.970
GLWSM-0607-08	6.0	+0.020 +0.068	7.0	8.0	6.068	6.020	7.015	7.000	6.000	5.970
GLWSM-0608-04	6.0	+0.020 +0.068	8.0	4.0	6.068	6.020	8.015	8.000	6.000	5.970
GLWSM-0608-10	6.0	+0.020 +0.068	8.0	10.0	6.068	6.020	8.015	8.000	6.000	5.970
GLWSM-0709-05	7.0	+0.025 +0.083	9.0	5.0	7.083	7.025	9.015	9.000	7.000	6.964
GLWSM-0709-10	7.0	+0.025 +0.083	9.0	10.0	7.083	7.025	9.015	9.000	7.000	6.964
GLWSM-0709-12	7.0	+0.025 +0.083	9.0	12.0	7.083	7.025	9.015	9.000	7.000	6.964
GLWSM-0809-05	8.0	+0.025 +0.083	9.0	5.0	8.083	8.025	9.015	9.000	8.000	7.964
GLWSM-0810-06	8.0	+0.025 +0.083	10.0	6.0	8.083	8.025	10.015	10.000	8.000	7.964
GLWSM-0810-08	8.0	+0.025 +0.083	10.0	8.0	8.083	8.025	10.015	10.000	8.000	7.964
GLWSM-0810-10	8.0	+0.025 +0.083	10.0	10.0	8.083	8.025	10.015	10.000	8.000	7.964
GLWSM-0810-12	8.0	+0.025 +0.083	10.0	12.0	8.083	8.025	10.015	10.000	8.000	7.964
GLWSM-0810-15	8.0	+0.025 +0.083	10.0	15.0	8.083	8.025	10.015	10.000	8.000	7.964
GLWSM-1011-07	10.0	+0.025 +0.083	11.0	7.0	10.083	10.025	11.018	11.000	10.000	9.964
GLWSM-1011-30	10.0	+0.025 +0.083	11.0	30.0	10.083	10.025	11.018	11.000	10.000	9.964
GLWSM-1012-06	10.0	+0.025 +0.083	12.0	6.0	10.083	10.025	12.018	12.000	10.000	9.964
GLWSM-1012-10	10.0	+0.025 +0.083	12.0	10.0	10.083	10.025	12.018	12.000	10.000	9.964
GLWSM-1012-15	10.0	+0.025 +0.083	12.0	15.0	10.083	10.025	12.018	12.000	10.000	9.964
GLWSM-1012-20	10.0	+0.025 +0.083	12.0	20.0	10.083	10.025	12.018	12.000	10.000	9.964
GLWSM-1214-20	12.0	+0.032 +0.102	14.0	20.0	12.102	12.032	14.018	14.000	12.000	11.957
GLWSM-1315-20	13.0	+0.032 +0.102	15.0	20.0	13.102	13.032	15.018	15.000	13.000	12.957
GLWSM-1315-25	13.0	+0.032 +0.102	15.0	25.0	13.102	13.032	15.018	15.000	13.000	12.957
GLWSM-1416-12	14.0	+0.032 +0.102	16.0	12.0	14.102	14.032	16.018	16.000	14.000	13.957
GLWSM-1618-08	16.0	+0.032 +0.102	18.0	8.0	16.102	16.032	18.018	18.000	16.000	15.957
GLWSM-1618-10	16.0	+0.032 +0.102	18.0	10.0	16.102	16.032	18.018	18.000	16.000	15.957
GLWSM-1820-25	18.0	+0.032 +0.102	20.0	25.0	18.102	18.032	20.021	20.000	18.000	17.957
GLWSM-1820-45	18.0	+0.032 +0.102	20.0	45.0	18.102	18.032	20.021	20.000	18.000	17.957
GLWSM-2022-15	20.0	+0.040 +0.124	22.0	15.0	20.124	20.040	22.021	22.000	20.000	19.948
GLWSM-2023-10	20.0	+0.040 +0.124	23.0	10.0	20.124	20.040	23.021	23.000	20.000	19.948
GLWSM-2528-12	25.0	+0.040 +0.124	28.0	12.0	25.124	25.040	28.021	28.000	25.000	24.948

iglide® GLW - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

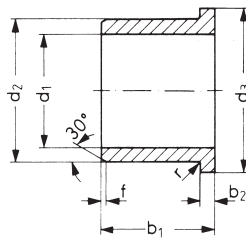
Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GLWSM-2528-20	25.0	+0.040 +0.124	28.0	20.0	25.124	25.040	28.021	28.000	25.000	24.948
GLWSM-2528-30	25.0	+0.040 +0.124	28.0	30.0	25.124	25.040	28.021	28.000	25.000	24.948
GLWSM-2530-30	25.0	+0.040 +0.124	30.0	30.0	25.124	25.040	30.021	30.000	25.000	24.948
GLWSM-3032-10	30.0	+0.040 +0.124	32.0	10.0	30.124	30.040	32.025	32.000	30.000	29.948
GLWSM-3034-15	30.0	+0.040 +0.124	34.0	15.0	30.124	30.040	34.025	34.000	30.000	29.948
GLWSM-3236-20	32.0	+0.050 +0.150	36.0	20.0	32.150	32.050	36.025	36.000	32.000	31.938
GLWSM-3236-40	32.0	+0.050 +0.150	36.0	40.0	32.150	32.050	36.025	36.000	32.000	31.938
GLWSM-3539-25	35.0	+0.050 +0.150	39.0	25.0	35.150	35.050	39.025	39.000	35.000	34.938
GLWSM-5055-40	50.0	+0.050 +0.150	55.0	40.0	50.150	50.050	55.030	55.000	50.000	49.938
GLWSM-5055-60	50.0	+0.050 +0.150	55.0	50.0	50.150	50.050	55.030	55.000	50.000	49.938

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iglide® GLW - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

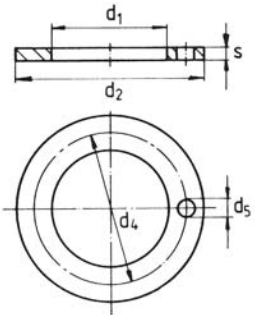
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

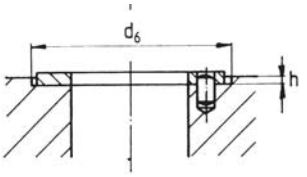
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance after Pressfit in Ø H7	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
				d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
GLWFM-0405-04	4.0	+0.020 +0.068	5.0	9.0	4.0	0.8	4.068	4.020	5.012	5.000	4.000	3.970
GLWFM-0607-06	6.0	+0.020 +0.068	7.0	11.0	6.0	0.5	6.068	6.020	7.015	7.000	6.000	5.970
GLWFM-0608-04	6.0	+0.020 +0.068	8.0	12.0	4.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GLWFM-0810-09	8.0	+0.025 +0.083	10.0	15.0	9.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GLWFM-1011-10	10.0	+0.025 +0.083	11.0	15.0	10.0	0.5	10.083	10.025	11.018	11.000	10.000	9.964
GLWFM-1012-17	10.0	+0.025 +0.083	12.0	18.0	17.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GLWFM-1214-07	12.0	+0.032 +0.102	14.0	20.0	7.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GLWFM-1214-10	12.0	+0.032 +0.102	14.0	20.0	10.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GLWFM-1214-17	12.0	+0.032 +0.102	14.0	20.0	17.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GLWFM-1214-20	12.0	+0.032 +0.102	14.0	20.0	20.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GLWFM-1315-06	13.0	+0.032 +0.102	15.0	22.0	6.0	1.0	13.102	13.032	15.018	15.000	13.000	12.957
GLWFM-1416-04	14.0	+0.032 +0.102	16.0	22.0	4.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GLWFM-1416-05	14.0	+0.032 +0.102	16.0	22.0	5.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GLWFM-1416-12	14.0	+0.032 +0.102	16.0	22.0	12.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GLWFM-1618-04	16.0	+0.032 +0.102	18.0	24.0	4.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GLWFM-1618-09	16.0	+0.032 +0.102	18.0	24.0	9.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GLWFM-1820-06	18.0	+0.032 +0.102	20.0	26.0	6.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GLWFM-1820-17	18.0	+0.032 +0.102	20.0	26.0	17.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GLWFM-202328-15	20.0	+0.040 +0.024	23.0	28.0	15.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
GLWFM-2730-20	27.0	+0.040 +0.024	30.0	35.0	20.0	1.5	27.124	27.040	30.021	30.000	27.000	26.948
GLWFM-3034-16	30.0	+0.040 +0.024	34.0	42.0	16.0	2.0	27.124	27.040	34.025	34.000	27.000	26.948
GLWFM-3539-16	35.0	+0.050 +0.150	39.0	47.0	16.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938

iglide® GLW - Plain Bearings
Thrust Washer, MM







Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1 +0.25	d2 -0.25	s -0.05	d4 -0.12 +0.12	d5 +0.375 +0.125	h +0.2 -0.2	d6 +0.12
GLWTM-0408-005	4.0	8.0	0.5				
GLWTM-0411-005	4.0	11.0	0.5				
GLWTM-0620-015	6.0	20.0	1.5	13.0	1.5	1.0	20.0
GLWTM-0713-005	7.0	13.0	0.5			0.2	13.0
GLWTM-0815-005	8.0	15.0	0.5			0.2	15.0
GLWTM-0818-010	8.0	18.0	1.0			0.7	18.0
GLWTM-0818-015	8.0	18.0	1.5	13.0	1.5	1.0	18.0
GLWTM-1018-010	10.0	18.0	1.0			0.7	18.0
GLWTM-1230-015	12.0	30.0	1.5				
GLWTM-1426-015	14.0	26.0	1.5	20.0	2.0	1.0	26.0
GLWTM-1630-015	16.0	30.0	1.5	22.0	2.0	1.0	30.0
GLWTM-2036-015	20.0	36.0	1.5	28.0	3.0	1.0	36.0
GLWTM-2442-015	24.0	42.0	1.5	33.0	3.0	1.0	42.0
GLWTM-3254-015	32.0	54.0	1.5	43.0	4.0	1.0	54.0

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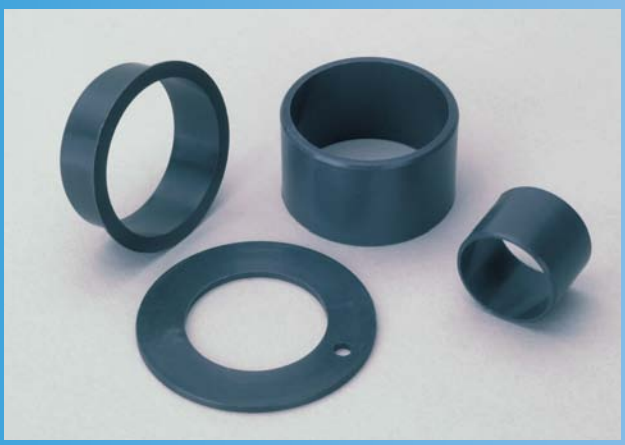
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp



igus®

iglide® G300
The All-Around Performer

- Maintenance-free, dry running
- High wear resistance
- Resistant to dust and dirt
- Over 900 sizes available from stock
- Cost-effective
- Vibration dampening



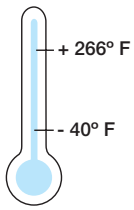
iglide® G300 - Plain Bearings

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Fax 1-401-438-7680

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Price Index





3 Styles
More than 900 Dimensions
Inner diameters
From 1/8 - 3 in. (1.5 - 150 mm)

Structure of the Part Number:

G S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material

When to use iglide® G300 plain bearings:

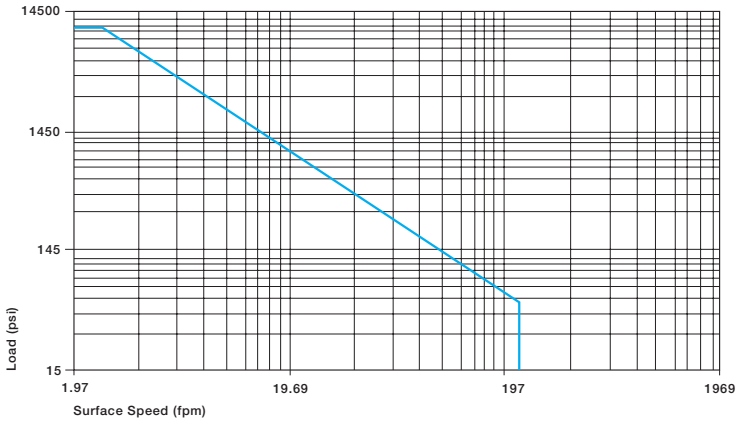
- When you need an economical all-around performance bearing
- For above average loads
- For low to average running speeds
- When the bearing needs to run on different shaft materials
- For oscillating and rotational movements

When not to use iglide® G300 plain bearings:

- When mechanical reaming of the wall surface is necessary
  ➤ iglide® M250
- When the highest wear resistance is necessary
  ➤ iglide® L280
- If temperatures are constantly greater than 266°F
  ➤ iglide® T500, F, Z

Table 6.1: Material Data

General Properties	Unit	iglide® G300	Testing Method
Density	g/cm³	1.45	
Color		dark gray	
Max. moisture absorption at 73°F / 50% r.h.	% weight	0.7	DIN 53495
Max. moisture absorption	% weight	4.0	
Coefficient of friction, dynamic against steel	µ	0.08 - 0.15	
p x v-value, max. (dry)	psi x fpm	12,000	
Mechanical Properties			
Modulus of elasticity	psi	1,131,000	DIN 53457
Tensile strength at 68°F	psi	30,450	DIN 53452
Compressive strength	psi	11,310	
Max. static surface pressure (68°F)	psi	11,600	
Shore D-hardness		81	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	266	
Max. short-term application temperature	°F	428	
Min. application temperature	°F	-40	
Thermal conductivity	(W/m x K)	0.24	ASTM C 177
Coefficient of thermal expansion (at 73°F)	(K^{-1} x 10^{-5})	9	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	> 10^{13}	DIN IEC 93
Surface resistance	Ω	> 10^{11}	DIN 53482

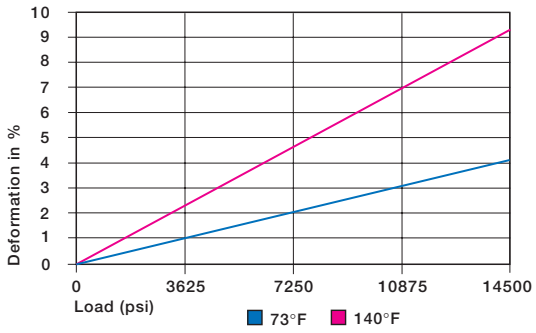


Graph 6.1: Permissible p x v - values for iglide® G300 running dry against a steel shaft, at 68°F

Compressive Strength

Picture 6.2 shows the elastic deformation of iglide® G300 during radial loading. At the maximum permissible load of 11,600 psi, the deformation is less than 5%. The plastic deformation is minimal up to a pressure of approximately 14,500 psi. However, it is also a result of the cycle time.

➤ Compressive Strength, Page 1.3



Graph 6.2: Deformation under load and temperature

Permissible Surface Speeds

iglide® G300 has been developed for low to medium surface speeds. The maximum values shown in Table 6.2 can only be achieved at low pressure loads. At the given speeds, friction can cause a temperature increase to maximum permissible levels. In practice, though, this temperature level is rarely reached, due to varying application conditions.

➤ Surface speed, Page 1.5
➤ p x v Value, Page 1.6

fpm	Rotating	Oscillating	Linear
Continuous	196	137	787
Short-term	393	275	984

Table 6.2: Maximum running speed

Temperatures

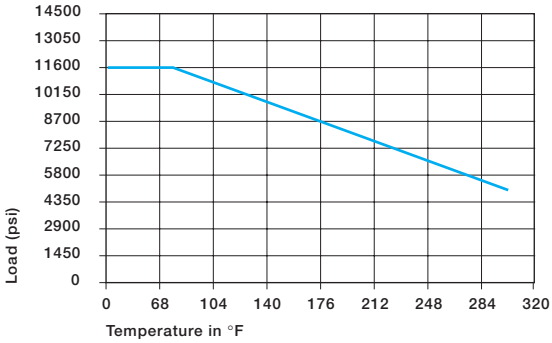
Application temperatures affect the properties of plain bearings greatly. The short-term maximum temperature is 428°F, this allows the use of iglide® G300 plain bearings in heat treating applications in which the bearings are not subjected to additional loading.

With increasing temperatures, the compressive strength of iglide® G300 plain bearings decreases. The graph 6.3 shows this inverse relationship. However, at the long-term maximum temperature of 266°F, the permissible surface pressure is still above 5,800 psi. The ambient temperatures that are prevelant in applications also has an effect on the bearing wear. With increasing temperatures, the wear increases and this effect is notable starting at the temperature of 248°F.

➤ Application Temperatures, Page 1.7

iglide® G300	Application Temperature
Minimum	- 40 °F
Max. long-term	+ 266 °F
Max. short-term	+ 428 °F

Table 6.3: Temperature limits for iglide® G300



Graph 6.3: Recommended maximum permissible static surface pressure of iglide® G300 as a result of temperature

iglide® G300
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iglide® G300 - Plain Bearings

Installation Tolerances

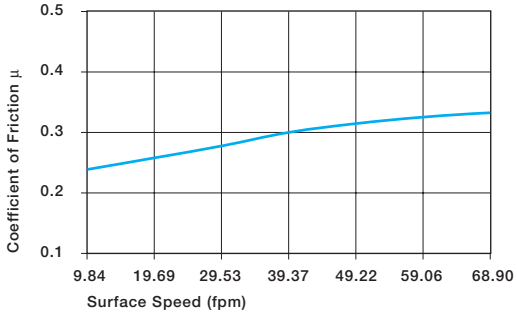
iglide® G300 plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

Friction and Wear

Similar to wear resistance, the coefficient of friction μ also changes with the load. The coefficient of friction decreases with increasing loads, whereas an increase in surface speed causes an increase of the coefficient of friction. This relationship explains the excellent results of iglide® G300 plain bearings for high loads and low speeds (See Graph 6.4 and 6.5).
The friction and wear are also dependent, to a large degree, on the shaft partner. Shafts that are too smooth, increase both the coefficient of friction and the wear of the bearing. For iglide® G300, a ground surface with an average roughness Ra= 32 rms is recommended (See Graph 6.6).

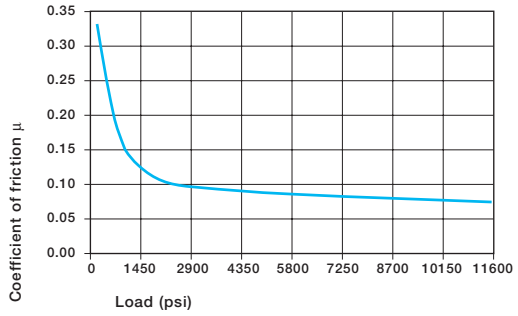
➤ Coefficients of friction and surfaces, Page 1.8
➤ Wear Resistance, Page 1.9



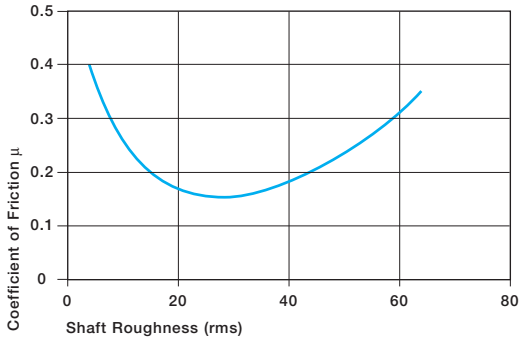
Graph 6.4: Coefficient of friction of iglide® G300 as a result of the running speed; p = 108 psi

iglide® G300	Dry	Grease	Oil	Water
Coefficient of Friction μ	0.08 - 0.15	0.09	0.04	0.04

Table 6.4: Coefficient of friction for iglide® G300 against steel (Ra=40 rms, 50 HRC)



Graph 6.5: Coefficient of friction of iglide® G300 as a result of the load

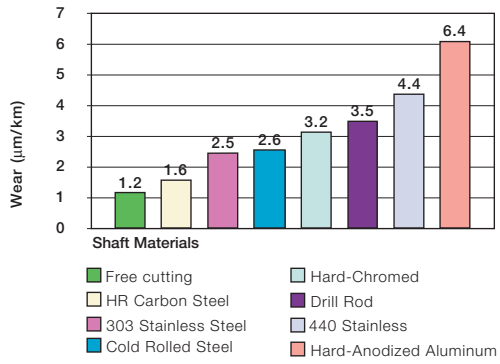


Graph 6.6: Coefficient of friction as result of the shaft surface (Shaft - Cold Rolled Steel)

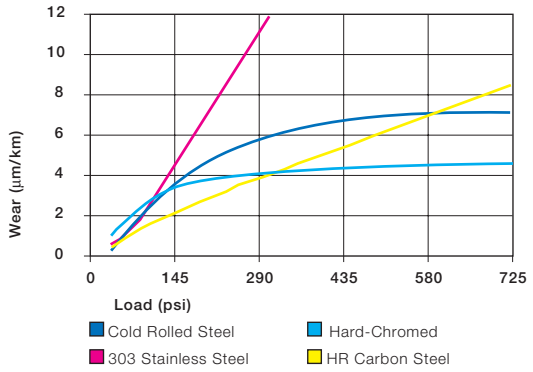
Shaft Materials

Graph 6.7 and 6.8 show results of testing different shaft materials with plain bearings made of iglide® G300.
In Graph 6.7 it is observed that iglide® G300 can be combined with various shaft materials. The simple shaft materials of free-cutting steel and HR Carbon Steel have proven best at low loads. This helps to design cost-effective systems, since both iglide® G300 and the sliding partner are economically priced.
It is important to note that with increasing loads, the recommended hardness of the shaft increases. The “soft” shafts tend to wear more easily and thus increase the wear of the overall system. If the loads exceed 290 psi, it is important to recognize that the wear rate (the slope of the curves) clearly decreases with the hard shaft materials.
The comparison of rotational movements to oscillating movements shows that iglide® G300 can provide advantages in oscillating movements. The wear of the bearing is smaller for equivalent conditions. The higher the load, the larger the difference. This means that iglide® G300 can be used for oscillating movements that are well above the given maximum load of 11,600 psi. For these loads, the use of hardened shafts is recommended.
In addition to the shaft materials presented here, many others have been tested. If the shaft material you plan on using is not contained in the test results presented here, please contact us.

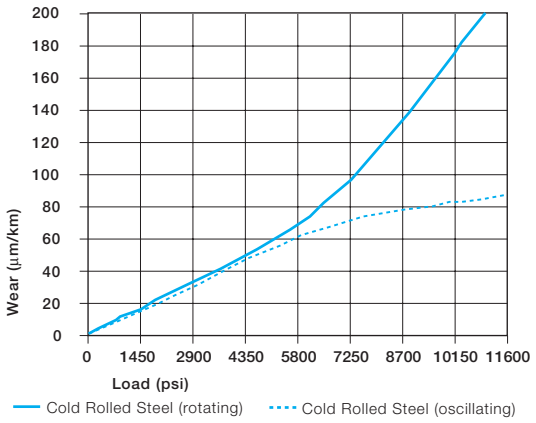
➤ Shaft Materials, Page 1.11



Graph 6.7: Wear of iglide® G300, rotating with different shaft materials, load p = 108 psi, v = 98 fpm



Graph 6.8: Wear with different shaft materials in rotational operation, as a result of the load



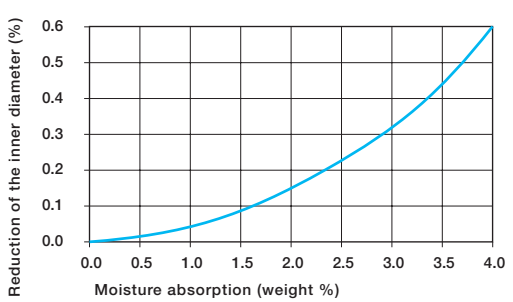
Graph 6.9: Wear for pivoting and rotating applications with shaft material Cold Rolled Steel 1018, as a result of the load

Chemical Resistance

iglide® G300 plain bearings have strong resistance to chemicals. They are also resistant to most lubricants.
iglide® G300 plain bearings are not affected by most weak organic and inorganic acids.
The moisture absorption of iglide® G300 plain bearings is approximately 1% in the standard atmosphere. The saturation limit submerged in water is 4%. This must be taken into account for these types of applications.
➤ Chemicals Table, Page 1.16

Medium	Resistance
Alcohols	Resistant
Chlorinated hydrocarbons	Resistant
Esters	Not Resistant
Greases, oils	Resistant
Ketone	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Conditionally Resistant
Strong lyes	Conditionally Resistant

Table 6.5: Chemical resistance of iglide® G300- detailed list, Page 35.1



Graph 6.10: Effect of moisture absorption on iglide® G300 plain bearings

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iglide® G300 - Plain Bearings

Radiation Resistance

Plain bearings made from iglide® G300 are resistant to radiation up to an intensity of 3 x 10^2 Gy.

UV Resistance

iglide® G300 plain bearings are permanently resistant to UV-radiation.

Vacuum

iglide® G300 plain bearings outgas in a vacuum. Use in a vacuum environment is only possible for dehumidified bearings.

Electrical Properties

iglide® G300 plain bearings are electrically insulating.

iglide® G300	
Specific volume resistance	> 10^{13} Ωcm
Surface resistance	> 10^{11} Ω

Table 6.6: Electrical properties of iglide® G300

Application Examples



Picture 6.1: Reliable under high load, wear-resistant during continuous rotational use



Picture 6.2: Tested at a load of 4046 lbs for 10,000 cycles, resulted in no measurable wear



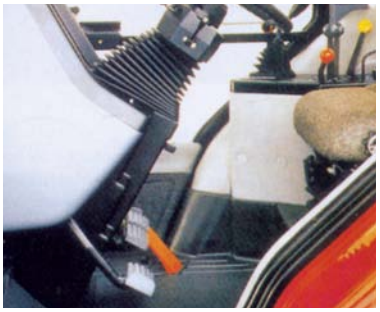
Picture 6.3: The pneumatic rotational drive unit in steam lines at temperatures up to 275°F



Picture 6.4: Vibrations, dirt, and temperatures up to 266°F characterize the area surrounding the engine



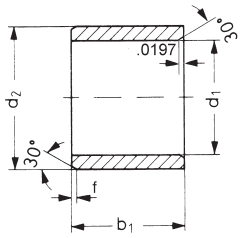
Picture 6.5: Conveyor chains: Through edge loading, short-term surface pressures of over 7,250 psi can occur



Picture 6.6: iglide® G300 plain bearings have proven themselves in control levers and pedals of farm tractors and construction vehicles

iglide® G300 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

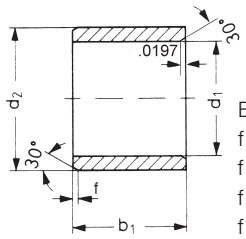
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
GSI-0203-03	1/8	3/16	3/16	.1269	.1251	.1878	.1873	.1243	.1236
GSI-0203-04	1/8	3/16	1/4	.1269	.1251	.1878	.1873	.1243	.1236
GSI-0203-06	1/8	3/16	3/8	.1269	.1251	.1878	.1873	.1243	.1236
GSI-0304-04	3/16	1/4	1/4	.1892	.1873	.2503	.2497	.1865	.1858
GSI-0304-06	3/16	1/4	3/8	.1892	.1873	.2503	.2497	.1865	.1858
GSI-0304-08	3/16	1/4	1/2	.1892	.1873	.2503	.2497	.1865	.1858
GSI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
GSI-0405-05	1/4	5/16	5/16	.2521	.2498	.3128	.3122	.2490	.2481
GSI-0405-06	1/4	5/16	3/8	.2521	.2498	.3128	.3122	.2490	.2481
GSI-0405-08	1/4	5/16	1/2	.2521	.2498	.3128	.3122	.2490	.2481
GSI-0405-10	1/4	5/16	5/8	.2521	.2498	.3128	.3122	.2490	.2481
GSI-0405-12	1/4	5/16	3/4	.2521	.2498	.3128	.3122	.2490	.2481
GSI-0506-04	5/16	3/8	1/4	.3148	.3125	.3753	.3747	.3115	.3106
GSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
GSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
GSI-0506-12	5/16	3/8	3/4	.3148	.3125	.3753	.3747	.3115	.3106
GSI-0607-04	3/8	15/32	1/4	.3773	.3750	.4691	.4684	.3740	.3731
GSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
GSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
GSI-0607-12	3/8	15/32	3/4	.3773	.3750	.4691	.4684	.3740	.3731
GSI-0608-08	3/8	1/2	1/2	.3783	.3760	.5015	.5010	.3750	.3741
GSI-0608-12	3/8	1/2	3/4	.3783	.3760	.5015	.5010	.3750	.3741
GSI-0708-04	7/16	17/32	1/4	.4406	.4379	.5316	.5309	.4365	.4355
GSI-0708-08	7/16	17/32	1/2	.4406	.4379	.5316	.5309	.4365	.4355
GSI-0809-03	1/2	19/32	3/16	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0809-04	1/2	19/32	1/4	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0809-06	1/2	19/32	3/8	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0809-08	1/2	19/32	1/2	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0809-10	1/2	19/32	5/8	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0809-12	1/2	19/32	3/4	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0809-14	1/2	19/32	7/8	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0809-16	1/2	19/32	1	.5030	.5003	.5941	.5934	.4990	.4980
GSI-0810-08	1/2	5/8	1/2	.5040	.5013	.6260	.6250	.5000	.4990
GSI-0810-12	1/2	5/8	3/4	.5040	.5013	.6260	.6250	.5000	.4990
GSI-0910-06	9/16	21/32	3/8	.5655	.5627	.6566	.6559	.5615	.5605
GSI-0910-08	9/16	21/32	1/2	.5655	.5627	.6566	.6559	.5615	.5605
GSI-0910-10	9/16	21/32	5/8	.5655	.5627	.6566	.6559	.5615	.5605
GSI-1011-06	5/8	23/32	3/8	.6280	.6253	.7192	.7184	.6240	.6230
GSI-1011-08	5/8	23/32	1/2	.6280	.6253	.7192	.7184	.6240	.6230
GSI-1011-10	5/8	23/32	5/8	.6280	.6253	.7192	.7184	.6240	.6230
GSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230
GSI-1011-16	5/8	23/32	1	.6280	.6253	.7192	.7184	.6240	.6230

iglide® G300 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

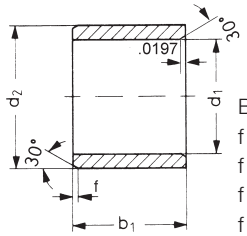
Length (inches)			Tolerance (h13)
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0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
GSI-1011-20	5/8	23/32	1 1/4	.6280	.6253	.7192	.7184	.6240	.6230
GSI-1011-30	5/8	23/32	1 7/8	.6280	.6253	.7192	.7184	.6240	.6230
GSI-1012-08	5/8	3/4	1/2	.6280	.6253	.7508	.7500	.6250	.6233
GSI-1012-16	5/8	3/4	1	.6280	.6253	.7508	.7500	.6250	.6233
GSI-1112-14	11/16	25/32	7/8	.6906	.6879	.7817	.7809	.6865	.6855
GSI-1214-02	3/4	7/8	1/8	.7541	.7508	.8755	.8747	.7491	.7479
GSI-1214-06	3/4	7/8	3/8	.7541	.7508	.8755	.8747	.7491	.7479
GSI-1214-08	3/4	7/8	1/2	.7541	.7508	.8755	.8747	.7491	.7479
GSI-1214-12	3/4	7/8	3/4	.7541	.7508	.8755	.8747	.7491	.7479
GSI-1214-16	3/4	7/8	1	.7541	.7508	.8755	.8747	.7491	.7479
GSI-1214-20	3/4	7/8	1 1/4	.7541	.7508	.8755	.8747	.7491	.7479
GSI-1214-24	3/4	7/8	1 1/2	.7541	.7508	.8755	.8747	.7491	.7479
GSI-1416-06	7/8	1	3/8	.8791	.8757	1.0005	.9997	.8741	.8729
GSI-1416-08	7/8	1	1/2	.8791	.8757	1.0005	.9997	.8741	.8729
GSI-1416-10	7/8	1	5/8	.8791	.8757	1.0005	.9997	.8741	.8729
GSI-1416-12	7/8	1	3/4	.8791	.8757	1.0005	.9997	.8741	.8729
GSI-1416-16	7/8	1	1	.8791	.8757	1.0005	.9997	.8741	.8729
GSI-1416-24	7/8	1	1 1/2	.8791	.8757	1.0005	.9997	.8741	.8729
GSI-1618-08	1	1 1/8	1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GSI-1618-12	1	1 1/8	3/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GSI-1618-20	1	1 1/8	1 1/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GSI-1618-24	1	1 1/8	1 1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GSI-1618-33	1	1 1/8	2 1/16	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GSI-1820-12	1 1/8	1 9/32	3/4	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
GSI-1820-20	1 1/8	1 9/32	1 1/4	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
GSI-1820-24	1 1/8	1 9/32	1 1/2	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
GSI-2022-12	1 1/4	1 13/32	3/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GSI-2022-14	1 1/4	1 13/32	7/8	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GSI-2022-16	1 1/4	1 13/32	1	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GSI-2022-20	1 1/4	1 13/32	1 1/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GSI-2022-24	1 1/4	1 13/32	1 1/2	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GSI-2224-16	1 3/8	1 17/32	1	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
GSI-2224-24	1 3/8	1 17/32	1 1/2	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
GSI-2224-26	1 3/8	1 17/32	1 5/8	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
GSI-2426-06	1 1/2	1 21/32	3/8	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GSI-2426-07	1 1/2	1 21/32	7/16	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GSI-2426-08	1 1/2	1 21/32	1/2	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GSI-2426-12	1 1/2	1 21/32	3/4	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GSI-2426-16	1 1/2	1 21/32	1	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972

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iglide® G300 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

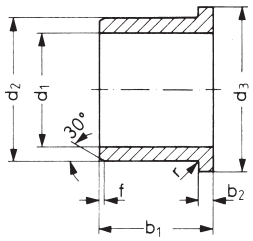
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
GSI-2426-24	1 1/2	1 21/32	1 1/2	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GSI-2629-14	1 5/8	1 25/32	7/8	1.6297	1.6258	1.7818	1.7808	1.6238	1.6222
GSI-2629-20	1 5/8	1 25/32	1 1/4	1.6297	1.6258	1.7818	1.7808	1.6238	1.6222
GSI-2831-16	1 3/4	1 15/16	1	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GSI-2831-24	1 3/4	1 15/16	1 1/2	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GSI-2831-32	1 3/4	1 15/16	2	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GSI-2831-40	1 3/4	1 15/16	2 1/2	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GSI-2831-48	1 3/4	1 15/16	3	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GSI-3235-16	2	2 3/16	1	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
GSI-3235-24	2	2 3/16	1 1/2	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
GSI-3235-32	2	2 3/16	2	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
GSI-3639-32	2 1/4	2 7/16	2	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489
GSI-4043-32	2 2/4	2 11/16	2	2.5082	2.5035	2.6881	2.6869	2.5000	2.4971
GSI-4447-32	2 3/4	2 15/16	2	2.7570	2.7523	2.9370	2.9358	2.7500	2.7471
GSI-4851-32	3	3 3/16	2	3.0070	3.0023	3.1889	3.1875	3.0000	2.9971

iglide® G300 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

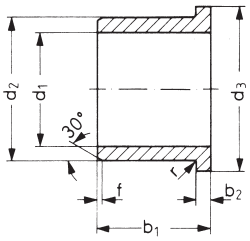
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
GFI-0203-02	1/8	3/16	1/8	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
GFI-0203-03	1/8	3/16	3/16	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
GFI-0203-04	1/8	3/16	1/4	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
GFI-0203-06	1/8	3/16	3/8	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
GFI-0304-04	3/16	1/4	1/4	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
GFI-0304-06	3/16	1/4	3/8	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
GFI-0304-08	3/16	1/4	1/2	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
GFI-0405-2.4	1/4	5/16	5/32	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
GFI-0405-04	1/4	5/16	1/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
GFI-0405-05	1/4	5/16	5/16	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
GFI-0405-06	1/4	5/16	3/8	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
GFI-0405-08	1/4	5/16	1/2	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
GFI-0405-12	1/4	5/16	3/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
GFI-0506-03	5/16	3/8	3/16	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GFI-0506-04	5/16	3/8	1/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GFI-0506-06	5/16	3/8	3/8	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GFI-0506-08	5/16	3/8	1/2	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GFI-0506-12	5/16	3/8	3/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
GFI-0607-04	3/8	15/32	1/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GFI-0607-05	3/8	15/32	5/16	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GFI-0607-06	3/8	15/32	3/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GFI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GFI-0607-12	3/8	15/32	3/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GFI-0607-14	3/8	15/32	7/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
GFI-0708-04	7/16	17/32	1/4	.750	.046	.4406	.4379	.5316	.5309	.4365	.4355
GFI-0708-08	7/16	17/32	1/2	.750	.046	.4406	.4379	.5316	.5309	.4365	.4355
GFI-0809-02	1/2	19/32	1/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GFI-0809-04	1/2	19/32	1/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GFI-0809-05	1/2	19/32	5/16	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GFI-0809-06	1/2	19/32	3/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GFI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GFI-0809-12	1/2	19/32	3/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GFI-0809-16	1/2	19/32	1	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
GFI-1011-06	5/8	23/32	3/8	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GFI-1011-08	5/8	23/32	1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GFI-1011-12	5/8	23/32	3/4	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GFI-1011-14	5/8	23/32	7/8	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GFI-1011-16	5/8	23/32	1	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GFI-1011-24	5/8	23/32	1 1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
GFI-1214-02	3/4	7/8	1/8	1.125	.062	.7541	.7508	.8755	.8747	.7491	.7479
GFI-1214-06	3/4	7/8	3/8	1.125	.062	.7541	.7508	.8755	.8747	.7491	.7479

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iglide® G300 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

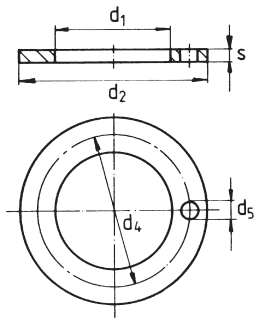
Length Tolerance (b1)

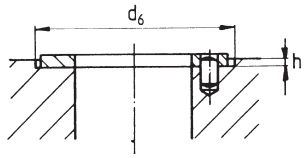
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
GFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7508	.8755	.8747	.7491	.7479
GFI-1214-10	3/4	7/8	5/8	1.125	.062	.7541	.7508	.8755	.8747	.7491	.7479
GFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7508	.8755	.8747	.7491	.7479
GFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7508	.8755	.8747	.7491	.7479
GFI-1214-24	3/4	7/8	1 1/2	1.125	.062	.7541	.7508	.8755	.8747	.7491	.7479
GFI-1416-08	7/8	1	1/2	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
GFI-1416-12	7/8	1	3/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
GFI-1416-16	7/8	1	1	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
GFI-1416-20	7/8	1	1 1/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
GFI-1416-24	7/8	1	1 1/2	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
GFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GFI-1618-20	1	1 1/8	1 1/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GFI-1618-24	1	1 1/8	1 1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
GFI-1820-12	1 1/8	1 9/32	3/4	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
GFI-1820-24	1 1/8	1 9/32	1 1/2	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
GFI-2022-06	1 1/4	1 13/32	3/8	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GFI-2022-12	1 1/4	1 13/32	3/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GFI-2022-14	1 1/4	1 13/32	7/8	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GFI-2022-16	1 1/4	1 13/32	1	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GFI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GFI-2022-24	1 1/4	1 13/32	1 1/2	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
GFI-2224-16	1 3/8	1 17/32	1	1.875	.078	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
GFI-2426-12	1 1/2	1 21/32	3/4	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GFI-2426-16	1 1/2	1 21/32	1	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GFI-2426-24	1 1/2	1 21/32	1 1/2	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
GFI-2831-16	1 3/4	1 15/16	1	2.375	.093	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GFI-2831-24	1 3/4	1 15/16	1 1/2	2.375	.093	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GFI-2831-32	1 3/4	1 15/16	2	2.375	.093	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
GFI-3235-16	2	2 3/16	1	2.625	.093	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
GFI-3235-24	2	2 3/16	1 1/2	2.625	.093	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
GFI-3235-32	2	2 3/16	2	2.625	.093	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
GFI-3639-32	2 1/4	2 7/16	2	2.750	.093	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489
GFI-4043-32	2 1/2	2 11/16	2	3.125	.093	2.5082	2.5035	2.6881	2.6869	2.5000	2.4971
GFI-4447-32	2 3/4	2 15/16	2	3.375	.093	2.7570	2.7523	2.9370	2.9358	2.7500	2.7471

iglide® G300 - Plain Bearings
Thrust Washer, Inch







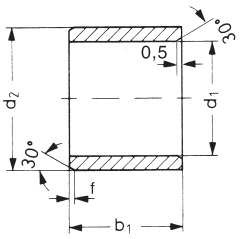
Part Number	d1 +.010	d2 -.010	s -.0020	d4 +-.005	d5 .015 +.005	h +.008	d6 +.005
GTI-0610-01	.375	.625	.040				.375
GTI-0814-01	.500	.875	.0585	.692	.067	.040	.875
GTI-1018-01	.625	1.125	.0585	.880	.099	.040	1.125
GTI-1220-01	.750	1.250	.0585	1.005	.099	.040	1.250
GTI-1424-01	.875	1.500	.0585	1.192	.130	.040	1.500
GTI-1628-01	1.000	1.750	.0585	1.380	.130	.040	1.750
GTI-2034-01	1.250	2.125	.0585	1.692	.161	.040	2.125
GTI-2440-01	1.500	2.500	.0585	2.005	.192	.040	2.500
GTI-2844-01	1.750	2.750	.0585	2.255	.192	.040	2.750
GTI-3248-01	2.000	3.000	.0895	2.505	.192	.070	3.000

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iglide® G300 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

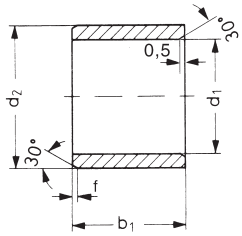
Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GSM-0103-02	1.5	+0.014 +0.054	3.0	2.0	1.554	1.514	3.008	3.000	1.500	1.475
GSM-0203-03	2.0	+0.014 +0.054	3.5	3.0	2.054	2.014	3.508	3.500	2.000	1.975
GSM-02504-05	2.5	+0.014 +0.054	4.5	5.0	2.554	2.514	4.508	4.500	2.500	2.475
GSM-0304-03	3.0	+0.014 +0.054	4.5	3.0	3.054	3.014	4.512	4.500	3.000	2.975
GSM-0304-05	3.0	+0.014 +0.054	4.5	5.0	3.054	3.014	4.512	4.500	3.000	2.975
GSM-0304-06	3.0	+0.014 +0.054	4.5	6.0	3.054	3.014	4.512	4.500	3.000	2.975
GSM-0304-16	3.0	+0.014 +0.054	4.5	16.0	3.054	3.014	4.512	4.500	3.000	2.975
GSM-0405-04	4.0	+0.020 +0.068	5.5	4.0	4.068	4.020	5.512	5.500	4.000	3.970
GSM-0405-06	4.0	+0.020 +0.068	5.5	6.0	4.068	4.020	5.512	5.500	4.000	3.970
GSM-0406-08	4.5	+0.020 +0.068	6.0	8.0	4.068	4.020	6.012	6.000	4.000	3.970
GSM-0407-05	4.0	+0.020 +0.068	7.0	5.0	4.068	4.020	7.015	7.000	4.000	3.970
GSM-0407-055	4.0	+0.020 +0.068	7.0	5.5	4.068	4.020	7.015	7.000	4.000	3.970
GSM-0506-046	5.0	+0.010 +0.040	6.0	4.6	5.040	5.010	6.012	6.000	5.000	4.970
GSM-0506-05	5.0	+0.010 +0.040	6.0	5.0	5.040	5.010	6.012	6.000	5.000	4.970
GSM-0506-07	5.0	+0.010 +0.040	6.0	7.0	5.040	5.010	6.012	6.000	5.000	4.970
GSM-0507-05	5.0	+0.020 +0.068	7.0	5.0	5.068	5.020	7.015	7.000	5.000	4.970
GSM-0507-08	5.0	+0.020 +0.068	7.0	8.0	5.068	5.020	7.015	7.000	5.000	4.970
GSM-0507-10	5.0	+0.020 +0.068	7.0	10.0	5.068	5.020	7.015	7.000	5.000	4.970
GSM-0607-06	6.0	+0.010 +0.040	7.0	6.0	6.040	6.010	7.015	7.000	6.000	5.970
GSM-0607-12	6.0	+0.010 +0.040	7.0	12.0	6.040	6.010	7.015	7.000	6.000	5.970
GSM-0607-17.5	6.0	+0.010 +0.040	7.0	17.5	6.040	6.010	7.015	7.000	6.000	5.970
GSM-0608-025	6.0	+0.020 +0.068	8.0	2.5	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-04	6.0	+0.020 +0.068	8.0	4.0	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-05	6.0	+0.020 +0.068	8.0	5.0	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-055	6.0	+0.020 +0.068	8.0	5.5	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-06	6.0	+0.020 +0.068	8.0	6.0	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-08	6.0	+0.020 +0.068	8.0	8.0	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-09	6.0	+0.020 +0.068	8.0	9.5	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-10	6.0	+0.020 +0.068	8.0	10.0	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-11	6.0	+0.020 +0.068	8.0	11.8	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0608-13	6.0	+0.020 +0.068	8.0	13.8	6.068	6.020	8.015	8.000	6.000	5.970
GSM-0708-10	7.0	+0.013 +0.049	8.0	10.0	7.049	7.013	8.015	8.000	7.000	6.964
GSM-0708-19	7.0	+0.013 +0.049	8.0	19.0	7.049	7.013	8.015	8.000	7.000	6.964
GSM-0709-05	7.0	+0.025 +0.083	9.0	5.0	7.083	7.025	9.015	9.000	7.000	6.964
GSM-0709-08	7.0	+0.025 +0.083	9.0	8.0	7.083	7.025	9.015	9.000	7.000	6.964
GSM-0709-09	7.0	+0.025 +0.083	9.0	9.0	7.083	7.025	9.015	9.000	7.000	6.964
GSM-0709-10	7.0	+0.025 +0.083	9.0	10.0	7.083	7.025	9.015	9.000	7.000	6.694
GSM-0709-12	7.0	+0.025 +0.083	9.0	12.0	7.083	7.025	9.015	9.000	7.000	6.694
GSM-0809-05	8.0	+0.013 +0.049	9.0	5.0	8.049	8.013	9.015	9.000	8.000	7.964
GSM-0809-06	8.0	+0.013 +0.049	9.0	6.0	8.049	8.013	9.015	9.000	8.000	7.964
GSM-0809-08	8.0	+0.013 +0.049	9.0	8.0	8.049	8.013	9.015	9.000	8.000	7.964

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f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

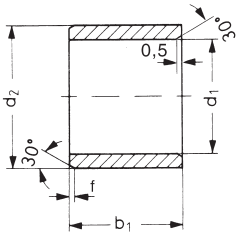
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GSM-0809-12	8.0	+0.013 +0.049	9.0	12.0	8.049	8.013	9.015	9.000	8.000	7.964
GSM-0810-05	8.0	+0.025 +0.083	10.0	5.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-06	8.0	+0.025 +0.083	10.0	6.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-07	8.0	+0.025 +0.083	10.0	7.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-08	8.0	+0.025 +0.083	10.0	8.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-10	8.0	+0.025 +0.083	10.0	10.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-12	8.0	+0.025 +0.083	10.0	12.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-13	8.0	+0.025 +0.083	10.0	13.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-15	8.0	+0.025 +0.083	10.0	15.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-16	8.0	+0.025 +0.083	10.0	16.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-20	8.0	+0.025 +0.083	10.0	20.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0810-22	8.0	+0.025 +0.083	10.0	22.0	8.083	8.025	10.015	10.000	8.000	7.964
GSM-0911-06	9.0	+0.025 +0.083	11.0	6.0	9.083	9.025	11.018	11.000	9.000	8.964
GSM-1011-06	10.0	+0.013 +0.049	11.0	6.0	10.049	10.013	11.018	11.000	10.000	9.964
GSM-1011-10	10.0	+0.013 +0.049	11.0	10.0	10.049	10.013	11.018	11.000	10.000	9.964
GSM-1011-20	10.0	+0.013 +0.049	11.0	20.0	10.049	10.013	11.018	11.000	10.000	9.964
GSM-1011-25	10.0	+0.013 +0.049	11.0	25.0	10.049	10.013	11.018	11.000	10.000	9.964
GSM-1011-30	10.0	+0.013 +0.049	11.0	30.0	10.049	10.013	11.018	11.000	10.000	9.964
GSM-1012-04	10.0	+0.025 +0.083	12.0	4.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-045	10.0	+0.025 +0.083	12.0	4.5	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-05	10.0	+0.025 +0.083	12.0	5.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-06	10.0	+0.025 +0.083	12.0	6.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-07	10.0	+0.025 +0.083	12.0	7.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-08	10.0	+0.025 +0.083	12.0	8.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-09	10.0	+0.025 +0.083	12.0	9.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-10	10.0	+0.025 +0.083	12.0	10.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-12	10.0	+0.025 +0.083	12.0	12.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-14	10.0	+0.025 +0.083	12.0	14.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-15	10.0	+0.025 +0.083	12.0	15.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-17	10.0	+0.025 +0.083	12.0	17.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1012-20	10.0	+0.025 +0.083	12.0	20.0	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1013-13	10.0	+0.025 +0.083	13.0	13.5	10.083	10.025	12.018	12.000	10.000	9.964
GSM-1014-10	10.0	+0.025 +0.083	14.0	10.0	10.083	10.025	14.018	14.000	10.000	9.964
GSM-1014-20	10.0	+0.025 +0.083	14.0	20.0	10.083	10.025	14.018	14.000	10.000	9.964
GSM-1213-047	12.0	+0.016 +0.059	13.0	4.7	12.059	12.016	13.018	13.000	12.000	11.957
GSM-1213-10	12.0	+0.016 +0.059	13.0	10.0	12.059	12.016	13.018	13.000	12.000	11.957
GSM-1213-12	12.0	+0.016 +0.059	13.0	12.0	12.059	12.016	13.018	13.000	12.000	11.957
GSM-1213-15	12.0	+0.016 +0.059	13.0	15.0	12.059	12.016	13.018	13.000	12.000	11.957
GSM-1214-04	12.0	+0.032 +0.102	14.0	4.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-05	12.0	+0.032 +0.102	14.0	5.0	12.102	12.032	14.018	14.000	12.000	11.957

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Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

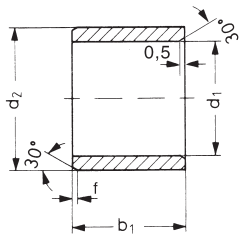
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
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> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GSM-1214-06	12.0	+0.032 +0.102	14.0	6.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-08	12.0	+0.032 +0.102	14.0	8.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-10	12.0	+0.032 +0.102	14.0	10.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-12	12.0	+0.032 +0.102	14.0	12.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-14	12.0	+0.032 +0.102	14.0	14.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-15	12.0	+0.032 +0.102	14.0	15.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-20	12.0	+0.032 +0.102	14.0	20.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1214-25	2.0	+0.032 +0.102	14.0	25.0	12.102	12.032	14.018	14.000	12.000	11.957
GSM-1215-06	12.0	+0.032 +0.102	15.0	6.0	12.102	12.032	15.018	15.000	12.000	11.957
GSM-1215-22	12.0	+0.032 +0.102	15.0	22.0	12.102	12.032	15.018	15.000	12.000	11.957
GSM-1315-07	13.0	+0.032 +0.102	15.0	7.0	13.102	13.032	15.018	15.000	13.000	12.957
GSM-1315-075	13.0	+0.032 +0.102	15.0	7.5	13.102	13.032	15.018	15.000	13.000	12.957
GSM-1315-10	13.0	+0.032 +0.102	15.0	10.0	13.102	13.032	15.018	15.000	13.000	12.957
GSM-1315-15	13.0	+0.032 +0.102	15.0	15.0	13.102	13.032	15.018	15.000	13.000	12.957
GSM-1315-20	13.0	+0.032 +0.102	15.0	20.0	13.102	13.032	15.018	15.000	13.000	12.957
GSM-1315-25	13.0	+0.032 +0.102	15.0	25.0	13.102	13.032	15.018	15.000	13.000	12.957
GSM-1416-03	14.0	+0.032 +0.102	16.0	3.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1416-06	14.0	+0.032 +0.102	16.0	6.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1416-08	14.0	+0.032 +0.102	16.0	8.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1416-10	14.0	+0.032 +0.102	16.0	10.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1416-12	14.0	+0.032 +0.102	16.0	12.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1416-15	14.0	+0.032 +0.102	16.0	15.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1416-20	14.0	+0.032 +0.102	16.0	20.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1416-25	14.0	+0.032 +0.102	16.0	25.0	14.102	14.032	16.018	16.000	14.000	13.957
GSM-1516-15	15.0	+0.016 +0.059	16.0	15.0	15.059	15.016	16.018	16.000	15.000	14.957
GSM-1517-04	15.0	+0.032 +0.102	17.0	4.0	15.102	15.032	16.018	16.000	15.000	14.957
GSM-1517-10	15.0	+0.032 +0.102	17.0	10.0	15.102	15.032	17.018	17.000	15.000	14.957
GSM-1517-12	15.0	+0.032 +0.102	17.0	12.0	15.102	15.032	17.018	17.000	15.000	14.957
GSM-1517-15	15.0	+0.032 +0.102	17.0	15.0	15.102	15.032	17.018	17.000	15.000	14.957
GSM-1517-20	15.0	+0.032 +0.102	17.0	20.0	15.102	15.032	17.018	17.000	15.000	14.957
GSM-1517-25	15.0	+0.032 +0.102	17.0	25.0	15.102	15.032	17.018	17.000	15.000	14.957
GSM-1618-055	16.0	+0.032 +0.102	18.0	5.5	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-08	16.0	+0.032 +0.102	18.0	8.0	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-10	16.0	+0.032 +0.102	18.0	10.0	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-12	16.0	+0.032 +0.102	18.0	12.0	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-13.5	16.0	+0.032 +0.102	18.0	13.5	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-13.8	16.0	+0.032 +0.102	18.0	13.8	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-15	16.0	+0.032 +0.102	18.0	15.0	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-20	16.0	+0.032 +0.102	18.0	20.0	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-25	16.0	+0.032 +0.102	18.0	25.0	16.102	16.032	18.018	18.000	16.000	15.957

iglide® G300 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

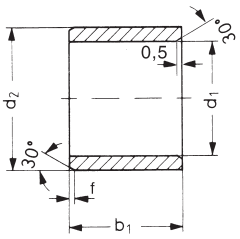
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	after pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
GSM-1618-30	16.0	+0.032 +0.102	18.0	30.0	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1618-50	16.0	+0.032 +0.102	18.0	50.0	16.102	16.032	18.018	18.000	16.000	15.957
GSM-1819-15	18.0	+0.032 +0.102	19.0	15.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1820-10	18.0	+0.032 +0.102	20.0	10.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1820-12	18.0	+0.032 +0.102	20.0	12.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1820-15	18.0	+0.032 +0.102	20.0	15.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1820-20	18.0	+0.032 +0.102	20.0	20.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1820-25	18.0	+0.032 +0.102	20.0	25.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1820-34	18.0	+0.032 +0.102	20.0	34.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1820-45	18.0	+0.032 +0.102	20.0	45.0	18.102	18.032	20.021	20.000	18.000	17.957
GSM-1922-06	19.0	+0.040 +0.124	22.0	6.0	19.124	19.040	22.021	22.000	19.000	18.957
GSM-1922-28	19.0	+0.040 +0.124	22.0	28.0	19.124	19.040	22.021	22.000	19.000	18.957
GSM-1922-35	19.0	+0.040 +0.124	22.0	35.0	19.124	19.040	22.021	22.000	19.000	18.957
GSM-2021-20	20.0	+0.020 +0.072	21.0	20.0	20.072	20.020	21.021	21.000	20.000	19.948
GSM-2022-03	20.0	+0.040 +0.124	22.0	3.0	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2022-08	20.0	+0.040 +0.124	22.0	8.0	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2022-105	20.0	+0.040 +0.124	22.0	10.5	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2022-15	20.0	+0.040 +0.124	22.0	15.0	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2022-20	20.0	+0.040 +0.124	22.0	20.0	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2022-22	20.0	+0.040 +0.124	22.0	22.0	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2022-30	20.0	+0.040 +0.124	22.0	30.0	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2022-47	20.0	+0.040 +0.124	22.0	47.0	20.124	20.040	22.021	22.000	20.000	19.948
GSM-2023-10	20.0	+0.040 +0.124	23.0	10.0	20.124	20.040	23.021	23.000	20.000	19.948
GSM-2023-15	20.0	+0.040 +0.124	23.0	15.0	20.124	20.040	23.021	23.000	20.000	19.948
GSM-2023-20	20.0	+0.040 +0.124	23.0	20.0	20.124	20.040	23.021	23.000	20.000	19.948
GSM-2023-23	20.0	+0.040 +0.124	23.0	23.0	20.124	20.040	23.021	23.000	20.000	19.948
GSM-2023-24	20.0	+0.040 +0.124	23.0	24.0	20.124	20.040	23.021	23.000	20.000	19.948
GSM-2023-25	20.0	+0.040 +0.124	23.0	25.0	20.124	20.040	23.021	23.000	20.000	19.948
GSM-2023-30	20.0	+0.040 +0.124	23.0	30.0	20.124	20.040	23.021	23.000	20.000	19.948
GSM-2224-10	22.0	+0.040 +0.124	24.0	10.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2224-15	22.0	+0.040 +0.124	24.0	15.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2224-17	22.0	+0.040 +0.124	24.0	17.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2224-20	22.0	+0.040 +0.124	24.0	20.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2224-30	22.0	+0.040 +0.124	24.0	30.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2225-15	22.0	+0.040 +0.124	25.0	15.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2225-20	22.0	+0.040 +0.124	25.0	20.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2225-25	22.0	+0.040 +0.124	25.0	25.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2225-30	22.0	+0.040 +0.124	25.0	30.0	22.124	22.040	24.021	24.000	22.000	21.948
GSM-2427-06	24.0	+0.040 +0.124	27.0	6.0	24.124	24.040	27.021	27.000	24.000	23.948
GSM-2427-15	24.0	+0.040 +0.124	27.0	15.0	24.124	24.040	27.021	27.000	24.000	23.948

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Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® G300 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

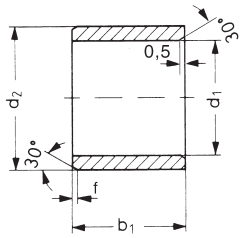
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GSM-2427-20	24.0	+0.040 +0.124	27.0	20.0	24.124	24.040	27.021	27.000	24.000	23.948
GSM-2427-25	24.0	+0.040 +0.124	27.0	25.0	24.124	24.040	27.021	27.000	24.000	23.948
GSM-2427-30	24.0	+0.040 +0.124	27.0	30.0	24.124	24.040	27.021	27.000	24.000	23.948
GSM-2526-25	25.0	+0.020 +0.072	26.0	25.0	25.072	25.020	26.021	26.000	25.000	24.948
GSM-2528-12	25.0	+0.040 +0.124	28.0	12.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2528-15	25.0	+0.040 +0.124	28.0	15.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2528-20	25.0	+0.040 +0.124	28.0	20.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2528-24	25.0	+0.040 +0.124	28.0	24.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2528-25	25.0	+0.040 +0.124	28.0	25.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2528-30	25.0	+0.040 +0.124	28.0	30.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2528-35	25.0	+0.040 +0.124	28.0	35.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2528-50	25.0	+0.040 +0.124	28.0	50.0	25.124	25.040	28.021	28.000	25.000	24.948
GSM-2630-16	26.0	+0.040 +0.124	30.0	16.0	26.124	26.040	28.021	28.000	25.000	24.948
GSM-2730-05	27.0	+0.040 +0.124	30.0	5.0	27.124	26.040	32.025	32.000	28.000	27.948
GSM-2832-10.5	28.0	+0.040 +0.124	32.0	10.5	28.124	28.040	32.025	32.000	28.000	27.948
GSM-2832-12	28.0	+0.040 +0.124	32.0	12.0	28.124	28.040	32.025	32.000	28.000	27.948
GSM-2832-15	28.0	+0.040 +0.124	32.0	15.0	28.124	28.040	32.025	32.000	28.000	27.948
GSM-2832-20	28.0	+0.040 +0.124	32.0	20.0	28.124	28.040	32.025	32.000	28.000	27.948
GSM-2832-23	28.0	+0.040 +0.124	32.0	23.0	28.124	28.040	32.025	32.000	28.000	27.948
GSM-2832-25	28.0	+0.040 +0.124	32.0	25.0	28.124	28.040	32.025	32.000	28.000	27.948
GSM-2832-30	28.0	+0.040 +0.124	32.0	30.0	28.124	28.040	32.025	32.000	28.000	27.948
GSM-3031-12	30.0	+0.020 +0.072	31.0	12.0	30.072	30.020	31.025	31.000	30.000	29.948
GSM-3031-30	30.0	+0.020 +0.072	31.0	30.0	30.072	30.020	31.025	31.000	30.000	29.948
GSM-3034-15	30.0	+0.040 +0.124	34.0	15.0	30.124	30.040	34.025	34.000	30.000	29.948
GSM-3034-20	30.0	+0.040 +0.124	34.0	20.0	30.124	30.040	34.025	34.000	30.000	29.948
GSM-3034-24	30.0	+0.040 +0.124	34.0	24.0	30.124	30.040	34.025	34.000	30.000	29.948
GSM-3034-25	30.0	+0.040 +0.124	34.0	25.0	30.124	30.040	34.025	34.000	30.000	29.948
GSM-3034-30	30.0	+0.040 +0.124	34.0	30.0	30.124	30.040	34.025	34.000	30.000	29.948
GSM-3034-35	30.0	+0.040 +0.124	34.0	25.0	30.124	30.040	34.025	34.000	30.000	29.948
GSM-3034-40	30.0	+0.040 +0.124	34.0	40.0	30.124	30.040	34.025	34.000	30.000	29.948
GSM-3236-20	32.0	+0.050 +0.150	36.0	20.0	32.150	32.050	36.025	36.000	32.000	31.938
GSM-3236-30	32.0	+0.050 +0.150	36.0	30.0	32.150	32.050	36.025	36.000	32.000	31.938
GSM-3236-40	32.0	+0.050 +0.150	36.0	40.0	32.150	32.050	36.025	36.000	32.000	31.938
GSM-3539-14	35.0	+0.050 +0.150	39.0	14.0	35.150	35.050	39.025	39.000	35.000	34.938
GSM-3539-20	35.0	+0.050 +0.150	39.0	20.0	35.150	35.050	39.025	39.000	35.000	34.938
GSM-3539-25	35.0	+0.050 +0.150	39.0	25.0	35.150	35.050	39.025	39.000	35.000	34.938
GSM-3539-30	35.0	+0.050 +0.150	39.0	30.0	35.150	35.050	39.025	39.000	35.000	34.938
GSM-3539-40	35.0	+0.050 +0.150	39.0	40.0	35.150	35.050	39.025	39.000	35.000	34.938
GSM-3539-50	35.0	+0.050 +0.150	39.0	50.0	35.150	35.050	39.025	39.000	35.000	34.938

iglide® G300 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

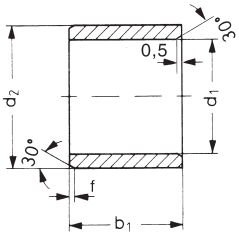
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GSM-3640-20	36.0	+0.050 +0.150	40.0	20.0	36.150	36.050	40.025	40.000	36.000	35.938
GSM-3741-20	37.0	+0.050 +0.150	41.0	20.0	37.150	37.050	41.025	41.000	37.000	36.938
GSM-4044-10	40.0	+0.050 +0.150	44.0	10.0	40.150	40.050	44.025	44.000	40.000	39.938
GSM-4044-16	40.0	+0.050 +0.150	44.0	16.0	40.150	40.050	44.025	44.000	40.000	39.938
GSM-4044-20	40.0	+0.050 +0.150	44.0	20.0	40.150	40.050	44.025	44.000	40.000	39.938
GSM-4044-30	40.0	+0.050 +0.150	44.0	30.0	40.150	40.050	44.025	44.000	40.000	39.938
GSM-4044-40	40.0	+0.050 +0.150	44.0	40.0	40.150	40.050	44.025	44.000	40.000	39.938
GSM-4044-50	40.0	+0.050 +0.150	44.0	50.0	40.150	40.050	44.025	44.000	40.000	39.938
GSM-4246-40	42.0	+0.050 +0.150	46.0	40.0	40.150	40.050	46.025	46.000	42.000	41.938
GSM-4550-22	45.0	+0.050 +0.150	50.0	22.0	45.150	45.050	50.025	50.000	45.000	44.938
GSM-4550-30	45.0	+0.050 +0.150	50.0	30.0	45.150	45.050	50.025	50.000	45.000	44.938
GSM-4550-38	45.0	+0.050 +0.150	50.0	38.0	45.150	45.050	50.025	50.000	45.000	44.938
GSM-4550-40	45.0	+0.050 +0.150	50.0	40.0	45.150	45.050	50.025	50.000	45.000	44.938
GSM-4550-50	45.0	+0.050 +0.150	50.0	50.0	45.150	45.050	50.025	50.000	45.000	44.938
GSM-5053-50	50.0	+0.050 +0.150	53.0	50.0	50.150	50.050	53.030	53.000	50.000	49.938
GSM-5055-20	50.0	+0.050 +0.150	55.0	20.0	50.150	50.050	55.030	55.000	50.000	49.938
GSM-5055-25	50.0	+0.050 +0.150	55.0	25.0	50.150	50.050	55.030	55.000	50.000	49.938
GSM-5055-30	50.0	+0.050 +0.150	55.0	30.0	50.150	50.050	55.030	55.000	50.000	49.938
GSM-5055-40	50.0	+0.050 +0.150	55.0	40.0	50.150	50.050	55.030	55.000	50.000	49.938
GSM-5055-50	50.0	+0.050 +0.150	55.0	50.0	50.150	50.050	55.030	55.000	50.000	49.938
GSM-5257-20	52.0	+0.060 +0.180	57.0	20.0	52.150	52.050	57.030	57.000	52.000	51.926
GSM-5560-40	55.0	+0.060 +0.180	60.0	40.0	55.180	55.060	60.030	60.000	55.000	54.926
GSM-5560-50	55.0	+0.060 +0.180	60.0	50.0	55.180	55.060	60.030	60.000	55.000	54.926
GSM-5560-60	55.0	+0.060 +0.180	60.0	60.0	55.180	55.060	60.030	60.000	55.000	54.926
GSM-6065-30	60.0	+0.060 +0.180	65.0	30.0	60.180	60.060	65.030	65.000	60.000	59.926
GSM-6065-40	60.0	+0.060 +0.180	65.0	40.0	60.180	60.060	65.030	65.000	60.000	59.926
GSM-6065-50	60.0	+0.060 +0.180	65.0	50.0	60.180	60.060	65.030	65.000	60.000	59.926
GSM-6065-60	60.0	+0.060 +0.180	65.0	60.0	60.180	60.060	65.030	65.000	60.000	59.926
GSM-6267-35	62.0	+0.060 +0.180	67.0	35.0	62.180	62.060	67.030	67.000	62.000	61.926
GSM-6267-72	62.0	+0.060 +0.180	67.0	72.0	62.180	62.060	67.030	67.000	62.000	61.926
GSM-6570-30	65.0	+0.060 +0.180	70.0	30.0	65.180	65.060	70.030	70.000	65.000	64.926
GSM-6570-50	65.0	+0.060 +0.180	70.0	50.0	65.180	65.060	70.030	70.000	65.000	64.926
GSM-7075-60	70.0	+0.060 +0.180	75.0	60.0	70.180	70.060	75.030	75.000	70.000	69.926
GSM-7277-76	72.0	+0.060 +0.180	77.0	76.0	72.180	72.060	77.030	77.000	72.000	71.926
GSM-7277-78	72.0	+0.060 +0.180	77.0	78.0	72.180	72.060	77.030	77.000	72.000	71.926
GSM-7580-40	75.0	+0.060 +0.180	80.0	40.0	75.180	75.060	80.030	80.000	75.000	74.926
GSM-7580-60	75.0	+0.060 +0.180	80.0	60.0	75.180	75.060	80.030	80.000	75.000	74.926
GSM-8085-60	80.0	+0.060 +0.180	85.0	60.0	80.180	80.060	85.030	85.000	80.000	79.926
GSM-8085-100	80.0	+0.060 +0.180	85.0	100.0	80.180	80.060	85.030	85.000	80.000	79.926

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iglide® G300 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

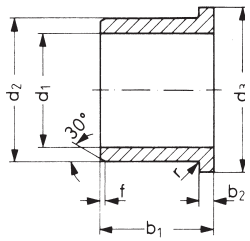
Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GSM-8590-100	85.0	+0.072 +0.212	90.0	100.0	85.212	85.072	90.035	90.000	85.000	84.913
GSM-9095-100	90.0	+0.072 +0.212	95.0	100.0	90.212	90.072	95.035	95.000	90.000	89.913
GSM-95100-100	95.0	+0.072 +0.212	100.0	100.0	95.212	95.072	100.035	100.000	95.000	94.913
GSM-100105-30	100.0	+0.072 +0.212	105.0	30.0	100.212	100.072	105.035	105.000	100.000	99.913
GSM-100105-100	100.0	+0.072 +0.212	105.0	100.0	100.212	100.072	105.035	105.000	100.000	99.913
GSM-110115-100	110.0	+0.072 +0.212	115.0	100.0	110.212	110.072	115.035	115.000	110.000	109.913
GSM-120125-100	120.0	+0.072 +0.212	125.0	100.0	120.212	120.072	125.035	125.000	120.000	119.913
GSM-125130-100	125.0	+0.085 +0.245	130.0	100.0	125.245	125.085	130.040	130.000	125.000	124.800
GSM-130135-100	130.0	+0.085 +0.245	135.0	100.0	130.245	130.085	135.040	135.000	130.000	129.900
GSM-135140-80	135.0	+0.085 +0.245	140.0	80.0	135.245	135.085	140.040	140.000	135.000	134.900
GSM-140145-100	140.0	+0.085 +0.245	145.0	100.0	140.245	140.085	145.040	145.000	140.000	139.900
GSM-150155-100	150.0	+0.085 +0.245	155.0	100.0	150.245	150.085	155.040	155.000	150.000	149.900

iglide® G300 - Plain Bearings
Flange Bearing, MM





r = max. 0.5
Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

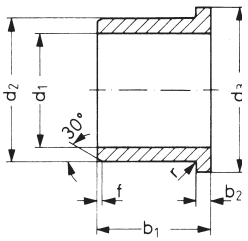
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	after Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
GFM-0304-02	3.0	+0.014 +0.054	4.5	7.5	2.0	0.75	3.054	3.014	4.512	4.500	3.000	2.975
GFM-0304-0275	3.0	+0.014 +0.054	4.5	7.5	2.75	0.75	3.054	3.014	4.512	4.500	3.000	2.975
GFM-0304-03	3.0	+0.014 +0.054	4.5	7.5	3.0	0.75	3.054	3.014	4.512	4.500	3.000	2.975
GFM-0304-05	3.0	+0.014 +0.054	4.5	7.5	5.0	0.75	3.054	3.014	4.512	4.500	3.000	2.975
GFM-030407-05	3.0	+0.014 +0.054	4.5	7.0	5.0	0.75	3.054	3.014	4.512	4.500	3.000	2.975
GFM-0405-03	4.0	+0.020 +0.068	5.5	9.5	3.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
GFM-0405-04	4.0	+0.020 +0.068	5.5	9.5	4.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
GFM-0405-06	4.0	+0.020 +0.068	5.5	9.5	6.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
GFM-040508-10	4.0	+0.020 +0.068	5.5	8.0	10.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
GFM-0506-035	5.0	+0.010 +0.040	6.0	10.0	3.5	0.5	5.040	5.010	6.012	6.000	5.000	4.970
GFM-0506-04	5.0	+0.010 +0.040	6.0	10.0	4.0	0.5	5.040	5.010	6.012	6.000	5.000	4.970
GFM-0506-05	5.0	+0.010 +0.040	6.0	10.0	5.0	0.5	5.040	5.010	6.012	6.000	5.000	4.970
GFM-0506-06	5.0	+0.010 +0.040	6.0	10.0	6.0	0.5	5.040	5.010	6.012	6.000	5.000	4.970
GFM-0506-15	5.0	+0.010 +0.040	6.0	10.0	15.0	0.5	5.040	5.010	6.012	6.000	5.000	4.970
GFM-0507-03	5.0	+0.020 +0.068	7.0	11.0	3.5	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-0507-04	5.0	+0.020 +0.068	7.0	11.0	4.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-0507-05	5.0	+0.020 +0.068	7.0	11.0	5.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-0507-07	5.0	+0.020 +0.068	7.0	11.0	7.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-0507-11	5.0	+0.020 +0.068	7.0	11.0	11.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-050715-04	5.0	+0.020 +0.068	7.0	15.0	4.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-0507-30	5.0	+0.020 +0.068	7.0	11.0	30.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-050709-05	5.0	+0.020 +0.068	7.0	9.0	5.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
GFM-0607-06	6.0	+0.010 +0.040	7.0	11.0	6.0	0.5	6.040	6.010	7.012	7.000	6.000	5.970
GFM-0607-10	6.0	+0.010 +0.040	7.0	11.0	10.0	0.5	6.040	6.010	7.012	7.000	6.000	5.970
GFM-0607-024	6.0	+0.010 +0.040	7.0	11.0	2.4	0.5	6.040	6.010	7.012	7.000	6.000	5.970
GFM-0608-04	6.0	+0.020 +0.068	8.0	12.0	4.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-0608-048	6.0	+0.020 +0.068	8.0	12.0	4.8	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-0608-05	6.0	+0.020 +0.068	8.0	12.0	5.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-0608-06	6.0	+0.020 +0.068	8.0	12.0	6.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-0608-07	6.0	+0.020 +0.068	8.0	12.0	7.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-0608-08	6.0	+0.020 +0.068	8.0	12.0	8.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-060810-08	6.0	+0.020 +0.068	8.0	10.0	8.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-0608-10	6.0	+0.020 +0.068	8.0	12.0	10.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-060812-20	6.0	+0.020 +0.068	8.0	12.0	20.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-060814-12	6.0	+0.020 +0.068	8.0	14.0	12.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
GFM-0708-03	7.0	+0.013 +0.049	8.0	12.0	3.0	0.5	7.049	7.013	8.015	8.000	7.000	6.964
GFM-0708-08	7.0	+0.013 +0.049	8.0	12.0	8.0	0.5	7.049	7.013	8.015	8.000	7.000	6.964
GFM-0709-06	7.0	+0.025 +0.083	9.0	15.0	6.0	1.0	7.068	7.020	9.015	9.000	7.000	6.964
GFM-0709-10	7.0	+0.025 +0.083	9.0	15.0	10.0	1.0	7.068	7.020	9.015	9.000	7.000	6.964
GFM-0709-12	7.0	+0.025 +0.083	9.0	15.0	12.0	1.0	7.068	7.020	9.015	9.000	7.000	6.964

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iglide® G300 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

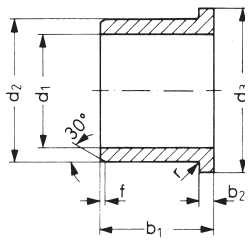
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	after Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
GFM-070919-10	7.0	+0.025 +0.083	9.0	19.0	10.0	1.0	7.083	7.025	9.015	9.000	7.000	6.964
GFM-0809-03	8.0	+0.013 +0.049	9.0	15.0	3.0	0.5	8.049	8.013	9.015	9.000	8.000	7.964
GFM-0809-035	8.0	+0.013 +0.049	9.0	15.0	3.5	0.5	8.049	8.013	9.015	9.000	8.000	7.964
GFM-0809-055	8.0	+0.013 +0.049	9.0	15.0	5.5	0.5	8.049	8.013	9.015	9.000	8.000	7.964
GFM-0809-08	8.0	+0.013 +0.049	9.0	15.0	8.0	0.5	8.049	8.013	9.015	9.000	8.000	7.964
GFM-0809-12	8.0	+0.013 +0.049	9.0	15.0	12.0	0.5	8.049	8.013	9.015	9.000	8.000	7.964
GFM-0810-02	8.0	+0.025 +0.083	10.0	15.0	2.7	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-03	8.0	+0.025 +0.083	10.0	15.0	3.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-035	8.0	+0.013 +0.049	10.0	15.0	3.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-04	8.0	+0.025 +0.083	10.0	15.0	4.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-05	8.0	+0.025 +0.083	10.0	15.0	5.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-06	8.0	+0.025 +0.083	10.0	15.0	6.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-065	8.0	+0.025 +0.083	10.0	15.0	6.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-07	8.0	+0.025 +0.083	10.0	15.0	7.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-09	8.0	+0.025 +0.083	10.0	15.0	9.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-10	8.0	+0.025 +0.083	10.0	15.0	10.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-11	8.0	+0.025 +0.083	10.0	15.0	11.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081013-08	8.0	+0.025 +0.083	10.0	13.0	8.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081014-05	8.0	+0.025 +0.083	10.0	14.0	5.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081014-06	8.0	+0.025 +0.083	10.0	14.0	6.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081014-08	8.0	+0.025 +0.083	10.0	14.0	8.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081014-10	8.0	+0.025 +0.083	10.0	14.0	10.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081016-11	8.0	+0.025 +0.083	10.0	16.0	11.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081016-15	8.0	+0.025 +0.083	10.0	16.0	15.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-15	8.0	+0.025 +0.083	10.0	15.0	15.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-25	8.0	+0.025 +0.083	10.0	15.0	25.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0810-30	8.0	+0.025 +0.083	10.0	15.0	30.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-081017-15	8.0	+0.025 +0.083	10.0	17.0	15.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
GFM-0811-07	8.0	+0.025 +0.083	11.0	15.0	7.0	1.5	8.083	8.025	11.018	11.000	8.000	7.964
GFM-0910-17	9.0	+0.013 +0.049	10.0	15.0	17.5	0.5	9.049	9.013	10.015	10.000	9.000	8.964
GFM-0910-065	9.0	+0.013 +0.049	10.0	15.0	6.5	0.5	9.049	9.013	10.015	10.000	9.000	8.964
GFM-1011-026	10.0	+0.013 +0.049	11.0	15.0	2.6	0.5	10.049	10.013	11.015	11.000	10.000	9.964
GFM-1011-03	10.0	+0.013 +0.049	11.0	15.0	3.0	0.5	10.049	10.013	11.015	11.000	10.000	9.964
GFM-1011-044	10.0	+0.013 +0.049	11.0	15.0	4.4	0.5	10.049	10.013	11.015	11.000	10.000	9.964
GFM-1011-10	10.0	+0.013 +0.049	11.0	15.0	10.0	0.5	10.049	10.013	11.015	11.000	10.000	9.964
GFM-1012-035	10.0	+0.025 +0.083	12.0	18.0	3.5	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-04	10.0	+0.025 +0.083	12.0	18.0	4.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-05	10.0	+0.025 +0.083	12.0	18.0	5.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-06	10.0	+0.025 +0.083	12.0	18.0	6.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-101214-06	10.0	+0.025 +0.083	12.0	14.0	6.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964

iglide® G300 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

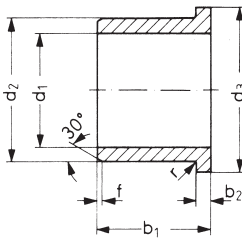
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance after Pressfit in Ø H7	d2	d3 d13	b1 h13	b2 -0.14	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GFM-101216-06	10.0	+0.025 +0.083	12.0	16.0	6.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-07	10.0	+0.025 +0.083	12.0	18.0	7.0	1.0	10.098	10.040	12.018	12.000	10.000	9.964
GFM-101214-07	10.0	+0.025 +0.083	12.0	14.0	7.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-09	10.0	+0.025 +0.083	12.0	18.0	9.0	1.0	10.098	10.040	12.018	12.000	10.000	9.964
GFM-101216-09	10.0	+0.025 +0.083	12.0	16.0	9.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-10	10.0	+0.025 +0.083	12.0	18.0	10.0	1.0	10.098	10.040	12.018	12.000	10.000	9.964
GFM-101216-10	10.0	+0.025 +0.083	12.0	16.0	10.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-12	10.0	+0.025 +0.083	12.0	18.0	12.0	1.0	10.098	10.040	12.018	12.000	10.000	9.964
GFM-101215-12	10.0	+0.025 +0.083	12.0	15.0	12.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-15	10.0	+0.025 +0.083	12.0	18.0	15.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-101216-15	10.0	+0.025 +0.083	12.0	16.0	15.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1012-17	10.0	+0.025 +0.083	12.0	18.0	17.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
GFM-1013-12	10.0	+0.025 +0.083	13.0	18.0	12.0	1.5	10.083	10.025	13.018	13.000	10.000	9.964
GFM-111320-037	11.0	+0.032 +0.102	13.0	20.0	3.7	1.0	11.102	11.032	13.018	13.000	11.000	10.957
GFM-1213-03	12.0	+0.016 +0.059	13.0	17.0	3.0	0.5	12.059	12.016	13.018	13.000	12.000	11.957
GFM-1213-12	12.0	+0.016 +0.059	13.0	17.0	12.0	0.5	12.059	12.016	13.018	13.000	12.000	11.957
GFM-121315-12	12.0	+0.016 +0.059	13.0	15.0	12.0	1.0	12.059	12.016	13.018	13.000	12.000	11.957
GFM-1214-03	12.0	+0.032 +0.102	14.0	20.0	3.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-121416-034	12.0	+0.032 +0.102	14.0	16.0	3.4	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-121418-04	12.0	+0.032 +0.102	14.0	18.0	4.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-06	12.0	+0.032 +0.102	14.0	20.0	6.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-07	12.0	+0.032 +0.102	14.0	20.0	7.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-121418-08	12.0	+0.032 +0.102	14.0	18.0	8.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-09	12.0	+0.032 +0.102	14.0	20.0	9.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-10	12.0	+0.032 +0.102	14.0	20.0	10.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-121418-10	12.0	+0.032 +0.102	14.0	18.0	10.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-11	12.0	+0.032 +0.102	14.0	20.0	11.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-12	12.0	+0.032 +0.102	14.0	20.0	12.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-121418-12	12.0	+0.032 +0.102	14.0	18.0	12.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-15	12.0	+0.032 +0.102	14.0	20.0	15.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-121418-15	12.0	+0.032 +0.102	14.0	18.0	15.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-17	12.0	+0.032 +0.102	14.0	20.0	17.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-20	12.0	+0.032 +0.102	14.0	20.0	20.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-121418-20	12.0	+0.032 +0.102	14.0	18.0	20.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1214-24	12.0	+0.032 +0.102	14.0	20.0	24.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
GFM-1315-06	13.0	+0.032 +0.102	15.0	22.0	6.0	1.0	13.102	13.032	15.018	15.000	13.000	12.957
GFM-1416-03	14.0	+0.032 +0.102	16.0	22.0	3.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1416-04	14.0	+0.032 +0.102	16.0	22.0	4.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1416-05	14.0	+0.032 +0.102	16.0	22.0	5.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1416-06	14.0	+0.032 +0.102	16.0	22.0	6.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957

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iglide® G300 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

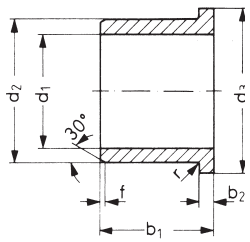
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance after Pressfit in Ø H7	d2	d3 d13	b1 h13	b2 -0.14	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
GFM-1416-08	14.0	+0.032 +0.102	16.0	22.0	8.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1416-10	14.0	+0.032 +0.102	16.0	22.0	10.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1416-12	14.0	+0.032 +0.102	16.0	22.0	12.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-141624-16	14.0	+0.032 +0.102	16.0	24.0	16.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1416-17	14.0	+0.032 +0.102	16.0	22.0	17.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1416-21	14.0	+0.032 +0.102	16.0	22.0	21.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
GFM-1516-02	15.0	+0.016 +0.059	16.0	20.0	2.0	0.5	15.059	15.016	16.018	16.000	15.000	14.957
GFM-1516-025	15.0	+0.016 +0.059	16.0	20.0	2.5	0.5	15.059	15.016	16.018	16.000	15.000	14.957
GFM-1516-03	15.0	+0.016 +0.059	16.0	20.0	3.0	0.5	15.059	15.016	16.018	16.000	15.000	14.957
GFM-1516-15	15.0	+0.016 +0.059	16.0	20.0	15.0	0.5	15.059	15.016	16.018	16.000	15.000	14.957
GFM-1517-04	15.0	+0.032 +0.102	17.0	23.0	4.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
GFM-1517-045	15.0	+0.032 +0.102	17.0	23.0	4.5	1.0	15.102	15.032	17.018	17.000	15.000	14.957
GFM-1517-05	15.0	+0.032 +0.102	17.0	23.0	5.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
GFM-1517-09	15.0	+0.032 +0.102	17.0	23.0	9.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
GFM-1517-12	15.0	+0.032 +0.102	17.0	23.0	12.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
GFM-1517-17	15.0	+0.032 +0.102	17.0	23.0	17.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
GFM-1517-20	15.0	+0.032 +0.102	17.0	23.0	20.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
GFM-151824-32	15.0	+0.032 +0.102	18.0	24.0	32.0	1.5	15.102	15.032	18.018	18.000	15.000	14.957
GFM-1618-04	16.0	+0.032 +0.102	18.0	24.0	4.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GFM-1618-06	16.0	+0.032 +0.102	18.0	24.0	6.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GFM-1618-09	16.0	+0.032 +0.102	18.0	24.0	9.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GFM-1618-12	16.0	+0.032 +0.102	18.0	24.0	12.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GFM-1618-17	16.0	+0.032 +0.102	18.0	24.0	17.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GFM-1618-21	16.0	+0.032 +0.102	18.0	24.0	21.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GFM-1622-12	16.0	+0.032 +0.102	22.0	25.0	12.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
GFM-1719-09	17.0	+0.032 +0.102	19.0	25.0	9.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
GFM-1719-25	17.0	+0.032 +0.102	19.0	25.0	25.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
GFM-1820-04	18.0	+0.032 +0.102	20.0	26.0	4.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1820-06	18.0	+0.032 +0.102	20.0	26.0	6.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-182022-06	18.0	+0.032 +0.102	20.0	22.0	6.0	1.0	18.102	18.032	22.021	22.000	18.000	17.957
GFM-1820-09	18.0	+0.032 +0.102	20.0	26.0	9.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1820-11	18.0	+0.032 +0.102	20.0	26.0	11.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1820-12	18.0	+0.032 +0.102	20.0	26.0	12.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1820-17	18.0	+0.032 +0.102	20.0	26.0	17.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1820-22	18.0	+0.032 +0.102	20.0	26.0	22.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1820-30	18.0	+0.032 +0.102	20.0	26.0	30.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1820-32	18.0	+0.032 +0.102	20.0	26.0	32.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-1822-28	18.0	+0.032 +0.102	20.0	26.0	28.0	2.0	18.102	18.032	20.021	20.000	18.000	17.957
GFM-2021-035	20.0	+0.020 +0.072	21.0	25.0	3.5	0.5	20.072	20.020	21.021	21.000	20.000	19.948
GFM-2021-20	20.0	+0.020 +0.072	21.0	25.0	20.0	0.5	20.072	20.020	21.021	21.000	20.000	19.948
GFM-2023-07	20.0	+0.040 +0.124	23.0	30.0	7.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948

iglide® G300 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

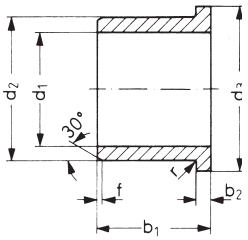
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance after Pressfit in Ø H7	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
				d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
GFM-2023-11	20.0	+0.040 +0.124	23.0	30.0	11.5	1.5	20.124	20.040	23.021	23.000	20.000	19.948
GFM-2023-16	20.0	+0.040 +0.124	23.0	30.0	16.5	1.5	20.124	20.040	23.021	23.000	20.000	19.948
GFM-202329-20	20.0	+0.040 +0.124	23.0	30.0	20.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
GFM-2023-21	20.0	+0.040 +0.124	23.0	30.0	21.5	1.5	20.124	20.040	23.021	23.000	20.000	19.948
GFM-202326-21	20.0	+0.040 +0.124	23.0	26.0	21.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
GFM-202328-15	20.0	+0.040 +0.124	23.0	28.0	15.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
GFM-2427-07	24.0	+0.040 +0.124	27.0	32.0	7.0	1.5	24.124	24.040	27.021	27.000	24.000	23.948
GFM-2427-10	24.0	+0.040 +0.124	27.0	32.0	10.0	1.5	24.124	24.040	27.021	27.000	24.000	23.948
GFM-2526-25	25.0	+0.020 +0.072	26.0	30.0	25.0	0.5	25.072	25.020	26.021	26.000	25.000	24.948
GFM-2527-48	25.0	+0.040 +0.124	27.0	32.0	48.0	1.0	25.124	25.040	27.021	27.000	25.000	24.948
GFM-2528-11	25.0	+0.040 +0.124	28.0	35.0	11.5	1.5	25.124	25.040	28.021	28.000	25.000	24.948
GFM-2528-16	25.0	+0.040 +0.124	28.0	35.0	16.5	1.5	25.124	25.040	28.021	28.000	25.000	24.948
GFM-2528-21	25.0	+0.040 +0.124	28.0	35.0	21.5	1.5	25.124	25.040	28.021	28.000	25.000	24.948
GFM-2630-12	26.0	+0.040 +0.124	30.0	35.0	12.0	2.0	26.124	26.040	30.021	30.000	26.000	25.948
GFM-2730-20	27.0	+0.040 +0.124	30.0	35.0	20.0	1.5	27.124	27.040	30.021	30.000	27.000	26.948
GFM-2830-10	28.0	+0.040 +0.124	30.0	35.0	10.0	1.0	28.124	28.040	30.025	30.000	28.000	27.948
GFM-2830-36	28.0	+0.040 +0.124	30.0	35.0	36.0	1.0	28.124	28.040	30.025	30.000	28.000	27.948
GFM-283239-20	28.0	+0.040 +0.124	32.0	39.0	20.0	2.0	28.124	28.040	32.025	32.000	28.000	27.948
GFM-3031-20	30.0	+0.040 +0.124	31.0	36.0	20.0	0.5	30.124	30.040	31.025	31.000	30.000	29.948
GFM-3031-30	30.0	+0.040 +0.124	31.0	35.0	30.0	0.5	30.124	30.040	31.025	31.000	30.000	29.948
GFM-3032-04	30.0	+0.040 +0.124	32.0	37.0	4.0	1.0	30.124	30.040	32.025	32.000	30.000	29.948
GFM-3032-12	30.0	+0.040 +0.124	32.0	37.0	12.0	1.0	30.124	30.040	32.025	32.000	30.000	29.948
GFM-3032-17	30.0	+0.040 +0.124	32.0	37.0	17.5	1.0	30.124	30.040	32.025	32.000	30.000	29.948
GFM-3032-22	30.0	+0.040 +0.124	32.0	37.0	22.0	1.0	30.124	30.040	32.025	32.000	30.000	29.948
GFM-3034-09	30.0	+0.040 +0.124	34.0	42.0	9.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
GFM-303440-10	30.0	+0.040 +0.124	34.0	40.0	10.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
GFM-3034-16	30.0	+0.040 +0.124	34.0	42.0	16.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
GFM-3034-20	30.0	+0.040 +0.124	34.0	42.0	20.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
GFM-3034-26	30.0	+0.040 +0.124	34.0	42.0	26.0	2.0	30.124	30.040	34.025	34.000	30.000	29.94
GFM-3034-37	30.0	+0.040 +0.124	34.0	42.0	37.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
GFM-3236-16	32.0	+0.050 +0.150	36.0	40.0	16.0	2.0	32.150	32.050	36.025	36.000	32.000	31.938
GFM-3236-26	32.0	+0.050 +0.150	36.0	40.0	26.0	2.0	32.150	32.050	36.025	36.000	32.000	31.938
GFM-343850-35	34.0	+0.050 +0.150	38.0	50.0	35.0	2.0	34.150	34.050	38.025	38.000	34.000	34.938
GFM-3539-058	35.0	+0.050 +0.150	39.0	47.0	5.8	2.0	35.150	35.050	39.025	39.000	35.000	34.938
GFM-3539-07	35.0	+0.050 +0.150	39.0	47.0	7.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
GFM-3539-16	35.0	+0.050 +0.150	39.0	47.0	16.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
GFM-3539-26	35.0	+0.050 +0.150	39.0	47.0	26.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
GFM-3539-36	35.0	+0.050 +0.150	39.0	47.0	36.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
GFM-354051-30	35.0	+0.050 +0.150	40.0	51.0	30.0	2.5	35.150	35.050	40.025	40.000	35.000	34.938
GFM-3842-22	38.0	+0.050 +0.150	42.0	54.0	22.0	2.0	38.150	38.050	42.025	42.000	38.000	37.938
GFM-4044-07	40.0	+0.050 +0.150	44.0	52.0	7.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
GFM-4044-14	40.0	+0.050 +0.150	44.0	52.0	14.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938

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iglide® G300 - Plain Bearings
Flange Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

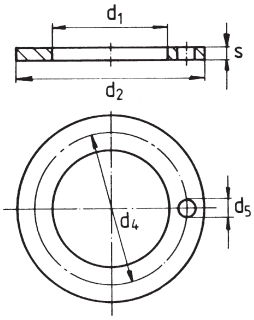
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

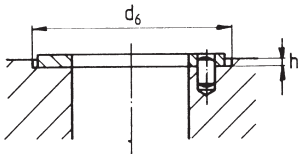
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance after Pressfit in Ø H7	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
				d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
GFM-4044-20	40.0	+0.050 +0.150	44.0	52.0	20.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
GFM-4044-30	40.0	+0.050 +0.150	44.0	52.0	30.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
GFM-4044-40	40.0	+0.050 +0.150	44.0	52.0	40.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
GFM-4044-50	40.0	+0.050 +0.150	44.0	52.0	50.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
GFM-4246-19	42.0	+0.050 +0.150	46.0	53.0	19.0	2.0	42.150	42.050	46.025	46.000	42.000	41.938
GFM-4550-30	45.0	+0.050 +0.150	50.0	58.0	30.0	2.0	45.150	45.050	50.025	50.000	45.000	44.938
GFM-4550-50	45.0	+0.050 +0.150	50.0	58.0	50.0	2.0	45.150	45.050	50.025	50.000	45.000	44.938
GFM-5055-07	50.0	+0.050 +0.150	55.0	63.0	7.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
GFM-5055-10	50.0	+0.050 +0.150	55.0	63.0	10.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
GFM-5055-18	50.0	+0.050 +0.150	55.0	63.0	18.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
GFM-5055-25	50.0	+0.050 +0.150	55.0	63.0	25.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
GFM-5055-40	50.0	+0.050 +0.150	55.0	63.0	40.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
GFM-5055-50	50.0	+0.050 +0.150	55.0	63.0	50.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
GFM-6065-07	60.0	+0.060 +0.180	65.0	73.0	7.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
GFM-6065-22	60.0	+0.060 +0.180	65.0	73.0	22.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
GFM-6065-30	60.0	+0.060 +0.180	65.0	73.0	30.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
GFM-6065-50	60.0	+0.060 +0.180	65.0	73.0	50.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
GFM-606580-62	60.0	+0.060 +0.180	65.0	80.0	62.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
GFM-6570-50	65.0	+0.060 +0.180	70.0	78.0	50.0	2.0	65.180	65.060	70.030	70.000	65.000	64.926
GFM-7075-50	70.0	+0.060 +0.180	75.0	83.0	50.0	2.0	70.180	70.060	75.030	75.000	70.000	69.926
GFM-7580-50	75.0	+0.060 +0.180	80.0	88.0	50.0	2.0	75.180	75.060	80.030	80.000	75.000	74.926
GFM-8085-100	80.0	+0.060 +0.180	85.0	93.0	100.0	2.5	80.180	80.040	85.030	85.000	80.000	79.926
GFM-8590-100	85.0	+0.072 +0.212	90.0	98.0	100.0	2.5	85.212	85.072	90.035	90.000	85.000	84.913
GFM-9095-100	90.0	+0.072 +0.212	95.0	103.0	100.0	2.5	90.212	90.072	95.035	95.000	90.000	89.913
GFM-95100-100	95.0	+0.072 +0.212	100.0	108.0	100.0	2.5	95.212	95.072	100.035	100.000	95.000	94.913
GFM-100105-42.5	100.0	+0.072 +0.212	105.0	113.0	42.5	2.5	100.212	100.072	105.035	105.000	100.000	99.913
GFM-100105-100	100.0	+0.072 +0.212	105.0	113.0	100.0	2.5	100.212	100.072	105.035	105.000	100.000	99.913
GFM-110115-100	110.0	+0.072 +0.212	115.0	123.0	100.0	2.5	110.212	110.072	115.035	115.000	110.000	109.913
GFM-120125-100	120.0	+0.072 +0.212	125.0	133.0	100.0	2.5	120.212	120.072	125.035	125.000	120.000	119.913
GFM-125130-100	125.0	+0.085 +0.245	130.0	138.0	100.0	2.5	125.245	125.085	130.040	130.000	125.000	124.900
GFM-130135-100	130.0	+0.085 +0.245	135.0	143.0	100.0	2.5	130.245	130.085	135.040	135.000	130.000	129.900
GFM-140145-100	140.0	+0.085 +0.245	145.0	153.0	100.0	2.5	140.245	140.085	145.040	145.000	140.000	139.900
GFM-150155-40	150.0	+0.085 +0.245	155.0	163.0	40.0	2.5	150.245	150.085	155.040	155.000	150.000	149.900
GFM-150155-100	150.0	+0.085 +0.245	155.0	163.0	100.0	2.5	150.245	150.085	155.040	155.000	150.000	149.900

iglide® G300 - Plain Bearings
Thrust Washer, MM







Part Number	d1 +0.25	d2 -0.25	s -0.05	d4 -0.12 +0.12	d5 +0.375 +0.125	h +0.2 -0.2	d6 +0.12
GTM-0509-006	5.0	9.5	0.6	*	*	.3	9.5
GTM-0615-015	6.0	15.0	1.5	*	*	1.0	15
GTM-0620-015	6.0	20.0	1.5	13.0	1.5	1.0	20
GTM-0713-005	7.0	13.0	0.5	*	*	.2	13
GTM-0815-005	8.0	15.0	0.5	*	*	.2	15
GTM-0815-015	8.0	15.0	1.5	11.5	*	1.0	15
GTM-0818-010	8.0	18.0	1.0	*	*	.7	18
GTM-0818-015	8.0	18.0	1.5	13.0	1.5	1.0	18
GTM-0918-015	9.0	18.0	1.5	13.5	1.5	1.0	18
GTM-1018-010	10.0	18.0	1.0	*	*	.7	18
GTM-1018-020	10.0	18.0	2.0	*	*	1.5	18
GTM-1224-015	12.0	24.0	1.5	18.0	1.5	1.0	24
GTM-1420-015	14.0	20.0	1.5	*	*	1.0	20
GTM-1426-015	14.0	26.0	1.5	20.0	2.0	1.0	26
GTM-1522-008	15.0	22.0	0.8	*	*	.5	22
GTM-1524-015	15.0	24.0	1.5	19.5	1.5	1.0	24
GTM-1524-0275	15.0	24.0	2.75	*	*	2.0	24
GTM-1630-015	16.0	30.0	1.5	22.0	2.0	1.0	30
GTM-1832-015	18.0	32.0	1.5	25.0	2.0	1.0	32
GTM-2036-015	20.0	36.0	1.5	28.0	3.0	1.0	36
GTM-2238-015	22.0	38.0	1.5	30.0	3.0	1.0	38
GTM-2442-015	24.0	42.0	1.5	33.0	3.0	1.0	42
GTM-2644-015	26.0	44.0	1.5	35.0	3.0	1.0	44
GTM-2835-005	28.0	35.0	0.5	*	*	.2	35
GTM-2848-015	28.0	48.0	1.5	38.0	4.0	1.0	48
GTM-3254-015	32.0	54.0	1.5	43.0	4.0	1.0	54
GTM-3862-015	38.0	62.0	1.5	50.0	4.0	1.0	62
GTM-4266-015	42.0	66.0	1.5	54.0	4.0	1.0	66
GTM-4874-020	48.0	74.0	2.0	61.0	4.0	1.5	74
GTM-5278-020	52.0	78.0	2.0	65.0	4.0	1.5	78
GTM-6290-020	62.0	90.0	2.0	76.0	4.0	1.5	90
GTM-6881-020	68.0	81.0	2.0	*	*	1.5	81

* Design without bore

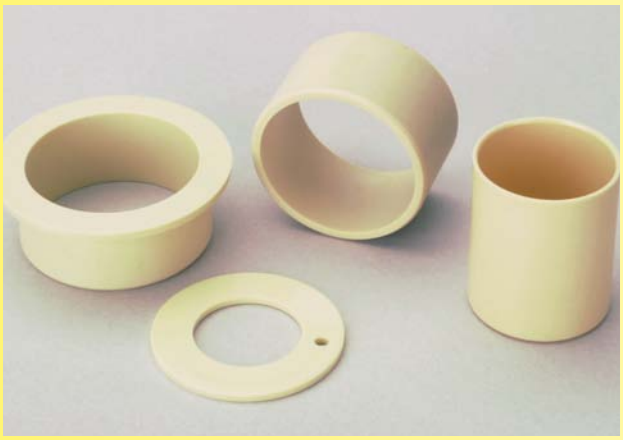
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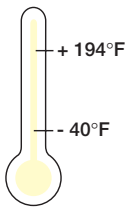
iglide® L280
The Marathon Runner

- For especially high service life
- Extremely high wear resistance
- Resistant to dirt and chemicals
- Suitable for soft shafts
- Low coefficient of friction



iglide® L280 - Plain Bearings

Price Index



3 Styles
More than 675 Dimensions
Inner Diameters
From 1/8 - 2-1/4" (2 - 120 mm)

When to use iglide® L280 plain bearings:

- When especially high service life is necessary
- When low coefficients of dynamic friction and high wear resistance are needed
- For use on 303 stainless steel shafts
- For harsh environments and very rough shafts

When not to use iglide® L280 plain bearings:

- For high loads starting at 7250 psi
  ➤ iglide® Q
- When temperatures are continuously above 266°F
  ➤ iglide® T500, F, Z
- When an especially economical bearing is desired
  ➤ iglide® G300

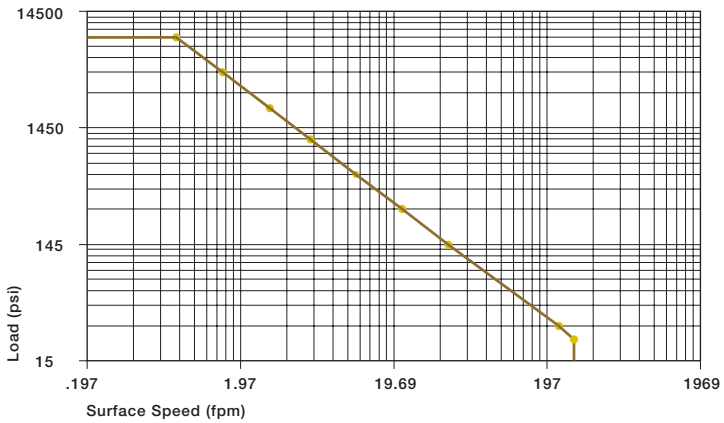
Table 7.1: Material Data

General Properties	Unit	iglide® L280	Testing Method
Density	g/cm³	1.24	
Color		yellow	
Max. moisture absorption at 73°F / 50% r.h.	% weight	1.3	DIN 53495
Max. moisture absorption	% weight	6.5	
Coefficient of friction, dynamic against steel	μ	0.08 - 0.23	
p x v-value, max. (dry)	psi x fpm	6,600	
Mechanical Properties			
Modulus of elasticity	psi	507,500	DIN 53457
Tensile strength at 68°F	psi	18,125	DIN 53452
Compressive strength	psi	8,845	
Permissible static surface pressure (68°F)	psi	8,700	
Shore D-hardness		77	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	194	
Max. short-term application temperature	°F	356	
Min. application temperature	°F	-40	
Thermal conductivity	W/m x K	0.24	ASTM C 177
Coefficient of thermal expansion (at 73°F)	$K^{-1} \times 10^{-5}$	9	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{13}$	DIN IEC 93
Surface resistance	Ω	$> 10^{12}$	DIN 53482

Structure of the Part Number:

L S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust Washer)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material



Graph 7.1: Permissible p x v - values for iglide® L280 running dry against a steel shaft, at 68°F

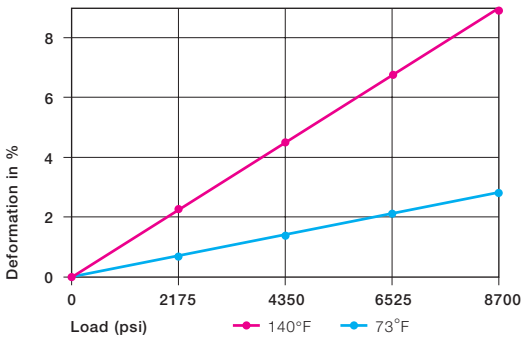
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High wear resistance, even in harsh environments or in connection with rough shafts, characterizes the iglide® L280 material. Of all iglide® materials, this material is the most resistant to these types of external effects.

Compressive Strength

iglide® L280 exhibits a very high compression resistance in spite of its high elasticity. Graph 7.2 shows the elastic deformation of iglide® L280 under radial loading. At the maximum permissible load of 8700 psi, the deformation at room temperature is less than 3%.
Below the maximum permissible pressure load of 8700 psi, the deformation at room temperature is virtually zero.

➤ Compressive Strength, Page 1.3



Graph 7.2: Deformation under load and temperature

Permissible Surface Speeds

Even at higher surface speeds, the coefficients of friction for iglide® L280 do not increase. Therefore, compared to other materials, higher surface speeds can be obtained, for example, up to 295 fpm rotating and up to 984 fpm linear.
The bearing wear remains low when used for long periods at high speeds, due to exceptional wear resistance.
Especially high speeds can be obtained with iglide® L280 bearings on hardened shafts with recommended surface finish.

➤ Surface Speed, Page 1.5
➤ p x v Value, Page 1.6

fpm	Rotating	Oscillating	Linear
Continuous	196	137	787
Short-term	492	354	1181

Table 7.2: Maximum surface speeds

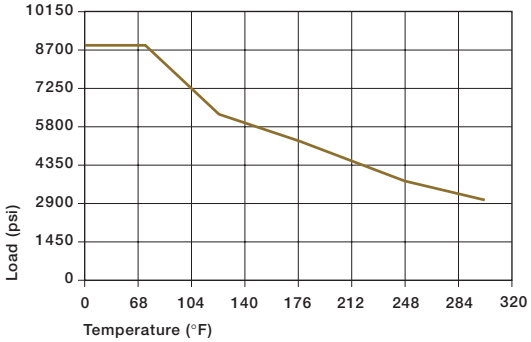
Temperatures

iglide® L280 plain bearings show minimal reaction to changing external effects. This also applies to temperatures. iglide® L280 bearings maintain their exceptional wear resistance even up to the highest permissible application temperatures and at the same time resist becoming brittle at low temperatures.
On the other hand, the mechanical properties at high temperatures limit the application of iglide® L280. Even at temperatures of 176°F, relaxation of the bearing can occur. In this process, the pressfit forces of the bearing decrease to a large extent due to temperature. During re-cooling and the resulting contraction caused by it, migration of the bearing can occur.
In order to avoid this situation, iglide® L280 plain bearings always need to be axially secured in applications at 176°F and above.

➤ Application Temperatures, Page 1.7

iglide® L280	Application Temperature
Minimum	-40 °F
Max. long-term	+194 °F
Mechanical (ges.)	+266 °F
Max. short-term	+356 °F

Table 7.3: Temperature limits for iglide® L280



Graph 7.3: Recommended maximum permissible static surface pressure of iglide® L280 as a result of temperature

iglide® L280 - Plain Bearings

Installation Tolerances

iglide® L280 plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing methods, Page 1.15

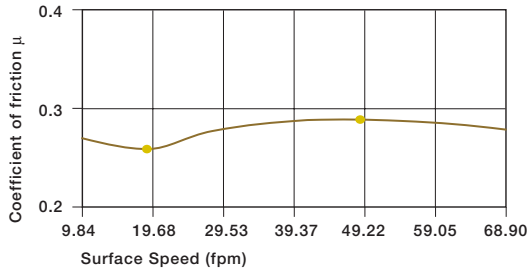
Friction and Wear

The coefficients of friction for iglide® L280 decrease with increasing load. In the dry run against steel (Cold Rolled Steel), friction is reduced when load ranges from p = 72.5 to 507.5 psi by approximately 25%.
In contrast to other iglide® materials, the coefficient of friction of iglide® L280 remains consistently low at higher rotational speeds.
Friction and wear are also, dependent, to a large degree on the shafting partner. Shafts that are too smooth increase both the coefficient of friction and the wear of the bearing. Smooth shafts have the danger of stick-slip. Squeaking as an effect of stick-slip is mostly the result of shafts that are too smooth.
For the lowest coefficients of friction when using iglide® L280 plain bearings, the surfaces should not be too smooth. Shaft roughnesses of 16-20 rms have proven to be the best (see Graph 7.6). Tests with iglide® L280 have shown the wear resistance at this roughness is very high, while the friction assumes its lowest value.

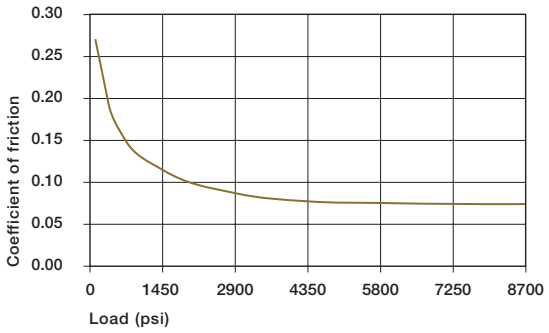
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9

iglide® L280	Dry	Grease	Oil	Water
Coefficient of Friction μ	0.08 - 0.23	0.09	0.04	0.04

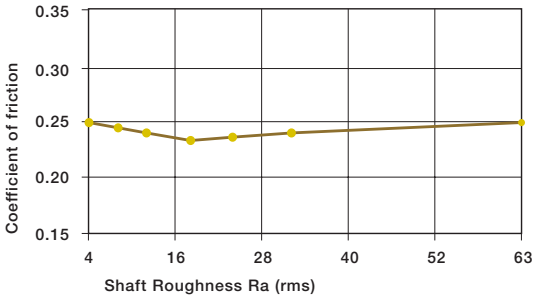
Table 7.4: Coefficient of friction for iglide® L280 against steel (Ra = 40 rms, 50 HRC)



Graph 7.4: Coefficient of friction of iglide® L280 as a result of the surface speed, p = 108 psi, shaft made of Cold Rolled Steel



Graph 7.5: Coefficient of friction of iglide® L280 as a result of the load, v = 1.97 fpm



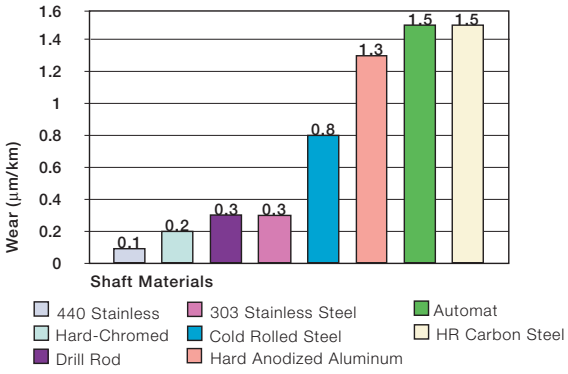
Graph 7.6: Coefficients of friction for iglide® L280 as a result of the shaft surface (shaft Cold Rolled Steel)

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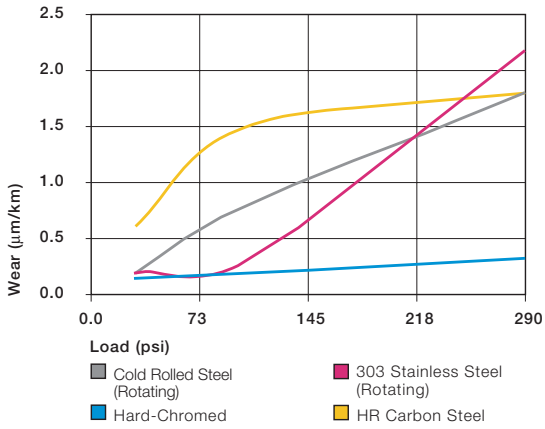
Shaft Materials

Graph 7.7 and 7.8 show results of testing different shaft materials with plain bearings made of iglide® L280.
For rotational applications with low loads, the wear varies according to the shaft material. iglide® L280 provides very good to acceptable coefficients of friction for all shafts that were tested. iglide® L280 likes hard shafts. For small radial loads with hard-chromed shafts and/or shafts made of corrosion-resistant steel, iglide® L280 is the best suited iglide® material.
The soft shaft materials HR carbon steel and free-cutting steel are not as well suited for plain bearings made of iglide® L280.
Hardened shafts are preferred for applications for higher loads. Graph 7.8 clearly shows the difference in materials for increasing loads. A similar picture emerges for oscillating applications. First, for low loads, the wear for the oscillating movement lies below that of a rotation at the same load. For higher loads, the situation changes.
If the shaft material you plan to use is not contained in this listing, please contact us.

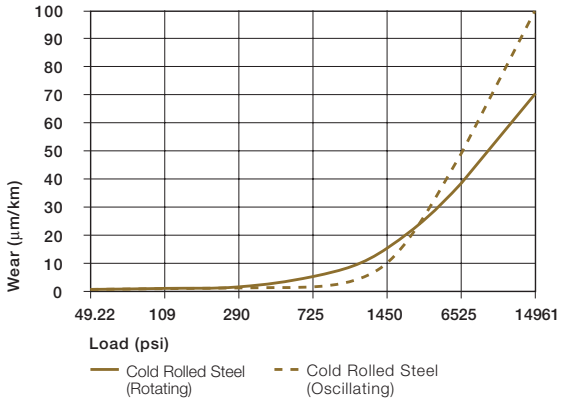
➤ Shaft Materials, Page 1.11



Graph 7.7: Wear of iglide® L280 with different shaft materials (p = 108 psi)



Graph 7.8: Wear with different shaft materials in rotational operation, as a result of the load



Graph 7.9: Wear for oscillating and rotating applications with shaft material Cold Rolled Steel, as a result of the load

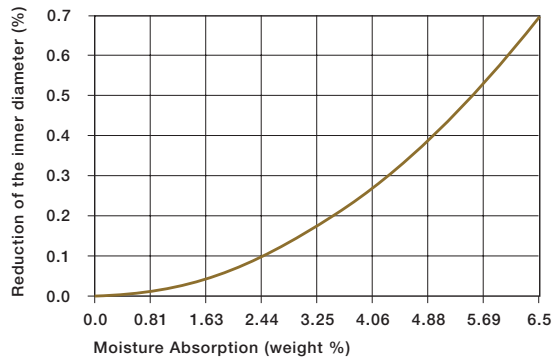
Chemical Resistance

iglide® L280 plain bearings have a good resistance to chemicals. They are resistant to most lubricants. iglide® L280 is not attacked by most weak organic and inorganic acids.
The moisture absorption of iglide® L280 plain bearings is approximately 1.3% weight in the standard atmosphere. The maximum water absorption is 6.5%. This must be taken into account along with other environmental influences.

➤ Chemical Table, Page 1.16

Medium	Resistance
Alcohols	Resistant
Chlorinated hydrocarbons	Resistant
Esters	Not Resistant
Greases, oils	Resistant
Ketone	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Resistant
Strong lyes	Conditionally Resistant

Table 7.5: Chemical resistance of iglide® L280



Graph 7.10: Effect of moisture absorption on iglide® L280 plain bearings

Radiation Resistance

Plain bearings made from iglide® L280 are resistant to radiation up to an intensity of 3 x 10^2 Gy.

UV-Resistance

iglide® L280 plain bearings are permanently resistant to UV radiation. A slight change in color (dark coloration) due to UV radiation and other weathering effects will not significantly influence the mechanical, electrical or thermal properties.

Vacuum

In a vacuum, iglide® L280 plain bearings will outgas any moisture they may have absorbed. The use of iglide® L280 in a vacuum environment is only possible to a limited extent.

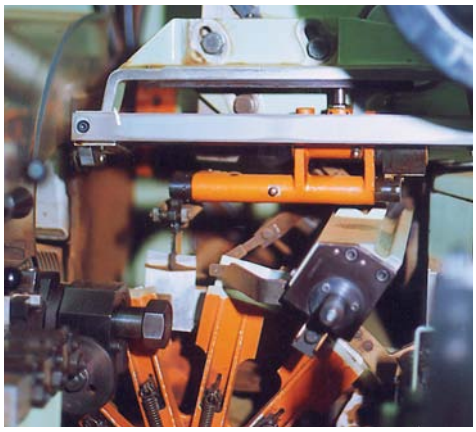
Electrical Properties

iglide® L280 plain bearings are electrically insulating.

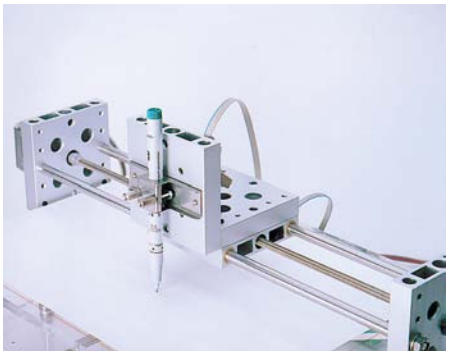
iglide® L280	
Specific volume resistance	> 10^{13} Ωcm
Surface Resistance	> 10^{12} Ω

Table 7.6: Electrical properties of iglide® L280

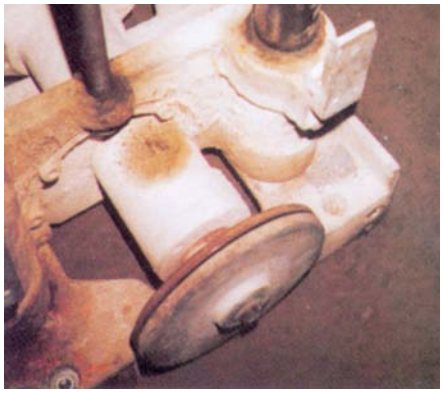
Application Examples



Picture 7.1: By converting to iglide® L280, the life of the bearing on this tea bag packaging machine was increased five times



Picture 7.2: Low coefficients of friction allow for small driving forces



Picture 7.3: iglide® L280, the highest wear resistance even in those places where abrasive media contact the bearing

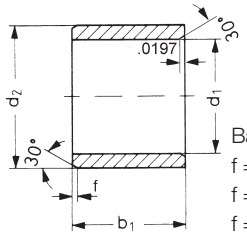


Picture 7.4: A quote from the test evaluation: “The plain bearing with the L280 material showed no wear at all”.

iglide® L280
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® L280 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

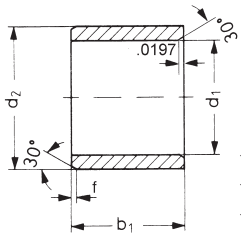
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
LSI-0203-03	1/8	3/16	3/16	.1269	.1251	.1878	.1873	.1243	.1236
LSI-0203-04	1/8	3/16	1/4	.1269	.1251	.1878	.1873	.1243	.1236
LSI-0203-06	1/8	3/16	3/8	.1269	.1251	.1878	.1873	.1243	.1236
LSI-0304-04	3/16	1/4	1/4	.1892	.1873	.2503	.2497	.1865	.1858
LSI-0304-06	3/16	1/4	3/8	.1892	.1873	.2503	.2497	.1865	.1858
LSI-0304-08	3/16	1/4	1/2	.1892	.1873	.2503	.2497	.1865	.1858
LSI-0405-03	1/4	5/16	3/16	.2521	.2498	.3128	.3122	.2490	.2481
LSI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
LSI-0405-05	1/4	5/16	5/16	.2521	.2498	.3128	.3122	.2490	.2481
LSI-0405-06	1/4	5/16	3/8	.2521	.2498	.3128	.3122	.2490	.2481
LSI-0405-08	1/4	5/16	1/2	.2521	.2498	.3128	.3122	.2490	.2481
LSI-0405-11	1/4	5/16	11/16	.2521	.2498	.3128	.3122	.2490	.2481
LSI-0506-04	5/16	3/8	1/4	.3148	.3125	.3753	.3747	.3115	.3106
LSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
LSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
LSI-0506-12	5/16	3/8	3/4	.3148	.3125	.3753	.3747	.3115	.3106
LSI-0607-04	3/8	15/32	1/4	.3773	.3750	.4691	.4684	.3740	.3731
LSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
LSI-0607-07	3/8	15/32	7/16	.3773	.3750	.4691	.4684	.3740	.3731
LSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
LSI-0607-12	3/8	15/32	3/4	.3773	.3750	.4691	.4684	.3740	.3731
LSI-0608-12	3/8	1/2	3/4	.3783	.3760	.5007	.5000	.3750	.3741
LSI-0708-08	7/16	17/32	1/2	.4406	.4379	.5316	.5309	.4365	.4355
LSI-0809-03	1/2	19/32	3/16	.5030	.5003	.5941	.5934	.4990	.4980
LSI-0809-04	1/2	19/32	1/4	.5030	.5003	.5941	.5934	.4990	.4980
LSI-0809-06	1/2	19/32	3/8	.5030	.5003	.5941	.5934	.4990	.4980
LSI-0809-08	1/2	19/32	1/2	.5030	.5003	.5941	.5934	.4990	.4980
LSI-0809-10	1/2	19/32	5/8	.5030	.5003	.5941	.5934	.4990	.4980
LSI-0809-12	1/2	19/32	3/4	.5030	.5003	.5941	.5934	.4990	.4980
LSI-0809-16	1/2	19/32	1	.5030	.5003	.5941	.5934	.4990	.4980
LSI-0810-08	1/2	5/8	1/2	.5040	.5013	.6260	.6250	.5000	.4990
LSI-0810-10	1/2	5/8	5/8	.5040	.5013	.6260	.6250	.5000	.4990
LSI-0810-12	1/2	5/8	3/4	.5040	.5013	.6260	.6250	.5000	.4990
LSI-0810-16	1/2	5/8	1	.5040	.5013	.6260	.6250	.5000	.4990
LSI-0910-08	9/16	21/32	1/2	.5655	.5627	.6570	.6563	.5615	.5605
LSI-0910-12	9/16	21/32	3/4	.5655	.5627	.6570	.6563	.5615	.5605
LSI-1011-04	5/8	23/32	1/4	.6280	.6253	.7192	.7184	.6240	.6230
LSI-1011-06	5/8	23/32	3/8	.6280	.6253	.7192	.7184	.6240	.6230
LSI-1011-08	5/8	23/32	1/2	.6280	.6253	.7192	.7184	.6240	.6230
LSI-1011-10	5/8	23/32	5/8	.6280	.6253	.7192	.7184	.6240	.6230
LSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230

iglide® L280 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

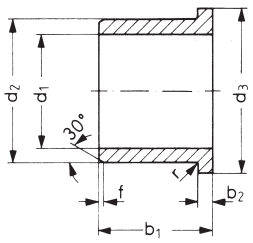
Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
LSI-1011-16	5/8	23/32	1	.6280	.6253	.7192	.7184	.6240	.6230
LSI-1112-12	11/16	25/32	3/4	.6906	.6879	.7817	.7809	.6865	.6855
LSI-1214-08	3/4	7/8	1/2	.7541	.7507	.8755	.8747	.7491	.7479
LSI-1214-12	3/4	7/8	3/4	.7541	.7507	.8755	.8747	.7491	.7479
LSI-1214-16	3/4	7/8	1	.7541	.7507	.8755	.8747	.7491	.7479
LSI-1214-24	3/4	7/8	1 1/2	.7541	.7507	.8755	.8747	.7491	.7479
LSI-1416-04	7/8	1	1/4	.8791	.8757	1.0005	.9997	.8741	.8729
LSI-1416-06	7/8	1	3/8	.8791	.8757	1.0005	.9997	.8741	.8729
LSI-1416-08	7/8	1	1/2	.8791	.8757	1.0005	.9997	.8741	.8729
LSI-1416-10	7/8	1	5/8	.8791	.8757	1.0005	.9997	.8741	.8729
LSI-1416-12	7/8	1	3/4	.8791	.8757	1.0005	.9997	.8741	.8729
LSI-1416-16	7/8	1	1	.8791	.8757	1.0005	.9997	.8741	.8729
LSI-1416-24	7/8	1	1 1/2	.8791	.8757	1.0005	.9997	.8741	.8729
LSI-1618-06	1	1 1/8	3/8	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LSI-1618-08	1	1 1/8	1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LSI-1618-12	1	1 1/8	3/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LSI-1618-20	1	1 1/8	1 1/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LSI-1618-22	1	1 1/8	1 3/8	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LSI-1618-24	1	1 1/8	1 1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LSI-1820-12	1 1/8	1 9/32	3/4	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
LSI-2022-14	1 1/4	1 13/32	7/8	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LSI-2022-16	1 1/4	1 13/32	1	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LSI-2022-20	1 1/4	1 13/32	1 1/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LSI-2022-24	1 1/4	1 13/32	1 1/2	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LSI-2224-16	1 3/8	1 17/32	1	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
LSI-2224-24	1 3/8	1 17/32	1 1/2	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
LSI-2426-12	1 1/2	1 21/32	3/4	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
LSI-2426-16	1 1/2	1 21/32	1	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
LSI-2426-24	1 1/2	1 21/32	1 1/2	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
LSI-2426-44	1 1/2	1 21/32	2 3/4	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
LSI-2629-16	1 5/8	1 25/32	1	1.6297	1.6258	1.7818	1.7808	1.6238	1.6222
LSI-2629-20	1 5/8	1 25/32	1 1/4	1.6297	1.6258	1.7818	1.7808	1.6238	1.6222
LSI-2831-16	1 3/4	1 15/16	1	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
LSI-2831-24	1 3/4	1 15/16	1 1/2	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
LSI-2831-32	1 3/4	1 15/16	2	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
LSI-2831-48	1 3/4	1 15/16	3	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
LSI-3235-16	2	2 3/16	1	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
LSI-3235-24	2	2 3/16	1 1/2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
LSI-3235-32	2	2 3/16	2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
LSI-3639-32	2 1/4	2 7/16	2	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® L280 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

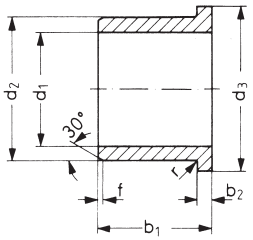
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
LFI-0203-03	1/8	3/16	3/16	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
LFI-0203-04	1/8	3/16	1/4	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
LFI-0203-06	1/8	3/16	3/8	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
LFI-0304-02	3/16	1/4	1/8	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
LFI-0304-04	3/16	1/4	1/4	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
LFI-0304-06	3/16	1/4	3/8	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
LFI-0304-08	3/16	1/4	1/2	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
LFI-0405-04	1/4	5/16	1/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
LFI-0405-05	1/4	5/16	5/16	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
LFI-0405-06	1/4	5/16	3/8	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
LFI-0405-08	1/4	5/16	1/2	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
LFI-0405-12	1/4	5/16	3/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
LFI-0506-04	5/16	3/8	1/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
LFI-0506-06	5/16	3/8	3/8	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
LFI-0506-08	5/16	3/8	1/2	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
LFI-0506-12	5/16	3/8	3/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
LFI-0607-04	3/8	15/32	1/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
LFI-0607-06	3/8	15/32	3/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
LFI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
LFI-0607-12	3/8	15/32	3/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
LFI-0607-14	3/8	15/32	7/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
LFI-0708-08	7/16	17/32	1/2	.750	.046	.4406	.4379	.5316	.5309	.4365	.4355
LFI-0809-04	1/2	19/32	1/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
LFI-0809-06	1/2	19/32	3/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
LFI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
LFI-0809-12	1/2	19/32	3/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
LFI-0809-16	1/2	19/32	1	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
LFI-1011-045	5/8	23/32	9/32	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
LFI-1011-08	5/8	23/32	1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
LFI-1011-12	5/8	23/32	3/4	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
LFI-1011-16	5/8	23/32	1	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
LFI-1011-24	5/8	23/32	1 1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
LFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
LFI-1214-10	3/4	7/8	5/8	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
LFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
LFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
LFI-1214-24	3/4	7/8	1 1/2	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
LFI-1416-04	7/8	1	1/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-1416-075	7/8	1	15/32	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-1416-08	7/8	1	1/2	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-1416-115	7/8	1	23/32	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729

iglide® L280 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

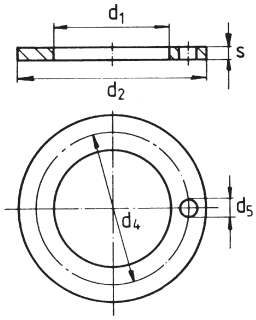
Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
LFI-1416-12	7/8	1	3/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-1416-16	7/8	1	1	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-1416-20	7/8	1	1 1/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-1416-24	7/8	1	1 1/2	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-141618-08	7/8	1	1/2	1.125	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-141618-10	7/8	1	5/8	1.125	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-141620-11	7/8	1	11/16	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
LFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LFI-1618-20	1	1 1/8	1 1/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LFI-1618-24	1	1 1/8	1 1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
LFI-1620-08	1	1 9/32	1/2	1.562	.062	1.0041	1.0007	1.2818	1.2808	.9991	.9979
LFI-1820-08	1 1/8	1 9/32	1/2	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
LFI-1820-12	1 1/8	1 9/32	3/4	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
LFI-1820-24	1 1/8	1 9/32	1 1/2	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
LFI-2022-12	1 1/4	1 13/32	3/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LFI-2022-14	1 1/4	1 13/32	7/8	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LFI-2022-16	1 1/4	1 13/32	1	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LFI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LFI-2022-24	1 1/4	1 13/32	1 1/2	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
LFI-2224-16	1 3/8	1 17/32	1	1.875	.078	1.3798	1.3758	1.5318	1.5308	1.3738	1.3722
LFI-2426-12	1 1/2	1 21/32	3/4	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
LFI-2426-16	1 1/2	1 21/32	1	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
LFI-2426-24	1 1/2	1 21/32	1 1/2	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
LFI-2831-16	1 3/4	1 15/16	1	2.375	.093	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
LFI-2831-24	1 3/4	1 15/16	1 1/2	2.375	.093	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
LFI-2831-32	1 3/4	1 15/16	2	2.375	.093	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
LFI-3235-16	2	2 3/16	1	2.625	.093	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
LFI-3235-24	2	2 3/16	1 1/2	2.625	.093	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969
LFI-3235-32	2	2 3/16	2	2.625	.093	2.0059	2.0012	2.1883	2.1871	1.9981	1.9969

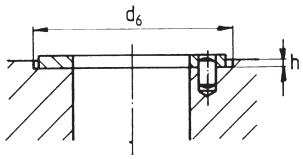
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iglide® L280 - Plain Bearings
Thrust Washer, Inch



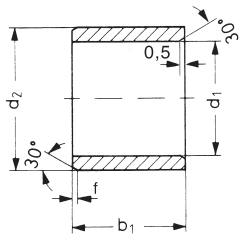




Part Number	d1 +.010	d2 -.010	s -.0020	d4 +-.005	d5 .015 +.005	h +.008	d6 +.005
LTI-0610-01	.375	.625	.040				.375
LTI-0814-01	.500	.875	.0585	.692	.067	.040	.875
LTI-1018-01	.625	1.125	.0585	.880	.099	.040	1.125
LTI-1220-01	.750	1.250	.0585	1.005	.099	.040	1.250
LTI-1424-01	.875	1.500	.0585	1.192	.130	.040	1.500
LTI-1628-01	1.000	1.750	.0585	1.380	.130	.040	1.750
LTI-2034-01	1.250	2.125	.0585	1.692	.161	.040	2.125
LTI-2440-01	1.500	2.500	.0585	2.005	.192	.040	2.500
LTI-2844-01	1.750	2.750	.0585	2.255	.192	.040	2.750
LTI-3248-01	2.000	3.000	.0895	2.505	.192	.070	3.000

iglide® L280 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

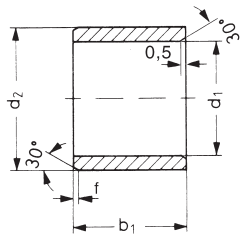
Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
LSM-0203-03	2.0	+0.014 +0.054	3.5	3.0	2.054	2.014	3.508	3.500	2.000	1.975
LSM-0204-03	2.5	+0.014 +0.054	4.0	3.0	2.554	2.514	4.012	4.000	2.500	2.475
LSM-0304-03	3.0	+0.014 +0.054	4.5	3.0	3.054	3.014	4.512	4.500	3.000	2.975
LSM-0304-05	3.0	+0.014 +0.054	4.5	5.0	3.054	3.014	4.512	4.500	3.000	2.975
LSM-0304-06	3.0	+0.014 +0.054	4.5	6.0	3.054	3.014	4.512	4.500	3.000	2.975
LSM-0405-04	4.0	+0.020 +0.068	5.5	4.0	4.068	4.020	5.512	5.500	4.000	3.970
LSM-0405-06	4.0	+0.020 +0.068	5.5	6.0	4.068	4.020	5.512	5.500	4.000	3.970
LSM-0405-08	4.0	+0.020 +0.068	5.5	8.0	4.068	4.020	5.512	5.500	4.000	3.970
LSM-0405-10	4.0	+0.020 +0.068	5.5	10.0	4.068	4.020	5.512	5.500	4.000	3.970
LSM-0507-05	5.0	+0.020 +0.068	7.0	5.0	5.068	5.020	7.015	7.000	5.000	4.970
LSM-0507-08	5.0	+0.020 +0.068	7.0	8.0	5.068	5.020	7.015	7.000	5.000	4.970
LSM-0507-10	5.0	+0.020 +0.068	7.0	10.0	5.068	5.020	7.015	7.000	5.000	4.970
LSM-0607-14	6.0	+0.010 +0.040	7.0	14.0	6.040	6.010	7.015	7.000	6.000	5.970
LSM-0608-06	6.0	+0.020 +0.068	8.0	6.0	6.068	6.020	8.015	8.000	6.000	5.970
LSM-0608-08	6.0	+0.020 +0.068	8.0	8.0	6.068	6.020	8.015	8.000	6.000	5.970
LSM-0608-09	6.0	+0.020 +0.068	8.0	9.5	6.068	6.020	8.015	8.000	6.000	5.970
LSM-0608-10	6.0	+0.020 +0.068	8.0	10.0	6.068	6.020	8.015	8.000	6.000	5.970
LSM-0608-11	6.0	+0.020 +0.068	8.0	11.8	6.068	6.020	8.015	8.000	6.000	5.970
LSM-0608-13	6.0	+0.020 +0.068	8.0	13.8	6.068	6.020	8.015	8.000	6.000	5.970
LSM-0709-09	7.0	+0.025 +0.083	9.0	9.0	7.083	7.025	9.015	9.000	7.000	6.964
LSM-0709-12	7.0	+0.025 +0.083	9.0	12.0	7.083	7.025	9.015	9.000	7.000	6.964
LSM-0810-06	8.0	+0.025 +0.083	10.0	6.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-08	8.0	+0.025 +0.083	10.0	8.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-10	8.0	+0.025 +0.083	10.0	10.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-12	8.0	+0.025 +0.083	10.0	12.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-13	8.0	+0.025 +0.083	10.0	13.8	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-15	8.0	+0.025 +0.083	10.0	15.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-16	8.0	+0.025 +0.083	10.0	16.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-20	8.0	+0.025 +0.083	10.0	20.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0810-21	8.0	+0.025 +0.083	10.0	21.0	8.083	8.025	10.015	10.000	8.000	7.964
LSM-0911-06	9.0	+0.025 +0.083	11.0	6.0	9.083	9.025	11.018	11.000	9.000	8.964
LSM-1012-04	10.0	+0.025 +0.083	12.0	4.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-06	10.0	+0.025 +0.083	12.0	6.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-08	10.0	+0.025 +0.083	12.0	8.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-09	10.0	+0.025 +0.083	12.0	9.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-10	10.0	+0.025 +0.083	12.0	10.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-12	10.0	+0.025 +0.083	12.0	12.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-15	10.0	+0.025 +0.083	12.0	15.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-17	10.0	+0.025 +0.083	12.0	17.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-20	10.0	+0.025 +0.083	12.0	20.0	10.083	10.025	12.018	12.000	10.000	9.964
LSM-1012-25.5	10.0	+0.025 +0.083	12.0	25.5	10.083	10.025	12.018	12.000	10.000	9.964

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iglide® L280 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

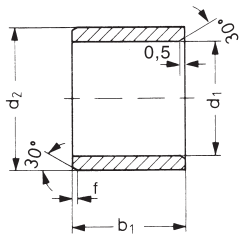
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	after pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
LSM-1113-08	11.0	+0.032 +0.102	13.0	8.0	11.102	11.032	13.018	13.000	11.000	10.964
LSM-1214-04	12.0	+0.032 +0.102	14.0	4.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-05	12.0	+0.032 +0.102	14.0	5.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-06	12.0	+0.032 +0.102	14.0	6.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-08	12.0	+0.032 +0.102	14.0	8.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-10	12.0	+0.032 +0.102	14.0	10.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-12	12.0	+0.032 +0.102	14.0	12.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-15	12.0	+0.032 +0.102	14.0	15.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-20	12.0	+0.032 +0.102	14.0	20.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1214-25	12.0	+0.032 +0.102	14.0	25.0	12.102	12.032	14.018	14.000	12.000	11.957
LSM-1315-07	13.0	+0.032 +0.102	15.0	7.0	13.102	13.032	15.018	15.000	13.000	12.957
LSM-1315-10	13.0	+0.032 +0.102	15.0	10.0	13.102	13.032	15.018	15.000	13.000	12.957
LSM-1315-15	13.0	+0.032 +0.102	15.0	15.0	13.102	13.032	15.018	15.000	13.000	12.957
LSM-1315-20	13.0	+0.032 +0.102	15.0	20.0	13.102	13.032	15.018	15.000	13.000	12.957
LSM-1416-07	14.0	+0.032 +0.102	16.0	7.5	14.102	14.032	16.018	16.000	14.000	13.957
LSM-1416-10	14.0	+0.032 +0.102	16.0	10.0	14.102	14.032	16.018	16.000	14.000	13.957
LSM-1416-15	14.0	+0.032 +0.102	16.0	15.0	14.102	14.032	16.018	16.000	14.000	13.957
LSM-1416-20	14.0	+0.032 +0.102	16.0	20.0	14.102	14.032	16.018	16.000	14.000	13.957
LSM-1416-25	14.0	+0.032 +0.102	16.0	25.0	14.102	14.032	16.018	16.000	14.000	13.957
LSM-1416-33	14.0	+0.032 +0.102	16.0	33.0	14.102	14.032	16.018	16.000	14.000	13.957
LSM-1517-10	15.0	+0.032 +0.102	17.0	10.0	15.102	15.032	17.018	17.000	15.000	14.957
LSM-1517-15	15.0	+0.032 +0.102	17.0	15.0	15.102	15.032	17.018	17.000	15.000	14.957
LSM-1517-20	15.0	+0.032 +0.102	17.0	20.0	15.102	15.032	17.018	17.000	15.000	14.957
LSM-1517-25	15.0	+0.032 +0.102	17.0	25.0	15.102	15.032	17.018	17.000	15.000	14.957
LSM-1618-07	16.0	+0.032 +0.102	18.0	7.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-08	16.0	+0.032 +0.102	18.0	8.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-11	16.0	+0.032 +0.102	18.0	11.5	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-12	16.0	+0.032 +0.102	18.0	12.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-15	16.0	+0.032 +0.102	18.0	15.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-20	16.0	+0.032 +0.102	18.0	20.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-25	16.0	+0.032 +0.102	18.0	25.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-30	16.0	+0.032 +0.102	18.0	30.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-35	16.0	+0.032 +0.102	18.0	35.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-42	16.0	+0.032 +0.102	18.0	42.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1618-45	16.0	+0.032 +0.102	18.0	45.0	16.102	16.032	18.018	18.000	16.000	15.957
LSM-1820-12	18.0	+0.032 +0.102	20.0	12.0	18.102	18.032	20.021	20.000	18.000	17.957
LSM-1820-15	18.0	+0.032 +0.102	20.0	15.0	18.102	18.032	20.021	20.000	18.000	17.957
LSM-1820-20	18.0	+0.032 +0.102	20.0	20.0	18.102	18.032	20.021	20.000	18.000	17.957
LSM-1820-25	18.0	+0.032 +0.102	20.0	25.0	18.102	18.032	20.021	20.000	18.000	17.957
LSM-1820-33	18.0	+0.032 +0.102	20.0	33.0	18.102	18.032	20.021	20.000	18.000	17.957
LSM-1820-35	18.0	+0.032 +0.102	20.0	35.0	18.102	18.032	20.021	20.000	18.000	17.957

iglide® L280 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

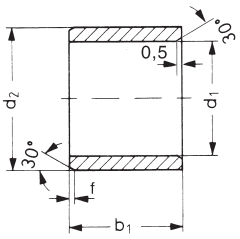
Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
LSM-1922-28	19.0	+0.040 +0.124	22.0	28.0	19.124	19.040	22.021	22.000	19.000	18.957
LSM-2022-11	20.0	+0.040 +0.124	22.0	11.5	20.124	20.040	22.021	22.000	20.000	19.948
LSM-2022-12	20.0	+0.040 +0.124	22.0	12.0	20.124	20.040	22.021	22.000	20.000	19.948
LSM-2022-15	20.0	+0.040 +0.124	22.0	15.0	20.124	20.040	22.021	22.000	20.000	19.948
LSM-2022-20	20.0	+0.040 +0.124	22.0	20.0	20.124	20.040	22.021	22.000	20.000	19.948
LSM-2022-30	20.0	+0.040 +0.124	22.0	30.0	20.124	20.040	22.021	22.000	20.000	19.948
LSM-2023-15	20.0	+0.040 +0.124	23.0	15.0	20.124	20.040	23.021	22.000	20.000	19.948
LSM-2023-20	20.0	+0.040 +0.124	23.0	20.0	20.124	20.040	23.021	22.000	20.000	19.948
LSM-2023-23	20.0	+0.040 +0.124	23.0	23.0	20.124	20.040	23.021	22.000	20.000	19.948
LSM-2023-25	20.0	+0.040 +0.124	23.0	25.0	20.124	20.040	23.021	22.000	20.000	19.948
LSM-2023-30	20.0	+0.040 +0.124	23.0	30.0	20.124	20.040	23.021	22.000	20.000	19.948
LSM-2224-15	22.0	+0.040 +0.124	24.0	15.0	22.124	22.040	24.021	24.000	22.000	21.948
LSM-2224-20	22.0	+0.040 +0.124	24.0	20.0	22.124	22.040	24.021	24.000	22.000	21.948
LSM-2224-30	22.0	+0.040 +0.124	24.0	30.0	22.124	22.040	24.021	24.000	22.000	21.948
LSM-2224-35	22.0	+0.040 +0.124	24.0	35.0	22.124	22.040	24.021	24.000	22.000	21.948
LSM-2225-15	22.0	+0.040 +0.124	25.0	15.0	22.124	22.040	25.021	24.000	22.000	21.948
LSM-2225-20	22.0	+0.040 +0.124	25.0	20.0	22.124	22.040	25.021	24.000	22.000	21.948
LSM-2225-25	22.0	+0.040 +0.124	25.0	25.0	22.124	22.040	25.021	24.000	22.000	21.948
LSM-2225-30	22.0	+0.040 +0.124	25.0	30.0	22.124	22.040	25.021	24.000	22.000	21.948
LSM-2427-15	24.0	+0.040 +0.124	27.0	15.0	24.124	24.040	27.021	27.000	24.000	23.948
LSM-2427-20	24.0	+0.040 +0.124	27.0	20.0	24.124	24.040	27.021	27.000	24.000	23.948
LSM-2427-25	24.0	+0.040 +0.124	27.0	25.0	24.124	24.040	27.021	27.000	24.000	23.948
LSM-2427-30	24.0	+0.040 +0.124	27.0	30.0	24.124	24.040	27.021	27.000	24.000	23.948
LSM-2528-12	25.0	+0.040 +0.124	28.0	12.0	25.124	25.040	28.021	28.000	25.000	24.948
LSM-2528-14	25.0	+0.040 +0.124	28.0	14.0	25.124	25.040	28.021	28.000	25.000	24.948
LSM-2528-15	25.0	+0.040 +0.124	28.0	15.0	25.124	25.040	28.021	28.000	25.000	24.948
LSM-2528-20	25.0	+0.040 +0.124	28.0	20.0	25.124	25.040	28.021	28.000	25.000	24.948
LSM-2528-25	25.0	+0.040 +0.124	28.0	25.0	25.124	25.040	28.021	28.000	25.000	24.948
LSM-2528-30	25.0	+0.040 +0.124	28.0	30.0	25.124	25.040	28.021	28.000	25.000	24.948
LSM-2630-16	26.0	+0.040 +0.124	30.0	16.0	26.124	26.040	30.025	30.000	26.000	25.948
LSM-2630-25	26.0	+0.040 +0.124	30.0	25.0	26.124	26.040	30.025	30.000	26.000	25.948
LSM-2830-10	28.0	+0.040 +0.124	30.0	10.0	28.124	28.040	30.025	30.000	28.000	27.948
LSM-2831-10	28.0	+0.040 +0.124	31.0	10.0	28.124	28.040	31.025	31.000	28.000	27.948
LSM-2832-20	28.0	+0.040 +0.124	32.0	20.0	28.124	28.040	32.025	32.000	28.000	27.948
LSM-2832-25	28.0	+0.040 +0.124	32.0	25.0	28.124	28.040	32.025	32.000	28.000	27.948
LSM-2832-30	28.0	+0.040 +0.124	32.0	30.0	28.124	28.040	32.025	32.000	28.000	27.948
LSM-3034-16	30.0	+0.040 +0.124	34.0	16.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3034-20	30.0	+0.040 +0.124	34.0	20.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3034-24	30.0	+0.040 +0.124	34.0	24.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3034-25	30.0	+0.040 +0.124	34.0	25.0	30.124	30.040	34.025	34.000	30.000	29.948

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® L280 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

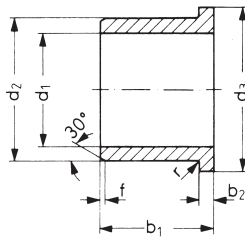
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	after pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
LSM-3034-30	30.0	+0.040 +0.124	34.0	30.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3034-36	30.0	+0.040 +0.124	34.0	36.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3034-38	30.0	+0.040 +0.124	34.0	38.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3034-40	30.0	+0.040 +0.124	34.0	40.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3034-47	30.0	+0.040 +0.124	34.0	47.0	30.124	30.040	34.025	34.000	30.000	29.948
LSM-3236-20	32.0	+0.050 +0.150	36.0	20.0	32.150	32.050	36.025	36.000	32.000	31.938
LSM-3236-25	32.0	+0.050 +0.150	36.0	25.0	32.150	32.050	36.025	36.000	32.000	31.938
LSM-3236-30	32.0	+0.050 +0.150	36.0	30.0	32.150	32.050	36.025	36.000	32.000	31.938
LSM-3236-40	32.0	+0.050 +0.150	36.0	40.0	32.150	32.050	36.025	36.000	32.000	31.938
LSM-3539-20	35.0	+0.050 +0.150	39.0	20.0	35.150	35.050	39.025	39.000	35.000	34.938
LSM-3539-30	35.0	+0.050 +0.150	39.0	30.0	35.150	35.050	39.025	39.000	35.000	34.938
LSM-3539-40	35.0	+0.050 +0.150	39.0	40.0	35.150	35.050	39.025	39.000	35.000	34.938
LSM-3539-50	35.0	+0.050 +0.150	39.0	50.0	35.150	35.050	39.025	39.000	35.000	34.938
LSM-4044-20	40.0	+0.050 +0.150	44.0	20.0	40.150	40.050	44.025	44.000	40.000	39.938
LSM-4044-30	40.0	+0.050 +0.150	44.0	30.0	40.150	40.050	44.025	44.000	40.000	39.938
LSM-4044-40	40.0	+0.050 +0.150	44.0	40.0	40.150	40.050	44.025	44.000	40.000	39.938
LSM-4044-50	40.0	+0.050 +0.150	44.0	50.0	40.150	40.050	44.025	44.000	40.000	39.938
LSM-4550-30	45.0	+0.050 +0.150	50.0	30.0	45.150	45.050	50.025	50.000	45.000	44.938
LSM-4550-50	45.0	+0.050 +0.150	50.0	50.0	45.150	45.050	50.025	50.000	45.000	44.938
LSM-5055-20	50.0	+0.050 +0.150	55.0	20.0	50.150	50.050	55.030	55.000	50.000	49.938
LSM-5055-30	50.0	+0.050 +0.150	55.0	30.0	50.150	50.050	55.030	55.000	50.000	49.938
LSM-5055-40	50.0	+0.050 +0.150	55.0	40.0	50.150	50.050	55.030	55.000	50.000	49.938
LSM-5055-50	50.0	+0.050 +0.150	55.0	50.0	50.150	50.050	55.030	55.000	50.000	49.938
LSM-5560-40	55.0	+0.060 +0.180	60.0	40.0	55.160	55.060	60.030	60.000	55.000	54.926
LSM-5560-60	55.0	+0.060 +0.180	60.0	60.0	55.160	55.060	60.030	60.000	55.000	54.926
LSM-6065-30	60.0	+0.060 +0.180	65.0	30.0	60.180	60.060	65.030	65.000	60.000	59.926
LSM-6065-60	60.0	+0.060 +0.180	65.0	60.0	60.180	60.060	65.030	65.000	60.000	59.926
LSM-6570-60	65.0	+0.060 +0.180	70.0	60.0	65.180	65.060	70.030	70.000	65.000	64.926
LSM-7075-60	70.0	+0.060 +0.180	75.0	60.0	70.180	70.060	75.030	75.000	70.000	69.926
LSM-7580-100	75.0	+0.060 +0.180	80.0	100.0	75.180	75.060	80.030	80.000	75.000	74.926
LSM-8085-100	80.0	+0.060 +0.180	85.0	100.0	80.180	80.060	85.030	85.000	80.000	79.926
LSM-9095-100	90.0	+0.072 +0.212	95.0	100.0	90.212	90.072	95.035	95.000	90.000	89.913
LSM-100105-100	100.0	+0.072 +0.212	105.0	100.0	100.212	100.072	105.035	105.000	100.000	99.913

iglide® L280 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

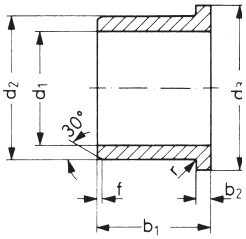
Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
LFM-0304-03	3.0	+0.014 +0.054	4.5	7.5	3.0	0.75	3.054	3.014	4.512	4.500	3.000	2.975
LFM-0304-05	3.0	+0.014 +0.054	4.5	7.5	5.0	0.75	3.054	3.014	4.512	4.500	3.000	2.975
LFM-0405-03	4.0	+0.020 +0.068	5.5	9.5	3.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
LFM-0405-04	4.0	+0.020 +0.068	5.5	9.5	4.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
LFM-0405-06	4.0	+0.020 +0.068	5.5	9.5	6.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
LFM-0506-08	5.0	+0.010 +0.040	6.0	10.0	8.0	0.5	5.040	5.010	6.012	6.000	5.000	4.970
LFM-0507-04	5.0	+0.020 +0.068	7.0	11.0	4.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
LFM-0507-05	5.0	+0.020 +0.068	7.0	11.0	5.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
LFM-0608-04	6.0	+0.020 +0.068	8.0	12.0	4.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
LFM-0608-06	6.0	+0.020 +0.068	8.0	12.0	6.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
LFM-0608-08	6.0	+0.020 +0.068	8.0	12.0	8.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
LFM-0608-10	6.0	+0.020 +0.068	8.0	12.0	10.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
LFM-0608-15	6.0	+0.020 +0.068	8.0	12.0	15.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
LFM-0709-12	7.0	+0.025 +0.083	9.0	15.0	12.0	1.0	7.083	7.025	9.015	9.000	7.000	6.964
LFM-0810-02	8.0	+0.025 +0.083	10.0	15.0	2.7	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-0810-05	8.0	+0.025 +0.083	10.0	15.0	5.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-0810-07	8.0	+0.025 +0.083	10.0	15.0	7.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-0810-09	8.0	+0.025 +0.083	10.0	15.0	9.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-0810-10	8.0	+0.025 +0.083	10.0	15.0	10.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-0810-23	8.0	+0.025 +0.083	10.0	15.0	23.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-0810-30	8.0	+0.025 +0.083	10.0	15.0	30.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-081015-05	8.0	+0.025 +0.083	10.0	15.0	5.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
LFM-1012-04	10.0	+0.025 +0.083	12.0	18.0	4.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-05	10.0	+0.025 +0.083	12.0	18.0	5.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-06	10.0	+0.025 +0.083	12.0	18.0	6.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-07	10.0	+0.025 +0.083	12.0	18.0	7.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-09	10.0	+0.025 +0.083	12.0	18.0	9.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-10	10.0	+0.025 +0.083	12.0	18.0	10.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-12	10.0	+0.025 +0.083	12.0	18.0	12.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-15	10.0	+0.025 +0.083	12.0	18.0	15.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1012-17	10.0	+0.025 +0.083	12.0	18.0	17.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
LFM-1214-04	12.0	+0.032 +0.102	14.0	20.0	4.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-06	12.0	+0.032 +0.102	14.0	20.0	6.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-07	12.0	+0.032 +0.102	14.0	20.0	7.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-09	12.0	+0.032 +0.102	14.0	20.0	9.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-10	12.0	+0.032 +0.102	14.0	20.0	10.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-11	12.0	+0.032 +0.102	14.0	20.0	11.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-12	12.0	+0.032 +0.102	14.0	20.0	12.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-15	12.0	+0.032 +0.102	14.0	20.0	15.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957

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iglide® L280 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

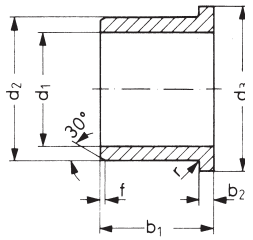
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance After Pressfit in Ø H7	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
				d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
LFM-1214-17	12.0	+0.032 +0.102	14.0	20.0	17.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1214-20	12.0	+0.032 +0.102	14.0	20.0	20.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
LFM-1315-06	13.0	+0.032 +0.102	15.0	22.0	6.0	1.0	13.102	13.032	15.018	15.000	13.000	12.957
LFM-1416-04	14.0	+0.032 +0.102	16.0	22.0	4.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
LFM-1416-05	14.0	+0.032 +0.102	16.0	22.0	5.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
LFM-1416-08	14.0	+0.032 +0.102	16.0	22.0	8.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
LFM-1416-12	14.0	+0.032 +0.102	16.0	22.0	12.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
LFM-1416-17	14.0	+0.032 +0.102	16.0	22.0	17.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
LFM-1416-29	14.0	+0.032 +0.102	16.0	22.0	29.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
LFM-1517-09	15.0	+0.032 +0.102	17.0	23.0	9.0	1.0	15.102	15.022	17.018	17.000	15.000	14.957
LFM-1517-12	15.0	+0.032 +0.102	17.0	23.0	12.0	1.0	15.102	15.022	17.018	17.000	15.000	14.957
LFM-1517-17	15.0	+0.032 +0.102	17.0	23.0	17.0	1.0	15.102	15.022	17.018	17.000	15.000	14.957
LFM-1517-20	15.0	+0.032 +0.102	17.0	23.0	20.0	1.0	15.102	15.022	17.018	17.000	15.000	14.957
LFM-1618-09	16.0	+0.032 +0.102	18.0	24.0	9.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
LFM-1618-12	16.0	+0.032 +0.102	18.0	24.0	12.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
LFM-1618-17	16.0	+0.032 +0.102	18.0	24.0	17.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
LFM-1719-12	17.0	+0.032 +0.102	19.0	25.0	12.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
LFM-1719-18	17.0	+0.032 +0.102	19.0	25.0	18.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
LFM-1719-25	17.0	+0.032 +0.102	19.0	25.0	25.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
LFM-1820-06	18.0	+0.032 +0.102	20.0	26.0	6.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
LFM-1820-12	18.0	+0.032 +0.102	20.0	26.0	12.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
LFM-1820-17	18.0	+0.032 +0.102	20.0	26.0	17.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
LFM-1820-22	18.0	+0.032 +0.102	20.0	26.0	22.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
LFM-2023-11	20.0	+0.040 +0.124	23.0	23.0	11.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
LFM-2023-14	20.0	+0.040 +0.124	23.0	30.0	14.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
LFM-2023-16	20.0	+0.040 +0.124	23.0	30.0	16.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
LFM-2023-21	20.0	+0.040 +0.124	23.0	30.0	21.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
LFM-2427-10	24.0	+0.040 +0.124	27.0	32.0	10.0	1.5	24.124	24.040	27.021	27.000	24.000	23.948
LFM-2528-11	25.0	+0.040 +0.124	28.0	35.0	11.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
LFM-2528-16	25.0	+0.040 +0.124	28.0	35.0	16.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
LFM-2528-21	25.0	+0.040 +0.124	28.0	35.0	21.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
LFM-2528-30	25.0	+0.040 +0.124	28.0	35.0	30.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
LFM-252831-13	25.0	+0.040 +0.124	28.0	31.0	13.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
LFM-2830-36	28.0	+0.040 +0.124	30.0	35.0	36.0	1.0	28.124	28.040	30.025	30.000	28.000	27.948
LFM-3034-10	30.0	+0.040 +0.124	34.0	42.0	10.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
LFM-3034-16	30.0	+0.040 +0.124	34.0	42.0	16.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
LFM-3034-26	30.0	+0.040 +0.124	34.0	42.0	26.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
LFM-3034-37	30.0	+0.040 +0.124	34.0	42.0	37.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
LFM-3236-16	32.0	+0.050 +0.150	36.0	40.0	16.0	2.0	32.150	32.050	36.025	36.000	32.000	31.938
LFM-3236-26	32.0	+0.050 +0.150	36.0	40.0	26.0	2.0	32.150	32.050	36.025	36.000	32.000	31.938
LFM-3539-09	35.0	+0.050 +0.150	39.0	47.0	9.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938

iglide® L280 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

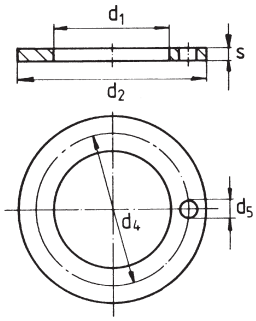
Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
LFM-3539-16	35.0	+0.050 +0.150	39.0	47.0	16.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
LFM-3539-26	35.0	+0.050 +0.150	39.0	47.0	26.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
LFM-353950-35	35.0	+0.050 +0.150	39.0	50.0	35.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
LFM-3842-22	38.0	+0.050 +0.150	42.0	50.0	22.0	2.0	38.150	38.050	42.025	42.000	38.000	37.938
LFM-4044-30	40.0	+0.050 +0.150	44.0	52.0	30.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
LFM-4044-40	40.0	+0.050 +0.150	44.0	52.0	40.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
LFM-4550-50	45.0	+0.050 +0.150	50.0	58.0	50.0	2.0	45.150	45.050	50.030	50.000	45.000	44.938
LFM-5055-40	50.0	+0.050 +0.150	55.0	63.0	40.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
LFM-5055-50	50.0	+0.050 +0.150	55.0	63.0	50.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
LFM-5560-60	55.0	+0.060 +0.180	60.0	68.0	60.0	2.0	55.180	55.060	60.030	60.000	55.000	54.928
LFM-5762-40	57.0	+0.060 +0.180	62.0	67.0	40.0	2.0	57.180	57.060	60.030	60.000	55.000	54.928
LFM-6065-60	60.0	+0.060 +0.180	65.0	73.0	60.0	2.0	60.180	60.060	65.030	65.000	60.000	59.928
LFM-6570-60	65.0	+0.060 +0.180	70.0	78.0	60.0	2.0	65.180	65.060	70.030	70.000	65.000	64.928
LFM-7075-100	70.0	+0.060 +0.180	75.0	83.0	100.0	2.0	70.180	70.060	75.030	75.000	70.000	69.928
LFM-7580-100	75.0	+0.060 +0.180	80.0	88.0	100.0	2.0	75.180	75.060	80.030	80.000	75.000	74.928
LFM-8085-100	80.0	+0.060 +0.180	85.0	93.0	100.0	2.5	80.180	80.060	85.035	85.000	80.000	79.928
LFM-9095-100	90.0	+0.072 +0.212	95.0	103.0	100.0	2.5	90.212	90.072	95.035	95.000	90.000	94.912
LFM-100105-100	100.0	+0.072 +0.212	105.0	113.0	100.0	2.5	100.212	100.072	105.035	105.000	100.000	99.912
LFM-120125-100	120.0	+0.072 +0.212	125.0	133.0	100.0	2.5	120.212	120.072	125.035	125.000	120.000	121.912

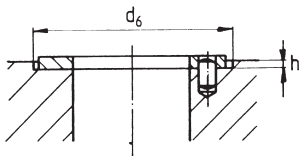
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iglide® L280 - Plain Bearings
Thrust Washer, MM







Part Number	d1 +0.25	d2 -0.25	s -0.05	d4 -0.12 +0.12	d5 +0.375 +0.125	h +0.2 -0.2	d6 +0.12
LTM-0509-006	5.0	9.5	0.6	*	*	.3	9.5
LTM-0620-015	6.0	20.0	1.5	13.0	1.5	1.0	20.0
LTM-0818-015	8.0	18.0	1.5	13.0	1.5	1.0	18.0
LTM-1018-010	10.0	18.0	1.0	14.0	1.5	.7	18.0
LTM-1018-015	10.0	18.0	1.5	14.0	1.5	.7	18.0
LTM-1224-015	12.0	24.0	1.5	18.0	1.5	1.0	24.0
LTM-1426-015	14.0	26.0	1.5	20.0	2.0	1.0	26.0
LTM-1524-015	15.0	24.0	1.5	19.5	1.5	1.0	24.0
LTM-1630-015	16.0	30.0	1.5	23.0	2.0	1.0	30.0
LTM-1832-015	18.0	32.0	1.5	25.0	2.0	1.0	32.0
LTM-2036-015	20.0	36.0	1.5	28.0	3.0	1.0	36.0
LTM-2238-015	22.0	38.0	1.5	30.0	3.0	1.0	38.0
LTM-2442-015	24.0	42.0	1.5	33.0	3.0	1.0	42.0
LTM-2644-015	26.0	44.0	1.5	35.0	3.0	1.0	44.0
LTM-2848-015	28.0	48.0	1.5	38.0	4.0	1.0	48.0
LTM-3254-015	32.0	54.0	1.5	43.0	4.0	1.0	54.0
LTM-3862-015	38.0	62.0	1.5	50.0	4.0	1.0	62.0
LTM-4266-015	42.0	66.0	1.5	54.0	4.0	1.0	66.0
LTM-4874-020	48.0	74.0	2.0	61.0	4.0	1.5	74.0
LTM-5278-020	52.0	78.0	2.0	65.0	4.0	1.5	78.0
LTM-6290-020	62.0	90.0	2.0	76.0	4.0	1.5	90.0
LTM-82110-020	82.0	110.0	2.0	*	*	1.5	110.0
LTM-102130-020	102.0	130.0	2.0	*	*	1.5	130.0
LTM-120150-020	120.0	150.0	2.0	*	*	1.5	150.0

* Design without bore

iglide® L280 - Linear Plain Bearing

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Fax 1-401-438-7680

Internet: http://www.igus.com
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QuickSpec: www.igus.com/qs/iglide.asp



igus®

iglide® Q – High Strength for High Loads

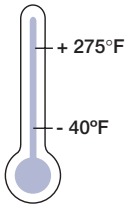
- Excellent wear resistance, especially for high loads
- Suitable for high p x v values
- Maintenance-free, dry running
- Dirt resistant
- Resistant to edge loads



iglide® Q - Plain Bearings

Price Index





3 Styles
More than 152 Dimensions
Inner Diameters
From 1/8 - 3 in. (6 - 80 mm)

When to use the iglide® Q plain bearings:

- When there are very high loads
- For shock and impact loads
- For oscillating applications

When not to use the iglide® Q plain bearings:

- When temperatures are continuously greater than 275°F
  ➤ iglide® T500, Z
- When electrically conductive bearings are needed
  ➤ iglide® F

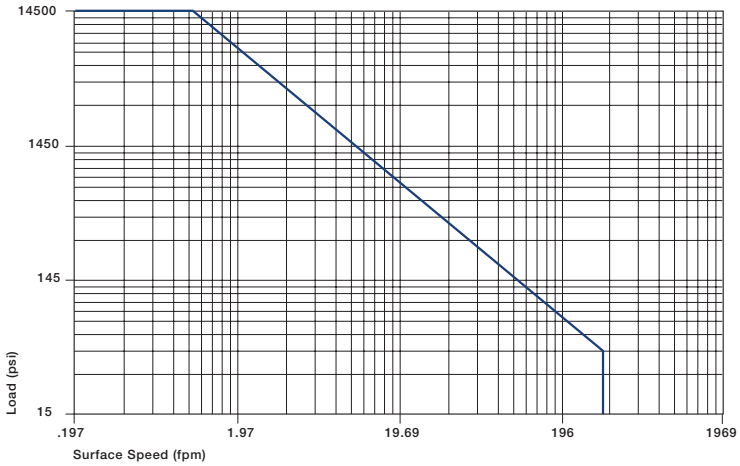
Table 8.1 - Material Table

General Properties	Unit	iglide® Q	Testing Method
Density	g/cm³	1.40	
Color		black	
Max. moisture absorption at 73°F / 50% r.h.	% weight	0.9	DIN 53495
Max. moisture absorption	% weight	4.9	
Coefficient of friction, dynamic against steel	µ	0.05 - 0.15	
p x v value, max. (dry)	psi x fpm	16,000	
Mechanical Properties			
Modulus of elasticity	psi	652,500	DIN 53457
Tensile strength at 68°F	psi	17,400	DIN 53452
Compressive strength	psi	12,905	
Permissible static surface pressure (68°F)	psi	14,500	
Shore D-hardness		83	DIN 53505
Physical and Thermal Properties			
Max., long-term application temperature	°F	275	
Max., short-term application temperature	°F	311	
Min. application temperature	°F	-40	
Thermal conductivity	W/m x K	0.23	ASTM C 177
Coefficient of thermal expansion (at 73°F)	$K^{-1} \times 10^{-5}$	5	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{15}$	DIN IEC 93
Surface resistance	Ω	$> 10^{12}$	DIN 53482

Structure of the Part Number:

Q S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust Washer)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material



Graph 8.1: Permissible p x v value for iglide® Q running dry against a steel shaft, at 68°F

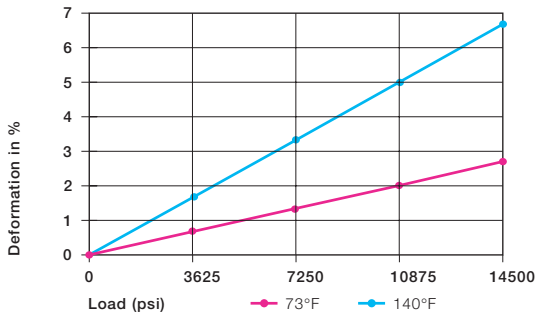
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E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

Iglide® Q plain bearings were developed especially for high load applications. At high loads, iglide® Q ranks among the best iglide® materials for wear resistance. Starting at a radial load of 3625 psi, even plain bearings made of the highly wear-resistant iglide® L280 are outmatched. Special solid lubricants are distributed throughout the iglide® Q material, allowing maintenance-free dry running applications at any load.

Compressive Strength

iglide® Q is a material that is used when high loads over 7250 psi are required. Graph 8.2 shows the elastic deformation of iglide® Q for radial loads. At the maximum permissible static load of 14,500 psi, deformation is less than 3% at room temperature.

➤ Compressive Strength, Page 1.3



Graph 8.2: Deformation under load and temperature

Permissible Surface Speeds

Under extreme radial loads, iglide® Q plain bearings can achieve the highest p x v values for plain bearings running dry. Although iglide® Q plain bearings provide the largest advantages, for high loads and low speeds, high surface speeds are also possible, due to excellent friction values. The values in Table 8.2 show the speeds at which friction can cause temperature to increase to maximum permissible levels.

➤ Surface Speed, Page 1.5
➤ p x v value, Page 1.6

fpm	Rotating	Oscillating	Linear
Continuous	196	137	984
Short-term	393	275	1181

Table 8.2: Maximum surface speeds

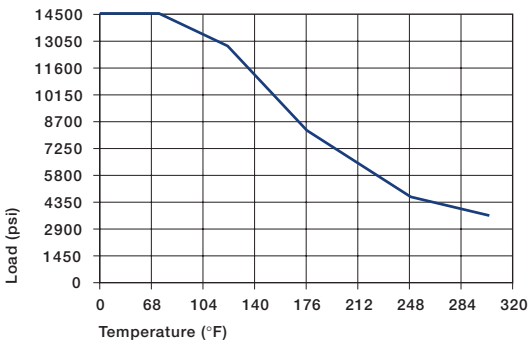
Temperatures

Plain bearings made of iglide® Q have excellent wear resistance even at high temperatures. The maximum long-term application temperature is 275°F. For the short-term, the material can withstand 311°F. Because of different environmental influences, the bearing can lose pressfit at lower temperatures. Therefore, it may be necessary to secure the bearings in the housing bore. Also, notice that the coefficient of friction increases rapidly as temperature increases beginning at approximately 212°F.

➤ Application Temperature, Page 1.7

iglide® Q	Application Temperature
Minimum	- 40 °F
Max., long-term	+ 275 °F
Max, short-term	+ 311 °F

Table 8.3: Temperature limits for iglide® Q



Graph 8.3: Recommended maximum static surface pressure of iglide® Q as a result of the temperature

Installation Tolerances

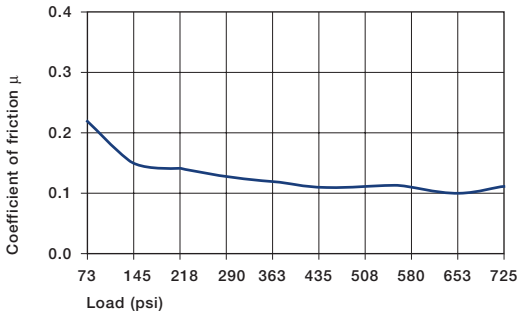
iglide® Q plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

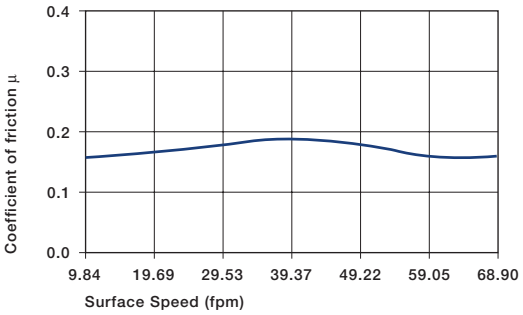
Friction and Wear

Many self-lubricated plain bearings have coefficients of friction that decrease with increasing loads. iglide® Q has the best coefficient of friction of all the iglide® plain bearings. After a short start-up phase, the coefficient of friction drops to its final result.
With these low coefficients of friction, iglide® Q is the recommended material, when extreme loads exist and maximum wear resistance is needed.
Also, the shafting partner has a large influence on friction and wear. Very smooth shafts increase the friction of the bearing. For applications with high loads, we recommend hardened and ground surfaces with an average roughness Ra = 6-12 rms.

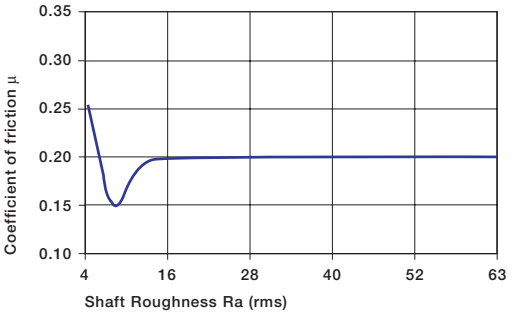
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9



Graph 8.5: Coefficient of friction as a result of the load, v = 1.97 fpm



Graph 8.4: Coefficient of friction as a result of the surface speed; load = 108 psi constant



Graph 8.6: Coefficient of friction as a result of the shaft surface

iglide® Q	Dry	Grease	Oil	Water
Coefficient of Friction µ	0.05 - 0.15	0.09	0.04	0.04

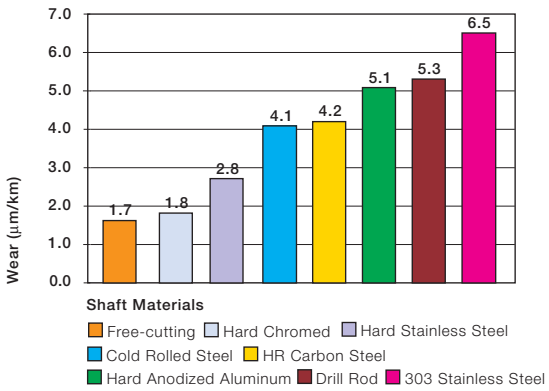
Table 8.4: Coefficient of friction for iglide® Q against steel (Ra = 40 rms, 50 HRC)

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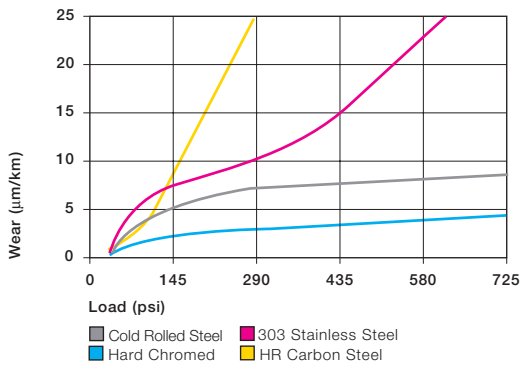
Shaft Materials

Graph 8.7 and 8.8 show results of testing different shaft materials with plain bearings made of iglide® Q.
iglide® Q plain bearings have a higher average wear rate at low loads, than bearings made of iglide® J or L280. However, the strength of iglide® Q is its wear resistance at heavy loads and in oscillating operation. In oscillating movements, iglide® Q plain bearings perform best against hard chromed or machined steel shafts.
If the shaft material you plan to use is not contained in this list, please contact us.

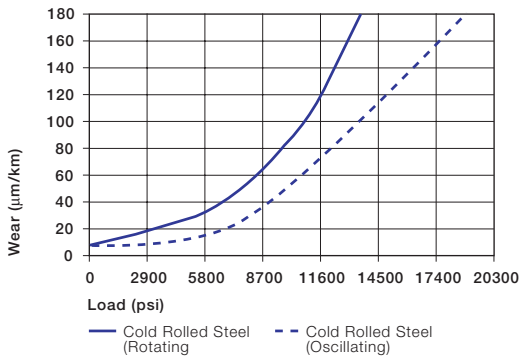
➤ Shaft Materials, Page 1.11



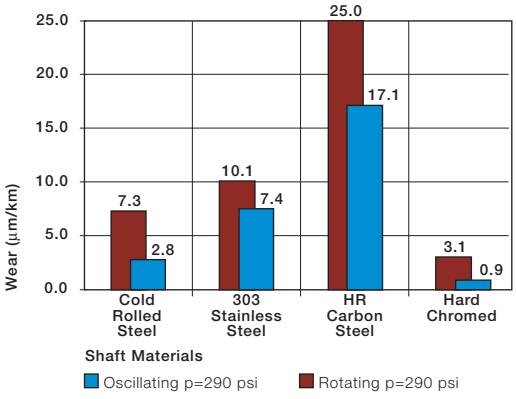
Graph 8.7: Wear of iglide® Q, rotating application with different shaft materials, p=108 psi, v=98 fpm



Graph 8.8: Wear with different shaft materials for rotating applications



Graph 8.9: Wear for oscillating and rotating applications with a Cold Rolled Steel shaft



Graph 8.10: Wear for oscillating and rotating applications with different shaft materials at p = 290 psi

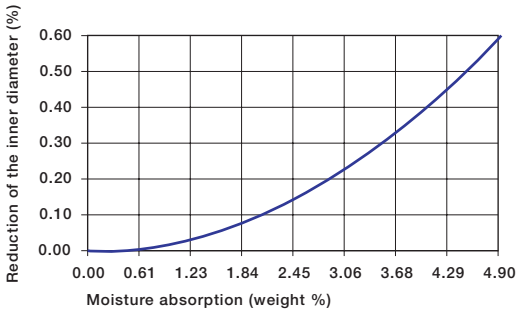
Chemical Resistance

iglide® Q plain bearings have excellent chemical resistance. They are resistant to organic solvents, fuels, oils and fats.
The material is only partially resistant to weak acids and weak lyes. The moisture absorption of iglide® Q plain bearings is approximately 0.9% in standard atmosphere. The saturation limit in water is 4.9%. This must be taken into account along with any other application conditions.

➤ Chemicals Table, Page 1.16

Medium	Resistance
Alcohol	Conditionally Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	partially Resistant
Strong acids	Not Resistant
Weak lyes	partially Resistant
Strong lyes	Not Resistant

Table 8.5: Resistance of iglide®Q to chemicals



Graph 8.11: Effect of moisture absorption on iglide® Q plain bearings

Radiation Resistance

Plain bearings made from iglide® Q are resistant to radiation up to an intensity of 3 x 10^2 Gy.

UV-Resistance

The tribological properties of iglide® Q plain bearings stay constant for the most part under weathering effects. However, a slight embrittlement of the material occurs.

Vacuum

When used in a vacuum, the iglide® Q plain bearings release existing moisture as a vapor. Therefore, only dehumidified bearings made of iglide® Q are suitable for the vacuum.

Electrical Properties

iglide® Q plain bearings are electrically insulating.

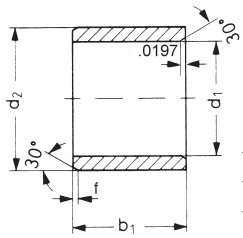
iglide® Q	
Specific volume resistance	< 10^{15} Ωcm
Surface resistance	< 10^{12} Ω

Table 8.6: Electrical properties of iglide® Q

iglide® Q
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iglide® Q - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

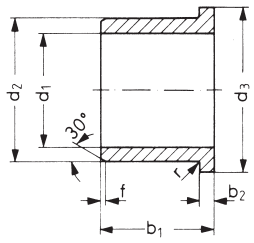
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
QSI-0203-04	1/8	3/16	1/4	.1269	.1251	.1878	.1873	.1243	.1236
QSI-0304-04	3/16	1/4	1/4	.1892	.1873	.2503	.2497	.1865	.1858
QSI-0304-06	3/16	1/4	3/8	.1892	.1873	.2503	.2497	.1865	.1858
QSI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
QSI-0405-06	1/4	5/16	3/8	.2521	.2498	.3128	.3122	.2490	.2481
QSI-0405-08	1/4	5/16	1/2	.2521	.2498	.3128	.3122	.2490	.2481
QSI-0506-04	5/16	3/8	1/4	.3148	.3125	.3753	.3747	.3115	.3106
QSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
QSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
QSI-0607-04	3/8	15/32	1/4	.3773	.3750	.4691	.4684	.3740	.3731
QSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
QSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
QSI-0708-08	7/16	17/32	1/2	.4406	.4379	.5316	.5309	.4365	.4355
QSI-0809-12	1/2	19/32	3/4	.5030	.5003	.5941	.5934	.4990	.4980
QSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230
QSI-1214-08	3/4	7/8	1/2	.7541	.7507	.8755	.8747	.7491	.7479
QSI-1214-12	3/4	7/8	3/4	.7541	.7507	.8755	.8747	.7491	.7479
QSI-1214-16	3/4	7/8	1	.7541	.7507	.8755	.8747	.7491	.7479
QSI-1416-16	7/8	1	1	.8791	.8757	1.0005	.9997	.8741	.8729
QSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
QSI-1618-24	1	1 1/8	1 1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
QSI-1820-24	1 1/8	1 9/32	1 1/2	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
QSI-2022-20	1 1/4	1 13/32	1 1/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
QSI-2022-24	1 1/4	1 13/32	1 1/2	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
QSI-2426-24	1 1/2	1 21/32	1 1/2	1.5408	1.5008	1.6568	1.6558	1.4988	1.4972
QSI-2629-20	1 25/32	1 25/32	1 1/4	1.6297	1.6258	1.7818	1.7808	1.6238	1.6222
QSI-2831-32	1 3/4	1 15/16	2	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
QSI-3235-12	2	2 3/16	3/4	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
QSI-3235-16	2	2 3/16	1	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
QSI-3235-24	2	2 3/16	1 1/2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
QSI-3235-32	2	2 3/16	2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
QSI-3235-40	2	2 3/16	2 1/2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
QSI-3639-32	2 1/4	2 7/16	2	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489
QSI-4043-16	2 1/2	2 11/16	1.0	2.5082	2.5035	2.6881	2.6869	2.5011	2.4993
QSI-4043-32	2 1/2	2 11/16	2.0	2.5082	2.5035	2.6881	2.6869	2.5011	2.4993
QSI-4851-16	3.0	3 3/16	1.0	3.0070	3.0023	3.1872	3.1858	3.0000	2.9982
QSI-4851-32	3.0	3 3/16	2.0	3.0070	3.0023	3.1872	3.1858	3.0000	2.9982
QSI-4851-48	3.0	3 3/16	3.0	3.0070	3.0023	3.1872	3.1858	3.0000	2.9982

iglide® Q - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

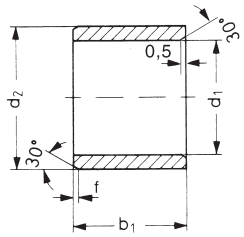
Length (inches)			Tolerance (h13)
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0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
QFI-0203-04	1/8	3/16	1/4	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
QFI-0304-06	3/16	1/4	3/8	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
QFI-0405-06	1/4	5/16	3/8	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
QFI-0405-08	1/4	5/16	1/2	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
QFI-0506-08	5/16	3/8	1/2	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
QFI-0607-04	3/8	15/32	1/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
QFI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
QFI-0809-04	1/2	19/32	1/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
QFI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
QFI-0809-12	1/2	19/32	3/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
QFI-1011-12	5/8	23/32	3/4	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
QFI-1012-08	5/8	3/4	1/2	1.000	.062	.6290	.6263	.7510	.7500	.6250	.6240
QFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
QFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
QFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
QFI-1416-12	7/8	1	3/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
QFI-1416-16	7/8	1	1	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
QFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
QFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
QFI-1618-24	1	1 1/8	1 1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
QFI-1820-12	1 1/8	1 9/32	3/4	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
QFI-1820-24	1 1/8	1 9/32	1 1/2	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
QFI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
QFI-2022-24	1 1/4	1 13/32	1 1/2	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
QFI-2426-04	1 1/2	1 21/32	1/4	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
QFI-2426-24	1 1/2	1 21/32	1 1/2	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
QFI-2831-32	1 3/4	1 15/16	2	2.375	.093	1.7547	1.7508	1.9381	1.9371	1.7487	1.7471
QFI-3235-32	2	23/16	2	2.625	.093	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
QFI-3639-32	2 1/4	27/16	2	2.750	.093	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489

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QuickSpec: www.igus.com/qs/iglide.asp

iglide® Q - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

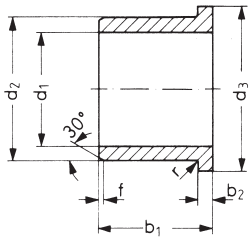
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance After Pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
QSM-0608-10	6.0	+0.020 +0.068	8.0	10.0	6.068	6.020	8.015	8.000	6.000	5.970
QSM-0810-08	8.0	+0.025 +0.083	10.0	8.0	8.083	8.025	10.015	10.000	8.000	7.964
QSM-1012-10	10.0	+0.025 +0.083	12.0	10.0	10.083	10.025	12.018	12.000	10.000	9.964
QSM-1214-10	12.0	+0.032 +0.102	14.0	10.0	12.102	12.032	14.018	14.000	12.000	11.957
QSM-1214-20	12.0	+0.032 +0.102	14.0	20.0	12.102	12.032	14.018	14.000	12.000	11.957
QSM-1618-08	16.0	+0.032 +0.102	18.0	8.0	16.102	16.032	18.018	18.000	16.000	15.957
QSM-1618-12	16.0	+0.032 +0.102	18.0	12.0	16.102	16.032	18.018	18.000	16.000	15.957
QSM-1618-20	16.0	+0.032 +0.102	18.0	20.0	16.102	16.032	18.018	18.000	16.000	15.957
QSM-1820-20	18.0	+0.032 +0.102	20.0	20.0	18.102	18.032	20.021	20.000	18.000	17.957
QSM-2022-15	20.0	+0.040 +0.124	22.0	15.0	20.124	20.040	22.021	22.000	20.000	19.948
QSM-2023-15	20.0	+0.040 +0.124	23.0	15.0	20.124	20.040	23.021	23.000	20.000	19.948
QSM-2023-20	20.0	+0.040 +0.124	23.0	20.0	20.124	20.040	23.021	23.000	20.000	19.948
QSM-2023-25	20.0	+0.040 +0.124	23.0	25.0	20.124	20.040	23.021	23.000	20.000	19.948
QSM-2023-30	20.0	+0.040 +0.124	23.0	30.0	20.124	20.040	23.021	23.000	20.000	19.948
QSM-2225-15	22.0	+0.040 +0.124	25.0	15.0	22.124	22.040	25.021	25.000	22.000	21.948
QSM-2528-25	25.0	+0.040 +0.124	28.0	25.0	25.124	25.040	28.021	28.000	25.000	24.948
QSM-2528-48	25.0	+0.040 +0.124	28.0	48.0	25.124	25.040	28.021	28.000	25.000	24.948
QSM-3034-20	30.0	+0.040 +0.124	34.0	20.0	30.124	30.040	34.025	34.000	30.000	29.948
QSM-3034-40	30.0	+0.040 +0.124	34.0	40.0	30.124	30.040	34.025	34.000	30.000	29.948
QSM-3539-15	35.0	+0.050 +0.150	39.0	15.0	35.150	35.050	39.025	39.000	35.000	34.938
QSM-3539-30	35.0	+0.050 +0.150	39.0	30.0	35.150	35.050	39.025	39.000	35.000	34.938
QSM-3539-50	35.0	+0.050 +0.150	39.0	50.0	35.150	35.040	39.025	39.000	35.000	34.938
QSM-4044-40	40.0	+0.050 +0.150	44.0	40.0	40.150	40.050	44.025	44.000	40.000	39.938
QSM-4044-47	40.0	+0.050 +0.150	44.0	47.0	40.150	40.050	44.025	44.000	40.000	39.938
QSM-4550-252	45.0	+0.050 +0.150	50.0	25.2	45.150	45.050	50.025	50.000	45.000	44.938
QSM-4550-50	45.0	+0.050 +0.150	50.0	50.0	45.150	45.050	50.025	50.000	45.000	44.938
QSM-5055-50	50.0	+0.050 +0.150	55.0	50.0	50.150	50.050	55.030	55.000	50.000	49.938
QSM-5055-60	50.0	+0.050 +0.150	55.0	60.0	50.150	50.050	55.030	55.000	50.000	49.938
QSM-5560-50	55.0	+0.050 +0.150	60.0	50.0	55.180	55.060	60.030	60.000	55.000	54.926
QSM-6065-50	60.0	+0.060 +0.180	65.0	50.0	60.180	60.060	65.030	65.000	60.000	59.926
QSM-6570-34	65.0	+0.050 +0.150	70.0	34.0	65.180	65.060	70.030	70.000	65.000	64.926
QSM-7075-50	70.0	+0.060 +0.180	75.0	50.0	70.180	70.060	75.030	75.000	70.000	69.926
QSM-8085-60	80.0	+0.050 +0.150	85.0	60.0	80.180	80.060	85.030	85.000	80.000	79.926

iglide® Q - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

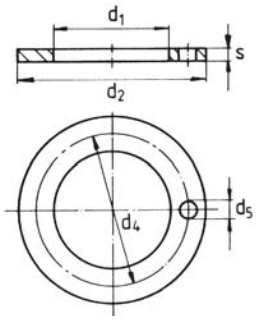
Dimensions according to ISO 3547-1 and special dimensions

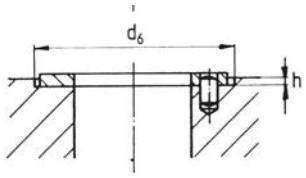
Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
QFM-0608-04	6.0	+0.020 +0.068	8.0	12.0	4.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
QFM-0810-05	8.0	+0.025 +0.083	10.0	15.0	5.5	1.0	8.083	8.025	10.015	10.000	8.000	7.964
QFM-0810-06	8.0	+0.025 +0.083	10.0	15.0	6.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
QFM-1012-06	10.0	+0.025 +0.083	12.0	18.0	6.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
QFM-101215-08	10.0	+0.025 +0.083	12.0	15.0	8.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
QFM-1012-10	10.0	+0.025 +0.083	12.0	18.0	10.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
QFM-101215-035	10.0	+0.025 +0.083	12.0	15.0	3.5	1.0	10.083	10.025	12.018	12.000	10.000	9.964
QFM-1214-08	12.0	+0.032 +0.102	14.0	20.0	8.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
QFM-1214-12	12.0	+0.032 +0.102	14.0	20.0	12.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
QFM-1214-20	12.0	+0.032 +0.102	14.0	20.0	20.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
QFM-1416-12	14.0	+0.032 +0.102	16.0	22.0	12.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
QFM-1618-17	16.0	+0.032 +0.102	18.0	24.0	17.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
QFM-1820-12	18.0	+0.032 +0.102	20.0	26.0	12.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
QFM-2023-21	20.0	+0.040 +0.124	23.0	30.0	21.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
QFM-2528-21	25.0	+0.040 +0.124	28.0	35.0	21.5	1.5	25.124	25.040	28.021	28.000	25.000	24.948
QFM-2528-25	25.0	+0.040 +0.124	28.0	35.0	25.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
QFM-2629-05	26.0	+0.040 +0.124	29.0	35.0	5.0	1.5	26.124	26.040	29.021	29.000	26.000	25.948
QFM-2629-10	26.0	+0.040 +0.124	29.0	35.0	10.0	1.5	26.124	26.040	29.021	29.000	26.000	25.948
QFM-2730-20	27.0	+0.040 +0.124	30.0	38.0	20.0	1.5	27.124	27.040	30.025	30.000	27.000	26.948
QFM-3034-37	30.0	+0.040 +0.124	34.0	42.0	37.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
QFM-3539-26	35.0	+0.050 +0.150	39.0	47.0	26.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
QFM-4044-40	40.0	+0.050 +0.150	44.0	52.0	40.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
QFM-5055-50	50.0	+0.050 +0.150	55.0	63.0	50.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
QFM-6065-50	60.0	+0.060 +0.180	65.0	73.0	50.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
QFM-7075-50	70.0	+0.060 +0.180	75.0	83.0	75.0	2.0	75.180	75.060	80.030	80.000	75.000	74.926

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QuickSpec: www.igus.com/qs/iglide.asp

iglide® Q - Plain Bearings
Thrust Washer, MM







Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1 +0.25	d2 -0.25	s -0.05	d4 -0.12 +0.12	d5 +0.375 +0.125	h +0.2 -0.2	d6 +0.12
QTM-2842-015	28.0	42.0	1.5	35.0	4.0	1.0	42.0
QTM-3254-015	32.0	54.0	1.5	43.0	4.0	1.0	54.0
QTM-3862-015	38.0	62.0	1.5	50.0	4.0	1.0	62.0
QTM-5278-020	52.0	78.0	2.0	65.0	4.0	1.5	78.0



igus®

iglide® P - Cost-Effective and Maintenance-Free

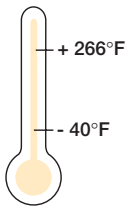
- Low water absorption
- Low wear rates
- High load capacity
- Maintenance-free
- Cost-effective



iglide® P - Plain Bearings

Price Index





2 Styles
More than 89 Dimensions
Innder diameters
From 1/4 - 7/8 in. (3 - 95 mm)

Structure of the Part Number:

P S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust Washer)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material

When to use the iglide® P plain bearings:

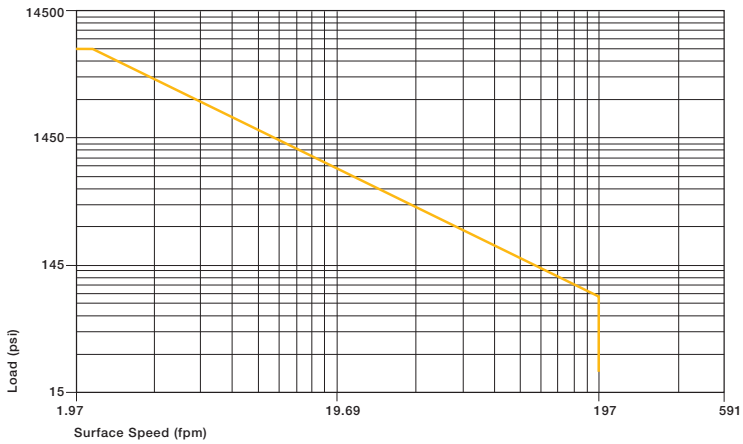
- When very low water absorption is needed
- When a cost-effective bearing for high pressure loads is desired
- For rotating movements under high loads

When not to use the iglide® P plain bearings:

- When the maximum application temperature is above 266°F
  ➤ iglide® G300
- When mechanical reaming of the wall surface is necessary
  ➤ iglide® M250
- When the highest wear resistance is needed
  ➤ iglide® L280

Table 9.1: Material Data

General Properties	Unit	iglide® P	Testing Method
Density	g/cm³	1.58	
Color		black	
Max. moisture absorption at 73°F / 50% r.h.	% weight	< 0,2	DIN 53495
Max. water absorption	% weight	0.4	
Coefficient of friction, dynamic against steel	µ	0.06 - 0.21	
p x v value, max. (dry)	psi x fpm	11,000	
Mechanical Properties			
Modulus of elasticity	psi	768,500	DIN 53457
Tensile strength at 68°F	psi	17,400	DIN 53452
Compressive strength	psi	9,570	
Permissible static surface pressure (68°F)	psi	7,250	
Shore D-hardness		75	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	266	
Max. short-term application temperature	°F	392	
Min. application temperature	°F	-40	
Thermal conductivity	W/m x K	0.25	ASTM C 177
Coefficient of thermal expansion	$K^{-1} \times 10^{-5}$	4	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{13}$	DIN IEC 93
Surface resistance	Ω	$> 10^{12}$	DIN 53482



Graph 9.1: Permissible p x v value for iglide® P running dry against a steel shaft, at 68°F

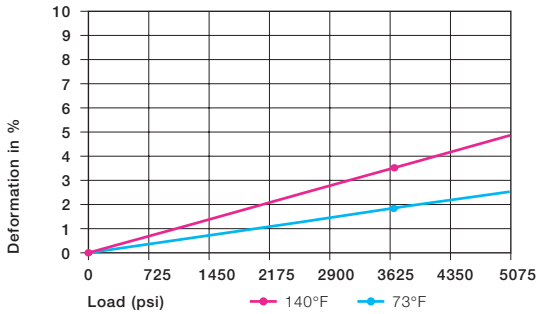
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With the iglide® P plain bearing, the user has a cost-effective, maintenance-free plain bearing. Compared to iglide® G300, plain bearings made of iglide® P are better suited for rotating movements and high loads.

Compressive Strength

Graph 9.2 shows the elastic deformation of iglide® P for radial loads. At the maximum permissible load of 5075 psi, the deformation is less than 3% at room temperature.

➤ Compressive Strength, Page 1.3



Graph 9.2: Deformation under load and temperature

Permissible Surface Speeds

Plain bearings made from iglide® P are maintenance-free plain bearings, which were developed for low to average surface speeds. The maximum values given in Table 9.2 can only be achieved at a very low surface pressure. The maximum speed given is the speed at which an increase up to the continuous use temperature occurs due to friction.

➤ Surface Speed, Page 1.5
➤ p x v value, Page 1.6

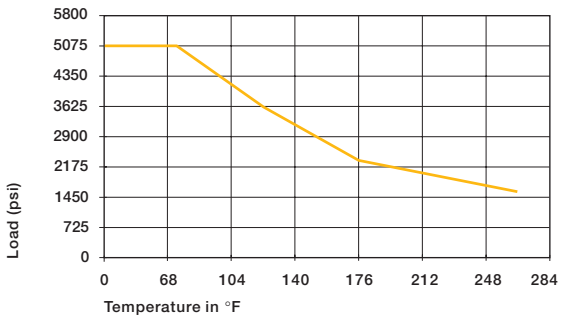
fpm	Rotating	Oscillating	Linear
Continuous	196	137	590
Short-term	393	275	787

Table 9.2: Maximum surface speed

Temperatures

Even at its highest long-term application temperature of 266°F, iglide® P does not quite reach the values of iglide® G300. With a maximum permissible short-term temperature of 392°F, a heat treating process is possible, without additional loading.
With increasing temperatures, the compressive strength of iglide® P plain bearings decreases. Graph 9.3 shows this relationship.
The ambient temperatures in the bearing system also have an effect on the bearing wear. With increasing temperatures, the wear increases.

➤ Application Temperatures, Page 1.7



Graph 9.3: Recommended maximum permissible static surface pressure of iglide® P as a result of the temperature

iglide® P	Application Temperature
Minimum	- 40°F
Max., long-term	+ 266°F
Max., short-term	+ 392°F

Table 9.3: Temperature limits for iglide® P

Installation Tolerances

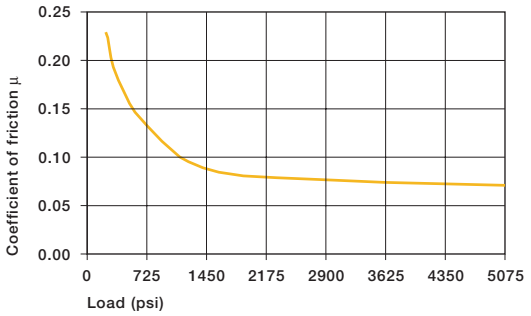
iglide® P plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

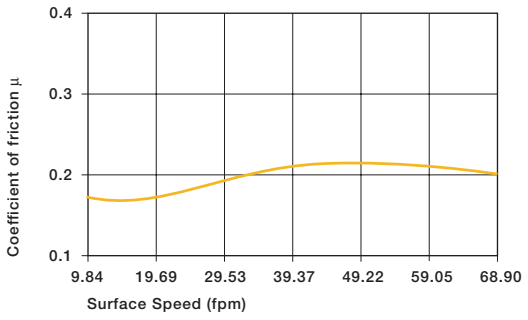
Friction and Wear

Similar to wear resistance, the coefficient of friction changes greatly with increasing load. For iglide® P the coefficient of friction increases slightly when the speed increases. Picture 9.5 shows how the coefficient of friction drops when the load increases. Starting at approximately 870 psi, the coefficient of friction is already below 0.1.
iglide® P plain bearings obtain a minimum coefficient of friction on shafts with a roughness Ra from 4-8 rms. Both smoother and rougher shaft finishes cause the friction to clearly increase.

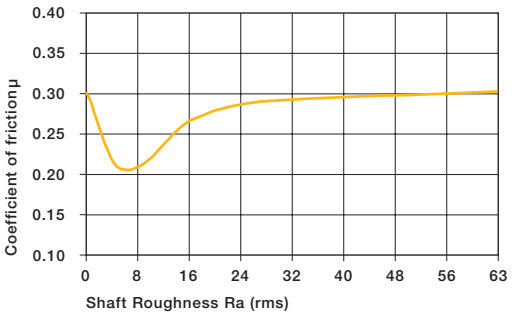
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9



Graph 9.5: Coefficients of friction of iglide® P as a result of the load, v = 1.97 fpm



Graph 9.4: Coefficients of friction of iglide® P as a result of the surface speed; p = 108 psi



Graph 9.6: Coefficients of friction of iglide® P as a result of the shaft surface (shaft Cold Rolled Steel)

iglide® P	Dry	Grease	Oil	Water
Coefficient of Friction	0.09 - 0.21	0.09	0.04	0.04

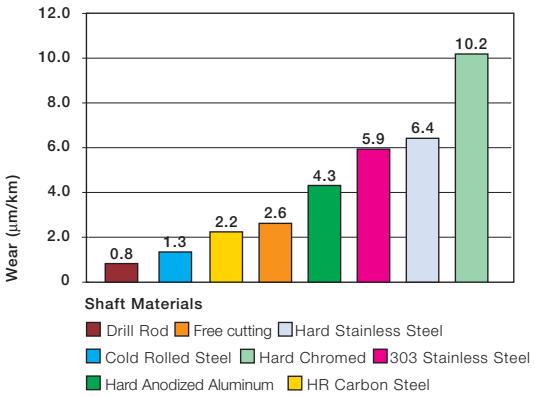
Table 9.4: Coefficients of friction for iglide® P against steel (Ra = 40 rms, 50 HRC)

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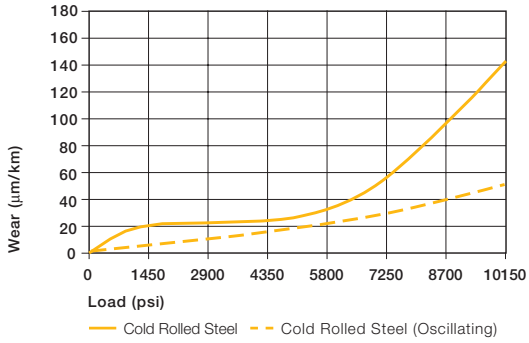
Shaft Materials

Graph 9.7 to 9.10 show results of testing different shaft materials with plain bearings made of iglide® P.
For rotating movements, the wear of iglide® P with Cold Rolled Steel and HR Carbon Steel shafts is very low. On the other hand, the bearings on 303 Stainless Steel shafts as well as hard-chromed shafts result in higher wear than other shaft materials even in the low load range. For example at a load of 290 psi, Cold Rolled Steel is six times better than 303 Stainless Steel.
For oscillating movements without loads, wear rates are lower than for most rotating movements. For this purpose, the Cold Rolled Steel and hard-chromed shafts prove to be the best sliding partners. Also, the 303 Stainless Steel shafts that have poor results for rotation, are very good in oscillating operation.
If the shaft material you plan to use is not contained in this list, please contact us.

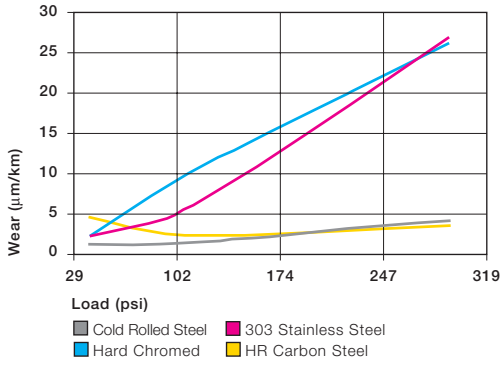
➤ Shaft Materials, Page 1.11



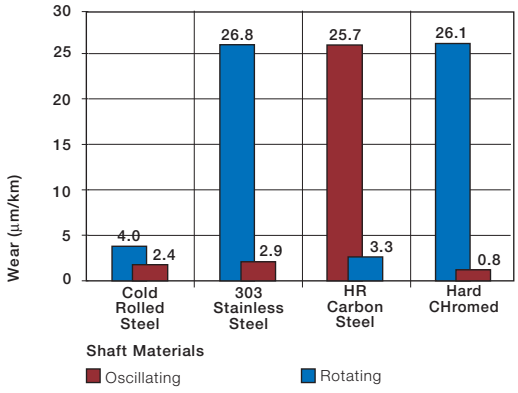
Graph 9.7: Wear of iglide® P with different shaft materials in rotating applications, p=108 psi, v=98 fpm



Graph 9.9: Wear with the Cold Rolled Steel shaft in oscillating and rotating applications



Graph 9.8: Wear of iglide® P with different shaft materials in rotating applications



Graph 9.10: Wear with different shaft materials in oscillating and rotating applications p = 290 psi

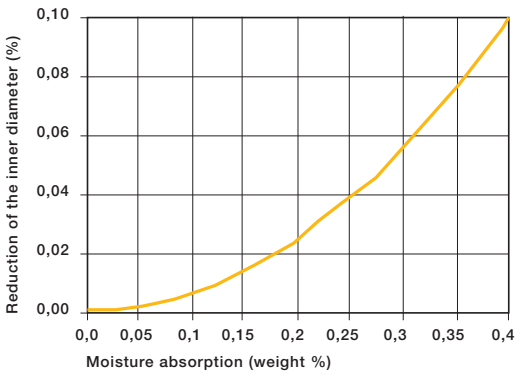
Chemical Resistance

iglide® P plain bearings are resistant to most chemicals. They are resistant to most lubricants. iglide® P is not attacked by most weak organic and inorganic acids.
The moisture absorption of iglide® P plain bearings is approximately 0.2% in standard atmosphere. The saturation limit in water is 0.4%. This low moisture absorption is clearly below the values of iglide® G300.

➤ Chemical Table, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Conditionally Resistant
Strong lyes	Not Resistant

Table 9.5: Chemical resistance



Graph 9.11: Effect of moisture absorption on iglide® P plain bearings

Radiation Resistance

Plain bearings made of iglide® P have limited use under radioactive radiation. They are resistant to radiation up to an intensity of 5 x 10^2 Gy.

UV-Resistance

iglide® P plain bearings are partially UV resistance.

Vacuum

In a vacuum environment, existing moisture of iglide® P plain bearings is released as a vapor. Use in a vacuum is only possible in a limited manner.

Electrical Properties

iglide® P plain bearings are electrically insulating.

iglide® P	
Specific volume resistance	> 10^{13} Ωcm
Surface resistance	> 10^{12} Ω

Table 9.6: Electrical properties of iglide® P

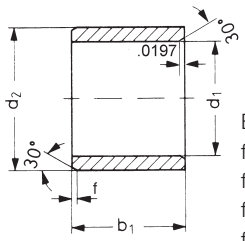
iglide® P

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® P - Linear Plain Bearing
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

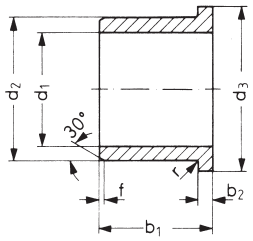
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
PSI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
PSI-0405-06	1/4	5/16	3/8	.2521	.2498	.3128	.3122	.2490	.2481
PSI-0405-08	1/4	5/16	1/2	.2521	.2498	.3128	.3122	.2490	.2481
PSI-0405-12	1/4	5/16	3/4	.2521	.2498	.3128	.3122	.2490	.2481
PSI-0506-04	5/16	3/8	1/4	.3148	.3125	.3753	.3747	.3115	.3106
PSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
PSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
PSI-0506-12	5/16	3/8	3/4	.3148	.3125	.3753	.3747	.3115	.3106
PSI-0607-04	3/8	15/32	1/4	.3773	.3750	.4691	.4684	.3740	.3731
PSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
PSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
PSI-0607-12	3/8	15/32	3/4	.3773	.3750	.4691	.4684	.3740	.3731
PSI-0608-08	3/8	1/2	1/2	.3783	.3760	.5015	.5010	.3750	.3741
PSI-0809-06	1/2	19/32	3/8	.5030	.5003	.5941	.5934	.4990	.4980
PSI-0809-08	1/2	19/32	1/2	.5030	.5003	.5941	.5934	.4990	.4980
PSI-0809-10	1/2	19/32	5/8	.5030	.5003	.5941	.5934	.4990	.4980
PSI-0809-12	1/2	19/32	3/4	.5030	.5003	.5941	.5934	.4990	.4980
PSI-0809-16	1/2	19/32	1	.5030	.5003	.5941	.5934	.4990	.4980
PSI-1011-08	5/8	23/32	1/2	.6280	.6253	.7192	.7184	.6240	.6230
PSI-1011-10	5/8	23/32	5/8	.6280	.6253	.7192	.7184	.6240	.6230
PSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230
PSI-1011-16	5/8	23/32	1	.6280	.6253	.7192	.7184	.6240	.6230
PSI-1214-08	3/4	7/8	1/2	.7541	.7507	.8755	.8747	.7491	.7479
PSI-1214-12	3/4	7/8	3/4	.7541	.7507	.8755	.8747	.7491	.7479
PSI-1214-16	3/4	7/8	1	.7541	.7507	.8755	.8747	.7491	.7479
PSI-1416-08	7/8	1	1/2	.8791	.8757	1.0050	.9997	.8741	.8729
PSI-1416-12	7/8	1	3/4	.8791	.8757	1.0050	.9997	.8741	.8729
PSI-1416-16	7/8	1	1	.8791	.8757	1.0050	.9997	.8741	.8729
PSI-1618-08	1	1 1/8	1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PSI-1618-12	1	1 1/8	3/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PSI-1618-24	1	1 1/8	1 1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PSI-2022-20	1 1/4	1 13/32	1	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
PSI-2022-24	1 1/4	1 13/32	1 1/2	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
PSI-2224-20	1 3/8	1 17/32	1 1/4	1.3978	1.3758	1.5318	1.5308	1.3738	1.3722
PSI-2224-24	1 3/8	1 17/32	1 1/2	1.3978	1.3758	1.5318	1.5308	1.3738	1.3722
PSI-2426-20	1 1/2	1 21/32	1 1/4	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
PSI-2426-24	1 1/2	1 21/32	1 1/2	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
PSI-3235-32	2	2 3/16	2	2.0052	2.0011	2.1883	2.1871	1.9981	1.9969

iglide® P - Linear Plain Bearing
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

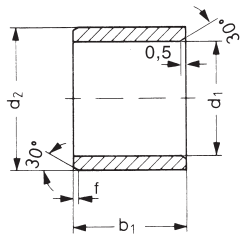
Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
PFI-0405-04	1/4	5/16	1/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
PFI-0405-05	1/4	5/16	5/16	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
PFI-0405-06	1/4	5/16	3/8	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
PFI-0405-08	1/4	5/16	1/2	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
PFI-0405-12	1/4	5/16	3/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
PFI-0506-04	5/16	3/8	1/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
PFI-0506-06	5/16	3/8	3/8	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
PFI-0506-08	5/16	3/8	1/2	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
PFI-0506-12	5/16	3/8	3/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
PFI-0607-04	3/8	15/32	1/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
PFI-0607-06	3/8	15/32	3/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
PFI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
PFI-0607-12	3/8	15/32	3/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
PFI-0809-06	1/2	19/32	3/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
PFI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
PFI-0809-10	1/2	19/32	5/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
PFI-0809-12	1/2	19/32	3/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
PFI-0809-16	1/2	19/32	1	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
PFI-0810-10	1/2	5/8	5/8	.875	.062	.5040	.5013	.6257	.6250	.5000	.4983
PFI-1011-06	5/8	23/32	3/8	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
PFI-1011-08	5/8	23/32	1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
PFI-1011-12	5/8	23/32	3/4	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
PFI-1011-16	5/8	23/32	1	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
PFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
PFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
PFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
PFI-1416-08	7/8	1	1/2	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
PFI-1416-12	7/8	1	3/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
PFI-1416-16	7/8	11	1	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
PFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PFI-1618-24	1	1 1/8	1 1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
PFI-2224-16	1 3/8	1 1/2	1	1.875	.078	1.3978	1.3758	1.5318	1.5308	1.3738	1.3722
PFI-2426-20	1 1/2	1 21/32	1 1/4	2.000	.078	1.5408	1.5008	1.6568	1.6558	1.4988	1.4972
PFI-2426-24	1 1/2	1 21/32	1 1/2	2.000	.078	1.5408	1.5008	1.6568	1.6558	1.4988	1.4972

Telephone 1-888-803-1895
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Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® P - Linear Plain Bearing
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

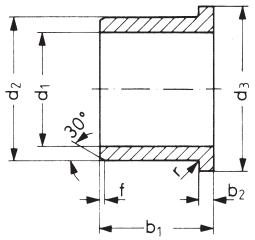
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
PSM-0304-03	3.0	+0.014 +0.054	4.5	3.0	3.054	3.014	4.512	4.500	3.000	2.975
PSM-0405-04	4.0	+0.020 +0.068	5.5	4.0	4.068	4.020	5.512	5.500	4.000	3.970
PSM-0507-05	5.0	+0.010 +0.040	7.0	5.0	5.040	5.010	7.015	7.000	5.000	4.970
PSM-0608-06	6.0	+0.020 +0.068	8.0	6.0	6.068	6.020	8.015	8.000	6.000	5.970
PSM-0810-08	8.0	+0.025 +0.083	10.0	8.0	8.083	8.025	10.015	10.000	8.000	7.964
PSM-0810-11	8.0	+0.025 +0.083	10.0	11.0	8.083	8.025	10.015	10.000	8.000	7.964
PSM-0810-12	8.0	+0.025 +0.083	10.0	12.0	8.083	8.025	10.015	10.000	8.000	7.964
PSM-1012-10	10.0	+0.025 +0.083	12.0	10.0	10.083	10.025	12.018	12.000	10.000	9.964
PSM-1214-15	12.0	+0.032 +0.102	14.0	15.0	12.102	12.032	14.018	14.000	12.000	11.957
PSM-1214-25	12.0	+0.032 +0.102	14.0	25.0	12.102	12.032	14.018	14.000	12.000	11.957
PSM-1517-15	15.0	+0.032 +0.102	17.0	15.0	15.102	15.032	17.018	17.000	15.000	14.957
PSM-1618-20	16.0	+0.032 +0.102	18.0	20.0	16.102	16.032	18.018	18.000	16.000	15.957
PSM-1618-42	16.0	+0.032 +0.102	18.0	42.0	16.102	16.032	18.018	18.000	16.000	15.957
PSM-1820-15	18.0	+0.032 +0.102	20.0	15.0	18.102	18.032	20.021	20.000	18.000	17.957
PSM-2022-22	20.0	+0.040 +0.124	22.0	22.0	20.124	20.040	22.021	22.000	20.000	19.948
PSM-2022-30	20.0	+0.040 +0.124	22.0	30.0	20.124	20.040	22.021	22.000	20.000	19.948
PSM-2022-51	20.0	+0.040 +0.124	22.0	51.0	20.124	20.040	22.021	22.000	20.000	19.948
PSM-2023-15	20.0	+0.040 +0.124	23.0	15.0	20.124	20.040	23.021	23.000	20.000	19.948
PSM-2023-20	20.0	+0.040 +0.124	23.0	20.0	20.124	20.040	23.021	23.000	20.000	19.948
PSM-2023-30	20.0	+0.040 +0.124	23.0	30.0	20.124	20.040	23.021	23.000	20.000	19.948
PSM-2224-45	22.0	+0.040 +0.124	24.0	45.0	22.124	22.040	25.021	25.000	22.000	21.948
PSM-2225-15	22.0	+0.040 +0.124	25.0	15.0	22.124	23.040	25.021	25.000	22.000	21.948
PSM-2225-45	22.0	+0.040 +0.124	25.0	45.0	22.124	22.040	25.021	25.000	22.000	21.948
PSM-2325-37	23.0	+0.040 +0.124	25.0	37.0	23.124	23.040	25.021	25.000	23.000	22.948
PSM-2528-30	25.0	+0.040 +0.124	28.0	30.0	25.124	25.040	28.021	28.000	25.000	24.948
PSM-2528-35	25.0	+0.040 +0.124	28.0	35.0	25.124	25.040	28.021	28.000	25.000	24.948
PSM-2630-25	26.0	+0.040 +0.124	30.0	25.0	26.124	26.040	30.021	30.000	26.000	25.948
PSM-2832-20	28.0	+0.040 +0.124	32.0	20.0	28.124	28.040	32.025	32.000	28.000	27.948
PSM-2832-25	28.0	+0.040 +0.124	32.0	25.0	28.124	28.040	32.025	32.000	28.000	27.948
PSM-3034-20	30.0	+0.040 +0.124	34.0	20.0	30.124	30.040	34.025	34.000	30.000	29.948
PSM-3034-40	30.0	+0.040 +0.124	34.0	40.0	30.124	30.040	34.025	34.000	30.000	29.948
PSM-3034-45	30.0	+0.040 +0.124	34.0	45.0	30.124	30.040	34.025	34.000	30.000	29.948
PSM-3539-40	35.0	+0.050 +0.150	39.0	40.0	35.150	35.050	39.025	39.000	35.000	34.938
PSM-4044-50	40.0	+0.050 +0.150	44.0	50.0	40.150	40.050	44.025	44.000	40.000	39.938
PSM-4044-58	40.0	+0.050 +0.150	44.0	58.0	40.150	40.050	44.025	44.000	40.000	39.938
PSM-5055-40	50.0	+0.050 +0.150	55.0	40.0	50.150	50.050	55.030	55.000	50.000	49.938
PSM-6065-60	60.0	+0.060 +0.180	65.0	60.0	60.180	60.060	65.030	65.000	60.000	59.926
PSM-7580-80	75.0	+0.060 +0.180	80.0	80.0	75.180	75.060	80.030	80.000	75.000	74.926
PSM-9095-100	90.0	+0.072 +0.212	95.0	100.0	90.212	90.072	95.035	95.000	90.000	89.913
PSM-95100-100	95.0	+0.072 +0.212	100.0	100.0	95.212	95.072	100.035	100.000	95.000	95.913

iglide® P - Linear Plain Bearing
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance After Pressfit in Ø H7	d2	d3 d13	b1 h13	b2 -0.14	I.D. After Pressfit Max..	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
PFM-0405-04	4.0	+0.020 +0.068	5.5	9.5	4.0	0.75	4.068	4.020	5.512	5.500	4.000	3.970
PFM-0507-05	5.0	+0.020 +0.068	7.0	11.0	5.0	1.0	5.068	5.020	7.015	7.000	5.000	4.970
PFM-0608-04	6.0	+0.020 +0.068	8.0	12.0	4.0	1.0	6.068	6.020	8.015	8.000	6.000	5.970
PFM-0810-10	8.0	+0.025 +0.083	10.0	15.0	10.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
PFM-081012-10	8.0	+0.025 +0.083	10.0	12.0	10.0	1.0	8.083	8.025	10.015	10.000	8.000	7.964
PFM-0810-15	8.0	+0.025 +0.083	10.0	15.0	15.0	1.0	8.083	8.025	12.018	12.000	10.000	9.964
PFM-1012-17	10.0	+0.025 +0.083	12.0	18.0	17.0	1.0	10.083	10.025	12.018	12.000	10.000	9.964
PFM-121418-08	12.0	+0.032 +0.102	14.0	18.0	8.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
PFM-1214-10	12.0	+0.032 +0.102	14.0	20.0	10.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
PFM-1214-15	12.0	+0.032 +0.102	14.0	20.0	15.0	1.0	12.102	12.032	14.018	14.000	12.000	11.957
PFM-1416-08	14.0	+0.032 +0.102	16.0	22.0	8.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
PFM-1416-12	14.0	+0.032 +0.102	16.0	22.0	12.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
PFM-141624-25	14.0	+0.032 +0.102	16.0	24.0	25.0	1.0	14.102	14.032	16.018	16.000	14.000	13.957
PFM-1517-22	15.0	+0.032 +0.102	17.0	23.0	22.0	1.0	15.102	15.032	17.018	17.000	15.000	14.957
PFM-151824-32	15.0	+0.032 +0.102	18.0	24.0	32.0	1.5	15.102	15.032	18.018	18.000	15.000	14.957
PFM-1618-12	16.0	+0.032 +0.102	18.0	24.0	12.0	1.0	16.102	16.072	18.018	18.000	16.000	15.957
PFM-1618-17	16.0	+0.032 +0.102	18.0	24.0	17.0	1.0	16.102	16.072	18.018	18.000	16.000	15.957
PFM-161824-40	16.0	+0.032 +0.102	18.0	24.0	40.0	1.0	16.102	16.032	18.018	18.000	16.000	15.957
PFM-1719-25	17.0	+0.032 +0.102	19.0	25.0	25.0	1.0	17.102	17.032	19.018	19.000	17.000	16.957
PFM-1820-17	18.0	+0.032 +0.102	20.0	26.0	17.0	1.0	18.102	18.032	20.021	20.000	18.000	17.957
PFM-2023-16	20.0	+0.040 +0.124	23.0	30.0	16.5	1.5	20.124	20.040	23.021	23.000	20.000	19.948
PFM-2023-30	20.0	+0.040 +0.124	23.0	30.0	30.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
PFM-202328-15	20.0	+0.040 +0.124	23.0	28.0	15.0	1.5	20.124	20.040	23.021	23.000	20.000	19.948
PFM-2528-21	25.0	+0.040 +0.124	28.0	35.0	21.5	1.5	25.124	25.040	28.021	28.000	25.000	24.948
PFM-2528-30	25.0	+0.040 +0.124	28.0	35.0	30.0	1.5	25.124	25.040	28.021	28.000	25.000	24.948
PFM-283239-20	28.0	+0.040 +0.124	32.0	39.0	20.0	2.0	28.124	28.040	32.025	32.000	28.000	28.948
PFM-3034-16	30.0	+0.040 +0.124	32.0	42.0	16.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
PFM-3034-26	30.0	+0.040 +0.124	34.0	42.0	26.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
PFM-3034-37	30.0	+0.040 +0.124	34.0	42.0	37.0	2.0	30.124	30.040	34.025	34.000	30.000	29.948
PFM-3236-16	32.0	+0.050 +0.150	36.0	40.0	16.0	2.0	32.150	32.050	36.025	36.000	32.0000	31.938
PFM-3539-058	35.0	+0.050 +0.150	39.0	47.0	5.8	2.0	35.150	35.050	39.025	39.000	35.000	34.938
PFM-3539-26	35.0	+0.050 +0.150	39.0	47.0	26.0	2.0	35.150	35.050	39.025	39.000	35.000	34.938
PFM-4044-40	40.0	+0.050 +0.150	44.0	52.0	40.0	2.0	40.150	40.050	44.025	44.000	40.000	39.938
PFM-5055-60	50.0	+0.050 +0.150	55.0	63.0	60.0	2.0	50.150	50.050	55.030	55.000	50.000	49.938
PFM-6065-50	60.0	+0.060 +0.180	65.0	73.0	50.0	2.0	60.180	60.060	65.030	65.000	60.000	59.926
PFM-7075-50	70.0	+0.060 +0.180	75.0	83.0	50.0	2.0	70.180	70.060	75.030	75.000	70.000	69.926
PFM-8085-100	80.0	+0.060 +0.180	85.0	93.0	100.0	2.5	80.180	80.060	85.030	85.000	80.000	79.926

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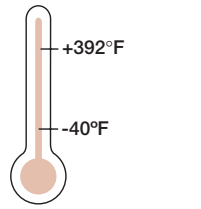
iglide® H370
High Performance for Wet Environments

- Excellent for underwater applications
- No moisture absorption
- Maintenance-free
- Resistant to chemicals
- For high temperatures



iglide® H370 - Plain Bearings

Price Index



2 Styles
More than 63 Dimensions
Inner Diameters
From 1/8 - 1-1/4 (3 - 75 mm)

When to use iglide® H370 plain bearings:

- For use underwater
- When high temperature resistance is necessary
- When high mechanical loading and wear resistance is required
- For use in contact with chemicals

When not to use iglide® H370 plain bearings:

- When mechanical reaming of the wall surface is necessary
  ➤ iglide® M250
- When high wear resistance is needed
  ➤ iglide® L280
- For use in dirty surroundings
  ➤ iglide® M250

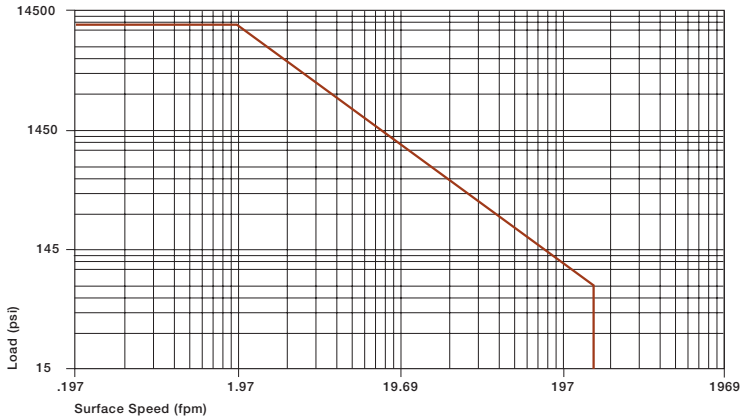
Table 10.1: Material Data

General Properties	Unit	iglide® H370	Testing Method
Density	g/cm³	1.60	
Color		gray	
Max. moisture absorption at 73°F / 50% r.h.	% weight	< 0.1	DIN 53495
Max. moisture absorption	% weight	< 0.1	
Coefficient of friction, dynamic against steel	µ	0.07 - 0.17	
p x v value, max. (dry)	psi x fpm	21,000	
Mechanical Properties			
Modulus of elasticity	psi	1,609,919	DIN 53457
Tensile strength at 68°F	psi	19,575	DIN 53452
Compressive strength	psi	11,455	
Permissible static surface pressure (68°C)	psi	10,875	
Shore D-hardness		82	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	392	
Max. short-term application temperature	°F	464	
Min. application Temperature	°F	-40	
Thermal conductivity	W/m x K	0.5	ASTM C 177
Coefficient of thermal expansion	$K^{-1} \times 10^{-5}$	5	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$< 10^5$	DIN IEC 93
Surface resistance	Ω	$< 10^5$	DIN 53482

Structure of the Part Number:

H370 S I - 0 2 0 3 - 0 3

- H370 — Material
- S — Type: S - Sleeve, F - Flange, T - Thrust
- I — Dimension: I - Inch (in 1/16”), M - Metric (in mm)
- 02 — d1
- 03 — d2
- 03 — b1 (s-Thrust Washer)



Graph 10.1: Permissible p x v value for iglide® H370 running dry against a steel shaft, at 68°F

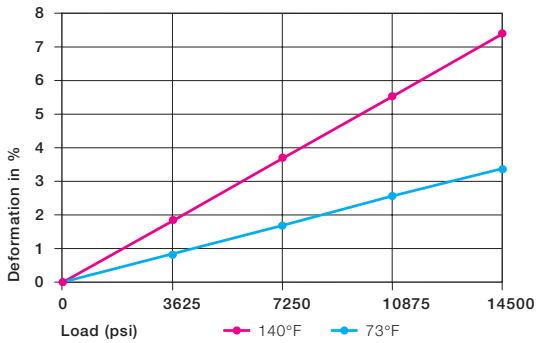
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The iglide® H370 is a further development of the iglide® H series. The material is characterized by very low water absorption and clearly improved wear resistance. In terms of the mechanical and thermal characteristic values, iglide® H370 shows the same properties as iglide® H (see 10.1)

Compressive Strength

Graph 10.2 shows the elastic deformation of iglide® H370 for radial loads. At the maximum permissible load of 10875 psi, the deformation is approximately 2.5% at room temperature.

➤ Compressive Strength, Page 1.3



Graph 10.2: Deformation under load and temperature

Permissible Surface Speeds

The maximum permissible surface speed depends on the temperature in the bearing position. iglide® H370 is able to run at speeds of up to 197 fpm (rotating) to 787 fpm (linear)

➤ Surface Speed, Page 1.5
➤ p x v value, Page 1.6

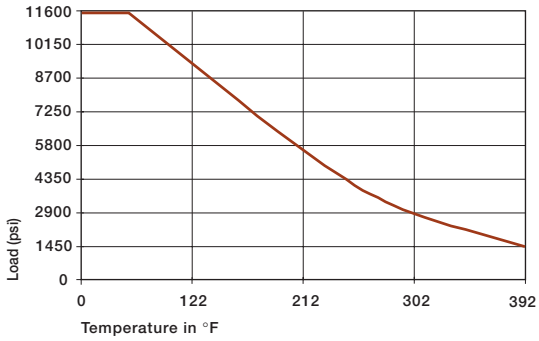
fpm	Rotating	Oscillating	Linear
Continuous	236	157	787
Short-term	295	216	984

Table 10.2: Maximum surface speeds

Temperatures

iglide® H370 is an extremely temperature-resistant material. With a maximum permissible short-term temperature of 464°F, iglide® H370 plain bearings may be subjected to a heat treating process without additonal load. With increasing temperatures, the compressive strength of iglide® H370 plain bearings decreases. Graph 10.3 shows this relationship.
The ambient temperatures prevalent in the bearing system also have an effect on the bearing wear. With increasing temperatures, the wear increases.
iglide® H370 loses approximately 75% of its compressive strength when the temperature increases from room temperature to 302°F. On the other hand, there is little change in wear resistance at the same temperature range.

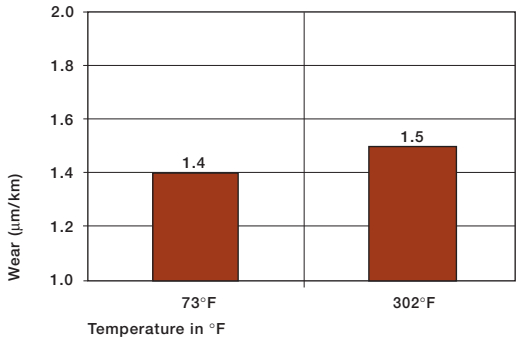
➤ Application Temperatures, Page 1.7



Graph 10.3: Recommended permissible maximum static surface pressure of iglide® H370 as a result of the temperature

iglide® H370	Application Temperature
Minimum	- 40 °F
Max. long-term	+ 392 °F
Max. short-term	+ 464 °F

Table 10.3: Temperature limits for iglide® H370



Graph 10.4 : Wear as a result of the temperature; rotation with p = 108 psi and v = 98 fpm

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Installation Tolerances

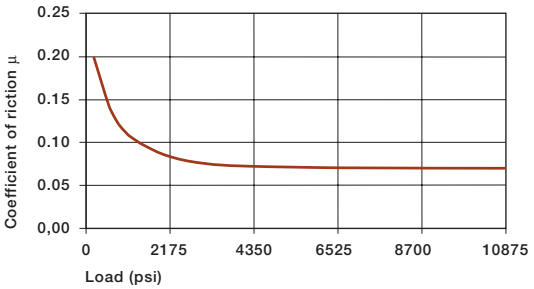
iglide® H370 plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

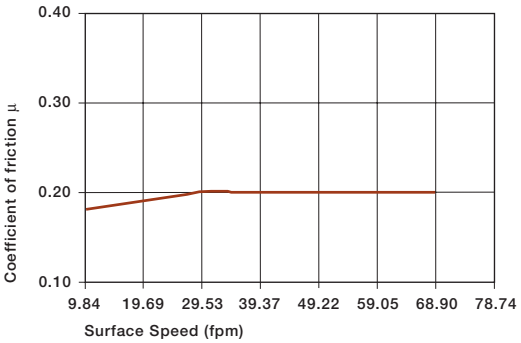
Friction and Wear

The friction and wear values are better for iglide® H370 than for iglide® H. Especially for underwater applications, there is no better material than iglide® H370. The coefficient of friction and wear resistance show little effect with increased speed and load. This relationship explains the excellent performance of iglide® H370 plain bearings at high loads.
Friction and wear are also dependent, to a large degree, on the shafting partner. Shafts that are too smooth increase both the coefficient of friction and the wear of the bearing. A ground surface with an average roughness Ra = 8-16 rms is best.

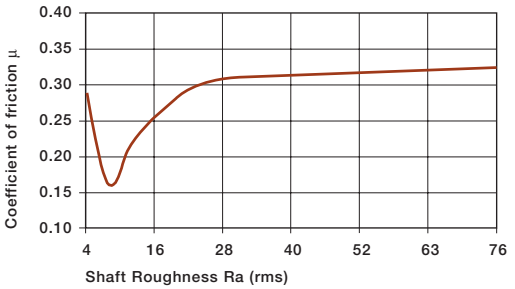
➤ Coefficients of Friction and Surface, Page 1.8
➤ Wear Resistance, Page 1.9



Graph 10.6: Coefficients of friction for iglide® H370 as a result of the load, v =1.97 fpm



Graph 10.5: Coefficients of friction for iglide® H370 as a result of the surface speed; p =108 psi



Graph 10.7: Coefficient of friction of iglide® H370 as a result of the shaft surface (shaft Cold Rolled Steel)

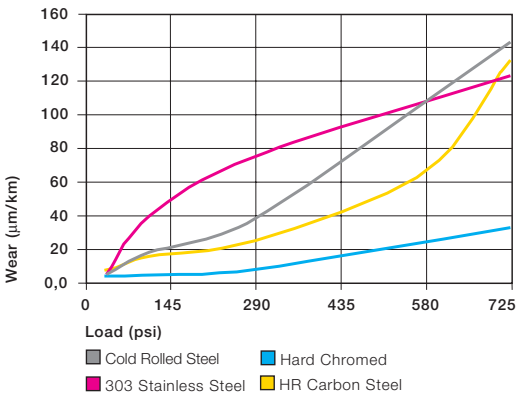
iglide® H370	Dry	Grease	Oil	Water
Coefficient of Friction µ	0.07 - 0.17	0.09	0.04	0.04

Table 10.4: Coefficients of friction for iglide® H370 against steel (Ra = 40 rms, 50 HRC)

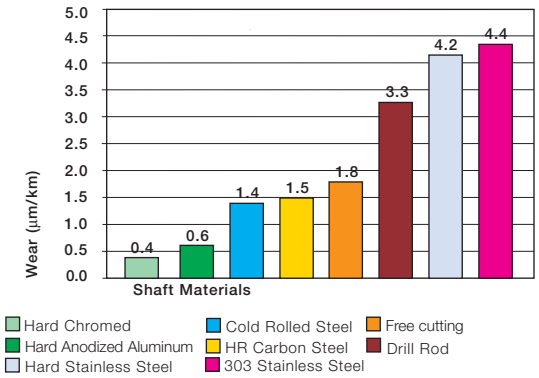
Shaft Materials

Graph 10.7 and 10.8 show results of testing different shaft materials with plain bearings made of iglide® H370.
For loads up to 290 psi, A hard-chromed shaft is the best material for iglide® H370 in rotating applications. Note the high wear values for 303 Stainless shafts, which have a tendency to stick-slip because of their very smooth surfaces. The HR Carbon Steel shaft has better rotational values than Cold Rolled Steel starting at 290 psi. On the other hand, for oscillating movements, the 303 Stainless Steel shaft has a clear superiority. As the graph shows, it produces, at 290 psi, a lower wear by a factor of 11 than the Cold Rolled Steel shaft.
If the shaft material you plan to use is not contained in this list, please contact us.

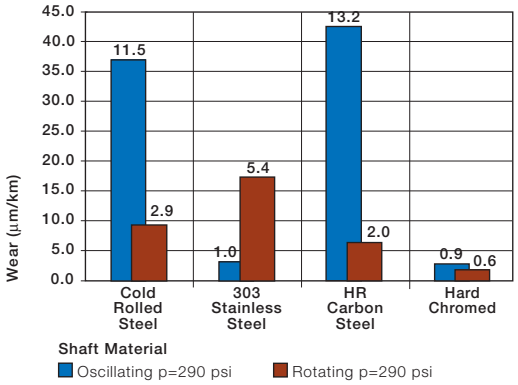
➤ Shaft materials, Page 1.11



Graph 10.9: Wear of iglide® H370 with different shaft materials in rotating applications



Graph 10.8: Wear of iglide® H370, rotating application with different shaft materials, p=108 psi, v=98 fpm



Graph 10.10: Wear for oscillating and rotating applications with different shaft materials p = 290 psi

Chemical Resistance

iglide® H370 plain bearings have a good chemical resistance. They are resistant to most lubricants, iglide® H370 is also resistant to most weak organic and inorganic acids.
The moisture absorption of iglide® H370 plain bearings is below 0.1% in standard atmosphere. The saturation limit in water is also below 0.1%. For this reason, iglide® H370 plain bearings are often used for underwater applications.

➤ Chemical Table, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Resistant
Greases, oils	Resistant
Ketones	Resistant
Fuels	Resistant
Weak acids	Resistant
Strong acids	Not Resistant
Weak lyes	Resistant
Strong lyes	Conditionally Resistant

Table 10.5: Chemical resistance of iglide® H370

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iglide® H370 - Plain Bearings

Radiation Resistance

iglide® H370 withstands neutron and gamma particle radiation without detectable losses to its excellent mechanical properties. Plain bearings made from iglide® H370 are resistant to radiation up to an intensity of 2 x 10^2 Gy

UV-Resistance

iglide® H370 plain bearings are permanently resistant against UV radiation.

Vacuum

In a vacuum environment, moisture is released as a vapor. However, due to its low moisture absorption, use in a vacuum is possible.

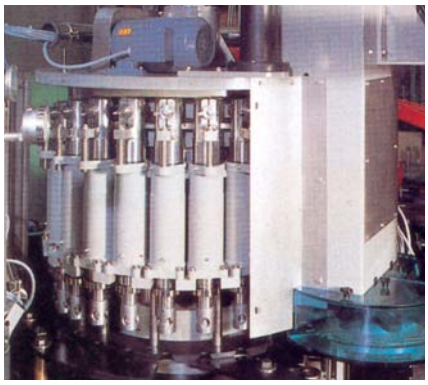
Electrical Properties

iglide® H370 plain bearings are electrically conducting.

iglide® H370	
Specific volume resistance	< 10^5 Ωcm
Surface resistance	< 10^5 Ω

Table 10.6: Electrical properties of iglide® H370

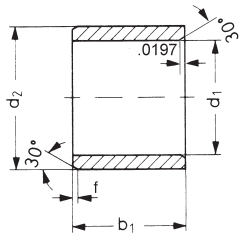
Application Example



Picture 10.1: Filling applications: linear, oscillating, and rotating movements can be achieved using iglide® H370 bearings

iglide® H370 - Plain Bearings
Sleeve Bearing, Inch





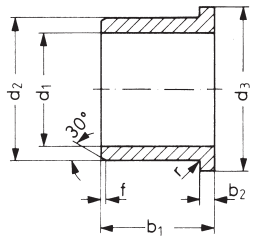
Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)			
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7		h13	Max.	Min.	Max.	Min.	Max.	Min.
H370SI-0203-03	1/8	3/16	3/16	.1269	.1251	.1878	.1873	.1243	.1236
H370SI-0304-04	3/16	1/4	1/4	.1892	.1873	.2503	.2497	.1865	.1858
H370SI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
H370SI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
H370SI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
H370SI-0809-08	1/2	19/32	1/2	.5030	.5003	.5941	.5934	.4990	.4980
H370SI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230
H370SI-1214-12	3/4	7/8	3/4	.7541	.7505	.8755	.8747	.7491	.7479
H370SI-1416-16	7/8	1	1	.8791	.8757	1.0005	.9997	.8741	.8729
H370SI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
H370SI-2022-20	1 1/4	1 13/32	1 1/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472

iglide® H370 - Linear Plain Bearing
Flange Bearing, Inch





r = max. .0197

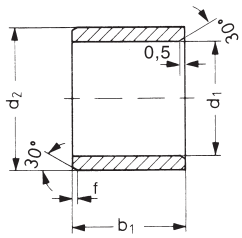
Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)			
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
H370FI-0203-03	1/8	3/16	3/16	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
H370FI-0304-04	3/16	1/4	1/4	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
H370FI-0405-04	1/4	5/16	1/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
H370FI-0506-06	5/16	3/8	3/8	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
H370FI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
H370FI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
H370FI-1011-12	5/8	23/32	3/4	1.000	.046	.6280	.6253	.7192	.7184	.6240	.6230
H370FI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7505	.8755	.8747	.7491	.7479
H370FI-1416-16	7/8	1	1	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
H370FI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
H370FI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472

iglide® H370 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Dimensions according to ISO 3547-1 and special dimensions

Length Tolerance (b1)

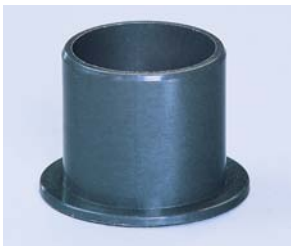
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

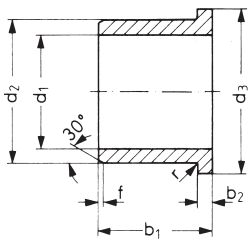
Part number	d1	d1-Tolerance after Pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
H370SM-0304-03	3.0	+0.006 +0.046	4.5	3.0	3.046	3.006	4.512	4.500	3.000	2.975
H370SM-0405-04	4.0	+0.010 +0.058	5.5	4.0	4.058	4.010	5.512	5.500	4.000	3.970
H370SM-0405-12	4.0	+0.010 +0.058	5.5	4.0	4.058	4.010	5.512	5.500	4.000	3.970
H370SM-0507-05	5.0	+0.010 +0.058	7.0	5.0	5.058	5.010	7.015	7.000	5.000	4.970
H370SM-0608-06	6.0	+0.010 +0.058	8.0	6.0	6.058	6.010	8.015	8.000	6.000	5.970
H370SM-0608-10	6.0	+0.010 +0.058	8.0	10.0	6.058	6.010	8.015	8.000	6.000	5.970
H370SM-0810-08	8.0	+0.013 +0.071	10.0	8.0	8.071	8.013	10.015	10.000	8.000	7.964
H370SM-0810-10	8.0	+0.013 +0.071	10.0	10.0	8.071	8.013	10.015	10.000	8.000	7.964
H370SM-0810-15	8.0	+0.013 +0.071	10.0	15.0	8.071	8.013	10.015	10.000	8.000	7.964
H370SM-1012-06	10.0	+0.013 +0.071	12.0	6.0	10.071	10.013	12.018	12.000	10.000	9.964
H370SM-1012-10	10.0	+0.013 +0.071	12.0	10.0	10.071	10.013	12.018	12.000	10.000	9.964
H370SM-1012-15	10.0	+0.013 +0.071	12.0	15.0	10.071	10.013	12.018	12.000	10.000	9.964
H370SM-1214-10	12.0	+0.016 +0.086	14.0	10.0	12.086	12.016	14.018	14.000	12.000	11.957
H370SM-1214-15	12.0	+0.016 +0.086	14.0	15.0	12.086	12.016	14.018	14.000	12.000	11.957
H370SM-1416-20	14.0	+0.016 +0.086	16.0	20.0	10.086	10.016	16.018	16.000	14.000	13.957
H370SM-1517-15	15.0	+0.016 +0.086	17.0	15.0	15.086	15.016	17.018	17.000	15.000	14.957
H370SM-1618-15	16.0	+0.016 +0.086	18.0	15.0	16.086	16.016	18.018	18.000	16.000	15.957
H370SM-1618-20	16.0	+0.016 +0.086	18.0	20.0	16.086	16.016	18.018	18.000	16..000	15.957
H370SM-1820-15	18.0	+0.016 +0.086	20.0	15.0	18.086	18.016	20.021	20.000	18.000	17.957
H370SM-2023-20	20.0	+0.020 +0.104	23.0	20.0	20.104	20.020	23.021	23.000	20.000	19.948
H370SM-2528-20	25.0	+0.020 +0.104	28.0	20.0	25.104	25.020	28.021	28.000	25.000	24.948
H370SM-2832-20	28.0	+0.020 +0.104	32.0	20.0	28.104	28.020	32.021	32.000	28.000	27.948
H370SM-3034-30	30.0	+0.020 +0.104	34.0	30.0	30.104	30.020	34.025	34.000	30.000	29.948
H370SM-3236-30	32.0	+0.025 +0.125	36.0	30.0	32.125	32.025	36.025	36.000	32.000	31.938
H370SM-3539-40	35.0	+0.025 +0.125	39.0	40.0	35.125	35.025	39.025	39.000	35.000	34.938
H370SM-4044-50	40.0	+0.025 +0.125	44.0	50.0	40.125	40.025	44.025	44.000	40.000	39.938
H370SM-4550-30	45.0	+0.025 +0.125	50.0	30.0	45.125	45.025	50.025	50.000	45.000	44.938
H370SM-5055-40	50.0	+0.025 +0.125	55.0	40.0	50.125	50.025	55.030	55.000	50.000	49.938
H370SM-5055-60	55.0	+0.025 +0.125	55.0	60.0	50.125	50.025	55.030	55.000	50.000	49.938
H370SM-5560-26	55.0	+0.030 +0.150	60.0	26.0	55.150	55.030	60.030	60.000	55.000	54.926
H370SM-6065-60	60.0	+0.030 +0.150	65.0	60.0	60.150	60.030	65.030	65.000	60.000	59.926
H370SM-7580-60	75.0	+0.030 +0.150	80.0	60.0	75.150	75.030	80.030	80.000	75.000	74.926

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iglide® H370 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
H370FM-0405-04	4.0	+0.010 +0.058	5.5	9.5	4.0	0.75	4.058	4.010	5.512	5.500	4.000	3.970
H370FM-0507-05	5.0	+0.010 +0.058	7.0	11.0	5.0	1.0	5.058	5.010	7.015	7.000	5.000	4.970
H370FM-0608-06	6.0	+0.010 +0.058	8.0	12.0	6.0	1.0	6.058	6.010	8.015	8.000	6.000	5.970
H370FM-0608-10	6.0	+0.010 +0.058	8.0	12.0	10.0	1.0	6.058	6.010	8.015	8.000	6.000	5.970
H370FM-0810-06	8.0	+0.013 +0.071	10.0	15.0	6.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
H370FM-0810-07	8.0	+0.013 +0.071	10.0	15.0	7.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
H370FM-0810-10	8.0	+0.013 +0.071	10.0	15.0	10.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
H370FM-0810-15	8.0	+0.013 +0.071	10.0	15.0	15.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
H370FM-1012-10	10.0	+0.013 +0.071	12.0	18.0	10.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
H370FM-1012-15	10.0	+0.013 +0.071	12.0	18.0	15.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
H370FM-1012-20	10.0	+0.013 +0.071	12.0	18.0	20.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
H370FM-1214-07	12.0	+0.016 +0.086	14.0	20.0	7.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
H370FM-1214-12	12.0	+0.016 +0.086	14.0	20.0	12.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
H370FM-1214-15	12.0	+0.016 +0.086	14.0	20.0	15.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
H370FM-1214-20	12.0	+0.016 +0.086	14.0	20.0	20.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
H370FM-1416-12	14.0	+0.016 +0.086	16.0	22.0	12.0	1.0	14.086	14.016	16.018	16.000	14.000	13.957
H370FM-1517-17	15.0	+0.016 +0.086	17.0	23.0	17.0	1.0	15.086	15.016	17.018	17.000	15.000	14.957
H370FM-1618-10	16.0	+0.016 +0.086	18.0	24.0	10.0	1.0	16.086	16.016	18.018	18.000	16.000	15.957
H370FM-1618-17	16.0	+0.016 +0.086	18.0	24.0	17.0	1.0	16.086	16.016	18.018	18.000	16.000	15.957
H370FM-1820-12	18.0	+0.016 +0.086	20.0	26.0	12.0	1.0	18.086	18.016	20.021	20.000	18.000	17.957
H370FM-1820-17	18.0	+0.016 +0.086	20.0	26.0	17.0	1.0	18.086	18.016	20.021	20.000	18.000	17.957
H370FM-2023-16	20.0	+0.020 +0.104	23.0	30.0	16.0	1.5	20.104	20.020	23.021	23.000	20.000	19.948
H370FM-2023-21	20.0	+0.020 +0.104	23.0	30.0	21.0	1.5	20.104	20.020	23.021	23.000	20.000	19.948
H370FM-2023-30	20.0	+0.020 +0.104	23.0	30.0	30.0	1.5	20.104	20.020	23.021	23.000	20.000	19.948
H370FM-2528-30	25.0	+0.020 +0.104	28.0	35.0	30.0	1.5	25.104	25.020	28.021	28.000	25.000	24.948
H370FM-3034-40	30.0	+0.020 +0.104	34.0	42.0	40.0	2.0	30.104	30.020	34.021	34.000	30.000	29.948
H370FM-3539-26	35.0	+0.025 +0.125	39.0	47.0	26.0	2.0	35.125	35.025	39.025	39.000	35.000	34.938
H370FM-4044-40	40.0	+0.025 +0.125	44.0	52.0	40.0	2.0	40.125	40.025	44.025	44.000	40.000	39.938
H370FM-5055-50	50.0	+0.025 +0.125	55.0	63.0	50.0	2.0	50.125	50.025	55.030	55.000	50.000	49.938
H370FM-6065-50	60.0	+0.030 +0.150	65.0	73.0	50.0	2.0	60.150	60.030	65.030	65.000	60.000	59.926
H370FM-7075-50	70.0	+0.030 +0.150	75.0	83.0	50.0	2.0	50.150	70.030	75.030	75.000	70.000	69.926

iglide® H370 - Plain Bearings

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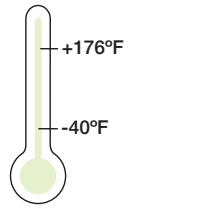
iglide® A200 – Pure and Healthy

- Approved by the FOOD AND DRUG ADMINISTRATION
- Good abrasion resistance
- suitable for direct contact with food and pharmaceuticals
- For low speed, rotational, oscillating and linear movements



iglide® A200 - Plain Bearings

Price Index



3 Styles
More than 236 Dimensions
Inner Diameters
From 1/8 - 1-3/4 in. (1 - 32 mm)

Structure of the Part Number:

A S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust Washer)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material

When to use iglide® A200 plain bearings:

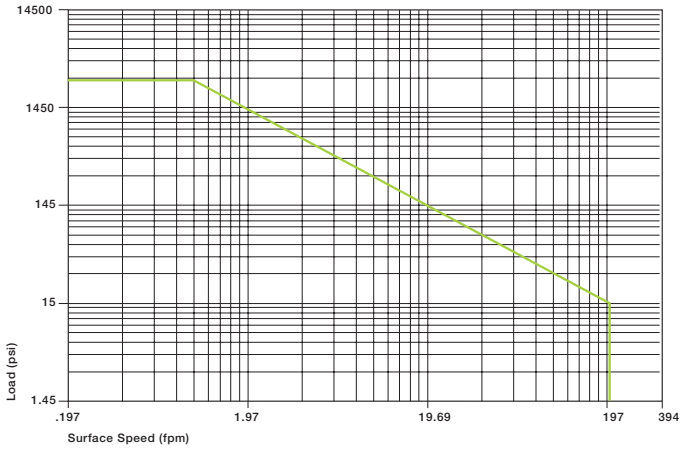
- When your bearing comes in direct contact with food or pharmaceuticals
- For low speeds
- When quiet operation is important
- When dirt needs to become embedded

When not to use iglide® A200 plain bearings:

- When the maximum abrasion resistance is necessary
  ➤ iglide® L280
- When temperatures are continuously greater than 176°F
  ➤ iglide® A290, T500
- When a cost-effective universal bearing is desired
  ➤ iglide® G300

Table 11.1: Material Data

General Properties	Unit	iglide® A200	Testing Method
Density	g/cm³	1.14	
Color		white	
Max. moisture absorption at 73°F / 50% r.h.	% weight	1.5	DIN 53495
Max. moisture absorption	% weight	7.6	
Coefficient of friction, dynamic against steel	µ	0.10 - 0.40	
p x v value, max. (dry)	psi x fpm	2900	
Mechanical Properties			
Modulus of elasticity	psi	362,500	DIN 53457
Tensile strength 68°F	psi	16,820	DIN 53452
Compressive strength	psi	7,830	
Permissible static surface pressure (68°F)	psi	2,610	
Shore D-hardness		81	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	176	
Max. short-term application temperature	°F	338	
Min. application temperature	°F	-40	
Thermal conductivity	[W/m x K]	0.24	ASTM C 177
Coefficient of thermal expansion (at 73°F)	[K^{-1} x 10^{-5}]	10	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	> 10^{13}	DIN IEC 93
Surface resistance	Ω	> 10^{12}	DIN 53482



Graph 11.1: Permissible p x v values for iglide® A200 running dry against a steel shaft, at 68°F

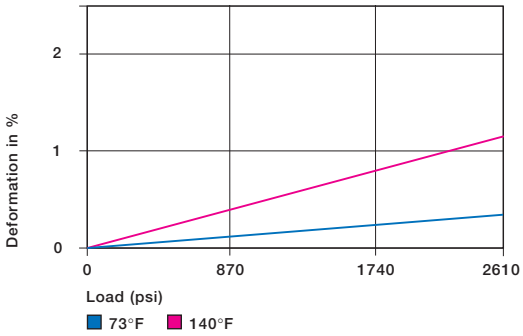
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Plain bearings made of iglide® A200 are FDA approved for use in direct contact with food and pharmaceuticals. They are an ideal solution for bearing applications on machines that manufacture consumables, pharmaceuticals, medical devices, small household appliances, etc. To achieve the benefit of food compatibility, mixing with solid lubricants must be avoided. The thermoplastic alloy of iglide® A200 is used for abrasion resistance. Furthermore, iglide® A200 is characterized by its capacity for embedding dirt and by its quiet running behavior.

Compressive Strength

The high abrasion resistance, the resistance to dirt, and the ability to run dry make it possible to eliminate the customary, expensive protective coverings of lubricated bearings.
Graph 11.2 shows the elastic deformation of iglide® A200 for radial loads. At the maximum permissible static surface pressure of 2610 psi, the deformation is less than 2%.
Plastic deformation is minimal up to this radial load. However, it is also a result of the cycle time.

➤ Compressive Strength, Page 1.3



Graph 11.2: Deformation under load and temperature

Permissible Surface Speeds

iglide® A200 was developed for low surface speeds. Running dry for continuous usage, a maximum of 157 fpm (rotating) or 393 fpm (linear) is possible.
These given values indicate the limits at which an increase up to the continuous permissible temperature occurs. This increase is a result of friction. In practice these limit values are not often reached, due to varying application conditions.

➤ Surface Speed, Page 1.5
➤ p x v value, Page 1.6

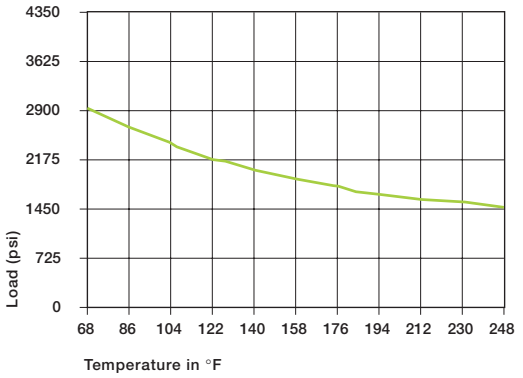
fpm	Rotating	Oscillating	Linear
Continuous	157	118	393
Short-term	295	216	590

Table 11.2: Maximum surface speeds

Temperatures

The maximum permissible short-term temperature is 338°F. With increasing temperatures, the compressive strength of iglide® A200 plain bearings decreases. Graph 11.3 shows this relationship. The ambient temperatures prevalent in the bearing system also have an effect on the bearing wear.

➤ Application Temperatures, Page 1.7



Graph 11.3: Recommended maximum permissible static surface pressure of iglide® A200 as a result of the temperature

iglide® A200	Application Temperature
Minimum	-40°F
Max. long-term	+176°F
Max. short-term	+338°F

Table 11.3: Temperature iglide® A200

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Installation Tolerances

iglide® A200 plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

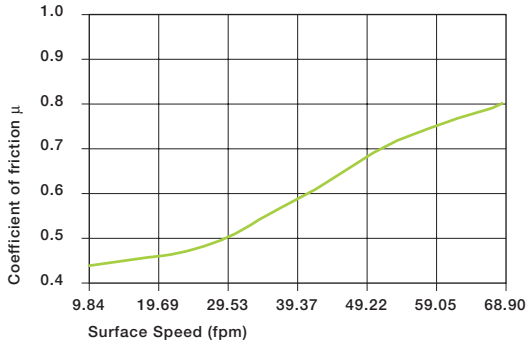
Friction and Wear

Similar to wear resistance, the coefficient of friction also changes with the load. For iglide® A200 plain bearings, the coefficient of friction μ decreases slightly with increasing load. Friction and wear are also dependent to a large degree on the shafting partner. Shafts that are too smooth not only increase the coefficient of friction, they can also increase the wear of the bearing. Ground surfaces with an average roughness greater than Ra = 16-24 rms are recommended.

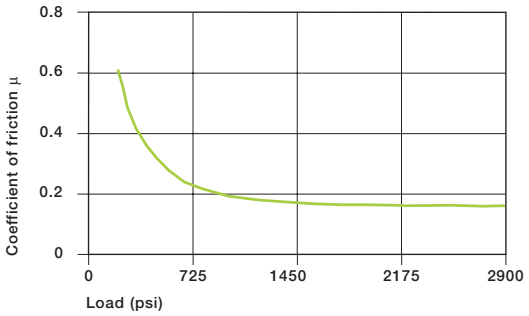
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9

iglide® A200	Dry	Grease	Oil	Water
Coefficient of Friction μ	0.10 - 0.40	0.09	0.04	0.04

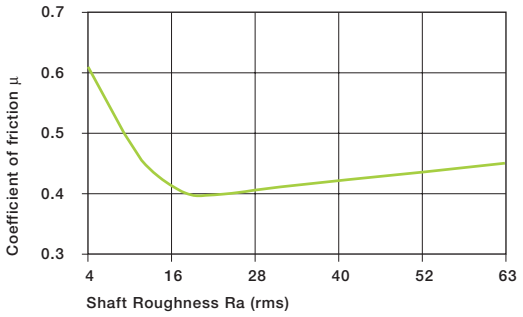
Table 11.4: Coefficient of friction of iglide® A200 against steel (Ra = 1 µm, 50 HRC)



Graph 11.4: Coefficients of friction of iglide® A200 as a function of the running speed; p = 108 psi



Graph 11.5: Coefficients of friction of iglide® A200 as a function of the load, v = 0.01 m/s

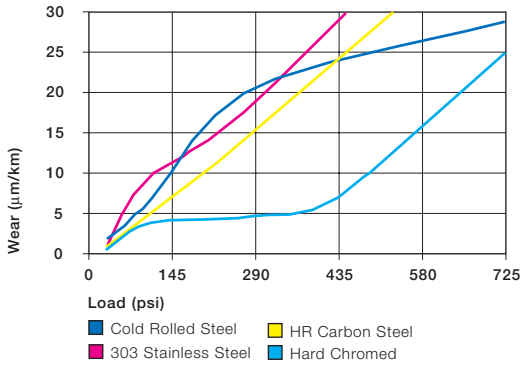


Graph 11.6: Coefficients of friction of iglide® A200 as a function of the shaft surface (shaft Cold Rolled Steel)

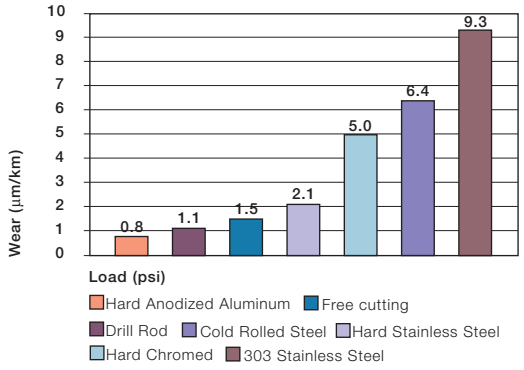
Shaft Materials

Graph 11.7 and 11.9 show results of testing different shaft materials with plain bearings made of iglide® A200.

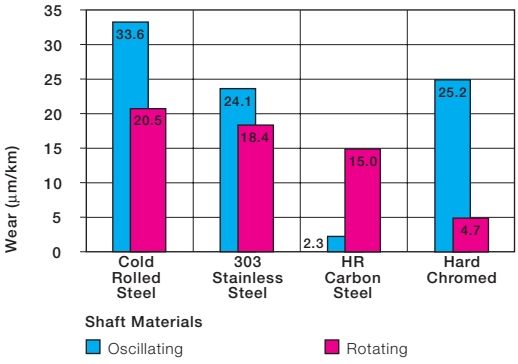
➤ Shaft Materials, Page 1.11



Graph 11.8: Wear of iglide® A200 with different shaft materials in rotational applications



Graph 11.7: Wear of iglide® A200, rotating applications with different shaft materials, p=108 psi, v=98 fpm



Graph 11.9: Wear with different shaft materials, oscillating and rotating movement p = 290 psi

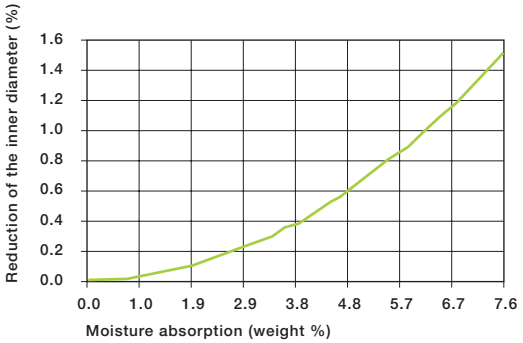
Chemical Resistance

iglide® A200 plain bearings have strong resistance to chemicals. They are also resistant to most lubricants.
iglide® A200 plain bearings are not attacked by most weak organic and inorganic acids.
The moisture absorption of iglide® A200 plain bearings is approximately 1.5% in the standard atmosphere. The saturation limit submerged in water is 7.6%. This must be taken into account for these types of use applications.

➤ Chemical Table, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Grease, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Conditionally Resistant
Strong lyes	Conditionally Resistant

Table 11.5: Chemical resistance of iglide® A200



Graph 11.10: Effect of moisture absorption on iglide® A200 plain bearings

iglide® A200 - Plain Bearings

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Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

Radiation Resistance

Plain bearings made from iglide® A200 are resistant to radiation up to an intensity of 2 x 10^4 Gy. Higher radiation levels attack the material and can cause essential mechanical properties to be lost.

UV-Resistance

iglide® A200 plain bearings are resistant to UV radiation.

Vacuum

In a vacuum environment, iglide® A200 plain bearings have restricted use.

Electrical Properties

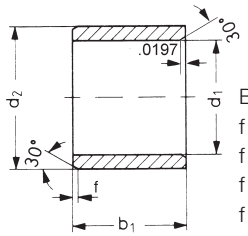
iglide® A200 plain bearings are electrically insulating.

iglide® A200	
Specific volume resistance	> 10^{13} Ωcm
Surface resistance	> 10^{12} Ω

Table 11.6: Electrical properties of iglide® A200

iglide® A200 - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

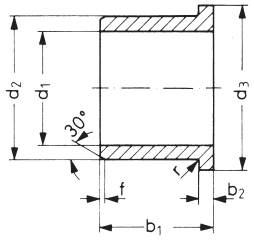
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
ASI-0204-04	1/8	1/4	1/4	.1280	.1262	.2515	.2510	.1250	.1241
ASI-0305-04	3/16	5/16	1/4	.1905	.1887	.3140	.3135	.1875	.1866
ASI-0406-04	1/4	3/8	1/4	.2539	.2516	.3765	.3760	.2500	.2491
ASI-0406-06	1/4	3/8	3/8	.2539	.2516	.3765	.3760	.2500	.2491
ASI-0406-08	1/4	3/8	1/2	.2539	.2516	.3765	.3760	.2500	.2491
ASI-0507-08	5/16	7/16	1/2	.3164	.3141	.4390	.4385	.3125	.3116
ASI-0608-04	3/8	1/2	1/4	.3789	.3766	.5015	.5010	.3750	.3741
ASI-0608-08	3/8	1/2	1/2	.3789	.3766	.5015	.5010	.3750	.3741
ASI-0810-08	1/2	5/8	1/2	.5047	.5020	.6260	.6250	.5000	.4990
ASI-0810-12	1/2	5/8	3/4	.5047	.5020	.6260	.6250	.5000	.4990
ASI-1013-05	5/8	1 3/16	5/16	.6297	.6270	.8135	.8125	.6250	.6240
ASI-1013-12	5/8	1 3/16	3/4	.6297	.6270	.8135	.8125	.6250	.6240
ASI-1216-12	3/4	1	3/4	.7559	.7525	1.0010	1.0000	.7500	.7490
ASI-1216-16	3/4	1	1	.7559	.7525	1.0010	1.0000	.7500	.7490
ASI-1418-16	7/8	1 1/8	1	.8809	.8775	1.1260	1.1250	.8750	.8740
ASI-1620-12	1	1 1/4	3/4	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
ASI-1620-16	1	1 1/4	1	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
ASI-2024-16	1 1/4	1 1/2	1	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
ASI-2428-24	1 1/2	1 3/4	1 1/2	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990

iglide® A200 - Plain Bearings
Flange Bearing, Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

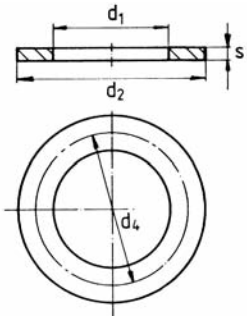
Length Tolerance (b1)

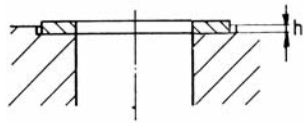
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
						Max.	Min.	Max.	Min.	Max.	Min.
AFI-0204-04	1/8	1/4	1/4	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
AFI-0305-04	3/16	5/16	1/4	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
AFI-0406-04	1/4	3/8	1/4	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
AFI-0406-06	1/4	3/8	3/8	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
AFI-0507-08	5/16	7/16	1/2	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
AFI-0608-04	3/8	1/2	1/4	.625	.062	.3787	.3764	.5007	.5000	.3750	.3736
AFI-0608-08	3/8	1/2	1/2	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
AFI-0810-08	1/2	5/8	1/2	.875	.062	.5047	.5020	.6257	.6250	.5000	.4983
AFI-0810-12	1/2	5/8	3/4	.875	.062	.5047	.5020	.6257	.6250	.5000	.4983
AFI-1013-16	5/8	13/16	1	1.063	.156	.6297	.6270	.8135	.8125	.6250	.6240
AFI-1216-12	3/4	1	3/4	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
AFI-1216-16	3/4	1	1	1.250	.156	.7559	.7525	1.0010	1.0000	.7500	.7490
AFI-1418-24	7/8	1 1/8	1 1/2	1.375	.156	.8809	.8775	1.1260	1.1250	.8750	.8740
AFI-1620-16	1	1 1/4	1	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
AFI-1620-24	1	1 1/4	1 1/2	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.0000	.9990
AFI-2024-16	1 1/4	1 1/2	1	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
AFI-2024-24	1 1/4	1 1/2	1 1/2	1.750	.200	1.2600	1.2531	1.5005	1.4995	1.2500	1.2490
AFI-2428-16	1 1/2	1 3/4	1	2.000	.125	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
AFI-2428-24	1 1/2	1 3/4	1 1/2	2.000	.125	1.5100	1.5032	1.7505	1.7495	1.5000	1.4990
AFI-2832-16	1 3/4	2	1	2.250	.125	1.7560	1.7532	2.0005	1.9995	1.7500	1.7490

iglide® A200 - Linear Plain Bearing
Thrust Washer, Inch





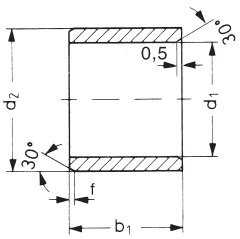


Part Number	d1	d1		d2		s
	(nominal)	Max.	Min.	Max	Min.	
ATI-04	1/4	.2610	.2551	.6201	.6094	.0902
ATI-06	3/8	.3943	.3813	.7500	.7370	.0902
ATI-08	1/2	.5102	.5031	.8201	.8071	.0902
ATI-12	3/4	.7673	.7598	1.0654	1.0500	.0941
ATI-16	1	1.0268	1.0197	1.5000	1.4843	.1252

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QuickSpec: www.igus.com/qs/iglide.asp

iglide® A200 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

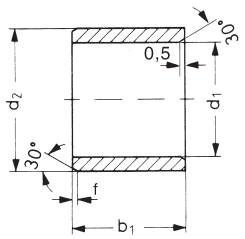
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance After Pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
ASM-0103-02	1.0	+0.020 +0.080	3.0	2.0	1.080	1.020	3.080	3.000	1.000	.975
ASM-0104-02	1.5	+0.020 +0.080	4.0	2.0	1.580	1.520	4.012	4.000	1.500	1.475
ASM-0205-02	2.0	+0.020 +0.080	5.0	2.0	2.080	2.020	5.012	5.000	2.000	1.975
ASM-0205-03	2.0	+0.020 +0.080	5.0	3.0	2.080	2.020	5.012	5.000	2.000	1.975
ASM-0206-03	2.5	+0.020 +0.080	6.0	3.0	2.580	2.520	6.012	6.000	2.500	2.475
ASM-0305-03	3.0	+0.020 +0.080	5.0	3.0	3.080	3.020	5.012	5.000	3.000	2.975
ASM-0305-04	3.0	+0.020 +0.080	5.0	4.0	3.080	3.020	5.012	5.000	3.000	2.975
ASM-0306-03	3.0	+0.020 +0.080	6.0	3.0	3.080	3.020	6.012	6.000	3.000	2.975
ASM-0306-04	3.0	+0.020 +0.080	6.0	4.0	3.080	3.020	6.012	6.000	3.000	2.975
ASM-0407-03	4.0	+0.030 +0.105	7.0	3.0	4.105	4.030	7.015	7.000	4.000	3.970
ASM-0407-04	4.0	+0.030 +0.105	7.0	4.0	4.105	4.030	7.015	7.000	4.000	3.970
ASM-0407-06	4.0	+0.030 +0.105	7.0	6.0	4.105	4.030	7.015	7.000	4.000	3.970
ASM-0408-06	4.0	+0.030 +0.105	8.0	6.0	4.105	4.030	8.015	8.000	4.000	3.970
ASM-0508-04	5.0	+0.030 +0.105	8.0	4.0	5.105	5.030	8.015	8.000	5.000	4.970
ASM-0508-05	5.0	+0.030 +0.105	8.0	5.0	5.105	5.030	8.015	8.000	5.000	4.970
ASM-0508-08	5.0	+0.030 +0.105	8.0	8.0	5.105	5.030	8.015	8.000	5.000	4.970
ASM-0509-05	5.0	+0.030 +0.105	9.0	5.0	5.105	5.030	9.015	9.000	5.000	4.970
ASM-0509-08	5.0	+0.030 +0.105	9.0	8.0	5.105	5.030	9.015	9.000	5.000	4.970
ASM-0608-10	6.0	+0.030 +0.105	8.0	10.0	6.105	6.030	8.015	8.000	6.000	5.970
ASM-0609-06	6.0	+0.030 +0.105	9.0	6.0	6.105	6.030	9.015	9.000	6.000	5.970
ASM-0610-04	6.0	+0.030 +0.105	10.0	4.0	6.105	6.030	10.015	10.000	6.000	5.970
ASM-0610-06	6.0	+0.030 +0.105	10.0	6.0	6.105	6.030	10.015	10.000	6.000	5.970
ASM-0610-10	6.0	+0.030 +0.105	10.0	10.0	6.105	6.030	10.015	10.000	6.000	5.970
ASM-0612-06	6.0	+0.030 +0.105	12.0	6.0	6.105	6.030	12.018	12.000	6.000	5.970
ASM-0612-10	6.0	+0.030 +0.105	12.0	10.0	6.105	6.030	12.018	12.000	6.000	5.970
ASM-0710-05	7.0	+0.040 +0.130	10.0	5.0	7.130	7.030	10.015	10.000	7.000	6.964
ASM-0710-08	7.0	+0.040 +0.130	10.0	8.0	7.130	7.030	10.015	10.000	7.000	6.964
ASM-0810-06	8.0	+0.040 +0.130	10.0	6.0	8.130	8.040	10.015	10.000	8.000	7.964
ASM-0810-08	8.0	+0.040 +0.130	10.0	8.0	8.130	8.040	10.015	10.000	8.000	7.964
ASM-0810-10	8.0	+0.040 +0.130	10.0	10.0	8.130	8.040	10.015	10.000	8.000	7.964
ASM-0811-08	8.0	+0.040 +0.130	11.0	8.0	8.130	8.040	11.018	11.000	8.000	7.964
ASM-0811-12	8.0	+0.040 +0.130	11.0	12.0	8.130	8.040	11.018	11.000	8.000	7.964
ASM-0812-06	8.0	+0.040 +0.130	12.0	6.0	8.130	8.040	12.018	12.000	8.000	7.964
ASM-0812-08	8.0	+0.040 +0.130	12.0	8.0	8.130	8.040	12.018	12.000	8.000	7.964
ASM-0812-10	8.0	+0.040 +0.130	12.0	10.0	8.130	8.040	12.018	12.000	8.000	7.964
ASM-0812-12	8.0	+0.040 +0.130	12.0	12.0	8.130	8.040	12.018	12.000	8.000	7.964
ASM-0814-06	8.0	+0.040 +0.130	14.0	6.0	8.130	8.040	14.018	14.000	8.000	7.964
ASM-0814-10	8.0	+0.040 +0.130	14.0	10.0	8.130	8.040	14.018	14.000	8.000	7.964
ASM-0912-14	9.0	+0.040 +0.130	12.0	14.0	9.130	9.040	12.018	12.000	9.000	8.964
ASM-1012-10	10.0	+0.040 +0.130	12.0	10.0	10.130	10.040	12.018	12.000	10.000	9.964
ASM-1014-06	10.0	+0.040 +0.130	14.0	6.0	10.130	10.040	14.018	14.000	10.000	9.964

iglide® A200 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

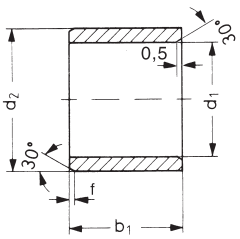
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance After Pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
ASM-1014-08	10.0	+0.040 +0.130	14.0	8.0	10.130	10.040	14.018	14.000	10.000	9.964
ASM-1014-10	10.0	+0.040 +0.130	14.0	10.0	10.130	10.040	14.018	14.000	10.000	9.964
ASM-1014-16	10.0	+0.040 +0.130	14.0	16.0	10.130	10.040	14.018	14.000	10.000	9.964
ASM-1016-06	10.0	+0.040 +0.130	16.0	6.0	10.130	10.040	16.018	16.000	10.000	9.964
ASM-1016-10	10.0	+0.040 +0.130	16.0	10.0	10.130	10.040	16.018	16.000	10.000	9.964
ASM-1016-16	10.0	+0.040 +0.130	16.0	16.0	10.130	10.040	16.018	16.000	10.000	9.964
ASM-1214-20	12.0	+0.050 +0.160	14.0	20.0	12.160	12.050	14.018	14.000	12.000	11.957
ASM-1216-15	12.0	+0.050 +0.160	16.0	15.0	12.160	12.050	16.018	16.000	12.000	11.957
ASM-1216-20	12.0	+0.050 +0.160	16.0	20.0	12.160	12.050	16.018	16.000	12.000	11.957
ASM-1218-08	12.0	+0.050 +0.160	18.0	8.0	12.160	12.050	18.018	18.000	12.000	11.957
ASM-1218-10	12.0	+0.050 +0.160	18.0	10.0	12.160	12.050	18.018	18.000	12.000	11.957
ASM-1218-15	12.0	+0.050 +0.160	18.0	15.0	12.160	12.050	18.018	18.000	12.000	11.957
ASM-1218-20	12.0	+0.050 +0.160	18.0	20.0	12.160	12.050	18.018	18.000	12.000	11.957
ASM-1416-10	14.0	+0.050 +0.160	16.0	10.0	14.160	14.050	16.018	16.000	14.000	13.957
ASM-1416-15	14.0	+0.050 +0.160	16.0	15.0	14.160	14.050	16.018	16.000	14.000	13.957
ASM-1416-20	14.0	+0.050 +0.160	16.0	20.0	14.160	14.050	16.018	16.000	14.000	13.957
ASM-1420-10	14.0	+0.050 +0.160	20.0	10.0	14.160	14.050	20.021	20.000	14.000	13.957
ASM-1420-15	14.0	+0.050 +0.160	20.0	15.0	14.160	14.050	20.021	20.000	14.000	13.957
ASM-1420-20	14.0	+0.050 +0.160	20.0	20.0	14.160	14.050	20.021	20.000	14.000	13.957
ASM-1517-10	15.0	+0.050 +0.160	17.0	10.0	15.160	15.050	17.018	17.000	15.000	14.957
ASM-1517-15	15.0	+0.050 +0.160	17.0	15.0	15.160	15.050	17.018	17.000	15.000	14.957
ASM-1521-10	15.0	+0.050 +0.160	21.0	10.0	15.160	15.050	21.021	21.000	15.000	14.957
ASM-1521-15	15.0	+0.050 +0.160	21.0	15.0	15.160	15.050	21.021	21.000	15.000	14.957
ASM-1521-20	15.0	+0.050 +0.160	21.0	20.0	15.160	15.050	21.021	21.000	15.000	14.957
ASM-1618-12	16.0	+0.050 +0.160	18.0	12.0	16.160	16.050	18.018	18.000	16.000	15.957
ASM-1618-20	16.0	+0.050 +0.160	18.0	20.0	16.160	16.050	18.018	18.000	16.000	15.957
ASM-1620-20	16.0	+0.050 +0.160	20.0	20.0	16.160	16.050	20.021	20.000	16.000	15.957
ASM-1620-25	16.0	+0.050 +0.160	20.0	25.0	16.160	16.050	20.021	20.000	16.000	15.957
ASM-1622-12	16.0	+0.050 +0.160	22.0	12.0	16.160	16.050	22.021	22.000	16.000	15.957
ASM-1622-15	16.0	+0.050 +0.160	22.0	15.0	16.160	16.050	22.021	22.000	16.000	15.957
ASM-1622-16	16.0	+0.050 +0.160	22.0	16.0	16.160	16.050	22.021	22.000	16.000	15.957
ASM-1622-20	16.0	+0.050 +0.160	22.0	20.0	16.160	16.050	22.021	22.000	16.000	15.957
ASM-1622-25	16.0	+0.050 +0.160	22.0	25.0	16.160	16.050	22.021	22.000	16.000	15.957
ASM-1824-12	18.0	+0.050 +0.160	24.0	12.0	18.160	18.050	24.021	24.000	18.000	17.957
ASM-1824-20	18.0	+0.050 +0.160	24.0	20.0	18.160	18.050	24.021	24.000	18.000	17.957
ASM-1824-30	18.0	+0.050 +0.160	24.0	30.0	18.160	18.050	24.021	24.000	18.000	17.957
ASM-2023-15	20.0	+0.065 +0.195	23.0	15.0	20.195	20.065	23.021	23.000	20.000	19.948
ASM-2023-20	20.0	+0.065 +0.195	23.0	20.0	20.195	20.065	23.021	23.000	20.000	19.948
ASM-2025-15	20.0	+0.065 +0.195	25.0	15.0	20.195	20.065	25.021	25.000	20.000	19.948
ASM-2025-20	20.0	+0.065 +0.195	25.0	20.0	20.195	20.065	25.021	25.000	20.000	19.948
ASM-2025-30	20.0	+0.065 +0.195	25.0	30.0	20.195	20.065	25.021	25.000	20.000	19.948

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iglide® A200 - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

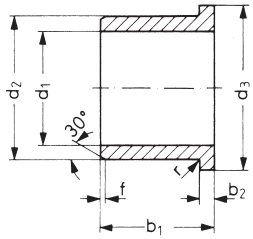
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance After Pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
ASM-2026-15	20.0	+0.065 +0.195	26.0	15.0	20.195	20.065	26.021	26.000	20.000	19.948
ASM-2026-20	20.0	+0.065 +0.195	26.0	20.0	20.195	20.065	26.021	26.000	20.000	19.948
ASM-2026-30	20.0	+0.065 +0.195	26.0	30.0	20.195	20.065	26.021	26.000	20.000	19.948
ASM-2226-15	22.0	+0.065 +0.195	26.0	15.0	22.195	22.065	26.021	26.000	22.000	21.948
ASM-2228-10	22.0	+0.065 +0.195	28.0	10.0	22.195	22.065	28.021	28.000	22.000	21.948
ASM-2228-15	22.0	+0.065 +0.195	28.0	15.0	22.195	22.065	28.021	28.000	22.000	21.948
ASM-2228-20	22.0	+0.065 +0.195	28.0	20.0	22.195	22.065	28.021	28.000	22.000	21.948
ASM-2228-30	22.0	+0.065 +0.195	28.0	30.0	22.195	22.065	28.021	28.000	22.000	21.948
ASM-2430-15	24.0	+0.065 +0.195	30.0	15.0	24.195	24.065	30.025	30.000	24.000	23.948
ASM-2430-20	24.0	+0.065 +0.195	30.0	20.0	24.195	24.065	30.025	30.000	24.000	23.948
ASM-2430-30	24.0	+0.065 +0.195	30.0	30.0	24.195	24.065	30.025	30.000	24.000	23.948
ASM-2528-12	25.0	+0.065 +0.195	28.0	12.0	25.195	25.065	28.021	28.000	25.000	24.948
ASM-2528-20	25.0	+0.065 +0.195	28.0	20.0	25.195	25.065	28.021	28.000	25.000	24.948
ASM-2530-20	25.0	+0.065 +0.195	30.0	20.0	25.195	25.065	30.025	30.000	25.000	24.948
ASM-2530-30	25.0	+0.065 +0.195	30.0	30.0	25.195	25.065	30.025	30.000	25.000	24.948
ASM-2530-40	25.0	+0.065 +0.195	30.0	40.0	25.195	25.065	30.025	30.000	25.000	24.948
ASM-2532-20	25.0	+0.065 +0.195	32.0	20.0	25.195	25.065	32.025	32.000	25.000	24.948
ASM-2532-30	25.0	+0.065 +0.195	32.0	30.0	25.195	25.065	32.025	32.000	25.000	24.948
ASM-2532-40	25.0	+0.065 +0.195	32.0	40.0	25.195	25.065	32.025	32.000	25.000	24.948
ASM-2630-20	26.0	+0.065 +0.195	30.0	20.0	26.195	26.065	30.025	30.000	26.000	25.948
ASM-2632-30	26.0	+0.065 +0.195	32.0	30.0	26.195	26.065	32.025	32.000	26.000	25.948
ASM-2734-20	27.0	+0.065 +0.195	34.0	20.0	27.195	27.065	34.025	34.000	27.000	26.948
ASM-2734-30	27.0	+0.065 +0.195	34.0	30.0	27.195	27.065	34.025	34.000	27.000	26.948
ASM-2734-40	27.0	+0.065 +0.195	34.0	40.0	27.195	27.065	34.025	34.000	27.000	26.948
ASM-2833-20	28.0	+0.065 +0.195	33.0	20.0	28.195	28.065	33.025	33.000	28.000	27.948
ASM-2836-20	28.0	+0.065 +0.195	36.0	20.0	28.195	28.065	36.025	36.000	28.000	27.948
ASM-2836-30	28.0	+0.065 +0.195	36.0	30.0	28.195	28.065	36.025	36.000	28.000	27.948
ASM-2836-40	28.0	+0.065 +0.195	36.0	40.0	28.195	28.065	36.025	36.000	28.000	27.948
ASM-3038-20	30.0	+0.065 +0.195	38.0	20.0	30.195	30.065	38.025	38.000	30.000	29.948
ASM-3038-30	30.0	+0.065 +0.195	38.0	30.0	30.195	30.065	38.025	38.000	30.000	29.948
ASM-3038-40	30.0	+0.065 +0.195	38.0	40.0	30.195	30.065	38.025	38.000	30.000	29.948
ASM-3240-20	32.0	+0.080 +0.240	40.0	20.0	32.240	32.080	40.025	40.000	32.000	31.938
ASM-3240-30	32.0	+0.080 +0.240	40.0	30.0	32.240	32.080	40.025	40.000	32.000	31.938
ASM-3240-40	32.0	+0.080 +0.240	40.0	40.0	32.240	32.080	40.025	40.000	32.000	31.938

iglide® A200 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

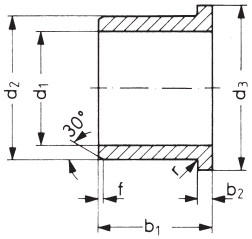
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0,14	Max.	Min.	Max.	Min.	Max.	Min.
AFM-0103-02	1.0	+0.020 +0.080	3.0	5.0	2.0	1.0	1.080	1.020	3.080	3.000	1.000	.9750
AFM-0104-02	1.5	+0.020 +0.080	4.0	6.0	2.0	1.0	1.580	1.520	4.012	4.000	1.500	1.475
AFM-0205-03	2.0	+0.020 +0.080	5.0	8.0	3.0	1.5	2.080	2.020	5.012	5.000	2.000	1.975
AFM-0206-03	2.5	+0.020 +0.080	6.0	9.0	3.0	1.5	2.080	2.020	5.012	5.000	2.000	1.975
AFM-0306-04	3.0	+0.020 +0.080	6.0	9.0	4.0	1.5	3.080	3.020	6.012	6.000	3.000	2.975
AFM-0408-04	4.0	+0.030 +0.105	8.0	12.0	4.0	2.0	4.105	4.030	8.015	8.000	4.000	3.970
AFM-0408-06	4.0	+0.030 +0.105	8.0	12.0	6.0	2.0	4.105	4.030	8.015	8.000	4.000	3.970
AFM-0507-05	5.0	+0.030 +0.105	7.0	11.0	5.0	1.0	5.105	5.030	7.012	7.000	5.000	4.970
AFM-0509-05	5.0	+0.030 +0.105	9.0	13.0	5.0	2.0	5.105	5.030	9.015	9.000	5.000	4.970
AFM-0509-06	5.0	+0.030 +0.105	9.0	13.0	6.0	2.0	5.105	5.030	9.015	9.000	5.000	4.970
AFM-0509-08	5.0	+0.030 +0.105	9.0	13.0	8.0	2.0	5.105	5.030	9.015	9.000	5.000	4.970
AFM-0610-04	6.0	+0.030 +0.105	10.0	14.0	4.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
AFM-0610-06	6.0	+0.030 +0.105	10.0	14.0	6.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
AFM-0610-10	6.0	+0.030 +0.105	10.0	14.0	10.0	2.0	6.105	6.030	10.015	10.000	6.000	5.970
AFM-0612-06	6.0	+0.030 +0.105	11.0	14.0	6.0	3.0	6.105	6.030	12.018	12.000	6.000	5.970
AFM-0612-08	6.0	+0.030 +0.105	12.0	14.0	8.0	3.0	6.105	6.030	12.018	12.000	6.000	5.970
AFM-0612-10	6.0	+0.030 +0.105	12.0	14.0	10.0	3.0	6.105	6.030	12.018	12.000	6.000	5.970
AFM-0711-08	7.0	+0.040 +0.130	11.0	15.0	8.0	2.0	7.130	7.040	11.018	11.000	7.000	6.964
AFM-0811-08	8.0	+0.040 +0.130	11.0	13.0	8.0	2.0	8.130	8.040	11.018	11.000	8.000	7.964
AFM-0812-06	8.0	+0.040 +0.130	12.0	13.0	6.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
AFM-0812-08	8.0	+0.040 +0.130	12.0	16.0	8.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
AFM-0812-12	8.0	+0.040 +0.130	12.0	16.0	12.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
AFM-0812-22	8.0	+0.040 +0.130	12.0	16.0	22.0	2.0	8.130	8.040	12.018	12.000	8.000	7.964
AFM-0814-06	8.0	+0.040 +0.130	14.0	18.0	6.0	3.0	8.130	8.040	14.018	14.000	8.000	7.964
AFM-0814-10	8.0	+0.040 +0.130	14.0	18.0	10.0	3.0	8.130	8.040	14.018	14.000	8.000	7.964
AFM-0914-06	9.0	+0.040 +0.130	14.0	19.0	6.0	2.0	9.130	9.040	14.018	14.000	9.000	8.964
AFM-0914-10	9.0	+0.040 +0.130	14.0	19.0	10.0	2.0	9.130	9.040	14.018	14.000	9.000	8.964
AFM-0914-14	9.0	+0.040 +0.130	14.0	19.0	14.0	2.0	9.130	9.040	14.018	14.000	9.000	8.964
AFM-1012-10	10.0	+0.040 +0.130	12.0	18.0	10.0	1.0	10.130	10.040	12.018	12.000	10.000	9.964
AFM-1016-06	10.0	+0.040 +0.130	16.0	22.0	6.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
AFM-1016-08	10.0	+0.040 +0.130	16.0	22.0	8.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
AFM-1016-10	10.0	+0.040 +0.130	16.0	22.0	10.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
AFM-1016-16	10.0	+0.040 +0.130	16.0	22.0	16.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
AFM-101620-10	10.0	+0.040 +0.130	16.0	20.0	10.0	3.0	10.130	10.040	16.018	16.000	10.000	9.964
AFM-1214-12	12.0	+0.050 +0.160	14.0	20.0	12.0	1.0	12.160	12.050	14.018	14.000	12.000	11.957
AFM-1218-08	12.0	+0.050 +0.160	18.0	24.0	8.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
AFM-1218-10	12.0	+0.050 +0.160	18.0	22.0	10.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
AFM-1218-12	12.0	+0.050 +0.160	18.0	24.0	12.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
AFM-1218-15	12.0	+0.050 +0.160	18.0	22.0	15.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
AFM-1218-20	12.0	+0.050 +0.160	18.0	22.0	20.0	3.0	12.160	12.050	18.018	18.000	12.000	11.957
AFM-1420-10	14.0	+0.050 +0.160	20.0	25.0	10.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957

Flange - MM
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iglide® A200 - Plain Bearings
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance After Pressfit in Ø H7	d2	d3 d13	b1 h13	b2 -0,14	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
AFM-1420-15	14.0	+0.050 +0.160	20.0	25.0	15.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957
AFM-1420-20	14.0	+0.050 +0.160	20.0	25.0	20.0	3.0	14.160	14.050	20.021	20.000	14.000	13.957
AFM-1521-10	15.0	+0.050 +0.160	21.0	27.0	10.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
AFM-1521-15	15.0	+0.050 +0.160	21.0	27.0	15.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
AFM-1521-20	15.0	+0.050 +0.160	21.0	27.0	20.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
AFM-1521-25	15.0	+0.050 +0.160	21.0	27.0	25.0	3.0	15.160	15.050	21.021	21.000	15.000	14.957
AFM-1622-12	16.0	+0.050 +0.160	22.0	28.0	12.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
AFM-1622-15	16.0	+0.050 +0.160	22.0	28.0	15.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
AFM-1622-20	16.0	+0.050 +0.160	22.0	28.0	20.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
AFM-1622-25	16.0	+0.050 +0.160	22.0	28.0	25.0	3.0	16.160	16.050	22.021	22.000	16.000	15.957
AFM-1824-12	18.0	+0.050 +0.160	24.0	30.0	12.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
AFM-1824-18	18.0	+0.050 +0.160	24.0	30.0	18.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
AFM-1824-20	18.0	+0.050 +0.160	24.0	30.0	20.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
AFM-1824-30	18.0	+0.050 +0.160	24.0	30.0	30.0	3.0	18.160	18.050	24.021	24.000	18.000	17.957
AFM-2026-15	20.0	+0.065 +0.195	26.0	32.0	15.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
AFM-2026-20	20.0	+0.065 +0.195	26.0	32.0	20.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
AFM-2026-30	20.0	+0.065 +0.195	26.0	32.0	30.0	3.0	20.195	20.065	26.021	26.000	20.000	19.948
AFM-2228-15	22.0	+0.065 +0.195	28.0	34.0	15.0	3.0	22.195	22.065	28.021	28.000	22.000	21.948
AFM-2228-20	22.0	+0.065 +0.195	28.0	34.0	20.0	3.0	22.195	22.065	28.021	28.000	22.000	21.948
AFM-2228-30	22.0	+0.065 +0.195	28.0	34.0	30.0	3.0	22.195	22.065	28.021	28.000	22.000	21.948
AFM-2430-15	24.0	+0.065 +0.195	30.0	36.0	15.0	3.0	24.195	24.065	30.025	30.000	24.000	23.948
AFM-2430-20	24.0	+0.065 +0.195	30.0	36.0	20.0	3.0	24.195	24.065	30.025	30.000	24.000	23.948
AFM-2430-30	24.0	+0.065 +0.195	30.0	36.0	30.0	3.0	24.195	24.065	30.025	30.000	24.000	23.948
AFM-2532-20	25.0	+0.065 +0.195	32.0	38.0	20.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
AFM-2532-30	25.0	+0.065 +0.195	32.0	38.0	30.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
AFM-2532-40	25.0	+0.065 +0.195	32.0	38.0	40.0	4.0	25.195	25.065	32.025	32.000	25.000	24.948
AFM-2734-20	27.0	+0.065 +0.195	34.0	40.0	20.0	4.0	27.195	27.065	34.025	34.000	27.000	26.948
AFM-2734-30	27.0	+0.065 +0.195	34.0	40.0	30.0	4.0	27.195	27.065	34.025	34.000	27.000	26.948
AFM-2734-40	27.0	+0.065 +0.195	34.0	40.0	40.0	4.0	27.195	27.065	34.025	34.000	27.000	26.948
AFM-2836-20	28.0	+0.065 +0.195	36.0	42.0	20.0	4.0	28.195	28.065	36.025	36.000	28.000	27.948
AFM-2836-30	28.0	+0.065 +0.195	36.0	42.0	30.0	4.0	28.195	28.065	36.025	36.000	28.000	27.948
AFM-2836-40	28.0	+0.065 +0.195	36.0	42.0	40.0	4.0	28.195	28.065	36.025	36.000	28.000	27.948
AFM-3038-20	30.0	+0.065 +0.195	38.0	44.0	20.0	4.0	30.195	30.065	38.025	38.000	30.000	29.948
AFM-3038-30	30.0	+0.065 +0.195	38.0	44.0	30.0	4.0	30.195	30.065	38.025	38.000	30.000	29.948
AFM-3038-40	30.0	+0.065 +0.195	38.0	44.0	40.0	4.0	30.195	30.065	38.025	38.000	30.000	29.948
AFM-3240-20	32.0	+0.080 +0.240	40.0	46.0	20.0	4.0	32.240	32.080	40.025	40.000	32.000	31.938
AFM-3240-30	32.0	+0.080 +0.240	40.0	46.0	30.0	4.0	32.240	32.080	40.025	40.000	32.000	31.938
AFM-3240-40	32.0	+0.080 +0.240	40.0	46.0	40.0	4.0	32.240	32.080	40.025	40.000	32.000	31.938

iglide® A200 - Plain Bearings

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igus®

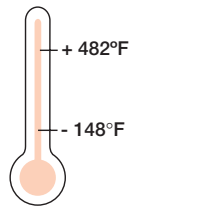
iglide® T500
The High Tech Problem Solver

- Temperature resistant from -148°F to 452°F in continuous operation
- Universal resistance to chemicals
- High compressive strength
- Very low moisture absorption
- Great wear resistance through the entire temperature range



iglide® T500 - Plain Bearings

Price Index



3 Styles
More than 566 Dimensions
Inner diameters
From 1/8 - 2-3/4" (2 - 75 mm)

Structure of the Part Number:

T S I - 0 2 0 3 - 0 3

d1 d2 b1 (s-Thrust Washer)

Dimension: I - Inch (in 1/16")
M - Metric (in mm)

Type: S - Sleeve
F - Flange
T - Thrust Washer

Material

When to use iglide® T500 plain bearings:

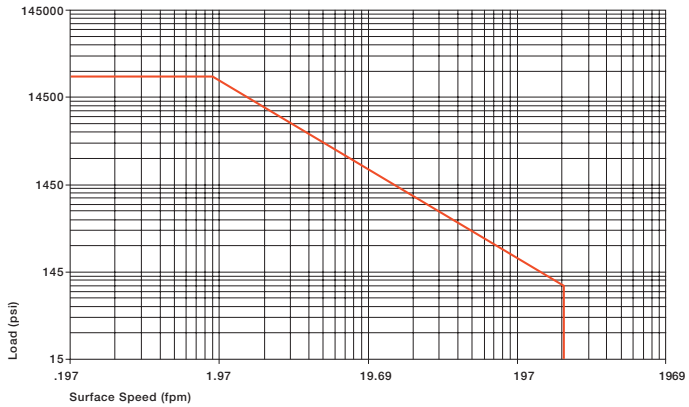
- When especially high temperature resistance is necessary
- For loads up to 21,750 psi
- For linear movements with a hard stainless steel
- For linear movements especially at high temperatures
- When universal resistance to chemicals is required

When not to use the iglide® T500 plain bearings:

- For very low wear at high loads
  ➤ iglide® Q, Z
- For edge compression
  ➤ iglide® Z

12.1: Material Table

General Properties	Unit	iglide® T500	Testing Method
Density	g/cm³	1.44	
Color		black	
Max. moisture absorption at 73°F / 50% r.h.	% weight	0.1	DIN 53495
Max. moisture absorption	% weight	0.5	
Coefficient of friction, dynamic against steel	µ	0.09 - 0.27	
p x v-value, max. (dry)	psi x fpm	37,700	
Mechanical Properties			
Modulus of elasticity	psi	1,174,500	DIN 53457
Tensile strength at 68°F	psi	24,650	DIN 53452
Compressive strength	psi	14,500	
Permissible static surface pressure (68°F)	psi	21,750	
Shore D-hardness		85	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	482	
Max. short-term application temperature	°F	599	
Min. application temperature	°F	-148	
Thermal conductivity	W/m x K	0.6	ASTM C 177
Coefficient of thermal expansion (to 73°F)	$K^{-1} \times 10^{-5}$	5	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$< 10^5$	DIN IEC 93
Surface resistance	Ω	$< 10^3$	DIN 53482



Graph. 12.1: Permissible p x v values for iglide® T500 running dry against a steel shaft, at 68°F

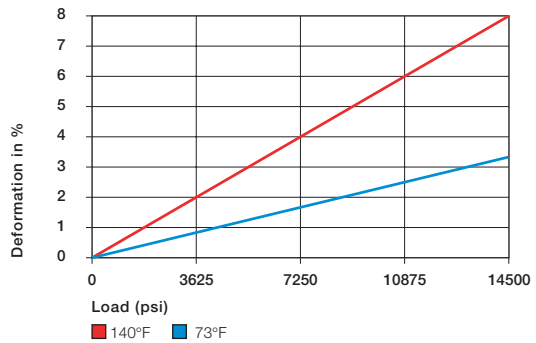
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iglide® T500 is defined by its combination of high temperature-resistance with compressive strength, along with high resistance to chemicals.

Compressive Strength

Graph 12.2 shows how iglide® T500 plain bearings deform elastically under load. Graph 12.1 on the preceding page shows the maximum p x v values at room temperature. In this case, the compressive strength of iglide® T500 even measures up to that of steel.
Graph 12.3 shows the special compression resistance of iglide® T500 also at very high temperatures. Even at the highest long-term application temperature of 482°F, iglide® T500 plain bearings still withstand a static surface pressure of approximately 4350 psi.

➤ Compressive Strength, Page 1.3



Graph 12.2: Deformation under load and temperature

Permissible Surface Speeds

iglide® T500 is designed for higher speeds than other iglide® bearings. This is due to its high temperature resistance and excellent heat conductivity. These benefits are readily apparent in the p x v values of max. 1.32 psi x fpm.
However, only the smallest radial loads may act on the bearings. At the given speeds, friction can cause a temperature increase to maximum permissible levels.

➤ Surface Speed, Page 1.5
➤ p x v Value, Page 1.6

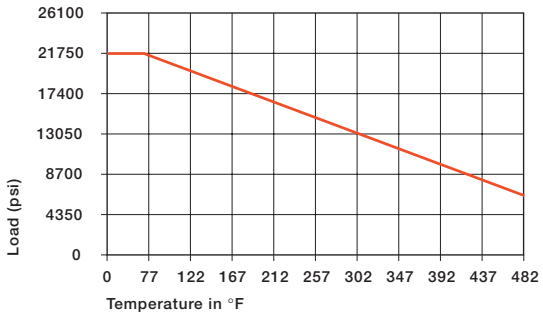
fpm	Rotating	Oscillating	Linear
Continuous	295	216	984
Short-term	689	492	1968

Table 12.2: Maximum surface speeds

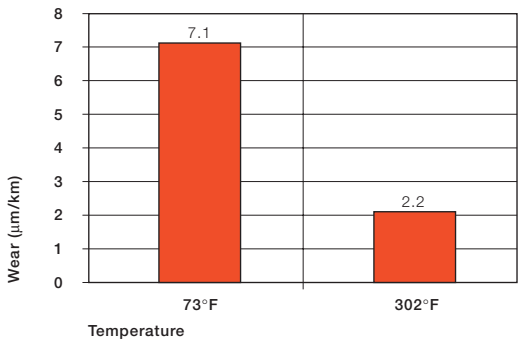
Temperatures

In terms of temperature resistance, iglide® T500 has also taken on a leading position. Having a permissible long-term application temperature of 482°F, iglide® T500 will even withstand 599°F for the short-term.
As in all thermoplastics, the compression resistance of T500 decreases with increasing temperature. However, the wear drops considerably when used within the observed temperature range of 73°F to 302°F. In certain cases, relaxation of the bearing can even occur at temperatures greater than 338°F. This could lead to, after recooling, the bearing moving out of the housing. At temperatures over 338°F, the axial security of the bearing in the housing needs to be tested. If necessary, secondary measures must be taken to mechanically secure the bearing. Please contact us if you have questions on bearing use.

➤ Application Temperatures, Page 1.7



Graph 12.3: Recommended maximum permissible static surface pressure of iglide® T500 as a result of temperature



Graph 12.4: Wear of iglide® T500, Rotation with p = 108 psi, v = 98 fpm, shaft made of Cold Rolled Steel

iglide® T500	Application Temperature
Minimum	- 148 °F
Max., long-term	+ 482 °F
Max., short-term	+ 599 °F

Table 12.3: Temperature limits for iglide® T500

Installation Tolerances

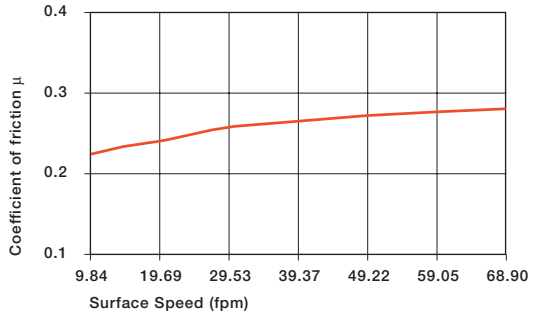
iglide® T500 plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

Friction and Wear

Similar to wear resistance, the coefficient of friction μ also changes with the load.The coefficient of friction increases with an increase in surface speed. On the other hand, an increased load has an inverse effect: the coefficient of friction decreases (see Graph 12.5 and 12.6). This explains the excellent performance of iglide® T500 plain bearings for high loads.
Friction and wear are also, dependent to a large degree on the shafting partner. Shafts that are too smooth increase the coefficient of friction of the bearing. Ground surfaces with an average roughness Ra of 24 - 32 rms are ideal.

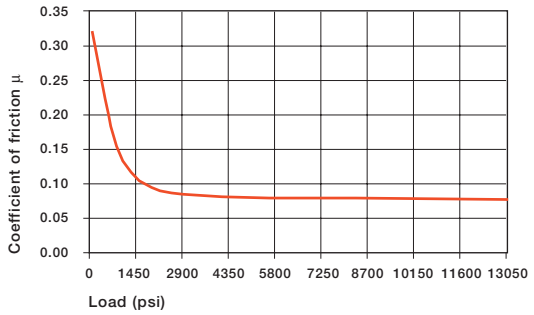
➤ Coefficients of friction and surfaces, Page 1.8
➤ Wear resistance, Page 1.9



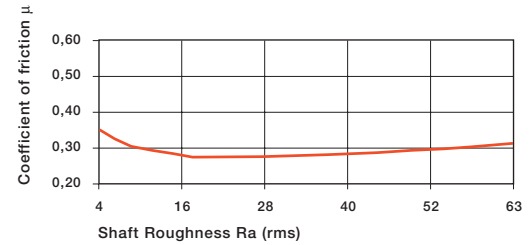
Graph 12.5: Coefficient of friction for iglide® T500 as a result of the surface speed; p = 108 psi, shaft Cold Rolled Steel

iglide® T500	Dry	Grease	Oil	Water
Coefficient of Friction μ	0.09 - 0.27	0.09	0.04	0.04

Table 12.4: Coefficient of friction for iglide® T500 against steel (Ra = 40 rms, 50 HRC)



Graph 12.6: Coefficient of friction for iglide® T500 as a result of the load, v = 1.97 fpm

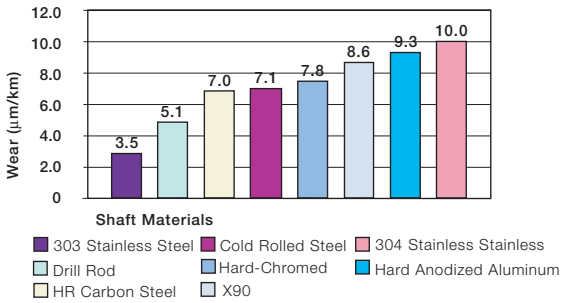


Graph 12.7: Coefficients of friction as a function of the shaft surface (shaft Cold Rolled Steel)

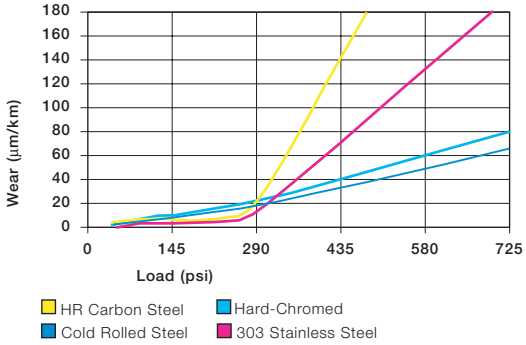
Shaft Materials

Graph 12.8 and 12.9 show results of testing different shaft materials with plain bearings made of iglide® T500. For low loads in rotating operation, the best wear values are found with 303 Stainless and HR Carbon Steel shafts. However, above a load of 290 psi, the bearing wear greatly increases with these two shaft materials. For the higher load range, hard-chromed shafts or Cold Rolled Steel shafts are advantageous. In oscillating operation at low loads, similar wear values for cold rolled Steel and 303 stainless steel shafts occur. The wear is somewhat higher than during rotational movements.
If the shaft material you plan to use is not contained in this list, please contact us.

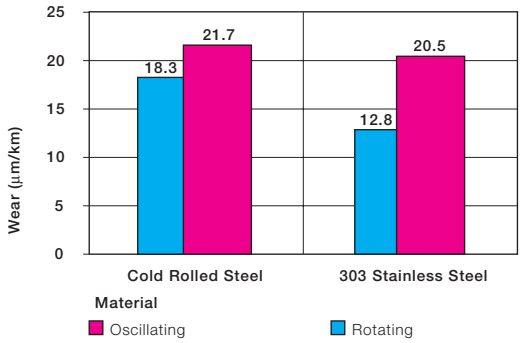
➤ Shaft Materials, Page 1.11



Graph 12.8: Wear of iglide® T500 with different shaft materials, p = 108 psi, v = 98 fpm



Graph 12.9: Wear of iglide® T500 with different shaft materials in rotational operation



Graph 12.10: Wear for oscillating and rotating applications with different shaft materials p = 290 psi

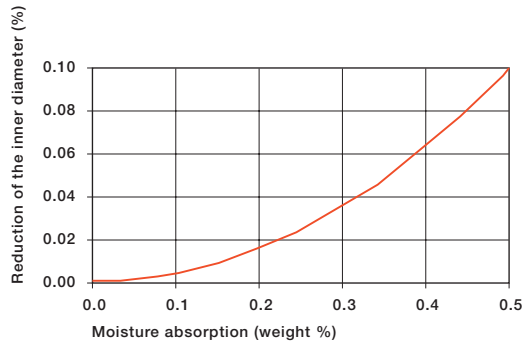
Chemical Resistance

iglide® T500 plain bearings are close to universally resistant to chemicals.
They are only attacked by concentrated nitric acid and by sulfuric acid with acidity levels over 65%. The list at the end of this catalog provides more comprehensive detailed information.

➤ Chemicals Table, Page 1.16

Medium	Resistance
Alcohols	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Resistant
Greases, oils	Resistant
Ketone	Resistant
Fuels	Resistant
Weak acids	Resistant
Strong acids	Conditionally Resistant
Weak lyes	Resistant
Strong lyes	Resistant

Table 12.5: Chemical resistance of iglide® T500



Graph 12.11: Effect of moisture absorption on iglide® T500 plain bearings

iglide® T500 - Plain Bearings

Radiation Resistance

Plain bearings made from iglide® T500 are resistant to radiation up to an intensity of $1x10^5$ Gy. iglide® T500 is the most radioactive-resistant material of the iglide® product line. iglide® T500 is extremely resistant to hard gamma radiation and withstands a radiation dose of 1000 Mrad without detectable change in its properties. The material also withstands an alpha or beta radiation of 10,000 Mrad with practically no damage.

UV Resistance

The excellent material properties of iglide® T500 do not change under UV radiation and other weathering effects.

Vacuum

In a vacuum environment, iglide® T500 plain bearings can be used virtually without restrictions. Outgassing takes place to a very limited extent.

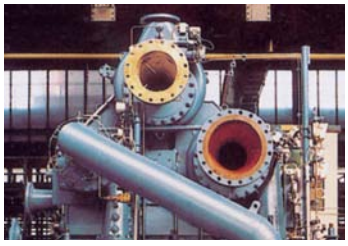
Electrical Properties

iglide® T500 plain bearings are electrically conductive.

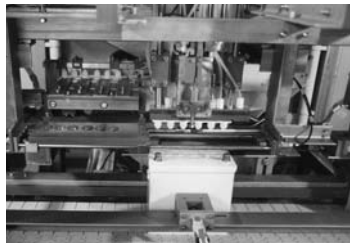
iglide® T500	
Specific volume resistance	$< 10^5$ Ωcm
Surface Resistance	$< 10^3$ Ω

Table 12.6: Electrical properties of iglide® T500

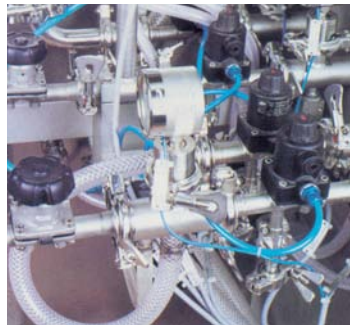
Application Examples



Picture 12.1: Intake control device



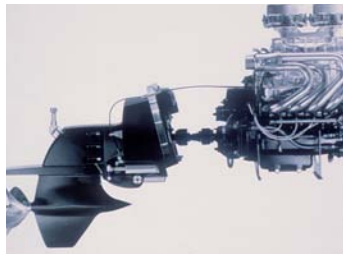
Picture 12.2: Battery decanting



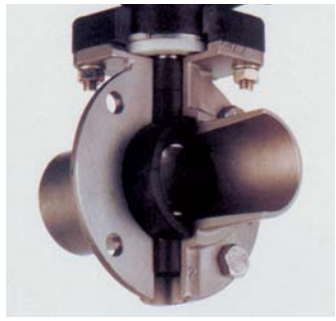
Picture 12.3: Flaps, valves



Picture 12.4: Catering equipment



Picture 12.5: Application on an outboard engine

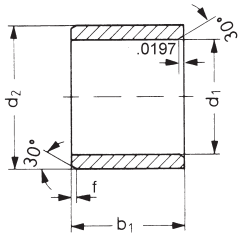


Picture 12.6: iglide® T500 plain bearing in valve applications

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iglide® T500 - Plain Bearings
Sleeve Bearing - Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

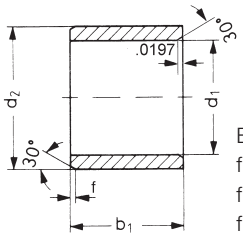
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
TSI-0203-03	1/8	3/16	3/16	.1269	.1251	.1878	.1873	.1243	.1236
TSI-0203-05	1/8	3/16	5/16	.1269	.1251	.1878	.1873	.1243	.1236
TSI-0203-06	1/8	3/16	3/8	.1269	.1251	.1878	.1873	.1243	.1236
TSI-0304-03	3/16	1/4	3/16	.1892	.1873	.2503	.2497	.1865	.1858
TSI-0304-04	3/16	1/4	1/4	.1892	.1873	.2503	.2497	.1865	.1858
TSI-0304-06	3/16	1/4	3/8	.1892	.1873	.2503	.2497	.1865	.1858
TSI-0304-08	3/16	1/4	1/2	.1892	.1873	.2503	.2497	.1865	.1858
TSI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
TSI-0405-06	1/4	5/16	3/8	.2521	.2498	.3128	.3122	.2490	.2481
TSI-0405-08	1/4	5/16	1/2	.2521	.2498	.3128	.3122	.2490	.2481
TSI-0506-04	5/16	3/8	1/4	.3148	.3125	.3753	.3747	.3115	.3106
TSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
TSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
TSI-0607-04	3/8	15/32	1/4	.3773	.3750	.4691	.4684	.3740	.3731
TSI-0607-05	3/8	15/32	5/16	.3773	.3750	.4691	.4684	.3740	.3731
TSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
TSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
TSI-0607-10	3/8	15/32	5/8	.3773	.3750	.4691	.4684	.3740	.3731
TSI-0607-12	3/8	15/32	3/4	.3773	.3750	.4691	.4684	.3740	.3731
TSI-0708-04	7/16	17/32	1/4	.4406	.4379	.5316	.5309	.4365	.4355
TSI-0708-08	7/16	17/32	1/2	.4406	.4379	.5316	.5309	.4365	.4355
TSI-0708-10	7/16	17/32	5/8	.4406	.4379	.5316	.5309	.4365	.4355
TSI-0708-12	7/16	17/32	3/4	.4406	.4379	.5316	.5309	.4365	.4355
TSI-0709-06	7/16	17/32	3/8	.4406	.4379	.5316	.5309	.4365	.4355
TSI-0809-04	1/2	19/32	1/4	.5030	.5003	.5941	.5934	.4990	.4980
TSI-0809-06	1/2	19/32	3/8	.5030	.5003	.5941	.5934	.4990	.4980
TSI-0809-08	1/2	19/32	1/2	.5030	.5003	.5941	.5934	.4990	.4980
TSI-0809-10	1/2	19/32	5/8	.5030	.5003	.5941	.5934	.4990	.4980
TSI-0809-12	1/2	19/32	3/4	.5030	.5003	.5941	.5934	.4990	.4980
TSI-0809-16	1/2	19/32	1	.5030	.5003	.5941	.5934	.4990	.4980
TSI-0910-08	9/16	21/32	1/2	.5655	.5627	.6566	.6559	.5615	.5605
TSI-0910-12	9/16	21/32	3/4	.5655	.5627	.6566	.6559	.5615	.5605
TSI-1011-04	5/8	23/32	1/4	.6280	.6253	.7192	.7184	.6240	.6230
TSI-1011-06	5/8	23/32	3/8	.6280	.6253	.7192	.7184	.6240	.6230
TSI-1011-08	5/8	23/32	1/2	.6280	.6253	.7192	.7184	.6240	.6230
TSI-1011-10	5/8	23/32	5/8	.6280	.6253	.7192	.7184	.6240	.6230
TSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230
TSI-1011-16	5/8	23/32	1	.6280	.6253	.7192	.7184	.6240	.6230
TSI-1112-04	11/16	25/32	1/4	.6906	.6879	.7817	.7809	.6865	.6855
TSI-1112-14	11/16	25/32	7/8	.6906	.6879	.7817	.7809	.6865	.6855

iglide® T500 - Plain Bearings
Sleeve Bearing - Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

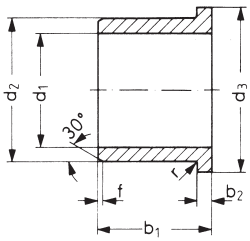
Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
TSI-1214-06	3/4	7/8	3/8	.7541	.7507	.8755	.8747	.7491	.7479
TSI-1214-08	3/4	7/8	1/2	.7541	.7507	.8755	.8747	.7491	.7479
TSI-1214-12	3/4	7/8	3/4	.7541	.7507	.8755	.8747	.7491	.7479
TSI-1214-16	3/4	7/8	1	.7541	.7507	.8755	.8747	.7491	.7479
TSI-1416-12	7/8	1	3/4	.8791	.8757	1.0005	.9997	.8741	.8729
TSI-1416-16	7/8	1	1	.8791	.8757	1.0005	.9997	.8741	.8729
TSI-1416-24	7/8	1	1 1/2	.8791	.8757	1.0005	.9997	.8741	.8729
TSI-1618-08	1	1 1/8	1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TSI-1618-12	1	1 1/8	3/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TSI-1618-24	1	1 1/8	1 1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TSI-1820-12	1 1/8	1 9/32	3/4	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
TSI-2022-10	1 1/4	1 13/32	5/8	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
TSI-2022-20	1 1/4	1 13/32	1 1/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
TSI-2426-12	1 1/2	1 21/32	3/4	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
TSI-2426-16	1 1/2	1 21/32	1	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
TSI-2426-24	1 1/2	1 21/32	1 1/2	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
TSI-2629-20	1 5/8	1 13/16	1 1/4	1.6297	1.6258	1.7818	1.7808	1.6238	1.6222
TSI-2831-16	1 3/4	1 15/16	1	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
TSI-3235-24	2	2 3/16	1 1/2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
TSI-3235-32	2	2 3/16	2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
TSI-3639-32	2 1/4	2 7/16	2	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489
TSI-4447-32	2 3/4	2 15/16	2	2.7570	2.7523	2.9370	2.9358	2.7500	2.7490

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iglide® T500 - Plain Bearings
Flange Bearing - Inch





r = max. 0.197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

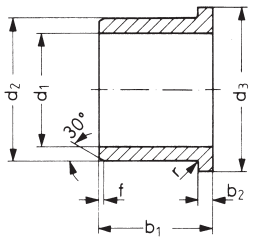
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
TFI-0203-03	1/8	3/16	3/16	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
TFI-0203-06	1/8	3/16	3/8	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
TFI-0304-04	3/16	1/4	1/4	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
TFI-0304-06	3/16	1/4	3/8	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
TFI-0304-08	3/16	1/4	1/2	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
TFI-0405-03	1/4	5/16	3/16	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
TFI-0405-04	1/4	5/16	1/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
TFI-0405-06	1/4	5/16	3/8	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
TFI-0405-08	1/4	5/16	1/2	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
TFI-0405-12	1/4	5/16	3/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
TFI-0506-04	5/16	3/8	1/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
TFI-0506-06	5/16	3/8	3/8	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
TFI-0506-08	5/16	3/8	1/2	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
TFI-0607-04	3/8	15/32	1/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
TFI-0607-06	3/8	15/32	3/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
TFI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
TFI-0607-12	3/8	15/32	3/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
TFI-0708-08	7/16	17/32	1/2	.750	.046	.4406	.4379	.5316	.5309	.4365	.4355
TFI-0809-04	1/2	19/32	1/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
TFI-0809-06	1/2	19/32	3/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
TFI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
TFI-0809-12	1/2	19/32	3/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
TFI-0809-16	1/2	19/32	1	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
TFI-1011-08	5/8	23/32	1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
TFI-1011-12	5/8	23/32	3/4	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
TFI-1011-16	5/8	23/32	1	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
TFI-1011-24	5/8	23/32	1 1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
TFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
TFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
TFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
TFI-1214-28	3/4	7/8	1 3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
TFI-1416-12	7/8	1	3/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
TFI-1416-16	7/8	1	1	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
TFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TFI-1618-24	1	1 1/8	1 1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
TFI-1719-06	1 1/16	1 3/16	3/8	1.500	.062	1.0666	1.0633	1.1883	1.1875	1.0616	1.0604
TFI-1820-12	1 1/8	1 9/32	3/4	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226

iglide® T500 - Plain Bearings
Flange Bearing - Inch





r = max. .0197

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

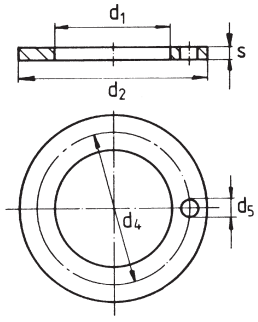
Length Tolerance (b1)

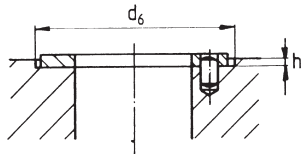
Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
TFI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
TFI-2022-32	1 1/4	1 13/32	2	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
TFI-2426-12	1 1/2	1 21/32	3/4	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
TFI-2426-16	1 1/2	1 21/32	1	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
TFI-2426-24	1 1/2	1 21/32	1 1/2	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
TFI-2831-16	1 3/4	1 15/16	1	2.375	.093	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
TFI-3235-32	2	2 3/16	2	2.625	.093	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
TFI-4447-32	2 3/4	2 15/16	2	3.375	.093	2.7570	2.7523	2.9370	2.9358	2.7500	2.7490

iglide® T500 - Plain Bearings
Thrust Washer - Inch





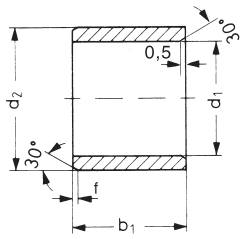


Part Number	d1	d2	s	d4	d5	h	d6
	+.010	-.010	-.0020	+-.005	.015 +.005	+.008	+.005
TTI-0814-01	.500	.875	.0585	.692	.067	.040	.875
TTI-1018-01	.625	1.125	.0585	.880	.099	.040	1.125
TTI-1220-01	.750	1.250	.0585	1.005	.099	.040	1.250
TTI-1422-01	.875	1.375	.0585	1.125	.130	.040	1.375
TTI-1424-01	.875	1.500	.0585	1.192	.130	.040	1.500
TTI-1628-01	1.000	1.750	.0585	1.380	.130	.040	1.750
TTI-1826-01	1.125	1.625	.0585	—	—	.040	1.625
TTI-2034-01	1.250	2.125	.0585	1.692	.161	.040	2.125
TTI-2844-01	1.750	2.750	.0585	2.255	.192	.040	2.750
TTI-3248-01	2.000	3.000	.0895	2.505	.192	.070	3.000

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iglide® T500 - Plain Bearings
Sleeve Bearing - MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

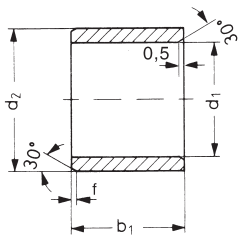
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	after pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
TSM-0203-03	2.0	+0.006 +0.046	3.5	3.0	2.046	2.006	3.580	3.500	2.000	1.975
TSM-0304-03	3.0	+0.006 +0.046	4.5	3.0	3.046	3.006	4.512	4.500	3.000	2.975
TSM-0304-06	3.0	+0.006 +0.046	4.5	6.0	3.046	3.006	4.512	4.500	3.000	2.975
TSM-0405-04	4.0	+0.010 +0.058	5.5	4.0	4.058	4.010	5.512	5.500	4.000	3.970
TSM-0507-035	5.0	+0.010 +0.058	7.0	3.5	5.058	5.010	7.015	7.000	5.000	4.970
TSM-0507-05	5.0	+0.010 +0.058	7.0	5.0	5.058	5.010	7.015	7.000	5.000	4.970
TSM-0507-08	5.0	+0.010 +0.058	7.0	8.0	5.058	5.010	7.015	7.000	5.000	4.970
TSM-0608-06	6.0	+0.010 +0.058	8.0	6.0	6.058	6.010	8.015	8.000	6.000	5.970
TSM-0608-08	6.0	+0.010 +0.058	8.0	8.0	6.058	6.010	8.015	8.000	6.000	5.970
TSM-0608-10	6.0	+0.010 +0.058	8.0	10.0	6.058	6.010	8.015	8.000	6.000	5.970
TSM-0608-13	6.0	+0.010 +0.058	8.0	13.0	6.058	6.010	8.015	8.000	6.000	5.970
TSM-0610-08	6.0	+0.010 +0.058	10.0	8.0	6.058	6.010	10.015	10.000	6.000	5.970
TSM-0610-20	6.0	+0.010 +0.058	10.0	20.0	6.058	6.010	10.015	10.000	6.000	5.970
TSM-0709-10	7.0	+0.013 +0.071	9.0	10.0	7.071	7.013	9.015	9.000	7.000	6.964
TSM-0709-12	7.0	+0.013 +0.071	9.0	12.0	7.071	7.013	9.015	9.000	7.000	6.964
TSM-0810-06	8.0	+0.013 +0.071	10.0	6.0	8.071	8.013	10.015	10.000	8.000	7.984
TSM-0810-08	8.0	+0.013 +0.071	10.0	8.0	8.071	8.013	10.015	10.000	8.000	7.964
TSM-0810-10	8.0	+0.013 +0.071	10.0	10.0	8.071	8.013	10.015	10.000	8.000	7.964
TSM-0810-15	8.0	+0.013 +0.071	10.0	15.0	8.071	8.013	10.015	10.000	8.000	7.964
TSM-1012-06	10.0	+0.013 +0.071	12.0	6.0	10.071	10.013	12.018	12.000	10.000	9.964
TSM-1012-08	10.0	+0.013 +0.071	12.0	8.0	10.071	10.013	12.018	12.000	10.000	9.964
TSM-1012-10	10.0	+0.013 +0.071	12.0	10.0	10.071	10.013	12.018	12.000	10.000	9.964
TSM-1012-12	10.0	+0.013 +0.071	12.0	12.0	10.071	10.013	12.018	12.000	10.000	9.964
TSM-1012-20	10.0	+0.013 +0.071	12.0	20.0	10.071	10.013	12.018	12.000	10.000	9.964
TSM-1214-035	12.0	+0.016 +0.086	14.0	3.5	12.086	12.016	14.018	14.000	12.000	11.957
TSM-1214-06	12.0	+0.016 +0.086	14.0	6.0	12.086	12.016	14.018	14.000	12.000	11.957
TSM-1214-08	12.0	+0.016 +0.086	14.0	8.0	12.086	12.016	14.018	14.000	12.000	11.957
TSM-1214-10	12.0	+0.016 +0.086	14.0	10.0	12.086	12.016	14.018	14.000	12.000	11.957
TSM-1214-12	12.0	+0.016 +0.086	14.0	12.0	12.086	12.016	14.018	14.000	12.000	11.957
TSM-1214-15	12.0	+0.016 +0.086	14.0	15.0	12.086	12.016	14.018	14.000	12.000	11.957
TSM-1214-20	12.0	+0.016 +0.086	14.0	20.0	12.086	12.016	14.018	14.000	12.000	11.957
TSM-1416-12	14.0	+0.016 +0.086	16.0	12.0	14.086	14.016	16.018	16.000	14.000	13.957
TSM-1416-15	14.0	+0.016 +0.086	16.0	15.0	14.086	14.016	16.018	16.000	14.000	13.957
TSM-1416-20	14.0	+0.016 +0.086	16.0	20.0	14.086	14.016	16.018	16.000	14.000	13.957
TSM-1517-15	15.0	+0.016 +0.086	17.0	15.0	15.086	15.016	17.018	17.000	15.000	14.957
TSM-1517-20	15.0	+0.016 +0.086	17.0	20.0	15.086	15.016	17.018	17.000	15.000	14.957

iglide® T500 - Plain Bearings
Sleeve Bearing - MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

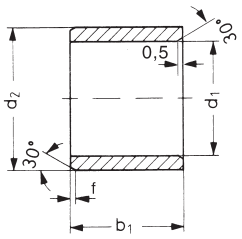
Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
TSM-1618-10	16.0	+0.016 +0.086	18.0	10.0	16.086	16.016	18.018	18.000	16.000	15.957
TSM-1618-12	16.0	+0.016 +0.086	18.0	12.0	16.086	16.016	18.018	18.000	16.000	15.957
TSM-1618-15	16.0	+0.016 +0.086	18.0	15.0	16.086	16.016	18.018	18.000	16.000	15.957
TSM-1618-20	16.0	+0.016 +0.086	18.0	20.0	16.086	16.016	18.018	18.000	16.000	15.957
TSM-1618-35	16.0	+0.016 +0.086	18.0	35.0	16.086	16.016	18.018	18.000	16.000	15.957
TSM-1719-20	17.0	+0.016 +0.086	19.0	20.0	17.086	17.016	19.021	19.000	17.000	16.957
TSM-1820-15	18.0	+0.016 +0.086	20.0	15.0	18.086	18.016	20.021	20.000	18.000	17.957
TSM-1820-20	18.0	+0.016 +0.086	20.0	20.0	18.086	18.016	20.021	20.000	18.000	17.957
TSM-2022-14	20.0	+0.020 +0.104	22.0	14.0	20.104	20.020	22.021	22.000	20.000	19.948
TSM-2022-18	20.0	+0.020 +0.104	22.0	18.0	20.104	20.020	22.021	22.000	20.000	19.948
TSM-2022-20	20.0	+0.020 +0.104	22.0	20.0	20.104	20.020	22.021	22.000	20.000	19.948
TSM-2023-07	20.0	+0.020 +0.104	23.0	7.0	20.104	20.020	23.021	23.000	20.000	19.948
TSM-2023-10	20.0	+0.020 +0.104	23.0	10.0	20.101	20.020	23.021	23.000	20.000	19.948
TSM-2023-15	20.0	+0.020 +0.104	23.0	15.0	20.104	20.020	23.021	23.000	20.000	19.948
TSM-2023-20	20.0	+0.020 +0.104	23.0	20.0	20.104	20.020	23.021	23.000	20.000	19.948
TSM-2023-25	20.0	+0.020 +0.104	23.0	25.0	20.104	20.020	23.021	23.000	20.000	19.948
TSM-2023-30	20.0	+0.020 +0.104	23.0	30.0	20.104	20.020	23.021	23.000	20.000	19.948
TSM-2225-15	22.0	+0.020 +0.104	25.0	15.0	22.104	22.020	25.021	25.000	22.000	21.948
TSM-2225-20	22.0	+0.020 +0.104	25.0	20.0	22.104	22.020	25.021	25.000	22.000	21.948
TSM-2426-20	24.0	+0.020 +0.104	26.0	20.0	24.104	24.020	26.021	26.000	24.000	23.948
TSM-2427-20	24.0	+0.020 +0.104	27.0	20.0	24.104	24.020	25.021	25.000	24.000	23.948
TSM-2528-09	25.0	+0.020 +0.104	28.0	9.0	25.104	25.020	28.021	28.000	25.000	24.948
TSM-2528-12	25.0	+0.020 +0.104	28.0	12.0	25.104	25.020	28.021	28.000	25.000	24.948
TSM-2528-13	25.0	+0.020 +0.104	28.0	13.0	25.104	25.020	28.021	28.000	25.000	24.948
TSM-2528-15	25.0	+0.020 +0.104	28.0	15.0	25.104	25.020	28.021	28.000	25.000	24.948
TSM-2528-20	25.0	+0.020 +0.104	28.0	20.0	25.104	25.020	28.021	28.000	25.000	24.948
TSM-2528-30	25.0	+0.020 +0.104	28.0	30.0	25.104	25.020	28.021	28.000	25.000	24.948
TSM-2730-05	27.0	+0.020 +0.104	30.0	20.0	27.104	27.020	30.021	30.000	27.000	26.948
TSM-2832-20	28.0	+0.020 +0.104	32.0	20.0	28.104	28.020	32.025	32.000	28.000	27.948
TSM-2832-30	28.0	+0.020 +0.104	32.0	30.0	28.104	28.020	32.025	32.000	28.000	27.948
TSM-3034-20	30.0	+0.020 +0.104	34.0	20.0	30.104	30.020	34.025	34.000	30.000	29.948
TSM-3034-25	30.0	+0.020 +0.104	34.0	25.0	30.104	30.020	34.025	34.000	30.000	29.948
TSM-3034-30	30.0	+0.020 +0.104	34.0	30.0	30.104	30.020	34.025	34.000	30.000	29.948
TSM-3034-40	30.0	+0.020 +0.104	34.0	40.0	30.104	30.020	34.025	34.000	30.000	29.948
TSM-3236-25	32.0	+0.025 +0.125	36.0	25.0	32.125	32.025	36.025	36.000	32.000	31.938
TSM-3236-30	32.0	+0.025 +0.125	36.0	30.0	32.125	32.025	36.025	36.000	32.000	31.938
TSM-3539-20	35.0	+0.025 +0.125	39.0	20.0	35.125	35.025	39.025	39.000	35.000	34.938
TSM-3539-30	35.0	+0.025 +0.125	39.0	30.0	35.125	35.025	39.025	39.000	35.000	34.938

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Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

iglide® T500 - Plain Bearings
Sleeve Bearing - MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

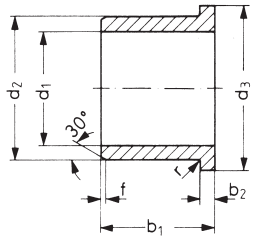
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance after pressfit in Ø H7	d2	b1 h13	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
TSM-3539-40	35.0	+0.025 +0.125	39.0	40.0	35.125	35.025	39.025	39.000	35.000	34.938
TSM-3539-50	35.0	+0.025 +0.125	39.0	50.0	35.125	35.025	39.025	39.000	35.000	34.938
TSM-4044-30	40.0	+0.025 +0.125	44.0	30.0	40.125	40.025	44.025	44.000	40.000	39.938
TSM-4044-40	40.0	+0.025 +0.125	44.0	40.0	40.125	40.025	44.025	44.000	40.000	39.938
TSM-4044-50	40.0	+0.025 +0.125	44.0	50.0	40.125	40.025	44.025	44.000	40.000	39.938
TSM-4550-50	45.0	+0.025 +0.125	50.0	50.0	45.125	45.025	50.025	50.000	45.000	44.938
TSM-5055-30	50.0	+0.025 +0.125	55.0	30.0	50.125	50.025	55.030	55.000	50.000	49.938
TSM-5055-40	50.0	+0.025 +0.125	55.0	40.0	50.125	50.025	55.030	55.000	50.000	49.938
TSM-5055-60	50.0	+0.025 +0.125	55.0	60.0	50.125	50.025	55.030	55.000	50.000	49.938
TSM-5560-50	55.0	+0.030 +0.150	60.0	50.0	55.150	55.030	60.030	60.000	55.000	54.926
TSM-6065-45	60.0	+0.030 +0.150	65.0	45.0	60.150	60.030	65.030	65.000	60.000	59.926
TSM-6065-60	60.0	+0.030 +0.150	65.0	60.0	60.150	60.030	65.030	65.000	60.000	59.926
TSM-6570-50	65.0	+0.030 +0.150	70.0	50.0	65.150	65.030	70.030	70.000	65.000	64.926
TSM-7075-70	70.0	+0.030 +0.150	75.0	70.0	70.150	70.030	75.030	75.000	70.000	69.926

iglide® T500 - Plain Bearings
Flange Bearing - MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

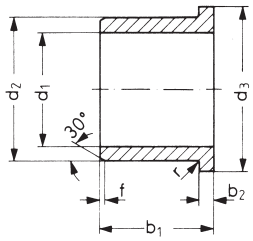
Part Number	d1[1]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
TFM-0304-05	3.0	+0.006 +0.046	4.5	7.5	5.0	0.75	3.046	3.006	4.512	4.500	3.000	2.975
TFM-0405-04	4.0	+0.010 +0.058	5.5	9.5	4.0	0.75	4.058	4.010	5.512	5.500	4.000	3.970
TFM-0405-06	4.0	+0.010 +0.058	5.5	9.5	6.0	0.75	4.058	4.010	5.512	5.500	4.000	3.970
TFM-040508-06	4.0	+0.010 +0.058	5.5	8.0	6.0	0.75	4.058	4.010	5.512	5.500	4.000	3.970
TFM-0507-05	5.0	+0.010 +0.058	7.0	11.0	5.0	1.0	5.058	5.010	7.015	7.000	5.000	4.970
TFM-0608-08	6.0	+0.010 +0.058	8.0	12.0	8.0	1.0	6.058	6.010	8.015	8.000	6.000	5.970
TFM-0608-10	6.0	+0.010 +0.058	8.0	12.0	10.0	1.0	6.058	6.010	8.015	8.000	6.000	5.970
TFM-060812-10	6.0	+0.010 +0.058	8.0	12.0	10.0	1.0	6.058	6.010	8.015	8.000	6.000	5.970
TFM-060812-20	6.0	+0.010 +0.058	8.0	12.0	20.0	1.0	6.058	6.010	8.015	8.000	6.000	5.970
TFM-081012-04	8.0	+0.013 +0.071	10.0	12.0	4.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
TFM-0810-05	8.0	+0.013 +0.071	10.0	15.0	5.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
TFM-0810-075	8.0	+0.013 +0.071	10.0	15.0	7.5	1.0	8.071	8.013	10.015	10.000	8.000	7.964
TFM-0810-08	8.0	+0.013 +0.071	10.0	15.0	8.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
TFM-0810-09	8.0	+0.013 +0.071	10.0	15.0	9.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
TFM-081117-05	8.0	+0.013 +0.071	11.0	17.0	5.0	1.5	8.071	8.013	10.015	10.000	8.000	7.964
TFM-1012-06	10.0	+0.013 +0.071	12.0	18.0	6.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
TFM-1012-08	10.0	+0.013 +0.071	12.0	15.0	8.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
TFM-1012-09	10.0	+0.013 +0.071	12.0	18.0	9.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
TFM-1012-15	10.0	+0.013 +0.071	12.0	18.0	15.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
TFM-1012-18	10.0	+0.013 +0.071	12.0	18.0	18.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
TFM-1012-22	10.0	+0.013 +0.071	12.0	18.0	22.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
TFM-1214-05	12.0	+0.016 +0.086	14.0	20.0	5.5	1.0	12.086	12.016	14.018	14.000	12.000	11.957
TFM-1214-09	12.0	+0.016 +0.086	14.0	20.0	9.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
TFM-1214-12	12.0	+0.016 +0.086	14.0	20.0	12.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
TFM-1214-15	12.0	+0.016 +0.086	14.0	20.0	15.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
TFM-1416-10	14.0	+0.016 +0.086	16.0	22.0	10.0	1.0	14.086	14.016	16.018	16.000	14.000	13.957
TFM-1416-12	14.0	+0.016 +0.086	16.0	22.0	12.0	1.0	14.086	14.016	16.018	16.000	14.000	13.957
TFM-1416-17	14.0	+0.016 +0.086	16.0	22.0	17.0	1.0	14.086	14.016	16.018	16.000	14.000	13.957
TFM-1517-12	15.0	+0.016 +0.086	17.0	23.0	12.0	1.0	15.086	15.016	17.018	17.000	15.000	14.957
TFM-1517-17	15.0	+0.016 +0.086	17.0	23.0	17.0	1.0	15.086	15.016	17.018	17.000	15.000	14.957
TFM-1618-12	16.0	+0.016 +0.086	18.0	24.0	12.0	1.0	16.086	16.016	18.018	18.000	16.000	15.957
TFM-1618-17	16.0	+0.016 +0.086	18.0	24.0	17.0	1.0	16.086	16.016	18.018	18.000	16.000	15.957
TFM-1820-12	18.0	+0.016 +0.086	20.0	26.0	12.0	1.0	18.086	18.016	20.021	20.000	18.000	17.957
TFM-1820-17	18.0	+0.016 +0.086	20.0	26.0	17.0	1.0	18.086	18.016	20.021	20.000	18.000	17.957
TFM-2023-075	20.0	+0.020 +0.104	23.0	30.0	7.5	1.5	20.104	20.020	23.021	23.000	20.000	19.948
TFM-2023-11	20.0	+0.020 +0.104	23.0	30.0	11.0	1.5	20.104	20.020	23.021	23.000	20.000	19.948
TFM-2023-16	20.0	+0.020 +0.104	23.0	30.0	16.0	1.5	20.104	20.020	23.021	23.000	20.000	19.948
TFM-2023-21	20.0	+0.020 +0.104	23.0	30.0	21.0	1.5	20.104	20.020	23.021	23.000	20.000	19.948
TFM-252833-08	25.0	+0.020 +0.104	28.0	33.0	8.0	1.5	25.104	25.020	28.021	28.000	25.000	24.948
TFM-2528-13	25.0	+0.020 +0.104	28.0	35.0	13.5	1.5	25.104	25.020	28.021	28.000	25.000	24.948
TFM-2528-21	25.0	+0.020 +0.104	28.0	35.0	21.0	1.5	25.104	25.020	28.021	28.000	25.000	24.948

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iglide® T500 - Plain Bearings
Flange Bearing - MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

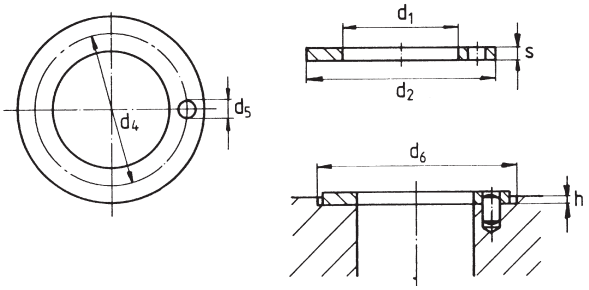
Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1[1)]	d1-Tolerance After Pressfit in Ø H7	d2	d3 d13	b1 h13	b2 -0.14	I.D. After Pressfit Max.	I.D. After Pressfit Min.	Housing Bore Max.	Housing Bore Min.	Shaft Size Max.	Shaft Size Min.
TFM-2730-20	27.0	+0.020 +0.104	30.0	38.0	20.0	1.5	27.104	27.020	30.021	30.000	27.000	26.948
TFM-2834-44	28.0	+0.020 +0.104	34.0	42.0	44.0	2.0	28.104	28.020	34.021	34.000	28.000	27.948
TFM-3034-16	30.0	+0.020 +0.104	34.0	42.0	16.0	2.0	30.104	30.020	34.025	34.000	30.000	29.948
TFM-3034-26	30.0	+0.020 +0.104	34.0	42.0	26.0	2.0	30.104	30.020	34.025	34.000	30.000	29.948
TFM-3034-40	30.0	+0.020 +0.104	34.0	42.0	40.0	2.0	30.104	30.020	34.025	34.000	30.000	29.948
TFM-3236-15	32.0	+0.025 +0.125	36.0	45.0	15.0	2.0	32.125	32.025	36.025	36.000	32.000	31.938
TFM-3236-26	32.0	+0.025 +0.125	36.0	45.0	26.0	2.0	32.125	32.025	36.025	36.000	32.000	31.938
TFM-3539-26	35.0	+0.025 +0.125	39.0	47.0	26.0	2.0	35.125	35.025	39.025	39.000	35.000	34.938
TFM-4044-22	40.0	+0.025 +0.125	44.0	52.0	22.0	2.0	40.125	40.025	44.025	44.000	40.000	39.938
TFM-4044-30	40.0	+0.025 +0.125	44.0	52.0	30.0	2.0	40.125	40.025	44.025	44.000	40.000	39.938
TFM-4044-40	40.0	+0.025 +0.125	44.0	52.0	40.0	2.0	40.125	40.025	44.025	44.000	40.000	39.938
TFM-4550-50	45.0	+0.025 +0.125	50.0	58.0	50.0	2.0	45.125	45.025	50.025	50.000	45.000	44.938
TFM-5055-40	50.0	+0.025 +0.125	55.0	63.0	40.0	2.0	50.125	50.025	55.030	55.000	50.000	49.938
TFM-6065-40	60.0	+0.030 +0.150	65.0	73.0	40.0	2.0	60.150	60.030	65.030	65.000	60.000	59.926
TFM-7075-40	70.0	+0.030 +0.150	75.0	83.0	40.0	2.0	70.150	70.030	75.030	75.000	70.000	69.926
TFM-7580-50	75.0	+0.030 +0.150	80.0	88.0	50.0	2.0	75.150	75.030	80.030	80.000	75.000	74.926

PDF: www.igus.com/pdf/iglide.asp
Specs/CAD/RFQ: www.igus.com/iglide.asp
RoHS info: www.igus.com/RoHS.asp

iglide® T500 - Plain Bearings
Thrust Washer - MM





Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1 +0,25	d2 -0,25	s -0,05	d4 -0,12 +0,12	d5 +0,375 +0,125	h +0,2 -0,2	d6 +0,12
TTM-0620-015	6.0	20.0	1.5	13.0	1.5	1.0	20.0
TTM-0818-015	8.0	18.0	1.5	13.0	1.5	1.0	18.0
TTM-1018-010	10.0	18.0	1.0	*	*	.7	18.0
TTM-1224-015	12.0	24.0	1.5	18.0	1.5	1.0	24.0
TTM-1426-015	14.0	26.0	1.5	20.0	2.0	1.0	26.0
TTM-1524-015	15.0	24.0	1.5	19.5	1.5	1.0	24.0
TTM-1630-015	16.0	30.0	1.5	22.0	2.0	1.0	30.0
TTM-1832-015	18.0	32.0	1.5	25.0	2.0	1.0	32.0
TTM-2036-015	20.0	36.0	1.5	28.0	3.0	1.0	36.0
TTM-2238-015	22.0	38.0	1.5	30.0	3.0	1.0	38.0
TTM-2442-015	24.0	42.0	1.5	33.0	3.0	1.0	42.0
TTM-2644-015	26.0	44.0	1.5	35.0	3.0	1.0	44.0
TTM-2848-015	28.0	48.0	1.5	38.0	4.0	1.0	48.0
TTM-3254-015	32.0	54.0	1.5	43.0	4.0	1.0	54.0
TTM-3862-015	38.0	62.0	1.5	50.0	4.0	1.0	62.0
TTM-4266-015	42.0	66.0	1.5	84.0	4.0	1.0	66.0
TTM-4874-020	48.0	74.0	2.0	61.0	4.0	1.5	74.0
TTM-5278-020	52.0	78.0	2.0	65.0	4.0	1.5	78.0
TTM-6290-020	62.0	90.0	2.0	76.0	4.0	1.5	90.0

* Design without bore

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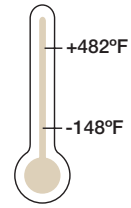
iglide® Z
The High-Temperature Material

- For high-temperature applications
- High thermal resistance
- For extreme loads
- For high surface speeds
- Resistant to edge loads



iglide® Z - Plain Bearings

Price Index



3 Styles
More than 33 Dimensions
Inner Diameters
From 1/8 - 2-1/4 in. (4 - 75 mm)

When to use iglide® Z plain bearings:

- For continuous temperatures up to 482°F, or 608°F short-term
- For high radial loads and high temperature
- For high surface speeds
- For edge loading in connection with high surface pressures

When not to use iglide® Z plain bearings:

- For low loads and temperatures
  ➤ iglide® P
- When a cost effective all-around bearing is sought
  ➤ iglide® G300
- When electrically conductive bearings are needed
  ➤ iglide® F

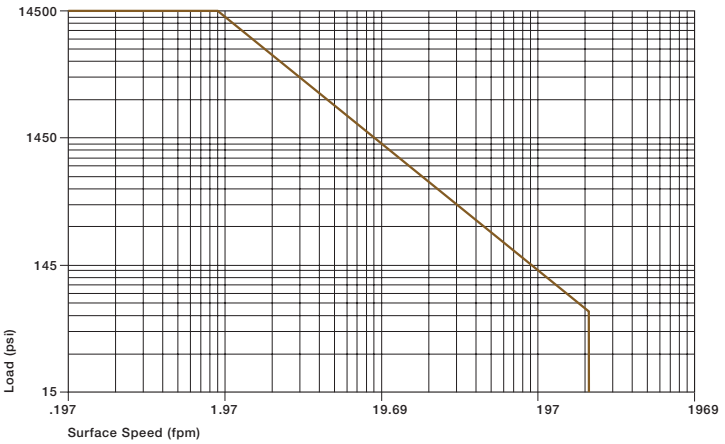
Structure of the Part Number:

Z S I - 0 2 0 3 - 0 3

- d1 d2 b1 (s-Thrust Washer)
- Dimension: I - Inch (in 1/16")
  M - Metric (in mm)
- Type: S - Sleeve
  F - Flange
  T - Thrust Washer
- Material

Table 13.1: Material Data

General Properties	Unit	iglide® Z	Testing Method
Density	g/cm³	1.40	
Color		brown	
Max. moisture absorption at 73°F/ 50% r.h.	% weight	0.3	DIN 53495
Max. moisture absorption	% weight	1.1	
Coefficient of friction, dynamic against steel	µ	0.06 - 0.14	
p x v value, max. (dry)	psi x fpm	24,000	
Mechanical Properties			
Modulus of elasticity	psi	348,000	DIN 53457
Tensile strength at 68°F	psi	13,775	DIN 53452
Compressive strength	psi	9,425	
Permissible static surface pressure (68°F)	psi	21,750	
Shore D-hardness		81	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	482	
Max. short-term application temperature	°F	590	
Minimum application temperature	°F	-148	
Thermal conductivity	W/m x K	0.62	ASTM C 177
Coefficient of thermal expansion	$K^{-1} \times 10^{-5}$	4	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{11}$	DIN IEC 93
Surface resistance	Ω	$> 10^{11}$	DIN 53482



Graph 13.1: Permissible p x v values for iglide® Z running dry against a steel shaft, at 68°F

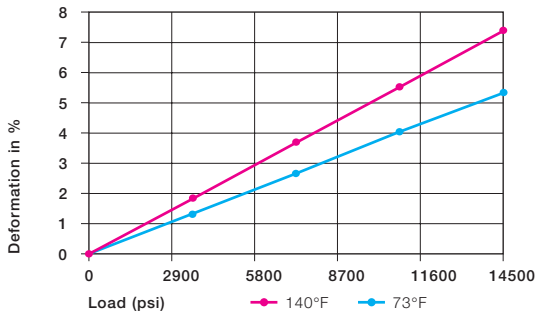
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Compressive Strength

Iglide® Z is a high-temperature bearing material, which is suited for applications with very high specific loads. For radial pressures between 7,250 and 14,500 psi, there is no better dry running wear-resistant iglide® material. Graph 13.2 shows the elastic deformation of iglide® Z for radial loads. At the maximum permissible load of 14,500, the deformation is approximately 5.5% at room temperature.

➤ Compressive Strength, Page 1.3



Graph 13.2: Deformation under load and temperature

Permissible Surface Speeds

iglide® Z is suited for both average and high speeds due to its high thermal resistance. The maximum values given in Table 13.2 can only be achieved at the lowest pressure loads. At the given speeds, friction can cause temperature to increase to maximum permissible levels.

➤ Surface Speed, Page 1.5
➤ p x v value, Page 1.6

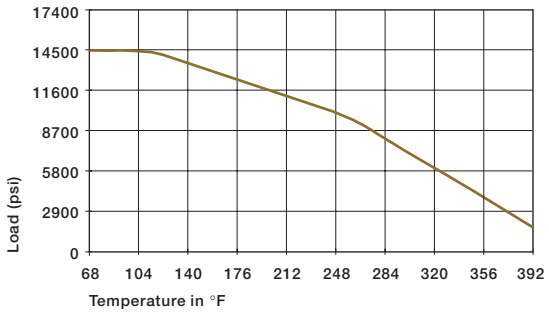
fpm	Rotating	Oscillating	Linear
Continuous	295	216	984
Short-term	689	492	1181

Table 13.2: Maximum surface speed

Temperatures

The maximum permissible short-term temperature is 590°F. This represents the highest thermal resistance of any iglide® material.
With increasing temperatures, the compressive strength of iglide® Z plain bearings decreases. Graph 13.3 shows this relationship.
The ambient temperatures prevalent in the bearing system also have an effect on the bearing wear. With increasing temperatures, the wear increases.
Graph 13.4 shows that when the temperature increases from room temperature to 302°F , the wear of iglide® Z only doubles. At high temperatures, iglide® Z is also the most wear-resistant material while running dry.

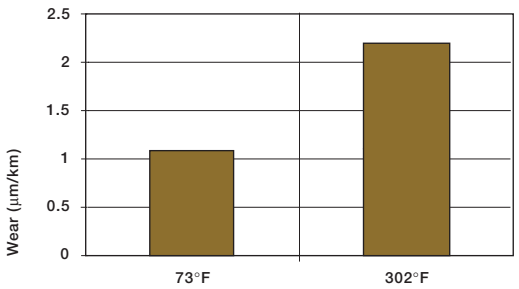
➤ Application Temperatures, Page 1.7



Graph 13.3: Recommended maximum permissible static surface pressure of iglide® Z as a result of the temperature

iglide® Z	Application Temperature
Minimum	- 148°F
Max. long-term	+ 482°F
Max. short-term	+ 608°F

Table 13.3: Temperature limits for iglide® Z



Graph 13.4: Wear of iglide® Z as a result of temperature, rotation with p = 108 psi, v = 98 fpm, (shaft Cold Rolled Steel)

iglide® Z - Plain Bearings

Installation Tolerances

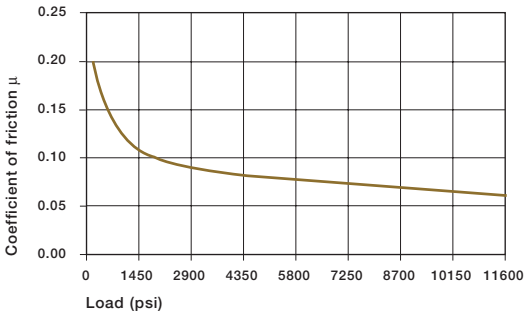
iglide® Z plain bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide® plain bearings.
Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14
➤ Testing Methods, Page 1.15

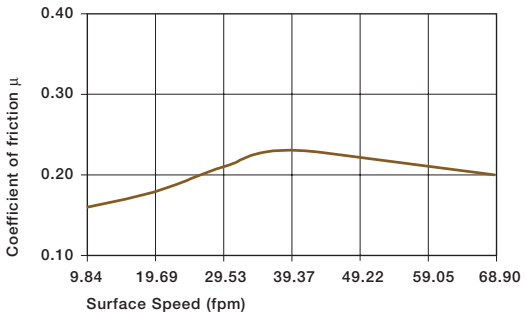
Friction and Wear

Similar to wear resistance, the coefficient of friction only changes slightly with increasing load. Friction and wear are also dependent, to a large degree, on the shaft partner. Shafts that are too smooth increase both the coefficient of friction and the wear of the bearing. iglide® Z proves to be relatively resistant in regard to the shaft surface. A ground surface with an average roughness of Ra = 16-32 rms is best suited, when minimal friction is necessary.

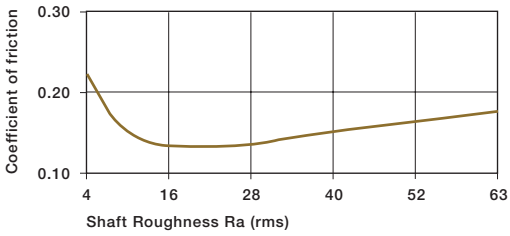
➤ Coefficients of Friction and Surfaces, Page 1.8
➤ Wear Resistance, Page 1.9



Graph 13.6: Coefficients of friction of iglide® Z as a result of the load, v = 1.97 fpm



Graph 13.5: Coefficients of friction of iglide® Z as a result of the running speed; p = 108 psi



Graph 13.7: Coefficients of friction of iglide® Z as a result of the shaft surface (shaft Cold Rolled Steel)

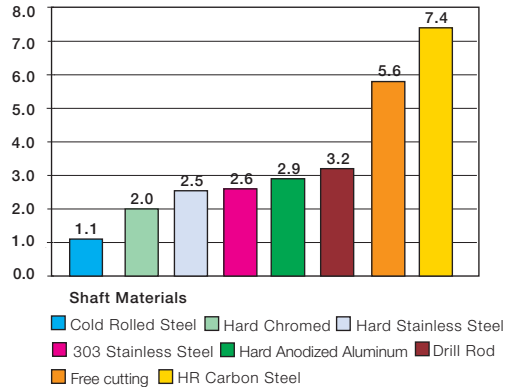
iglide® Z	Dry	Grease	Oil	Water
Coefficient of Friction	0.06 - 0.14	0.09	0.04	0.04

Table 13.4: Coefficients of friction for iglide® Z against steel (Ra = 40 rms, 50 HRC)

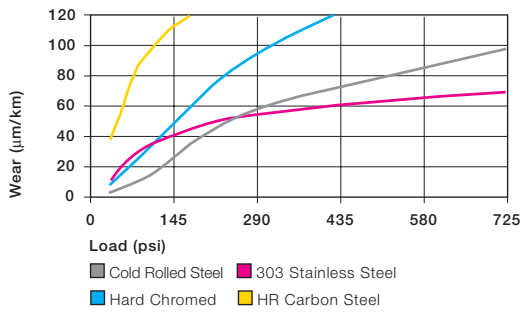
Shaft Materials

The diagrams show wear rates in the lower load range, which are very similar to those of other iglide® materials. In the upper range on the other hand, iglide® Z outperforms all other materials in wear resistance. Provided a Cold Rolled Steel shaft is used, the wear at 6525 psi is still only 15 µm/km.
For low loads. iglide® Z plain bearings wear in oscillating operation less than in rotation. 303 Stainless Steel and hard-chromed shaft are of interest here. The value 0.5 µm/km shows 303 Stainless provides the lowest wear in oscillating movements at 280 psi. For higher loads, hard-chromed shafts outperform 303 Stainless. However even at 14,500 psi, iglide® Z obtains excellent wear values. If the shaft material you plan to use is not contained in this list, please contact us.

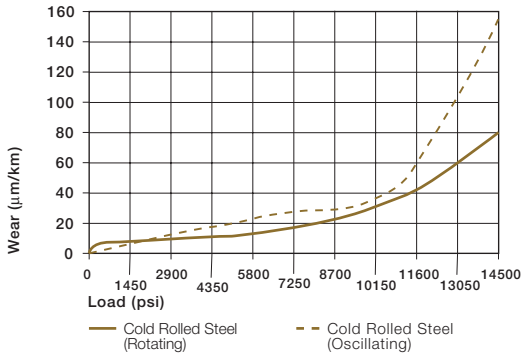
➤ Shaft Materials, Page 1.11



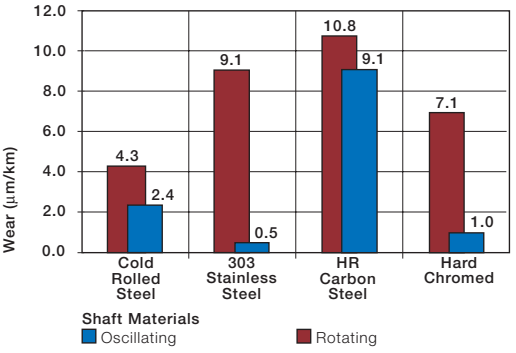
Graph 13.8: Wear of iglide® Z rotating applications with different shaft materials, p=108 psi, v=98 fpm



Graph 13.9: Wear of iglide® Z with different shaft materials in rotating applications



Graph 13.10: Wear for oscillating and rotating applications with Cold Rolled Steel shafts



Graph 13.11: Wear for oscillating and rotating applications with different shaft materials, load p = 290 psi

iglide® Z - Plain Bearings

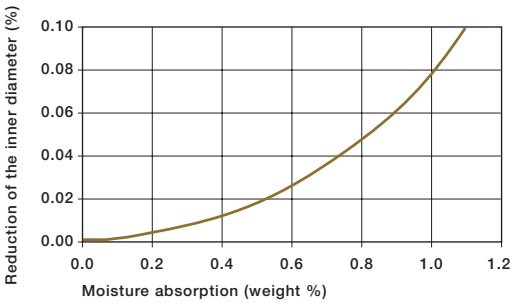
Chemical Resistance

iglide® Z plain bearings have a good resistance to chemicals. They have an excellent resistance against organic solvents, fuels, oils and greases. The material is only partially resistant against weak acids. The moisture absorption of iglide® Z plain bearings is approximately 0.3% in standard atmosphere. The saturation limit in water is 1.1%.

➤ Chemical Resistance, Page 1.16

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Partially Resistant
Strong acids	Partially Resistant
Weak lyes	Resistant
Strong acids	Resistant

Table 13.5: Chemical resistance of iglide® Z



Graph 13.12: Effect of moisture absorption on iglide® Z plain bearings

Radiation Resistance

Plain bearings made from iglide® Z are resistant to radiation up to an intensity of 1 x 10^5 Gy.

UV-Resistance

UV radiation causes approximately 50% decline of the tribological properties (wear) of plain bearings made from iglide® Z.

Vacuum

For use in a vacuum environment, moisture content is released as vapor. Therefore, only dehumidified bearings made of iglide® Z are suitable for a vacuum environment.

Electrical Properties

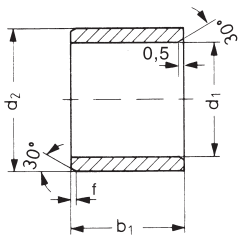
iglide® Z plain bearings are electrically insulating.

iglide® Z	
Specific volume resistant	> 10^{11} Ωcm
Surface resistance	> 10^{11} Ω

Table 13.6: Electrical properties of iglide® Z

iglide® Z - Plain Bearings
Sleeve Bearing, Inch





Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

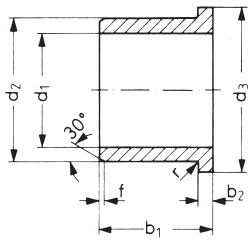
Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

Part Number	d1	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
				Max.	Min.	Max.	Min.	Max.	Min.
ZSI-0203-03	1/8	3/16	3/16	.1266	.1247	.1878	.1873	.1243	.1236
ZSI-0506-06	5/16	3/8	3/8	.3143	.3120	.3753	.3747	.3115	.3106
ZSI-0607-04	3/8	15/32	1/4	.3768	.3745	.4691	.4685	.3740	.3731
ZSI-0607-06	3/8	15/32	3/8	.3768	.3745	.4691	.4685	.3740	.3731
ZSI-0607-08	3/8	15/32	1/2	.3768	.3745	.4691	.4685	.3740	.3731
ZSI-0708-08	7/16	17/32	1/2	.4399	.4371	.5316	.5307	.4365	.4355
ZSI-0809-12	1/2	19/32	3/4	.5024	.4996	.5941	.5933	.4990	.4980
ZSI-0810-12	1/2	5/8	3/4	.5034	.5006	.6260	.6248	.5000	.4990
ZSI-1011-12	5/8	23/32	3/4	.6274	.6246	.7192	.7185	.6240	.6230
ZSI-1214-12	3/4	7/8	3/4	.7532	.7499	.8755	.8748	.7491	.7479
ZSI-1214-16	3/4	7/8	1	.7532	.7499	.8755	.8748	.7491	.7479
ZSI-1416-16	7/8	1	1	.8782	.8749	1.0005	.9997	.8741	.8729
ZSI-1618-16	1	1 1/8	1	1.0032	.9999	1.1255	1.1247	.9991	.9979
ZSI-1618-24	1	1 1/8	1 1/2	1.0032	.9999	1.1255	1.1247	.9991	.9979
ZSI-1820-24	1 1/8	1 9/32	1 1/2	1.1279	1.1246	1.2818	1.2807	1.1238	1.1226
ZSI-2022-20	1 1/4	1 13/32	1 1/4	1.2537	1.2498	1.4068	1.4059	1.2488	1.2472
ZSI-2426-24	1 1/2	1 21/32	1 1/2	1.5037	1.4998	1.6568	1.6559	1.4988	1.4972
ZSI-2831-32	1 3/4	1 15/16	2	1.7536	1.7497	1.9381	1.9370	1.7487	1.7471
ZSI-3235-16	2	2 3/16	1	2.0040	1.9993	2.1883	2.1870	1.9981	1.9969
ZSI-3235-32	2	2 3/16	2	2.0040	1.9993	2.1883	2.1870	1.9981	1.9969
ZSI-3639-32	2 1/4	2 7/16	2	2.2566	2.2519	2.4377	2.4366	2.2507	2.2489

iglide® Z - Plain Bearings
Flange Bearing, Inch





r = max. 0.5

Based on I.D.
f = .012 → d_1 .040" - .236"
f = .019 → d_1 > .236" - .472"
f = .031 → d_1 > .472" - 1.18"
f = .047 → d_1 > 1.18"

Length Tolerance (b1)

Length (inches)			Tolerance (h13)
0.1181	to	0.2362	-0.0000 /-0.0071
0.2362	to	0.3937	-0.0000 /-0.0087
0.3937	to	0.7086	-0.0000 /-0.0106
0.7086	to	1.1811	-0.0000 /-0.0130
1.1811	to	1.9685	-0.0000 /-0.0154
1.9685	to	3.1496	-0.0000 /-0.0181

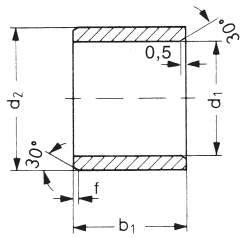
Part Number	d1	d2	b1	d3	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
					-.0055	Max.	Min.	Max.	Min.	Max.	Min.
ZFI-0405-08	1/4	5/16	1/2	.500	.032	.2518	.2495	.3128	.3122	.2490	.2476
ZFI-0506-06	5/16	3/8	3/8	.562	.032	.3143	.3120	.3753	.3747	.3115	.3101
ZFI-0607-08	3/8	15/32	1/2	.687	.046	.3768	.3745	.4691	.4684	.3740	.3731
ZFI-0708-08	7/16	17/32	1/2	.750	.046	.4399	.4371	.5314	.5307	.4365	.4348
ZFI-1012-08	5/8	3/4	1/2	1.000	.062	.6284	.6256	.7508	.7500	.6250	.6240
ZFI-1214-12	3/4	7/8	3/4	1.125	.062	.7532	.7499	.8755	.8748	.7491	.7479
ZFI-1214-16	3/4	7/8	1	1.125	.062	.7532	.7499	.8755	.8748	.7491	.7479
ZFI-1416-12	7/8	1	3/4	1.250	.062	.8782	.8749	1.0005	.9997	.8741	.8729
ZFI-1416-16	7/8	1	1	1.250	.062	.8782	.8749	1.0005	.9997	.8741	.8729
ZFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0032	.9999	1.1255	1.1247	.9991	.9979
ZFI-1618-16	1	1 1/8	1	1.375	.062	1.0032	.9999	1.1255	1.1247	.9991	.9979
ZFI-1820-12	1 1/8	1 9/32	3/4	1.562	.078	1.1279	1.1246	1.2818	1.2807	1.1238	1.1226
ZFI-1820-24	1 1/8	1 9/32	1 1/2	1.562	.078	1.1279	1.1246	1.2818	1.2807	1.1238	1.1226
ZFI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2537	1.2498	1.4068	1.4059	1.2488	1.2472
ZFI-2022-24	1 1/4	1 13/32	1 1/2	1.687	.078	1.2537	1.2498	1.4068	1.4059	1.2488	1.2472
ZFI-2426-24	1 1/2	1 21/32	1 1/2	2.000	.078	1.5037	1.4998	1.6568	1.6559	1.4988	1.4972
ZFI-2831-32	1 3/4	1 15/16	2	2.375	.093	1.7536	1.7497	1.9381	1.9370	1.7487	1.7471
ZFI-3235-32	2	2 3/16	2	2.625	.093	2.0040	1.9993	2.1883	2.1870	1.9981	1.9969

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iglide® Z - Plain Bearings
Sleeve Bearing, MM





Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

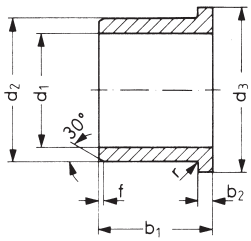
Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

Part Number	d1	d1-Tolerance	d2	b1	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			h13	Max.	Min.	Max.	Min.	Max.	Min.
ZSM-0405-04	4.0	+0.010 +0.058	5.5	4.0	4.058	4.010	5.512	5.500	4.000	3.970
ZSM-0507-05	5.0	+0.010 +0.058	7.0	5.0	5.058	5.010	7.015	7.000	5.000	4.970
ZSM-0608-08	6.0	+0.010 +0.058	8.0	8.0	6.058	6.010	8.015	8.000	6.000	5.970
ZSM-0608-12	6.0	+0.010 +0.058	8.0	12.0	6.058	6.010	8.015	8.000	6.000	5.970
ZSM-0810-08	8.0	+0.013 +0.071	10.0	8.0	8.071	8.013	10.015	10.000	8.000	7.964
ZSM-0810-10	8.0	+0.013 +0.071	10.0	10.0	8.071	8.013	10.015	10.000	8.000	7.964
ZSM-1012-08	10.0	+0.013 +0.071	12.0	8.0	10.071	10.013	12.018	12.000	10.000	9.964
ZSM-1012-10	10.0	+0.013 +0.071	12.0	10.0	10.071	10.013	12.018	12.000	10.000	9.964
ZSM-1012-12	10.0	+0.013 +0.071	12.0	12.0	10.071	10.013	12.018	12.000	10.000	9.964
ZSM-1214-15	12.0	+0.016 +0.086	14.0	15.0	12.086	12.016	14.018	14.000	12.000	11.957
ZSM-1517-15	15.0	+0.016 +0.086	17.0	15.0	15.086	15.016	17.018	17.000	15.000	13.957
ZSM-1618-12	16.0	+0.016 +0.086	18.0	12.0	16.086	16.016	18.018	18.000	16.000	15.957
ZSM-1618-15	16.0	+0.016 +0.086	18.0	15.0	16.086	16.016	18.018	18.000	16.000	15.957
ZSM-1820-20	18.0	+0.016 +0.086	20.0	20.0	18.086	18.016	20.021	20.000	18.000	19.948
ZSM-2022-15	20.0	+0.020 +0.104	22.0	15.0	20.104	20.020	22.021	22.000	20.000	19.948
ZSM-2023-20	20.0	+0.020 +0.104	23.0	20.0	20.104	20.020	23.021	23.000	20.000	19.948
ZSM-2023-30	20.0	+0.020 +0.104	23.0	30.0	20.104	20.020	23.021	23.000	20.000	19.948
ZSM-2023-35	20.0	+0.020 +0.104	23.0	35.0	20.104	20.020	23.021	23.000	20.000	19.948
ZSM-2225-20	22.0	+0.020 +0.104	25.0	20.0	22.104	22.020	25.021	25.000	22.000	21.948
ZSM-2528-20	25.0	+0.020 +0.104	28.0	20.0	25.104	25.020	28.021	28.000	25.000	24.948
ZSM-2528-30	25.0	+0.020 +0.104	28.0	30.0	25.104	25.020	28.021	28.000	25.000	24.948
ZSM-2528-48	25.0	+0.020 +0.104	28.0	48.0	25.104	25.020	28.021	28.000	25.000	24.948
ZSM-3034-20	30.0	+0.020 +0.104	34.0	20.0	30.104	30.020	34.025	34.000	30.000	29.948
ZSM-3034-30	30.0	+0.020 +0.104	34.0	30.0	30.104	30.020	34.025	34.000	30.000	29.948
ZSM-3034-40	30.0	+0.020 +0.104	34.0	40.0	30.104	30.020	34.025	34.000	30.000	29.948
ZSM-3539-20	35.0	+0.025 +0.125	39.0	20.0	35.125	35.025	39.025	39.000	35.000	34.938
ZSM-4044-40	40.0	+0.025 +0.125	44.0	40.0	40.125	40.025	44.025	44.000	40.000	39.938
ZSM-5055-60	50.0	+0.025 +0.125	55.0	60.0	50.125	50.025	55.030	55.000	50.000	49.938
ZSM-6065-60	60.0	+0.025 +0.125	65.0	60.0	65.125	65.025	65.030	65.000	60.000	59.926

iglide® Z - Linear Plain Bearing
Flange Bearing, MM





r = max. 0.5

Based on I.D.
f = 0.3 → d_1 1 - 6 mm
f = 0.5 → d_1 > 6 - 12 mm
f = 0.8 → d_1 > 12 - 30 mm
f = 1.2 → d_1 > 30 mm

Length Tolerance (b1)

Length (mm)			Tolerance (h13) (µm)
1	to	3	-0 /-140
> 3	to	6	-0 /-180
> 6	to	10	-0 /-220
>10	to	18	-0 /-270
>18	to	30	-0 /-330
>30	to	50	-0 /-390
>50	to	80	-0 /-460

Dimensions according to ISO 3547-1 and special dimensions

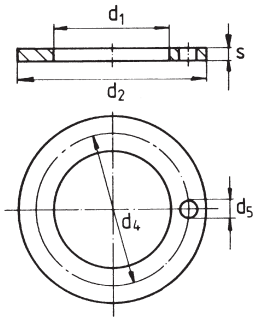
Part Number	d1[1)]	d1-Tolerance	d2	d3	b1	b2	I.D. After Pressfit		Housing Bore		Shaft Size	
	After Pressfit in Ø H7			d13	h13	-0.14	Max.	Min.	Max.	Min.	Max.	Min.
ZFM-0405-04	4.0	+0.010 +0.058	5.5	9.5	4.0	0.75	4.058	4.010	5.512	5.500	4.000	3.970
ZFM-0507-05	5.0	+0.010 +0.058	7.0	11.0	5.0	1.00	5.058	5.010	7.015	7.000	5.000	4.970
ZFM-0608-08	6.0	+0.010 +0.058	8.0	12.0	8.0	1.0	6.058	6.010	8.015	8.000	6.000	5.970
ZFM-0810-09	8.0	+0.013 +0.071	10.0	15.0	9.0	1.0	8.071	8.013	10.015	10.000	8.000	7.964
ZFM-1012-09	10.0	+0.013 +0.071	12.0	18.0	9.0	1.0	10.071	10.013	12.018	12.000	10.000	9.964
ZFM-1214-09	12.0	+0.016 +0.086	14.0	20.0	9.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
ZFM-1214-12	12.0	+0.016 +0.086	14.0	20.0	12.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
ZFM-1214-15	12.0	+0.016 +0.086	14.0	20.0	15.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
ZFM-1214-20	12.0	+0.016 +0.086	14.0	20.0	20.0	1.0	12.086	12.016	14.018	14.000	12.000	11.957
ZFM-1416-16	14.0	+0.016 +0.086	16.0	22.0	16.0	1.0	14.086	14.016	16.018	16.000	14.000	13.957
ZFM-1416-17	14.0	+0.016 +0.086	16.0	22.0	17.0	1.0	14.086	14.016	16.018	16.000	14.000	13.957
ZFM-1517-11	15.0	+0.016 +0.086	17.0	23.0	11.0	1.0	15.086	15.016	17.018	17.000	15.000	14.957
ZFM-1517-15	15.0	+0.016 +0.086	17.0	23.0	15.0	1.0	15.086	15.016	17.018	17.000	15.000	14.957
ZFM-1820-04	18.0	+0.013 +0.071	20.0	26.0	4.0	1.0	18.071	18.013	20.021	20.000	18.000	17.957
ZFM-1820-17	18.0	+0.013 +0.071	20.0	26.0	17.0	1.0	18.071	18.013	20.021	20.000	18.000	17.957
ZFM-2022-21	20.0	+0.020 +0.104	22.0	30.0	21.0	1.5	20.104	20.020	22.040	22.000	20.000	19.948
ZFM-2023-11	20.0	+0.020 +0.104	23.0	30.0	11.5	1.5	20.104	20.020	23.021	23.000	20.000	19.948
ZFM-2023-155	20.0	+0.020 +0.104	23.0	30.0	15.5	1.5	20.104	20.020	23.021	23.000	20.000	19.948
ZFM-2023-16	20.0	+0.020 +0.104	23.0	30.0	16.0	1.5	20.104	20.020	23.021	23.000	20.000	19.948
ZFM-2023-21	20.0	+0.020 +0.104	23.0	30.0	21.5	1.5	20.104	20.020	23.021	23.000	20.000	19.948
ZFM-2023-31	20.0	+0.020 +0.104	23.0	30.0	31.5	1.5	20.104	20.020	23.021	23.000	20.000	19.948
ZFM-2528-16	25.0	+0.020 +0.104	28.0	35.0	16.5	1.5	25.104	25.020	28.021	28.000	25.000	24.948
ZFM-2528-21	25.0	+0.020 +0.104	28.0	35.0	21.5	1.5	25.104	25.020	28.021	28.000	25.000	24.948
ZFM-2528-31	25.0	+0.020 +0.104	28.0	35.0	31.5	1.5	25.104	25.020	28.021	28.000	25.000	24.948
ZFM-3034-20	30.0	+0.020 +0.104	34.0	42.0	20.0	2	30.104	30.020	34.025	34.000	30.000	29.948
ZFM-3034-26	30.0	+0.020 +0.104	34.0	42.0	26.0	2.0	30.104	30.020	34.025	34.000	30.000	29.948
ZFM-3034-37	30.0	+0.020 +0.104	34.0	42.0	37.0	2.0	30.104	30.020	34.025	34.000	30.000	29.948
ZFM-3539-26	35.0	+0.025 +0.125	39.0	47.0	26.0	2.0	35.125	35.025	39.025	39.000	35.000	34.938
ZFM-4044-20	40.0	+0.025 +0.125	44.0	52.0	20.0	2.0	40.125	40.025	44.025	44.000	40.000	39.938
ZFM-4044-40	40.0	+0.025 +0.125	44.0	52.0	40.0	2.0	40.125	40.025	44.025	44.000	40.000	39.938
ZFM-7580-50	75.0	+0.030 +0.150	80.0	88.0	50.0	2.0	75.150	75.030	80.030	80.000	75.000	74.926

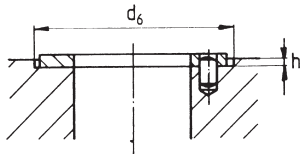
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iglide® Z - Plain Bearings
Thrust Washer, MM







Dimensions according to ISO 3547-1 and special dimensions

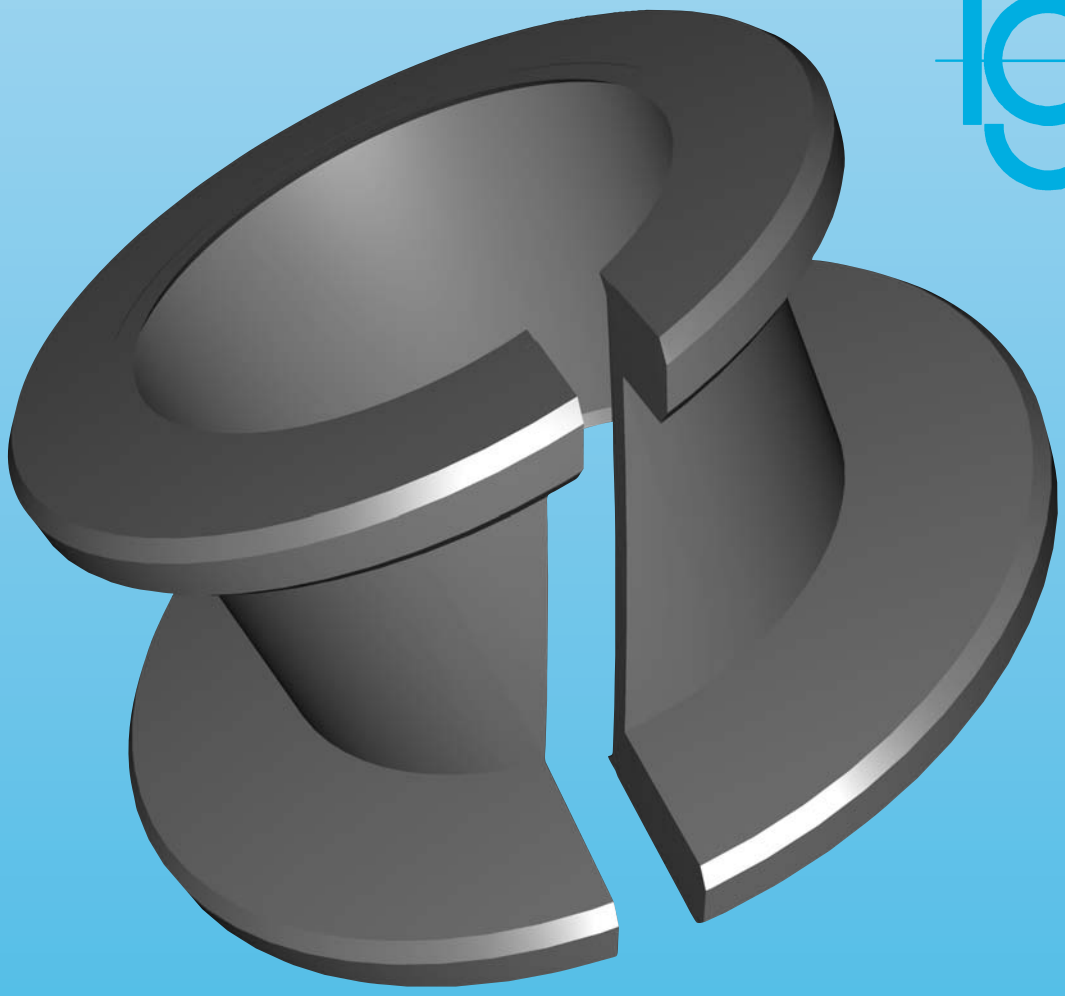
Part number	d1 +0.25	d2 -0.25	s -0.05	d4 -0.12 +0.12	d5 +0.375 +0.125	h +0.2 -0.2	d6 +0.12
ZTM-2644-015	26.0	44.0	1.5	35.0	3.0	1.0	44.0
ZTM-3254-015	32.0	54.0	1.5	43.0	4.0	1.0	54.0
ZTM-4874-020	48.0	74.0	2.0	61.0	4.0	1.5	74.0
ZTM-6290-020	62.0	90.0	2.0	76.0	4.0	1.5	90.0

iglide® Z - Plain Bearings

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QuickSpec: www.igus.com/qs/iglide.asp

igus®



iglide® Clip & Clip2 Bearings





- Easy to install
- Good wear resistance
- Maintenancce-free
- Used for both rotational and linear movements
- Custom dimensions are possible

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QuickSpec: www.igus.com/qs/iglide.asp

iglide® Clip Bearings

iglide® clip bearings are designed specifically for putting shafts through sheet metal plates. For this reason, the bearings have flanges located on both ends. The bearings are secured in the sheet metal plate on both sides after installation.
The clip bearings are slit at an angle, so installation of the bearings is possible from one side. After installation, the bearing opens and forms a lining for the bore hole in the metal plate. The shaft prevents the clip bearing from detaching from the housing. Even during axial movement, the bearing remains secured in the housing.
In addition, the lateral slit can compensate for bearing expansions due to temperature or moisture. During expansion, the slit width decreases, and changes so the bearing clearance is minimized.
The flange diameter on the smaller side is made to ensure that housings with larger tolerances can be properly secured.



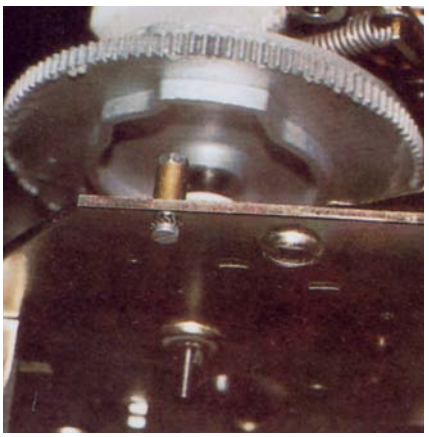
- **secured with double flange design**
- **very quick and easy installation**
- **custom dimensions are possible**
- **lightweight**
- **for sheet metal thicknesses of .040 - .135 inches (2mm, 3mm and 4mm)**

Special Properties of the iglide® Clip Bearing

iglide clip bearings are manufactured out of the wear-resistant material iglide M250. iglide M250 is a plain bearing material with strong wear-resistance at average loads. The bearings are self-lubricating and can be used dry. The bearings can be lubricated if desired. The iglide M250 material is resistant to all common lubricants.

When to use iglide® Clip Bearings:

- secured with the double flange design
- maintenance-free and self-lubricating
- good wear-resistance
- smooth operation
- used for both rotational and linear movements
- expansion possible through slit design



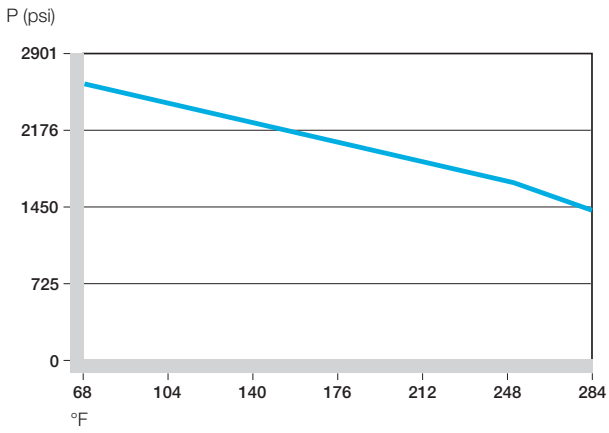
Picture 14.1: Typical use of iglide® clip bearings



Picture 14.2: Clip bearings are available in sizes from 3/16" to 1" (3 to 25mm) from stock.

Compressive Strength

The permissible static load of iglide Clip bearings at room temperature is 2610 psi. Due to the possibility of high tolerances in the housing bore, the clip bearing has a high compressive strength even for punched holes. For bearing surfaces that are very small, the vibration-dampening properties and the resistance to edge loads are especially important.



Graph 14.1: Permissible static surface pressure as a result of the operating temperature for clip bearings made of iglide® M250

Surface Speeds

Clip bearings are extremely wear-resistant in slow rotating, oscillating, and axial movements. The maximum surface speeds for the different movements are the same as for the iglide® M250 material (See adjacent table).
With lubrication during installation or continuous lubrication, the permissible speeds can be increased.

fpm	Rotating	Oscillating	Linear
Continuous	157	157	492
Short-term	393	393	984

Table 14.1: Maximum running speeds

Operating Temperatures

For operating temperatures up to 176°F, iglide® clip bearings display high wear resistance.
Even in the cold, the plain bearings remain elastic and wear-resistant.

iglide® M250	Application Temperature
Minimum	- 40°F
Max. Long-term	+ 176°F
Max. Short-term	+ 338°F

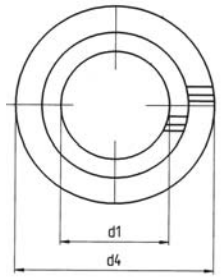
Table 14.2: Temperature limits for iglide® M250

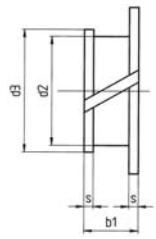
Installation

For installation, the plain bearings are pressed together on the side with the large flange. The angled slit makes the bearing spiral -shaped so that it can be placed easily into the metal plate.
The slit also compensates for expansions of the circumference. In this way, a tight clearance is possible with the clip bearings. The recommended clearance allows a nominal size shaft to turn easily. The Clip bearing can also rotate within the housing bore.

iglide® Clip Bearing, Inch







Structure of the Order Number:
(Dimrnsions in 1/16 inch)

MC I - 03 - 01

- MC I: Material
- Type
- Inch dimension
- 03: d1
- 01: b1

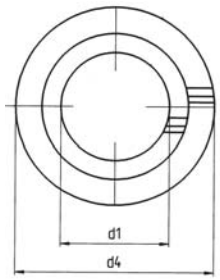
Part Number	d1	d2	d3	d4	s	b1	ID of Bearing in Housing	Recommended Sheet Metal Thickness
MCI-03-01	3/16	0.2343	1/4	5/16	0.032	0.1380	.1885	.040/.075
MCI-03-02	3/16	0.2343	1/4	5/16	0.032	0.2000	.1885	.072/.135
MCI-04-01	1/4	0.3125	11/32	7/16	0.032	0.1380	.2510	.040/.075
MCI-04-02	1/4	0.3125	11/32	7/16	0.032	0.2000	.2510	.072/.135
MCI-05-01	5/16	0.3750	13/32	1/2	0.032	0.1380	.3135	.040/.075
MCI-05-02	5/16	0.3750	13/32	1/2	0.032	0.2000	.3135	.072/.135
MCI-06-01	3/8	0.4375	15/32	9/16	0.032	0.1380	.3760	.040/.075
MCI-06-02	3/8	0.4375	15/32	9/16	0.032	0.2000	.3760	.072/.135
MCI-07-01	7/16	0.5000	17/32	5/8	0.032	0.1380	.4385	.040/.075
MCI-07-02	7/16	0.5000	17/32	5/8	0.032	0.2000	.4385	.072/.135
MCI-08-01	1/2	0.5625	19/32	11/16	0.032	0.1380	.5010	.040/.075
MCI-08-02	1/2	0.5625	19/32	11/16	0.032	0.2000	.5010	.072/.135
MCI-10-01	5/8	0.6875	23/32	7/8	0.032	0.1380	.6260	.040/.075
MCI-10-02	5/8	0.6875	23/32	7/8	0.032	0.2000	.6260	.072/.135
MCI-12-01	3/4	0.8125	27/32	1	0.032	0.1380	.7510	.040/.075
MCI-12-02	3/4	0.8125	27/32	1	0.032	0.2000	.7510	.072/.135

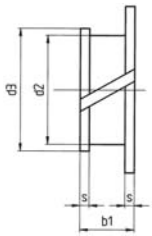
Part Number	Recommended Housing Bore		Recommended Shaft Size	
	Max.	Min.	Max.	Min.
MCI-03-01	0.2414	0.2343	0.1875	0.1865
MCI-03-02	0.2414	0.2272	0.1875	0.1865
MCI-04-01	0.3212	0.3125	0.2500	0.2490
MCI-04-02	0.3212	0.3038	0.2500	0.2490
MCI-05-01	0.3834	0.3750	0.3125	0.3115
MCI-05-02	0.3834	0.3663	0.3125	0.3115
MCI-06-01	0.4481	0.4375	0.3750	0.3740
MCI-06-02	0.4481	0.4269	0.3750	0.3740
MCI-07-01	0.5106	0.5000	0.4375	0.4365
MCI-07-02	0.5106	0.4894	0.4375	0.4365
MCI-08-01	0.5731	0.5625	0.5000	0.4990
MCI-08-02	0.5731	0.5519	0.5000	0.4990
MCI-10-01	0.6981	0.6875	0.6250	0.6240
MCI-10-02	0.6981	0.6769	0.6250	0.6240
MCI-12-01	0.8255	0.8125	0.7500	0.7490
MCI-12-02	0.8255	0.7995	0.7500	0.7490

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iglide® Clip Bearing, MM







Structure of the Order Number:
(Dimrnsions in mm)

MC M - 03-02

- MC: Material
- M: Type
- 03: Metric dimension d1
- 02: b1

Part Number	d1	d2	d3	d4	s	b1	ID of Bearing in Housing	Recommended Sheet Metal Thickness
MCM-03-02	3	4.2	4.8	6	0.6	3.2	3.025	2.34/1.45
MCM-03-03	3	4.2	4.8	6	0.6	4.2	3.025	3.13/2.87
MCM-04-02	4	5.2	5.9	7	0.6	3.2	4.025	2.34/1.45
MCM-04-03	4	5.2	5.9	7	0.6	4.2	4.025	3.13/2.87
MCM-05-02	5	6.2	6.8	8	0.6	3.2	5.025	2.34/1.45
MCM-05-03	5	6.2	6.8	8	0.6	4.2	5.025	3.13/2.87
MCM-06-02	6	7.2	7.8	11	0.6	3.2	6.025	2.34/1.45
MCM-06-03	6	7.2	7.8	11	0.6	4.2	6.025	3.13/2.87
MCM-06-04	6	7.2	7.8	11	0.6	5.2	6.025	
MCM-07-03	7	9	9.8	13	0.8	4.6	7.025	3.13/2.87
MCM-08-02	8	9.6	10.4	13	0.8	3.6	8.025	2.34/1.45
MCM-08-03	8	9.6	10.4	13	0.8	4.6	8.025	3.13/2.87
MCM-09-02	9	10.6	11.4	14	0.8	3.6	9.025	2.34/1.45
MCM-10-02	10	11.6	12.4	15	0.8	3.6	10.025	2.34/1.45
MCM-10-03	10	11.6	12.4	15	0.8	4.6	10.025	3.13/2.87
MCM-12-02	12	13.6	14.4	17	0.8	3.6	12.025	2.34/1.45
MCM-12-03	12	13.6	14.4	17	0.8	4.6	12.025	3.13/2.87
MCM-12-04	12	13.6	14.4	17	0.8	5.6	12.025	
MCM-14-03	14	15.6	16.4	19	0.8	4.6	14.025	3.13/2.87
MCM-16-02	16	17.6	18.4	21	0.8	3.6	16.025	2.34/1.45
MCM-16-03	16	17.6	18.4	21	0.8	4.6	16.025	3.13/2.87
MCM-18-03	18	20	21	23	1.0	5.0	18.025	3.13/2.87
MCM-20-03	20	22	23	25	1.0	5.0	20.025	3.13/2.87
MCM-25-03	25	27	28	30	1.0	5.0	25.025	3.13/2.87

For recommended housing bore and shaft sizes see following page

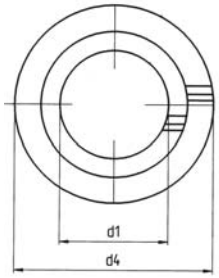
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RoHS info: www.igus.com/RoHS.asp

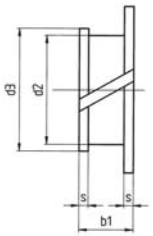
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iglide® Clip Bearing, MM







Structure of the Order Number:
(Dimrnsions in mm)

MC M - 03 - 02

- d1 b1 — Metric dimension
- Type
- Material

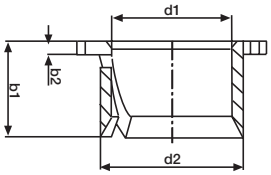
Part Number	Recommended Housing Bore		Recommended Shaft Size	
	Max.	Min.	Max.	Min.
MCM-03-02	4.380	4.200	3.000	2.975
MCM-03-03	4.380	4.200	3.000	2.975
MCM-04-02	5.380	5.200	4.000	3.975
MCM-04-03	5.380	5.200	4.000	3.975
MCM-05-02	6.420	6.200	5.000	4.975
MCM-05-03	6.420	6.200	5.000	4.975
MCM-06-02	7.420	7.200	6.000	5.975
MCM-06-03	7.420	7.200	6.000	5.975
MCM-06-04	7.420	7.200	6.000	5.975
MCM-07-03	9.220	9.000	7.000	6.975
MCM-08-02	9.820	9.600	8.000	7.975
MCM-08-03	9.820	9.600	8.000	7.975
MCM-09-02	10.870	10.600	9.000	8.975
MCM-10-02	11.870	11.600	10.000	9.975
MCM-10-03	11.870	11.600	10.000	9.975
MCM-12-02	13.870	13.600	12.000	11.975
MCM-12-03	13.870	13.600	12.000	11.975
MCM-12-04	13.870	13.600	12.000	11.975
MCM-14-03	15.870	15.600	14.000	13.975
MCM-16-02	17.870	17.600	16.000	15.975
MCM-16-03	17.870	17.600	16.000	15.975
MCM-18-03	20.330	20.000	18.000	17.975
MCM-20-03	22.330	22.000	20.000	19.975
MCM-25-03	27.330	27.000	25.000	24.975

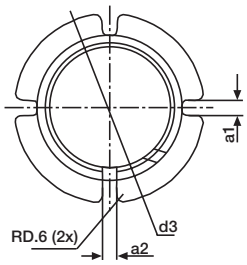


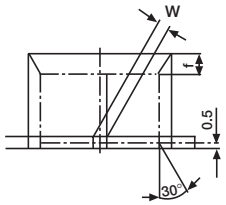
Special Properties of the iglide® Clip2 Bearing

The iglide® Clip2 bearing is a thin walled bearing in the iglide® M250 material with beveled edge for extremely simple installations. The diagonal slit helps to compensate for poor housing bore tolerance as well as temperature and humidity changes.

- **Split version of the iglide® M250 bearing**
- **Easy assembly by hand**
- **Compensation for heat expansion**
- **Suitable for ambient temperatures with high humidity**
- **Lightweight**
- **Very economical**
- **Inch and metric sizes available from stock**







Part Number	d1	d2	d3	b1	b2	W	a1=a2	Recommended Housing Bore		Recommended Shaft Size	
								Max.	Min.	Max.	Min.
MYI-03-03	3/16	0.2339	5/16	3/16	0.0252	25°	0.0394	0.2351	0.2339	0.1875	0.1865
MYI-04-04	1/4	0.2965	13/32	1/4	0.0252	25°	0.0394	0.2979	0.2965	0.2500	0.2490
MYI-05-05	5/16	0.3744	1/2	5/16	0.0299	25°	0.0394	0.3758	0.3744	0.3125	0.3115
MYI-06-06	3/8	0.4370	19/32	3/8	0.0299	25°	0.0394	0.4387	0.4370	0.3750	0.3740
MYI-07-07	7/16	0.4996	21/32	7/16	0.0299	25°	0.0394	0.5013	0.4996	0.4375	0.4365
MYI-08-06	1/2	0.5618	3/8	3/8	0.0299	25°	0.0591	0.5635	0.5618	0.5000	0.4990
MYI-08-08	1/2	0.5618	3/4	1/2	0.0299	25°	0.0591	0.5635	0.5618	0.5000	0.4990
MYI-10-07	5/8	0.6870	15/16	7/16	0.0299	25°	0.0591	0.6887	0.6870	0.6250	0.6240
MYI-10-10	5/8	0.6870	15/16	5/8	0.0299	25°	0.0591	0.6887	0.6870	0.6250	0.6240
MYI-10-18	5/8	0.6870	15/16	1 1/8	0.0299	25°	0.0591	0.6887	0.6870	0.6250	0.6240
MYI-12-12	3/4	0.8118	1 1/8	3/4	0.0299	25°	0.0591	0.8139	0.8118	0.7500	0.7490
MYI-12-18	3/4	0.8118	1 1/8	1 1/8	0.0299	25°	0.0591	0.8139	0.8118	0.7500	0.7490
MYI-14-7.5	7/8	0.9370	1 5/16	15/32	0.0299	25°	0.0591	0.9391	0.9370	0.8750	0.8740
MYI-14-14	7/8	0.9370	1 5/16	7/8	0.0299	25°	0.0591	0.9391	0.9370	0.8750	0.8740
MYI-16-14	1	1.0933	1 1/2	7/8	0.0449	25°	0.0591	1.0954	1.0933	1.0000	0.9985
MYI-16-16	1	1.0933	1 1/2	1	0.0499	25°	0.0591	1.0954	1.0933	1.0000	0.9985

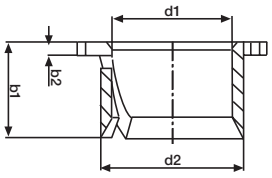
iglide® Clip2 Bearing, MM

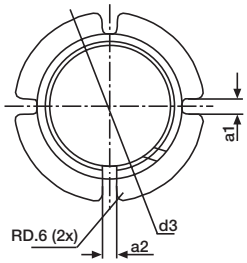


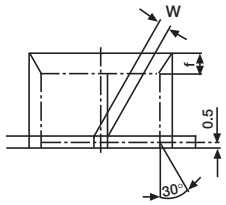
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- Easy assembly by hand
- Compensation for heat expansion
- Suitable for ambient temperatures with high humidity
- Lightweight
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- Inch and metric sizes available from stock

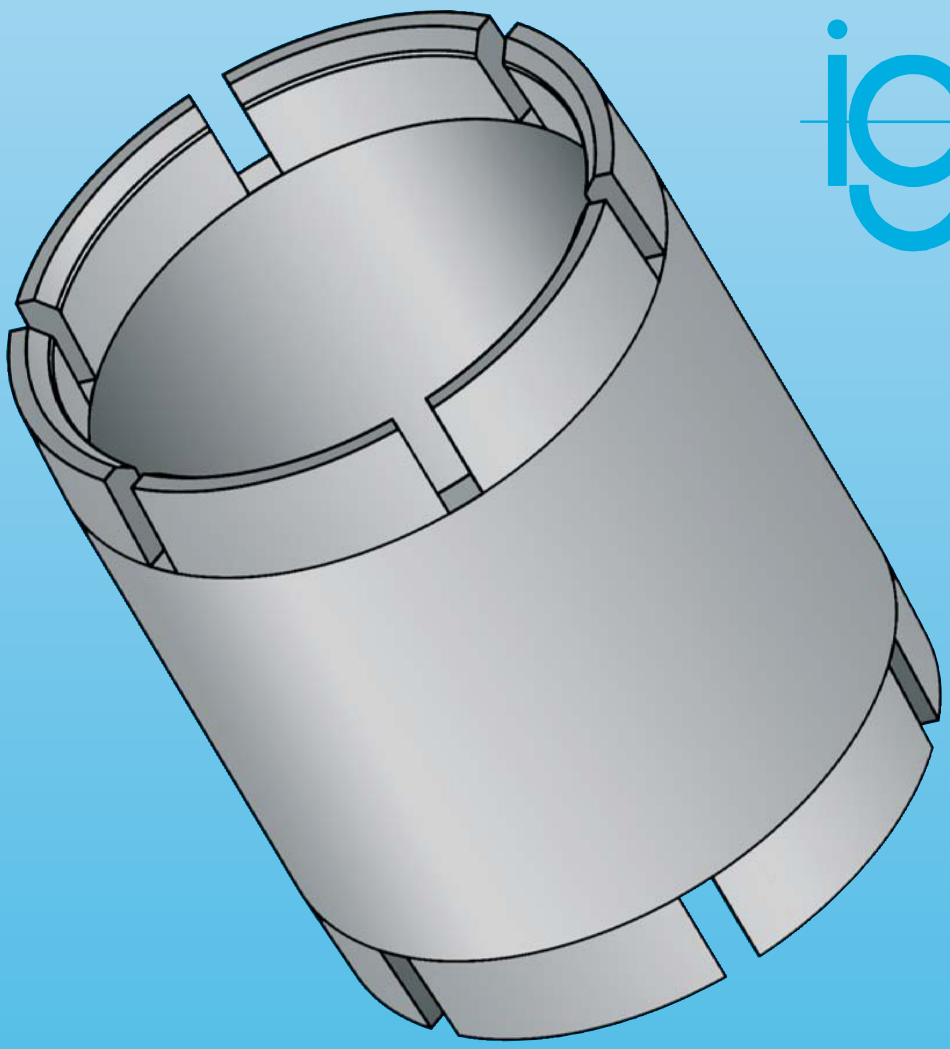






Part Number	d1	d2	d3	b1	b2	W	a1=a2	Recommended Housing Bore		Recommended Shaft Size	
								Max.	Min.	Max.	Min.
MYM-04-04	4	5.2	7.0	4.0	0.6	25°	1.000	5.230	5.200	4.000	3.975
MYM-05-05	5	6.2	8.0	5.0	0.6	25°	1.000	6.236	6.200	5.000	4.975
MYM-06-06	6	7.2	9.5	6.0	0.6	25°	1.000	7.236	7.200	6.000	5.975
MYM-08-08	8	9.6	12.0	8.0	0.8	25°	1.000	9.636	9.600	8.000	7.975
MYM-10-10	10	11.6	15.0	10.0	0.8	25°	1.000	11.643	11.600	10.000	9.975
MYM-12-12	12	13.6	18.0	12.0	0.8	25°	1.000	13.643	13.600	12.000	11.975
MYM-14-14	14	15.6	21.0	14.0	0.8	25°	1.000	15.643	15.600	14.000	13.975
MYM-16-16	16	17.6	24.0	16.0	0.8	25°	1.000	17.643	17.600	16.000	15.975
MYM-20-20	20	21.6	30.0	20.0	0.8	25°	1.000	21.652	21.600	20.000	19.975
MYM-25-25	25	27.4	37.5	25.0	1.2	25°	1.000	27.452	27.400	25.000	24.962

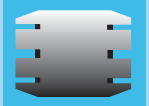
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iglide® JVSI, JVSM, JVFM
Pre-tensioned, No Clearance

- Pre-loaded bearing
- Clearance-free in loaded or unloaded state
- Maintenance-free, predictable service life
- Made with iglide® J material
- Very high load capacity





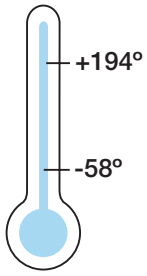
Pre-tensioned Bearing

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iglide® Pre-tensioned Bearing - JVSI / JVSM / JVFM

Price Index



2 Styles
7 Dimensions
Inner diameters
From .31” - .79” (8 - 20 mm)

iglide® JVSM and JVFM bearings are free from clearance in unloaded state because of the pre-tension at the ends,. The material iglide® J is designed for the lowest coefficient of friction while running dry for its low stick slip tendency.

Special properties:

- Pre-loaded bearing
- Clearance-free in loaded or unloaded state
- Maintenance-free, predictable service life
- Made with iglide® J material
- Very high load capacity

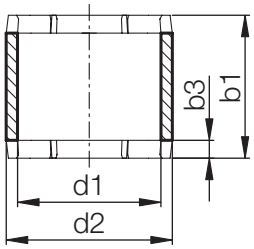


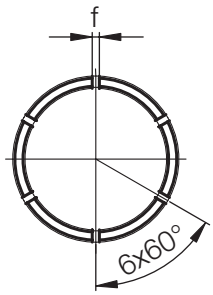
Material Table

General Properties	Unit	iglide® J	Testing Method
Density	g/cm³	1.49	
Color		yellow	
Max. moisture absorption at 73°F/50% r.h.	% weight	0.3	DIN 53495
Max. moisture absorption	% weight	1.3	
Coefficient of friction, dynamic against steel	µ	0.06 - 0.18	
p x v value, max. (dry)	psi x fpm	9700	
Mechanical Properties			
Modulus of elasticity	psi	348,000	DIN 53457
Tensile strength at 68°F	psi	10,585	DIN 53452
Compressive strength	psi	8,700	
Permissible static surface pressure (68°F)	psi	5,075	
Shore D-hardness		74	DIN 53505
Physical and Thermal Properties			
Max. long-term application temperature	°F	194	
Max. application temperature, short-term	°F	248	
Min. application temperature	°F	-58	
Thermal conductivity	W/m x K	0.25	ASTM C 177
Coefficient of thermal expansion (at 73°F)	$K^{-1} \times 10^{-5}$	10	DIN 53752
Electrical Properties			
Specific volume resistance	Ωcm	$> 10^{13}$	DIN IEC 93
Surface resistance	Ω	$> 10^{12}$	DIN 53482

iglide® Pre-tensioned Bearing - JVSI







Dimensions (inch)

Part No.	d1	d1-Tolerance		d2	b1	b1 Tolerance
		Max.	Min.	h13		
JVSI-0608-06	3/8	0.3773	0.3750	1/2	3/8	0.075
JVSI-0810-08	1/2	0.5040	0.5013	5/8	1/2	0.075
JVSI-1012-10	5/8	0.6297	0.6270	3/4	5/8	0.075
JVSI-1214-12	3/4	0.7541	0.7505	7/8	3/4	0.075
JVSI-1618-16	1	1.0041	1.0007	1 1/8	1	0.100

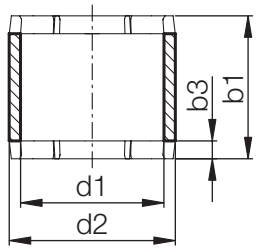
d1 – Measured after pressfit in housing bore.

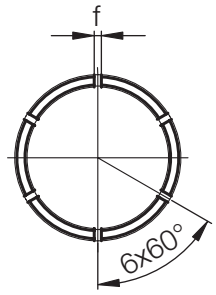
d2 – Nominal dimension of H7 within the measurement plane ➤ Page 1.3

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iglide® Pre-tensioned Bearing - JVSM







Dimensions [mm]

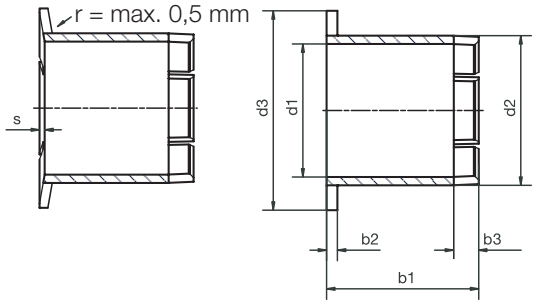
Part No.	d1	d1 Tolerance E10	d2	b1 h13	b3	f
JVSM-0810-08	8	+0.083 / +0.025	10	8	2.0	1
JVSM-1012-10	10	+0.083 / +0.025	12	10	2.0	1
JVSM-1214-12	12	+0.102 / +0.032	14	12	2.0	1
JVSM-1416-14	14	+0.102 / +0.032	16	14	2.0	1
JVSM-1517-15	15	+0.102 / +0.032	17	15	2.5	1
JVSM-1820-18	18	+0.102 / +0.032	20	18	2.5	1
JVSM-2023-20	20	+0.124 / +0.040	23	20	2.5	1

d1 – Measured after pressfit in housing bore.

d2 – Nominal dimension of H7 within the measurement plane ➤ Page 1.3

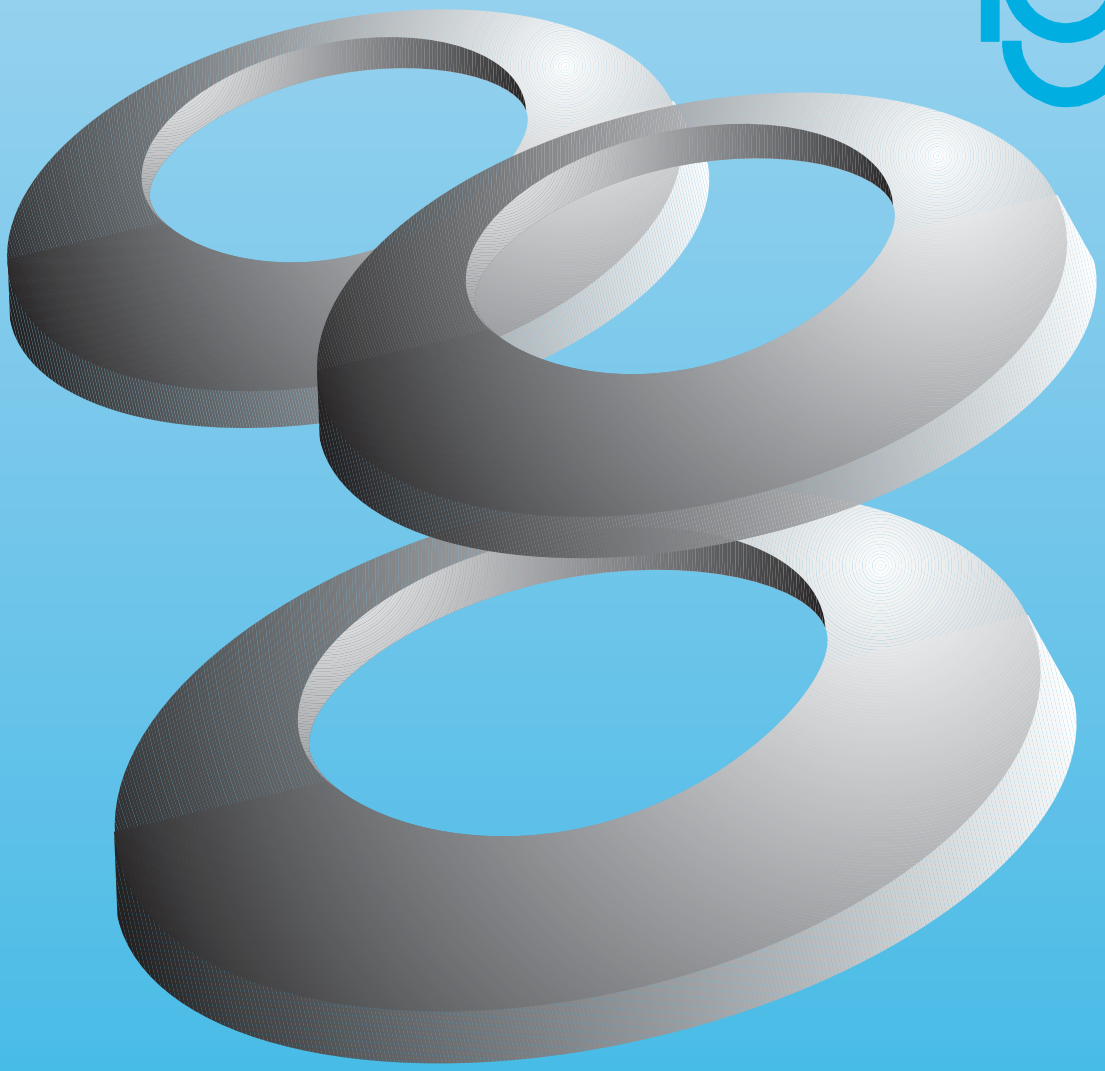
iglide® Pre-tensioned Bearing - JVFM





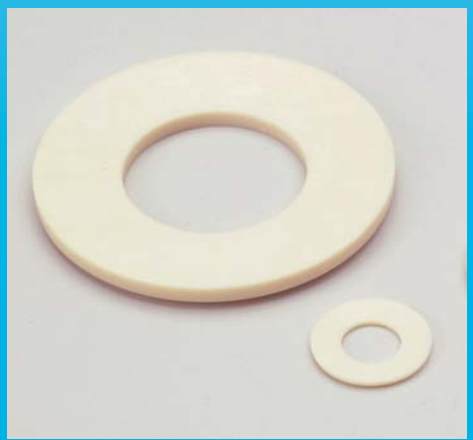
Dimensions [mm]

Part No.	d1	d1-Tolerance E10	d2	d3	b1 h13	b2	b3	s
JVFM-0810-10	8	+0.083 / +0.025	10	15	10	1	2.0	0.44
JVFM-1012-10	10	+0.083 / +0.025	12	18	10	1	2.0	0.53
JVFM-1214-12	12	+0.102 / +0.032	14	20	12	1	2.0	0.53
JVFM-1416-12	14	+0.102 / +0.032	16	22	12	1	2.0	0.53
JVFM-1517-15	15	+0.102 / +0.032	17	23	15	1	2.5	0.53
JVFM-1820-18	18	+0.102 / +0.032	20	26	18	1	2.5	0.53
JVFM-2023-20	20	+0.124 / +0.040	23	30	20	1.5	2.5	0.62

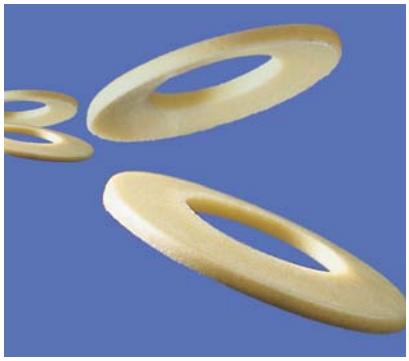


Polysorb Plastic Disc Springs

- Compensation for axial clearances and manufacturing tolerances
- Vibration dampening
- Noise dampening
- Corrosion-free
- Lightweight



Polysorb Disc Springs



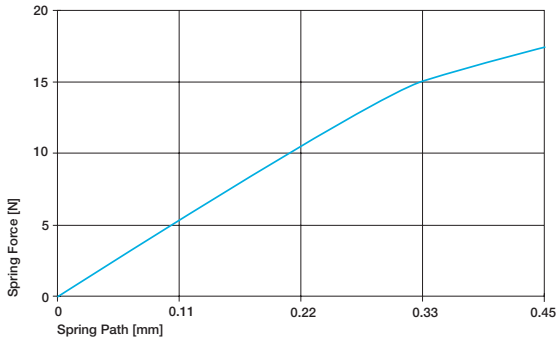
When to use Polysorb Disc Springs:

- application requires, flat spring characteristics, which are only possible in metal at a considerable expense (slotted design)
- compensation of axial clearances and manufacturing tolerances
- vibration dampening
- noise-dampening
- electrical and thermal insulation
- no lubrication necessary
- lightweight
- low profile dimensions
- anti-magnetic

When not to use Polysorb Disc Springs:

- when constant spring forces are necessary over wide temperature ranges
- when high spring forces are desired

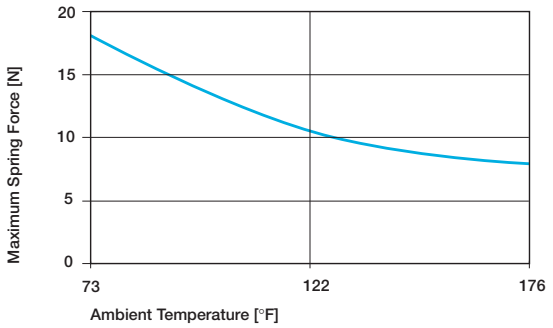
Spring washers are discs that can be axially loaded, which are concave in the axial direction on the plate surface. Polysorb disc springs require less space than other spring types. They are especially suitable for designs, that do not require a high spring length.
The spring length of the disc spring is relatively small. In practice a number of disc springs are combined. Disc springs that are alternately stacked increase the spring length proportionally to the amount of springs. The total spring force is as large as the force of one single disc spring. In order to increase the force, the disc springs can be parallel stacked to form a spring packet.



Graph 16.1: Experimental test results between the force ratio $F/F_{1.0}$ and the spring length ratio S/h_0 ($S_{1.0} = H_0$)

Increased Temperatures

Increased temperatures reduces the rigidity of plastics. Polysorb disc springs still have a maximum spring force of 1.80 lbs at the maximum permissible temperature of 176°F. The spring force in ambient temperature is shown in Graph 16.2.



Graph 16.2: Effect of ambient temperature on the spring force

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Chemical Resistance

Polysorb disc springs are acid-resistant against diluted lyes and very weak acids, as well as against fuels and all types of lubricants. The small moisture absorption permits the use in wet or moist environments.

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Conditionally Resistant
Strong lyes	Conditionally Resistant

Table 16.1: Chemical resistance of Polysorb

Moisture Absorption

Polysorb disc springs absorb moisture. In the process, their mechanical properties change. However, in the worst application case - a long lasting use in water - Polysorb disc springs still have a maximum spring force of 2.24 lbs.

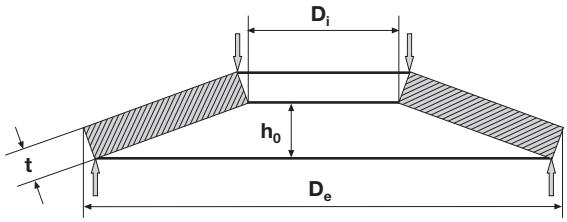
Application Example



Picture 16.1: Polysorb Disc Springs in a fatigue test

Polysorb Disc Springs - mm - JTEM





Dimensions based on DIN 2093

Part Number	Standard values: spring lengths and forces											
	D_e (mm)	D_i (mm)	t (mm)	h_0 (mm)	$S_{0.25}$ (mm)	$F_{0.25}$ (lbs)	$S_{0.5}$ (mm)	$F_{0.5}$ (lbs)	$S_{0.75}$ (mm)	$F_{0.75}$ (lbs)	$F_{1.0}$ (lbs)	M (g)
JTEM-05	10.0	5.2	0.5	0.25	0.06	.22	0.13	.54	0.19	.81	1.12	0.04
JTEM-06	12.5	6.2	0.7	0.30	0.08	.67	0.15	1.15	0.23	1.80	2.70	0.11
JTEM-08	16.0	8.2	0.9	0.35	0.09	.90	0.18	1.80	0.28	2.47	2.70	0.20
JTEM-10	20.0	10.2	1.1	0.45	0.11	1.12	0.22	2.25	0.33	3.37	4.05	0.33
JTEM-12	25.0	12.2	1.5	0.55	0.14	2.02	0.28	4.05	0.42	6.07	7.87	0.85
JTEM-16	31.5	16.3	1.75	0.70	0.18	3.37	0.35	7.19	0.53	11.46	15.74	1.44
JTEM-20	40.0	20.4	2.25	0.90	0.23	7.87	0.45	15.74	0.68	24.73	31.47	3.10

The standard values for the spring lengths and forces represent rounded average values

F	=	Force
S	=	Spring Length
D_e	=	Outside diameter (mm)
D_i	=	Inside diameter (mm)
t	=	Thickness of one plate
h_0	=	Maximum spring (mm)
$S_{0.25}$	=	25% of the maximum spring length (mm)
$F_{0.25}$	=	Spring force at 25% spring (N)
$S_{0.5}$	=	50% of the maximum spring length (mm)
$F_{0.5}$	=	Spring force at 50% spring (N)
$S_{0.75}$	=	75% of the maximum spring length (mm)
$F_{0.75}$	=	Spring force at 75% spring (N)
$F_{1.0}$	=	Spring force 100% spring (N)
M	=	Weight of a single plate (g)

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iglide® Flange Bearings

- Easy to install
- Good wear resistance
- Maintenance-free
- Used for both rotational and linear movements
- Special dimensions are possible



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iglide® Flange Bearing

With this design it is possible to use iglide® high performance plain bearings in locations where recommended housing bore tolerances are not possible.

Standard: iglide® G300

Through the design, high loads are possible when there is a minimal precision requirement of the housing. iglide® maintenance-free flange bearings are made of iglide® G300, but can also be manufactured by special order from the different iglide® materials. In this way, all advantages of the iglide® high performance plastics can be utilized.

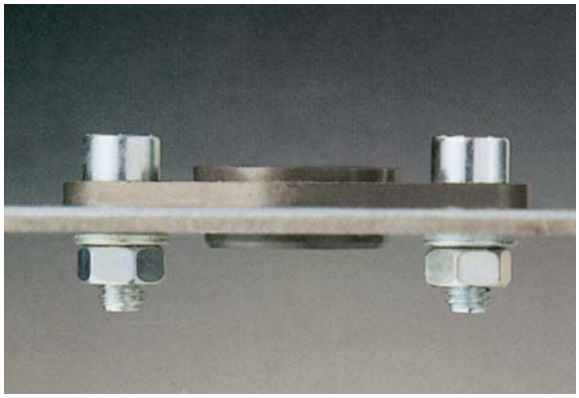


Advantages:

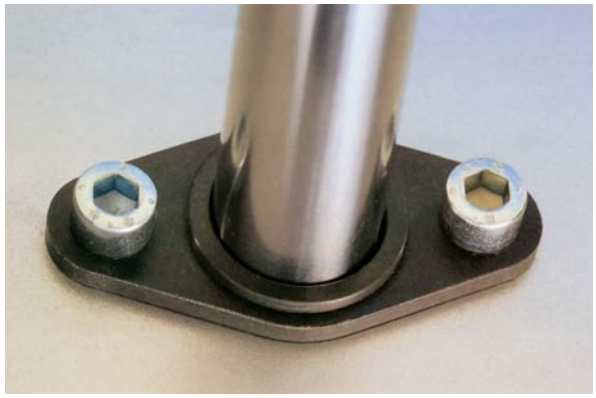
- Maintenance-free
- easy installation
- very good wear resistance
- very high temperature resistance
- resistant to dirt, dust, and lint
- corrosion-resistant
- vibration-dampening
- used for rotating and linear movements
- very lightweight
- inner diameter of 10mm to 35mm available
- can also be used in bore holes with larger tolerances

Installation

Depending on the requirements, different mounting types can be considered. For low radial loads, it is sufficient to mount iglide® flange bearings on one surface simply with two bolts. For higher radial loads, it is recommended to support the iglide® flange bearing in a bore on the reinforced side facing the direction of the load. For this bore hole, large tolerances are permitted, since it only serves as additional support for the iglide flange bearing. In order to achieve higher radial loads in the bearings, the iglide® flange bearing can be pressfit into a recommended housing bore. The additional bolts ensure the fit of the bearing in the housing.
For the installation of the iglide® maintenance-free flange bearing, no special materials or devices are necessary.



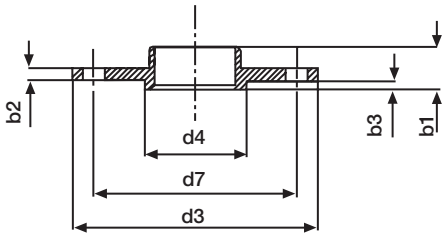
Picture 17.1: iglide® Flange Bearing



Picture 17.2: The installation of the iglide® flange bearing, simple and secure

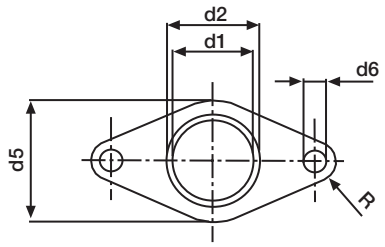
iglide® Flange Bearing, GFL





Structure of the Order Number:
(Data in mm)

G FL - 10
- G: Material
- FL: Type
- 10: d1



Dimensions according to DIN 1494 and special dimensions

Part Number	d1[1]	d2[2]	d3	d4	d5	d6	d7 (± 0.2)	b1	b2	b3	R
GFL-10	10	12	30	14	15	4.5	22	6	2	1	4
GFL-12	12	14	36	16	18	4.5	26	6	2	1	4.5
GFL-14	14	16	42	18	21	5.5	30	6	2	1	5
GFL-16	16	18	48	20	24	5.5	34	6	2	1	5.5
GFL-18	18	20	54	22	27	6.5	39	6	2	1	7
GFL-20	20	23	60	26	30	6.5	44	10	3	2	7
GFL-25	25	28	75	30	35	6.5	55	10	3	2	8.5
GFL-30	30	34	90	36	40	8.5	66	10	3	2	10
GFL-35	35	39	95	41	55	8.5	77	10	3	2	12

1) Tolerance for d1:E10 (cylinder gauge measurement) ➤ Page 1.14
2) Pressfit in H7-tolerance housing bore ➤ Page 1.14

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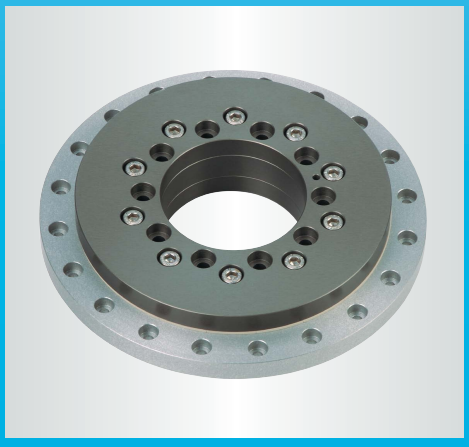


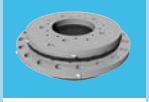
igus®



iglide® PRT
Slewing Ring Bearing

- Completely maintenance-free
- Suitable for all environments
- Easy installation
- Interchangeable sliding elements
- Very high load capacity





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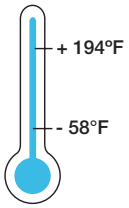
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iglide® Slewing Ring Bearing, PRT

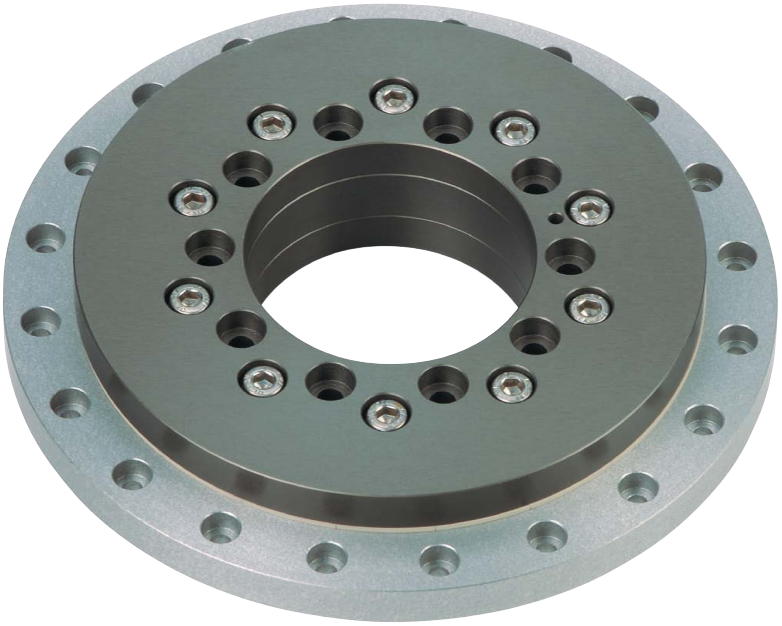
Price Index

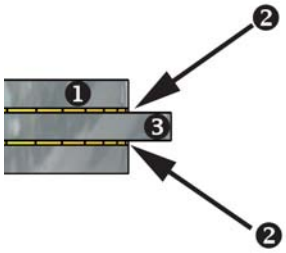


iglide® PRT is a slewing ring bearing with the proven advantage of igus® plastic bearings. The iglide® J sliding elements are completely maintenance-free and lubrication-free. All the housing components are made of aluminum (except style 02, which has iglide® J4 head rings), and all the parallel surfaces of iglide® J sliding elements are hard anodized. All the fixing screws are made of stainless steel. The PRT slewing rings are available on request in stainless steel.



2 Styles
5 Dimensions
Inner diameters
From 1.18” - 7.87” (30 - 200 mm)





Polymer- Slewing Ring Bearing, PRT

❶ **Style 01:**
Aluminum, hard anodized or stainless steel
Style 02:
iglide® J4

❷ **Style 01:**
iglide® J ➤ Chapter 3
iglide® H1➤ Page 35

❸ **Style 01 and 02:**
Aluminum or stainless steel

When to use iglide® PRT:

- When a ready-to-install solution is needed
- When a robust and corrosion resistant bearing unit with high loads is needed
- For high tilting moments
- For use in dirty environments
- For maintenance-free applications without lubrication
- For slow to medium speeds

When not to use iglide® PRT:

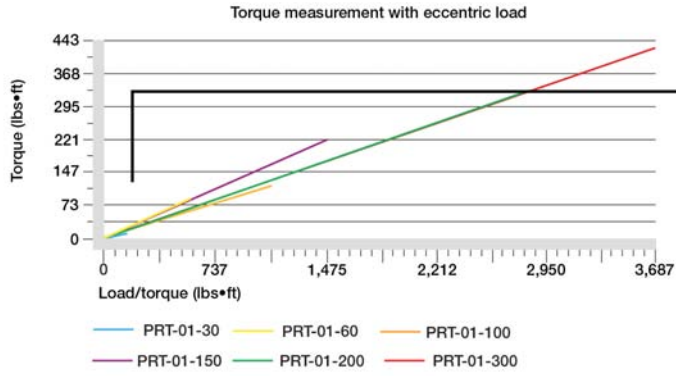
- For fast rotations
- When there is not enough driving torque at high loads
- When extreme precision is needed

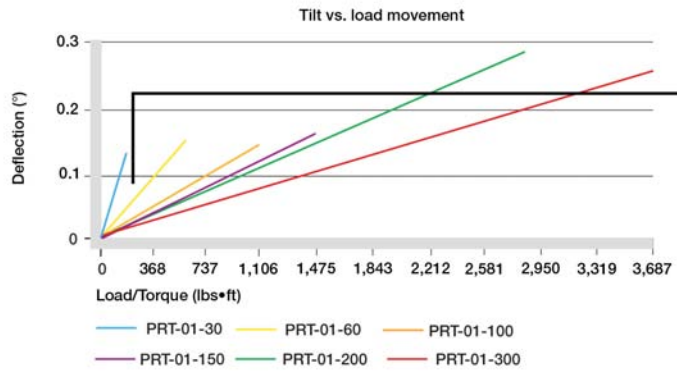
When to use iglide® H1 sliding elements:

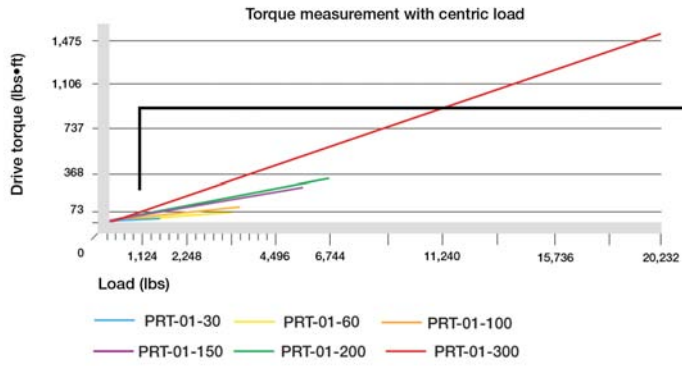
- When temperatures are above 192°F
- For high moisture environments

iglide® Slewing Ring Bearing, PRT

Part No.	Weight	Axial Load		Radial Load		Max. rpm	Rigidity		Max. Perm.
		static	dynamic	static	dynamic	dry	axial	radial	tilting moment
	lbs	lbs	lbs	lbs	lbs	1/rpm	N/µm	N/µm	lbs•ft
PRT-02-30	.441	5,620	1,573	562	157	200	-	-	73
PRT-02-60	1.54	10116	2700	2,250	629	120	-	-	147
PRT-01-30	.88	6,070	1,573	1,124	337	250	100	50	147
PRT-01-60	2.43	11,240	3,372	2,248	674	200	300	65	590
PRT-01-100	2.87	12,364	3,596	3,596	1,124	150	400	65	1,106
PRT-01-150	4.85	17,984	5,620	5,620	1,798	100	450	65	1,475
PRT-01-200	7.05	22,480	6,744	7,868	2,248	80	500	65	2,802
PRT-01-300	16.75	33,721	20,232	10,116	6,069	50	500	65	3,687











Handling and transport system for Semiconductor-Carrier/-Box. The complete system is suitable for the use in cleanrooms, lubrication- and maintenance-free

PDF: www.igus.com/pdf/iglide.asp
Specs/CAD/RFQ: www.igus.com/iglide.asp
RoHS info: www.igus.com/RoHS.asp

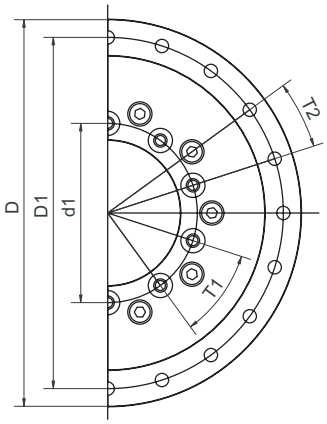
mm

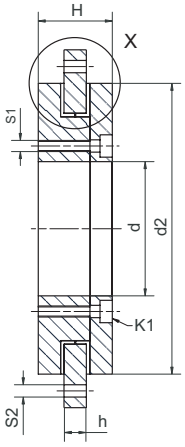
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/iglide.asp

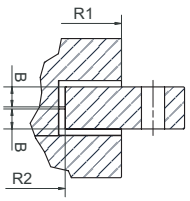
iglide® Slewing Ring Bearing, PRT, Style 01

PRT-01-300









Special properties:

- High rigidity
- Easy to install, interchangeable
- High wear resistance
- Available in aluminum, stainless steel
- Also available for high temperature applications using iglide® H1 material for sliding elements

Dimensions (mm)

iglide® Slewing Ring Bearing PRT

Part No.	D*	D1	d1	d	d2 ±0.2	H	h	T1	T2	S1	S2	K1 for screw	R1	R2	B
PRT-01-30	100	91	42.5	30	82	29	10	8 x 45°	8 x 45°	M4	4.5	DIN 7984 M4	41	29	4.5
PRT-01-60	160	145	74	60	130	33	10	10 x 36°	20 x 18°	M5	5.5	DIN 912 M5	65	51.5	4.5
PRT-01-100	185	170	112	100	160	34	12	12 x 30°	16 x 22.5°	M5	5.5	DIN 912 M5	80	69	5.5
PRT-01-150	250	235	165	150	220	35	12	12 x 30°	16 x 22.5°	M5	5.5	DIN 912 M5	110	96.5	5.5
PRT-01-200	300	285	215	200	274	38	15	12 x 30°	16 x 22.5°	M6	7.0	DIN 912 M6	137	124	7.0
PRT-01-300	450	430	320	300	410	42	15	12 x 30°	16 x 22.5°	M8	9.0	DIN7984M8	205	186.6	7.0

Please add “ES” to the end of the part number for 303 stainless steel option; Tolerance according to DIN ISO 2768 mK
Please add “H1” to the end of the part number for High Temperature option. For example: PRT-01-200-H1
Other options are available. Please call igus for more information.

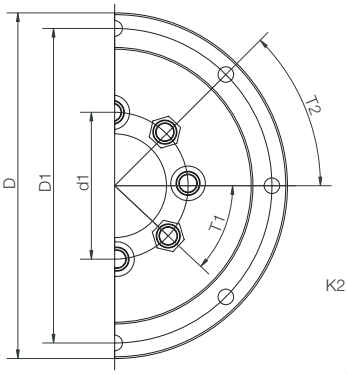
iglide® Slewing Ring Bearing, PRT, Style 02

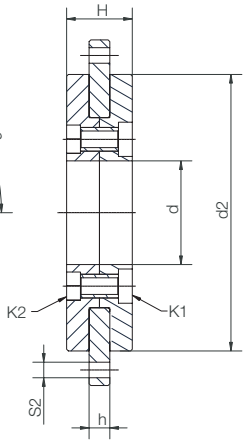


PRT-02-60

PRT-02-30









Outer ring available in stainless steel as an option. Inner rings made from iglide® J4

Special properties

- Lightweight (.44 lbs)
- Outer ring made from hard anodized Aluminum or stainless steel
- iglide® J4 inner ring – sliding against the outer ring without lubrication
- Low cost

Dimensions (mm)

iglide® Slewing Ring Bearing PRT

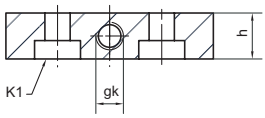
Part No.	D	D1	d1	d	d2	H	h	T1	T2	S2	K1 For Screw	K2 For Screw
PRT-02-20-AL	80	70	31	20	60	16	5	6 x 60°	6 x 60°	4.5	DINB6912-172 M5	DIN439-A2 M5
PRT-02-30-AL	100	91	42.5	30	80	19	6	8 x 45	8x45	4.5	DIN 7984 M5	DIN 439 M5A2
PRT-02-60-AL	160	145	86.5	60	130	30	10	6 x 60°	20 x 18°	5.5	DIN931 M5x25	DIN934 M5

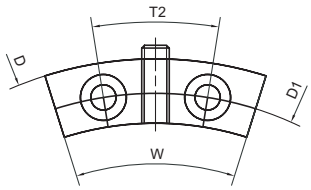
Please add “ES” to the Part No. for stainless steel

iglide® Slewing Ring Bearing, PRT Accessories

Hand clamp







- With .75 lbs · ft screw torque a holding torque up to 7lbs · ft is possible
- Easy to screw onto outer ring



Picture shows PRT with fitted manual clamp

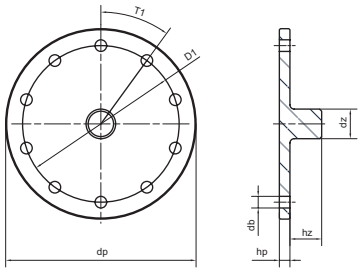
Part No.	D(mm)	D1(mm)	T2(°)	K1	h(mm)	gk	W(°)
PRT-HK-60	160	145	20x18	DIN 7984 M5	10	M6	35
PRT-HK-100*	205	185	16x22.5	DIN 7984 M5	12	M6	40
PRT-HK-200*	320	300	16x22.5	DIN 7984 M6	15	M6	40

* Only available with large outer rings

Drive plate



- For quick and easy drive coupling





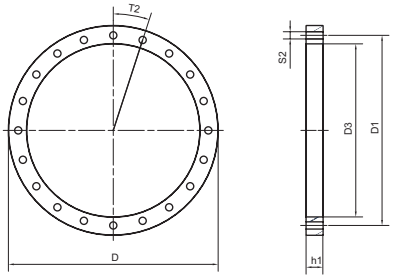
Picture shows PRT with fitted drive plate

Part No.	dp(mm)	hp(mm)	dz(mm)	hz(mm)	D1(mm)	T1(°)	db(mm)
PRT-AZ-60	90	5	14	15	74	10x36	5.5

Mounting rings



- Easier, more flexible mounting
- No bore in the mounting face necessary





Picture shows PRT with fitted distance ring

Part No.	D(mm)	D1(mm)	T2(°)	S2(mm)	D3(mm)	h1(mm)
PRT-01-30-DR	100	91	8x45	4.5	84	11
PRT-01-60-DR	160	145	20x18	5.5	132	13
PRT-01-100-DR	185	170	16x22.5	5.5	162	13
PRT-01-150-DR	250	235	16x22.5	5.5	222	13
PRT-01-200-DR	300	285	16x22.5	7.0	276	13

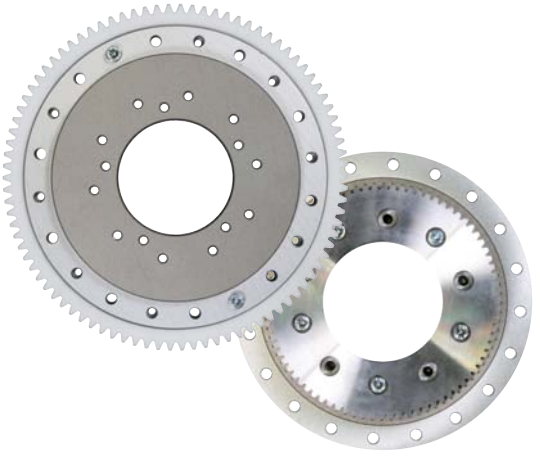
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Fax 1-401-438-7680

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E-Mail: sales@igus.com
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iglide® Slewing Ring Bearing Custom Options

PRT with gear system

A toothed belt can be mounted on either the inner or outer ring of the bearing, depending on the type of drive configuration required. The unique design makes the geared module ready to install, which enables design engineers to cut costs and decrease supply base and lead times.



Challenge igus® to meet you custom Slewing Ring needs

- Custom holes
  - add holes
  - remove holes
  - change size of holes
  - change placement
  - change threaded holes
- Stainless steel version
  - Type 303
  - Type 304
  - Type 316



- Higher temperature (H1 inserts)
- Lower moisture version (H1 inserts)
- Black anodizing
- Increase outer ring diameter
- and many more!



iglide® Xiros for extreme operations

- Maintenance-free and lubrication-free
- High corrosion resistance
- For temperatures up to 302°F (150°C)
- Non-magnetic and easy to clean
- Low weight



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iglide® Xiros

iglide® Xiros opens new fields of application for plastic bearings. The inner and outer races of the iglide® Xiros are made from high performance iglide® materials. The corrosion-free balls are made from stainless steel. Glass balls are also available for maximum corrosion resistance. Xiros is made from the A500 material are temperature-resistant up to 302°F (150°C), while the Xiros from the B180 material are designed for temperatures up to 176°F (80°C).



Special properties:

- Free from maintenance and lubrication
- High corrosion resistance
- Conforms to FDA Standards
- Non-magnetic and easy to clean
- Low weight

Material Table

General Properties	Unit	iglide® A500	iglide® B180	Testing Method
Density	g/cm³	1.28	1.49	
Color		Brown	Cream	
Max. moisture absorption at 73°F/50% r.h.	% weight	0.3	0.3	DIN 53495
Max. moisture absorption	% weight	0.5	1.3	
Mechanical Properties				
Modulus of elasticity	psi	522,100	2,400 mpa	DIN 53457
Tensile strength at 68°F	psi	20,300	73 mpa	DIN 53452
Shore D-hardness		83	74	DIN 53505
Electrical Properties				
Specific volume resistance	Ωcm	> 10^{14}	10^{13}	DIN IEC 93
Surface resistance	Ω	> 10^{13}	10^{12}	DIN 53482

The xiros® polymer ball beqarings are singlerow grooved ball bearings in accordance with DIN 625. The lubricant and maintenance-free ball bearings are comprised of four components:

- the outer race
- the inner race
- the cage
- and the balls

Inner and outer rings are made of igus® tribopolymers in order to maximize service life and minimize friction values. In contrast to metallic ball bearings, xiros® polymer ball bearings function without lubrication. For this reason, they are suitable for numerous applications where in comparison to permanently lubricated metallic ball bearings, lubricant-free use is more important than top speeds or loads. These include food and medical technology, for example, as well as the packaging and textile industries, chemical industry and clean room applications as well as electronics and office technology.

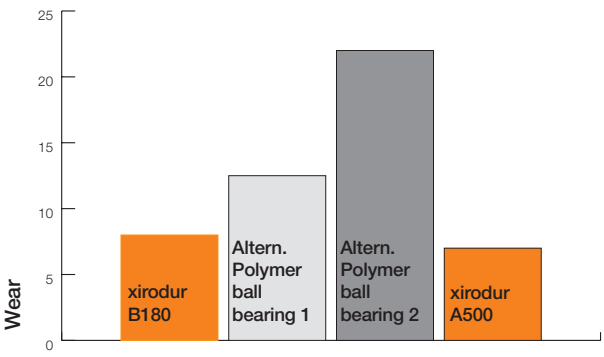




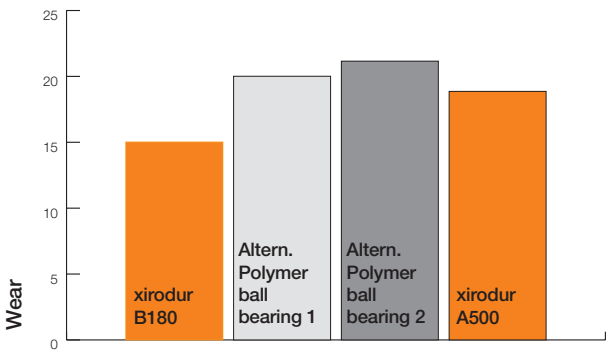
The development and design of dry running xiros® polymer ball bearings is based on tests carried out in the igus® polymer bearing laboratory.



The material combinations for bearing races, balls and cages are tested in the igus® polymer bearing laboratory under a wide range of different load and speed conditions. This extensive testing allows application-specific selection of the suitable bearing and an estimation of the service life.



n = 2000 rpm, F = 5 lbs, T = 73 °F



n = 500 rpm, F = 17 lbs, T = 73 °F

PDF: www.igus.com/pdf/iglide.asp
Specs/CAD/RFQ: www.igus.com/iglide.asp
RoHS info: www.igus.com/RoHS.asp

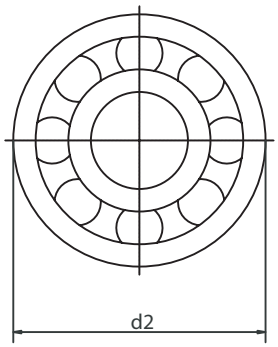
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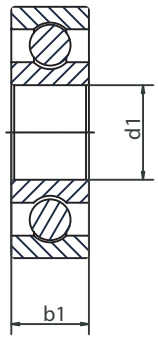
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E-Mail: sales@igus.com
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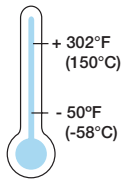
iglide® Xiros - A500 material
For high temperatures

iglide®-plastic ball-bearings open new fields of application for plastic bearings. Our iglide® Xiros bearings made with races in our A500 material offer excellent wear incomparison to other high-temp polymers.









- Maintenance- and lubricant-free
- For temperatures up to 302°F
- Corrosion-free
- Nonmagnetic and washable
- Chemical resistant
- All components with FDA compliance (with stainless steel balls and PEEK-cages)
- Predictable lifetime
- Low weight
- For 3 - 10 mm shaft diameter

Dimensions and materials

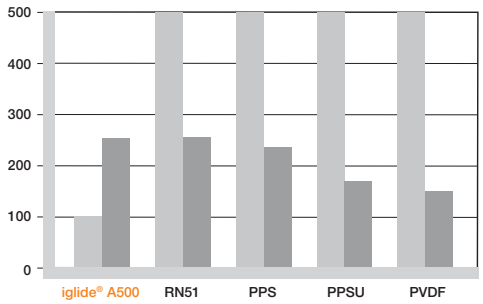
iglide® Xiros – combination PA/Stainless steel balls 1.4401

Part no.	Races	Cage	d1 (mm)	d2 (mm)	b1 (mm)	d1 + d2 Tolerances (mm)	Max. Static. load axial (lbs)	Static load rating (lbs)	Dynamic load rating (lbs)	Max. Speed (rpm)
BB623A50010ES	A500	PA	3	10	4	±0.04	9	7	9	5000
BB626A50010ES	A500	PA	6	19	6	±0.04	28	13	18	3200
BB608A50010ES	A500	PA	8	22	7	±0.04	50	16	22	2700
BB6000A50010ES	A500	PA	10	26	8	±0.04	85	23	31	2100

iglide® Xiros – combination PEEK/Glass balls

Part no.	Races	Cage	d1 (mm)	d2 (mm)	b1 (mm)	d1 + d2 Tolerances (mm)	Max. Static. load axial (lbs)	Static load rating (lbs)	Dynamic load rating (lbs)	Max. Speed (rpm)
BB623A50010GL	A500	PA	3	10	4	±0.04	9	7	9	5000
BB626A50070GL	A500	PEEK	6	19	6	±0.04	28	13	18	3200
BB608A50070GL	A500	PEEK	8	22	7	±0.04	50	16	22	2700
BB6000A50070GL	A500	PEEK	10	26	8	±0.04	85	23	31	2100

Please consult igus® for lifetime calculation in your application.



Comparison of max. application temperature and wear of some high-temperature polymers

Wear (%, iglide® A500 = 100)
max. application temperature (°C)

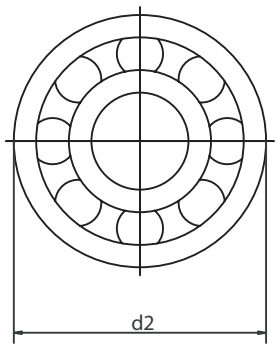
Applications:

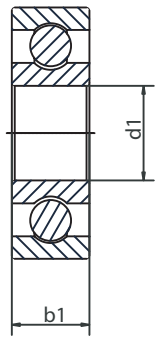
- Medical
- Chemical
- Food
- Pharmaceutical
- Biotechnology
- Plant engineering

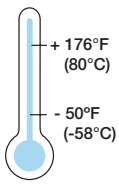
iglide® Xiros - B180 material
For normal temperatures

As well as the high-temperature range, igus® supplies a normal temperature line for use at temperatures up to 80°C. The specially developed material xirodur B180 for the inner and outer races provides significantly longer life times, at a lower cost for applications in the normal temperature range.









- For temperatures up to 176° F
- Maintenance- and lubricant-free
- Nonmagnetic and washable
- Corrosion-free
- Predictable lifetime
- Low weight
- Low friction
- For 3 - 20 mm shaft diameters

Dimensions and materials

iglide® Xiros – combination PA/Stainless steel balls

Part no.	Races	Cage	d1 (mm)	d2 (mm)	b1 (mm)	d1 + d2 Tolerances (mm)	Max. Static. load axial (lbs)	Static load rating (lbs)	Dynamic load rating (lbs)	Max. Speed (rpm)
BB623B18010ES	B180	PA	3	10	4	±0.04	7	5	8	4500
BB626B18010ES	B180	PA	6	19	6	±0.04	21	11	16	2600
BB608B18010ES	B180	PA	8	22	7	±0.04	37	13	19	2200
BB6000B18010ES	B180	PA	10	26	8	±0.04	64	19	27	1900
BB6001B18010ES	B180	PA	12	28	8	±0.04	71	24	33	1750
BB6004B18010ES	B180	PA	20	42	12	±0.04	90	47	66	1150

iglide® Xiros – combination PA/Glass balls

Part no.	Races	Cage	d1 (mm)	d2 (mm)	b1 (mm)	d1 + d2 Tolerances (mm)	Max. Static. load axial (lbs)	Static load rating (lbs)	Dynamic load rating (lbs)	Max. Speed (rpm)
BB623B18010GL	B180	PA	3	10	4	±0.04	7	5	8	4500
BB626B18010GL	B180	PA	6	19	6	±0.04	21	11	16	2600
BB608B18010GL	B180	PA	8	22	7	±0.04	37	13	19	2200
BB6000B18010GL	B180	PA	10	26	8	±0.04	64	19	27	1900
BB6001B18010GL	B180	PA	12	28	8	±0.04	71	24	33	1750
BB6004B18010GL	B180	PA	20	42	12	±0.04	90	47	66	1150

Please consult igus® for lifetime calculation in your application.

Applications:

- Medical engineering
- Chemical
- Food
- Pharmaceutical
- Biotechnology
- Plant engineering

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Design Engineering with DryLin®



DryLin®

System Comparison	P. 20.2	Fixed and Floating Mounting Instructions	P. 20.13
System Properties	P. 20.4	Expert System	P. 20.15
Features & Benefits	P. 20.6	Calculation Variables	P. 20.15
Bearing Materials	P. 20.7	Horizontal	P. 20.16
Loading Capacity	P. 20.8	Lateral	P. 20.17
Permissible Speeds	P. 20.8	Vertical	P. 20.18
The 2:1 Rule	P. 20.8	System Analysis	P. 20.19
Coefficients of friction	P. 20.9	Application Examples	P. 20.20
Wear Behavior	P. 20.10		
Operating Temperatures	P. 20.10		
Chemical Resistance	P. 20.11		
Corrosion Behavior	P. 20.11		
Cleanroom Suitability	P. 20.12		

DryLin® Overview

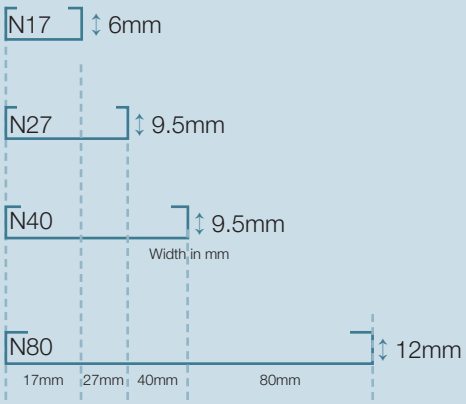




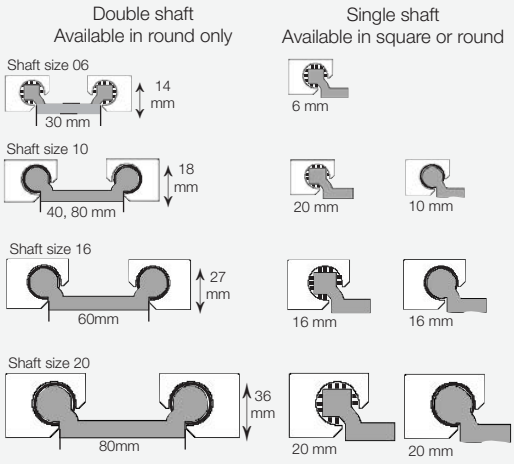
The DryLin Story

We perform over 2,500 tests per year on hundreds of bearing materials specifically formulated for maintenance-free operation, with lubrication. As a result of this testing we have determined that our iglide® J, J200 and T500 are ideal materials for most linear bearing applications due to their excellent wear properties and low coefficients of friction. Unlike older bearing technology, DryLin® Linear Plain Bearings are engineered to run dry, without the need for messy lubricants or costly maintenance and downtime; expensive and cumbersome grease lines may be eliminated ffrom the design entirely. Dirt, dust, and other abrasives will not be drawm intot he bearing surface, making DryLin ideal for agressive environments, as welll as for high moisture, wash-down, and even underwater applications.





Not actual size



Not actual size

DryLin® N Low Profile Guide Rails

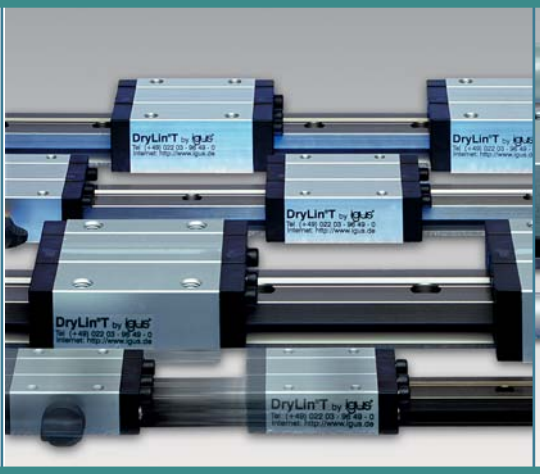
The DryLin® N series offers extremely low profiles in several widths, and is therefore ideal in tight space constraints. Like all DryLin® products the carriages glide smoothly on anodized aluminum rails without the need for messy lubricants. They are also available in preloaded versions for reducing running clearance. DryLin® N is a particularly low-coat alternative to miniature ball bearing systems, and is more precise and economical when compared to many custom-machined or simple plastic parts.

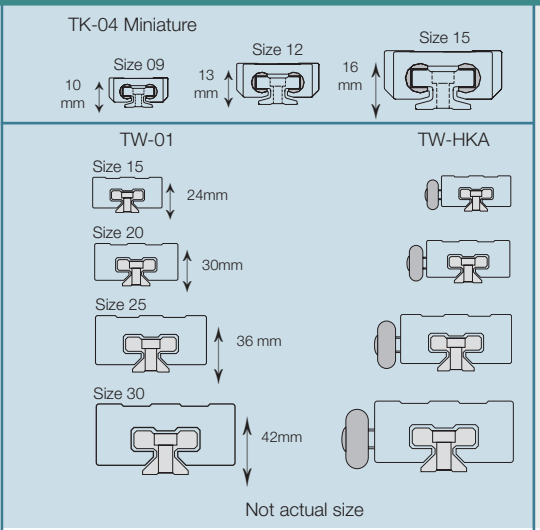
DryLin® W Flexible Linear Guide System

DryLin® W was developed to promote design flexibility and quick assembly in both single and double rail configurations. DryLin® W is also offered as a pre-mounted, bolt-on system - eliminating the need for timely shaft alignment and carriage assembly. All DryLin® W systems are available with our enhanced J200 liners, which reduces friction and optimizes bearing life.

- The single rail system, which can incorporate a floating square linear bearing, compensates efficiently for extreme shaft misalignments.
- The double rail system totally eliminates the need for shaft alignment, offering a single, bolt-on solution.
- Available in 316 Stainless Steel

DryLin® T
Linear Guide System



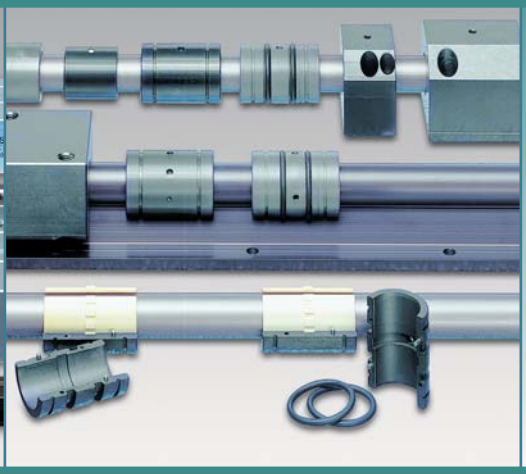


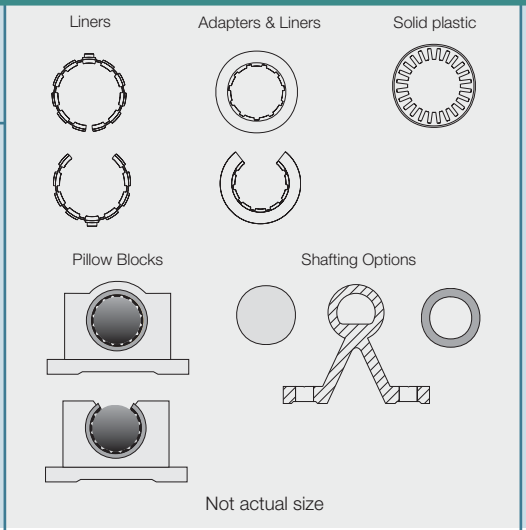
DryLin® T
Profile Guide Rails

DryLin® T guide rails are dimensionally interchangeable with recirculating ball guides, but offer cost-effective, maintenance-free operation. Series 01 offers adjustable clearance, and the mini 04 series is ideal for use in tight design constraints. Both use iglide® J glide pads and hard-anodized aluminum rails for optimal friction and wear resistance.

- Permits adjustments to the play of guidance systems (Series 01)
- Very resistant to dirt
- Very low coefficient of friction and wear

DryLin® R
Linear Bearings/Shafting



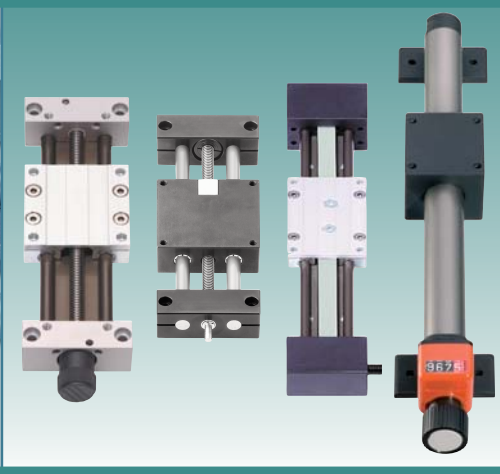


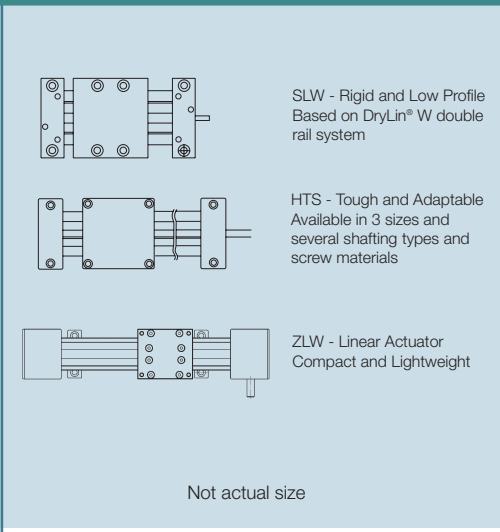
DryLin® R
Shaft Guide

DryLin® R is dimensionally interchangeable with other linear bearings, but offers clean, cost-effective results, suitable for many shaft materials. The liner offers excellent clearance, and makes DryLin® R suitable for use in extremely wet and dirty environments – they are also easily replaceable. DryLin® S shafting is the optimal shafting for the iglide® J material - increasing lifetime up to 50% vs. steel shafting.

- Hard anodized aluminum shafts in combination with DryLin® linear bearings are ideal for applications in which weight reduction and/or high service life is required.
- DryLin® with stainless steel shafts provide excellent chemical resistance and is an ideal solution for applications in the food and packaging industry
- The use of standard steel shafts made of Cf53 hardened and ground steel offers extremely low friction values when running dry at a favorable price
- High-tech solutions can be implemented using carbon fiber shafts.

DryLin® Slide Tables





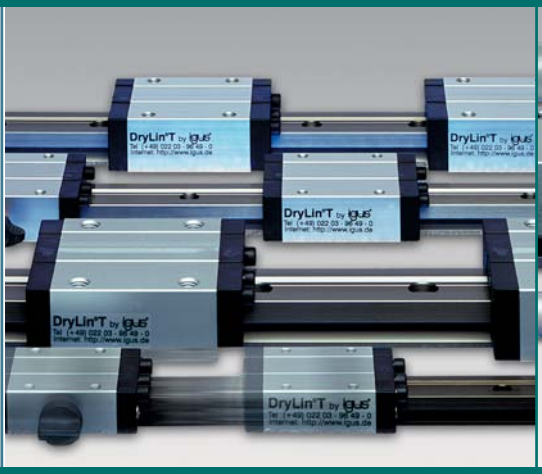
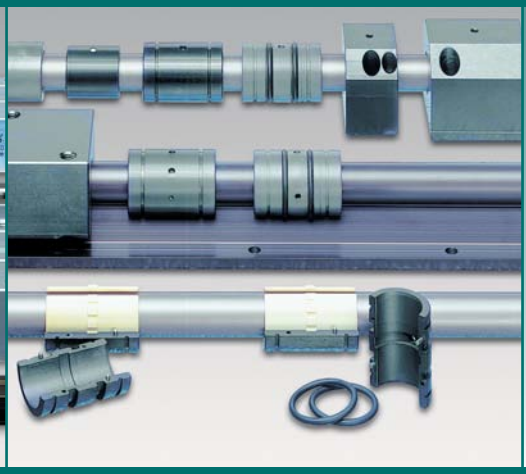
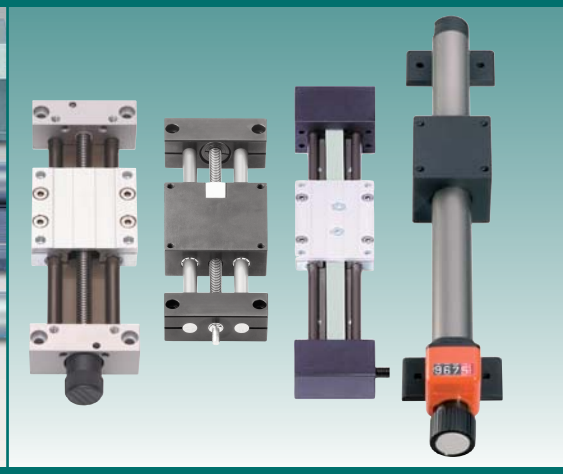
DryLin®
Slide Tables

SLW/HTS
DryLin® Slide Tables are maintenance-free and offered in both belt and screw drives for simple bolt-on assembly. Offering design flexibility and corrosion-resistance, they are also ideal as a low cost solutions for reduced production and assembly time.

ZLW
High speed belt-driven tables for velocities up to 15 fps (5m/s)

SET EasyTube
Simple, but and effective and solid design: that's the new DryLin® SET EasyTube. A complete system from few components for simple linear adjustments.

	DryLin® N Low Profile Guides	DryLin® W Flexible Guiding System
		
Properties		
Max. static load	225 lbs	**Mounted System** 2,877 lbs **Single Bearing** 719 lbs
Max. surface speed - linear	49.2 ft/s (15 m/s)	49.2 ft/s (15 m/s)
Max. application temperature	-40°F to 194°F (-40°C to +90°C)	-40°F to 194°F (-40°C to +90°C)
Rail/Shaft Material	anodized aluminum	hard anodized aluminum, anodized aluminum 316 stainless steel
Online Calculator	**Online Lifetime Calculation www.igus.com**	**Online Lifetime Calculation www.igus.com**
	Section 21	**Section 22**
How long does it last? Application Example		
		
	Storage Solutions for a Tape Library	Flatbed Ink-Jet Printer

DryLin® T Linear Guide System	DryLin® R Linear Bearings/Shafting	DryLin® Slide Tables	
			
3,140 lbs	>11,240 lbs	**Screw driven** 2,200 lbs	**Belt driven** 65 lbs (300 N)
49.2 ft/s (15 m/s)	49.2 ft/s (15 m/s)	3.9 fpm	16.4 fpm (5 m/s)
-40°F to 194°F (-40°C to +90°C)	**iglide® J** -40°F to 194°F (-40°C to +90°C) **iglide® T500** 148° to 482°F (-100° to 250°C)	-40°F to 194°F (-40°C to +90°C)	
hard anodized aluminum	hard anodized aluminum, anodized aluminum, case hardened steel, chrome plated steel, stainless steel,	Hard anodized aluminum, steel, stainless steel, chrome-plated	Hard anodized aluminum
Online Lifetime Calculation **www.igus.com**	**Online Lifetime Calculation** **www.igus.com**		
Section 23	**Section 24**	**Section 25**	



Mailroom Machinery



Machining Center



High Dirt Resistance

DryLin® Linear Plain Bearings

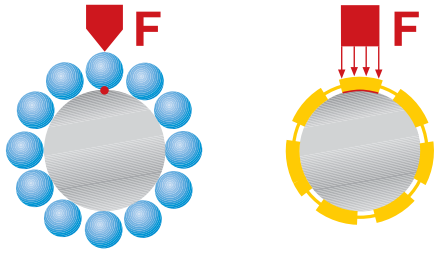
Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin®: Sliding instead of Rolling

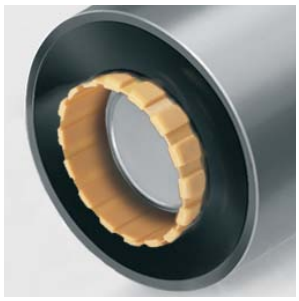
DryLin® is a range of maintenance-free, lubrication-free linear slide bearings consisting of four main product lines. Principal features, in addition to zero maintenance, are strength and resistance to external influences such as corrosion, moisture, chemicals, heat and impact.

Features	Benefits
● Predictable, long life	= Confidence in design and operation
● Self lubricating and oil-free	= Eliminate down time and messy lubricants
● Maintenance-free	= Save money
● Dirt and dust resistant	= Ideal for harsh environments
● Replaceable liners	= Lower costs
● Supports high static loads	= Eliminate shaft damage
● Needs no messy grease lines	= Cleaner, simpler design
● Lightweight	= Less transportation costs and fatigue
● Runs on soft and hard shafts	= More options, including cost-effective shafts
● Constant coefficient of friction	= Smooth movements over design lifetime
● Short strokes and high accelerations	= No scoring or replacement of shafting
● Withstands shocks and vibrations	= Reduces stress on other components
● Dimensionally interchangeable	= No redesign/drop-in replacements available
● Corrosion-free	= Ideal for high moisture/wash down/chemicals





Ball bearing system



igus® DryLin® linear bearings

Lower surface pressure

DryLin® linear bearings work through the use of sliding elements, in contrast to the design of recirculating ball bearing systems. This results in a larger contact surface and to a much lower pressure. The advantages are:

- Compatibility with non-hardened shafts
- and even non-metallic counterparts
- complete avoidance of seizure



Picture 60.1: Resistant to dirt, dust and moisture

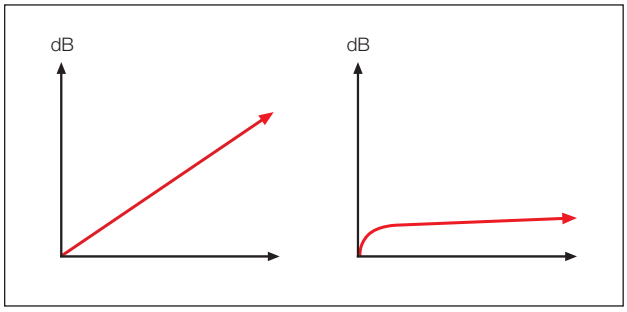
Dry running, without lubrication



DryLin® does not require costly maintenance or additional components such as grease lines to function. Designed for dry running, DryLin® linear bearing systems run without grease or oil; this permits operation even applications with dirt or washdowns- the bearing liners are designed to act as wipers by removing debris from the system.

No minimum stroke lengths

Compared with recirculating ball bushings, DryLin® bearings' operating characteristics do not depend on the length of travel, nor do they impose any requirements concerning minimum stroke.
Even applications with extremely short strokes are no problem for DryLin® linear bearings.



Graph 60.1: Comparative noise generation

Quiet operation

The smooth operation is also attributable to the difference between rolling and sliding (Graph 60.1): No mechanical rolling against hard surfaces, no collisions between balls resulting in loud running noises. Sliding motion is extremely quiet, only a low "swishing" noise is heard. Many customers prefer the feel of DryLin® for manual operations

DryLin®: Materials

Suitable Materials for the DryLin® Series

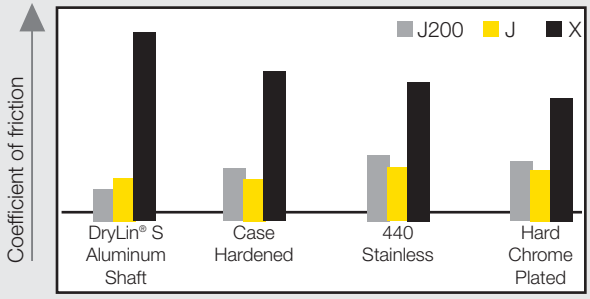
	DryLin® T	DryLin® N	DryLin® W	DryLin® R
iglide® J	●	●	●	●
iglide® J200 [1]	–	–	●	●
iglide® T500 [2]	–	–	–	●

● suitable – not available

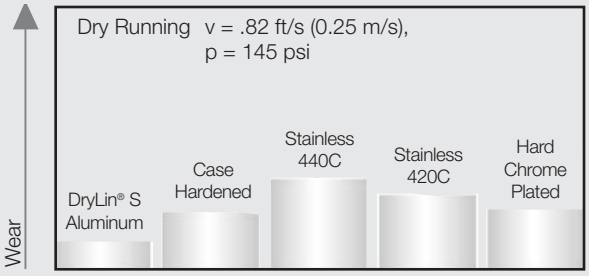
[1] only in combination with hard anodized aluminum

[2] only in combination with hardened shafts, preferably stainless steel or chromed shafts

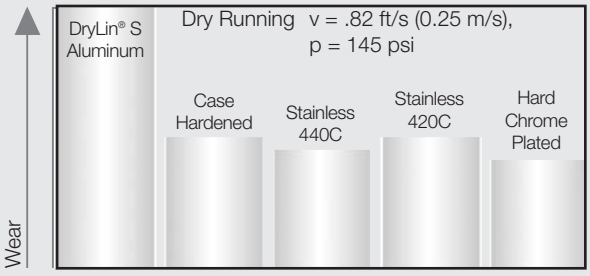
iglide® – Coefficients of friction



iglide® J – various shaft materials

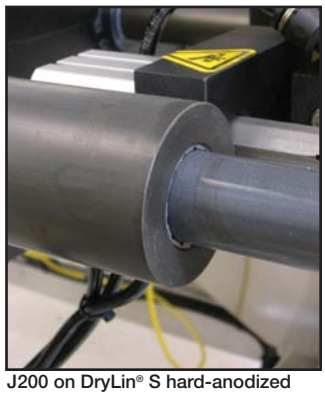


iglide® T500 – various shaft materials



The coefficient of friction - Not just simple plastics

All DryLin® materials are characterized by excellent coefficient of friction values in dry operation. The average coefficient of friction values shown in the diagram hint at suitable combinations of materials. DryLin® linear guide systems can reach coefficients of friction as low as 0.12 without any additional lubricants. Depending on the load, the kind of application and the environmental conditions, this value might be 2 to 3 times higher.



J200 on DryLin® S hard-anodized shafting

The iglide® J material

iglide® J material gliding on different surface materials achieved the best results in our tests. Comprehensive laboratory tests showed that iglide® J is by far the most suitable polymer material for linear motion applications. Special Characteristics of iglide® J:

- Lowest coefficient of friction on all materials
- Very low abrasion values during dry operation
- Excellent wear resistance
- Maintenance free dry operation
- Vibration dampening
- Very low moisture absorption
- Recommended for all shaft materials

The iglide® T500 material

iglide® T500 is defined by its combination of high temperature resistance with compressive strength, along with high resistance to chemicals. iglide® T500 achieves the best wear results with stainless steel and chrome plated steel shafts. Special characteristics:

- Temperature resistant from -148°F to +482°F in continuous operation
- Universal resistance to chemicals
- High compressive strength
- Very low moisture absorption
- Great wear resistance through the entire temperature range

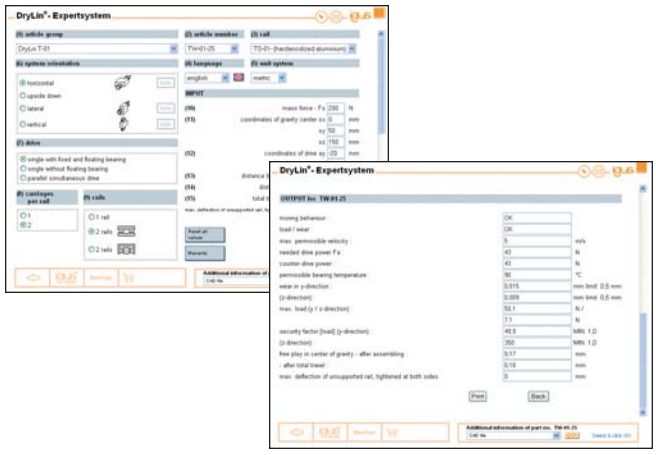


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Calculation

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Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Plain Bearings:

Loading Capacity

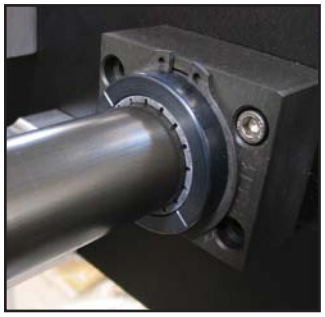
Static Load Capacity

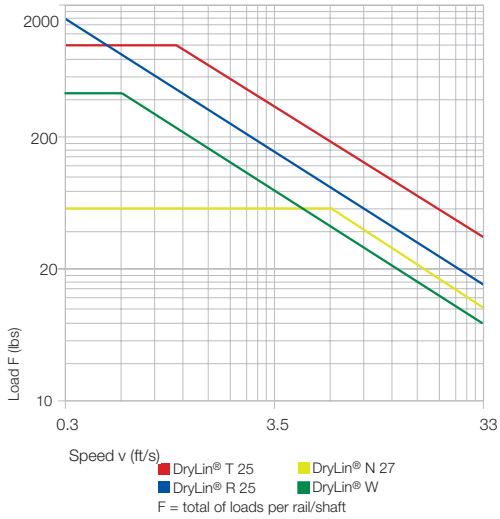
Since there is no point-to-point contact with DryLin®, as there is with ball bearing systems, the static load capabilities of DryLin are extremely high. At the right find the maximum static load for the largest bearing in each series:

Series	Max Static Load
DryLin R	20,000 lbs
DryLin T	3,140 lbs
DryLin W	719 lbs
DryLin N	220 lbs

Dynamic Load Capacity

The dynamic load capacity is related to the continuous application speed as shown in Graph 20.1, this is due to the P•V value of the iglide® J material. The lower the surface speed, the higher the permissible dynamic load. Our available Online Expert System quickly and easily checks the functionality of a particular DryLin® system for your application, and is available at www.igus.com. It will give warning if the load capacity of a certain bearing is exceeded.





Graph 20.1: F x V values of comparable DryLin® systems

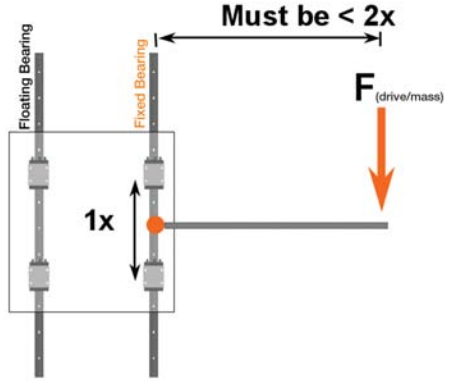
Permissible Speeds

With low loads DryLin® has been tested at speeds up to 49 fps (15 m/s). The maximum permissible speed is related to the bearing load - the lower the load the higher the permissible speed. Since DryLin does not rely on complicated rolling elements, but instead on specially engineered, low wear, low friction glide strips, extremely high speeds and accelerations are now possible. This means that DryLin® is ideal for applications where cycle and accelerations must be increased.

More significant than the maximum speed is the average speed-per-cycle time. Therefore, in order to calculate the suitability of a particular DryLin® system, the average surface speed should be determined. In applications with intermittent cycles, the highest average surface speed is significant; this is an average taken over a 10-30 minute time period

The use of DryLin® S hard anodized aluminum as a shaft material decreases the operating temperature in the bearing system due to its thermal conductivity and micro-finish. It is recommended for most applications with short-strokes or high cycles when using the iglide® J/J200 material liners. It is the material we have designed for use with all of our profile guides as well.

Eccentric Forces



2:1 Rule = permissible distances of the applied forces

The 2:1 Rule

When using linear plain bearings it is important to ensure that the acting forces follow the 2:1 Rule (see drawing). If either the load or the drive force (F) is greater than twice the bearing length (1X), then a binding or interrupted motion may occur.

If the location of the drive force or load cannot be changed, simply increase the distance between the bearings, or create a counterbalance to move the center-of-gravity back within the 2 to 1 ratio.



Online Lifetime Calculation www.igus.com

DryLin® Linear Plain Bearings:

Coefficients of Friction

DryLin® R linear plain bearings provide excellent coefficients of frictions while running dry. The coefficients of friction μ is strongly affected by the sliding partner, the running speed, the temperature, and the surface load.

After a short start-up phase, during which the coefficient of friction stabilizes, the coefficient of friction is considered constant over the total lifetime for DryLin® bearings. Graph 20.2 shows the coefficients of friction of linear plain bearings with iglide® J versus different sliding partners.

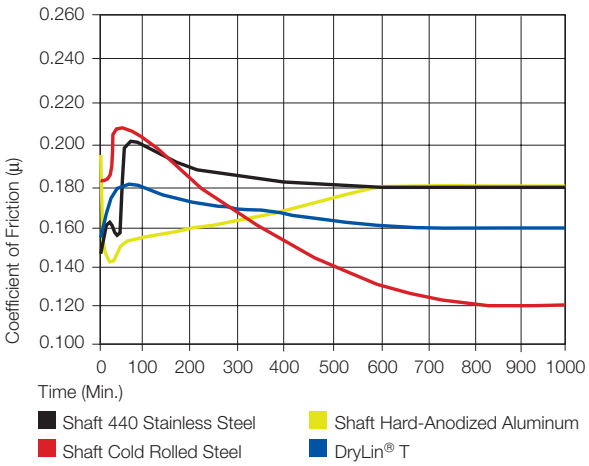
Loads and surface speeds have a large effect on the coefficients of friction of linear systems. An increase of the load at a constant speed lowers the coefficient of friction (Graphs 3 and 4).

Under constant loads, the coefficient of friction increases slightly with increased speeds. (Graphs 6 and 7).

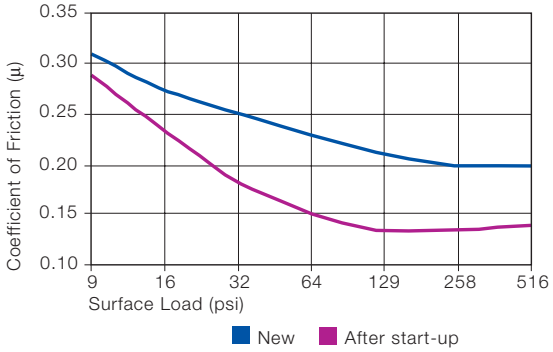
The temperature in the bearing area influences the coefficient of friction starting at approxImately 149°F. Over the permissible operating temperature of 194°F, a large increase in the coefficients of friction is to be expected. (Graph 20.5).

The coefficients of friction of a plain bearing are clearly higher compared to the data for recirculating ball systems. These differences must be taken into account in the design of linear applications.

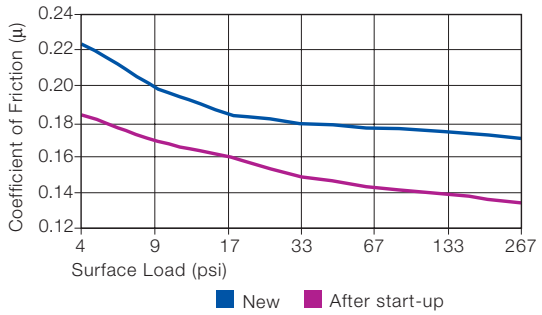
Although DryLin® linear guide systems have clear advantages in applications with high amounts of dirt, the coefficients of friction in dirty applications also increase. It was observed that the stability of the coefficients of friction are not the same in extreme application conditions.



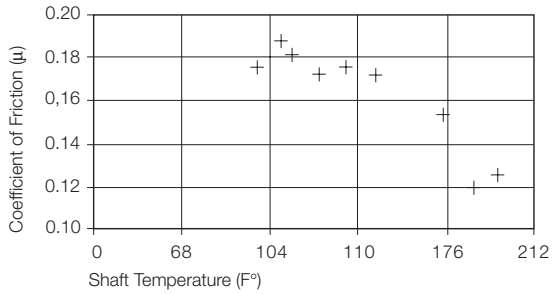
Graph 20.2: DryLin® long-term progression of the coefficient of friction, p=130 psi, v=29.5 fpm



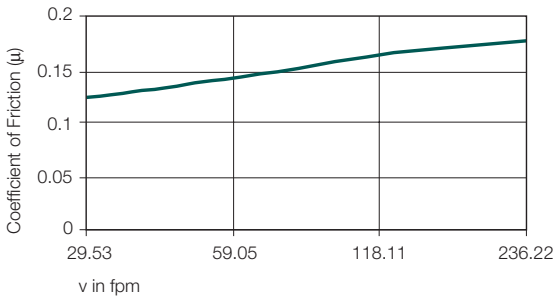
Graph 20.3: Coefficient of friction under load/DryLin® R, v=29.5 fpm



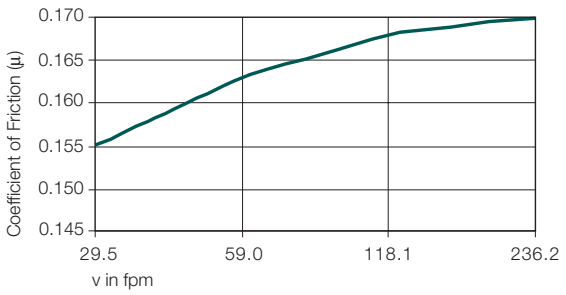
Graph 20.4: Coefficients of friction under load/DryLin® T, v=29.5 fpm



Graph 20.5: Coefficients of friction as a result of the temperature iglide® J versus Aluminum hc, v=59 fpm, p=130 psi



Graph 20.6: Coefficient of friction as a result of the speed/DryLin® R, p=130 psi



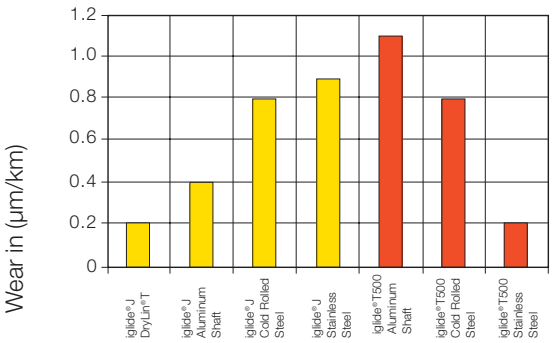
Graph 20.7: Coefficient of friction as a result of the speed/DryLin® T, p=67 psi

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

Linear Plain Bearings: DryLin® N, DryLin® W, DryLin® T, DryLin® R, Slide Tables

Wear Behavior

The wear behavior of DryLin® R linear plain bearings is a result of the shaft material. iglide® J works well on many different materials. The surface load, in addition to the shaft material and roughness, has an effect on the wear.
With decreasing surface load, the wear also decreases.



Graph 20.8: Wear in µm/km for different sliding partners, p = 145 psi

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Online Lifetime Calculation www.igus.com

Stick-Slip Behavior

Stick-slip occurs when there is intermittent movement between two sliding partners. The stop and go movement is caused by frequent changes from static to dynamic friction.
The coefficients of static and sliding friction are close enough to each other for iglide® J that the danger of stick-slip behavior is very low (Table 20.1).

	Coefficient of Static Friction	Coefficient of Dynamic Friction
J/Cold Rolled Steel	0.16	0.13

Table 20.1: Coefficients of friction

Operating Temperatures

iglide® J Material

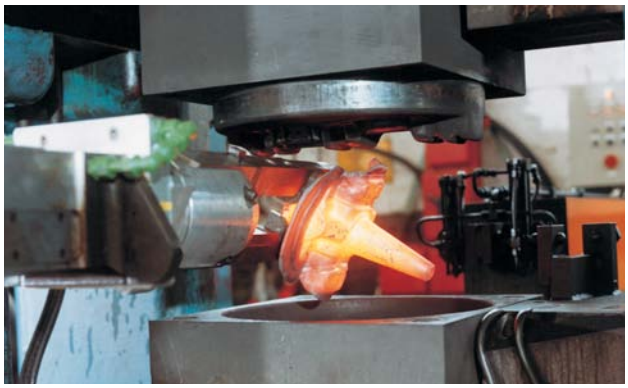
Sliding elements made of iglide® J can be used in the temperature range between -40°F and 194°F. Because of the excellent heat conductivity of aluminum as a shaft and housing material, a large increase in bearing temperature only occurs in high-frequency short-stroke applications with a high load.

Temperature limits for iglide® J

iglide® J	Application Temperature
Minimum	-40 °F
Max., long-term	+194 °F
Max,, short-term	+248 °F

iglide® T500 Material

T500 liners were developed specifically for high temperature and chemical applications, and run particularly well on stainless-steel shafting.



iglide® T500 material for heavy-duty operation at high temperatures in foundries

Temperature limits for iglide® T500

iglide® T500	Application Temperature
Minimum	- 148 °F
Max., long-term	+ 482 °F
Max., short-term	+ 599 °F

Chemical Resistance

iglide® J is resistant to weak acids, diluted lyes and to fuels and all types of lubricants. Even the frequent chemical washdowns of machines in the food industry are not a problem for DryLin® linear plain bearings.
T500 liners were developed specifically for chemical resistance and high temperature applications. T500 liners run particularly well when combined with stainless steel shafts, which are also recommended for chemical resistance.

Medium	iglide® J Resistance	iglide® T500
Alcohol	Resistant	Resistant
Chlorinated hydrocarbons	Resistant	Resistant
Ester	Not Resistant	Resistant
Greases, oils	Resistant	Resistant
Ketones	Conditionally Resistant	Resistant
Fuels	Resistant	Resistant
Weak acids	Conditionally Resistant	Resistant
Strong acids	Not Resistant	Conditionally Resistant
Weak lyes	Resistant	Resistant
Strong lyes	Resistant	Resistant
Sea water	Resistant	Resistant

Table 20.3: Chemical resistance of iglide® J and iglide® T500

Corrosion Behavior

The low moisture absorption of iglide® J and T500 allows design in underwater areas. With the use of stainless steel shafts or anodized aluminum, a corrosion resistant guide results. Anodized aluminum is resistant to chemically neutral materials in the PH range 5 to 8. For special applications it is recommended to test coated aluminum sample parts to examine results prior to their use.



Golden manus® winner for Inspection equipment for offshore drilling riserplant with iglide® G300 and DryLin® N
www.manus-wettbewerb.de

Clean Room Suitability and ESD Compability

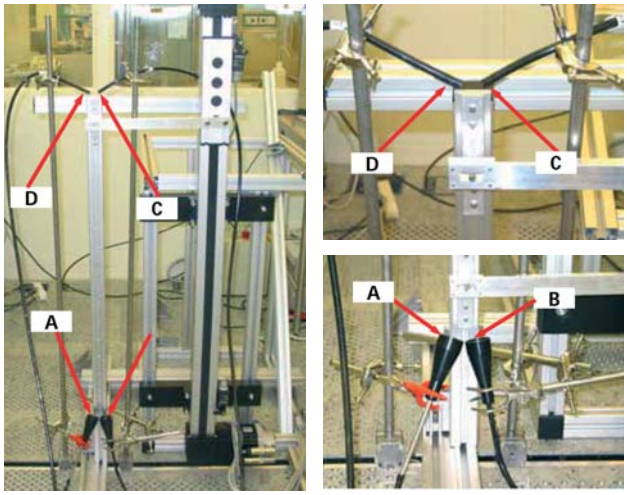
All DryLin® guide systems are qualified for cleanroom applications. The differentiation between the various cleanroom classes is only dependent on load and speed of the application. The combination of iglide® J and hard anodized aluminum is classified as level 1 in the ESD compatibility according to SEMI E78-0998 (Highest rank).
The following DryLin® guide systems were examined: N40, W10, T25 and T30. See ► page 20.12 for detailed results.

Fraunhofer IPA TESTED DEVICE igus Energieführungsketten/ Linearglettführung Report No. IG 0308-295

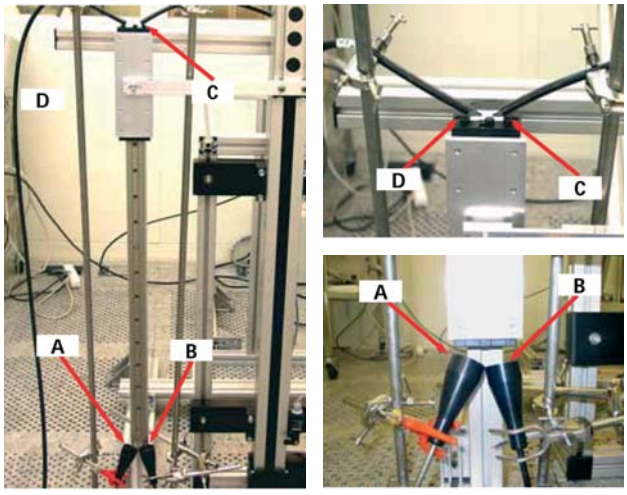
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® – Cleanroom Suitability

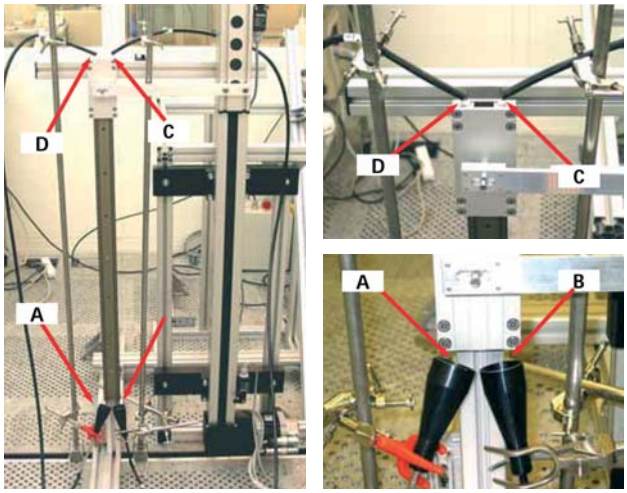
Fraunhofer TESTED® DEVICE
igus Energieführungsketten/ Lineargleitführung
Report No. IG 0308-295



Photographs of the measuring points MP1 to MP4 of the linear bearing DryLin® NK-02-40-02 used for the airborne particle emission measurements



Photographs of the measuring points MP1 to MP4 of the linear bearing DryLin® TK-01-25-02 used for the airborne particle emission measurements



Photographs of the measuring points MP1 to MP4 of the linear bearing DryLin® WK-10-40-15-01 used for the airborne particle emission measurements

All DryLin®-Guides are clearly qualified for clean room applications. The differentiation between the various clean room classes is only dependent on load and speed of the application. The combination of iglide® J and hard anodized aluminum is classified as level 1 in the ESD compatibility according to SEMI E78-0998 (Highest rank).

The following DryLin®-Guides have been examined:
N40, W10, T25 and T30. Detailed results can be found below:

Linear guide DryLin® TK-10-30-01

"For the linear guiding system DryLin® TK-10-30-01 by igus®, it is possible, on the calculations of the likelihood of violation of the threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm and 5 µm with a motion speed of v = 0.1 m/s, to clearly derive a suitability for clean rooms classified as ISO-Class 3 according to DIN EN ISO 14644-1".

Linear guide DryLin® NK-02-40-02

"For the linear guiding system DryLin® NK-02-40-02 by igus®, it is possible, on the calculations of the likelihood of violation of the threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm and 5 µm with a motion speed of v = 1 m/s, to clearly derive a suitability for clean rooms classified as ISO-Class 6 according to DIN EN ISO 14644-1".

The measurement results of the ESD compatibility according to SEMI E78-0998 show that the linear guiding system DryLin® NK-02-40-02 can be classified "level 1" (highest rank). See Fraunhofer IPA Report No.: IG 0308-295 73.

Linear guide DryLin® TK-01-25-02

"For the linear guiding system DryLin® TK-01-25-02 by igus®, it is possible, on the calculations of the likelihood of violation of the threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm and 5 µm with a motion speed of v = 1 m/s, to clearly derive a suitability for clean rooms classified as ISO-Class 5 according to DIN EN ISO 14644-1".

The measurement results of the ESD compatibility according to SEMI E78-0998 show that the linear guiding system DryLin® TK-01-25-02 can be classified "level 1" (highest rank).

Linear guide DryLin® WK-10-40-15-01

"For the linear guiding system DryLin® WK-10-40-15-01 by igus®, it is possible, on the calculations of the likelihood of violation of the threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm and 5 µm with a motion speed of v = 1 m/s, to clearly derive a suitability for clean rooms classified as ISO-Class 6 according to DIN EN ISO 14644-1".

The measurement results of the ESD compatibility according to SEMI E78-0998 show that the linear guiding system DryLin® WK-10-40-15-01 can be classified "level 1" (highest rank). See Fraunhofer IPA Report No.: IG 0308-295 74.

DryLin® Linear Plain Bearings: Floating Bearing/Self-Alignment

Fixed and Floating Bearing Mounting Instructions

When using systems with 2 parallel rails, one side must be designated as the “fixed” rail, and the opposite side as the “floating” rail.

Why use floating bearings?

- promotes smooth gliding performance and maximizes bearing life
- prevents binding caused by parallelism and angle errors
- decreases necessary drive force and wear by minimizing friction-forces
- Enhances the precision of the system over the bearings’ lifetime.
- Reduce assembly time and cost



Online Lifetime Calculation www.igus.com

Fixed Bearings

The “fixed” bearing rail should be positioned closest to the drive force. This rail will determine the precision of the system; no system should contain more than two “fixed” bearings.

Floating/Self-Aligning Bearings

The “floating” rail should be the rail located furthest from the drive force. It is to act only as a guide, and will compensate for any misalignments or angle errors in the system ensuring proper functionality.

Mounting Surfaces

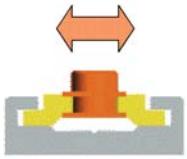
The mounting surfaces for rails and bearings should have a very flat surface (e.g milled surface) in order to enhance performance. Variations in these surfaces may be compensated for by using floating bearings.

DryLin® N - Floating Systems

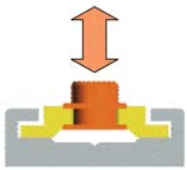
Maximum float = .02” (.5 mm)



Standard Version



Horizontal Float “LLZ”



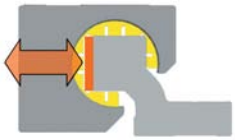
Vertical Float “LLY”

DryLin® W - Floating Systems

Maximum float = .08” (2 mm)



Standard Version



Horizontal Float “LLZ”



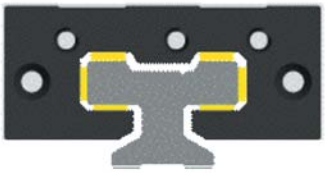
Vertical Float “LLY”



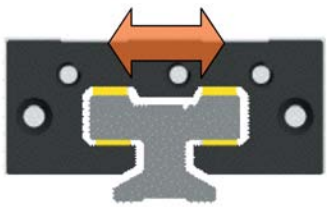
DryLin® W can also alleviate edge pressure Ideal for non-flat, even surfaces

DryLin® T - Floating Systems

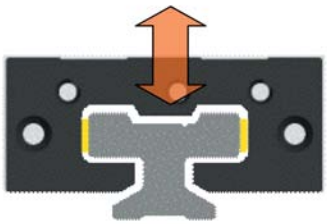
Maximum float = .04” (1 mm)



Standard Version



Horizontal Float “LLZ”



Vertical Float “LLY”

Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Plain Bearings: Floating Bearing/Self-Alignment - DryLin® T, DryLin® R

DryLin® R

DryLin® R linear plain bearings in the 03 Design Series offer great advantages in applications with parallel shafts. By their geometry, they are able to compensate for alignment and parallelism errors and should be used on the shaft located furthest from the drive mechanism.

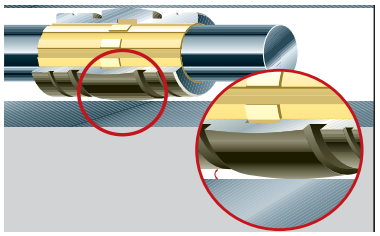
The design provides a raised spherical area on the outer diameter of the aluminum adapter for self-alignment. Load capacity is the same as the fixed version.

Thanks to the even load distribution over the entire bearing, edge loads are not possible with the self-aligning Drylin® R linear plain bearings. Even in unfavorable conditions, the load is supported by the entire projected surface

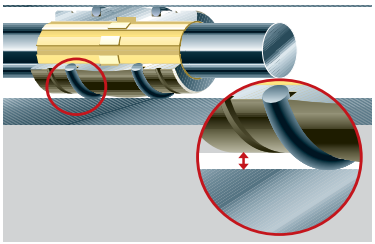
In order to compensate for parallelism errors between two shafts, the outer diameter is designed to be smaller than the housing bore diameter by 0.2 - 0.3 mm (depending on the size). With the use of mounted O-rings, these bearings have an elastic bearing seat. The overdimension allows for the maximum compensation of possible shaft misalignment.

The DryLin® R self-aligning bearings are delivered hard-anodized. These surfaces guarantee the highest wear resistance if the aluminum bearing moves in the housing during compensation adjustments.

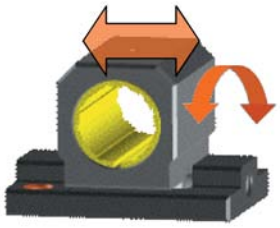
Use the floating 06LL version for extreme misalignments: ±.12" (3 mm).



The spherical DryLin® adapters can compensate for alignment errors. A hard-anodization protects the aluminum adapter from wear.

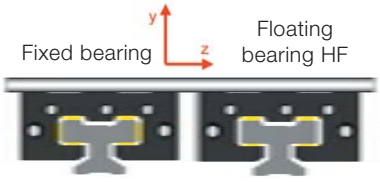


With built in clearances and the use of O-rings, the self-aligning DryLin® R bearings of the 03 Design Series can compensate for parallelism errors.

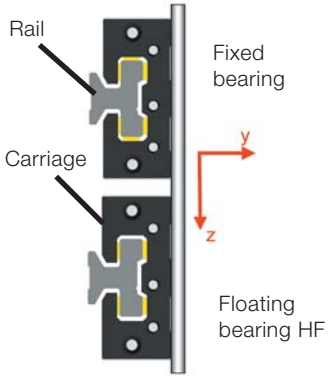


The self-aligning DryLin® R bearings of the 06 LL design series can compensate parallelism errors up to ± .12" (3mm).

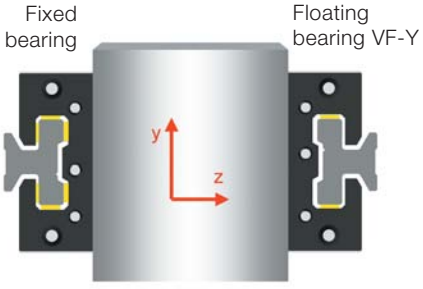
DryLin® T Shown As Example Only



Installation variation horizontal with floating bearing in the Z-direction



Installation variation lateral with floating bearing in the Z-direction



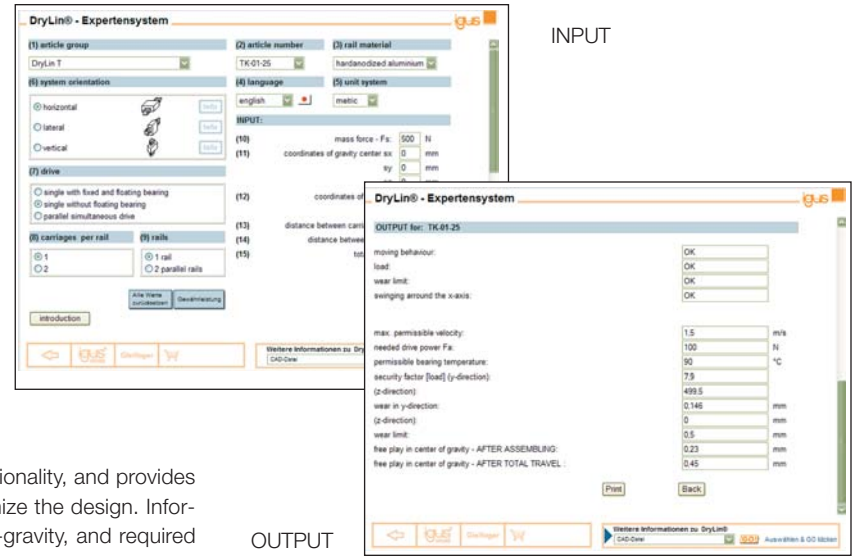
Horizontal mounting version with floating bearing in the Y-direction and lateral mounting carriage

Linear Plain Bearings:
DryLin® N, DryLin® W, DryLin® T, DryLin® R, Slide Tables

The Expert System

The Online Expert System (www.igus.com) enables the user to quickly and confidently determine the suitability of one or all DryLin systems in a particular application, and is able to calculate the following:

- Bearing lifetime in miles or kilometers
- The necessary drive force
- The maximum permissible continuous speed
- Bearing wear and the theoretical clearance



The system is able to determine proper functionality, and provides warning signals in order for the user to optimize the design. Information with regards to drive force, center-of-gravity, and required lifetime are also given.

Example of DryLin® T Calculation

For the exact calculation of the Linear Guide System it is essential to find out whether the position of the forces is within the allowable limits, and if the gliding element where the highest forces occur is not overloaded. The calculation of the necessary driving force and the maximum speed allowed is important. Each mounting version requires a different formula for calculation. Factors concerning shocks and acceleration forces are not included in the calculation, therefore the maximum load and allowable load must be monitored.

Variables in the Calculation:

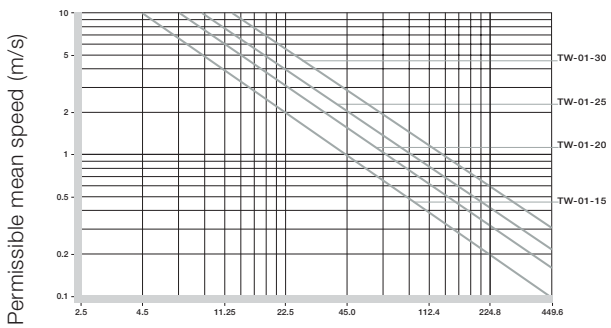
Fa	:	Drive Force (lbs)
Fs	:	Applied Mass Force (lbs)
Fy, Fz	:	Bearing Load (lbs)
		in y or z direction (mm)
sx, sy, sz	:	Distance of the mass force in y or z direction (mm)
ay, az	:	Distance of the drive force in y or z direction (mm)
wx	:	Distance between carriages on a rail (mm)
LX	:	Constant from table (mm)
Zm	:	Constant from table (mm)
Y0	:	Constant from table (mm)
b	:	Distance between guide rails (mm)
μ	:	Coefficient of Friction,
		μ = 0 for static Loads
		μ = 0.2 for dynamic loads
ZW	:	number of carriages per rail

Coefficients:

	1 Rail 1 Carriage	1 Rail 2 Carriages	2 Rails 3-4 Carriages
K_1	(ay+Y0)/Lx	(ay+Y0)/Wx	(ay+Y0)/Wx
K_2	(sy+Y0)/Lx	(sy+Y0)/Wx	(sy+Y0)/Wx
K_3	az/Lx	az/Wx	az/Wx
K_4	sx/Lx	sx/Wx	sx/Wx
K_5	sz/Lx	sz/Wx	sz/Wx
K_6	(sy+Y0)/Zm	(sy+Y0)/Zm	(sy+Y0)/b
K_7	sz/Zm	sz/Zm	(sz/b)-0.5

The Constant Values:

Part #	LX (mm)	ZM (mm)	Y0 (mm)
TW-01-15	29	16	11.5
TW-01-20	35	23	15.0
TW-01-25	41	25	19.0
TW-01-30	49	29	21.5



Graph 20.6: Diagram for determining the maximum permissible speed for the calculated bearing load

Part No.	Fymax, Fzmax (lbs)
TW-01-15	450
TW-01-20	830
TW-01-25	1125
TW-01-30	1575

Table 20.2: Maximum permissible load

Online Lifetime Calculation www.igus.com

DryLin® T Linear Guide Systems - Mounting Version - Horizontal

Recommended Procedure:

1st Step

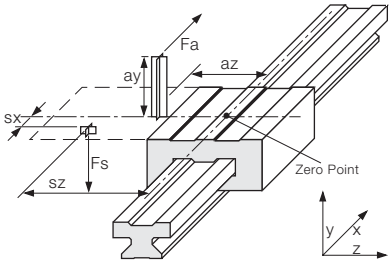
Select the mounting version:

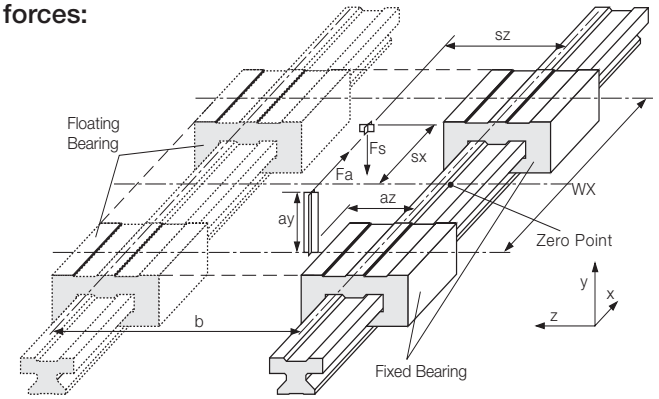
- **horizontal**
  - 1 rail and 1 carriage
  - 1 rail and 2 carriages
  - 2 rails and 4 carriages

2nd Step

Check to see whether the maximum distances of the applied forces are within the permissible values (see Maximum permissible distances.)

Maximum permissible distances between acting forces:





Variation: 1 Rail, 1 Carriage

sy + sz	<	2 Lx - Y0
ay + az	<	2 Lx - Y0
sy	<	5 Zm
sz	<	5 Zm

Variation: 1 Rail, 2 Carriages
Variation: 2 Rails, 4 Carriages

sy + sz	<	2 wx - Y0
ay + az	<	2 wx - Y0

3rd Step:

Calculate the necessary drive force

3.1 Center of gravity in **x** and **z direction inside** the carriage(s)

$$Fa_1 = \frac{\mu}{1-2\mu\ K_3} \cdot Fs$$

3.2 Center of gravity in **z direction outside** of the carriage(s)

$$Fa_2 = \frac{2\mu\ K_7}{1-2\mu\ K_3} \cdot Fs$$

3.3 Center of gravity in **x direction outside** of the carriage(s)

$$Fa_3 = \frac{2\mu\ K_4}{1-2\mu\ K_3-2\mu\ K_1} \cdot Fs$$

If the position of the center of gravity is not specified: $Fa = MAX\ (Fa_1, Fa_2, Fa_3)$

4th Step:

Calculate the maximum bearing load

4.1 Maximum bearing load in the **y direction**

$$Fy_{max} = \frac{2\,Fs}{Zw}\left(\frac{2\,K_4}{Zw} + 0{,}5\right) \cdot \left(K_7 + 0{,}5\right) + \frac{2\,Fa\ K_1}{Zw^2}$$

4.2 Maximum bearing load in the **z direction**

$$Fz_{max} = \frac{4\,Fa\ K_3}{Zw^2}$$

5th Step:

Check calculated load for both y and z with table on page 20.9 - Maximum permissible load for Fymax & Fzmax. This table illustrates the maximum permissible load on a single gliding element from the DryLin® T carriage. Evaluating the maximum load on a single gliding element establishes a safety factor for the linear system.

➤Page 20.15

6th Step:

Determine the maximum permissible speed for the calculated load from Step No. 4

➤Page 20.15

DryLin® T Linear Guide Systems - Mounting Version - Lateral

Online Lifetime Calculation
www.igus.com

Recommended Procedure:

1st Step

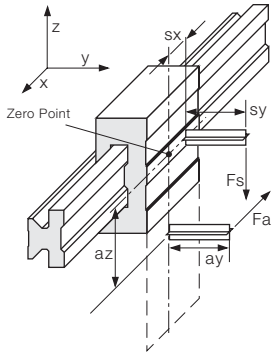
Select the mounting version:

- **side-mounting**
  - 1 rail and 1 carriage
  - 1 rail and 2 carriages
  - 2 rails and 4 carriages

2nd Step

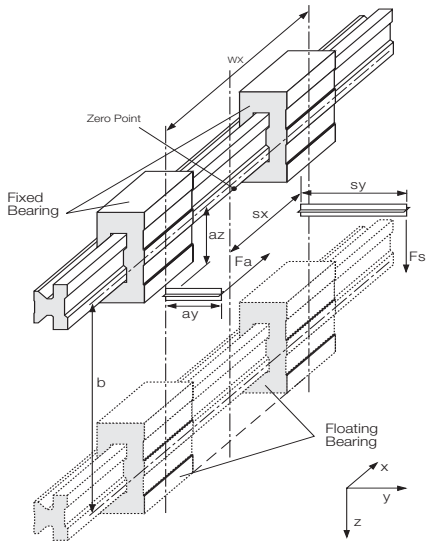
Check to see whether the maximum distances of the applied forces are within the permissible values (see Maximum permissible distances.)

Maximum permissible distances between acting forces:



Variation: 1 Rail, 1 Carriage

sy + sz	<	2 Lx - Y0
ay + az	<	2 Lx - Y0
sy	<	5 Zm
sz	<	5 Zm



Variation: 1 Rail, 2 Carriages
Variation: 2 Rails, 4 Carriages

sy + sz	<	2 wx - Y0
ay + az	<	2 wx - Y0

3rd Step:

Calculate the necessary drive force

First, two calculations must be made:

$$Fa_1 = \frac{(1+2K_6)\mu}{1-2\mu K_1} \cdot Fs \qquad Fa_2 = \frac{(2K_4+2K_6)\mu}{1-2\mu K_1-2\mu K_3} \cdot Fs$$

The drive force Fa corresponds to the calculated maximum value $Fa = MAX(Fa_1, Fa_2)$

4th Step:

Calculate the maximum bearing load

4.1 Maximum bearing load in the **y direction**

$$Fy_{max} = \frac{Fs\,K_6}{Zw} + \frac{2Fa\,K_1}{Zw^2}$$

4.2 Maximum bearing load in the **z direction**

$$Fz_{max} = \frac{2Fs}{Zw}\left(\frac{2K_4}{Zw} + 0.5\right) + \frac{4Fa\,K_3}{Zw^2}$$

5th Step:

Check calculated load for both y and z with table on page 20.9 - Maximum permissible load for Fymax & Fzmax. This table illustrates the maximum permissible load on a single gliding element from the DryLin® T carriage. Evaluating the maximum load on a single gliding element establishes a safety factor for the linear system.

➤Page 20.15

6th Step:

Determine the maximum permissible speed for the calculated load from Step No. 4

➤Page 20.15

Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® T Linear Guide Systems - Mounting Version - Vertical

Recommended Procedure:

1st Step

Select the mounting version:

- **vertical**

1 rail and 1 carriage

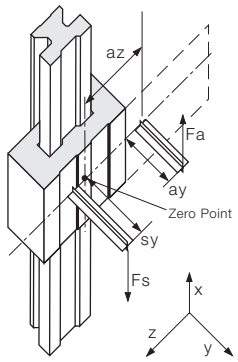
1 rail and 2 carriages

2 rails and 4 carriages

2nd Step

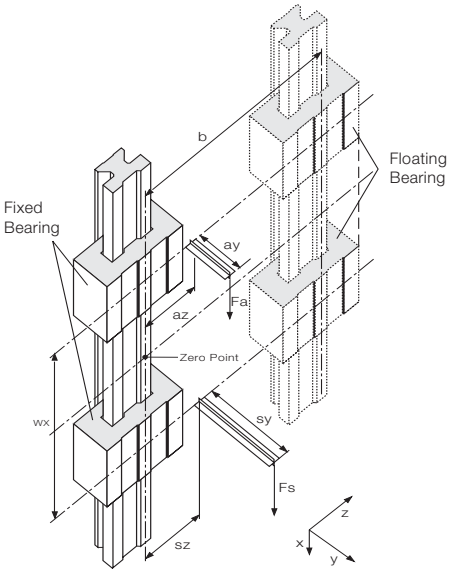
Check to see whether the maximum distances of the applied forces are within the permissible values (see Maximum permissible distances.)

Maximum permissible distances between acting forces:



Variation: 1 Rail, 1 Carriage

sy + sz	<	2 Lx - Y0
ay + az	<	2 Lx - Y0
sy	<	5 Zm
sz	<	5 Zm



Variation: 1 Rail, 2 Carriages
Variation: 2 Rails, 4 Carriages

sy + sz	<	2 wx - Y0
ay + az	<	2 wx - Y0

3rd Step:

Calculate the necessary drive force

First, four calculations must be made:

$$Fa_1 = \frac{2\mu\,(sz+sy+Y_0)-wx}{2\mu\,(az+ay+Y_0)-wx} \cdot Fs \qquad Fa_3 = \frac{2\mu\,(sz-sy-Y_0)-wx}{2\mu\,(az-ay-Y_0)-wx} \cdot Fs$$

$$Fa_2 = \frac{2\mu\,(-sz+sy+Y_0)-wx}{2\mu\,(-az+ay+Y_0)-wx} \cdot Fs \qquad Fa_4 = \frac{2\mu\,(sz+sy+Y_0)+wx}{2\mu\,(az+ay+Y_0)+wx} \cdot Fs$$

The drive force Fa corresponds to the calculated maximum value $Fa = MAX\,(Fa_1, Fa_2, Fa_3, Fa_4)$

4th Step:

Calculate the maximum bearing load

4.1 Maximum bearing load in the **y direction**

$$Fy_{max} = \left| Fa\,\frac{ay+Y_0}{wx} - Fs\,K_2 \right| \cdot \frac{2}{Zw^2}$$

4.2 Maximum bearing load in the **z direction**

$$Fz_{max} = \left| Fa\,\frac{az}{wx} - Fs\,K_5 \right| \cdot \frac{4}{Zw^2}$$

5th Step:

Check calculated load for both y and z with table on page 20.9 - Maximum permissible load for Fymax & Fzmax. This table illustrates the maximum permissible load on a single gliding element from the DryLin® T carriage. Evaluating the maximum load on a single gliding element establishes a safety factor for the linear system.

➤Page 20.15

6th Step:

Determine the maximum permissible speed for the calculated load from Step No. 4

➤Page 20.15

DryLin® Analysis Worksheet

Please enter as much data as possible.
Most applications questions can be answered with just a partial amount of data.
Please call us if you have any questions (Tel: 1-888-803-1895).
You may fax this worksheet to 401-438-7680

Online Lifetime Calculation www.igus.com

Application: .....

.....

Current guide system: .....

Installation position (1=horizontal, 2=vertical, 3=lateral): .....

Number of bearings per rail/shaft: .....Number of rails/shafts: .....

Type of drive: .....Drive force [lbs]: .....

Average speed: .....Maximum speed: .....

Length of stroke: .....Expected service life: .....

Operating time: .....

Ambient temperature .....Maximum temperature: .....

Surrounding medium: .....Lubrication: .....

Static Load: .....Dynamic Load: .....

For the following data, the drawings on the reverse side will help you!

Distance between bearings/carriages on a rail/shaft (wx) : .....

Distance between rails/shafts (b) : .....

Distance of the mass force in the x-direction (Sx) : .....

Distance of the mass force in the y-direction (Sy) : .....

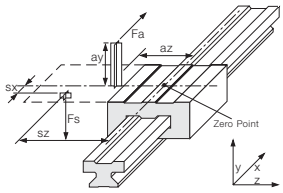
Distance of the mass force in the z-direction (Sz) : .....

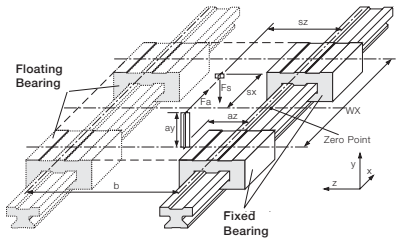
Distance of the drive force in the y-direction (ay) : .....

Distance of the drive force in the z-direction (az) : .....

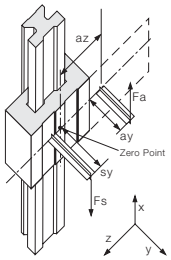
Please enter all the data you know and if possible make a schematic drawing.

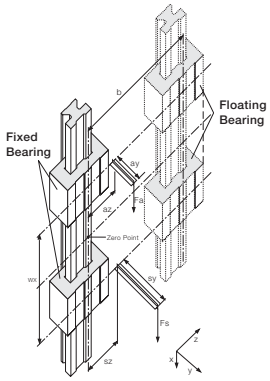
Horizontal Orientation



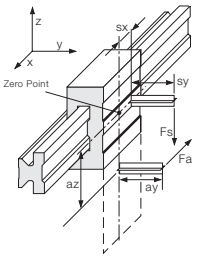


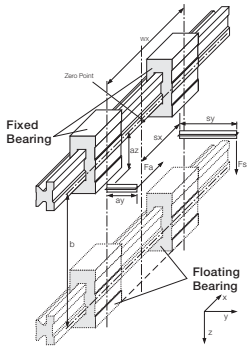
Vertical Orientation





Lateral Orientation





DryLin® – Applications



Testing and sorting machines



Storage solutions for a tape library



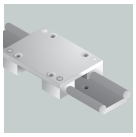
DryLin® N



Feeding systems for a blister machine



Flatbed ink-jet printers



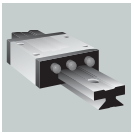
DryLin® W



Packaging machines



Machining centers for the furniture industry



DryLin® T



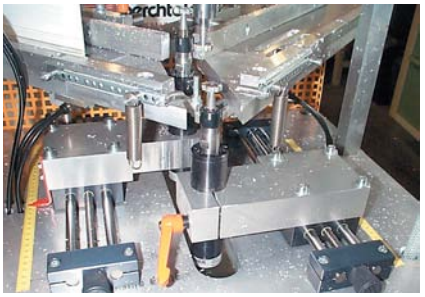
Machining Center



Packaging technology



DryLin® R



Positioning of milling heads



Height-adjustment for an encoding machine

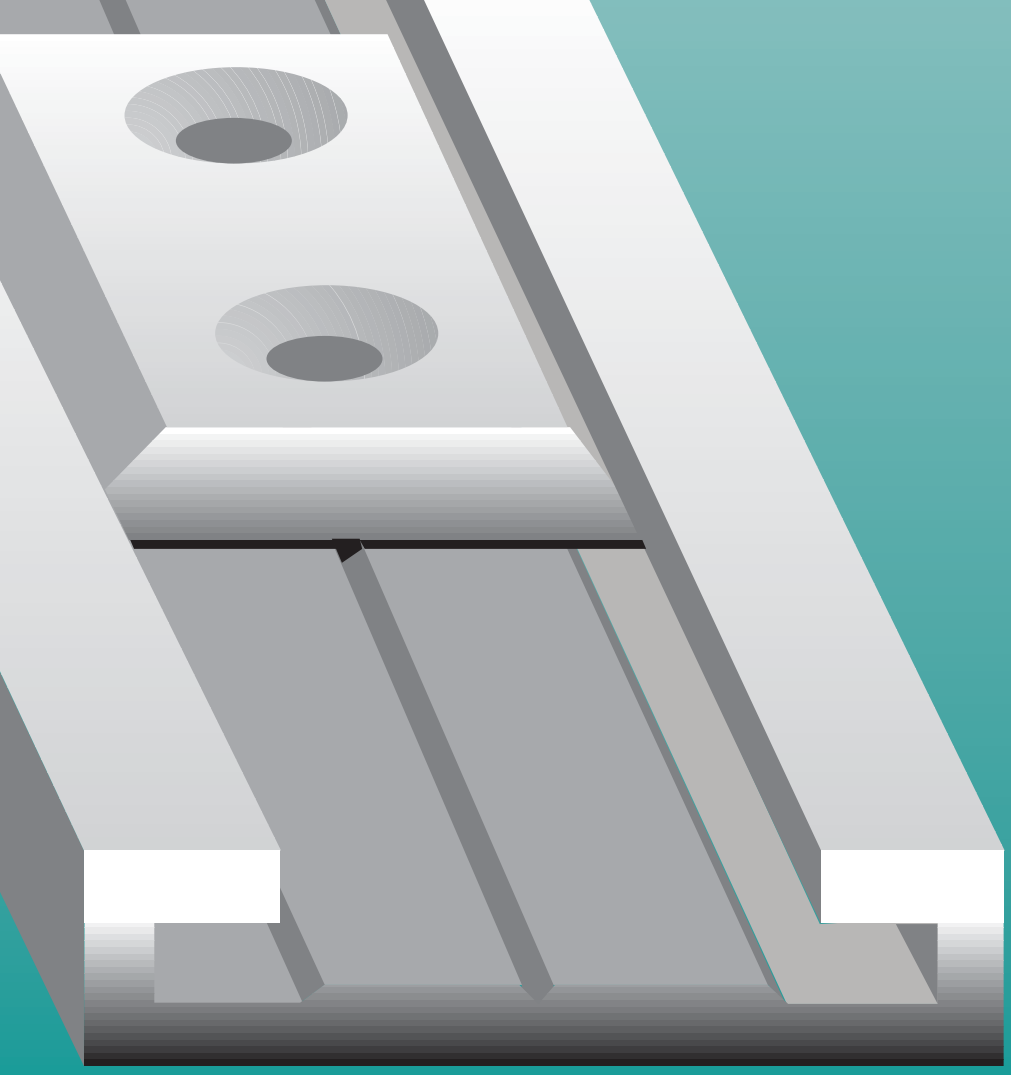


DryLin® HTS

DryLin® Linear Plain Bearings

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

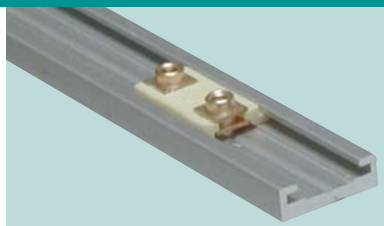
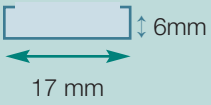


DryLin® N Low Profile Linear Guide System

- Low profile height and width
- Replaceable polymer sliding elements
- Anodized aluminum rail
- High speed and acceleration possible
- Lubricant-free
- Lightweight



DryLin® N Selection Guide

	DryLin® N17	DryLin® N27-01
		
		

Features



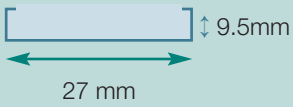
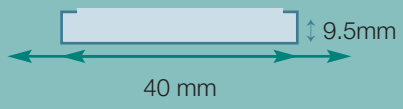
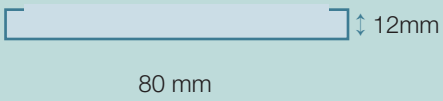
Online Lifetime Calculation www.igus.com

- **Good for tight design constraints**
- **Replaceable glide pads**
- **Excellent for low loads**
- **Excellent corrosion resistance**

- **Through hole for flexible mounting**
- **Extremely low friction/low wear**
- **Replaceable glide pads**
- **Low weight**
- **Flexible size**
- **Excellent for low to medium loads**

Properties

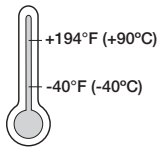
Maximum Load	11 lbs (50 N)	110 lbs (500 N)
Maximum Speed	49 fps (15 m/s)	49 fps (15 m/s)
Maximum Rail Length	6.5 ft	12 ft
Carriage Weight	.0602 lbs (1.7 g)	.38 oz - .44 oz (10.8g - 12.5g)
Rail Weight	1.6 oz/ft (150 g/m)	3.12 oz/ft (290 g/m)
Rail Material	Anodized Aluminum	Anodized Aluminum
Carriage Material	Brass / iglide® J	Chromated Zinc / iglide® J
Temperature	-40 to 194°F	-40 to 194°F
Preloaded for reduced clearance	Available	Available

DryLin® N27-02	DryLin® N40	DryLin® N80
		
		
• Threaded adjusting studs for easy attachment • Flexible size • Replaceable glide pads • Extremely low friction/low wear • Excellent for low to medium loads	• Flexible size • Replaceable glide pads • Excellent for medium to high loads • Wide base for stable design	• May use one rail instead of two narrow rails • High accelerations possible • Replaceable glide pads • Extremely low friction/low wear • Good for higher loads • Aluminum carriage available for low weight/higher loads
110 lbs (500 N)	154 lbs (700 N)	220 lbs (50 N)
49 fps (15 m/s)	49 fps (15 m/s)	49 fps (15 m/s)
12 ft	12 ft	12 ft
.027 lbs (12.5 g)	.066 lbs (30 g)	.22 lbs (100 g)
3.12 oz./inch (290 g/m)	.025 lbs/inch (450 g/m)	.064 lbs/inch (1140 g/m)
Anodized Aluminum	Anodized Aluminum	Anodized Aluminum
Chromated Zinc / iglide® J	Chromated Zinc / iglide® J	Chromated Zinc / iglide® J Aluminum available
-40 to 194°F	-40 to 194°F	-40 to 194°F
Available	Not Available	Not Available

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® N Low Profile Linear Guide Systems



Technical Data

Sliding elements:	
	Maintenance-free
Material:	
	iglide® J*
Max. surface speed:	
	50 fps (15 m/s)
Temperature range:	
	-40°F to +194°F
	(-40 °C to +90 °C)

* Other materials upon request

DryLin® N	Height
N17	.24 in (6.0 mm)
N27	.37 in (9.5 mm)
N40	.37 in (9.5 mm)
N80	.47 in (12.0 mm)

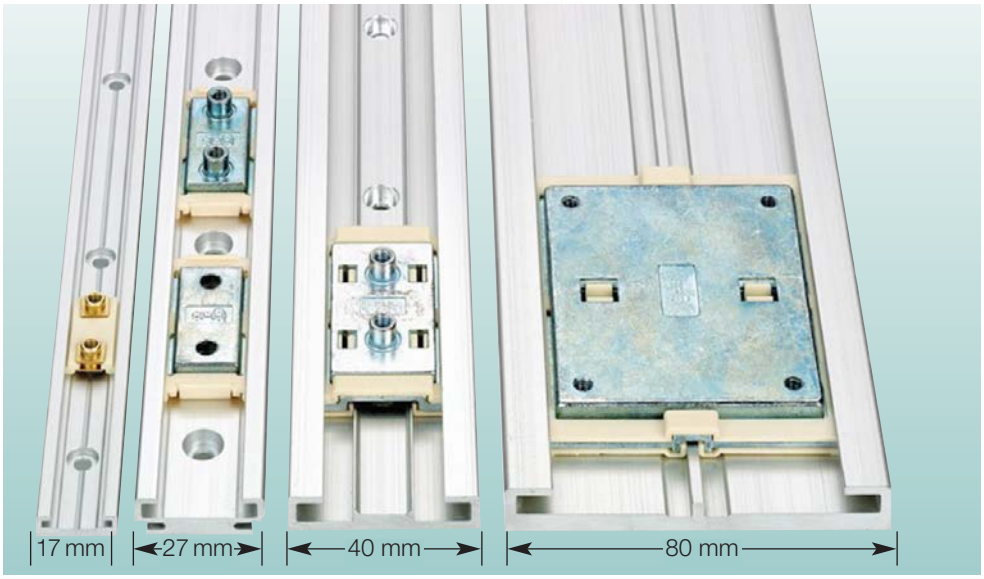


DryLin® N80, black anodized used for adjusting spotlights



DryLin® N80 in a belt-driven linear actuator for high-speed handling up to 12 m/s

The DryLin® N series offers extremely low profiles in several widths, and is therefore ideal in tight space constraints. Like all DryLin® products the carriages are designed to glide smoothly on anodized aluminum rails without the need for messy lubricants. They are also available in preloaded versions for reduced running clearance. DryLin® N is a particularly low-cost alternative to miniature ball bearing systems, and is more precise and economical when compared to many custom-machined or simple plastic parts.



Advantages of DryLin® N

- Small mounting height and width
- Maintenance-free and self-lubricating
- High resistance to dirt
- Corrosion-resistant
- Low wear and low coefficient of friction
- Lightweight due to aluminum polymer combination
- Very high speed and acceleration possible
- Replaceable polymer sliding elements made of iglide® J
- Base structure of the carriage made of plastic (size 17) or zinc, chromated (size 27, 40 and 80)
- Anodized aluminum rails
- Available from stock



❶ Anodized aluminum rails
❷ iglide® J plain bearing liner
❸ Zinc chromated carriage Type 01 (with mounting hole)
❹ Zinc chromed carriage Type 02 (with thread)



Online Lifetime Calculation
www.igus.com



Standard | Preload | Floating

DryLin® NW-17 = 17 mm Rail width

NW 17

The smallest size of the DryLin® N range is designed to have minimum dimensions coupled with a high load capacity. In addition, this range is free from lubrication and can run at high speeds.

NW 17 Preload
The NW 17 Preload model of the DryLin® N series provides for an automatic pretension to the rail.



Standard 01 with mounting hole | Standard 02 with thread | Preload with mounting hole or thread | Overmolded with mounting hole or thread

DryLin® NW-27 = 27 mm Rail width

NW 27

The NW 27 series is available in 2 different versions: As a slide with a plain bore, and as a slide with a threaded bore. The lubrication free design is capable of running at high linear speeds.

NW 27 Preload
Like NW 17 Preload, this larger NW 27 Preload model of DryLin® N possesses the special feature of automatic pre-tension.

Overmolded
This version is practically identical to the standard slide NW-01/02-27. Overmolded with iglide® J, however, it is easier to assemble and store large quantities.

- Quick assembly
- Easier handling

Maximum loads (per carriage)

NW-02-17	=	11 lbs
NW-01/02-27	=	110 lbs
NW-02-40	=	154 lbs
NW-02-80	=	220 lbs







Standard 02 with thread | Overmolded with thread

DryLin® NW-40 = 40 mm Rail width

NW 40

Compared with smaller series, NW 40 is able to withstand significantly higher loads. Like all other DryLin® N series, the lubrication free design is capable of running at high linear speeds.

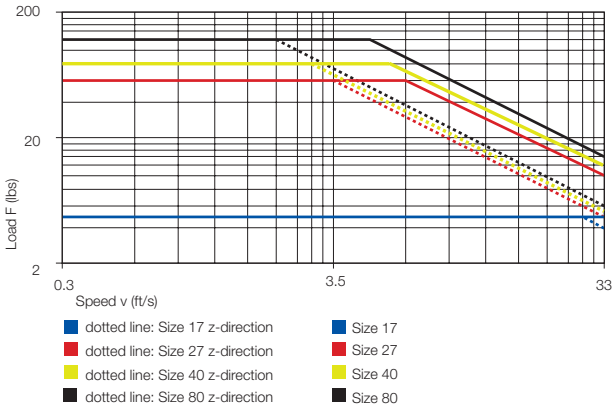




DryLin® NW-80 = 80 mm rail width

NW 80

The largest of the DryLin® N series permits low installation heights while offering high load-bearing capacity. The lubrication free design is capable of running at high linear speeds.



F = total of the loads on one rail

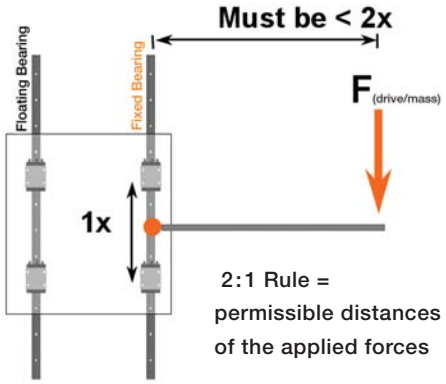
Graph 21.1: Fv-Diagram, maximum permissible dynamic loads of DryLin® N

Telephone 1-888-803-1895
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Internet: http://www.igus.com
E-Mail: sales@igus.com
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DryLin® N Low Profile Linear Guide Systems

Eccentric Forces



2:1 Rule = permissible distances of the applied forces



Online Lifetime Calculation www.igus.com

The 2:1 Rule

When using linear plain bearings it is important to ensure that the acting forces follow the 2:1 Rule (see drawing). If either the load or the drive force (F) is greater than twice the bearing length (1X), then a binding or interrupted motion may occur.

If the location of the drive force or load cannot be changed, simply increase the distance between the bearings, or create a counterbalance to move the center-of-gravity back within the 2 to 1 ratio.

Fixed and Floating Bearing Mounting Instructions

When using systems with 2 parallel rails, one side must be designated as the “fixed” rail, and the opposite side the “floating” rail.

Why use floating bearings?

- promotes smooth gliding performance and maximizes bearing life
- prevents binding caused by parallelism and angle errors
- decreases necessary drive force and wear by minimizing friction-forces
- Enhances the precision of the system over the bearings’ lifetime.
- Reduce assembly time and cost

Fixed Bearings

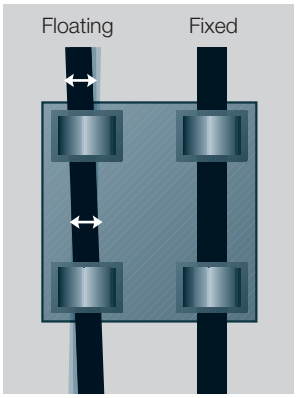
The “fixed” bearing rail should be positioned closest to the drive force. This rail will determine the precision of the system; no system should contain more than two “fixed” bearings.

Floating/Self-Aligning Bearings

The “floating” rail should be the rail located furthest from the drive force. It is to act only as a guide, and will compensate for any misalignments or angle errors in the system ensuring proper functionality.

Mounting Surfaces

The mounting surfaces for rails and bearings should have a very flat surface (e.g milled surface) in order to enhance performance. Variations in these surfaces may be compensated for by using floating bearings.



Automatic compensation of parallelism errors

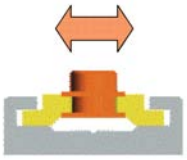
DryLin® N - Floating Systems

Maximum float = ± .02” (.5 mm)



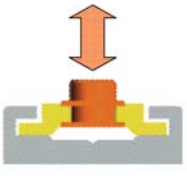
Standard Version

Part No. Fixed Bearing - CARRIAGE ONLY
NW-02-17
NW-02-27 / NW-02-27
NW-02-40
NW-02-80



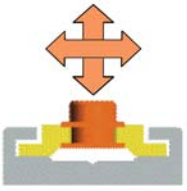
Horizontal Float “LLZ”

Part No. Horizontal Floating - CARRIAGE ONLY
NW-02-17 LLZ
NW-01-27 LLZ
NW-02-27 LLZ
NW-02-40 LLZ
NW-02-80 LLZ



Vertical Float “LLY”

Part No. Vertical Floating - CARRIAGE ONLY
NW-02-17 LLY
NW-01-27 LLY
NW-02-27 LLY
NW-02-40 LLY
NW-02-80 LLY



Vertical Float “LLYZ”

Part No. Horizontal/Vertical Floating - CARRIAGE ONLY
NW-02-17 LLYZ
NW-01-27 LLYZ
NW-02-27 LLYZ
NW-02-40 LLYZ
NW-02-80 LLYZ

DryLin® N Low Profile Linear Guide Systems

Part No. for single carriages:

Carriages	Carriage/Bearing Material/Color	Mounting Style	Description	Max Static Load
NW-02-17	Plastic/Brass/iglide J/Yellow	Threaded brass boss	Standard	11 lbs (50N)
NW-02-17 P	Plastic/Brass/iglide J/Yellow	Threaded brass boss	Preloaded	11 lbs (50N)
NW-22-17-40	Plastic/Brass/iglide J/Yellow	Threaded brass boss	Overmolded, double-length version	11 lbs (50N)
NW-01-27	Chromated Zinc/iglide J/Yellow	Through holes	Standard, clip-on plastic	112 lbs (500N)
NW-01-27 P	Zinc/iglide J/Yellow	Through holes	Preloaded .22 lbs (1N)	112 lbs (500N)
NW-11-27	Zinc/iglide J/Yellow	Through holes	Overmolded plastic, with through holes	112 lbs (500N)
NW-11-27-SS	Stainless Steel/iglide J/Yellow	Through holes	Overmolded plastic, with through holes	
NW-02-27	Zinc/iglide J/Yellow	Threaded bosses	Standard, clip-on plastic	112 lbs (500N)
NW-02-27 P	Zinc/iglide J/Yellow	Threaded bosses	Preloaded .22 lbs (1N)	112 lbs (500N)
NW-12-27	Zinc/iglide J/Yellow	Threaded bosses	Overmolded plastic, with through holes	112 lbs (500N)
NW-04-27	Zinc/iglide J200/Grey	Through holes	Overmolded, double-length version	112 lbs (500N)
NW-21-27-60P	Plastic/iglide J/Yellow	Brass through holes	50% longer, preloaded	112 lbs (500N)
NW-22-27-60P	Plastic/iglide J/Yellow	Brass threaded boss	50% longer, preloaded	112 lbs (500N)
NW-01-40	Chromated Zinc/iglide J/Yellow	Through holes	Standard. clip-on plastic	157 lbs (700N)
NW-02-40	Chromated Zinc/iglide J/Yellow	Threaded bosses	Standard. clip-on plastic	157 lbs (700N)
NW-12-40	Chromated Zinc/iglide J/Yellow	Threaded bosses	Overmolded plastic	157 lbs (700N)
NW-02-80	Chromated Zinc/iglide J/Yellow	Threaded, no bosses	Standard. clip-on plastic	225 lbs (1000N)
NW-12-80	Chromated Zinc/iglide J/Yellow	Threaded, no bosses	Overmolded	225 lbs (1000N)
NW-02-80AL	Aluminum/iglide J/Yellow	Threaded, no bosses	Standard. clip-on plastic	250 lbs (1111N)

Part No. for single rails:

Rail	Material	Description	Maximum Length
NS-01-17	6063-T6 Anodized AL	M3 Mounting holes	6.5 ft (4000 mm special order)
NS-01-27	6063-T6 Anodized AL	M4 Mounting holes	12 ft (4000 mm special order)
NS-01-27S	6063-T6 Anodized AL	No holes	12 ft (4000 mm special order)
NS-01-40	6063-T6 Anodized AL	M4 Mounting holes	12 ft (4000 mm special order)
NS-01-40S	6063-T6 Anodized AL	No holes	12 ft (4000 mm special order)
NS-01-80	6063-T6 Anodized AL	M4 Mounting holes	12 ft (4000 mm special order)
NS-01-80S	6063-T6 Anodized AL	No holes	12 ft (4000 mm special order)

Structure of the Part No. for assembled systems:

NK	-02	-27	-02	-500	LLZ	C5=20

Assembled system

Type of carriage
01 with thru bore
02 with thread
11 with thru bore, overmolded, size 27
12 with thread, overmolded, size 27, 40

Size
17/27/40/80

No. of carriages

Length of rail in mm

Carriage options
Leave blank: Standard
LLZ: Floating z-direction
LLY: Floating y-direction
LLYZ: Floating y- and z-direction
P: Preload (max. 1 N), only sizes 17/27

Rail options
Leave blank: Standard with holes
No holes: Without holes
C5 = ... mm If hole spacing is not symmetrical

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® N Low Profile Linear Guide Systems - NK-02-17



NW-02-17
Standard



NW-22-17-40
Double Length



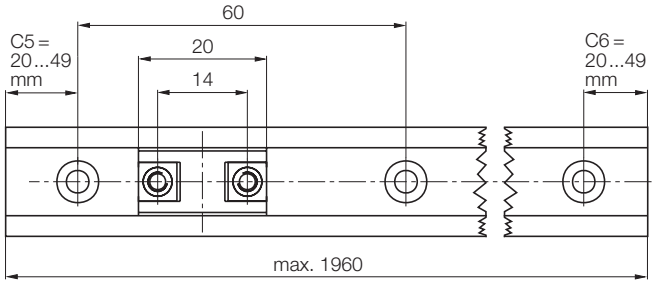
NW-02-17P
Preloaded

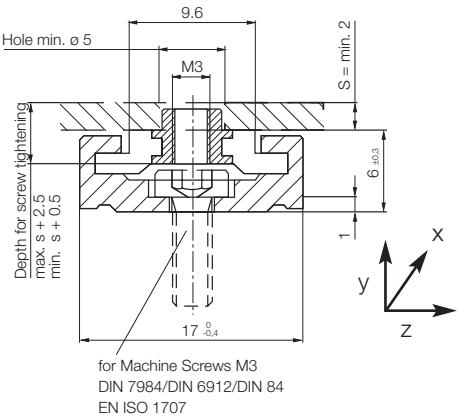
Carriages	Carriage/Bearing Material/Color	Mounting Style	Description	Weight	Max Static Load
NW-02-17	Plastic/Brass/iglide J/Yellow	Threaded brass boss	Standard	.06 oz (1.7g)	11 lbs (50N)
NW-02-17P	Plastic/Brass/iglide J/Yellow	Threaded brass boss	Preloaded .23 lbs (1N)	.06 oz (1.7g)	11 lbs (50N)
NW-22-17-40	Plastic/Brass/iglide J/Yellow	Threaded brass boss	Overmolded, double-length version	.09 oz (2.6g)	11 lbs (50N)
-LLZ	for floating in Z-direction, best for horizontal applications for rail alignment				
-LLY	for floating in Y-direction, best for vertical applications or when flatness of the mounting surface is of concern				
-LLYZ	for lfoating in both directions				

Floating carriages (see page 21.6 about fixed and floating

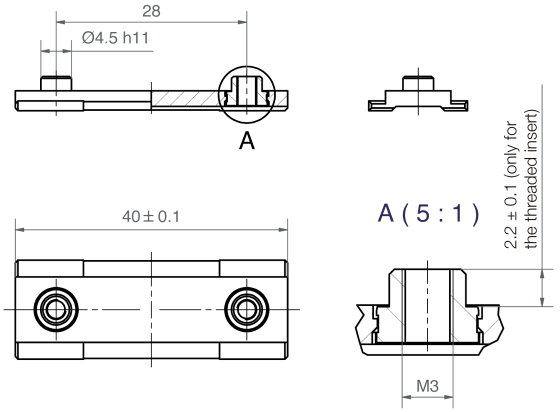
Rail	Material	Description	Weight	Hole Pattern	Max Length
NS-01-17	6063-T6 Anodized AL	M3 Mounting holes	0.1 lbs/ft (150 g/m)	Bore pattern symmetrical C%=C6	6.5 ft
NS-01-17S		No holes	0.1 lbs/ft (150 g/m)	NA	12 ft

NW-02-17(P)

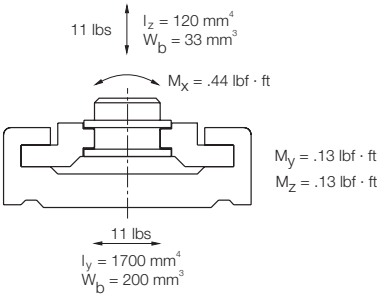




NW-22-17-40



Static load-bearing capacity and geometric moment of inertia



Structure of the Part No.

NK	-02	-17	P	-2	-500

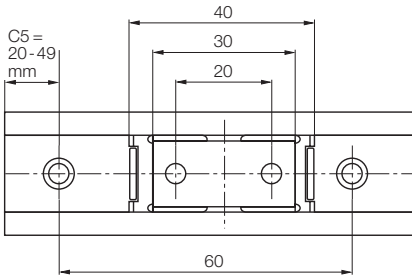
- Complete system
- Thread
- Size
- "P" for preloaded
- Number of carriages
- Length of rail (mm)

CAD files online:
www.igus.com

DryLin® N Low Profile Linear Guide Systems
NK-01-27 / NK-02-27

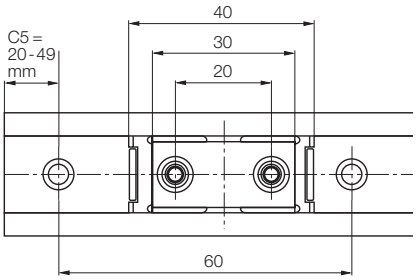
NW-01-27(P)/NW-11-01
Carriages with through hole





NW-02-27(P)/NW-12-01
Carriages with threaded boss





Carriages	Carriage/Bearing Material/Color	Mounting Style	Description	Weight	Max Static Load
Standard					
NW-01-27	Chromated Zinc/iglide J/Yellow	Through holes	Standard, clip-on plastic	.38 oz (10.8g)	112 lbs (500N)
NW-02-27	Chromated Zinc/iglide J/Yellow	Threaded bosses	Standard, clip-on plastic	.44 oz (12.5g)	112 lbs (500N)
Overmolded					
NW-11-27	Chromated Zinc/iglide J/Yellow	Through holes	Overmolded plastic	.38 oz (10.8g)	112 lbs (500N)
NW-12-27	Chromated Zinc/iglide J/Yellow	Threaded bosses	Overmolded plastic	.44 oz (12.5g)	112 lbs (500N)
Preloaded					
NW-01-27P	Chromated Zinc/iglide J/Yellow	Through holes	Preloaded .22 lbs (1N), clip-on	.38 oz (10.8g)	112 lbs (500N)
NW-02-27P	Chromated Zinc/iglide J/Yellow	Threaded bosses	Preloaded .22 lbs (1N), clip-on	.44 oz (12.5g)	112 lbs (500N)

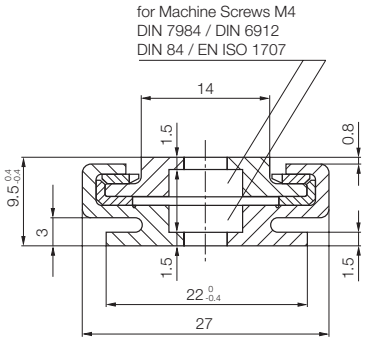
-LLZ	for floating in Z-direction, best for horizontal applications for rail alignment
-LLY	for floating in Y-direction, best for vertical applications or when flatness of the mounting surface is of concern
-LLYZ	for lfoating in both directions

Floating carriages (see page 21.6 about fixed and floating

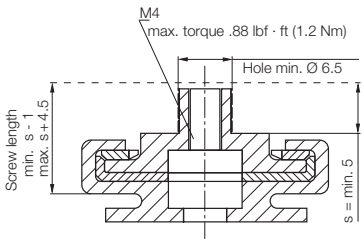
Rail	Material	Description	Weight	Hole Pattern	Max Length
NS-01-27	6063-T6 Anodized AL	M3 Mounting holes	0.2 lbs/ft (290 g/m)	Bore pattern symmetrical C%=C6	12 ft
NS-01-27S	6063-T6 Anodized AL	No holes	0.2 lbs/ft (290 g/m)	NA	12 ft

*** Length of overmolded carriages version NW-11-27 and NW-12-27: 34 ± 0.7 mm**

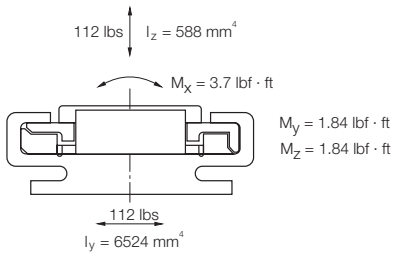
NK-01-27(P)

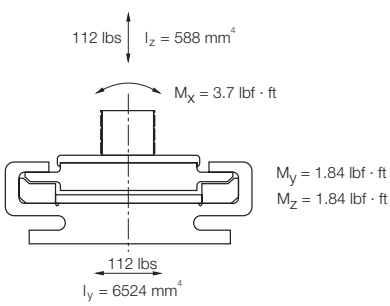


NK-02-27(P)



Static load-bearing capacity and geometric moment of inertia





CAD files online: www.igus.com

Telephone 1-888-803-1895
Fax 1-401-438-7680

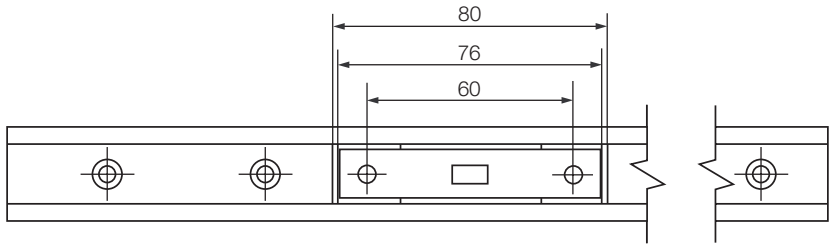
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® N Low Profile Linear Guide Systems
NK-04-27 Double Length Version

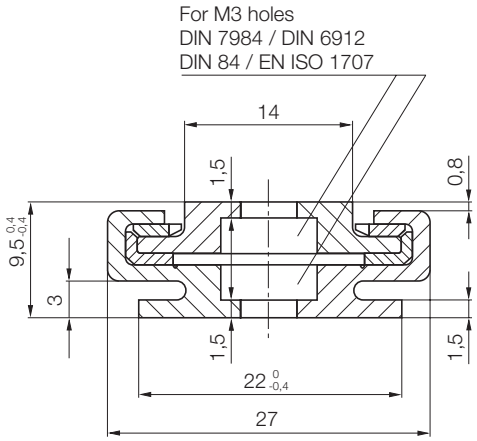
Carriages	Carriage/Bearing Material/Color	Mounting Style	Description	Weight	Max Static Load
NW-04-27	Chromated Zinc/iglide J200/Grey	Through holes	Overmolded, double length version	.80 oz (25g)	168 lbs (750N)

Rail	Material	Description	Weight	Hole Pattern	Max Length
NS-01-27	6063-T6 Anodized AL	M3 Mounting holes	0.2 lbs/ft (290 g/m)	Bore pattern symmetrical C%=C6	12 ft
NS-01-27S	6063-T6 Anodized AL	No holes	0.2 lbs/ft (290 g/m)	NA	12 ft

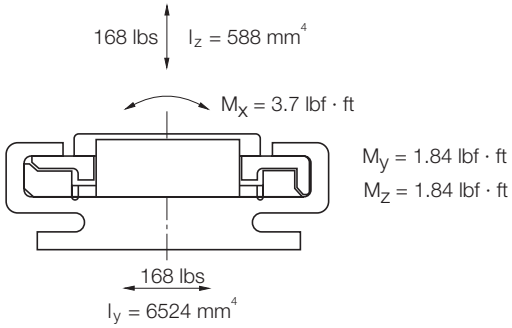




NK-04-27



Static load-bearing capacity and geometric moment of inertia



CAD files online:
www.igus.com

DryLin® N Low Profile Linear Guide Systems, Preloaded



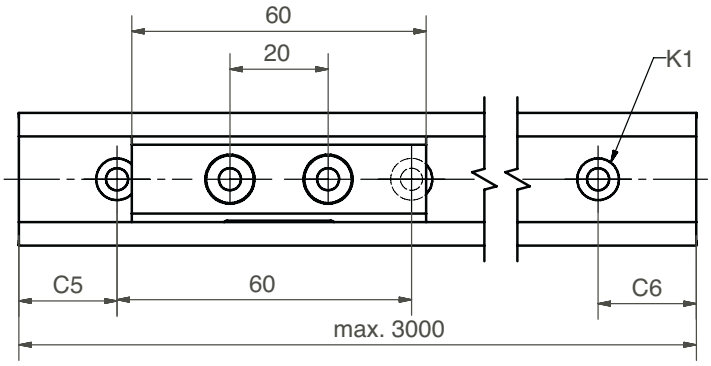
NW-21-27-60-P



NW-22-27-60-P

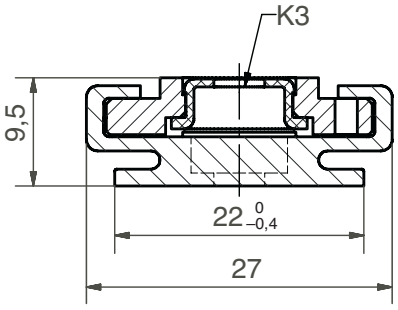
Carriages	Carriage/Bearing Material/Color	Mounting Style	Description	Weight	Max Static Load
NW-21-27-60P	Plastic/iglide J/Yellow	Brass through holes	Preloaded, 50% longer	.29 oz (9g)	112 lbs (500N)
NW-22-27-60P	Plastic/iglide J/Yellow	Brass threaded boss	Preloaded, 50% longer	.39 oz (12g)	112 lbs (500N)

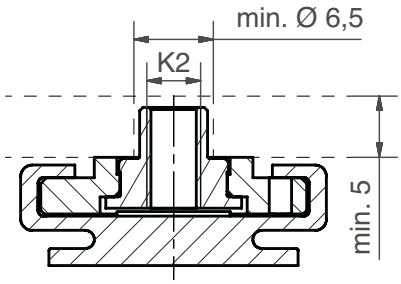
Rail	Material	Description	Weight	Hole Pattern	Max Length
NS-01-27	6063-T6 Anodized AL	M3 Mounting holes	0.2 lbs/ft (290 g/m)	Bore pattern symmetrical C%=C6	12 ft
NS-01-27S	6063-T6 Anodized AL	No holes	0.2 lbs/ft (290 g/m)	NA	12 ft

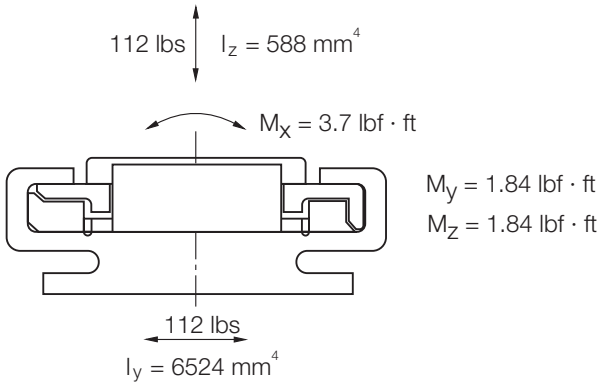


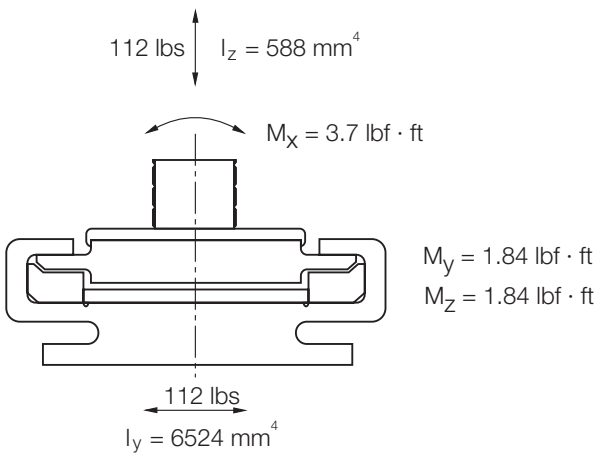
NW-21-27-60-P

NW-22-27-60-P









Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
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QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® N Low Profile Linear Guide Systems NW-01/02-40



NW-02-40

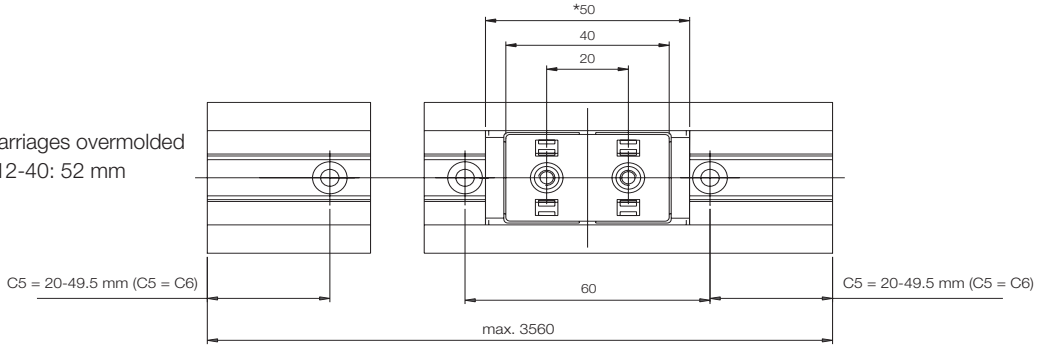


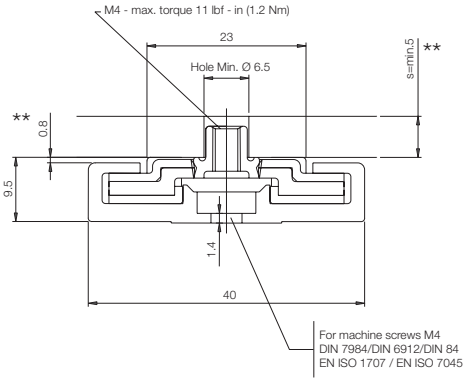
NW-01-40

Carriages	Carriage/Bearing Material/Color	Mounting Style	Description	Weight	Max Static Load
NW-01-40	Chromated Zinc/iglide J/Yellow	Through holes	Standard, clip-on plastic	1.06 oz (30g)	157 lbs (700N)
NW-02-40	Chromated Zinc/iglide J/Yellow	Threaded bosses	Standard, clip-on plastic	1.06 oz (30g)	157 lbs (700N)
NW-12-40	Chromated Zinc/iglide J/Yellow	Threaded bosses	Overmolded plastic	1.06 oz (30g)	157 lbs (700N)
-LLZ	for floating in Z-direction, best for horizontal applications for rail alignment				
-LLY	for floating in Y-direction, best for vertical applications or when flatness of the mounting surface is of concern				
-LLYZ	for lfoating in both directions				

Rail	Material	Description	Weight	Hole Pattern	Max Length
NS-01-40	6063-T6 Anodized AL	M4 Mounting holes	0.3 lbs/ft (450 g/m)	Bore pattern symmetrical C%=C6	12 ft
NS-01-40S	6063-T6 Anodized AL	No holes	0.3 lbs/ft (450 g/m)	NA	12 ft

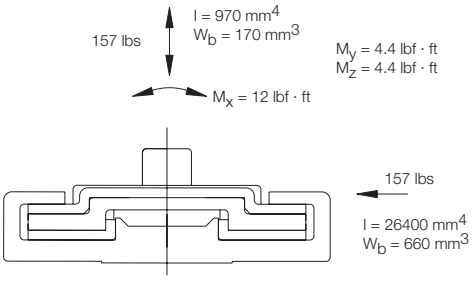
* Length of carriages overmolded version NW-12-40: 52 mm





** For NW-02-40 only

Static load-bearing capacity and geometric moment of inertia



DryLin® NK – Complete system

Structure of the Part No. – Standard version

NK	-02	-40	-2	-500

- -500: Length of rail (mm)
- -2: Number of carriages
- -40: Size
- -02: Thread
- NK: Complete system

Option:

Polymer End cap for rail, Part No. NSK-40



CAD files online: www.igus.com

DryLin® N Low Profile Linear Guide Systems - NK-02-80

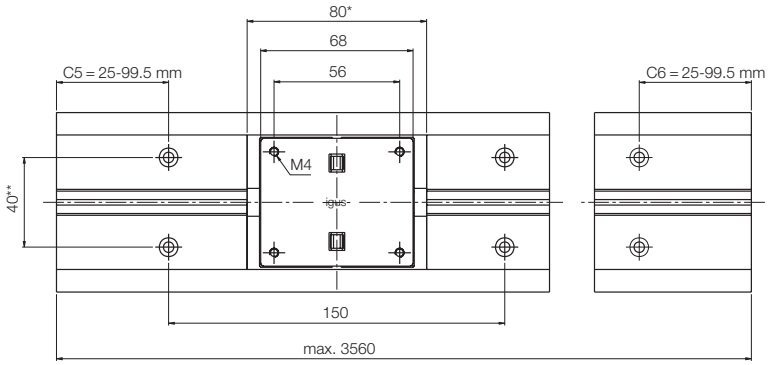


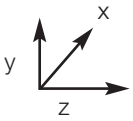
Carriages	Carriage/Bearing Material/Color	Mounting Style	Description	Weight	Max Static Load
NW-02-80	Chromated Zinc/iglide J/Yellow	Threaded no bosses	Standard, clip-on plastic	3.53 oz (100g)	225 lbs (1000N)
NW-12-80	Chromated Zinc/iglide J200/Grey	Threaded no bosses	Overmolded	3.53 oz (100g)	225 lbs (1000N)
NW-02-80AL	Aluminum/iglide J/Yellow	Threaded no bosses	Aluminum, clip-on plastic	2.56 oz (72g)	250 lbs (1111N)

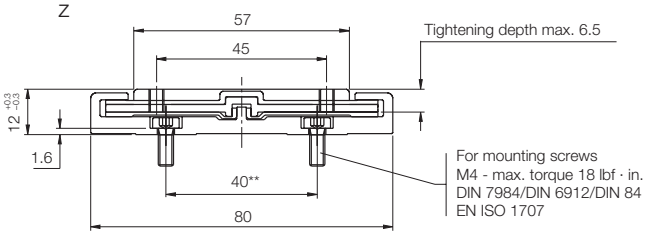
Rail	Material	Description	Weight	Hole Pattern	Max Length
NS-01-80	6063-T6 Anodized AL	M4 Mounting holes	0.3 lbs/ft (450 g/m)	Bore pattern symmetrical C%=C6	12 ft
NS-01-80S	6063-T6 Anodized AL	No holes	0.3 lbs/ft (450 g/m)	NA	12 ft

* carriage length for overmolded NW-12-80 = 83 mm

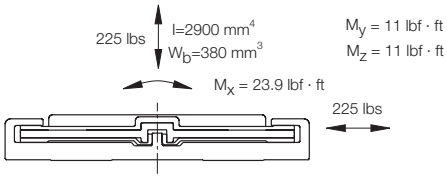
** size 45 on request







Static load-bearing capacity and geometric moment of inertia



Structure of the Part No. – Standard version

NK	-02	-40	-2	-500	-LLZ

- Carriage option
  - Standard - Leave blank
  - Floating z-direction - LLZ
  - Floating y-direction - LLY
  - Floating y- and z-direction - LLYZ
- Length of rail (mm)
- Number of carriages
- Size
- Thread
- Complete system



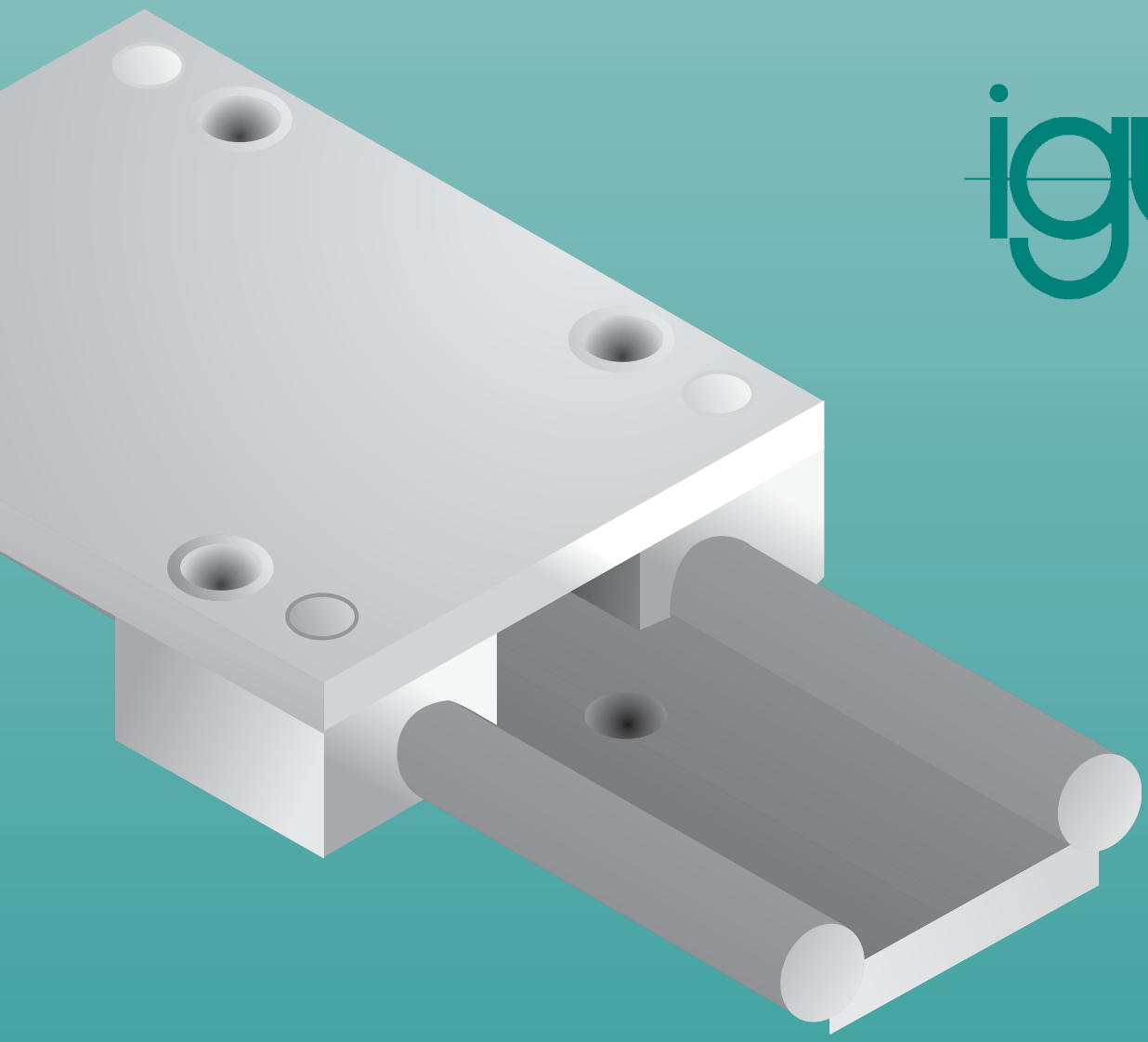
Online Lifetime Calculation www.igus.com

CAD files online: www.igus.com

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680

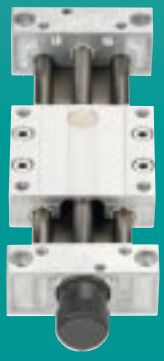




DryLin® W - Harnessed DryLin® Systems

- Flexible and efficient use of space
- Low friction in dry operation
- Hard anodized aluminum rail
- Quiet operation
- Resistant to dust and dirt

Also available as pre-assembled driven systems



SLW
Page 25.9



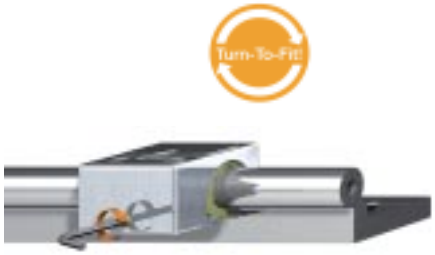
ZLW
Page 25.22

DryLin® W Selection Guide



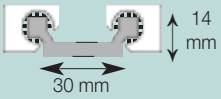


Online Lifetime Calculation www.igus.com



Adjustable clearance available





Features

Round vs. Square

DryLin® W “Single Rail Systems” are available in both round and square configurations.
For most applications the square version of the DryLin® W system is suitable — it’s ability to float in parallel systems optimizes bearing lifetime, reduces friction-forces, and saves on assembly time of the system.
The round version is ideal for dirty environments since debris is easily wiped from the system.

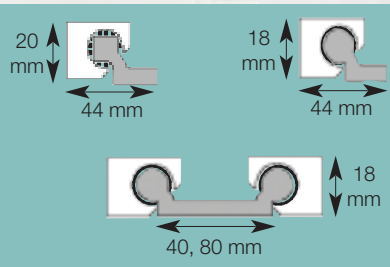
- **Small size for design constraints**
- **Flexible**
- **J200 liner for reduced friction**
- **Great for manual and motor driven applications**
- **Square design for optimal floating option**

Properties

Maximum Load (Depends on Orientation)	94 lbs
Maximum Speed	49 fps (15 m/s)
Maximum Rail Length	9.84 ft
Carriage Weight	.04 lbs (16 g)
Rail Weight	.15 lbs/ft (.23 kg/m)
Rail Material	Hard Anodized Aluminum
Carriage Material	Chromated Zinc / iglide® J200
Temperature Range	-40 to 194°F (-40°C to +90°C)
Carriage Clamp	Not Available

DryLin® W10

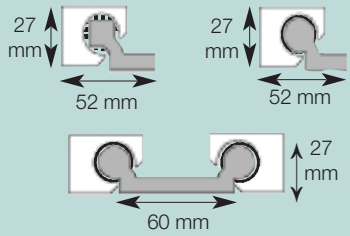




- **Available in the most configurations**
- **Round standard with iglide® J material**
- **Square standard with iglide® J200 material**
- **Use square style as floating bearings**
- **Round style is excellent in aggressive environments**

DryLin® W16

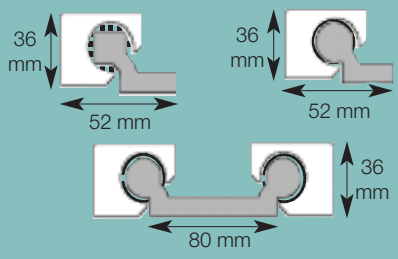




- **All use the enhanced iglide® J200 liner**
- **Available square rail for optimal floating feature**
- **Also available in round profile**
- **Durable size**

DryLin® W20





Single Carriage 270 lbs	Mounted System 1079 lbs	Single Carriage 462 lbs	Mounted System 1848 lbs	Single Carriage 719 lbs	Mounted System 2876 lbs
49 fps (15 m/s)		49 fps (15 m/s)		49 fps (15 m/s)	
12 ft (4m available upon request)		12 ft (4m available upon request)		12 ft (4m available upon request)	
.09 lbs (41 g)		.22 lbs (190 g)		.42 lbs (190 g)	
.42 to 1 lbs/ft (.62 to 1.5 kg/m)		.66 to 1.32 lbs/ft (.98 to 1.96 kg/m)		.89 to 2.21 lbs/ft (1.32 to 3.3 kg/m)	
Hard Anodized Aluminum 316 Stainless		Hard Anodized Aluminum		Hard Anodized Aluminum 316 Stainless	
Chromated Zinc / iglide® J / J200 Anodized aluminum and 316 stainless steel optional		Chromated Zinc / iglide® J200 Anodized aluminum optional		Chromated Zinc / iglide® J200 Anodized aluminum and 316 stainless steel optional	
-40 to 194°F (-40°C to +90°C) -148°F to 482°F (stainless)		-40 to 194°F (-40°C to +90°C)		-40 to 194°F (-40°C to +90°C) -148°F to 482°F (stainless)	
Available		Not Available		Available	

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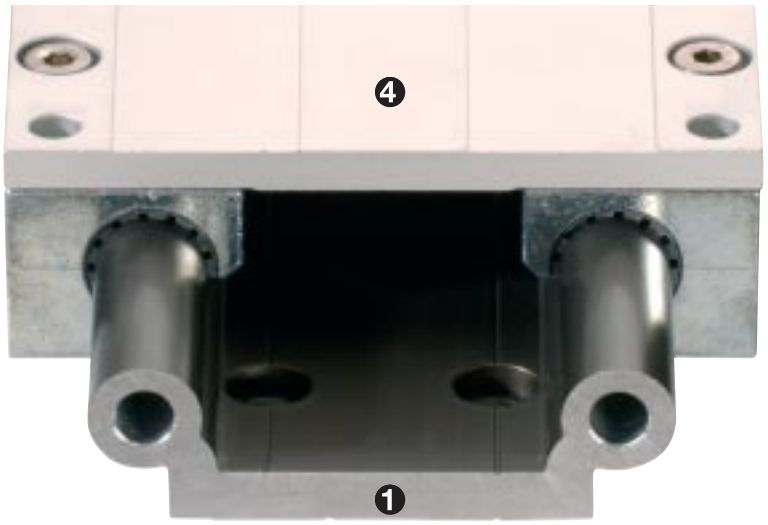
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® W Linear Guide System

DryLin® W was developed to promote both design flexibility and quick assembly in both single and double rail configurations. DryLin® W is also available in several mounted assemblies eliminating the need for both shaft alignment and bearing assembly. All DryLin® W systems are available with our enhanced J200 liners, which reduce friction and optimize bearing life.

Technical Data

Sliding elements:
Maintenance-free
iglide® J / J200
iglide® T500 (SS only)
Max. surface speed:
49 f/s (15 m/s)
Temperature range:
-40°F to +194°F
(-40°C to +90°C)
Rail:
Hard anodized aluminum
Optional 316 stainless
Carriages:
Chromated Zinc
Anodized aluminum
Optional 316 Stainless



DryLin® W - The original flexible guiding systems

DryLin® W uses J200 liners similar to DryLin® R but is also offered as cost-effective, harnessed systems. The design of DryLin® W promotes flexibility of design, and ease of assembly, with both single and double rail configurations:

- The single rail system, which may incorporate a floating square bearing, efficiently compensates for extreme shaft misalignments.
- The double rail system eliminates altogether the need for shaft alignment, offering a single bolt-on solution.

Hard anodized aluminum is used as the rail material, therefore DryLin® W also offers low wear, low friction without lubrication, resistance to dirt and dust, low weight and quiet operation.





DryLin® W used for a stop dog in the glass industry



DryLin® W in permanent use in a conveyor belt

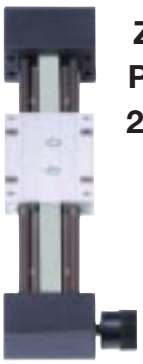


DryLin® W for guiding the igus® EnergyChain® in an inkjet printer

Also available as pre-assembled driven systems



SLW
Page
25.9



ZLW
Page
25.22





Turn-To-Fit carriages allow you to adjust the clearance for your application

DryLin® W Linear Guide System - Carriage

DryLin® W - Sliding elements
iglide® J and iglide® J200



iglide® J

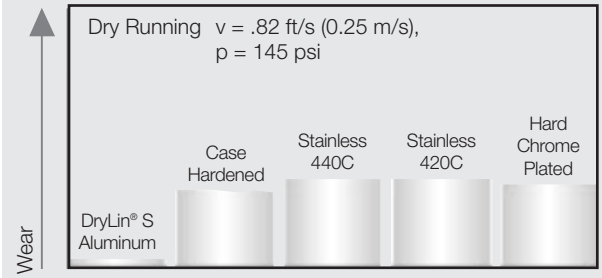


iglide® J200 Square



iglide® J200 Round

iglide® J200 – various shaft materials



The iglide® J200 material

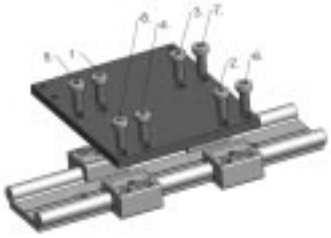
iglide® J200 material is especially developed for hard anodized aluminum surfaces. Comprehensive laboratory tests showed that iglide® J200 is by far the most suitable polymer material for linear motion applications on aluminum rails. iglide® J200 is 3 times as abrasion resistant on anodized aluminum than hardened steel. Special Characteristics of iglide® J200:

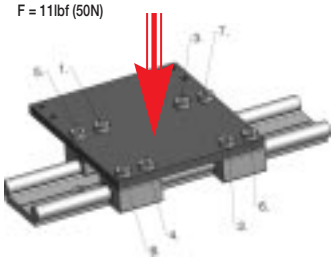
- Extreme durability using anodized aluminum
- Low abrasion using anodized aluminum
- Excellent wear resistance using anodized aluminum
- Maintenance free

Iglide® J200 is standard on all DryLin® W products. DryLin® WS-10 (round) uses iglide® J as the standard liner material, but is also available with J200 upon request.

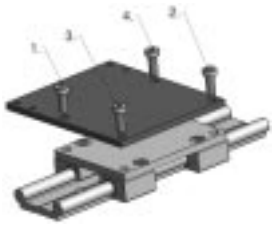
DryLin® W Mounting Instructions

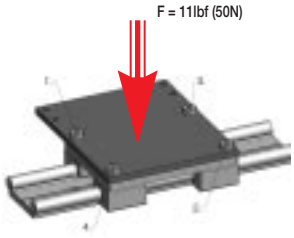
For Parts WJ-





For Parts WK-





A thrust force of at least 11lbs (50N) applied to the center of the assembly is recommended during the mounting process.

Fastener/Torque

W-06: M4 = 13.27 lbf · in (1.5 Nm)
W-10: M6 = 53 lbf · in (6 Nm)
W-16: M8 = 133 lbf · in (15 Nm)
W-20: M8 = 133 lbf · in (15 Nm)



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DryLin® W Linear Guide Systems - Technical Information

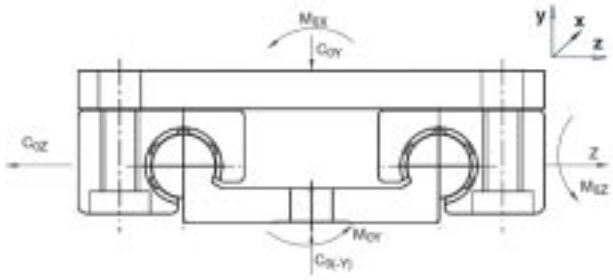
Type	Carriage Length (in.)	mm	Carriage Width (in.)	mm	Coy (lbs)	N	Coz (lbs)	N	Mox (lbf · ft) Nm	Moy (lbf · ft) Nm	Moz (lbf · ft) Nm
WW-06-30-06	(2.36)	60	(2.13)	54	(377)	1680	(377)	1680	(18) 25	(25) 34	(25) 34
WW-06-30-08	(3.15)	80	(2.13)	(54	(377)	1680	(377)	1680	(18) 25	(37) 51	(37) 51
WW-06-30-10	(3.94)	100	(2.13)	54	(377)	1680	(377)	1680	(18) 25	(50) 68	(50) 68
WW-10-40-10	(3.94)	100	(2.87)	73	(1079)	4800	(1079)	4800	(70) 96	(125) 170	(125) 170
WW-10-40-15	(5.91)	150	(2.87)	73	(1079)	4800	(1079)	4800	(70) 96	(213) 290	(213) 290
WW-10-40-20	(7.87)	200	(2.87)	73	(1079)	4800	(1079)	4800	(70) 96	(302) 410	(302) 410
WW-10-80-10	(3.94)	100	(4.21)	107	(1079)	4800	(1079)	4800	(131) 178	(125) 170	(125) 170
WW-10-80-15	(5.91)	150	(4.21)	107	(1079)	4800	(1079)	4800	(131) 178	(213) 290	(213) 290
WW-10-80-20	(7.87)	200	(4.21)	107	(1079)	4800	(1079)	4800	(131) 178	(302) 410	(302) 410
WW-16-60-10	(3.94)	100	(4.09)	104	(1888)	8400	(1888)	8400	(177) 240	(199) 270	(199) 270
WW-16-60-15	(5.91)	150	(4.90)	104	(1888)	8400	(1888)	8400	(177) 240	(354) 480	(354) 480
WW-16-60-20	(7.87)	200	(4.09)	104	(1888)	8400	(1888)	8400	(177) 240	(509) 690	(509) 690
WW-20-80-15	(5.91)	150	(5.20)	134	(2877)	12800	(2877)	12800	(387) 525	(434) 670	(434) 670
WW-20-80-20	(7.87)	200	(5.20)	134	(2877)	12800	(2877)	12800	(387) 525	(730) 990	(730) 990
WW-20-80-25	(9.84)	250	(5.20)	134	(2877)	12800	(2877)	12800	(387) 525	(922) 1250	(922) 1250

Load capacities for complete carriage plates

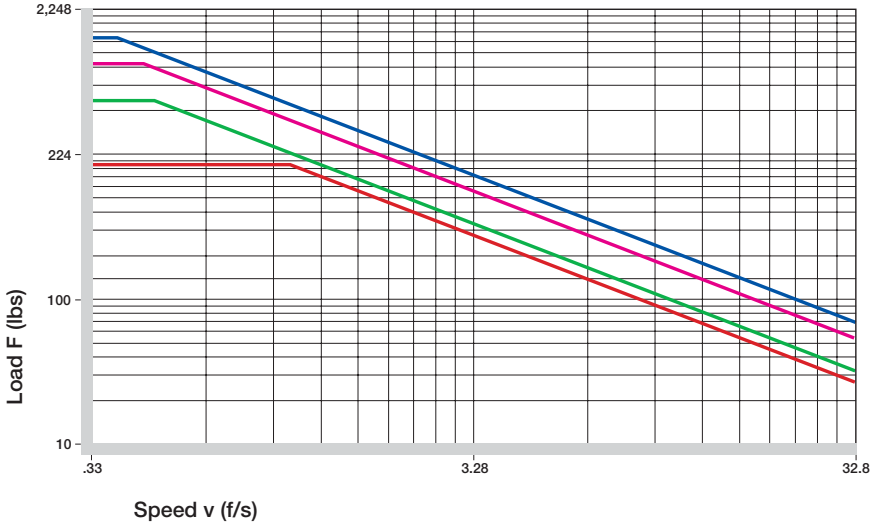
DryLin® W – Rail Systems

	Size 6 (mm)	Size 10 (mm)	Size 16 (mm)	Size 20 (mm)
Single Rail – Round		●	●	●
Single Rail – Square	●	●	●	●
Double Rail	30[1/2] ●	40[2], 80[2] ● ●	60[2] ●	80[2] ●
Linear Guide System	●	●	●	●

[1] Square double profile
[2] Width double rails (mm)







F x V Diagram, maximum permissible dynamic loads (4 bearing system)



Floating bearings for all directions compensate misalignments and parallelism errors

Floating bearings facilitate assembly – only necessary for individual rails.

Assembly is easy with the DryLin® WQ square profile. Floating bearings for all directions (±1 mm) compensate for misalignments and parallelism errors between rails. This includes jamming, otherwise only prevented by time-consuming parallel alignment of the system.

Although DryLin® W is a profile rail system, it is able to compensate angular rotation errors about the x-axis. An angular adjustment of ±7° is possible. This effectively eliminates the problems known to occur when fitting to sheet metal.

System Assembling: Rails

Fixed Floating



Fixed Floating



Fixed Floating



Available floating bearing blocks

± .008 in (0.2 mm)

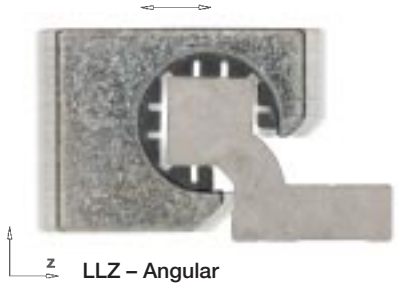


LL – Round



LLY – Angular

± .04 in (1.0 mm)



LLZ – Angular



Rotating – Angular

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DryLin® W Linear Guide Systems - Design Rules

When using systems with 2 parallel rails, one side must be designated as the “fixed” rail, and the opposite side as the “floating” rail.

Why use floating bearings?

- promotes smooth gliding performance and maximizes bearing life
- prevents binding caused by parallelism and angle errors
- decreases necessary drive force and wear by minimizing friction-forces
- Enhances the precision of the system over the bearings’ lifetime.
- Reduce assembly time and cost

Fixed Bearings

The “fixed” bearing rail should be positioned closest to the drive force. This rail will determine the precision of the system; no system should contain more than two “fixed” bearings.

Floating/Self-Aligning Bearings

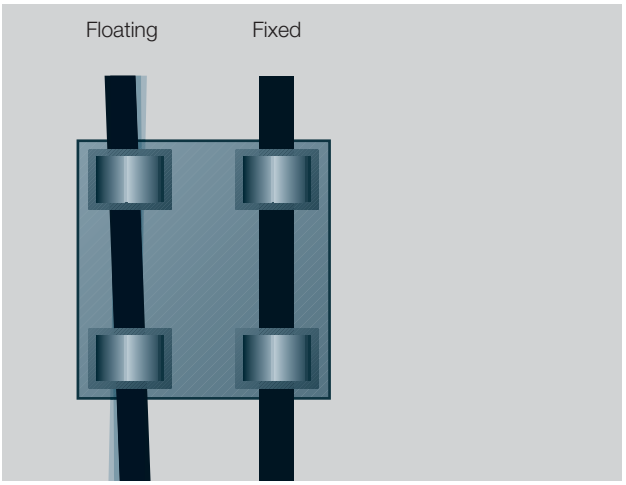
The “floating” rail should be the rail located furthest from the drive force. It is to act only as a guide, and will compensate for any misalignments or angle errors in the system ensuring proper functionality.

Mounting Surfaces

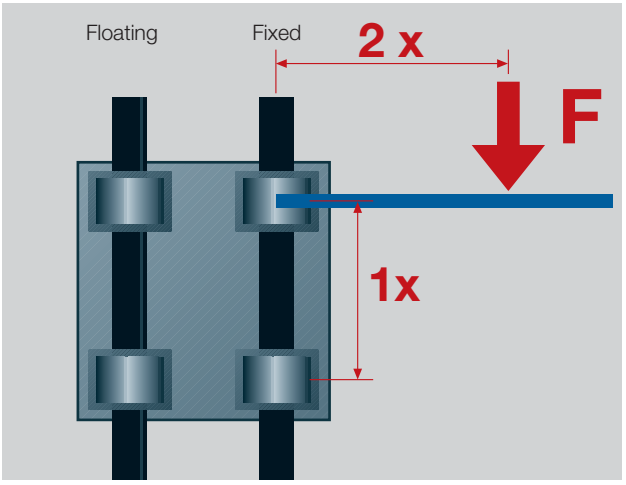
The mounting surfaces for rails and bearings should have a very flat surface (e.g milled surface) in order to enhance performance. Variations in these surfaces may be compensated for by using floating bearings.

Eccentric Forces — The 2:1 Rule

When using linear plain bearings it is important to ensure that the acting forces follow the 2:1 Rule (see drawing). If either the load or the drive force (F) is greater than twice the bearing length (1X), then a binding or interrupted motion may occur.
If the location of the drive force or load cannot be changed, simply increase the distance between the bearings, or create a counterbalance to move the center-of-gravity back within the 2 to 1 ratio.



Automatic compensation of parallelism errors



The 2:1 Rule

Order example, complete system:

WK-10-40-15-01, 1500 for a complete system, consisting of 1500 mm rail and with a 150 mm-long and 40 mm-wide guide slide.

WK	-10	-40	-15	-01	-1500	LLZ	C5=20

Rail options
- Leave blank: Standard with holes
- C5 = … mm: If hole spacing is not symmetrical

Carriage options
- Leave blank: Standard
- LLZ: Floating z-direction
- LLY: Floating y-direction

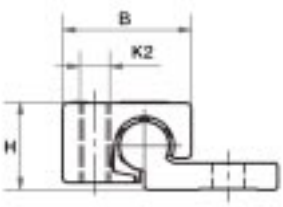
Length of rail
Number of carriage plates
Length of carriage plate
Support width
Shaft diameter
Complete system

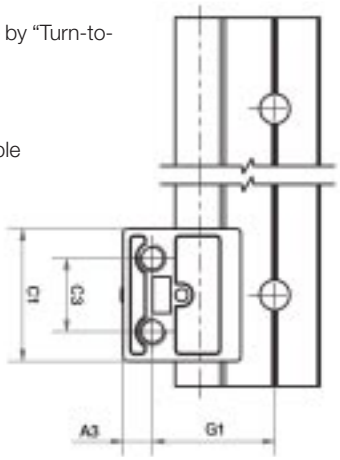
DryLin® W Linear Guide Systems - “Turn-to-Fit”



DryLin® W ‘Turn-To-Fit’ adjustable carriages allow you to set the clearance for your application by using a set screw. The design also has a unique ‘clicking’ feature which audibly enables you to hear each revolution - so you can adjust to a set torque level and back off any number of revolutions to achieve your required fit. Currently available only in zinc-cast versions.

- Manual adjustable clearance by “Turn-to-Fit” function with allen key
- 100% lubrication-free
- Compact Dimensions
- 8 different rail profiles available
  See page 22.11 - 22.12





Can also be used in:



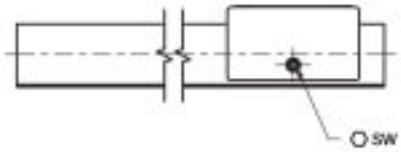
DryLin® W
Linear guides



DryLin® SLW
Linear slide tables



DryLin® ZLW
Linear actuators

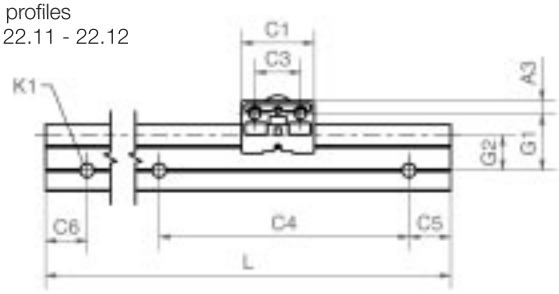


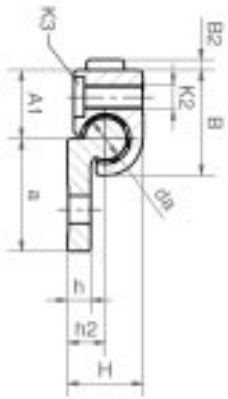
Part No.	Weight (g)	B (mm)	C1 (mm)	C3 (mm)	A3 (mm)	K2 (mm)	H (mm)	SW (mm)	G1 (mm)
WJUME-01-10	43	26	29	16	6.5	M6	18	1.5	27
WJ200UME-01-16	110	34.5	36	18	9	M8	27	2.5	33
WJ200UME-01-20	222	42.5	45	27	9	M8	36	2.5	38

DryLin® W Linear Guide Systems - Hybrid Linear Bearing

An additional DryLin® W solution is a combined rolling and sliding carriage. Because of the defined load direction the required drive force is reduced by a maintenance free roller bearing. This system represents an ideal solution for many hand powered applications under 112 lbs. Ideal for machine tool guards, furniture and aerospace applications.

- Size (shaft diameter): 10 mm
- Roller made from plastic
- Low drive force needed
- Low cost
- 3 different profiles
  See page 22.11 - 22.12







Part No. Rail	Weight (kg/m)	H ±0.07 (mm)	da -0.1 (mm)	L max. (mm)	a -0.3 (mm)	h (mm)	h2 (mm)	G1 (mm)	G2 (mm)	A1 (mm)	C4 (mm)	C5 min. (mm)	C5 max. (mm)	C6 ,min. (mm)	C6 max. (mm)	K1 for screw DIN 912
WS-10	0.62	18	10	4,000	27	5.5	9	27	17	16.5	120	20	79.5	20	79.5	M6
WS-10-40	1.00	18	10	4,000	40	5.5	9	30	20	16.5	120	20	79.5	20	79.5	M6
WS-10-80	1.50	18	10	4,000	74	5.5	9	27	17	16.5	120	20	79.5	20	79.5	M6

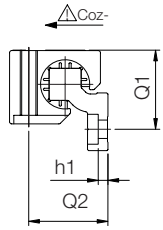
Part No. Housing Bearing	Weight (g)	B (mm)	B2 (mm)	C1 (mm)	C3 (mm)	A3 (mm)	K2 (mm)	K3 (mm)
WJRM-01-10	46	26	2.5	35	22	6.5	M6	M5

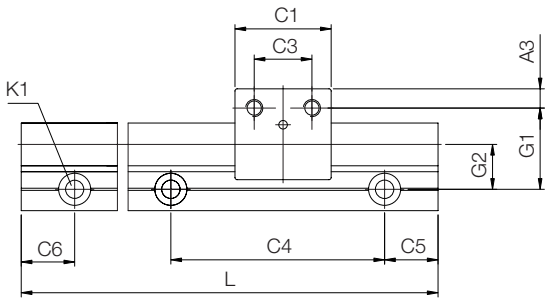
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Fax 1-401-438-7680

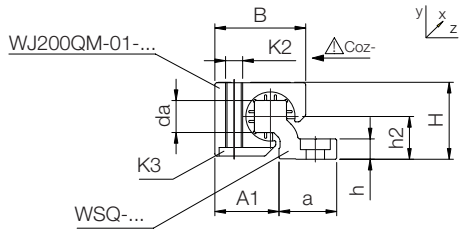
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E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® W Linear Guide Systems - Single Rail - Square
4 dimensions available









Dimensions in (mm) unless otherwise specified

DryLin® W guide rails – Square

Part No.	Weight	H ± 0.07	da –0.1	L Max.	a –0.3	h	h1	h2	G1	G2	A1	Q1	Q2
	(kg/m)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
WSQ-06	0.23	14	5	3000	14	4	4*	7.5	18	10.5	13.5	17	15
WSQ-10	0.54	20	7.5	4000	25	5.5	5.5*	11	27	17	18.5	26	21
WSQ-16	0.94	27	11.5	4000	27	7.5	3.5	14	33	19	25	32	28
WSQ-20	1.41	36	15	4000	27	9.5	4.5	20	38	21	30	37	37

Part No.	C4	C5 Min.	C5 Max.	C6 Min.	C6 Max.	K1 for screw	Iy	Iz	Wby	Wbz
	(mm)	(mm)	(mm)	(mm)	(mm)	DIN 912	(mm^4)	(mm^4)	(mm^3)	(mm^3)
WSQ-06	60	20	49.5	20	49.5	M4*	2200	640	220	100
WSQ-10	120	20	79.5	20	79.5	M6*	16100	3300	950	350
WSQ-16	120	20	79.5	20	79.5	M8	33000	10800	1700	910
WSQ-20	120	20	79.5	20	79.5	M8	56500	34000	2600	2100

Standard bore pattern symmetrical: C5 = C6; please order C5 ≠ C6 with drawing

* Through hole

DryLin® W housing bearings – Square - Zinc

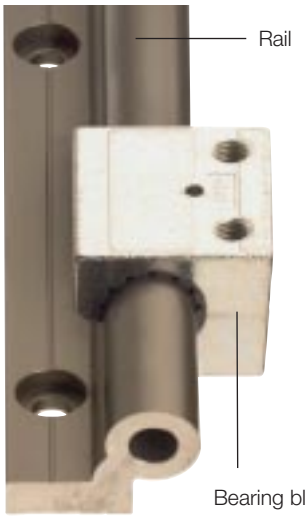
Part No.	Floating bearing	Floating bearing	Weight	B	C1	C3	A3	K2	K3	Static load capacity		
										Coy	Coz+	Coz–
	play	direction	(g)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	lbf (N)	lbf (N)	lbf (N)
WJ200QM-01-06	–	–	16	18	19	10	4.5	M4	M3	94 (420)	94 (420)	31 (140)
WJ200QM-01-06 LLZ	± 0.5	z	16	18	19	10	4.5	M4	M3	94 (420)	94 (420)	31 (140)
WJ200QM-01-06 LLY	± 0.5	y	16	18	19	10	4.5	M4	M3	94 (420)	94 (420)	31 (140)
WJ200QM-01-10** (AL)	–	–	20	26	29	16	6.5	M6	M5	270 (1200)	270 (1200)	56 (250)
WJ200QM-01-10 LLZ	± 0.7	z	41	26	29	16	6.5	M6	M5	270 (1200)	270 (1200)	56 (250)
WJ200QM-01-10 LLY	± 0.7	y	41	26	29	16	6.5	M6	M5	270 (1200)	270 (1200)	56 (250)
WJ200QM-01-16 (AL)	–	–	47	34.5	36	18	9	M8	M6	472 (2100)	472 (2100)	89 (400)
WJ200QM-01-16 LLZ	± 1.0	z	100	34.5	36	18	9	M8	M6	472 (2100)	472 (2100)	89 (400)
WJ200QM-01-16 LLY	± 1.0	y	100	34.5	36	18	9	M8	M6	472 (2100)	472 (2100)	89 (400)
WJ200QM-01-20**	–	–	94	42.5	45	27	9	M8	M6	719 (3200)	719 (3200)	112 (500)
WJ200QM-01-20 LLZ	± 1.0	z	190	42.5	45	27	9	M8	M6	719 (3200)	719 (3200)	112 (500)
WJ200QM-01-20 LLY	± 1.0	y	190	42.5	45	27	9	M8	M6	719 (3200)	719 (3200)	112 (500)

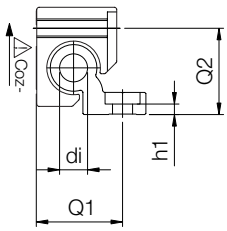
For the aluminum version add "-AL" after the part number. Example: **WJ200QM-01-10-AL**

** Also available as stainless steel version. More on ► Page 22.14

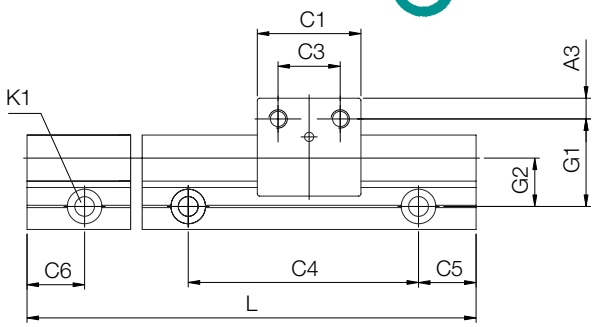
CAD files online: www.igus.com

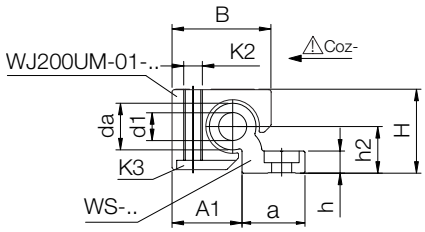
DryLin® W Linear Guide Systems - Single Rail, Round
3 dimensions available





This bearing block orientation is not possible for WS-10. Use square WSQ-10





Dimensions in (mm) unless otherwise specified

DryLin® W guide rails – Round

Part No.	Weight	H	da	di	L	a	h	h1	h2	G1	G2	A1	Q1	Q2
	(kg/m)	± 0.07 (mm)	-0.1 (mm)	(mm)	Max. (mm)	-0.3 (mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
WS-10	0.62	18	10	–	4000	27	5.5	5.5**	9	27	17	16.5	–	–
WS-16	0.98	27	16	8.0	4000	27	7.5	3.5	14	33	19	25	32	28
WS-20	1.32	36	20	10.2	4000	27	9.5	4.5	20	38	21	30	37	37

Part No.	C4	C5 Min.	C5 Max.	C6 Min.	C6 Max.	K1 for screw DIN 912	Iy	Iz	Wby	Wbz
	(mm)	(mm)	(mm)	(mm)	(mm)		(mm^4)	(mm^4)	(mm^3)	(mm^3)
WS-10	120	20	79.5	20	79.5	M6**	19000	2850	1000	310
WS-16	120	20	79.5	20	79.5	M8	36000	12900	1800	940
WS-20	120	20	79.5	20	79.5	M8	57100	35000	2700	1900

Standard bore pattern symmetrical: C5 = C6; please order C5 ≠ C6 with drawing
** Through hole

DryLin® W housing bearings – Round

Part No.	Floating bearing play	Floating bearing direction	Weight	B	C1	C3	A3	K2	K3	Static load capacity Coy	Coz+	Coz–
			(g)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	lbf (N)	lbf (N)	lbf (N)
WJ200UM-01-10***(AL)	–	–	20	26	29	16	6.5	M6	M5	270 (1200)	270 (1200)	56 (250)
WJ200UM-01-10 LL	± 0.2	–	41	26	29	16	6.5	M6	M5	270 (1200)	270 (1200)	56 (250)
WJ200UM-01-16 (AL)	–	–	47	34.5	36	18	9	M8	M6	472 (2100)	472 (2100)	89 (400)
WJ200UM-01-20*** (AL)	–	–	94	42.5	45	27	9	M8	M6	719 (3200)	719 (3200)	112 (500)
WJ200UM-01-20 LL	± 0.25	–	190	42.5	45	27	9	M8	M6	719 (3200)	719 (3200)	112 (500)

For the aluminum version add "-AL" after the part number. Example: **WJ200UM-01-10-AL-LLZ**
*** Also available as stainless steel version. More on ► page 22.14

Turn-To-Fit



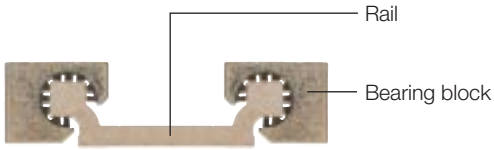
Adjustable clearance available (see page 22.9)

Telephone 1-888-803-1895
Fax 1-401-438-7680

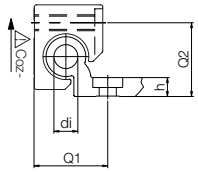
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® W Linear Guide Systems - Double Rail
1 dimension square, 3 dimensions round

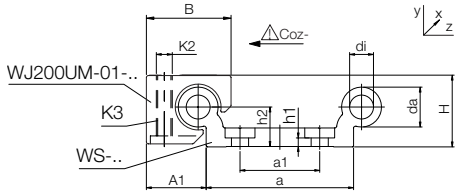


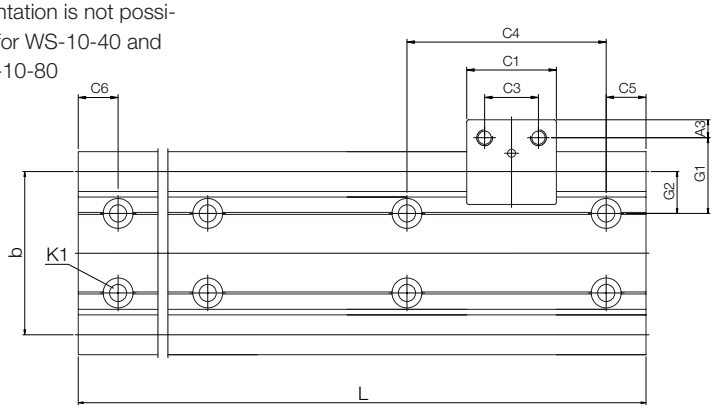


Form ☐: WSQ-06-30, WJ200QM-01-06



This bearing block orientation is not possible for WS-10-40 and WS-10-80





Dimensions in (mm) unless otherwise specified

DryLin® W guide rails

Part No.	Form	Weight (kg/m)	H ± 0,07 (mm)	da –0,1 (mm)	di	L Max. (mm)	a –0,3 (mm)	b (mm)	h (mm)	h1 (mm)	h2 (mm)	G1 (mm)	G2 (mm)	a1* (mm)
WSQ-06-30	☐	0.45	14	5	–	3000	27	30	4	4	7.5	18	10.5	–
WS-10-40	o	1.00	18	10	–	4000	40	40	5.5	5.5**	9	27	17	–
WS-10-80	o	1.50	18	10	–	4000	74	74	5.5	5.5**	9	27	17	40
WS-16-60	o	1.96	27	16	8.0	4000	54	58	7.5	3.5	14	33	19	–
WS-20-80	o	3.30	36	20	10.2	4000	74	82	9.5	4.5	20	38	21	40

* WSQ-06-30, WS-10-40 and WS-16-60 have a single row of mounting holes down the centreline
** WS-10-80 and WS-20-80 have two parallel rows of mounting holes

Part No.	Form	C4 (mm)	C5 Min. (mm)	C5 Max. (mm)	C6 Min. (mm)	C6 Max. (mm)	K1 for screw DIN 912	Iy (mm^4)	Iz (mm^4)	Wby (mm^3)	Wbz (mm^3)
WSQ-06-30	☐	60	20	49.5	20	49.5	M4	19000	1250	1100	200
WS-10-40	o	120	20	79.5	20	79.5	M6***	91000	5100	3600	590
WS-10-80	o	120	20	79.5	20	79.5	M6***	388000	6100	9200	650
WS-16-60	o	120	20	79.5	20	79.5	M8	367600	26100	9900	1900
WS-20-80	o	120	20	79.5	20	79.5	M8	1080000	78700	21000	4000

Standard bore pattern symmetrical: C5 = C6; please order C5 ≠ C6 with drawing. *** Through bore

DryLin® W housing bearings

Part No.	Form	Floating bearing play	Floating bearing direction	Weight (g)	B (mm)	C1 (mm)	C3 (mm)	A3 (mm)	K2 (mm)	K3 (mm)	Static load capacity Coy (N)	Coz+ (N)	Coz– (N)
WJ200QM-01-06	☐	–	–	16	18	19	10	4.5	M4	M3	94 (420)	94 (420)	31 (140)
WJ200UM-01-10****(AL)	o	–	–	41	26	29	16	6.5	M6	M5	270 (1200)	270 (1200)	56 (250)
WJ200UM-01-16 (AL)	o	–	–	100	34.5	36	18	9	M8	M6	472 (2100)	472 (2100)	89 (400)
WJ200UM-01-20****(AL)	o	–	–	190	42.5	45	27	9	M8	M6	719 (3200)	719 (3200)	112 (500)

For the aluminum version add "-AL" after the part number. Example: **WJ200UM-01-10-AL**
**** Also available as stainless steel version. More on ► Page 22.14



Adjustable clearance available

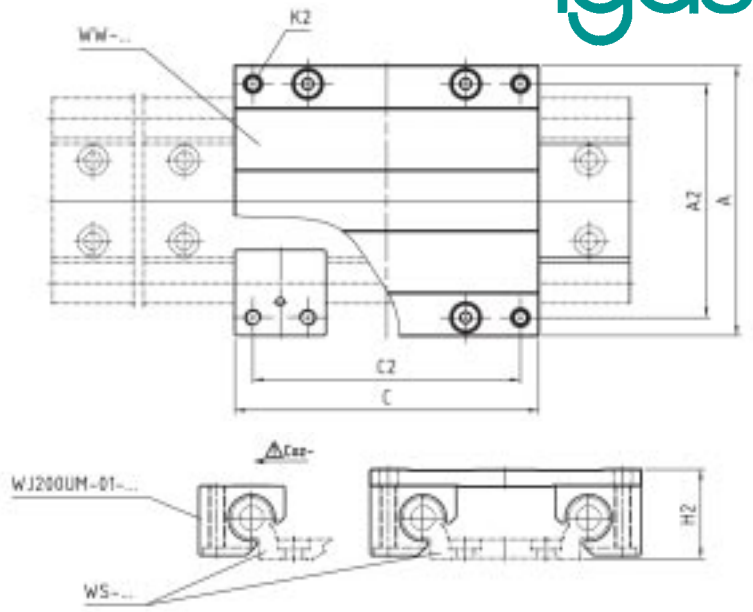
Also available as pre-assembled driven systems

SLW - Page 25.9
ZLW - Page 25.22

DryLin® W Linear Guide Systems - Carriages, assembled



DryLin® W Carriages, fitted



Part No.	Suitable rail	WT	A	C	A2	C2	K2	H2	Static load capacity				
			Width	Length				±0.17	Coy	Coz	Mox	Moy	Moz
	Part No.	(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	lbs (N)	lbs (N)	lbs (Nm)	lbf·ft (Nm)	lbf·ft (Nm)
WW-06-30-06	WSQ-06-30	0.10	54	60	45	51	M4	18	377 (1680)	377 (1680)	18 (25)	25 (34)	25 (34)
WW-06-30-08	WSQ-06-30	0.11	54	80	45	71	M4	18	377 (1680)	377 (1680)	18 (25)	37 (51)	37 (51)
WW-06-30-10	WSQ-06-30	0.12	54	100	45	91	M4	18	377 (1680)	377 (1680)	18 (25)	50 (68)	50 (68)
WW-10-40-10	WS-10-40	0.29	73	100	60	87	M6	24	1079 (4800)	1079 (4800)	70 (96)	125 (170)	125 (170)
WW-10-40-15	WS-10-40	0.34	73	150	60	137	M6	24	1079 (4800)	1079 (4800)	70 (96)	213 (290)	213 (290)
WW-10-40-20	WS-10-40	0.40	73	200	60	187	M6	24	1079 (4800)	1079 (4800)	70 (96)	302 (410)	302 (410)
WW-10-80-10	WS-10-80	0.34	107	100	94	87	M6	24	1079 (4800)	1079 (4800)	131 (178)	125 (170)	125 (170)
WW-10-80-15	WS-10-80	0.42	107	150	94	137	M6	24	1079 (4800)	1079 (4800)	131 (178)	213 (290)	213 (290)
WW-10-80-20	WS-10-80	0.50	107	200	94	187	M6	24	1079 (4800)	1079 (4800)	131 (178)	302 (410)	302 (410)
WW-16-60-10	WS-16-60	0.71	104	100	86	82	M8	35	1888 (8400)	1888 (8400)	177 (240)	199 (270)	199 (270)
WW-16-60-15	WS-16-60	0.84	104	150	86	132	M8	35	1888 (8400)	1888 (8400)	177 (240)	354 (480)	354 (480)
WW-16-60-20	WS-16-60	0.97	104	200	86	182	M8	35	1888 (8400)	1888 (8400)	177 (240)	508 (690)	508 (690)
WW-20-80-15	WS-20-80	1.20	134	150	116	132	M8	44	2878 (12800)	2878 (12800)	387 (525)	494 (670)	494 (670)
WW-20-80-20	WS-20-80	1.30	134	200	116	182	M8	44	2878 (12800)	2878 (12800)	387 (525)	730 (990)	730 (990)
WW-20-80-25	WS-20-80	1.50	134	250	116	232	M8	44	2878 (12800)	2878 (12800)	387 (525)	922 (1250)	922 (1250)

Part No. for a complete system:

WK	-10	-40	-15	-01	-1500	LLZ	C5=20

Rail options
Leave blank: Standard with holes
C5 = … mm: If hole spacing is not symmetrical

Carriage options
Leave blank: Standard
LLZ: Floating z-direction
LLY: Floating y-direction

Length of rail
Number of carriage plates
Length of carriage plate
Support width
Shaft diameter
Complete system



Order example, complete system:

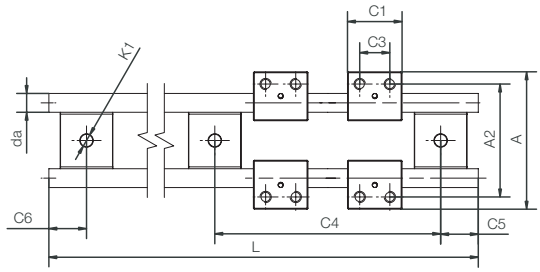
WK-10-40-15-01-1500 for a complete system, consisting of 1500 mm rail and with a 150 mm-long and 40 mm-wide guide slide.

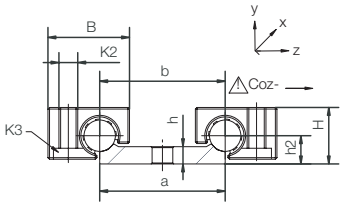
Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® W Linear Guide Systems, 316 Stainless Steel







DryLin® W Guide rail, double, ø 10 mm

Part No.	Suitable bearing (Part No.)	Weight (kg/m)	da h9 (mm)	L Max. (mm)	a –0,3 (mm)	b (mm)	h (mm)	h2 (mm)
WS-10-40-ES (FG)	WJUM-01-10-ES (FG)	1.58	10	3000	40	40	5.5	9

(FG) - cast 316

Part No.	C4 (mm)	C5 Min. (mm)	C5 Max. (mm)	C6 Min. (mm)	C6 Max. (mm)	K1 for screw DIN 912
WS-10-40-ES (FG)	120	20	79.5	20	79,5	M6

(FG) - cast 316

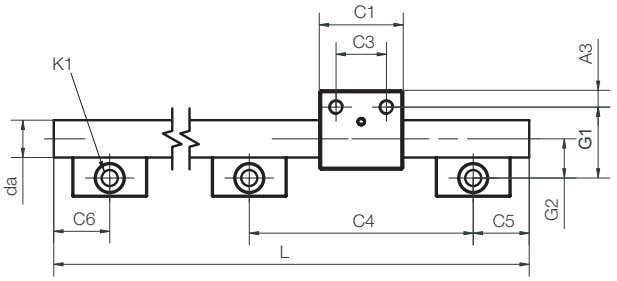
DryLin® W housing bearings

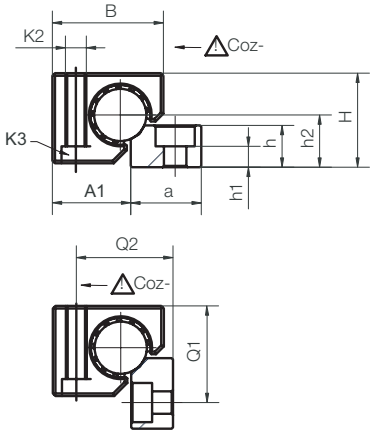
Part No.	Weight (g)	H ± 0,07 (mm)	B (mm)	C1 (mm)	C3 (mm)	A (mm)	A2 (mm)	K2 (mm)	K3 Countersunk screw	Static load capacity Coy lbs (N)	Coz+ lbs (N)	Coz– lbs (N)
WJUM-01-10-ES (FG)*	57	18	26	29	16	73	60	M6	M5	854 (3800)	854 (3800)	213 (950)

(FG) - cast 316

* TUM-01-10 liners are optional extra, page 24.26, for high temperatures







DryLin® W-Guide rail, single, ø 20 mm

Part No.	Suitable bearing (Part No.)	Weight (kg/m)	da h9 (mm)	L Max. (mm)	a –0,3 (mm)	h (mm)	h2 (mm)	G2 (mm)
WS-20-ES (FG)	WJUM-01-20-ES (FG)	3.37	20	3000	27	16	20	21

(FG) - cast 316

Part No.	C4 (mm)	C5 Min. (mm)	C5 Max. (mm)	C6 Min. (mm)	C6 Max. (mm)	K1 for screw DIN 912	h1 (mm)	Iy (mm^4)	Iz (mm^4)	Wby (mm^3)	Wbz (mm^3)
WS-20-ES (FG)	120	20	79.5	20	79,5	M8	8	7854	7854	785	785

(FG) - cast 316

DryLin® W housing bearings

Part No.	WT (g)	H ± 0,07 (mm)	B (mm)	C1 (mm)	C3 (mm)	G1 (mm)	A3 (mm)	A1 (mm)	K2 Countersunk-head screw	K3 (mm)	Q1 (mm)	Q2 Coy (N)	Static load capacity Coz+ (N)	Coz- (N)
WJUM-01-20-ES (FG)*	280	36	42.5	45	27	38	9	30	M8	M6	37	37	2473 (11000)	2473 (11000)	4270(1900)

* TUMO-01-20 liners are optional for high temperatures up to 482°F

(FG) - cast 316

DryLin® W Linear Guide Systems

DryLin® W – various sliding parts

Special properties

- Quick replacement
- Low friction
- Low abrasion
- Round and square version available
- “fast-and-slow”-motion possible
- Material iglide® J200



Part No. structure for the liners:

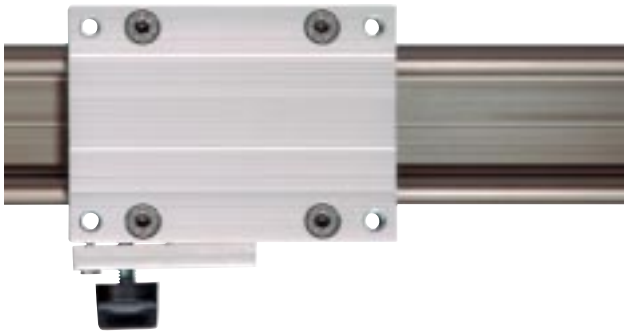
J200QM-01-...□	Square liner for square rails WSQ-... and for bearings WJ200QM-...
J200UMO-01-...Ø	Round liner for round rails WS-... and for bearing WJ200UM-...

DryLin® W – Accessories

DryLin® W – manual clamp

Special properties

- For simple positioning duties
- Low-cost
- Universal applications
- Clamping force depending on tightening torque
- Clamping is produced by friction



DryLin® W manual clamp developed for simple functions
Part No.: WHKA-10, WHKA-16 and WHKA-20

DryLin® W – digital measuring device

Special properties

- **Installation:** right (R) or left (L) of guide carriage
- **Measuring principle:** magnetic with magnetic tape (10 x 1.4 mm)
- **Resolution:** 0.1 mm
- **Accuracy:** ±(0.1 + 0.01 x measured length (m) mm
- **Service life:** 5 years powered 100% of the time
- **Operation temperature:** +32 °C to +140 °C
- **Display:** LCD
- **Repeat accuracy:** ±1 Digit
- **Absolute and incremental measuring method**



Wireless measuring device with direct, digital indication of position
Part No.: WKM-10 / WKM-20

Clean room suitability and ESD-compatibility

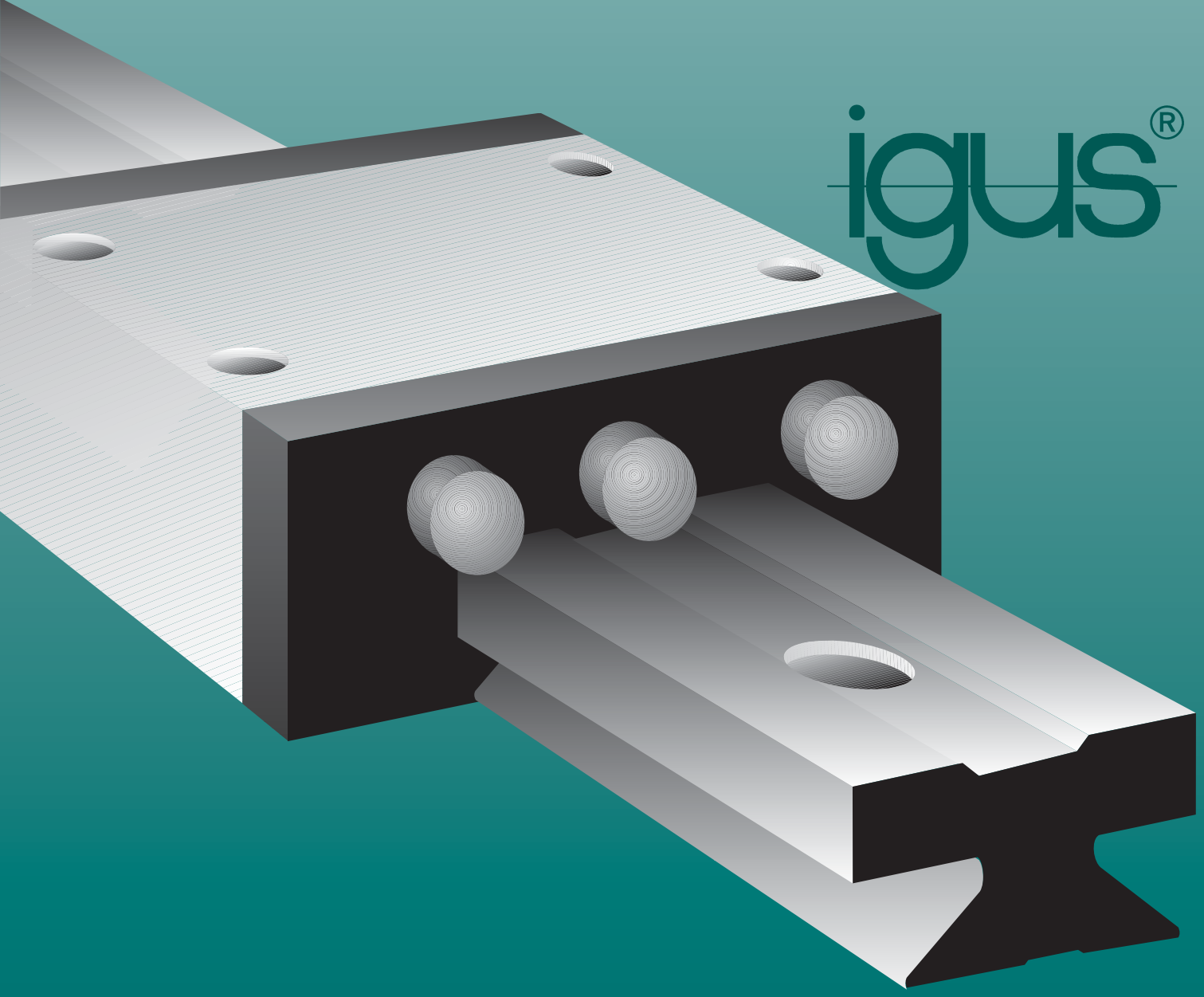
Fraunhofer IPA TESTED DEVICE

You can find detailed results on
► Page 20.12

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680

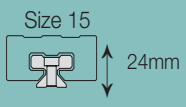
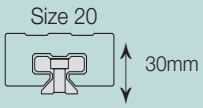
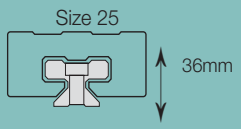




DryLin® T Linear Guide System Maintenance-Free, Adjustable, and Quiet

- Corrosion-resistant
- Wear-resistant
- Low coefficient of friction
- Extremely quiet operation
- No lubrication necessary

DryLin® T Selection Guide

	TK-01-15	TK-01-20	TK-01-25
			
			

Features

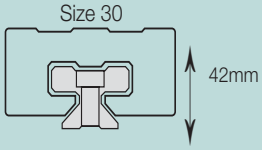
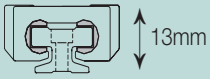
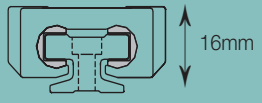


Online Lifetime Calculation www.igus.com

TK-01-15	TK-01-20	TK-01-25
• Adjustable clearance • Clamping mechanism available • Cost-effective • Corrosion resistant • Automatic clearance setting version available	• Adjustable clearance • Automatic clearance setting version available • Corrosion resistant • Clamping mechanism available • Cost-effective • No need for messy lubrication	• Clamping mechanism available • Adjustable clearance • Automatic clearance setting version available • Corrosion resistant • Cost-effective

Properties

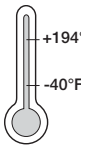
	TK-01-15	TK-01-20	TK-01-25
Maximum Load	900 lbs	1665 lbs	2250 lbs
Maximum Speed	49 fps	49 fps	49 fps
Maximum Rail Length	12 ft (4 m) upon request	12 ft (4 m) upon request	12 ft (4 m) upon request
Carriage Weight	.24 lbs	.42 lbs	.64 lbs
Rail Weight	.40 lbs/ft	.67 lbs/ft	.88 lbs/ft
Rail Material	Hard-Anodized Aluminum	Hard-Anodized Aluminum	Hard-Anodized Aluminum
Carriage Material	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum
Temperature	-40°F to +194°F	-40°F to +194°F	-40°F to +194°F
Adjustable Clearance	Available	Available	Available
Automatic Clearance	Available	Available	Available
Hand Clamp	Available	Available	Available

TK-01-30	TK-04-09	TK-04-12	TK-04-15
			
			
• Robust size for higher loads • Adjustable clearance • Automatic clearance setting version available • Corrosion resistant • cost-effective	• Lightweight • Ideal for tight design constraints • Cost-effective • No need for messy lubrication	• No need for messy lubrication • Lightweight • Cost-effective • Ideal for tight design constraints	• Cost-effective • Quiet operation • Lightweight • Ideal for tight design constraints • No need for messy lubrication
3140 lbs	108 lbs	215 lbs	315 lbs
49 fps	49 fps	49 fps	49 fps
12 ft (4 m) upon request	6.56 ft (2000 mm)	6.56 ft (2000 mm)	9.84 ft (3000 mm)
1.10 lbs	.04 lbs	.07 lbs	.12 lbs
1.28 lbs/ft	.073 lbs/ft	.134 lbs/ft	.223 lbs/ft
Hard-Anodized Aluminum	Hard-Anodized Aluminum	Hard-Anodized Aluminum	Hard-Anodized Aluminum
Anodized Aluminum	Chromated Zinc	Chromated Zinc	Chromated Zinc
-40°F to +194°F	-40°F to +194°F	-40°F to +194°F	-40°F to +194°F
Available	N/A	N/A	N/A
Available	N/A	N/A	N/A
Available	N/A	N/A	N/A

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QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® T Linear Guide Systems



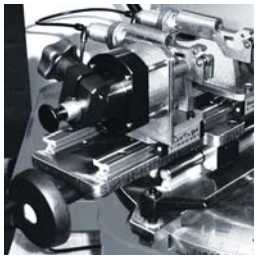
Technical Data

Sliding elements:	
Maintenance-free	
Material:	
iglide® J*	
Max. surface speed:	
49 fps (15 m/s)	
Temperature range:	
-40° F to +194°F	
(-40 °C to +90 °C)	

* Other materials upon request



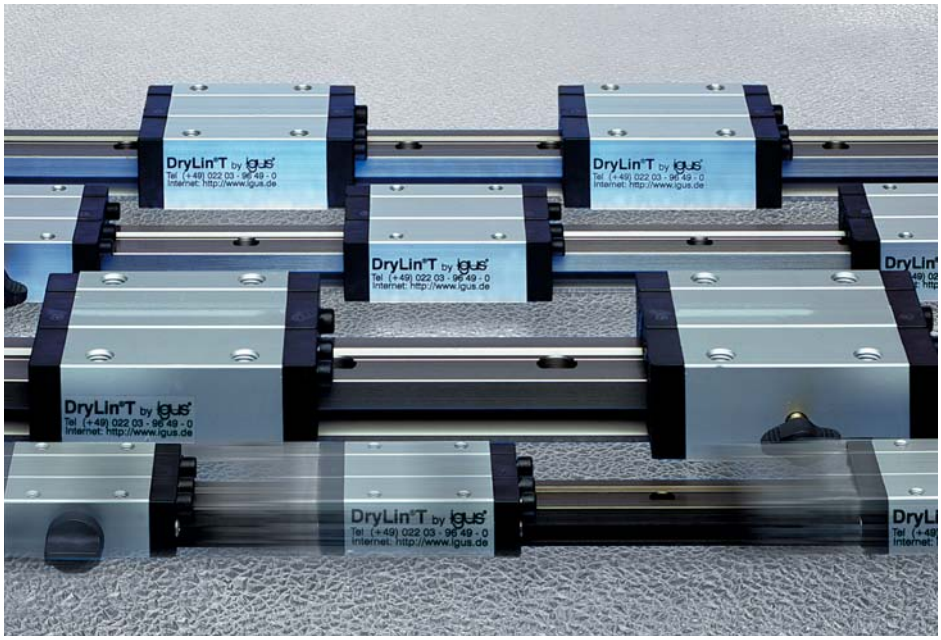
DryLin® linear guide system in a treatment machine

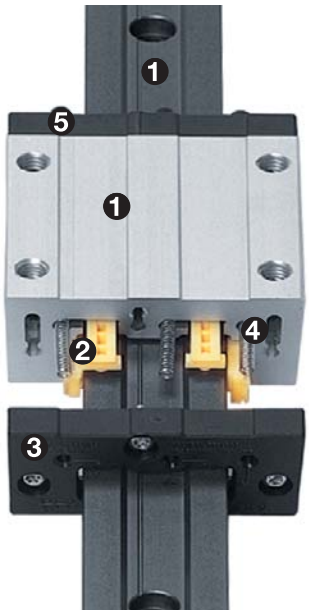


Valve machining produces an extreme environment



DryLin® T linear guide system in pneumatic doors of tool changers





1. Slide rails and base structure of the carriages manufactured from 6063-T6 Aluminum
   The rail is hard anodized, the aluminum carriage housing is clear anodized
2. 6 sliding iglide® J elements act as guide bearings, which are set in opposing pairs and act as three guide bearings altogether
3. Each of the three guide bearings can be adjusted manually or automatically
4. All steel parts are galvanized or stainless steel
5. The end plate is solid plastic with an optional aluminum - HD carriage

Technical Data

Guide Rails	
Material	Aluminum, extruded
Substance	6063-T6 (Al Mg Si 0.5)
Coating	Hard-anodized aluminum, .002" (50 µm)
Hardness	500 HV
Sliding Carriages	
Base Structure	Aluminum, extruded section (TK01/TKA/TKC1), Zinc (TK04)
Material	6063-T6 (Al Mg Si 0.5)
Coating	Clear Anodized
Sliding Elements	iglide® J, maintenance-free, plain bearing material
Bolts	Stainless steel
Springs	Stainless steel
Cover	Plastic
Max. Surface Speed	49 ft/s (15 m/s)
Temperature Range	-40°F to 194°F (-40°C to +90°C)

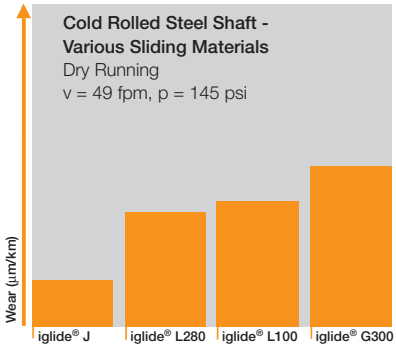
The iglide® J Material

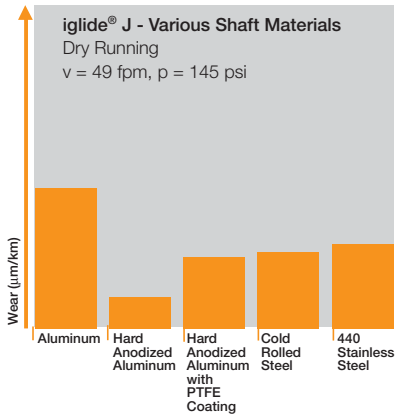
The iglide® J material gliding on hard anodized aluminum achieved the best results in our tests.

Comprehensive laboratory tests showed that iglide® J is by far the most suitable plastic material for linear motion applications. iglide® J is 3 times as abrasion resistant on anodized aluminum than hardened steel.

Special Characteristics of iglide® J

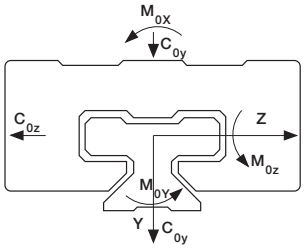
- very low abrasion values during dry operation
- excellent wear resistance
- maintenance-free dry operation
- vibration dampening
- very low moisture absorption





DryLin® T - Load / Speed Capacity

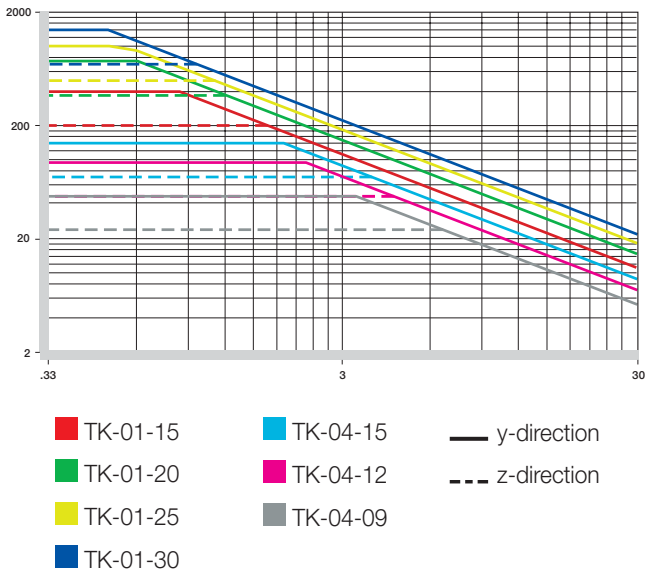
DryLin® T Linear Guide Systems can receive high static loads because of large surface areas. The maximum load in the y-direction is higher than in the z-direction, since the surfaces are doubled in the y-direction. With a low rate of inertia, high accelerations and short term extreme speeds up to 98 ft/s (30 m/s) are possible.



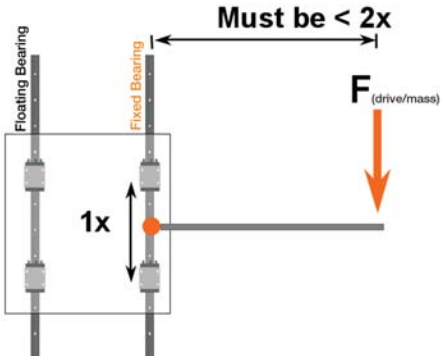
Designation of load directions

Type	C_{0Y} (lbs)	$C_{0(-Y)}$ (lbs)	C_{0Z} (lbs)	M_{0X} (ft lbs)	M_{0Y} (ft lbs)	M_{0Z} (ft lbs)
01-15	900	900	450	24	18	18
01-20	1665	1665	833	62	32	32
01-25	2250	2250	1125	92	48	48
01-30	3140	3140	1570	148	74	74
04-09	108	108	54	2.5	1.3	1.3
04-12	215	215	108	6.8	3.2	3.2
04-15	315	315	157	12.5	6.0	6.0

Table 20.1: DryLin® T permissible static load capacity



Eccentric Forces



2:1 Rule = permissible distances of the applied forces

The 2:1 Rule

When using linear plain bearings it is important to ensure that the acting forces follow the 2:1 Rule (see drawing). If either the load or the drive force (F) is greater than twice the bearing length (1X), then a binding or interrupted motion may occur.

If the location of the drive force or load cannot be changed, simply increase the distance between the bearings, or create a counterbalance to move the center-of-gravity back within the 2 to 1 ratio.

Online Lifetime Calculation www.igus.com

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Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® T Linear Guide Systems - Fixed and Floating Systems

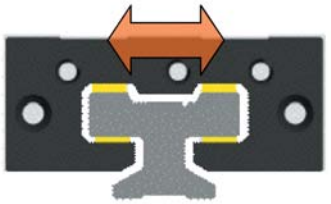
DryLin® T - Floating Systems

Maximum float = .04" (1 mm)



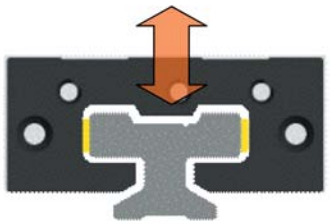
Standard Version

Part-No. Standard
TW-01-15
TW-01-20
TW-01-25
TW-01-30



Horizontal Float "LLZ"

Part-No. Floating Horizontal
TW-01-15HF
TW-01-20HF
TW-01-25HF
TW-01-30HF



Vertical Float "LLY"

Part No. Floating Vertical
TW-01-15VF
TW-01-20VF
TW-01-25VF
TW-01-30VF

DryLin® T - Fixed and Floating Bearing Mounting Instructions

When using systems with 2 parallel rails, one side must be designated as the "fixed" rail, and the opposite side the "floating" rail.

Why use floating bearings?

- promotes smooth gliding performance and maximizes bearing life
- prevents binding caused by parallelism and angle errors
- decreases necessary drive force and wear by minimizing friction-forces
- Enhances the precision of the system over the bearings' lifetime.
- Reduce assembly time and cost

Fixed Bearings

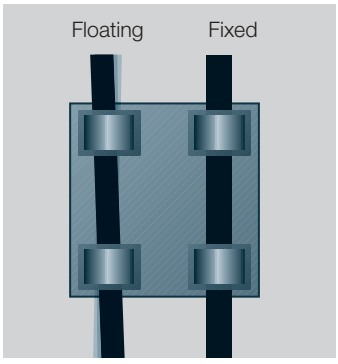
The "fixed" bearing rail should be positioned closest to the drive force. This rail will determine the precision of the system; no system should contain more than two "fixed" bearings.

Floating/Self-Aligning Bearings

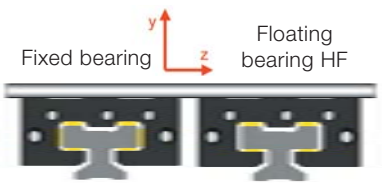
The "floating" rail should be the rail located furthest from the drive force. It is to act only as a guide, and will compensate for any misalignments or angle errors in the system ensuring proper functionality.

Mounting Surfaces

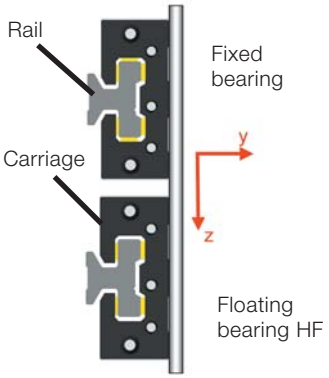
The mounting surfaces for rails and bearings should have a very flat surface (e.g milled surface) in order to enhance performance. Variations in these surfaces may be compensated for by using floating bearings. See the chart below for the maximum allowable float for each DryLin® system.



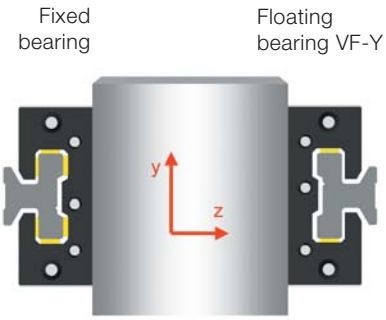
Automatic compensation of parallelism errors



Installation variation horizontal with floating bearing in the Z-direction



Installation variation lateral with floating bearing in the Z-direction



Horizontal mounting version with floating bearing in the Y-direction and lateral mounting carriage

Cleanroom Suitability and ESD Compability of DryLin®

Linear Guide Systems by igus® GmbH

All DryLin® guide systems are clearly qualified for clean room applications. The differentiation between the various clean room classes is only dependent on load and speed of the application. The combination of iglide® J and hard anodized aluminum is classified as level 1 in the ESD compatibility according to SEMI E78-0998 (Highest rank).

Fraunhofer IPA TESTED® DEVICE igus Energieführungsketten/ Lineargleitführung Report No. IG 0308-295

The following DryLin® guide systems by igus® were examined: N40, W10, T25 and T30.
See below for detailed results.

Linear guide system DryLin® TK-10-30-01:
"For the linear guide system DryLin® TK-10-30-01 by igus®, it is possible, on the calculations of the likelihood of violation of threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm, and 5 µm with motion speed of v = 0.1 m/s, to clearly derive suitability for clean rooms classified as ISO Class 3 according to DIN EN ISO 14644-1."

Linear guide system DryLin® NK-02-40-02:
"For the linear guide system DryLin® NK-02-40-02 by igus®, it is possible, on the calculations of the likelihood of violation of threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm, and 5 µm with motion speed of v =1 m/s, to clearly derive suitability for clean rooms classified as ISO Class 6 according to DIN EN ISO 14644-1."

The measurement results of the ESD compatibility according to SEMI E78-0998 show that the linear guide system DryLin® NK-02-40-02 can be classified as "level 1" (Highest rank). See Fraunhofer IPA Report No.: IG 0308-295 73.

Linear guide system DryLin® TK-01-25-02:
"For the linear guide system DryLin® TK-01-25-02 by igus®, it is possible, on the calculations of the likelihood of violation of threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm, and 5 µm with motion speed of v =1 m/s, to clearly derive suitability for clean rooms classified as ISO Class 5 according to DIN EN ISO 14644-1."
The measurement results of the ESD compatibility according to SEMI E78-0998 show that the linear guide system DryLin® TK-01-25-02 can be classified as "level 1" (Highest rank).

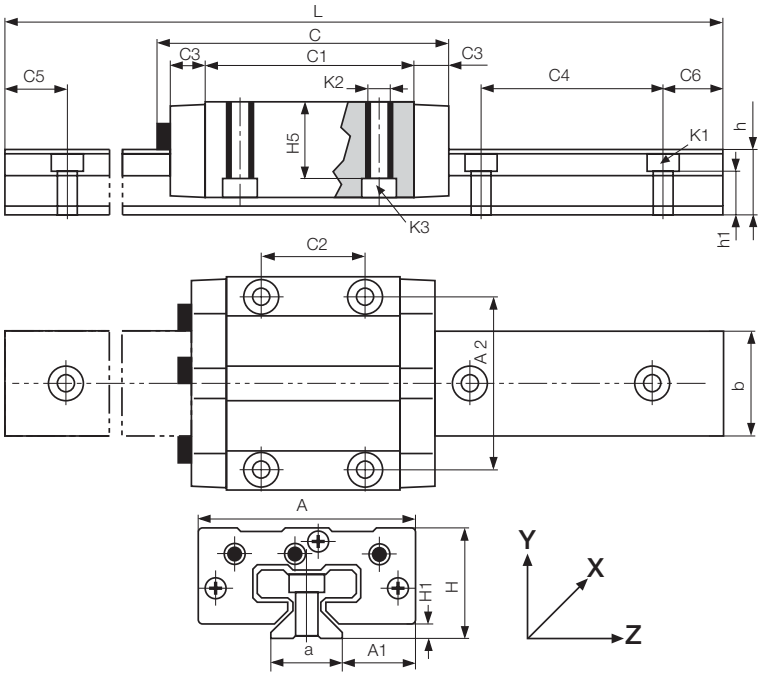
Linear guide system DryLin® WK-10-40-15-01:
"For the linear guide system DryLin® WK-10-40-15-01 by igus®, it is possible, on the calculations of the likelihood of violation of threshold values of the detection sizes 0.2 µm, 0.3 µm, 0.5 µm, and 5 µm with motion speed of v =1 m/s, to clearly derive suitability for clean rooms classified as ISO Class 6 according to DIN EN ISO 14644-1."
The measurement results of the ESD compatibility according to SEMI E78-0998 show that the linear guide system DryLin® WK-10-40-15-01 can be classified as "level 1" (Highest rank).
See Fraunhofer IPA Report No.: IG 0308-295 74.

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DryLin® T Linear Guide Systems - Adjustable Clearance





- Slide carriage with manual clearance adjustment
- Maintenance-free, dry operation
- Resistant to corrosion
- Hard anodized aluminium rails
- Standard bore pattern symmetrical C5 = C6

DryLin® T guide rails

Part No.	Weight	L max.	a -0.2	C4	C5 min.	C5 max.	C6 min.	C6 max.	h	h1	K1 for Screw DIN 912	b	Iy	Iz	Wby	Wbz
	(kg/m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				(mm)	(mm^4)	(mm^4)	(mm^3)	(mm^3)
TS-01-15	0.6	4000	15	60	20	49	20	49	15.5	10.0	M 4	22	6440	4290	585	488
TS-01-20	1.0	4000	20	60	20	49	20	49	19.0	12.3	M 5	31	22570	11520	1456	1067
TS-01-25	1.3	4000	23	60	20	49	20	49	21.5	13.8	M 6	34	34700	19300	2041	1608
TS-01-30	1.9	4000	28	80	20	59	20	59	26.0	15.8	M 8	40	70040	40780	3502	2832

Order example: TS-01-15, 2000 for a guide rail TS-01-15 of 2 m length
For rails without mounting holes, please use part number suffix “without mounting hole”

DryLin® T carriages

Part No.	Weight	H ±0.35	A	C	A1 ±0.35	A2	C1	C2	C3	H1 ±0.35	H5	K2 Thread	Torque Max.	K3 for Screw DIN 912
	(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(Nm)	
TW-01-15	0.11	24	47	74	16.0	38	50	30	9	4.0	16.0	M 5	1.5	M 4
TW-01-20	0.19	30	63	87	21.5	53	61	40	10	5.0	19.8	M 6	2.5	M 5
TW-01-25	0.29	36	70	96	23.5	57	68	45	11	5.0	24.8	M 8	6.0	M 6
TW-01-30	0.50	42	90	109	31.0	72	79	52	12	6.5	27.0	M 10	15.0	M 8

Order examples: TW-01-20 for a guide carriage
TW-01-20, LLy for a guide carriage with floating bearing in y-direction
TW-01-20, LLz for a guide carriage with floating bearing in z-direction

Structure – part no.

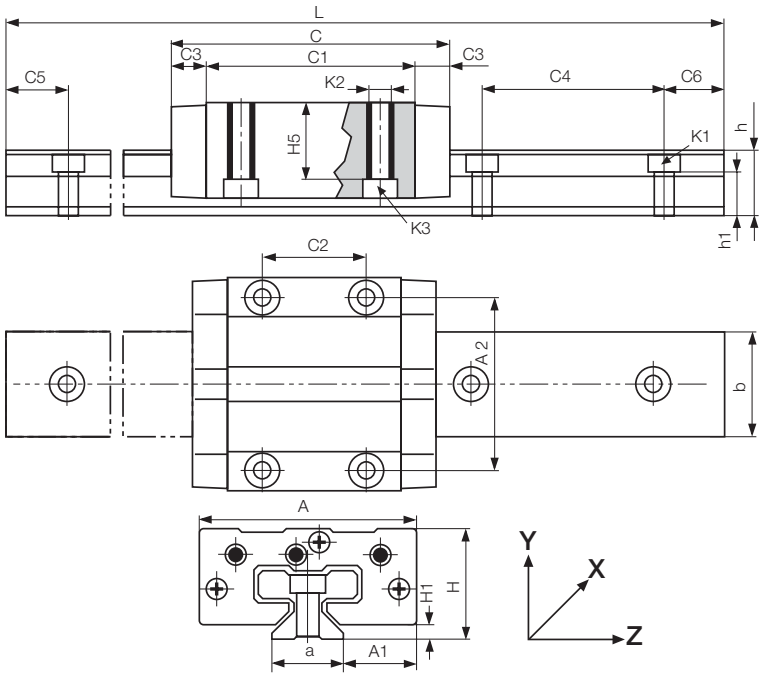
TK	-01	-15	-2	-500

-500 Length of rail (mm)
-2 Number of carriages
-15 Size
-01 Type
TK Complete set

This order example (TK-01-15-2-500) corresponds to a complete DryLin® system of size 15 with 2 carriages and 500 mm rail length. Order TK-01-15-2-500-LLY for a complete system with floating bearing in y-direction.

DryLin® T Linear Guide Systems - Automatic





- Self-adjusting carriage (automatic clearance adjustment)
- Maintenance-free, dry operation
- Resistant to corrosion
- Hard anodized aluminium rails
- Standard bore pattern symmetrical C5 = C6

DryLin® T guide rails

Part No.	Weight	L max.	a -0.2	C4	C5 min.	C5 max.	C6 min.	C6 max.	h	h1	K1 for Screw DIN 912	b	Iy	Iz	Wby	Wbz
	(kg/m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				(mm)	(mm^4)	(mm^4)	(mm^3)	(mm^3)
TS-01-15	0.6	3960	15	60	20	49.5	20	49.5	15.5	10.0	M 4	22	6440	4290	585	488
TS-01-20	1.0	3960	20	60	20	49.5	20	49.5	19.0	12.3	M 5	31	22570	11520	1456	1067
TS-01-25	1.3	3960	23	60	20	49.5	20	49.5	21.5	13.8	M 6	34	34700	19300	2041	1608
TS-01-30	1.9	3960	28	80	20	59.5	20	59.5	26.0	15.8	M 8	40	70040	40780	3502	2832

Order example: TS-01-15, 2000 for a guide rail TS-01-15 of 2 m length
For rails without mounting holes, please use part number suffix “without mounting hole”

DryLin® T carriages with automatic clearance adjustment

Part No.	Weight	H ±0.35	A	C	A1 ±0.35	A2	C1	C2	C3	H1 ±0.35	H5	K2-Thread	Torque max.	K3 for Screw DIN 912
	(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(Nm)	
TWA-01-15	0.11	24	47	68	16.0	38	50	30	9	4.0	16.0	M 5	1.11	M 4
TWA-01-20	0.19	30	63	81	21.5	53	61	40	10	5.0	19.8	M 6	1.84	M 5
TWA-01-25	0.29	36	70	90	23.5	57	68	45	11	5.0	24.8	M 8	4.43	M 6
TWA-01-30	0.50	42	90	103	31.0	72	79	52	12	6.5	27.0	M 10	11.06	M 8

Order examples: TWA-01-20 for a guide carriage
TWA-01-20, LLy for a guide carriage with floating bearing in y-direction
TWA-01-20, LLz for a guide carriage with floating bearing in z-direction



DryLin® T used in packaging machines

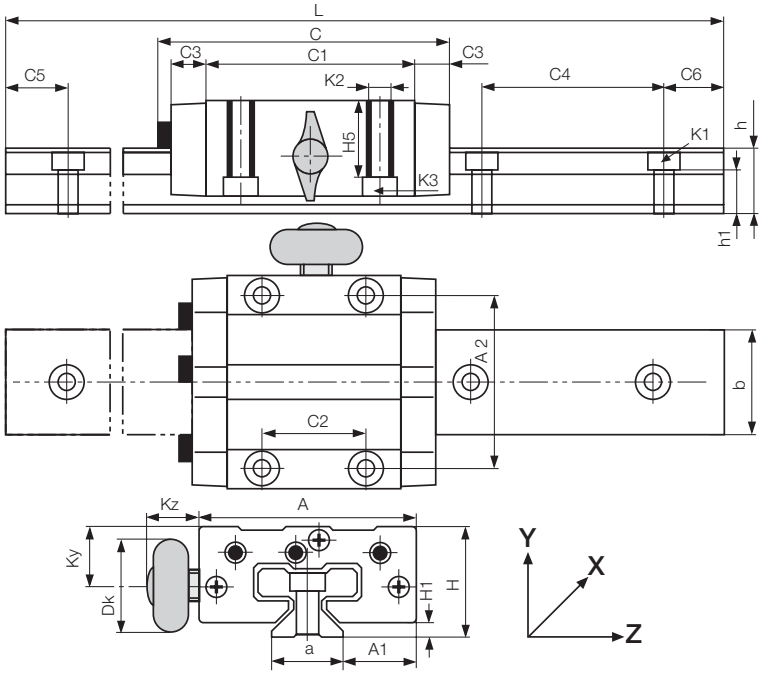
PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

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DryLin® T Linear Guide Systems - Manual Clamping





- With manual clamp for simple locking functions. Plastic may creep over time resulting in decreased clamping forces (up to 70%). Please call igus® for other alternatives for demanding applications
- Slide carriage with manual adjustable clearance
- Maintenance-free, dry operation
- Resistant to corrosion
- Hard anodized aluminium rails
- Standard bore pattern symmetrical C5 = C6

DryLin® T guide rails

Part No.	Weight	L max.	a -0.2	C4	C5 min.	C5 max.	C6 min.	C6 max.	h	h1	K1 for Screw DIN 912	b	Iy	Iz	Wby	Wbz
	(kg/m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				(mm)	(mm⁴)	(mm⁴)	(mm³)	(mm³)
TS-01-15	0.6	3960	15	60	20	49,5	20	49.5	15.5	10.0	M 4	22	6440	4290	585	488
TS-01-20	1.0	3960	20	60	20	49.5	20	49.5	19.0	12.3	M 5	31	22570	11520	1456	1067
TS-01-25	1.3	3960	23	60	20	49.5	20	49.5	21.5	13.8	M 6	34	34700	19300	2041	1608
TS-01-30	1.9	3960	28	80	20	59.5	20	59.5	26.0	15.8	M 8	40	70040	40780	3502	2832

Order example: TS-01-15, 2000 for a guide rail TS-01-15 of 2m length

DryLin® T carriages

Part No.	Weight	H ±0.35	A	C	A1 ±0.35	A2	C1	C2	C3	H1 ±0.35	H5	K2 Thread	Torque Max.	K3 for Screw
	(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(Nm)	DIN 912
TW-HKA-01-15	0.11	24	47	74	16.0	38	50	30	9	4.0	16.0	M 5	1.5	M 4
TW-HKA-01-20	0.19	30	63	87	21.5	53	61	40	10	5.0	19.8	M 6	2.5	M 5
TW-HKA-01-25	0.29	36	70	96	23.5	57	68	45	11	5.0	24.8	M 8	6.0	M 6
TW-HKA-01-30	0.50	42	90	109	31.0	72	79	52	12	6.5	27.0	M 10	15.0	M 8

DryLin® T - Carriages with manual clamping

Part No.	Size	Kz	Ky	Dk	Thread of the Clamp
TW-HKA-01-15	15	19.0	11.5	20.0	M6
TW-HKA-01-20	20	18.0	15.0	28.0	M8
TW-HKA-01-25	25	17.0	19.0	28.0	M8
TW-HKA-01-30	30	20.0	21.5	28.0	M8

Order examples: TW-01-20 HKA for a guide carriage with manual clamping; TW-01-20 HKA, LLy for a guide carriage with manual clamping and floating bearing in y-direction

This order example (TK-01-15-2-500 HKA) corresponds to a DryLin® T system of size 15 with 2 carriages, 500 mm rail length and manual clamping.
Order TKA-01-15-2-500 HKA-LLY for a complete system with manual clamping and floating bearing in y-direction

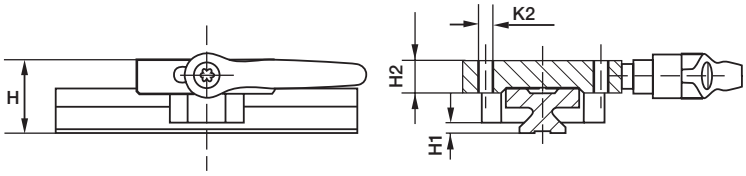
Structure – part no.

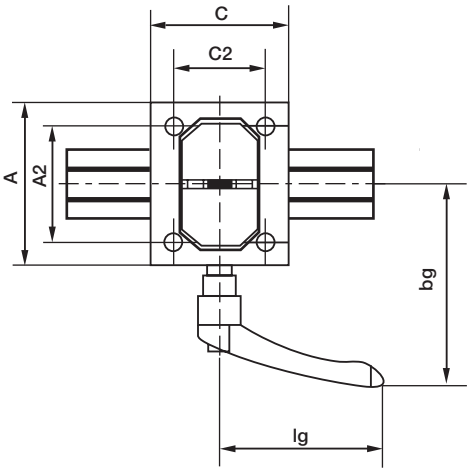
TK	-01	-15	-2	-500	HKA

- HKA: Manual clamping
- -500: Length of rail (mm)
- -2: Number of carriages
- -15: Size
- -01: Type
- TK: Complete set

DryLin® T Linear Guide Systems
Manual Clamp







DryLin® T hand clamp for the DryLin® T linear plain bearing type series

- Clamping of high loads, holding strength 112 lbf per clamp
- Brass clamp elements
- Location bores as TW-01-25
- Removable handle

DryLin® T guide rail for TWBM

Part No.	Weight	L max.	a –0.2	C4	C5 min.	C5 max.	C6 min.	C6 max.	h	h1	K1 for Screw	b	Iy	Iz	Wby	Wbz
	[kg/m]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]			DIN 912	[mm]	[mm⁴]	[mm⁴]	[mm³]	[mm³]
TS-01-25	1.3	4,000	23	60	20	49	20	49	21.5	13.8	M 6	34	34700	19300	2041	1608

Bestellbeispiel: TS-01-25, 2000 for a guide rail TS-01-25 of 2 m length
For rails without mounting holes, please use part number suffix “without mounting hole”

DryLin® T carriages with manual clamping

Part No.	A	A2	H	H1	H2	K2	C	C2	lg	bg
	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]
TWBM-01-25	80	57	36	5	16	M8	68	45	80	99



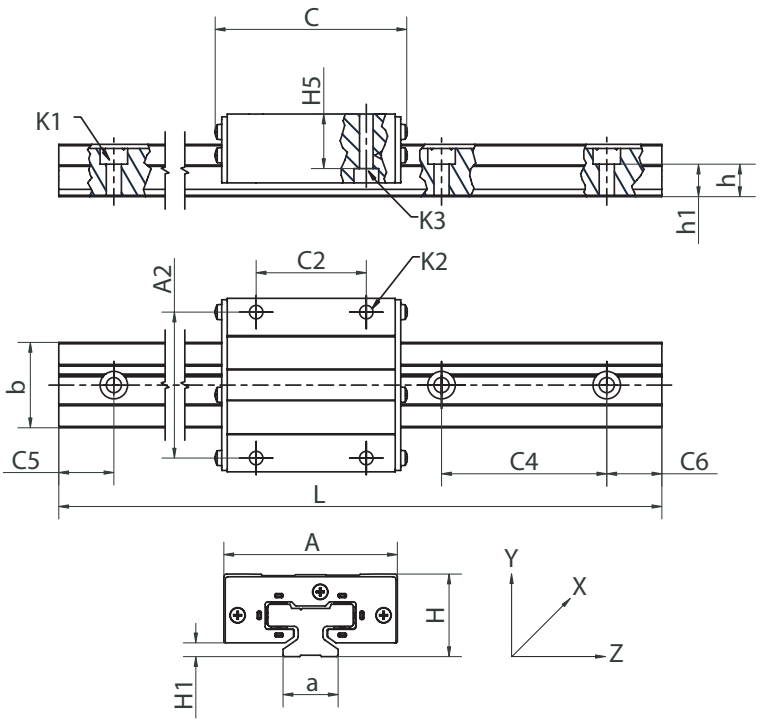
DryLin® TWBM manual clamping, mounted with two DryLin® T carriages

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® T Linear Guide Systems
Heavy Duty





- Linear guide carriage for extreme conditions (dirt, glue resins, chippings, mud, etc.)
- iglide® J polymer sliding pads are mechanically fixed by metal end plates
- Dimensions equivalent to the TW-01 design and standard recirculating ball bearings.

DryLin® T guide rails

Part No.	Weight	L Max.	a -0.2	C4	C5 Min.	C5 Max.	C6 Min.	C6 Max.	h	h1	K1 for Screw	b	Iy	Iz	Wby	Wbz
	(kg/m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			DIN 912	(mm)	(mm^4)	(mm^4)	(mm^3)	(mm^3)
TS-01-20	1.0	4000	20	60	20	49	20	49	19.0	12.3	M 5	31	22570	11520	1456	1067
TS-01-25	1.3	4000	23	60	20	49	20	49	21.5	13.8	M 6	34	34700	19300	2041	1608
TS-01-30	1.9	4000	28	80	20	59	20	59	26.0	15.8	M 8	40	70040	40780	3502	2832

Order example: TS-01-20, 2000 for a guide rail TS-01-20 of 2 m length
For rails without mounting holes, please use part number suffix “without mounting hole”

DryLin® T heavy duty carriages

Part No.	Weight	H ± 0.35	H5	A	C	A2	C2	H1 ± 0.35	K2	K3
	(kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
TW-02-20	0.19	30	19.8	63	70	53	40	5.0	M6	M5
TW-02-25	0.29	36	24.8	70	77	57	45	5.0	M8	M6
TW-02-30	0.50	42	27.0	90	92	72	52	6.5	M10	M8

Floating bearing on request

DryLin® TK-02 complete system

Structure – part no.

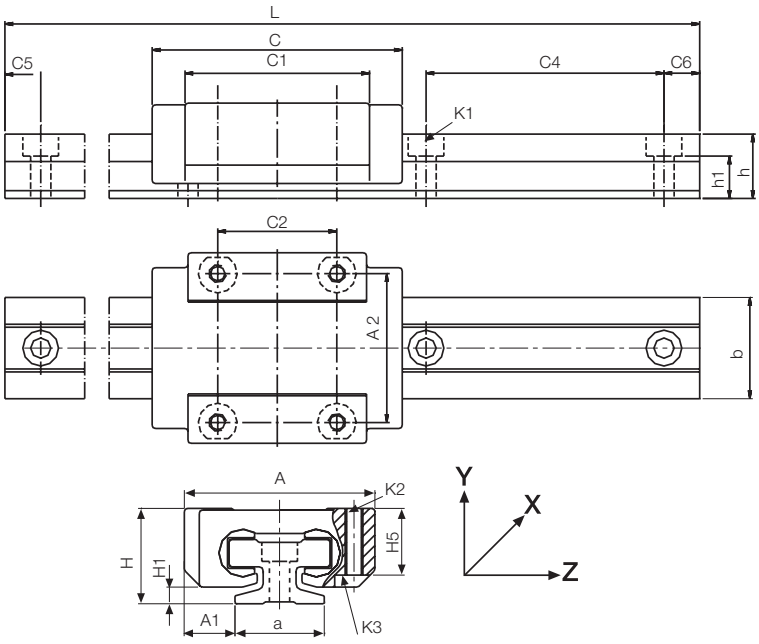
TK	-02	-20	-2	-500

Length of rail (mm)
Number of carriages
Size
Type
Complete set

This order example (TW-02-20-2-500) corresponds to a complete DryLin® T Heavy Duty system of size 20 with 2 carriages 500 mm rail length.
Order TW-02-20-2-500-LLY for a complete system with floating bearing in y-direction.

DryLin® T Linear Guide Systems - Miniature





- Maintenance-free, dry operation
- 3 sizes
- Cast zinc chromated carriage
- iglide® J polymer sliding pads
- Hard anodized aluminium rails
- Small mounting height and width
- Resistant to corrosion
- Standard bore pattern symmetrical C5 = C6

DryLin® T miniature rails

Part No.	Weight	L max.	a -0.2	C4	C5 min.	C5 max.	C6 min.	C6 max.	h	h1	K1 for Screw	b	Iy	Iz	Wby	Wbz
	(kg/m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			DIN 912	(mm)	(mm^4)	(mm^4)	(mm^3)	(mm^3)
TS-04-09	0.11	2000	9	20	5	14.5	5	14.5	6.3	4.6	M 2	9.6	252	169	52	49
TS-04-12	0.19	2000	12	25	5	19.5	5	19.5	8.6	5.9	M 3	13	856	574	132	120
TS-04-15	0.33	3000	15	40	10	29.5	10	29.5	10.8	7.0	M 3	17	2420	1410	285	239

DryLin® T miniature carriages

Part No.	Weight	H ±0.2	A ±0.2	C ±0.3	A1 ±0.35	A2	C1	C2	H1 ±0.35	H5	K2 Thread	Torque Max.	K3 for Screw
	(g)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(Nm)	DIN 912
TW-04-09	17	10	20	29	5.5	15	18	13	1.7	7.2	M 2	25	(M 2)
TW-04-12	34	13	27	34	7.5	20	22	15	2.2	9.5	M 3	50	M2 (M 3)
TW-04-15	61	16	32	42	8.5	25	31	20	2.8	11	M 3	50	M2 (M 3)

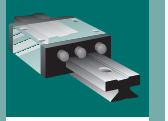
Available from stock

Structure – part no.

TK	-04	-15	-2	-500

- -500: Length of rail (mm)
- -2: Number of carriages
- -15: Size
- -04: Type
- TK: Complete set

This order example (TK-04-15-2-500) corresponds to a complete DryLin® T miniature system of size 15 with 2 carriages 500 mm rail length. Order TK-04-15-2-500-LLY for a complete system with floating bearing in y-direction.



DryLin® T
Linear Guide System

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® T Linear Guide Systems - Adjusting and Installation

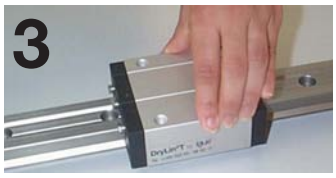
Adjusting the clearance: DryLin® T

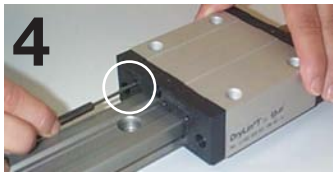
DryLin® T is delivered ready for installation. Clearance of the carriage is adjusted at the factory. The preadjustment is determined by the acting forces on each individual system. If you have special requirements, please indicate in your order whether particularly limited or extended bearing clearance is required. If necessary, clearance of the DryLin® T linear guide system can be readjusted. This should always take place when there is no load on the carriage.









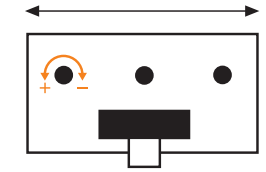


1 After removing the protective cover, loosen the locknuts – Width across flats:
- SW 5 for TW-01-15 and TW-01-20
- SW 7 for TW-01-25 and TW-01-30

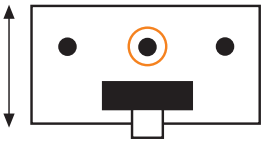
2 Adjust the bearing clearance for the 3 guide points with an Allen key – Allen key size:
- 1.5 mm for TW-01-15 and TW-01-20
- 2.0 mm for TW-01-25 and TW-01-30

3 Check the clearance of the carriage after adjusting the 3 levels. If it is sufficient, tighten the locknuts and put on the cover.

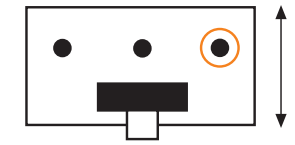
4 There is a danger that excessive reduction of the clearances can seize the sliding pads and that the clearance cannot be reset simply by loosening the adjustment screws. The sliding pads are then released by pressing the reset button on the opposite side. Press hard against the readjusting spring. You must have already loosened the respective adjustment screws. Use the correct size pin for this purpose:
- 2.5 mm for TW-01-20 and TW-01-15
- 3.0 mm for TW-01-25 and TW-01-30



lateral guide:
– less clearance
+ more clearance



vertical guide left



vertical guide right



Adjusting the clearance: DryLin® T Automatic

The DryLin® T Automatic series offers you an automatic adjustment of the clearance. A readjustment can take place automatically in steps of 0.1 mm. Springs tighten the regulating wedge immediately as soon as the clearance is bigger than 0.1 mm and the system is unloaded.







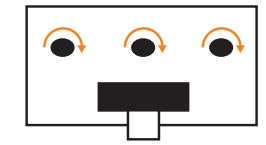


1 The system will be delivered with 3 keys which are already fitted. They are necessary for mounting the carriage onto the rail. In case these keys are removed they need to be replugged into the openings and turned clockwise 90°.

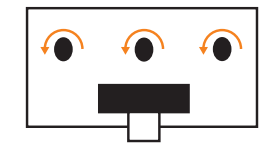
2 When the carriage is on the rail, remove the keys by turning them anticlockwise 90° and pull out. The clearance will then be adjusted automatically.

3 Check the clearance of the carriage. Fine adjusting can be done at this point.

4 You can remove the carriage at any time. In order to do so, simply plug the keys back into the carriage (see step 1).



locked



unlocked

DryLin® T Linear Guide Systems
System Design

Example of DryLin® T Calculation

For the exact calculation of the Linear Guide System it is essential to find out whether the position of the forces is within the allowable limits, and if the gliding element where the highest forces occur is not overloaded. The calculation of the necessary driving force and the maximum speed allowed is important. Each mounting version requires a different formula for calculation. Factors concerning shocks and acceleration forces are not included in the calculation, therefore the maximum load and allowable load must be monitored.

Variables in the Calculation:

Fa	:	Drive Force (lbs)
Fs	:	Applied Mass Force (lbs)
Fy, Fz	:	Bearing Load (lbs)
		in y or z direction (mm)
sx, sy, sz	:	Distance of the mass force in y or z direction (mm)
ay, az	:	Distance of the drive force in y or z direction (mm)
wx	:	Distance between carriages on a rail (mm)
LX	:	Constant from table (mm)
Zm	:	Constant from table (mm)
Y0	:	Constant from table (mm)
b	:	Distance between guide rails (mm)
μ	:	Coefficient of Friction,
		μ = 0 for static Loads
		μ = 0.2 for dynamic loads
ZW	:	number of carriages per rail

Coefficients:

	1 Rail 1 Carriage	1 Rail 2 Carriages	2 Rails 3-4 Carriages
K_1	(ay+Y0)/Lx	(ay+Y0)/Wx	(ay+Y0)/Wx
K_2	(sy+Y0)/Lx	(sy+Y0)/Wx	(sy+Y0)/Wx
K_3	az/Lx	az/Wx	az/Wx
K_4	sx/Lx	sx/Wx	sx/Wx
K_5	sz/Lx	sz/Wx	sz/Wx
K_6	(sy+Y0)/Zm	(sy+Y0)/Zm	(sy+Y0)/b
K_7	sz/Zm	sz/Zm	(sz/b)-0.5

The Constant Values:

Part #	LX (mm)	ZM (mm)	Y0 (mm)
TW-01-15	29	16	11.5
TW-01-20	35	23	15.0
TW-01-25	41	25	19.0
TW-01-30	49	29	21.5

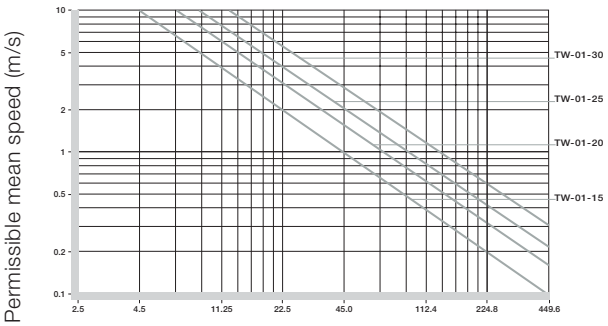


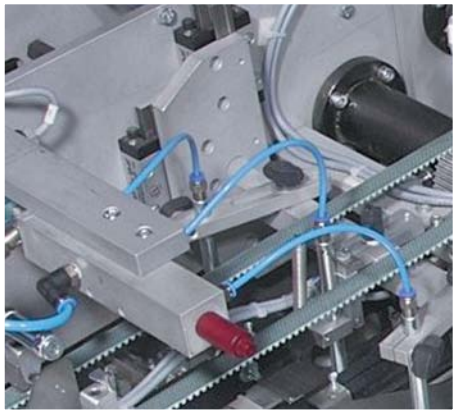
Diagram for determining the maximum permissible speed for the calculated bearing load

Part No.	Fymax, Fzmax lbs	(N)
TW-01-15	450	2000
TW-01-20	830	3700
TW-01-25	1125	5000
TW-01-30	1575	7000

Maximum permissible load

Online Lifetime Calculation www.igus.com





DryLin® T linear guide systems are used in these enveloping machines to guide a suction opener for envelopes . The guide system must have low clearance, be maintenance-free and not require any lubrication.

DryLin® T Linear Guide Systems - Mounting Version - Horizontal

Recommended Procedure:

1st Step

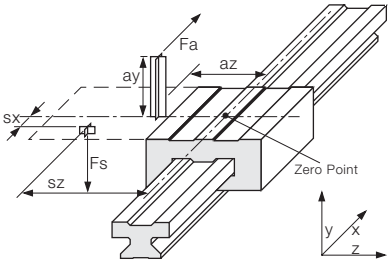
Select the mounting version:

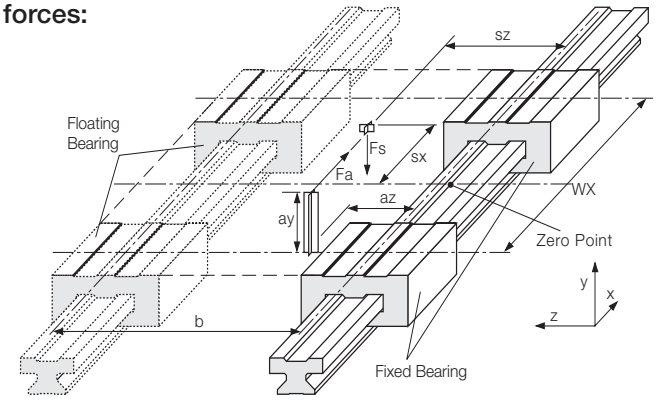
- **horizontal**
  - 1 rail and 1 carriage
  - 1 rail and 2 carriages
  - 2 rails and 4 carriages

2nd Step

Check to see whether the maximum distances of the applied forces are within the permissible values (see Maximum permissible distances.)

Maximum permissible distances between acting forces:





Variation: 1 Rail, 1 Carriage

sy + sz	<	2 Lx - Y0
ay + az	<	2 Lx - Y0
sy	<	5 Zm
sz	<	5 Zm

Variation: 1 Rail, 2 Carriages
Variation: 2 Rails, 4 Carriages

sy + sz	<	2 wx - Y0
ay + az	<	2 wx - Y0

3rd Step:

Calculate the necessary drive force

3.1 Center of gravity in **x** and **z direction inside** the carriage(s)

$$Fa_1 = \frac{\mu}{1-2\mu\ K_3} \cdot Fs$$

3.2 Center of gravity in **z direction outside** of the carriage(s)

$$Fa_2 = \frac{2\mu\ K_7}{1-2\mu\ K_3} \cdot Fs$$

3.3 Center of gravity in **x direction outside** of the carriage(s)

$$Fa_3 = \frac{2\mu\ K_4}{1-2\mu\ K_3-2\mu\ K_1} \cdot Fs$$

If the position of the center of gravity is not specified: $Fa = MAX\ (Fa_1, Fa_2, Fa_3)$

4th Step:

Calculate the maximum bearing load

4.1 Maximum bearing load in the **y direction**

$$Fy_{max} = \frac{2\,Fs}{Zw}\left(\frac{2\,K_4}{Zw} + 0{,}5\right) \cdot \left(K_7 + 0{,}5\right) + \frac{2\,Fa\ K_1}{Zw^2}$$

4.2 Maximum bearing load in the **z direction**

$$Fz_{max} = \frac{4\,Fa\ K_3}{Zw^2}$$

5th Step:

Check calculated load for both y and z with table on page 19.9 - Maximum permissible load for Fymax & Fzmax. This table illustrates the maximum permissible load on a single gliding element from the DryLin® T carriage. Evaluating the maximum load on a single gliding element establishes a safety factor for the linear system.

➤Page 23.15

6th Step:

Determine the maximum permissible speed for the calculated load from Step No. 4

➤Page 23.15

DryLin® T Linear Guide Systems - Mounting Version - Lateral

Recommended Procedure:

1st Step

Select the mounting version:

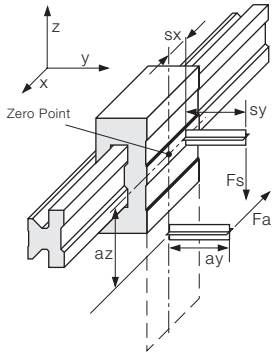
- **side-mounting**
  - 1 rail and 1 carriage
  - 1 rail and 2 carriages
  - 2 rails and 4 carriages

Online Lifetime Calculation
www.igus.com

2nd Step

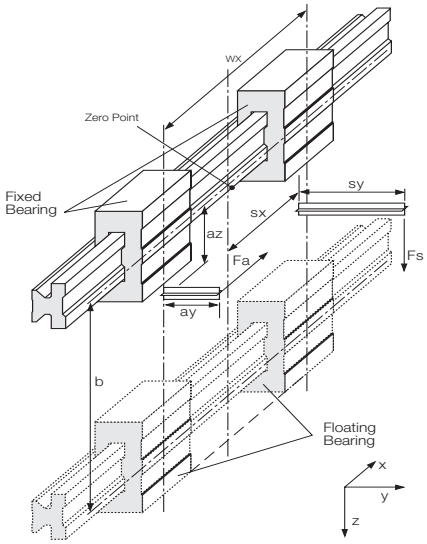
Check to see whether the maximum distances of the applied forces are within the permissible values (see Maximum permissible distances.)

Maximum permissible distances between acting forces:



Variation: 1 Rail, 1 Carriage

sy + sz	<	2 Lx - Y0
ay + az	<	2 Lx - Y0
sy	<	5 Zm
sz	<	5 Zm



Variation: 1 Rail, 2 Carriages
Variation: 2 Rails, 4 Carriages

sy + sz	<	2 wx - Y0
ay + az	<	2 wx - Y0

3rd Step:

Calculate the necessary drive force

First, two calculations must be made:

$$Fa_1 = \frac{(1+2K_6)\mu}{1-2\mu K_1} \cdot Fs \qquad Fa_2 = \frac{(2K_4+2K_6)\mu}{1-2\mu K_1-2\mu K_3} \cdot Fs$$

The drive force Fa corresponds to the calculated maximum value $Fa = MAX(Fa_1, Fa_2)$

4th Step:

Calculate the maximum bearing load

4.1 Maximum bearing load in the **y direction**

$$Fy_{max} = \frac{Fs\,K_6}{Zw} + \frac{2Fa\,K_1}{Zw^2}$$

4.2 Maximum bearing load in the **z direction**

$$Fz_{max} = \frac{2Fs}{Zw}\left(\frac{2K_4}{Zw} + 0.5\right) + \frac{4Fa\,K_3}{Zw^2}$$

5th Step:

Check calculated load for both y and z with table on page 19.9 - Maximum permissible load for Fymax & Fzmax. This table illustrates the maximum permissible load on a single gliding element from the DryLin® T carriage. Evaluating the maximum load on a single gliding element establishes a safety factor for the linear system.

➤Page 23.15

6th Step:

Determine the maximum permissible speed for the calculated load from Step No. 4

➤Page 23.15

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DryLin® T Linear Guide Systems - Mounting Version - Vertical

Recommended Procedure:

1st Step

Select the mounting version:

- **vertical**

1 rail and 1 carriage

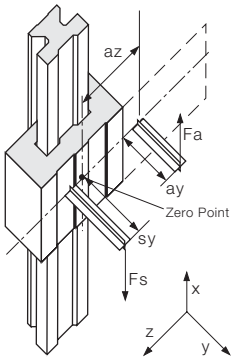
1 rail and 2 carriages

2 rails and 4 carriages

2nd Step

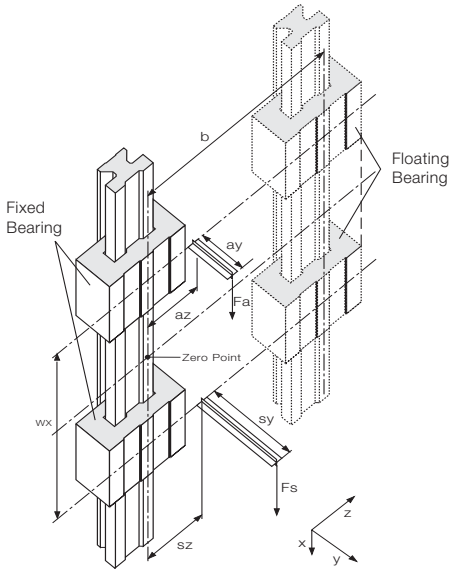
Check to see whether the maximum distances of the applied forces are within the permissible values (see Maximum permissible distances.)

Maximum permissible distances between acting forces:



Variation: 1 Rail, 1 Carriage

sy + sz	<	2 Lx - Y0
ay + az	<	2 Lx - Y0
sy	<	5 Zm
sz	<	5 Zm



Variation: 1 Rail, 2 Carriages
Variation: 2 Rails, 4 Carriages

sy + sz	<	2 wx - Y0
ay + az	<	2 wx - Y0

3rd Step:

Calculate the necessary drive force

First, four calculations must be made:

$$Fa_1 = \frac{2\mu\,(sz+sy+Y_0)-wx}{2\mu\,(az+ay+Y_0)-wx} \cdot Fs \qquad Fa_3 = \frac{2\mu\,(sz-sy-Y_0)-wx}{2\mu\,(az-ay-Y_0)-wx} \cdot Fs$$

$$Fa_2 = \frac{2\mu\,(-sz+sy+Y_0)-wx}{2\mu\,(-az+ay+Y_0)-wx} \cdot Fs \qquad Fa_4 = \frac{2\mu\,(sz+sy+Y_0)+wx}{2\mu\,(az+ay+Y_0)+wx} \cdot Fs$$

The drive force Fa corresponds to the calculated maximum value $Fa = MAX\,(Fa_1, Fa_2, Fa_3, Fa_4)$

4th Step:

Calculate the maximum bearing load

4.1 Maximum bearing load in the **y direction**

$$Fy_{max} = \left| Fa\,\frac{ay+Y_0}{wx} - Fs\,K_2 \right| \cdot \frac{2}{Zw^2}$$

4.2 Maximum bearing load in the **z direction**

$$Fz_{max} = \left| Fa\,\frac{az}{wx} - Fs\,K_5 \right| \cdot \frac{4}{Zw^2}$$

5th Step:

Check calculated load for both y and z with table on page 19.9 - Maximum permissible load for Fymax & Fzmax. This table illustrates the maximum permissible load on a single gliding element from the DryLin® T carriage. Evaluating the maximum load on a single gliding element establishes a safety factor for the linear system.

➤Page 23.15

6th Step:

Determine the maximum permissible speed for the calculated load from Step No. 4

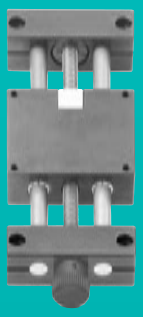
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DryLin® R Linear Bearings & Accessories - Fast and Quiet

- Corrosion-resistant
- Wear-resistant
- Resistant to contaminants
- Low coefficient of friction
- Extremely quiet operation
- Lightweight

Also available as driven systems



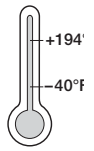
HTS
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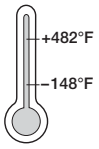
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DryLin® R Linear Plain Bearing

DryLin® R linear plain bearings, made from solid polymers, are dimensionally equivalent to standard ball bearings. They are made entirely of wear resistant iglide® materials and offer technical advantages as well as a clear price advantage.



iglide® J
iglide® J200



iglide® T500

Technical Data

Liners:	Maintenance-free
Materials:	
●	iglide® J
●	iglide® J200
●	iglide® T500
Max. speed:	up to 15 m/s
Shaft materials:	
●	Anodized aluminum
●	Case-hardened steel
●	Stainless steel
●	Cold-rolled steel
●	Hard chrome-plated
●	carbon fibre



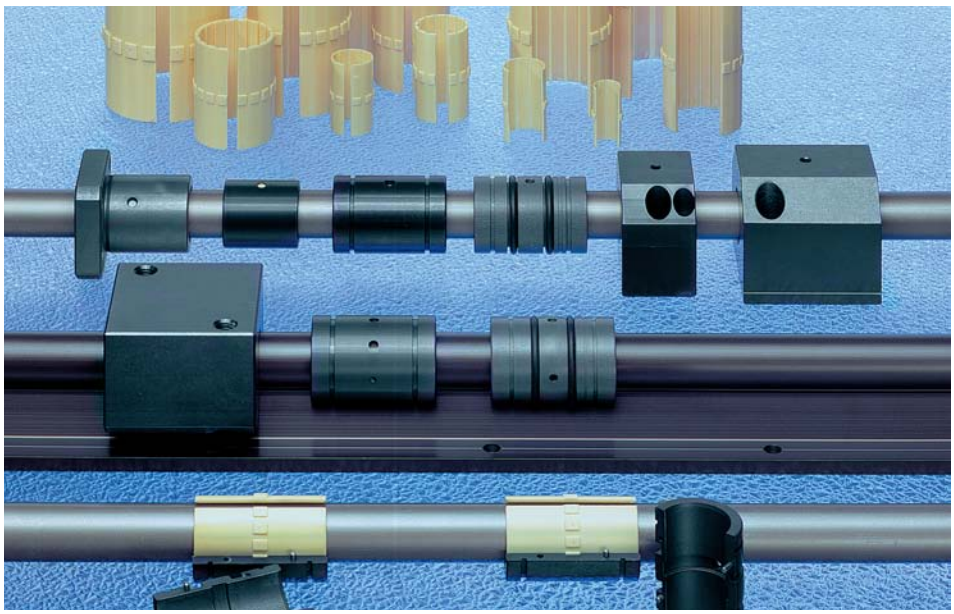
DryLin® R can be used in extreme dirt conditions



DryLin® R can be used in high temperature environments



DryLin® R can be used for applications with aggressive chemicals



DryLin® R: Linear Plain Bearings

DryLin® R is dimensionally interchangeable with linear ball bearings, but offers cleaner, more cost-effective results even in harsh environments. The standard RJUI/RJUM bearing consists of an iglide® J liner slip-fit into an aluminum housing. The unique grooved design of the J liner minimizes clearance, is suitable for use in extremely wet and dirty environments, and is easily replaceable. Dimensionally interchangeable all-polymer parts RJI/RJM are also available for cost-savings, weight reduction, and other technical advantages. Both parts are secured with retaining clips, as are ball bearings. DryLin R guides may also be used with the high temperature, chemically resistant TUI/TUM liners for extreme applications.

Advantages of DryLin® R

- Self-lubricating
- Maintenance-free
- Can be used in extreme dirt conditions
- Can be used underwater or in washdown conditions
- Replaceable liner
- Dimensionally interchangeable with standard recirculating ball bearings
- Vibration dampening
- No seals or wipers needed
- Compensation for shaft misalignment (03 series)

Also available as driven systems



HTS Page 25.11

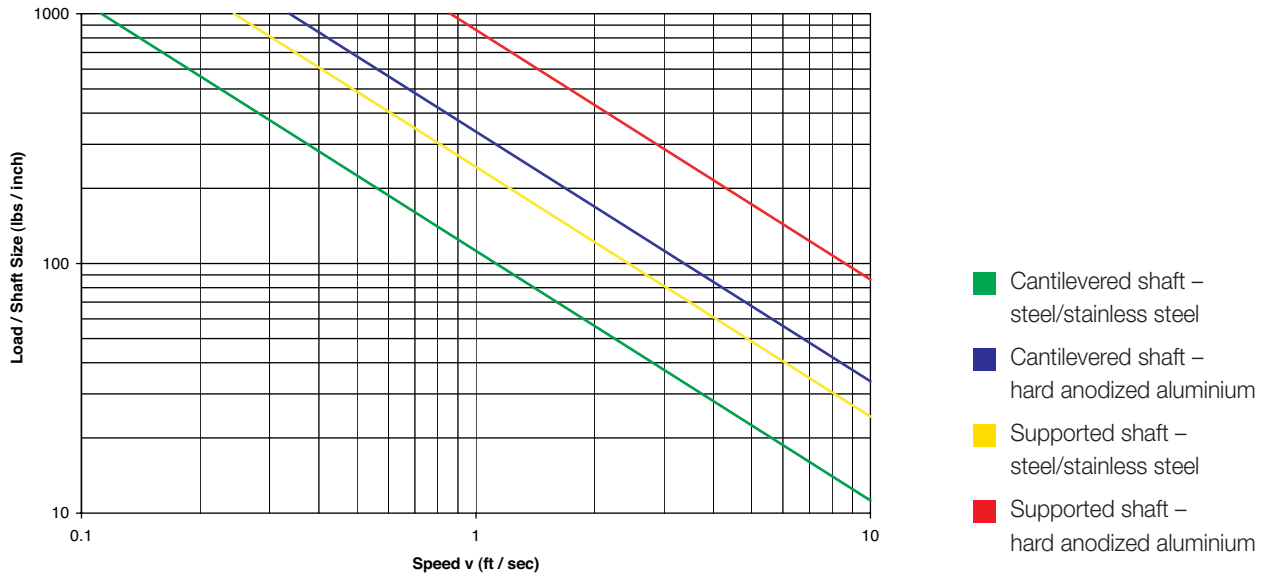


❶ Self aligning adapter aluminum anodized
❷ Stainless steel adapter (optional)
❸ Standard flanged housing anodized aluminum
❹ Standard iglide® J liner
❺ High temperature iglide® T500 liner
❻ Pillow blocks - dimensionally interchangeable with ball bearings

DryLin® R Linear Plain Bearing Material Table

General Properties	Unit	iglide® J	iglide® T500	iglide® J200 (Available in some sizes)	Testing Method
Density	g/cm³	1.49	1.44	1.72	
Color		Yellow	Black	Dark grey	
Max. moisture absorption at 23 °C/50% r. F.	% weight	0.3	0.1	0.2	DIN 53495
Max. moisture absorption at 73°F	% weight	1.3	0.5	0.7	
Coefficient of sliding friction. dynamic against steel	µ	0.06 - 0.18	0.09 - 0.27	0.11- 0.17	
P x V value. max. (dry)	psi x fpm	9,700	37,700	8,600	
Mechanical Properties					
Modulus of elasticity	PSI	398,090	1,174,806	406,105	DIN 53457
Tensile strength at 68°F	PSI	10587	24656	8412	DIN 53452
Compressive strength	PSI	8702	14504	n.d.	
Permissible static surface pressure (68°F)	PSI	5076	21755	3335	
Shore D hardness		74	85	70	DIN 53505
Physical and Thermal Properties					
Max. long term application temperature	°F	194	482	194	
Max. short term application temperature	°F	248	599	248	
Min. application temperature	°F	-58	-148	-58	
Thermal conductivity	W/m x K	0.25	0.6	0.24	ASTM C 177
Coefficient of thermal expansion (at 68°C)	$K^{-1} \times 10^{-5}$	10	5	8	DIN 53752
Electrical Properties					
Specific volume resistance	Ωcm	> 10^{13}	< 10^{5}	> 10^{8}	DIN IEC 93
Surface resistance	Ω	> 10^{12}	< 10^{3}	> 10^{8}	DIN 53482

Table 24.1: Material Data



Graph 24.1: DryLin® R – Comparison of the permissible dynamic loads at equivalent diameters

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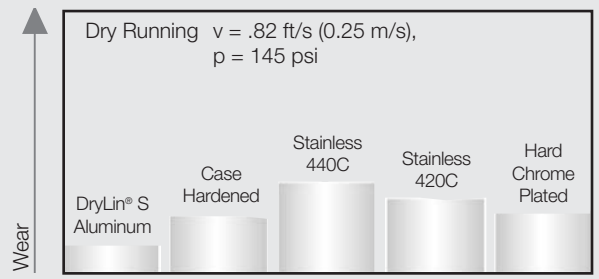
Shaft Materials and DryLin® R Linear Plain Bearings



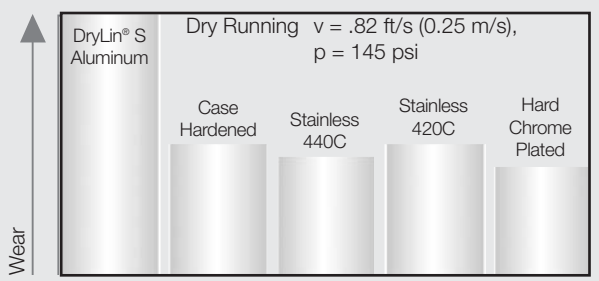
DryLin® S: Hard-Anodized Shafting

Although DryLin® R works well with various steel shafts, DryLin® S hard-anodized aluminum shafting was specifically developed as the optimal sliding surface for DryLin® R when using our standard iglide® J/J200 liner material. This combination achieves the lowest frictional properties, and reduces wear by up to 50% versus steel shafting — not to mention being very lightweight and extremely cost-effective.

iglide® J – various shaft materials



iglide® T500 – various shaft materials



The iglide® J material

iglide® J material gliding on different surface materials achieved the best results in our tests. Comprehensive laboratory tests showed that iglide® J is by far the most suitable polymer material for linear motion applications. Special Characteristics of iglide® J:

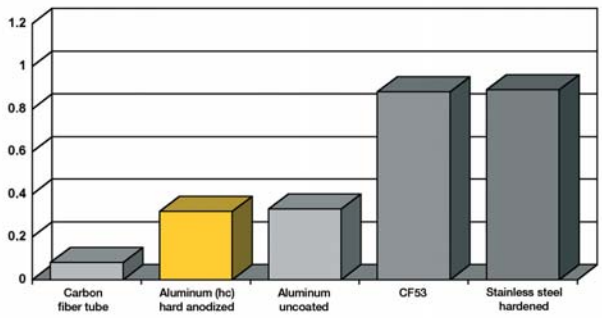
- Lowest coefficient of friction on all materials
- Very low abrasion values during dry operation
- Excellent wear resistance
- Maintenance free dry operation
- Vibration dampening
- Very low moisture absorption
- Recommended for all shaft materials

The iglide® T500 material

iglide® T500 is defined by its combination of high temperature resistance with compressive strength, along with high resistance to chemicals. iglide® T500 achieves the best wear results with stainless steel and chrome plated steel shafts. Special characteristics:

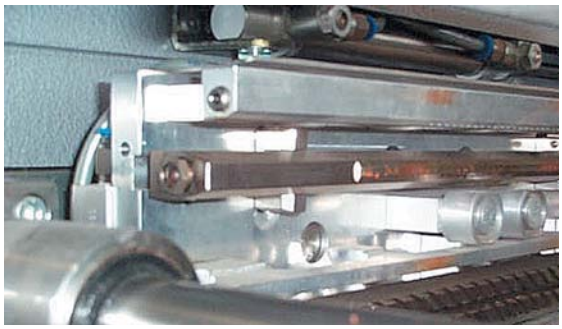
- Temperature resistant from -148°F to +482°F in continuous operation
- Universal resistance to chemicals
- High compressive strength
- Very low moisture absorption
- Great wear resistance through the entire temperature range

Shaft Material	Suitability
Hardened, ground steel shafts	+ + + +
Hardened, ground stainless steel shafts	+ + +
Hard-anodized or anodized aluminum shafts	+ + + + +
Free-cutting steel	+ +
Ceramic	+ + +
GFK and CFK Shafts	+
HR Carbon steel K	+
303 Stainless steel/304 stainless steel	+ +



Recommended Shafting for DryLin® R

Size in inches	Class "L" Tolerance	Size in mm	h9
1/4"	.2495"/.2490"	6	6.000/5.988
3/8"	.3745"/.3740"	8	8.000/7.988
1/2"	.4995"/.4990"	10	10.000/9.988
5/8"	.6245"/.6240"	12	12.000/11.988
3/4"	.7495"/.7490"	16	16.000/15.988
1"	.9995"/.9990"	20	20.000/19.988
1 1/4"	1.2495"/1.2490"	25	25.000/24.988
1 1/2"	1.4994"/1.4989"	30	30.000/29.987
2"	1.9994"/1.9987"	40	40.000/39.987
		50	50.000/49.984



DryLin® high-temperature bearings made of iglide® T500 are used to support the sealing bar in this packaging machine. The TUM liners run without lubrication at temperatures of around 266°F, allowing a class leading output of 90 cycles/min.

Chemical Resistance

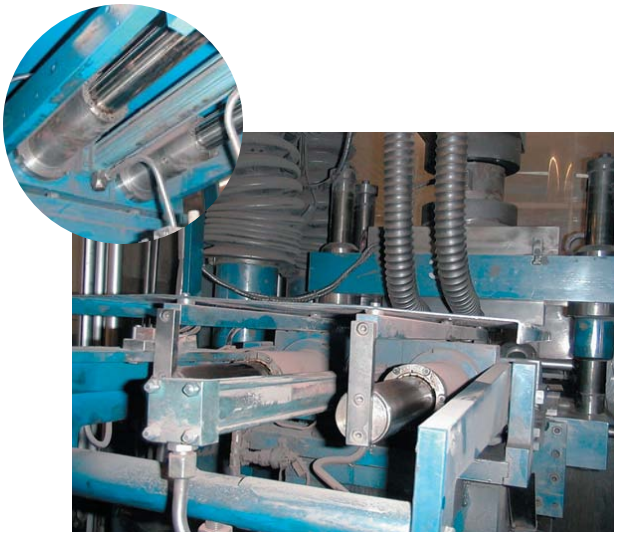
iglide® J is resistant to weak acids, diluted lyes and to fuels and all types of lubricants. Even the frequent chemical washdowns of machines in the food industry are not a problem for DryLin® linear plain bearings.
T500 liners were developed specifically for chemical resistance and high temperature applications. T500 liners run particularly well when combined with stainless steel shafts, which are also recommended for chemical resistance.

Medium	iglide® J Resistance	iglide® T500
Alcohol	Resistant	Resistant
Chlorinated hydrocarbons	Resistant	Resistant
Ester	Not Resistant	Resistant
Greases, oils	Resistant	Resistant
Ketones	Conditionally Resistant	Resistant
Fuels	Resistant	Resistant
Weak acids	Conditionally Resistant	Resistant
Strong acids	Not Resistant	Conditionally Resistant
Weak lyes	Resistant	Resistant
Strong lyes	Resistant	Resistant
Sea water	Resistant	Resistant

Table 17.3: Chemical resistance of iglide® J and iglide® T500

Corrosion Behavior

The low moisture absorption of iglide® J and T500 allows design in underwater areas. With the use of stainless steel shafts or anodized aluminum, a corrosion resistant guide results. Anodized aluminum is resistant to chemically neutral materials in the PH range 5 to 8. For special applications it is recommended to test coated aluminum sample parts to examine results prior to their use.



Stick-Slip Behavior

Stick-slip occurs when there is intermittent movement between two sliding partners. The stop and go movement is caused by frequent changes from static to dynamic friction.
The coefficients of static and sliding friction are close enough to each other for iglide® J that the danger of stick-slip behavior is very low.

	Coefficient of Static Friction	Coefficient of Dynamic Friction
J/Cold Rolled Steel	0.16	0.13

Coefficients of friction

Structure of the DryLin® R Part Numbers

The part numbers of the DryLin® R Linear bearings are designated according to the following system

R J U I - 3 1 - 16 - TW

Housing
R = closed
O = open
T = split
F = flange

Bearing Material
J = iglide® J Liner (standard)
T = iglide® T500 liner for high temperatures

Design Plain Bearing
U = standard Liner
Z = pressfit sleeve bearing (any iglide® material)

Measuring System
M = metric
I = Inches

Assembly Type
0 = standard liner in aluminum adapter
1 = standard liner in aluminum adpater in pillow block
2 = low clearance liner in aluminum adapter
3 = low clearance liner in aluminum adapterin pillow block

Bearing Type
0 = standard fixed bearing
1 = thin walled, short bearing
2 = self-aligning

Inner diameter, nominal

For Twin Length (leave blank for standard)

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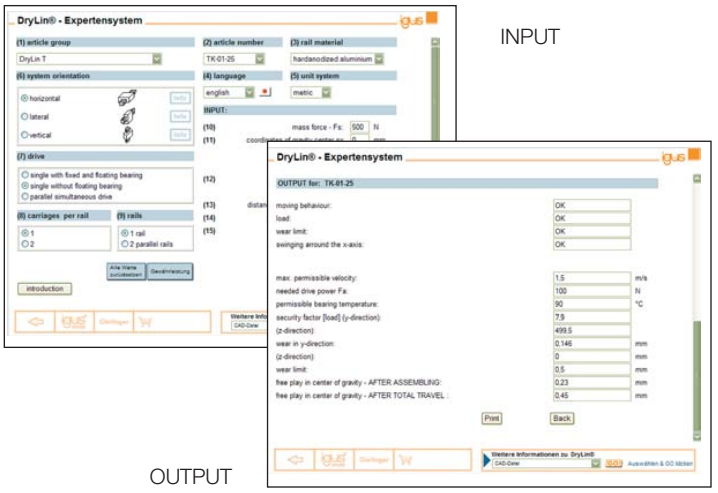
DryLin® R Linear Plain Bearing

The Expert System

The Online Expert System (www.igus.com) enables the user to quickly and confidently determine the suitability of one or all DryLin systems in a particular application, and is able to calculate the following:

- Bearing lifetime in miles or kilometers
- The necessary drive force
- The maximum permissible continuous speed
- Bearing wear and the theoretical clearance

The system is able to determine proper functionality, and provides warning signals in order for the user to optimize the design. Information with regards to drive force, center-of-gravity, and required lifetime are also given.



Dirt, Dust, Fibers

An important distinction among all the linear plain bearings is their compatibility with dirt. For most systems, the use of wiper or seals is recommended to prevent dirt accumulation. No other system has the design benefits for use in dust, lint, and coarse dirt as DryLin®

The patented design of the bearing surface using individual slide pads connected by thin film sections, provides performance benefits for dirty environments.

Dirt, even if it becomes wet on the shaft, is wiped away by the individual glide pads and is moved into the contact-free areas. The glide sections of the DryLin® bearings then slide on the shaft that has been cleared of all contaminants.



DryLin® R provides reliability in applications also under the action of dust and coarse dirt



DryLin® R linear bearings in a safety door



DryLin® R bearings in a retrieval robot with speeds up to 1574 fpm

Split Linear Bearings

Applications that operate on the edge of technical feasibility or in extremely harsh environments are characterized by the frequent replacement of the linear bearings. In many cases, service life can be multiplied many times by DryLin®. However, extreme applications, replacement of the bearings can be necessary even with DryLin®.

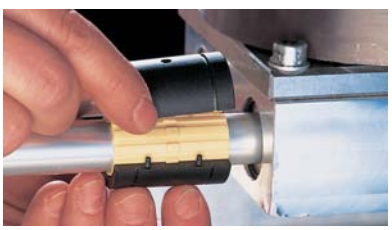
DryLin® linear bearings can contribute to considerable cost reductions in such cases, as only the bearings liner made of plastics has to be replaced. This often means a reduction of more than 90% in replacement part costs. The iglide® J liner can be replaced, while a ball-bearing cage cannot.

The new range of split adapters offers even greater cost savings. Shafts need no longer be removed from the housing. The two shells of the adapter can be opened very easily. The high-performance plastic bearing inside is split and can easily be pulled off the shaft. Clip a new bearing over the shaft, put the two adapter halves together, install - done!

With this product line of split DryLin® bearings, installation times can be reduced to a minimum.



The DryLin® liner can be pushed easily onto the shaft

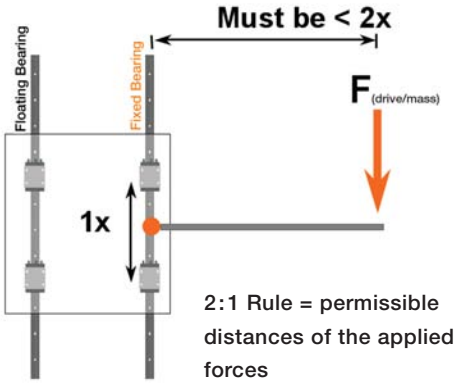


Then the adapter is fitted over the liner



Installation is simple and reduces downtime and maintenance costs

Eccentric Forces



2:1 Rule = permissible distances of the applied forces

The 2:1 Rule

When using linear plain bearings it is important to ensure that the acting forces follow the 2:1 Rule (see drawing). If either the load or the drive force (F) is greater than twice the bearing length (1X), then a binding or interrupted motion may occur.

If the location of the drive force or load cannot be changed, simply increase the distance between the bearings, or create a counterbalance to move the center-of-gravity back within the 2 to 1 ratio.

Online Lifetime Calculation www.igus.com

Fixed and Floating Bearing Mounting Instructions

When using systems with 2 parallel rails, one side must be designated as the "fixed" rail, and the opposite side as the "floating" rail.

Why use floating bearings?

- Promotes smooth gliding performance and maximizes bearing life
- Prevents binding caused by parallelism and angle errors
- Decreases necessary drive force and wear by minimizing friction-forces
- Enhances the precision of the system over the bearings' lifetime.
- Reduce assembly time and cost

Fixed Bearings

The "fixed" bearing rail should be positioned closest to the drive force. This rail will determine the precision of the system; no system should contain more than two "fixed" bearings.

Floating/Self-Aligning Bearings

The "floating" rail should be the rail located furthest from the drive force. It is to act only as a guide, and will compensate for any misalignments or angle errors in the system ensuring proper functionality.

Mounting Surfaces

The mounting surfaces for rails and bearings should have a very flat surface (e.g milled surface) in order to enhance performance. Variations in these surfaces may be compensated for by using floating bearings.

DryLin® R - Mounting Instructions

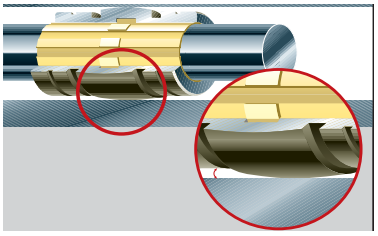
DryLin® R linear plain bearings in the 03 Design Series offer great advantages in applications with parallel shafts. By their geometry, they are able to compensate for alignment and parallelism errors and should be used on the shaft located furthest from the drive mechanism.

The design provides a spherical area on the outer diameter of the aluminum adapter for self-alignment. Reductions in load capacity are prevented, since the shaft always lies on the total projected surface.

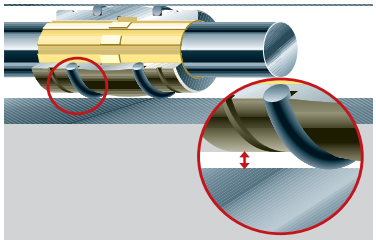
Thanks to the even load distribution over the entire bearing, edge loads are not possible with the self-aligning Drylin® R linear plain bearings. Even in unfavorable conditions, the load is supported by the entire projected surface

In order to compensate for parallelism errors between two shafts, the outer diameter is designed to be smaller than the housing bore diameter by 0.2 - 0.3 mm (depending on the size). With the use of mounted O-rings, these bearings have an elastic bearing seat. The overdimension allows for the maximum compensation of possible shaft misalignment.

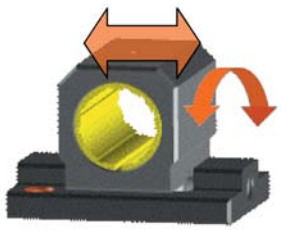
The DryLin® R self-aligning bearings are delivered hard-anodized. These surfaces guarantee the highest wear resistance if the aluminum bearing moves in the housing during compensation adjustments.



The spherical DryLin® adapters can compensate for alignment errors. A hard-anodization protects the aluminum adapter from wear.



With built in clearances and the use of O-rings, the self-aligning DryLin® R bearings of the 03 Design Series can compensate for parallelism errors.

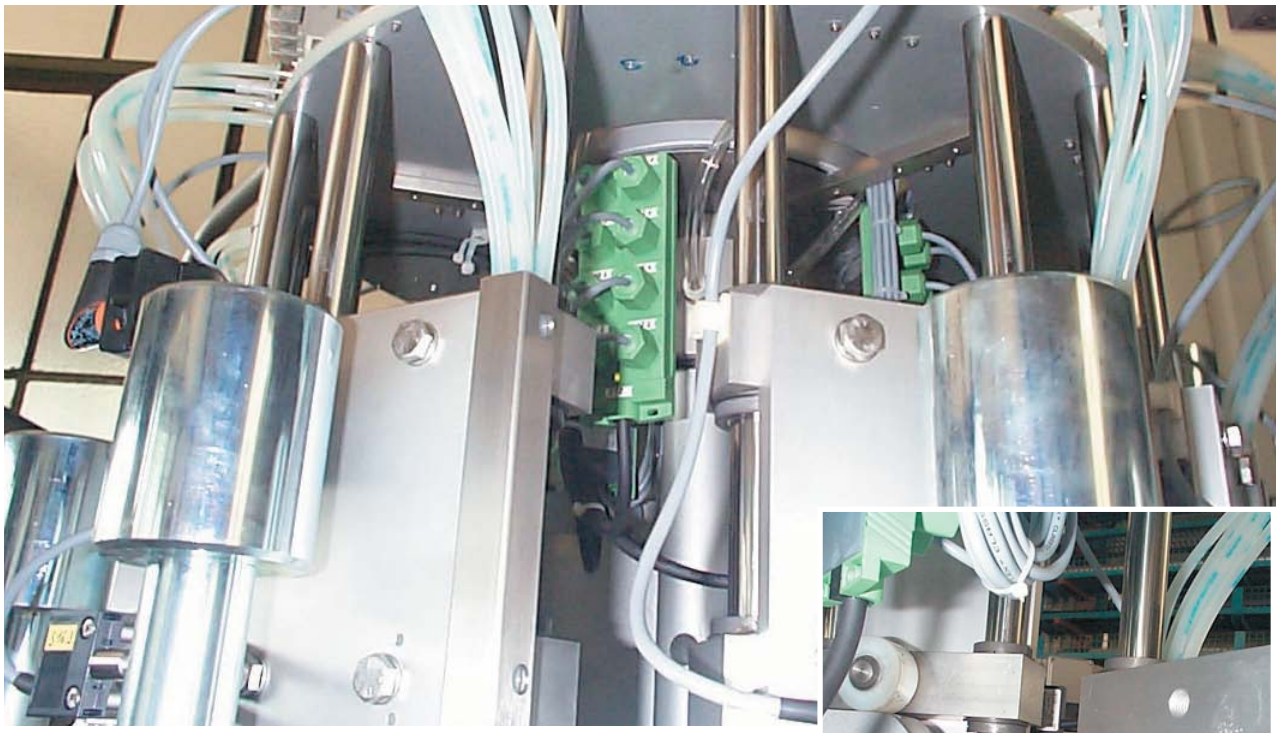


The self-aligning DryLin® R bearings of the 06 LL design series can compensate parallelism errors up to ± .12" (3mm).

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DryLin® R Linear Plain Bearing - Applications



This application, a rotary transfer machine, seals champagne bottles with corks, aluminum caps and wire braid. The fact that the DryLin® guide systems are lubricant free is important in the food sector, additional benefits include resistance to chemicals and cleaning.

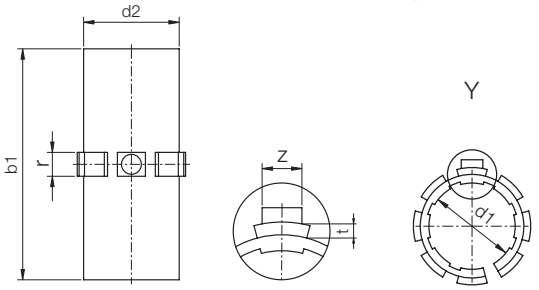


This application from the food industry transfers breads and pastries from one conveyor to the next. Lubrication is totally prohibited due to food contact. Another reason for using the DryLin® R linear plain bearings is the resistance to corrosive cleaning agents. Additional benefits include the reduced design space required by the iglide® J bearings and the excellent corrosion resistance.

DryLin® R - Liner, inch
JUI-01, Standard
JUI-20, Low Clearance
TUI-01, High Temp

Special Properties

- Very low coefficient of friction while running dry
- Very high wear resistance
- Maintenance-free
- Vibration dampening
- Very low moisture absorption
- High chemical resistance
- Suitable for rotating, oscillating and linear movements



Part No.	Nominal Size	Tolerance*	d2	b1	r -0.004 -0.008	t -0.004	z -0.020
Standard Clearance							
JUI-01-06	3/8	.0016 - .0024	0.4684	0.846	.1250	.0311	.0866
JUI-01-08	1/2	.0016 - .0024	0.5934	1.220	.1250	.0391	.1024
JUI-01-10	5/8	.0016 - .0024	0.7184	1.460	.1406	.0391	.1181
JUI-01-12	3/4	.0016 - .0024	0.8747	1.545	.1875	.0391	.1339
JUI-01-16	1	.0016 - .0024	1.1247	2.205	.1875	.0391	.1496
JUI-01-20	1 1/4	.0020 - .0032	1.4058	2.573	.1875	.0391	.1496
JUI-01-24	1 1/2	.0020 - .0032	1.6558	2.953	.2500	.0625	.1811
JUI-01-32	2	.0024 - .0040	2.1871	3.937	.2813	.0625	.2280
Low Clearance							
JUI-20-06	3/8	.0008 - .0012	0.4684	0.846	.1250	.0311	.0866
JUI-20-08	1/2	.0008 - .0012	0.5934	1.220	.1250	.0391	.1024
JUI-20-10	5/8	.0008 - .0012	0.7184	1.460	.1406	.0391	.1181
JUI-20-12	3/4	.0008 - .0012	0.8747	1.545	.1875	.0391	.1339
JUI-20-16	1	.0008 - .0012	1.1247	2.205	.1875	.0391	.1496
JUI-20-20	1 1/4	.0010 - .0016	1.4058	2.573	.1875	.0391	.1496
JUI-20-24	1 1/2	.0010 - .0016	1.6558	2.953	.2500	.0625	.1811
JUI-20-32	2	.0012 - .0020	2.1871	3.937	.2813	.0625	.2280
High Temperature							
TUI-01-08	1/2	.0016 - .0024	0.5934	1.220	.1250	.0391	.1024
TUI-01-12	3/4	.0016 - .0024	0.8747	1.545	.1875	.0391	.1339
TUI-01-16	1	.0016 - .0024	1.1247	2.205	.1875	.0391	.1496
TUI-01-20	1 1/4	.0020 - .0032	1.4058	2.573	.1875	.0391	.1496
TUI-01-24	1 1/2	.0020 - .0032	1.6558	2.953	.2500	.0625	.1811



JUI-01-XX

Material: iglide® J
Temp. range: -40°F to +194°F
Best Shaft Material: DryLin® AWI hard anodized aluminum, case hardened steel, 300 series stainless



JUI-20-XX

Material: iglide® J
Temp. range: -40°F to +194°F
Best Shaft Material: DryLin® AWI hard anodized aluminum, case hardened steel, 300 series stainless



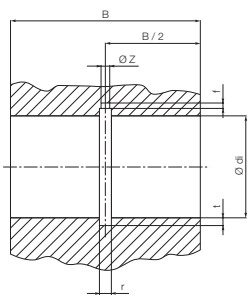
TUI-01-XX
***2-piece design**

Material: iglide® T500
Temp. range: -148°F to +482°F
Best Shaft Material: Hardened stainless and hard chrome plated steel

Housing Bore for Liner JUI-01/JUI-20/TUI-01

Dimensions (inch)

Part No.	Nominal Size	di Max.	di Min.	B h10	r +0.002	t +0.004	f +0.02	z +0.008
JUI-01-06	3/8	.4680	.4684	1.14	.1250	.031	.039	.102
JUI-01-08	1/2	.5940	.5934	1.26	.1250	.0391	.059	.122
JUI-01-10	5/8	.7190	.7184	1.42	.1406	.0391	.067	.142
JUI-01-12	3/4	.8755	.8747	1.77	.1875	.0391	.079	.142
JUI-01-16	1	1.1255	1.1247	2.28	.1875	.0391	.079	.161
JUI-01-20	1 1/4	1.4068	1.4058	2.68	.1875	.0391	.079	.161
JUI-01-24	1 1/2	1.6568	1.6558	3.15	.2500	.051	.098	.200
JUI-01-32	2	2.1881	2.1871	3.94	.2813	.051	.098	.240



JUI-01/JUI-20/TUI-01 Liners are used in:

- ➤ RJUI-01 Page 24.12
- ➤ RJUI-03 Page 24.13
- ➤ TJUI-01 Page 24.14
- ➤ TJUI-03 Page 24.15

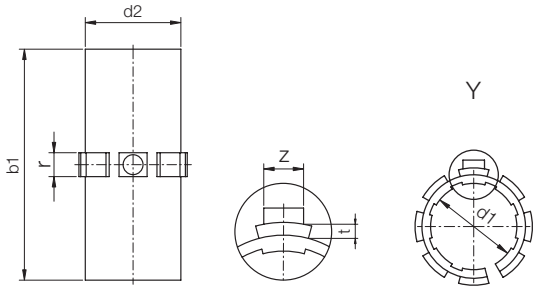
Online Lifetime Calculation www.igus.com

Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R - Open Liner, inch
JUIO-0, Standard
JUIO-20, Low Clearance

Special Properties

- Open design for supported shafts
- Very low coefficient of friction while running dry
- Very high wear resistance
- Maintenance-free
- Vibration dampening
- Very low moisture absorption
- High chemical resistance
- Suitable for rotating, oscillating and linear movements
- High temperature T500 liners available for up to 482°F



Standard Clearance

Part No.	Nominal Size	Tolerance	d2	b1	W	r -0.004 -0.008	t -0.004	z -0.020
JUIO-01-06	3/8	.0016 - .0024	0.4684	0.846	0.250	.1250	.0311	.0866
JUIO-01-08	1/2	.0016 - .0024	0.5934	1.220	0.394	.1250	.0391	.1024
JUIO-01-10	5/8	.0016 - .0024	0.7184	1.460	0.433	.1406	.0391	.1181
JUIO-01-12	3/4	.0016 - .0024	0.8747	1.575	0.492	.1875	.0391	.1339
JUIO-01-16	1	.0016 - .0024	1.1247	2.205	0.630	.1875	.0391	.1496
JUIO-01-20	1 1/4	.0020 - .0032	1.4058	2.573	0.709	.1875	.0391	.1496
JUIO-01-24	1 1/2	.0020 - .0032	1.6558	3.953	0.866	.2500	.0625	.1811
JUIO-01-32	2	.0024 - .0040	2.1871	4.937	1.181	.2813	.0625	.2280



Material: iglide® J
Temp. range: -40°F to +194°F
Best Shaft Material: DryLin® AWI hard anodized aluminum, case hardened steel, 300 series stainless

Low Clearance

JUIO-20-06	3/8	.0008 - .0012	0.4684	0.846	0.250	.1250	.0311	.0866
JUIO-20-08	1/2	.0008 - .0012	0.5934	1.220	0.394	.1250	.0391	.1024
JUIO-20-10	5/8	.0008 - .0012	0.7184	1.460	0.433	.1406	.0391	.1181
JUIO-20-12	3/4	.0008 - .0012	0.8747	1.575	0.492	.1875	.0391	.1339
JUIO-20-16	1	.0008 - .0012	1.1247	2.205	0.630	.1875	.0391	.1496
JUIO-20-20	1 1/4	.0010 - .0016	1.4058	2.573	0.709	.1875	.0391	.1496
JUIO-20-24	1 1/2	.0010 - .0016	1.6558	3.953	0.866	.2500	.0625	.1811
JUIO-20-32	2	.0012 - .0020	2.1871	4.937	1.181	.2813	.0625	.2280

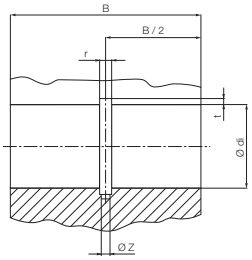


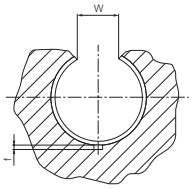
Material: iglide® J
Temp. range: -40°F to +194°F
Best Shaft Material: DryLin® AWI hard anodized aluminum, case hardened steel, 300 series stainless

* **according to igus® testing method** ➤ Page 24.67

Installation Drawings
Housing Bore, Dimensions [Inch]

Part No.	Shaft Size Ø	di [inch] Min.	di [inch] Max.	B [inch] .004	r [inch] +0.002	t [inch] +0.004	f [inch] +0.02	z [inch] +0.008	W [inch] +0.008
JUIO-01/20-08	1/2	.5940	.5934	1.26	.1250	.031	.059	.122	0.394
JUIO-01/20-10	5/8	.7190	.7184	1.42	.1406	.039	.067	.142	0.433
JUIO-01/20-12	3/4	.8755	.8747	1.77	.1875	.039	.079	.142	0.492
JUIO-01/20-16	1	1.1255	1.1247	2.28	.1875	.039	.079	.161	0.630
JUIO-01/20-20	1 1/4	1.4068	1.4058	2.68	.1875	.039	.079	.161	0.709
JUIO-01/20-24	1 1/2	1.6568	1.6558	3.15	.2500	.062	.089	.200	0.866
JUIO-01/20-32	2	2.1881	2.1871	3.94	.2813	.062	.098	.240	1.181





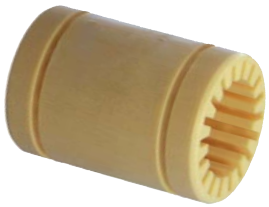
JUIO-01 Liners are used in:

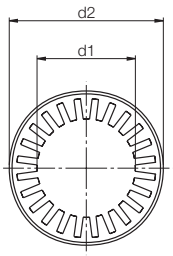
➤ OJUI-01, Page 24.16
➤ OJUI-03, Page 24.17

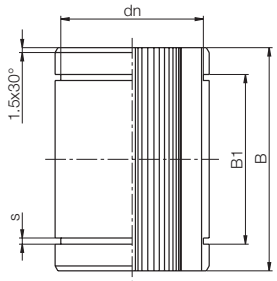
DryLin® R - Liner RJI-01, inch

Special Properties

- Plain bearing made from iglide® J
- Dimensionally interchangeable with linear ball bearings
- Secured by retaining clips (not included in delivery)
- Designed as a press-fit part
- Temperature range: -40°F to +194°F
- Best with DryLin® AWI shafting, case-hardened steel, 300 series stainless and others (call for assistance)







Inner Diameter, Load Capacity and Weight

Part No.	Nominal Size	Tolerance for d1	pmax Dynamic Load (lbs) p = 363 psi	pmax Static Load (lbs) p = 2538 psi	Weight (g)
RJI-01-08	1/2	.0013 - .0030	80	555	8.8
RJI-01-10	5/8	.0013 - .0030	141	992	17.4
RJI-01-12	3/4	.0016 - .0036	204	1428	22.2
RJI-01-16	1	.0016 - .0036	294	2062	42.5
RJI-01-20	1-1/4	.0020 - .0044	595	4163	81.1
RJI-01-24	1-1/2	.0020 - .0044	816	5710	127.1
RJI-01-32	2	.0024 - .0053	1452	10152	249.0

Other Dimensions (inch)

Part No.	d1	d2	B -.011	B1 .008	S .004	dn
RJI-01-08	1/2	.8750	1.2500	1.0120	.0520	.8200
RJI-01-10	5/8	1.1250	1.5000	1.0950	.0620	1.0600
RJI-01-12	3/4	1.2500	1.6200	1.2500	.0620	1.1770
RJI-01-16	1	1.5625	2.2500	1.8640	.0740	1.4710
RJI-01-20	1-1/4	2.0000	2.6250	1.9840	.0740	1.8890
RJI-01-24	1-1/2	2.3750	3.0000	2.3900	.0950	2.2410
RJI-01-32	2	3.0000	4.0000	3.1630	.1110	2.8390

* according to igus® testing method ➤ Page 24.67

Housing Bore Recommendations

Nominal ID Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

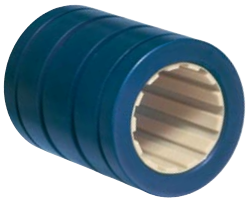
RJI is a press-fit part. It will be oversized prior to installation



online lifetime calculation www.igus.com

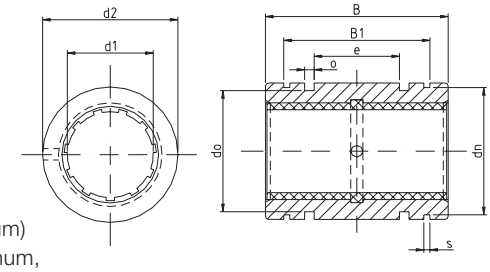
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R Straight Linear Plain Bearing - Inch



Special Properties

- Anodized aluminum adapter
- Dimensionally interchangeable with linear ball bearings
- Equipped with liner made of iglide® J
  Temperature range -40°F to +194°F
  JUI-01 (standard), JUI-20 (low clearance)
- T500 liner optional for chemicals/high temps (up to 482°F for steel housing, 356°F for aluminum)
- Suitable shafting for iglide® J: DryLin® AWI aluminum, case-hardened, 300 series stainless
  Best shafting for T500: hard-chrome and hard-stainless steel



RJUI-01, Standard Clearance

Dimensions (inch)

Part No.	Nominal Size	Tolerance**	d2 ISO h7	B ISO h10	B1 ISO H10	s	dn	e	o +.004	do
RJZI-01-04*	1/4	0.0016 - 0.0032	.5000	.7500	.518	.0410	.4670	.125	.0800	.3990
RJUI-01-06	3/8	0.0016 - 0.0032	.6250	.8700	.644	.0410	.5870	.243	.0610	.5660
RJUI-01-08	1/2	0.0016 - 0.0032	.8750	1.2500	.979	.0520	.8200	.281	.1250	.7120
RJUI-01-10	5/8	0.0016 - 0.0032	1.1250	1.5000	1.124	.0620	1.0600	.312	.1250	.9620
RJUI-01-12	3/4	0.0016 - 0.0032	1.2500	1.6200	1.186	.0620	1.1770	.312	.1250	1.0870
RJUI-01-16	1	0.0016 - 0.0032	1.5625	2.2500	1.773	.0740	1.4710	.500	.1250	1.3990
RJUI-01-20	1-1/4	0.0020 - 0.0041	2.0000	2.6200	2.023	.0740	1.8890	.625	.1250	1.8370
RJUI-01-24	1-1/2	0.0020 - 0.0041	2.3750	3.0000	2.440	.0950	2.2410	.750	.1620	2.1520
RJUI-01-32	2	0.0024 - 0.0051	3.0000	4.0000	3.222	.1110	2.8390	1.000	.1890	2.7750

RJUI-21, Low Clearance

Dimensions (inch)

Part No.	Nominal Size	Tolerance**	d2 ISO h7	B ISO h10	B1 ISO H10	s	dn	e	o +.004	do
RJUI-21-06	3/8	0.0008 - 0.0016	.6250	.8700	.644	.0410	.5870	.243	.0610	.5660
RJUI-21-08	1/2	0.0008 - 0.0016	.8750	1.2500	.979	.0520	.8200	.281	.1250	.7120
RJUI-21-10	5/8	0.0008 - 0.0016	1.1250	1.5000	1.124	.0620	1.0600	.312	.1250	.9620
RJUI-21-12	3/4	0.0008 - 0.0016	1.2500	1.6200	1.186	.0620	1.1770	.312	.1250	1.0870
RJUI-21-16	1	0.0008 - 0.0016	1.5625	2.2500	1.773	.0740	1.4710	.500	.1250	1.3990
RJUI-21-20	1-1/4	0.0010 - 0.0021	2.0000	2.6200	2.023	.0740	1.8890	.625	.1250	1.8370
RJUI-21-24	1-1/2	0.0010 - 0.0021	2.3750	3.0000	2.440	.0950	2.2410	.750	.1620	2.1520
RJUI-21-32	2	0.0012 - 0.0026	3.0000	4.0000	3.222	.1110	2.8390	1.000	.1890	2.7750

Housing Bore Recommendations

Nominal ID Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

Load Data

Part No.	pmax Dynamic Load (lbs) p = 725 psi	pmax Static Load (lbs) p = 5075 psi
RJZI-01-04*	135	946
RJUI-01-06 / RJUI-21-06	118	828
RJUI-01-08 / RJUI-21-08	225	1575
RJUI-01-10 / RJUI-21-10	338	2365
RJUI-01-12 / RJUI-21-12	439	3077
RJUI-01-16 / RJUI-21-16	811	5678
RJUI-01-20 / RJUI-21-20	1184	8287
RJUI-01-24 / RJUI-21-24	1622	11358
RJUI-01-32 / RJUI-21-32	2885	20198

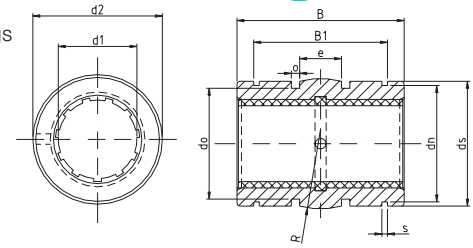
* Nominal widths under 3/8 inch are delivered with pressfit sleeve bearings
** according to igus® testing method ➤ Page 24.67

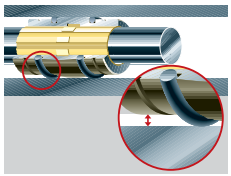
DryLin® R Self-Aligning Linear Plain Bearing, inch



Special Properties

- Hard anodized aluminum adapter
- Dimensionally interchangeable with linear ball bearings
- Equipped with liner made of iglide® J
  Temperature range -40°F to +194°F
  JUI-01 (standard), JUI-20 (low clearance)
- T500 liner optional for chemicals/high temps
  (up to 482°F for steel housing, 356°F for aluminum)
- Suitable shafting for iglide® J: DryLin® AWI aluminum, case-hardened, 300 series stainless
  Best shafting for T500: hard-chrome and hard-stainless steel
- Includes o-rings
- Secure by retaining clips (not included)





RJUI-03, Standard Clearance

Dimensions (inch)

Part No.	Nominal Size	Tolerance**	d2 ISO h8	B ISO h10	B1 ISO H10	s	ds	dn ISO h10	do	o -0.004	e
RJZI-03-04*	1/4	.0016 - .0032	.4921	.7460	.5270	.0410	.4803	.4660	.3990	.0800	.1250
RJUI-03-06	3/8	.0016 - .0032	.6173	.8713	.6520	.0410	.6055	.5870	.5240	.0610	.2430
RJUI-03-08	1/2	.0016 - .0032	.8673	1.2461	.9870	.0520	.8556	.8200	.7120	.1250	.2815
RJUI-03-10	5/8	.0016 - .0032	1.1173	1.4961	1.1360	.0620	1.1055	1.0600	.9620	.1250	.3125
RJUI-03-12	3/4	.0016 - .0032	1.2421	1.6173	1.1980	.0620	1.2300	1.1770	1.0870	.1250	.3125
RJUI-03-16	1	.0016 - .0032	1.5547	2.2421	1.7890	.0740	1.5271	1.4710	1.3990	.1250	.5000
RJUI-03-20	1-1/4	.0020 - .0041	1.9881	2.6173	2.0390	.0740	1.9606	1.8890	1.8370	.1250	.6250
RJUI-03-24	1-1/2	.0020 - .0041	2.3634	2.9921	2.4630	.0950	2.3358	2.2410	2.1520	.1620	.7500
RJUI-03-32	2	.0024 - .0051	2.9881	3.9921	3.2490	.1110	2.9606	2.8390	2.7750	.1890	1.0000

RJUI-23, Low Clearance

Dimensions (inch)

Part No.	Nominal Size	Tolerance**	d2 ISO h8	B ISO h10	B1 ISO H10	s	ds	dn ISO h10	do	o -0.004	e
RJUI-23-06	3/8	.0008 - .0016	.6173	.8713	.6520	.0410	.6055	.5870	.5240	.0610	.2430
RJUI-23-08	1/2	.0008 - .0016	.8673	1.2461	.9870	.0520	.8556	.8200	.7120	.1250	.2815
RJUI-23-10	5/8	.0008 - .0016	1.1173	1.4961	1.1360	.0620	1.1055	1.0600	.9620	.1250	.3125
RJUI-23-12	3/4	.0008 - .0016	1.2421	1.6173	1.1980	.0620	1.2300	1.1770	1.0870	.1250	.3125
RJUI-23-16	1	.0008 - .0016	1.5547	2.2421	1.7890	.0740	1.5271	1.4710	1.3990	.1250	.5000
RJUI-23-20	1-1/4	.0010 - .0021	1.9881	2.6173	2.0390	.0740	1.9606	1.8890	1.8370	.1250	.6250
RJUI-23-24	1-1/2	.0010 - .0021	2.3634	2.9921	2.4630	.0950	2.3358	2.2410	2.1520	.1620	.7500
RJUI-23-32	2	.0012 - .0026	2.9881	3.9921	3.2490	.1110	2.9606	2.8390	2.7750	.1890	1.0000

Housing Bore Recommendations

Nominal ID Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

Part No.	pmax Dynamic Load (lbs) p = 725 psi	pmax Static Load (lbs) p = 5075 psi
RJZI-03-04*	135	946
RJUI-03-06 / RJUI-23-06	118	828
RJUI-03-08 / RJUI-23-08	225	1575
RJUI-03-10 / RJUI-23-10	338	2365
RJUI-03-12 / RJUI-23-12	439	3077
RJUI-03-16 / RJUI-23-16	811	5678
RJUI-03-20 / RJUI-23-20	1184	8287
RJUI-03-24 / RJUI-23-24	1622	11358
RJUI-03-32 / RJUI-23-32	2885	20198

* Nominal widths under 3/8 inch are delivered with pressfit sleeve bearings

** according to igus® testing method ➤ Page 24.67

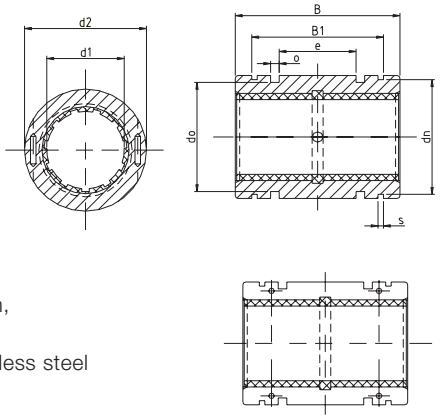
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R Straight, Split Linear Bearings, inch



Special Properties

- Anodized aluminum adapter
- Dimensionally interchangeable with linear ball bearings
- Equipped with liner made of iglide® J
  Temperature range -40°F to +194°F
  JUI-01 (standard), JUI-20 (low clearance)
- T500 liner optional for chemicals/high temps
  (up to 482°F for steel housing, 356°F for aluminum)
- Suitable shafting for iglide® J: DryLin® AWI aluminum, case-hardened, 300 series stainless
  Best shafting for T500: hard-chrome and hard-stainless steel



TJUI-01, Standard Clearance

Dimensions (inch)

Part No.	Nominal Size	Tolerance*	d2 ISO f7	B ISO h10	B1 ISO H10	s	dn	e	o +0.008	do
TJUI-01-08	1/2	0.0016 - 0.0036	.8750	1.2500	.979	.0520	.8200	.281	.1250	.7120
TJUI-01-10	5/8	0.0016 - 0.0036	1.1250	1.5000	1.124	.0620	1.0600	.312	.1250	.9620
TJUI-01-12	3/4	0.0016 - 0.0036	1.2500	1.6250	1.186	.0620	1.1770	.312	.1250	1.0870
TJUI-01-16	1	0.0016 - 0.0036	1.5625	2.2500	1.773	.0740	1.4710	.500	.1250	1.3990
TJUI-01-20	1-1/4	0.0020 - 0.0039	2.0000	2.6250	2.023	.0740	1.8890	.625	.1250	1.8370
TJUI-01-24	1-1/2	0.0020 - 0.0047	2.3750	3.0000	2.440	.0950	2.2410	.650	.1620	2.1520
TJUI-01-32	2	0.0024 - 0.0057	3.0000	4.0000	3.222	.1110	2.8390	1.000	.1890	2.7750

TJUI-21, Low Clearance

Dimensions (inch)

Part No.	Nominal Size	Tolerance*	d2 ISO f7	B ISO h10	B1 ISO H10	s	dn	e	o +0.008	do
TJUI-21-08	1/2	0.0008-0.0018	.8750	1.2500	.979	.0520	.8200	.281	.1250	.7120
TJUI-21-10	5/8	0.0008-0.0018	1.1250	1.5000	1.124	.0620	1.0600	.312	.1250	.9620
TJUI-21-12	3/4	0.0008-0.0018	1.2500	1.6250	1.186	.0620	1.1770	.312	.1250	1.0870
TJUI-21-16	1	0.0008-0.0018	1.5625	2.2500	1.773	.0740	1.4710	.500	.1250	1.3990
TJUI-21-20	1-1/4	0.0010-0.0020	2.0000	2.6250	2.023	.0740	1.8890	.625	.1250	1.8370
TJUI-21-24	1-1/2	0.0010-0.0024	2.3750	3.0000	2.440	.0950	2.2410	.650	.1620	2.1520
TJUI-21-32	2	0.0012-0.0029	3.0000	4.0000	3.222	.1110	2.8390	1.000	.1890	2.7750

Housing Bore Recommendations

Nominal ID Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

Part No.	pmax Dynamic Load (lbs) p = 725 psi	pmax Static Load (lbs) p = 5075 psi
TJUI-01-08 / TJUI-03-08	225	1575
TJUI-01-10 / TJUI-03-10	338	2365
TJUI-01-12 / TJUI-03-12	439	3077
TJUI-01-16 / TJUI-03-16	811	5678
TJUI-01-20 / TJUI-03-20	1184	8287
TJUI-01-24 / TJUI-03-24	1622	11358
TJUI-01-32 / TJUI-03-32	2885	20198

Material: iglide® J
Temp. range: -40°F to +194°F
Best Shaft Material: DryLin® AWI hard anodized aluminum, case hardened steel, 300 series stainless

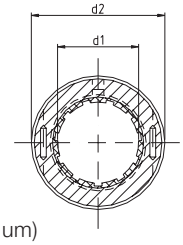
* **according to igus® testing method** ➤ Page 24.67

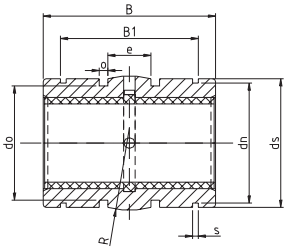
DryLin® R Self-Aligning, Split Linear Plain Bearing, inch

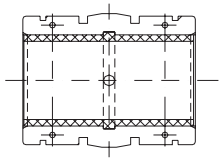


Special Properties

- Anodized aluminum adapter
- Dimensionally interchangeable with linear ball bearings
- Equipped with liner made of iglide® J
  Temperature range -40°F to +194°F
  JUI-01 (standard), JUI-20 (low clearance)
- T500 liner optional for chemicals/high temps
  (up to 482°F for steel housing, 356°F for aluminum)
- Suitable shafting for iglide® J: DryLin® AWI aluminum, case-hardened, 300 series stainless
  Best shafting for T500: hard-chrome and hard-stainless steel







TJUI-03, Standard Clearance

Dimensions (inch)

Part No.	⌀ Shaft	Tolerance*	d2 ISO f7	B ISO h10	B1 ISO H10	s	ds	do	o +0.008	e
TJUI-03-08	1/2	.0016 - .0036	.8750	1.2420	.987	.0520	.8563	.7120	.1250	.2815
TJUI-03-10	5/8	.0016 - .0036	1.1250	1.4920	1.136	.0620	1.1039	.9620	.1250	.3125
TJUI-03-12	3/4	.0016 - .0036	1.2500	1.6170	1.198	.0620	1.2276	1.0870	.1250	.3125
TJUI-03-16	1	.0016 - .0036	1.5625	2.2382	1.789	.0740	1.5350	1.3990	.1250	.5000
TJUI-03-20	1-1/4	.0020 - .0039	2.0000	2.6134	2.039	.0740	1.9654	1.8370	.1250	.6250
TJUI-03-24	1-1/2	.0020 - .0047	2.3750	2.9843	2.463	.0950	2.3370	2.1520	.1620	.7500
TJUI-03-32	2	.0024 - .0057	3.0000	3.9803	3.249	.1110	2.9531	2.7750	.1890	1.0000

TJUI-23, Low Clearance

Dimensions (inch)

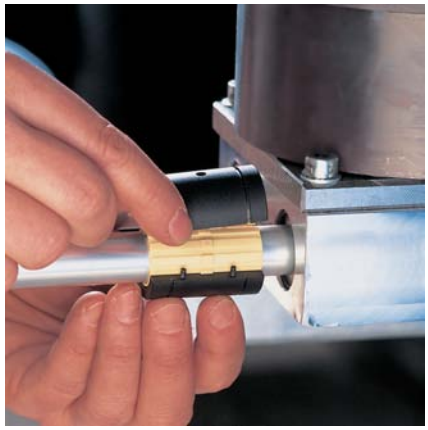
Part No.	⌀ Shaft	Tolerance*	d2 ISO f7	B ISO h10	B1 ISO H10	s	ds	do	o +0.008	e
TJUI-23-08	1/2	.0008 - .0018	.8750	1.2420	.987	.0520	.8563	.7120	.1250	.2815
TJUI-23-10	5/8	.0008 - .0018	1.1250	1.4920	1.136	.0620	1.1039	.9620	.1250	.3125
TJUI-23-12	3/4	.0008 - .0018	1.2500	1.6170	1.198	.0620	1.2276	1.0870	.1250	.3125
TJUI-23-16	1	.0008 - .0018	1.5625	2.2382	1.789	.0740	1.5350	1.3990	.1250	.5000
TJUI-23-20	1-1/4	.0010 - .0020	2.0000	2.6134	2.039	.0740	1.9654	1.8370	.1250	.6250
TJUI-23-24	1-1/2	.0010 - .0024	2.3750	2.9843	2.463	.0950	2.3370	2.1520	.1620	.7500
TJUI-23-32	2	.0012 - .0029	3.0000	3.9803	3.249	.1110	2.9531	2.7750	.1890	1.0000

Housing Bore Recommendations

Nominal ID Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

Benefits

- Drastically reduce machine downtime
- Replace bearings without removing shafts
- Unique, cost-effective solution versus ball bearings



* according to igus® testing method ➤ Page 24.67

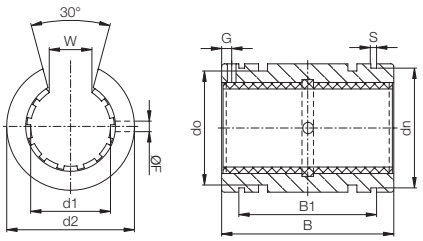
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R Straight, Open Linear Bearing, inch



Special Properties

- Anodized aluminum adapter
- Dimensionally interchangeable with linear ball bearings
- Equipped with liner made of iglide® J
  Temperature range -40°F to +194°F
  JUI-01 (standard), JUI-20 (low clearance)
- T500 liner optional for chemicals/high temps
  (up to 482°F for steel housing, 356°F for aluminum)
- Suitable shafting for iglide® J: DryLin® AWI aluminum, case-hardened, 300 series stainless
  Best shafting for T500: hard-chrome and hard-stainless steel



OJUI-01, Standard Clearance

Dimensions (inch)

Part No..	Ø Shaft	Tolerance*	d2 ISO h7	B ISO h10	W ±0.012	s	dn ISO h10	B1 ISO H10	F +0.004	G +0.004	do
OJUI-01-08	1/2	0.0016 - 0.0032	.8750	1.2500	.3940	.0520	.8200	.979	.1360	.6250	.684
OJUI-01-10	5/8	0.0016 - 0.0032	1.1250	1.5000	.4330	.0620	1.0600	1.124	.1360	.1250	.934
OJUI-01-12	3/4	0.0016 - 0.0032	1.2500	1.6250	.4920	.0620	1.1770	1.186	.1360	.1250	1.059
OJUI-01-16	1	0.0016 - 0.0032	1.5625	2.2500	.6300	.0740	1.4710	1.773	.1360	.1250	1.372
OJUI-01-20	1-1/4	0.0020 - 0.0041	2.0000	2.6250	.7090	.0740	1.8890	2.023	.2010	.1875	1.809
OJUI-01-24	1-1/2	0.0020 - 0.0041	2.3750	3.0000	.8660	.0950	2.2410	2.440	.2010	.1875	2.113
OJUI-01-32	2	0.0024 - 0.0051	3.0000	4.0000	1.1810	.1110	2.8390	3.222	.2650	.3125	2.738

OJUI-21, Low Clearance

Dimensions (inch)

Part No..	Ø Shaft	Tolerance*	d2 ISO h7	B ISO h10	W ±0.012	s	dn ISO h10	B1 ISO H10	F +0.004	G +0.004	do
OJUI-21-08	1/2	0.0008-0.0016	.8750	1.2500	.3940	.0520	.8200	.979	.1360	.6250	.684
OJUI-21-10	5/8	0.0008-0.0016	1.1250	1.5000	.4330	.0620	1.0600	1.124	.1360	.1250	.934
OJUI-21-12	3/4	0.0008-0.0016	1.2500	1.6250	.4920	.0620	1.1770	1.186	.1360	.1250	1.059
OJUI-21-16	1	0.0008-0.0016	1.5625	2.2500	.6300	.0740	1.4710	1.773	.1360	.1250	1.372
OJUI-21-20	1-1/4	0.0010 - 0.0021	2.0000	2.6250	.7090	.0740	1.8890	2.023	.2010	.1875	1.809
OJUI-21-24	1-1/2	0.0010 - 0.0021	2.3750	3.0000	.8660	.0950	2.2410	2.440	.2010	.1875	2.113
OJUI-21-32	2	0.0012-0.0026	3.0000	4.0000	1.1810	.1110	2.8390	3.222	.2650	.3125	2.738

Housing Bore Recommendations

Nominal ID Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

Part No.	pmax. Dynamic Load P=725 psi			pmax. Static Load P=5075 psi		
	0°	90°	180°	0°	90°	180°
OJUI-01-08 / OJUI-21-08	226	154	80	1585	1078	555
OJUI-01-10 / OJUI-21-10	340	231	118	2378	1617	832
OJUI-01-12 / OJUI-21-12	408	277	143	2854	1942	998
OJUI-01-16 / OJUI-21-16	590	400	206	4123	2804	1443
OJUI-01-20 / OJUI-21-20	1189	809	416	8323	5659	2912
OJUI-01-24 / OJUI-21-24	1631	1109	571	11418	7765	3996
OJUI-01-32 / OJUI-21-32	2900	1972	1015	20300	13804	7104

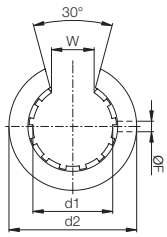
* according to igus® testing method ➤ Page 24.67

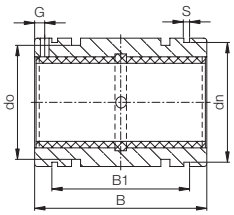
DryLin® R Self-Aligning, Open Linear Plain Bearing, inch



Special Properties

- Hard anodized aluminum adapter
- Dimensionally interchangeable with linear ball bearings
- Equipped with liner made of iglide® J
  Temperature range -40°F to +194°F
  JUI-01 (standard), JUI-20 (low clearance)
- T500 liner optional for chemicals/high temps
  (up to 482°F for steel housing, 356°F for aluminum)
- Suitable shafting for iglide® J: DryLin® AWI aluminum, case-hardened, 300 series stainless
  Best shafting for T500: hard-chrome and hard-stainless steel





OJUI-03, Standard Clearance

Dimensions (inch)

Part No.	Ø Shaft	Tolerance*	d2 ISO h8	ds ISO h10	F +0.004	G +0.004	do	B1 ISO H10	s ISO H10	dn ISO h10	B ISO h10	W +0.012
OJUI-03-08	1/2	.0016-.0032	.8673	.8556	.1360	.6250	.6846	.987	.0520	.8200	1.2461	.3940
OJUI-03-10	5/8	.0016-.0032	1.1173	1.1055	.1360	.1250	.9346	1.136	.0620	1.0600	1.4961	.4330
OJUI-03-12	3/4	.0016-.0032	1.2421	1.2300	.1360	.1250	1.0590	1.198	.0620	1.1770	1.6173	.4920
OJUI-03-16	1	.0016-.0032	1.5547	1.5271	.1360	.1250	1.3720	1.789	.0740	1.4710	2.2421	.6300
OJUI-03-20	1-1/4	.0020-.0041	1.9881	1.9606	.2010	.1875	1.8094	2.039	.0740	1.8890	2.6173	.7090
OJUI-03-24	1-1/2	.0020-.0041	2.3634	2.3358	.2010	.1875	2.1130	2.463	.0950	2.2410	2.9921	.8660
OJUI-03-32	2	.0024-.0051	2.988	2.9606	.2650	.3125	2.7378	3.249	.1110	2.8390	3.9921	1.1810

OJUI-23, Low Clearance

Dimensions (inch)

Part No.	Ø Shaft	Tolerance*	d2 ISO h8	ds ISO h10	F +0.004	G +0.004	do	B1 ISO H10	s ISO H10	dn ISO h10	B ISO h10	W +0.012
OJUI-23-08	1/2	.0008-.0016	.8673	.8556	.1360	.6250	.6846	.987	.0520	.8200	1.2461	.3940
OJUI-23-10	5/8	..0008-.0016	1.1173	1.1055	.1360	.1250	.9346	1.136	.0620	1.0600	1.4961	.4330
OJUI-23-12	3/4	..0008-.0016	1.2421	1.2300	.1360	.1250	1.0590	1.198	.0620	1.1770	1.6173	.4920
OJUI-23-16	1	..0008-.0016	1.5547	1.5271	.1360	.1250	1.3720	1.789	.0740	1.4710	2.2421	.6300
OJUI-23-20	1-1/4	.0010-.0021	1.9881	1.9606	.2010	.1875	1.8094	2.039	.0740	1.8890	2.6173	.7090
OJUI-23-24	1-1/2	.0010-.0021	2.3634	2.3358	.2010	.1875	2.1130	2.463	.0950	2.2410	2.9921	.8660
OJUI-23-32	2	.0012-.0026	2.988	2.9606	.2650	.3125	2.7378	3.249	.1110	2.8390	3.9921	1.1810

Housing Bore Recommendations

Nominal ID Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

Part No.	pmax. Dynamic Load P=725 psi			pmax. Static Load P=5075 psi		
	0°	90°	180°	0°	90°	180°
OJUI-03-08 / OJUI-23-08	226	154	80	1585	1078	555
OJUI-03-10 / OJUI-23-10	340	231	118	2378	1617	832
OJUI-03-12 / OJUI-23-12	408	277	143	2854	1942	998
OJUI-03-16 / OJUI-23-16	590	400	206	4123	2804	1443
OJUI-03-20 / OJUI-23-20	1189	809	416	8323	5659	2912
OJUI-03-24 / OJUI-23-24	1631	1109	571	11418	7765	3996
OJUI-03-32 / OJUI-23-32	2900	1972	1015	20300	13804	7104

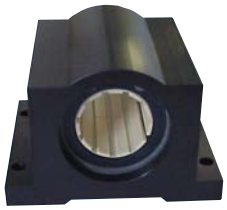
* according to igus® testing method ➤ Page 24.67

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
RoHS info: www.igus.com/RoHS.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680

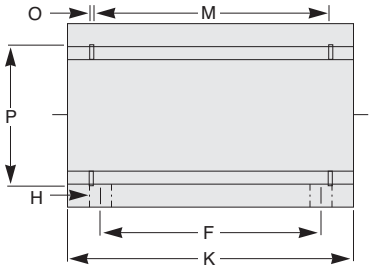
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

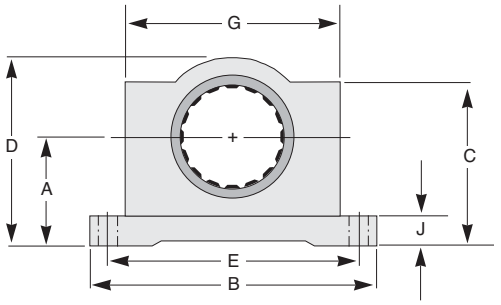
DryLin® R Straight Bearing, Closed Pillow Block, inch



Special Properties

- Closed, anodized aluminum housing
- Liner JUI-01 made of iglide® J is contained according to standard tolerances
- Can be fitted with T500 liner material for temperatures up to 356°F
- Low clearance liners optional





RJUI-11, Straight Bearing

Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	D ±.010	E ±.010	F	G	H BOLT	H HOLE	J	K	M	O	P
RJZI-11-04	1/4	0.437	1.625	0.750	0.813	1.312	0.750	1.000	#6	5/32	0.188	1.188	0.750	0.039	0.532
RJUI-11-06	3/8	0.500	1.750	0.875	0.938	1.437	0.875	1.125	#6	5/32	0.188	1.313	0.875	0.039	0.665
RJUI-11-08	1/2	0.687	2.000	1.125	1.250	1.688	1.000	1.375	#6	5/32	0.250	1.688	1.250	0.046	0.931
RJUI-11-10	5/8	0.875	2.500	1.438	1.625	2.125	1.125	1.750	#8	3/16	0.281	1.938	1.500	0.056	1.197
RJUI-11-12	3/4	0.937	2.750	1.563	1.750	2.375	1.250	1.875	#8	3/16	0.313	2.063	1.625	0.056	1.330
RJUI-11-16	1	1.187	3.250	1.938	2.188	2.875	1.750	2.375	#10	7/32	0.375	2.813	2.250	0.068	1.671
RJUI-11-20	1-1/4	1.500	4.000	2.500	2.813	3.500	2.000	3.000	#10	7/32	0.438	3.625	2.625	0.068	2.122
RJUI-11-24	1-1/2	1.750	4.750	2.875	3.250	4.125	2.500	3.500	1/4	9/32	0.500	4.000	3.000	0.086	2.519
RJUI-11-32	2	2.125	6.000	3.625	4.063	5.250	3.250	4.500	3/8	13/32	0.625	5.000	4.000	0.103	3.182

For a Low Clearance version use part number RJUI-31-XX

RJUI-13, Self-Aligning

Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	D ±.010	E ±.010	F	G	H BOLT	H HOLE	J	K	M	O	P
RJZI-13-04	1/4	0.437	1.625	0.750	0.813	1.312	0.750	1.000	#6	5/32	0.188	1.188	0.750	0.039	0.532
RJUI-13-06	3/8	0.500	1.750	0.875	0.938	1.437	0.875	1.125	#6	5/32	0.188	1.313	0.875	0.039	0.665
RJUI-13-08	1/2	0.687	2.000	1.125	1.250	1.688	1.000	1.375	#6	5/32	0.250	1.688	1.250	0.046	0.931
RJUI-13-10	5/8	0.875	2.500	1.438	1.625	2.125	1.125	1.750	#8	3/16	0.281	1.938	1.500	0.056	1.197
RJUI-13-12	3/4	0.937	2.750	1.563	1.750	2.375	1.250	1.875	#8	3/16	0.313	2.063	1.625	0.056	1.330
RJUI-13-16	1	1.187	3.250	1.938	2.188	2.875	1.750	2.375	#10	7/32	0.375	2.813	2.250	0.068	1.671
RJUI-13-20	1-1/4	1.500	4.000	2.500	2.813	3.500	2.000	3.000	#10	7/32	0.438	3.625	2.625	0.068	2.122
RJUI-13-24	1-1/2	1.750	4.750	2.875	3.250	4.125	2.500	3.500	1/4	9/32	0.500	4.000	3.000	0.086	2.519
RJUI-13-32	2	2.125	6.000	3.625	4.063	5.250	3.250	4.500	3/8	13/32	0.625	5.000	4.000	0.103	3.182

For a Low Clearance version use part number RJUI-33-XX



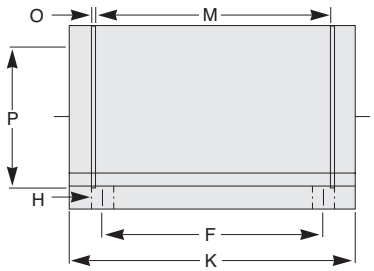
Online lifetime calculation
www.igus.com

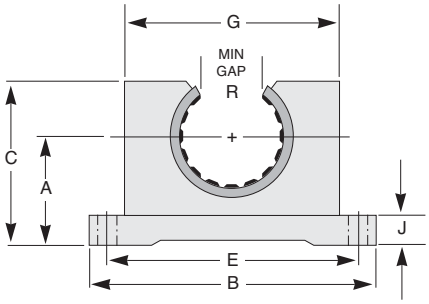
DryLin® R Straight Bearing, Open Pillow Block, inch



Special Properties

- Open, anodized aluminum housing
- Liner JUI-01 made of iglide® J is contained according to standard tolerances
- Can be fitted with T500 liner material for temperatures up to 356°F
- Low clearance liners optional





OJUI-11, Straight Bearing

Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	E ±.010	F ±.010	G	H BOLT	H HOLE	J	K	M	O	P	R
OJUI-11-08	1/2	0.687	2.000	1.125	1.688	1.000	1.375	#6	5/32	0.250	1.688	1.250	0.046	0.931	0.313
OJUI-11-10	5/8	0.875	2.500	1.438	2.125	1.125	1.750	#8	3/16	0.281	1.938	1.500	0.056	1.197	0.375
OJUI-11-12	3/4	0.937	2.750	1.563	2.375	1.250	1.875	#8	3/16	0.313	2.063	1.625	0.056	1.330	0.438
OJUI-11-16	1	1.187	3.250	1.938	2.875	1.750	2.375	#10	7/32	0.375	2.813	2.250	0.068	1.671	0.563
OJUI-11-20	1-1/4	1.500	4.000	2.500	3.500	2.000	3.000	#10	7/32	0.438	3.625	2.625	0.068	2.122	0.625
OJUI-11-24	1-1/2	1.750	4.750	2.875	4.125	2.500	3.500	1/4	9/32	0.500	4.000	3.000	0.086	2.519	0.750
OJUI-11-32	2	2.125	6.000	3.625	5.250	3.250	4.500	3/8	13/32	0.625	5.000	4.000	0.103	3.182	1.000

For a Low Clearance version use part number OJUI-31-XX

OJUI-13, Self-Aligning

Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	E ±.010	F ±.010	G	H BOLT	H HOLE	J	K	M	O	P	R
OJUI-13-08	1/2	0.687	2.000	1.125	1.688	1.000	1.375	#6	5/32	0.250	1.688	1.250	0.046	0.931	0.313
OJUI-13-10	5/8	0.875	2.500	1.438	2.125	1.125	1.750	#8	3/16	0.281	1.938	1.500	0.056	1.197	0.375
OJUI-13-12	3/4	0.937	2.750	1.563	2.375	1.250	1.875	#8	3/16	0.313	2.063	1.625	0.056	1.330	0.438
OJUI-13-16	1	1.187	3.250	1.938	2.875	1.750	2.375	#10	7/32	0.375	2.813	2.250	0.068	1.671	0.563
OJUI-13-20	1-1/4	1.500	4.000	2.500	3.500	2.000	3.000	#10	7/32	0.438	3.625	2.625	0.068	2.122	0.625
OJUI-13-24	1-1/2	1.750	4.750	2.875	4.125	2.500	3.500	1/4	9/32	0.500	4.000	3.000	0.086	2.519	0.750
OJUI-13-32	2	2.125	6.000	3.625	5.250	3.250	4.500	3/8	13/32	0.625	5.000	4.000	0.103	3.182	1.000

For a Low Clearance version use part number OJUI-33-XX



Online lifetime calculation
www.igus.com

Telephone 1-888-803-1895
Fax 1-401-438-7680

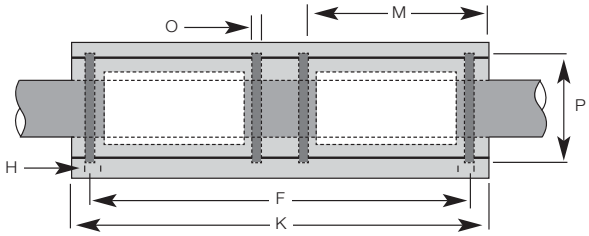
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

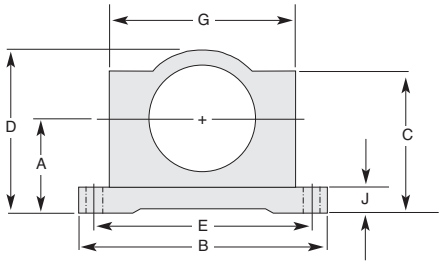
DryLin® R Straight Bearing, Closed Twin Pillow Block, inch



Special Properties

- Cosed, anodized aluminum housing, twin design
- Liner JUI-01 made of iglide® J is contained according to standard tolerances
- Can be fitted with T500 liner material for temperatures up to 356°F
- Low clearance liners optional





RJUI-11-XXTW, Straight Bearing

Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	D ±.010	E ±.010	F	G	H BOLT	H HOLE	J	K	M	O	P
RJZI-11-04TW	1/4	0.437	1.625	0.750	0.813	1.312	2.000	1.000	#6	5/32	0.188	2.500	0.750	0.039	0.532
RJUI-11-06TW	3/8	0.500	1.750	0.875	0.938	1.437	2.250	1.125	#6	5/32	0.188	2.750	0.875	0.039	0.665
RJUI-11-08TW	1/2	0.687	2.000	1.125	1.250	1.688	2.500	1.375	#6	5/32	0.250	3.500	1.250	0.046	0.931
RJUI-11-10TW	5/8	0.875	2.500	1.438	1.625	2.125	3.000	1.750	#8	3/16	0.281	4.000	1.500	0.056	1.197
RJUI-11-12TW	3/4	0.937	2.750	1.563	1.750	2.375	3.500	1.875	#8	3/16	0.313	4.500	1.625	0.056	1.330
RJUI-11-16TW	1	1.187	3.250	1.938	2.188	2.875	4.500	2.375	#10	7/32	0.375	6.000	2.250	0.068	1.671
RJUI-11-20TW	1-1/4	1.500	4.000	2.500	2.813	3.500	5.500	3.000	#10	7/32	0.438	7.500	2.625	0.068	2.122
RJUI-11-24TW	1-1/2	1.750	4.750	2.875	3.250	4.125	6.500	3.500	1/4	9/32	0.500	9.000	3.000	0.086	2.519
RJUI-11-32TW	2	2.125	6.000	3.625	4.063	5.250	8.250	4.500	3/8	13/32	0.625	10.000	4.000	0.103	3.182

For a Low Clearance version use part number RJUI-31-XXTW

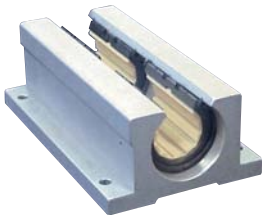
RJUI-13-XXTW, Self-Aligning

Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	D ±.010	E ±.010	F	G	H BOLT	H HOLE	J	K	M	O	P
RJZI-13-04TW	1/4	0.437	1.625	0.750	0.813	1.312	2.000	1.000	#6	5/32	0.188	2.500	0.750	0.039	0.532
RJUI-13-06TW	3/8	0.500	1.750	0.875	0.938	1.437	2.250	1.125	#6	5/32	0.188	2.750	0.875	0.039	0.665
RJUI-13-08TW	1/2	0.687	2.000	1.125	1.688	2.500	2.500	1.375	#6	5/32	0.250	3.500	1.250	0.046	0.931
RJUI-13-10TW	5/8	0.875	2.500	1.438	2.125	3.000	3.000	1.750	#8	3/16	0.281	4.000	1.500	0.056	1.197
RJUI-13-12TW	3/4	0.937	2.750	1.563	2.375	3.500	3.500	1.875	#8	3/16	0.313	4.500	1.625	0.056	1.330
RJUI-13-16TW	1	1.187	3.250	1.938	2.875	4.500	4.500	2.375	#10	7/32	0.375	6.000	2.250	0.068	1.671
RJUI-13-20TW	1-1/4	1.500	4.000	2.500	3.500	5.500	5.500	3.000	#10	7/32	0.438	7.500	2.625	0.068	2.122
RJUI-13-24TW	1-1/2	1.750	4.750	2.875	4.125	6.500	6.500	3.500	1/4	9/32	0.500	9.000	3.000	0.086	2.519
RJUI-13-32TW	2	2.125	6.000	3.625	5.250	8.250	8.250	4.500	3/8	13/32	0.625	10.000	4.000	0.103	3.182

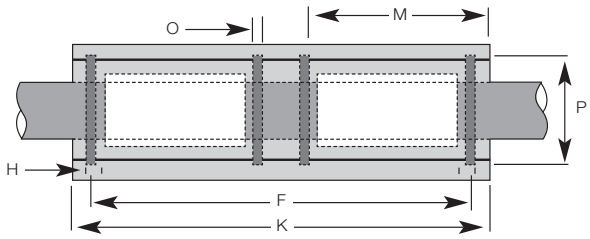
For a Low Clearance version use part number RJUI-33-XXTW

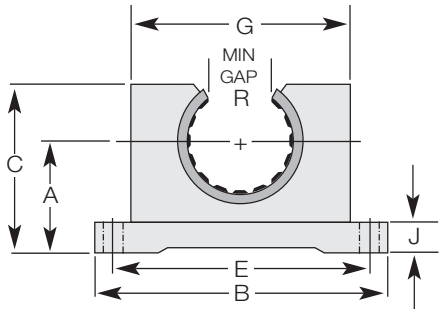
DryLin® R Straight Bearing, Open Twin Pillow Block, inch



Special Properties

- Open, anodized aluminum housing, twin design
- Liner JUIO-01 made of iglide® J is contained according to standard tolerances
- Can be fitted with T500 liner material for temperatures up to 356°F
- Low clearance liners optional





OJUI-11-XXTW, Straight Bearing

Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	E ±.010	F ±.010	G	H BOLT	H HOLE	J	K	M	O	P	R
OJUI-11-08TW	1/2	0.687	2.000	1.125	1.688	2.500	1.375	#6	5/32	0.250	3.500	1.250	0.046	0.931	0.313
OJUI-11-10TW	5/8	0.875	2.500	1.438	2.125	3.000	1.750	#8	3/16	0.281	4.000	1.500	0.056	1.197	0.375
OJUI-11-12TW	3/4	0.937	2.750	1.563	2.375	3.500	1.875	#8	3/16	0.313	4.500	1.625	0.056	1.330	0.438
OJUI-11-16TW	1	1.187	3.250	1.938	2.875	4.500	2.375	#10	7/32	0.375	6.000	2.250	0.068	1.671	0.563
OJUI-11-20TW	1-1/4	1.500	4.000	2.500	3.500	5.500	3.000	#10	7/32	0.438	7.500	2.625	0.068	2.122	0.625
OJUI-11-24TW	1-1/2	1.750	4.750	2.875	4.125	6.500	3.500	1/4	9/32	0.500	9.000	3.000	0.086	2.519	0.750
OJUI-11-32TW	2	2.125	6.000	3.625	5.250	8.250	4.500	3/8	13/32	0.625	10.000	4.000	0.103	3.182	1.000

For a Low Clearance version use part number OJUI-31-XXTW

OJUI-13-XXTW, Self-Aligning

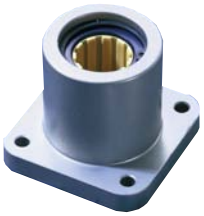
Dimensions (inch)

Part No.	Nom. Size	A ±.001	B	C	E ±.010	F ±.010	G	H BOLT	H HOLE	J	K	M	O	P	R
OJUI-13-08TW	1/2	0.687	2.000	1.125	1.688	2.500	1.375	#6	5/32	0.250	3.500	1.250	0.046	0.931	0.313
OJUI-13-10TW	5/8	0.875	2.500	1.438	2.125	3.000	1.750	#8	3/16	0.281	4.000	1.500	0.056	1.197	0.375
OJUI-13-12TW	3/4	0.937	2.750	1.563	2.375	3.500	1.875	#8	3/16	0.313	4.500	1.625	0.056	1.330	0.438
OJUI-13-16TW	1	1.187	3.250	1.938	2.875	4.500	2.375	#10	7/32	0.375	6.000	2.250	0.068	1.671	0.563
OJUI-13-20TW	1-1/4	1.500	4.000	2.500	3.500	5.500	3.000	#10	7/32	0.438	7.500	2.625	0.068	2.122	0.625
OJUI-13-24TW	1-1/2	1.750	4.750	2.875	4.125	6.500	3.500	1/4	9/32	0.500	9.000	3.000	0.086	2.519	0.750
OJUI-13-32TW	2	2.125	6.000	3.625	5.250	8.250	4.500	3/8	13/32	0.625	10.000	4.000	0.103	3.182	1.000

For a Low Clearance version use part number OJUI-33-XXTW

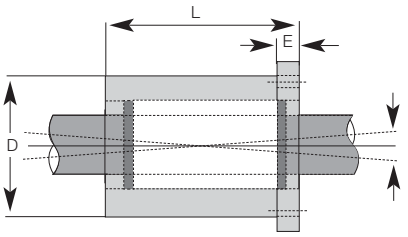
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

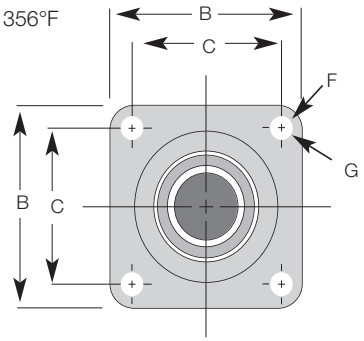
DryLin® R Flange Pillow Block, inch



Special Properties

- Flange housing made of anodized aluminum, square flange
- Liner JUI-02 made of iglide® J
- Can be fitted with T500 liner material for temperatures up to 356°F
- Low clearance liners optional





FJUI-11-XX, Straight Bearing

Dimensions (inch)

Part no.	Size	B	C	D	E	F Bolt Size	G	L
FJUI-11-08	1/2	1.63	1.25	1.25	.250	#8	.187	1.687
FJUI-11-12*	3/4	2.38	1.75	1.75	.375	#10	.219	2.067
FJUI-11-16*	1	2.75	2.125	2.25	.500	1/4	.281	2.812

For a Low Clearance version use part number FJUI-31-XX
***Double length twin version available upon request**

FJUI-13-XX, Self-Aligning

Dimensions (inch)

Part no.	Size	B	C	D	E	F Bolt Size	G	L
FJUI-13-08	1/2	1.63	1.25	1.25	.250	#8	.187	1.687
FJUI-13-12*	3/4	2.38	1.75	1.75	.375	#10	.219	2.067
FJUI-13-16*	1	2.75	2.125	2.25	.500	1/4	.281	2.812

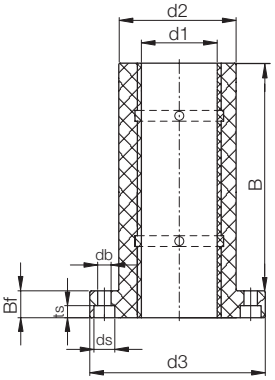
For a Low Clearance version use part number FJUI-33-XX
***Double length twin version available upon request**

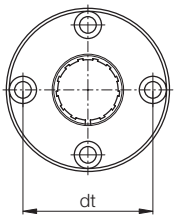
FJUIT-01-XX, Twin Flange Pillow Block



Special Properties

- Flange housing made of anodized aluminum, round flange
- 2x liner JUI-01 made of iglide® J contained as a standard
- More sizes may be available upon request
- Can be fitted with T500 liner material for temperatures up to 356°F
- Low clearance liners optional





Dimensions (inch)

Part No.	d1	d2 ISO h7	d3	dt	B	Bf	ts	db	ds	Bolt Screw size
FJUIT-01-12	3/4	1.260	2.126	1.693	2.72	.433	.203	.219	.343	#10
FJUIT-01-16	1	1.575	2.441	2.000	3.98	.433	.203	.219	.343	#10

DryLin® S Aluminum Shaft, inch



Properties

Material:	6061-T6
Tolerance:	ISO h9-h11
Roundness:	.0004
Straightness:	.004/ft
Hardness:	75 HB
Surface:	hard-anodized

Layer Thickness:	> .0016"
Surface Hardness:	450-550 HV approx. (60 RC)
Roughness:	RMS = 4-20
Spec. Electr. Resistance:	$4*10^{11}$ Ohm mm^2/m
Chemical Resistance:	2<ph<9

Dimensions (inches)

Part No.	Design	Diameter	Max. Length*	Weight (lbs/ft)
AWI-04- L in inches	Solid	.2500	72	.057
AWI-06- L in inches	Solid	.3750	72	.130
AWI-08- L in inches	Solid	.5000	72	.231
AWI-10- L in inches	Solid	.6250	72	.361
AWI-12- L in inches	Solid	.7500	72	.519
AWI-16- L in inches	Solid	1.0000	72	.924
AWI-20- L in inches	Solid	1.2500	72	1.44
AWI-24- L in inches	Solid	1.5000	72	2.08
AWI-32- L in inches	Solid	2.0000	72	3.70



*Shaft supports available upon request

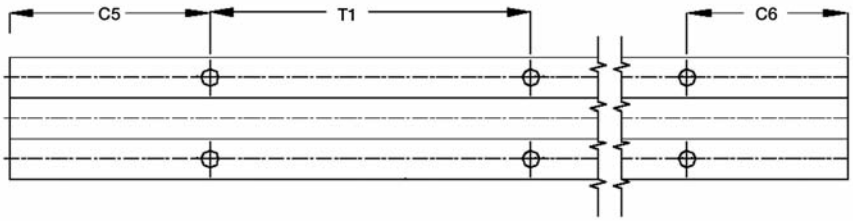
Longer sizes available upon request
Metric sizes are also available. See page 24.57

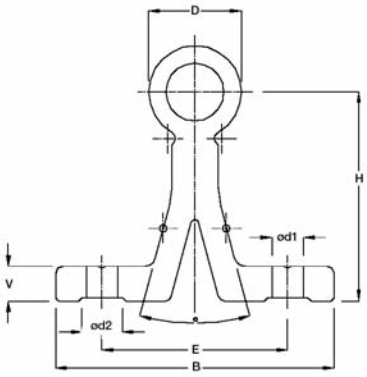
DryLin® S Supported Aluminum Shaft, AWUI-XX



Properties

Material:	6063-T6
Surface:	hard-anodized aluminum
Layer Thickness:	< .002"





Dimensions (inch)

Part No.	D	B	H ±0.008	V	d1	d2	(°)	E ±.008	T1 Bore Spacing	C5/C6 min.	C5/C6 max.	Max. Length	Weight (lbs/ft)
AWUI-08- L in mm	.500 (-.004)	1.50	1.125	.190	.169	.217	30°	1.000	4.00	1	2.95	144	.6
AWUI-12- L in mm	.750 (-.004)	1.75	1.500	.252	.220	.276	30°	1.250	6.00	1	3.95	144	1.2
AWUI-16- L in mm	1.000 (-.005)	2.13	1.750	.252	.280	.335	30°	1.500	6.00	1	3.95	144	1.5
AWUI-24- L in mm	1.500 (-.006)	3.00	2.500	.374	.343	.394	30°	2.250	8.00	1	3.95	144	2.6

Please contact igus for additional sizes
Order example: AWUI-16-500 corresponds to supported aluminum shaft diameter 1", 500 mm long

Other shaft materials available upon request

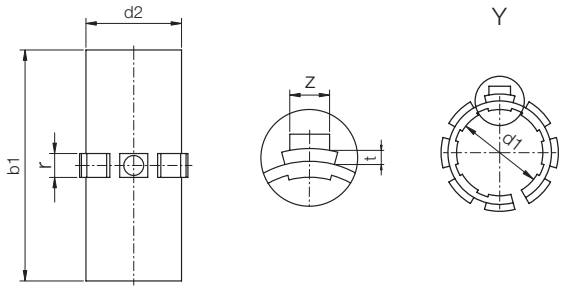


Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R - Liner, mm
JUM-01, Standard, JUM-02 Short Standard
JUM-20, Low Clearance, JUM-22 Short Low Clearance
TUM-01, High Temp

Special Properties

- Very low coefficients of friction while running dry
- Very high wear resistance
- Maintenance-free
- Vibration dampening
- Very low moisture absorption
- High chemical resistance
- Suitable for rotating, oscillating and linear movements



Part No.	d1	Tolerance*	d2	b1 JUM-01 standard	b1 JUM-02 short	r -0.1 -0.2	t -0.1	z -0.5	Weight (g)
Standard Clearance									
JUM-01/02-10	10	0.03-0.070	12	29	25	3.0	0.8	2.5	0.98
JUM-01/02-12	12	0.03-0.070	14	31	27	3.0	0.8	3.0	1.38
JUM-01/02-16	16	0.03-0.070	18	35	29	3.5	0.8	3.5	1.82
JUM-01/02-20	20	0.03-0.070	23	44	29	5.0	0.8	3.5	3.25
JUM-01/02-25	25	0.03-0.070	28	57	39	5.0	0.8	4.0	5.80
JUM-01/02-30	30	0.04-0.085	34	67	49	5.0	0.8	4.0	11.15
JUM-01/02-40	40	0.04-0.085	44	79	59	6.0	1.3	5.0	18.01
JUM-01/02-50	50	0.05-0.100	55	99	69	7.0	1.3	6.0	32.60
Low Clearance									
JUM-20/22-10	10	0.015-0.0350	12	29	25	3.0	0.8	2.5	0.98
JUM-20/22-12	12	0.015-0.0350	14	31	27	3.0	0.8	3.0	1.38
JUM-20/22-16	16	0.015-0.0350	18	35	29	3.5	0.8	3.5	1.82
JUM-20/22-20	20	0.015-0.0350	23	44	29	5.0	0.8	3.5	3.25
JUM-20/22-25	25	0.015-0.0350	28	57	39	5.0	0.8	4.0	5.80
JUM-20/22-30	30	0.020-0.0425	34	67	49	5.0	0.8	4.0	11.15
JUM-20/22-40	40	0.020-0.0425	44	79	59	6.0	1.3	5.0	18.01
JUM-20/22-50	50	0.025-0.0500	55	99	69	7.0	1.3	6.0	32.60
High Temperature									
TUM-01-12	12	0.03-0.070	14	31	—	3.0	0.8	3.0	0.048
TUM-01-16	16	0.03-0.070	18	35	—	3.5	0.8	3.5	0.064
TUM-01-20	20	0.03-0.070	23	44	—	5.0	0.8	3.5	0.114
TUM-01-25	25	0.03-0.070	28	57	—	5.0	0.8	4.0	0.203
TUM-01-30	30	0.04-0.085	34	67	—	5.0	0.8	4.0	0.390



JUM-01-XX
JUM-20-XX



JUM-02-XX

Material: iglide® J
Temp. range: -40°F to +194°F
Best Shaft Material: DryLin® AWI hard anodized aluminum, case hardened steel, 300 series stainless

TUM-01-XX

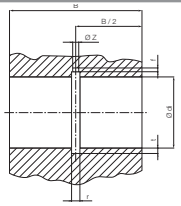


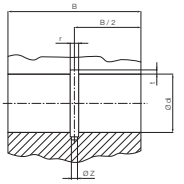
Material: iglide® T500
Temp. range: -148°F to +482°F
Best Shaft Material: Hardened stainless and hard chrome plated steel

Housing Bore for Liner JUM-01(02)/JUM-20(22)/TUM-01

Dimensions (mm)

Part No.	Nominal Size	di H7	B h10	r +0.05	t +0.1	f +0.5	z +0.2
JUM-01(02)(20)(22) /TUM-01-10	10	12	29	3.0	0.8	1.0	2.6
JUM-01(02)(20)(22)/TUM-01-12	12	14	32	3.0	0.8	1.5	3.1
JUM-01(02)(20)(22)/TUM-01-16	16	18	36	3.5	0.8	1.7	3.6
JUM-01(02)(20)(22)/TUM-01-20	20	23	45	5.0	0.8	2.0	3.6
JUM-01(02)(20)(22)/TUM-01-25	25	28	58	5.0	0.8	2.0	4.1
JUM-01(02)(20)(22)/TUM-01-30	30	34	68	5.0	0.8	2.0	4.1
JUM-01(02)(20)(22)/TUM-01-40	40	44	80	6.0	1.3	2.5	5.1
JUM-01(02)(20)(22)/TUM-01-50	50	55	100	7.0	1.3	2.5	6.1

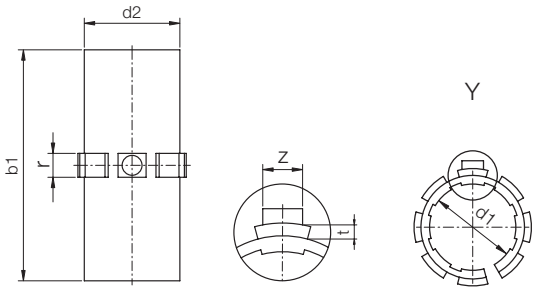




DryLin® R - Liner, mm
JUMO-01, Open Standard
JUMO-20, OpenLow Clearance

Special Properties

- Open design for supported shafts
- Very low coefficients of friction while running dry
- Very high wear resistance
- Maintenance-free
- Vibration dampening
- Very low moisture absorption
- High chemical resistance
- Suitable for rotating, oscillating and linear movements
- Recommended housing bore H7



Part No.	d1	Tolerance*	d2	b1	W +0.2	r -0.1 -0.2	t -0.1	z -0.5	Weight (g)
Standard Clearance									
JUMO-01-10	10	0.03-0.070	12	29	7.3	3.0	0.8	2.5	0.8
JUMO-01-12	12	0.03-0.070	14	31	9.0	3.0	0.8	3.0	1.7
JUMO-01-16	16	0.03-0.070	18	35	11.6	3.5	0.8	3.5	2.5
JUMO-01-20	20	0.03-0.070	23	44	12.0	5.0	0.8	3.5	4.2
JUMO-01-25	25	0.03-0.070	28	57	14.5	5.0	0.8	4.0	5.9
JUMO-01-30	30	0.04-0.085	34	67	16.6	5.0	0.8	4.0	12.0
JUMO-01-40	40	0.04-0.085	44	79	21.0	6.0	1.3	5.0	20.0
JUMO-01-50	50	0.05-0.100	55	99	25.5	7.0	1.3	6.0	36.0
Low Clearance									
JUMO-20-10	10	0.015-0.0350	12	29	7.3	3.0	0.8	2.5	0.8
JUMO-20-12	12	0.015-0.0350	14	31	9.0	3.0	0.8	3.0	1.7
JUMO-20-16	16	0.015-0.0350	18	35	11.6	3.5	0.8	3.5	2.5
JUMO-20-20	20	0.015-0.0350	23	44	12.0	5.0	0.8	3.5	4.2
JUMO-20-25	25	0.015-0.0350	28	57	14.5	5.0	0.8	4.0	5.9
JUMO-20-30	30	0.020-0.0425	34	67	16.6	5.0	0.8	4.0	12.0
JUMO-20-40	40	0.020-0.0425	44	79	21.0	6.0	1.3	5.0	20.0
JUMO-20-50	50	0.025-0.0500	55	99	25.5	7.0	1.3	6.0	36.0

*** according to igus® testing method** ➤ Page 24.67

JUMO-01/20



Material: iglide® J
Temp. range: -40°F to +194°F
Best Shaft Material: DryLin® AWI hard anodized aluminum, case hardened steel, 300 series stainless
**Call for high temperature options

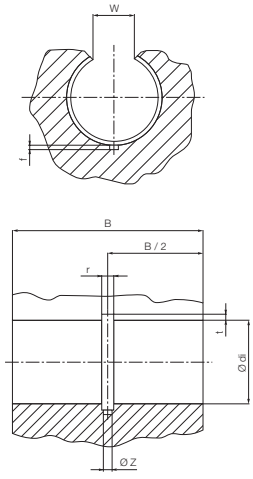
Liners of the Series JUMO-01 are used in:

➤ OJUM-01, Page 24.36
➤ OJUM-03, Page 24.38
➤ OJUM-06, Page 24.46

Installation Drawings
Housing Bore, Dimensions (mm)

Part No.	Nominal Size	di H7	B h10	r +0.05	t +0.1	f +0.5	z +0.2	W +0.2
JUMO-01/JUMO-20-10	10	12	29	3.0	0.8	1.0	2.6	7.3
JUMO-01/JUMO-20-12	12	14	32	3.0	0.8	1.5	3.1	9.0
JUMO-01/JUMO-20-16	16	18	36	3.5	0.8	1.7	3.6	11.6
JUMO-01/JUMO-20-20	20	23	45	5.0	0.8	2.0	3.6	12.0
JUMO-01/JUMO-20-25	25	28	58	5.0	0.8	2.0	4.1	14.5
JUMO-01/JUMO-20-30	30	34	68	5.0	0.8	2.0	4.1	16.6
JUMO-01/JUMO-20-40	40	44	80	6.0	1.3	2.5	5.1	21.0
JUMO-01/JUMO-20-50	50	55	100	7.0	1.3	2.5	6.1	25.5

*** according to igus® testing method** ➤ Page 24.67



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DryLin® R Liner TUM-01, mm

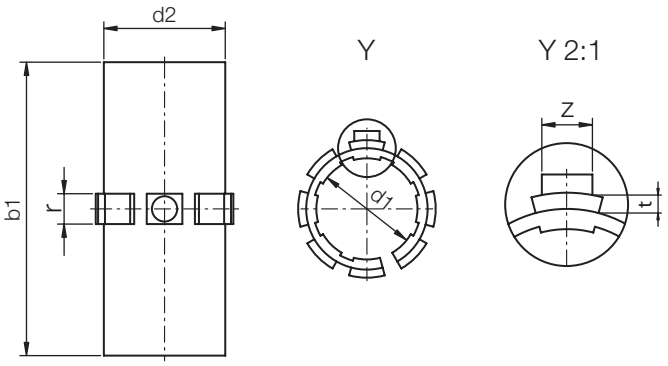


Special Properties

- Made of iglide® T500 (in two parts)
- Recommended for high temperature applications over 176°F up to 482°F (80°C up to 250°C)
- High chemical resistance
- Maintenance-free
- Very low moisture absorption
- Available for all adapters and pillow blocks (Ø12 mm - 30 mm)
- Recommended for use on stainless steel or hard chromed steel

Liners of the Series JUM-01 are used in:

➤ RJUM-01, Page 24.28
➤ RJUM-03, Page 24.30
➤ RJUM-06, Page 24.43
➤ TJUM-01, Page 24.32
➤ TJUM-03, Page 24.34
➤ FJUM-01, Page 24.49
➤ FJUM-02, Page 24.50

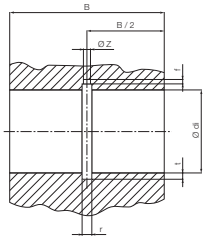


Dimensions (mm)

Part No.	d1	Tolerance*	d2	b1	r -0.1/-0.2	t -0.1	z -0.5	Weight (oz) -0.2
TUMO-01-10**	10	0.00-0.070	12	28	3.0	0.8	2.5	0.035
TUM-01-12	12	0.03-0.070	14	31	3.0	0.8	3.0	0.048
TUM-01-16	16	0.03-0.070	18	35	3.5	0.8	3.5	0.064
TUM-01-20	20	0.03-0.070	23	44	5.0	0.8	3.5	0.114
TUM-01-25	25	0.03-0.070	28	57	5.0	0.8	4.0	0.203
TUM-01-30	30	0.04-0.085	34	67	5.0	0.8	4.0	0.390

Housing bore Dimensions (mm)

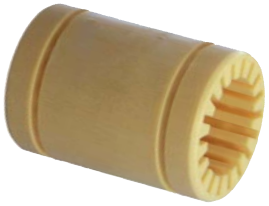
Part No.	Nominal Size	di H7	B h10	r +0.05	t +0.1	f +0.5	z +0.2
TUMO-01-10**	10	12	29	3.0	1.0	1.0	2.6
TUM-01-12	12	14	32	3.0	1.0	1.5	3.1
TUM-01-16	16	18	36	3.5	1.0	1.7	3.6
TUM-01-20	20	23	45	5.0	1.0	2.0	3.6
TUM-01-25	25	28	58	5.0	1.0	2.0	4.1
TUM-01-30	30	34	68	5.0	1.0	2.0	4.1



** Only available in the open design
Liners of Series TUM-01 can be used in alll housings designed for DryLin® R standard series.
Order example: Housing bearing, short: RXUM-05-20 instead of RJUM-05-20

* **according to igus® testing method** ➤ Page 24.67

DryLin® R Solid Plastic Bearing RJM-01, mm

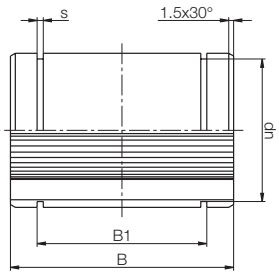


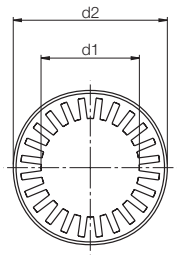
Special Properties

- Plain bearing made of all plastic
- Dimensions corresponds to the standard for recirculating ball bearings
- Recommended housing bore H7
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Designed as a press-fit part, it will be oversized in free-state

Liners of the Series RJM-01 are used in:

➤ RQA-04, Page 24.53
➤ RTA-04, Page 24.54
➤ RGA-04, Page 24.55
➤ RGAS-04, Page 24.56





Dimensions (mm)

Part No.	Nominal Size	Housing Bore Max.	Housing Bore Min.	Tolerance for d1	pmax Dynamic Load p = 363 psi	pmax Static Load p = 2538 psi	Weight (g)
RJM-01-08	8	16.018	16.000	0.025 - 0.061	56	393	9
RJM-01-10	10	19.021	19.000	0.032 - 0.075	81	570	14
RJM-01-12	12	22.021	22.000	0.032 - 0.075	107	755	21
RJM-01-16	16	26.021	26.000	0.032 - 0.075	161	1132	28
RJM-01-20	20	32.025	32.000	0.040 - 0.092	252	1770	49
RJM-01-25	25	40.025	40.000	0.040 - 0.092	407	2852	108
RJM-01-30	30	47.025	47.000	0.040 - 0.092	573	4012	162
RJM-01-40	40	62.030	62.000	0.050 - 0.112	899	6294	334
RJM-01-50	50	75.030	75.000	0.060 - 0.134	1405	9835	579

Part No.	d1	d2	B	B1	s	dn
RJM-01-08	8	16	25	16.2	1.10	15.2
RJM-01-10	10	19	29	21.6	1.30	17.5
RJM-01-12	12	22	32	22.6	1.30	20.5
RJM-01-16	16	26	36	24.6	1.30	24.2
RJM-01-20	20	32	45	31.2	1.60	29.6
RJM-01-25	25	40	58	43.7	1.85	36.5
RJM-01-30	30	47	68	51.7	1.85	43.5
RJM-01-40	40	62	80	60.3	2.15	57.8
RJM-01-50	50	75	100	77.3	2.65	70.5

* according to igus® testing method ➤ Page 24.67

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QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R Straight Linear Bearing RJUM-01, mm

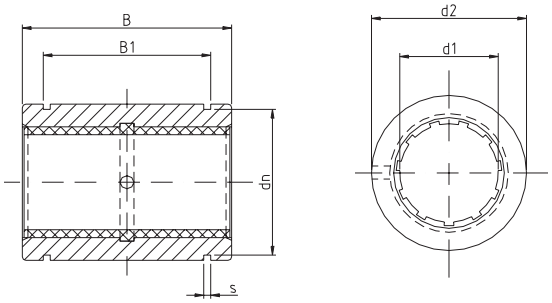


Special Properties

- Closed, anodized aluminum adapter
- Dimensions equivalent to the standard for recirculating ball bearings
- Equipped with JUM-01 liner made of iglide® J
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

RJUM-01 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56



Dimensions (mm)

Part No.	Nominal Size	Tolerance** Bearing Inner Diameter	pmax. Dynamic Load P=725 psi (lbs)	pmax. Static Load P=5075 psi (lbs)	Weight (g)
RJZM-01-05*	5	0.025 - 0.060	118	826	5
RJZM-01-08*	8	0.032 - 0.070	216	1511	9
RJUM-01-10	10	0.030 - 0.088	163	1141	14
RJUM-01-12	12	0.030 - 0.088	216	1511	21
RJUM-01-16	16	0.030 - 0.088	324	2266	28
RJUM-01-20	20	0.030 - 0.091	506	3541	49
RJUM-01-25	25	0.030 - 0.091	815	5704	108
RJUM-01-30	30	0.040 - 0.110	1146	8025	162
RJUM-01-40	40	0.040 - 0.115	1798	12589	334
RJUM-01-50	50	0.050 - 0.130	2810	19670	579

Part No.	d1	d2 h7	B h10	B1	s	dn
RJZM-01-05*	5	12	22	14.2	1.10	11.5
RJZM-01-08*	8	16	25	16.2	1.10	15.2
RJUM-01-10	10	19	29	21.6	1.30	17.5
RJUM-01-12	12	22	32	22.6	1.30	20.5
RJUM-01-16	16	26	36	24.6	1.30	24.2
RJUM-01-20	20	32	45	31.2	1.60	29.6
RJUM-01-25	25	40	58	43.7	1.85	36.5
RJUM-01-30	30	47	68	51.7	1.85	43.5
RJUM-01-40	40	62	80	60.3	2.15	57.8
RJUM-01-50	50	75	100	77.3	2.65	70.5

Housing Bore Dimensions

Nominal Size	METRIC Min.	METRIC Max.
8	16.000	16.018
10	19.000	19.021
12	22.000	22.021
16	26.000	26.021
20	32.000	32.025
25	40.000	40.025
30	47.000	47.025
40	62.000	62.030
50	75.000	75.030

* nominal width under 10 mm are delivered with pressfit cylindrical plain bearings
* according to igus® testing method ➤ Page 24.67

DryLin® R Straight, Low Clearance Linear Bearing RJUM-21, mm

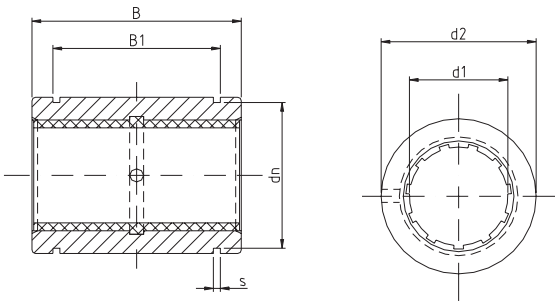


Special Properties

- Closed, anodized aluminum adapter
- Dimensions equivalent to the standard for recirculating ball bearings
- Equipped with JUM-20 liner made of iglide® J
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

RJUM-21 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56



Dimensions (mm)

Part No.	Nominal Size	Tolerance** Bearing Inner Diameter	pmax. Dynamic Load P=725 psi (lbs)	pmax. Static Load P=5075 psi (lbs)	Weight (g)
RJZM-21-05*	5	0.0125 - 0.0300	118	826	5
RJZM-21-08*	8	0.0160 - 0.0350	216	1511	9
RJUM-21-10	10	0.0150 - 0.0440	163	1141	14
RJUM-21-12	12	0.0150 - 0.0440	216	1511	21
RJUM-21-16	16	0.0150 - 0.0440	324	2266	28
RJUM-21-20	20	0.0150 - 0.0455	506	3541	49
RJUM-21-25	25	0.0150 - 0.0455	815	5704	108
RJUM-21-30	30	0.0200 - 0.0550	1146	8025	162
RJUM-21-40	40	0.0200 - 0.0575	1798	12589	334
RJUM-21-50	50	0.0250 - 0.0650	2810	19670	579

Part No.	d1	d2 h7	B h10	B1	s	dn
RJZM-21-05*	5	12	22	14.2	1.10	11.5
RJZM-21-08*	8	16	25	16.2	1.10	15.2
RJUM-21-10	10	19	29	21.6	1.30	17.5
RJUM-21-12	12	22	32	22.6	1.30	20.5
RJUM-21-16	16	26	36	24.6	1.30	24.2
RJUM-21-20	20	32	45	31.2	1.60	29.6
RJUM-21-25	25	40	58	43.7	1.85	36.5
RJUM-21-30	30	47	68	51.7	1.85	43.5
RJUM-21-40	40	62	80	60.3	2.15	57.8
RJUM-21-50	50	75	100	77.3	2.65	70.5

* nominal width under 10 mm are delivered with pressfit cylindrical plain bearings
* according to igus® testing method ➤ Page 24.67

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
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DryLin® R Self-Aligning Linear Bearing RJUM-03, mm

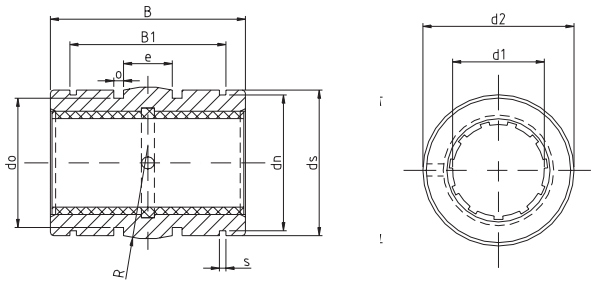


Special Properties

- Closed aluminum adapter with
  - reduced outer diameter
  - spherical area on the outer diameter for automatic alignment compensation
  - O-rings for elastic seating
  - hard-anodized
- Equipped with JUM-01 liner made of iglide® J
- Dimensions otherwise equivalent to the standard for recirculating ball bearings
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

RJUM-03 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56



Housing Bore Dimensions

	METRIC	
Nominal Size	Min.	Max.
8	16.000	16.018
10	19.000	19.021
12	22.000	22.021
16	26.000	26.021
20	32.000	32.025
25	40.000	40.025
30	47.000	47.025
40	62.000	62.030
50	75.000	75.030

Dimensions (mm)

Part No.	Nominal Size	Housing Bore i.d. h7 (mm)	Tolerance** Bearing Inner Diameter (lbs)	pmax. Dynamic Load P=725 psi (lbs)	pmax. Static Load P=5075 psi	Weight (g)
RJZM-03-08*	8	16	0.032 - 0.070	216	1511	8
RJUM-03-10	10	19	0.030 - 0.088	163	1141	11
RJUM-03-12	12	22	0.030 - 0.088	216	1511	17
RJUM-03-16	16	26	0.030 - 0.088	324	2266	23
RJUM-03-20	20	32	0.030 - 0.091	506	3541	44
RJUM-03-25	25	40	0.030 - 0.091	815	5704	92
RJUM-03-30	30	47	0.040 - 0.110	1146	8025	145
RJUM-03-40	40	62	0.040 - 0.115	1798	12589	311
RJUM-03-50	50	75	0.050 - 0.130	2810	19670	542

Part No.	d1	d2 h8	B h10	B1 H10	s H10	dn h10	ds h10	do h10	o +0.1	e	R
RJZM-03-08*	8	15.8	24.9	16.4	1.10	15.0	15.5	13.2	1.86	5.0	20.0
RJUM-03-10	10	18.8	28.9	21.8	1.30	17.5	18.5	15.4	1.86	5.0	13.0
RJUM-03-12	12	21.8	31.9	22.8	1.30	20.5	21.5	18.4	1.86	6.0	18.0
RJUM-03-16	16	25.8	35.9	24.9	1.30	24.2	25.5	20.4	2.86	8.0	32.0
RJUM-03-20	20	31.8	44.8	31.5	1.60	29.6	31.5	26.4	2.86	10.0	50.0
RJUM-03-25	25	39.8	57.8	44.1	1.85	36.5	39.5	34.4	2.86	12.5	39.0
RJUM-03-30	30	46.7	67.8	52.1	1.85	43.5	46.0	41.4	2.86	15.0	57.0
RJUM-03-40	40	61.7	79.8	60.9	2.15	57.8	61.0	56.4	2.86	20.0	100.0
RJUM-03-50	50	74.7	99.8	78.0	2.65	70.5	74.0	69.4	2.86	25.0	157.0

* nominal width under 10 mm are delivered with pressfit cylindrical plain bearings
* according to igus® testing method ➤ Page 24.67

DryLin® R Self-Aligning, Low Clearance Linear Bearing RJUM-23, mm

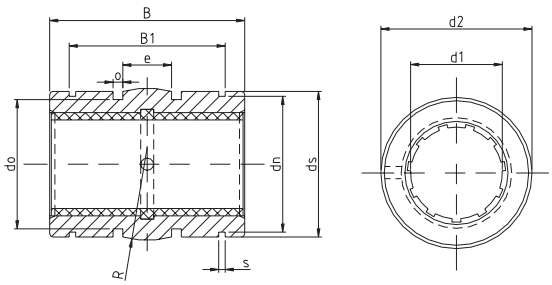


Special Properties

- Closed aluminum adapter with
  - reduced outer diameter
  - spherical area on the outer diameter for automatic alignment compensation
  - O-rings for elastic seating
  - hard-anodized
- Equipped with JUM-20 liner made of iglide® J
- Dimensions otherwise equivalent to the standard for recirculating ball bearings
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

RJUM-23 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56



Dimensions (mm)

Part No.	Nominal Size	Housing Bore i.d. (mm)	Tolerance** Bearing Inner Diameter	pmax. Dynamic Load P=725 psi (lbs)	pmax. Static Load P=5075 psi (lbs)	Weight (g)
RJZM-23-08*	8	16	0.016 - 0.0350	216	1511	8
RJUM-23-10	10	19	0.015 - 0.0440	163	1141	11
RJUM-23-12	12	22	0.015 - 0.0440	216	1511	17
RJUM-23-16	16	26	0.015 - 0.0440	324	2266	23
RJUM-23-20	20	32	0.015 - 0.0455	506	3541	44
RJUM-23-25	25	40	0.015 - 0.0455	815	5704	92
RJUM-23-30	30	47	0.020 - 0.0550	1146	8025	145
RJUM-23-40	40	62	0.020 - 0.0575	1798	12589	311
RJUM-23-50	50	75	0.025 - 0.0650	2810	19670	542

Part No.	d1	d2 h8	B h10	B1 H10	s H10	dn h10	ds h10	do h10	o +0.1	e	R
RJZM-23-08*	8	15.8	24.9	16.4	1.10	15.0	15.5	13.2	1.86	5.0	20.0
RJUM-23-10	10	18.8	28.9	21.8	1.30	17.5	18.5	15.4	1.86	5.0	13.0
RJUM-23-12	12	21.8	31.9	22.8	1.30	20.5	21.5	18.4	1.86	6.0	18.0
RJUM-23-16	16	25.8	35.9	24.9	1.30	24.2	25.5	20.4	2.86	8.0	32.0
RJUM-23-20	20	31.8	44.8	31.5	1.60	29.6	31.5	26.4	2.86	10.0	50.0
RJUM-23-25	25	39.8	57.8	44.1	1.85	36.5	39.5	34.4	2.86	12.5	39.0
RJUM-23-30	30	46.7	67.8	52.1	1.85	43.5	46.0	41.4	2.86	15.0	57.0
RJUM-23-40	40	61.7	79.8	60.9	2.15	57.8	61.0	56.4	2.86	20.0	100.0
RJUM-23-50	50	74.7	99.8	78.0	2.65	70.5	74.0	69.4	2.86	25.0	157.0

* nominal width under 10 mm are delivered with pressfit cylindrical plain bearings
* according to igus® testing method ➤ Page 24.67

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
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DryLin® R Straight, Split Linear Bearing TJUM-01, mm

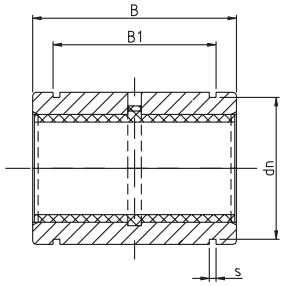


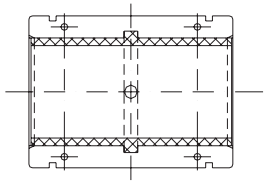
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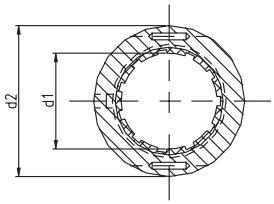
- Split, anodized aluminum adapter
- Dimensions equivalent to the standard for recirculating ball bearings
- Equipped with JUM-01 liner made of iglide® J
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

TJUM-01 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56







Housing Bore Dimensions

Nominal Size	METRIC Min.	METRIC Max.
8	16.000	16.018
10	19.000	19.021
12	22.000	22.021
16	26.000	26.021
20	32.000	32.025
25	40.000	40.025
30	47.000	47.025
40	62.000	62.030
50	75.000	75.030

Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi (lbs)	pmax. Static Load P=5075 psi (lbs)	Weight (g)
TJUM-01-10	10	0.030 - 0.092	163	1140	14
TJUM-01-12	12	0.030 - 0.097	215	1510	19
TJUM-01-16	16	0.030 - 0.097	323	2260	27
TJUM-01-20	20	0.030 - 0.103	505	3540	49
TJUM-01-25	25	0.030 - 0.103	815	5704	106
TJUM-01-30	30	0.040 - 0.124	1146	8025	166
TJUM-01-40	40	0.040 - 0.124	1798	12588	347
TJUM-01-50	50	0.050 - 0.146	2810	19670	577

Part No.	d1	d2	Tolerance	B h10	B1 H10	s H10	dn
TJUM-01-10	10	19	-0.020/-0.040	29	21.6	1.30	17.5
TJUM-01-12	12	22	-0.020/-0.040	32	22.6	1.30	20.5
TJUM-01-16	16	26	-0.020/-0.040	36	24.6	1.30	24.2
TJUM-01-20	20	32	-0.020/-0.045	45	31.2	1.60	29.6
TJUM-01-25	25	40	-0.030/-0.055	58	43.7	1.85	36.5
TJUM-01-30	30	47	-0.030/-0.055	68	51.7	1.85	43.5
TJUM-01-40	40	62	-0.030/-0.060	80	60.3	2.15	57.8
TJUM-01-50	50	75	-0.030/-0.060	100	77.3	2.65	70.5

* according to igus® testing method ➤ Page 24.67

DryLin® R Straight, Split, Low Clearance Linear Bearing TJUM-21, mm

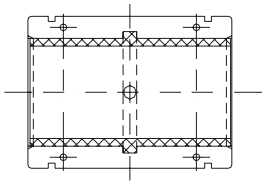


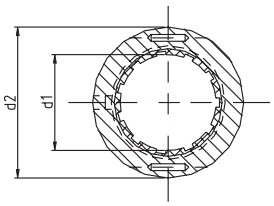
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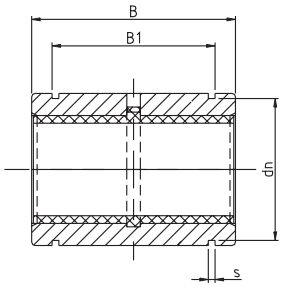
- Split, anodized aluminum adapter
- Dimensions equivalent to the standard for recirculating ball bearings
- Equipped with JUM-20 liner made of iglide® J
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

TJUM-21 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56







Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi (lbs)	pmax. Static Load P=5075 psi (lbs)	Weight (g)
TJUM-21-10	10	0.0150 - 0.0460	163	1140	14
TJUM-21-12	12	0.0150 - 0.0485	215	1510	19
TJUM-21-16	16	0.0150 - 0.0485	323	2260	27
TJUM-21-20	20	0.0150 - 0.0515	505	3540	49
TJUM-21-25	25	0.0150 - 0.0515	815	5704	106
TJUM-21-30	30	0.0200 - 0.0620	1146	8025	166
TJUM-21-40	40	0.0200 - 0.0620	1798	12588	347
TJUM-21-50	50	0.0250 - 0.0730	2810	19670	577

Part No.	d1	d2	Tolerance	B h10	B1 H10	s H10	dn
TJUM-21-10	10	19	-0.020/-0.040	29	21.6	1.30	17.5
TJUM-21-12	12	22	-0.020/-0.040	32	22.6	1.30	20.5
TJUM-21-16	16	26	-0.020/-0.040	36	24.6	1.30	24.2
TJUM-21-20	20	32	-0.020/-0.045	45	31.2	1.60	29.6
TJUM-21-25	25	40	-0.030/-0.055	58	43.7	1.85	36.5
TJUM-21-30	30	47	-0.030/-0.055	68	51.7	1.85	43.5
TJUM-21-40	40	62	-0.030/-0.060	80	60.3	2.15	57.8
TJUM-21-50	50	75	-0.030/-0.060	100	77.3	2.65	70.5

* **according to igus® testing method** ➤ Page 24.67

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
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DryLin® R Self-Aligning, Split Linear Bearing TJUM-03, mm

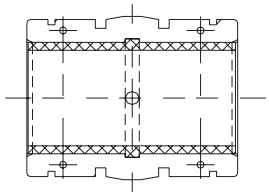


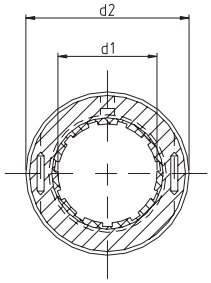
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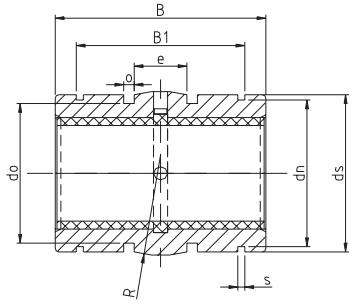
- Split aluminum adapter with
  - spherical area on the outer diameter for self-alignment purposes
  - O-rings for elastic seating
- Dimensions otherwise equivalent to the standard for recirculating ball bearings
- Equipped with JUM-01 liner made of iglide® J
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

TJUM-03 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56







Housing Bore Dimensions

Nominal Size	METRIC Min.	METRIC Max.
8	16.000	16.018
10	19.000	19.021
12	22.000	22.021
16	26.000	26.021
20	32.000	32.025
25	40.000	40.025
30	47.000	47.025
40	62.000	62.030
50	75.000	75.030

Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)
TJUM-03-10	10	0.030 - 0.092	163	1141	11
TJUM-03-12	12	0.030 - 0.097	215	1510	17
TJUM-03-16	16	0.030 - 0.097	323	2266	23
TJUM-03-20	20	0.030 - 0.103	505	3540	44
TJUM-03-25	25	0.030 - 0.103	815	5704	92
TJUM-03-30	30	0.040 - 0.124	1146	8025	145
TJUM-03-40	40	0.040 - 0.124	1798	12588	311
TJUM-03-50	50	0.050 - 0.146	2810	19670	542

Part No.	d1	d2	B h10	B1 H10	s H10	dn h10	ds h10	do +0.2	o 0.4	e	R
TJUM-03-10	10	19 -0.020 -0.040	28.9	21.8	1.30	17.5	18.5	15.4	1.86	5.0	13.0
TJUM-03-12	12	22 -0.020 -0.040	31.9	22.8	1.30	20.5	21.5	18.4	1.86	6.0	18.0
TJUM-03-16	16	26 -0.020 -0.040	35.9	24.9	1.30	24.2	25.5	20.4	2.86	8.0	32.0
TJUM-03-20	20	32 -0.020 -0.045	44.8	31.5	1.60	29.6	31.5	26.4	2.86	10.0	50.0
TJUM-03-25	25	40 -0.030 -0.055	57.8	44.1	1.85	36.5	39.5	34.4	2.86	12.5	39.0
TJUM-03-30	30	47 -0.030 -0.055	67.8	52.1	1.85	43.5	46.0	41.4	2.86	15.0	57.0
TJUM-03-40	40	62 -0.030 -0.060	79.8	60.9	2.15	57.8	61.0	56.4	2.86	20.0	100.0
TJUM-03-50	50	75 -0.030 -0.060	99.8	78.0	2.65	70.5	74.0	69.4	2.86	25.0	157.0

* according to igus® testing method ➤ Page 24.67

DryLin® R Self-Aligning, Split, Low Clearance Linear Bearing - TJUM-23, mm

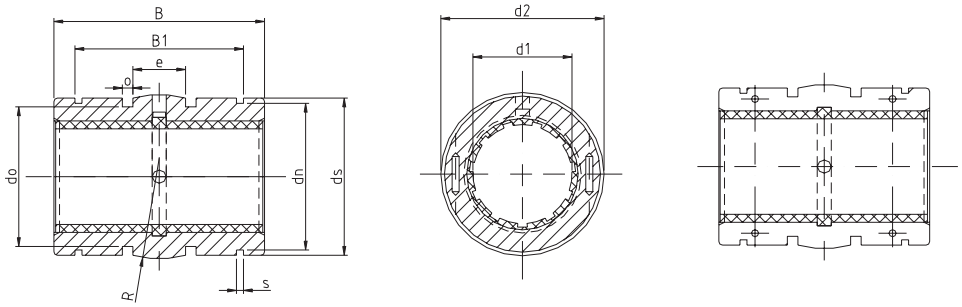


Special Properties

- Split aluminum adapter with
  - spherical area on the outer diameter for self-alignment purposes
  - O-rings for elastic seating
- Dimensions otherwise equivalent to the standard for recirculating ball bearings
- Equipped with JUM-20 liner made of iglide® J
- Secured by retaining clips according to DIN 471 or 472 (not included in delivery)
- Recommended housing bore H7

TJUM-23 Bearings are used in:

➤ RQA-01, Page 24.53
➤ RTA-01, Page 24.54
➤ RGA-01, Page 24.55
➤ RGAS-01, Page 24.56



Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)
TJUM-23-10	10	0.0150-0.0460	163	1141	11
TJUM-23-12	12	0.0150-0.0485	215	1510	17
TJUM-23-16	16	0.0150-0.0485	323	2266	23
TJUM-23-20	20	0.0150-0.0515	505	3540	44
TJUM-23-25	25	0.0150-0.0515	815	5704	92
TJUM-23-30	30	0.0200-0.0620	1146	8025	145
TJUM-23-40	40	0.0200-0.0620	1798	12588	311
TJUM-23-50	50	0.0250-0.0730	2810	19670	542

Part No.	d1	d2	B h10	B1 H10	s H10	dn h10	ds h10	do +0.2	o 0.4	e	R
TJUM-23-10	10	19 -0.020 -0.040	28.9	21.8	1.30	17.5	18.5	15.4	1.86	5.0	13.0
TJUM-23-12	12	22 -0.020 -0.040	31.9	22.8	1.30	20.5	21.5	18.4	1.86	6.0	18.0
TJUM-23-16	16	26 -0.020 -0.040	35.9	24.9	1.30	24.2	25.5	20.4	2.86	8.0	32.0
TJUM-23-20	20	32 -0.020 -0.045	44.8	31.5	1.60	29.6	31.5	26.4	2.86	10.0	50.0
TJUM-23-25	25	40 -0.030 -0.055	57.8	44.1	1.85	36.5	39.5	34.4	2.86	12.5	39.0
TJUM-23-30	30	47 -0.030 -0.055	67.8	52.1	1.85	43.5	46.0	41.4	2.86	15.0	57.0
TJUM-23-40	40	62 -0.030 -0.060	79.8	60.9	2.15	57.8	61.0	56.4	2.86	20.0	100.0
TJUM-23-50	50	75 -0.030 -0.060	99.8	78.0	2.65	70.5	74.0	69.4	2.86	25.0	157.0

* **according to igus® testing method** ➤ Page 24.67

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
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DryLin® R Straight, Open Linear Bearing - OJUM-01, mm

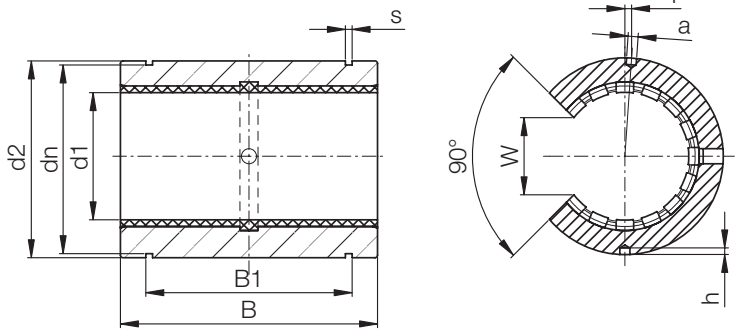


Special Properties

- Open, anodized aluminum adapter for supported shafts
- Dimensions equivalent to the standard for recirculating ball bearings
- Equipped with JUMO liner made of iglide® J
- Recommended housing bore H7
- Secured the bearing with set screws (not included in the delivery)

OJUM-01 Bearings are used in:

➤ OQA-01, Page 24.53
➤ OTA-01, Page 24.54
➤ OGA-01, Page 24.55
➤ OGAS-01, Page 24.56



Housing Bore Dimensions

	METRIC	
Nominal Size	Min.	Max.
8	16.000	16.018
10	19.000	19.021
12	22.000	22.021
16	26.000	26.021
20	32.000	32.025
25	40.000	40.025
30	47.000	47.025
40	62.000	62.030
50	75.000	75.030

Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi			pmax. Static Load P=5075 psi			Weight (g)
			0°	90°	180°	0°	90°	180°	
OJUM-01-10	10	0.030 - 0.088	163	112	44	1141	786	308	11
OJUM-01-12	12	0.030 - 0.088	215	142	54	1510	999	377	15
OJUM-01-16	16	0.030 - 0.088	323	222	89	2266	1560	623	21
OJUM-01-20	20	0.030 - 0.091	505	404	202	3540	2832	1416	42
OJUM-01-25	25	0.030 - 0.091	815	663	342	5704	4646	2396	70
OJUM-01-30	30	0.040 - 0.110	1146	955	512	8025	6684	3584	132
OJUM-01-40	40	0.040 - 0.115	1798	1530	854	12588	10714	5993	278
OJUM-01-50	50	0.050 - 0.130	2810	2416	1377	19670	16919	13769	479

Part No.	d1	d2 h7	B h10	W	a +0.1	dn h10	B1 H10	s H10	f ±0.2	h -0.5
OJUM-01-10	10	19	29	7.3	0.0	17.5	21.6	1.30	0	1.2
OJUM-01-12	12	22	32	9.0	3.0	20.5	22.6	1.30	1.33 (7°)	1.2
OJUM-01-16	16	26	36	11.6	2.2	24.2	24.6	1.30	0	1.2
OJUM-01-20	20	32	45	12.0	2.2	29.6	31.2	1.60	0	1.2
OJUM-01-25	25	40	58	14.5	3.0	36.5	43.7	1.85	-1.5 (-4.3°)	1.5
OJUM-01-30	30	47	68	16.6	3.0	43.5	51.7	1.85	2 (4.9°)	2.0
OJUM-01-40	40	62	80	21.0	3.0	57.8	60.3	2.15	1.5 (2.8°)	2.0
OJUM-01-50	50	75	100	25.5	5.0	70.5	77.3	2.65	2.5 (3.8°)	2.0

* according to igus® testing method ➤ Page 24.67

DryLin® R Straight, Open, Low Clearance Linear Bearing - OJUM-21, mm

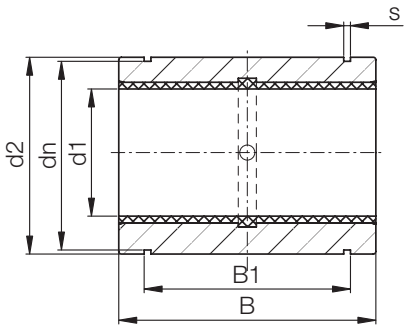


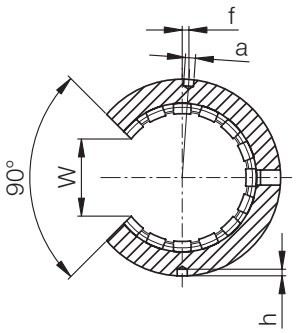
Special Properties

- Open, anodized aluminum adapter for supported shafts
- Dimensions equivalent to the standard for recirculating ball bearings
- Equipped with JUMO-20 liner made of iglide® J
- Recommended housing bore H7
- Secured the bearing with set screws (not included in the delivery)

OJUM-21 Bearings are used in:

➤ OQA-01, Page 24.53
➤ OTA-01, Page 24.54
➤ OGA-01, Page 24.55
➤ OGAS-01, Page 24.56





Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi			pmax. Static Load P=5075 psi			Weight (g)
			0°	90°	180°	0°	90°	180°	
OJUM-21-10	10	0.0150 - 0.0440	163	112	44	1141	786	308	11
OJUM-21-12	12	0.0150 - 0.0440	215	142	54	1510	999	377	15
OJUM-21-16	16	0.0150 - 0.0440	323	222	89	2266	1560	623	21
OJUM-21-20	20	0.0150 - 0.0455	505	404	202	3540	2832	1416	42
OJUM-21-25	25	0.0150 - 0.0455	815	663	342	5704	4646	2396	70
OJUM-21-30	30	0.0200 - 0.0550	1146	955	512	8025	6684	3584	132
OJUM-21-40	40	0.0200 - 0.0575	1798	1530	854	12588	10714	5993	278
OJUM-21-50	50	0.0250 - 0.0650	2810	2416	1377	19670	16919	13769	479

Part No.	d1	d2 h7	B h10	W	a +0.1	dn h10	B1 H10	s H10	f ±0.2	h -0.5
OJUM-21-10	10	19	29	7.3	0.0	17.5	21.6	1.30	0	1.2
OJUM-21-12	12	22	32	9.0	3.0	20.5	22.6	1.30	1.33 (7°)	1.2
OJUM-21-16	16	26	36	11.6	2.2	24.2	24.6	1.30	0	1.2
OJUM-21-20	20	32	45	12.0	2.2	29.6	31.2	1.60	0	1.2
OJUM-21-25	25	40	58	14.5	3.0	36.5	43.7	1.85	-1.5 (-4.3°)	1.5
OJUM-21-30	30	47	68	16.6	3.0	43.5	51.7	1.85	2 (4.9°)	2.0
OJUM-21-40	40	62	80	21.0	3.0	57.8	60.3	2.15	1.5 (2.8°)	2.0
OJUM-21-50	50	75	100	25.5	5.0	70.5	77.3	2.65	2.5 (3.8°)	2.0

* **according to igus® testing method** ➤ Page 24.67

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
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DryLin® R Self Aligning, Open Linear Bearing - OJUM-03, mm

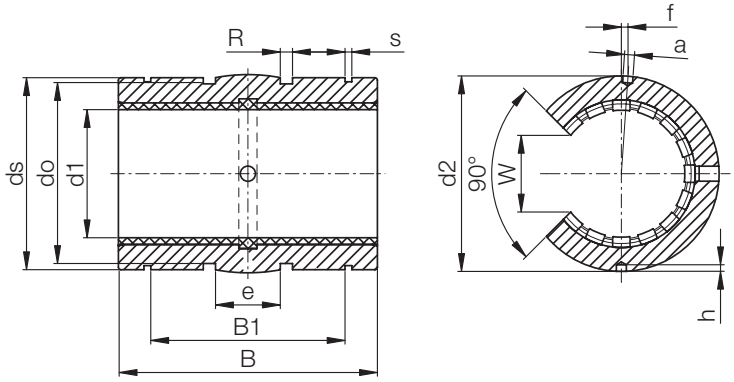


Special Properties

- Open, aluminum adapter with
  - reduced outer diameter
  - spherical area on the outer diameter for automatic alignment compensation
  - O-rings for elastic seating
  - hard-anodized
- Dimensions correspond to the standard for recirculating ball bearings
- Equipped with JUMO liner made of iglide® J
- Recommended housing bore H7
- Attachment by mounting bolts (not included in delivery)

OJUM-03 Bearings are used in:

➤ OQA-01, Page 24.53
➤ OTA-01, Page 24.54
➤ OGA-01, Page 24.55
➤ OGAS-01, Page 24.56



Housing Bore Dimensions

Nominal Size	METRIC Min.	Max.
8	16.000	16.018
10	19.000	19.021
12	22.000	22.021
16	26.000	26.021
20	32.000	32.025
25	40.000	40.025
30	47.000	47.025
40	62.000	62.030
50	75.000	75.030

Dimensions (mm)

Part No.	Nominal Size	Housing bore	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi 0°	90°	180°	pmax. Static Load P=5075 psi 0°	90°	180°	Weight (g)
OJUM-03-10	10	19	0.030 - 0.088	163	112	44	1141	786	308	10
OJUM-03-12	12	22	0.030 - 0.088	215	142	54	1510	999	377	13
OJUM-03-16	16	26	0.030 - 0.088	323	222	89	2266	1560	623	19
OJUM-03-20	20	32	0.030 - 0.091	505	404	202	3540	2832	1416	38
OJUM-03-25	25	40	0.030 - 0.091	815	663	342	5704	4646	2396	63
OJUM-03-30	30	47	0.040 - 0.110	1146	955	512	8025	6684	3584	119
OJUM-03-40	40	62	0.040 - 0.115	1798	1531	854	12588	10714	5979	250
OJUM-03-50	50	75	0.050 - 0.130	2810	2416	1377	19670	16919	9638	431

Part No.	d2 h7	ds h10	e	o +0.1	do h10	B1 H10	s H10	B h10	R	W	a +0.1	f ±0.2	h -0.5	a
OJUM-03-10	18.8	18.5	5.0	1.86	15.4	21.8	1.30	28.9	13.0	7.3	0.0	0	1.2	10
OJUM-03-12	21.8	21.5	6.0	1.86	18.4	22.8	1.30	31.9	18.0	9.0	3.0	1.33 (7°)	1.2	12
OJUM-03-16	25.8	25.5	8.0	2.86	20.4	24.9	1.30	35.9	32.0	11.6	2.2	0	1.2	16
OJUM-03-20	31.8	31.5	10.0	2.86	26.4	31.5	1.60	44.8	50.0	12.0	2.2	0	1.2	20
OJUM-03-25	39.8	39.0	12.5	2.86	34.4	44.1	1.85	57.8	39.0	14.5	3.0	-1.5 (-4.3°)	1.5	25
OJUM-03-30	46.7	46.0	15.0	2.86	41.4	52.1	1.85	67.8	57.0	16.6	3.0	2 (4.9°)	2	30
OJUM-03-40	61.7	61.0	20.0	2.86	56.4	60.9	2.15	79.8	100.0	21.0	3.0	1.5 (2.8°)	2	40
OJUM-03-50	74.7	74.0	25.0	2.86	69.4	78.0	2.65	99.8	157.0	25.5	5.0	2.5 (3.8°)	2	50

* **according to igus® testing method** ➤ Page 24.67

DryLin® R Self Aligning, Open, Low Clearance Linear Bearing - OJUM-23, mm

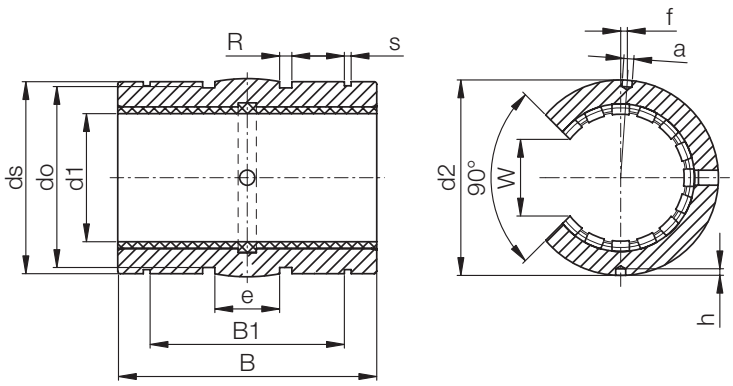


Special Properties

- Open, aluminum adapter with
  - reduced outer diameter
  - spherical area on the outer diameter for automatic alignment compensation
  - O-rings for elastic seating
  - hard-anodized
- Dimensions correspond to the standard for recirculating ball bearings
- Equipped with JUMO-20 liner made of iglide® J
- Recommended housing bore H7
- Attachment by mounting bolts (not included in delivery)

OJUM-23 Bearings are used in:

➤ OQA-01, Page 24.53
➤ OTA-01, Page 24.54
➤ OGA-01, Page 24.55
➤ OGAS-01, Page 24.56



Dimensions (mm)

Part No.	Nominal Size	Housing bore	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi			pmax. Static Load P=5075 psi			Weight (g)
				0°	90°	180°	0°	90°	180°	
OJUM-23-10	10	19	0.0150 - 0.0440	163	112	44	1141	786	308	10
OJUM-23-12	12	22	0.0150 - 0.0440	215	142	54	1510	999	377	13
OJUM-23-16	16	26	0.0150 - 0.0440	323	222	89	2266	1560	623	19
OJUM-23-20	20	32	0.0150 - 0.0455	505	404	202	3540	2832	1416	38
OJUM-23-25	25	40	0.0150 - 0.0455	815	663	342	5704	4646	2396	63
OJUM-23-30	30	47	0.0200 - 0.0550	1146	955	512	8025	6684	3584	119
OJUM-23-40	40	62	0.0200 - 0.0575	1798	1531	854	12588	10714	5979	250
OJUM-23-50	50	75	0.0250 - 0.0650	2810	2416	1377	19670	16919	9638	431

Part No.	d2 h7	ds h10	e	o +0.1	do h10	B1 H10	s H10	B h10	R	W	a +0.1	f ±0.2	h -0.5	a
OJUM-23-10	18.8	18.5	5.0	1.86	15.4	21.8	1.30	28.9	13.0	7.3	0.0	0	1.2	10
OJUM-23-12	21.8	21.5	6.0	1.86	18.4	22.8	1.30	31.9	18.0	9.0	3.0	1.33 (7°)	1.2	12
OJUM-23-16	25.8	25.5	8.0	2.86	20.4	24.9	1.30	35.9	32.0	11.6	2.2	0	1.2	16
OJUM-23-20	31.8	31.5	10.0	2.86	26.4	31.5	1.60	44.8	50.0	12.0	2.2	0	1.2	20
OJUM-23-25	39.8	39.0	12.5	2.86	34.4	44.1	1.85	57.8	39.0	14.5	3.0	-1.5 (-4.3°)	1.5	25
OJUM-23-30	46.7	46.0	15.0	2.86	41.4	52.1	1.85	67.8	57.0	16.6	3.0	2 (4.9°)	2	30
OJUM-23-40	61.7	61.0	20.0	2.86	56.4	60.9	2.15	79.8	100.0	21.0	3.0	1.5 (2.8°)	2	40
OJUM-23-50	74.7	74.0	25.0	2.86	69.4	78.0	2.65	99.8	157.0	25.5	5.0	2.5 (3.8°)	2	50

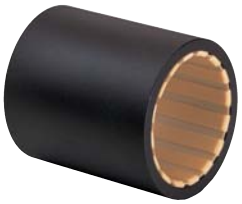
* according to igus® testing method ➤ Page 24.67

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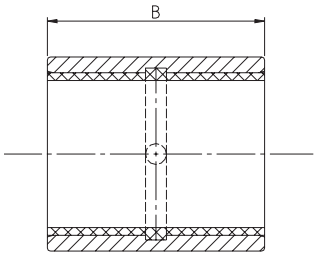
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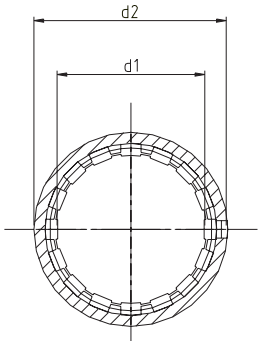
DryLin® R Thin Walled, Linear Bearing RJUM-02, mm



Special Properties

- Closed, anodized aluminum adapter
- Dimensions equivalent to the standard for recirculating ball bearings
- Equipped with JUM-02 liner made of iglide® J
- Secured by pressfit in a recommended housing bore
- Recommended housing bore H7





RJUM-02, Standard Clearance

Dimensions (mm)

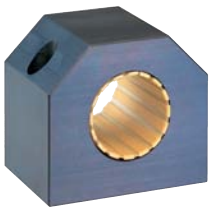
Part No.	Nominal Size	Housing Bore i.d. h7	Tolerance** Bearing i.d. Min.	Tolerance** Bearing i.d. Max.	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)	d1	d2 k7	B h10
RJZM-02-08*	8	15	0.032	0.070	215	1510	6	8	15	24
RJUM-02-10	10	17	0.030	0.088	146	1022	8	10	17	26
RJUM-02-12	12	19	0.030	0.088	188	1321	10	12	19	28
RJUM-02-16	16	24	0.030	0.088	269	1888	17	16	24	30
RJUM-02-20	20	28	0.030	0.091	337	2360	18	20	28	30
RJUM-02-25	25	35	0.030	0.091	562	3934	42	25	35	40
RJUM-02-30	30	40	0.040	0.110	843	5901	56	30	40	50
RJUM-02-40	40	52	0.040	0.115	1348	9441	113	40	52	60
RJUM-02-50	50	60	0.050	0.130	1967	13769	147	50	60	70

RJUM-22, Low Clearance

Dimensions (mm)

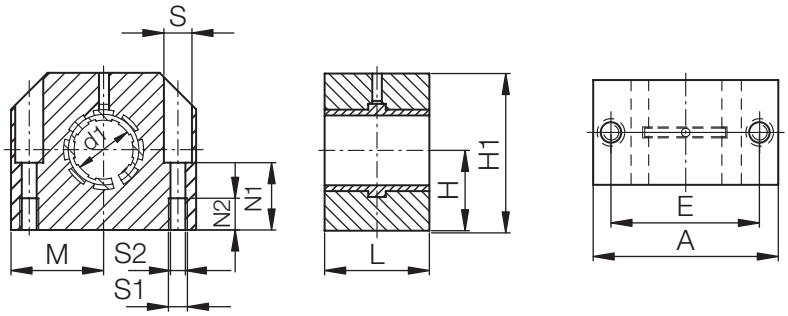
Part No.	Nominal Size	Housing Bore i.d.	Tolerance** Bearing i.d. Min.	Tolerance** Bearing i.d. Max.	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)	d1	d2 k7	B h10
RJZM-02-08*	8	15	0.016	0.0350	215	1510	6	8	15	24
RJUM-22-10	10	17	0.015	0.0440	146	1022	8	10	17	26
RJUM-22-12	12	19	0.015	0.0440	188	1321	10	12	19	28
RJUM-22-16	16	24	0.015	0.0440	269	1888	17	16	24	30
RJUM-22-20	20	28	0.015	0.0455	337	2360	18	20	28	30
RJUM-22-25	25	35	0.015	0.0455	562	3934	42	25	35	40
RJUM-22-30	30	40	0.020	0.0550	843	5901	56	30	40	50
RJUM-22-40	40	52	0.020	0.0575	1348	9441	113	40	52	60
RJUM-22-50	50	60	0.025	0.0650	1967	13769	147	50	60	70

DryLin® R Closed Pillow Block, Short Design
Linear Bearing RJUM-05, mm



Special Properties

- Closed, anodized aluminum housing, short design
- Contains JUM-02-XX liner



Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)
RJUM-05-10	10	0.030 - 0.088	146	1022	71
RJUM-05-12	12	0.030 - 0.088	188	1321	78
RJUM-05-16	16	0.030 - 0.088	269	1888	106
RJUM-05-20	20	0.030 - 0.091	337	2360	132
RJUM-05-25	25	0.030 - 0.091	562	3934	253
RJUM-05-30	30	0.040 - 0.110	843	5901	374
RJUM-05-40	40	0.040 - 0.115	1348	9441	713
RJUM-05-50	50	0.050 - 0.130	1967	13769	1.168

For a Low Clearance version use part number RJUM-35-XX

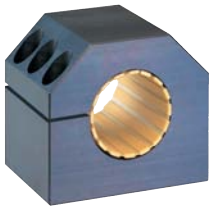
Part No.	d1	H +0.01 -0.014	H1	A	M	E ±0.15	S	S1	S2	N1	N2	L
RJUM-05-10	10	16	33	40	20.0	29	8.0	M 5	4.3	16	11	26
RJUM-05-12	12	17	33	40	20.0	29	8.0	M 5	4.3	16	11	28
RJUM-05-16	16	19	38	45	22.5	34	8.0	M 5	4.3	18	11	30
RJUM-05-20	20	23	45	53	26.5	40	9.5	M 6	5.3	22	13	30
RJUM-05-25	25	27	54	62	31.0	48	11.0	M 8	6.6	26	18	40
RJUM-05-30	30	30	60	67	33.5	53	11.0	M 8	6.6	29	18	50
RJUM-05-40	40	39	76	87	43.5	69	15.0	M10	8.4	38	22	60
RJUM-05-50	50	47	92	103	51.5	82	18.0	M12	10.5	46	26	70

* according to igus® testing method ➤ Page 24.67

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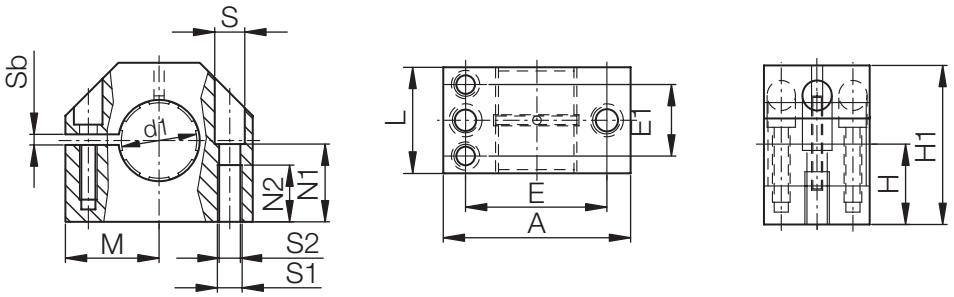
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R Adjustable Pillow Block, Short Design Linear Bearing RJUME-05, mm



Special Properties

- Adjustable, anodized aluminum housing, short design
- Contains JUM-02-XX liner
- With adjustable clearance for shaft dimensions 12 to 40 mm



Dimensions (mm)

Part No.	Nominal Size	Tolerance Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)
RJUME-05-12	12	adjustable	188	1321	78
RJUME-05-16	16	adjustable	269	1888	106
RJUME-05-20	20	adjustable	337	2360	132
RJUME-05-25	25	adjustable	562	3934	253
RJUME-05-30	30	adjustable	843	5901	374
RJUME-05-40	40	adjustable	1348	9441	713

For a Low Clearance version use part number RJUME-35-XX

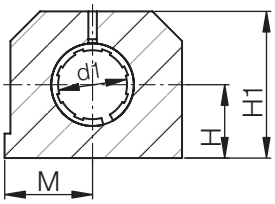
Part No.	d1	H +0.01 -0.014	H1	A	M	E ±0.15	E1 ±0.15	S	S1	S2	Sb	N1	N2	L
RJUME-05-12	12	17	33	40	20.0	29	18.0	8.0	4.3	M 5	2	16	11	28
RJUME-05-16	16	19	38	45	22.5	34	19.0	8.0	4.3	M 5	2	18	11	30
RJUME-05-20	20	23	45	53	26.5	40	20.0	9.5	5.3	M 6	2	22	13	30
RJUME-05-25	25	27	54	62	31.0	48	25.5	11.0	6.6	M 8	2	26	18	40
RJUME-05-30	30	30	60	67	33.5	53	30.5	11.0	6.6	M 8	2	29	18	50
RJUME-05-40	40	39	76	87	43.5	69	36.0	15.0	8.4	M10	2	38	22	60

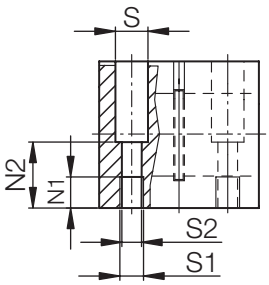
DryLin® R Closed Pillow Block, Long Design
Linear Bearing RJUM-06, mm

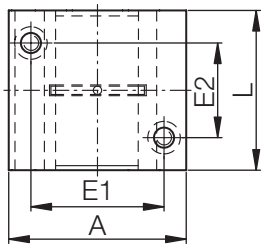


Special Properties

- Closed, anodized aluminum housing, long design
- Contains JUM-01-XX liner







Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (kg)
RJUM-06-12	12	0.030 - 0.088	215	1510	0.121
RJUM-06-16	16	0.030 - 0.088	323	2266	0.211
RJUM-06-20	20	0.030 - 0.091	505	3540	0.323
RJUM-06-25	25	0.030 - 0.091	815	5704	0.651
RJUM-06-30	30	0.040 - 0.110	1146	8025	1.050
RJUM-06-40	40	0.040 - 0.115	1798	12588	1.820
RJUM-06-50	50	0.050 - 0.130	2810	19670	3.250

For a Low Clearance version use part number RJUM-36-XX

Part No.	d1	H +0.01 -0.014	H1	A	M	E1 ±0.15	E2 ±0.15	S	S1	S2	N1	N2	L
RJUM-06-12	12	18	35	43	21.5	32	23	8.0	M 5	4.3	16.5	11	39
RJUM-06-16	16	22	42	53	26.5	40	26	10.0	M 6	5.3	21.0	13	43
RJUM-06-20	20	25	50	60	30.0	45	32	11.0	M 8	6.6	24.0	18	54
RJUM-06-25	25	30	60	78	39.0	60	40	15.0	M10	8.4	29.0	22	67
RJUM-06-30	30	35	70	87	43.5	68	45	15.0	M10	8.4	34.0	22	79
RJUM-06-40	40	45	90	108	54.0	86	58	18.0	M12	10.5	44.0	26	91
RJUM-06-50	50	50	105	132	66.0	108	50	20.0	M16	13.5	49.0	34	113

* **according to igus® testing method** ➤ Page 24.67

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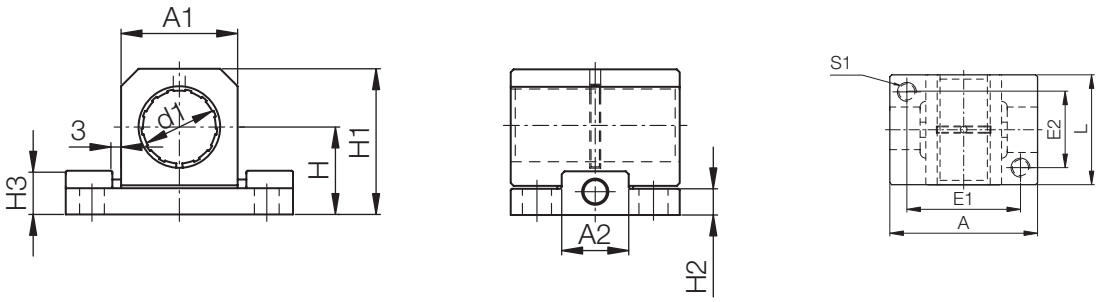
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R Floating Pillow Block
RJUM-06 LL, mm



Special Properties

- Closed, anodized aluminum housing, long design
- Contains JUM-01-XX liner
- Same properties as standard pillow block
- Compensation of parallelism errors up to 6mm
- Compensates for angular errors and bending of the shaft



Dimensions (mm)

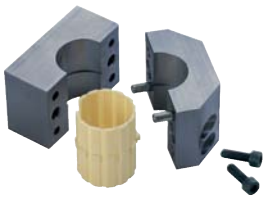
Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. [lbs] Static or Dynamic	Weight [kg]
RJUM-06-12 LL	12	0.030 - 0.088	126	0.050
RJUM-06-16 LL	16	0.030 - 0.088	207	0.080
RJUM-06-20 LL	20	0.030 - 0.091	472	0.130
RJUM-06-25 LL	25	0.030 - 0.091	798	0.280
RJUM-06-30 LL	30	0.040 - 0.110	1191	0.430

For a Low Clearance version use part number RJUM-36-XX LL

Part No.	d1	H	H1	A	E1 ±0.15	E2 ±0.15	S1	L	A1	A2	H2	H3
RJUM-06-12 LL	12	18	28	43	32	23	M 5	39	20	13	6	11
RJUM-06-16 LL	16	22	35	53	40	26	M 6	43	26	15	7	11
RJUM-06-20 LL	20	25	41	60	45	32	M 8	54	32	19	7	12.5
RJUM-06-25 LL	25	30	50	78	60	40	M 10	67	40	23	9	15
RJUM-06-30 LL	30	35	59	87	68	45	M 10	79	48	28	10	15

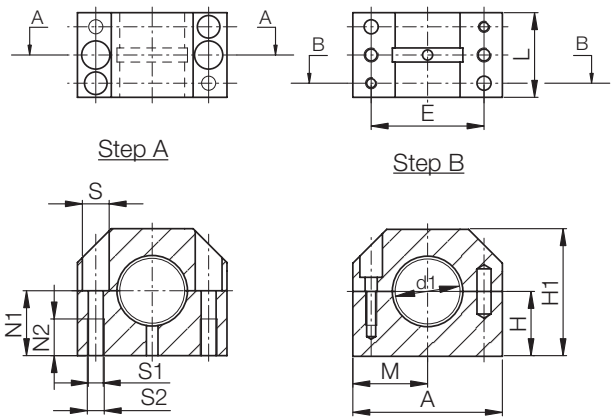
* according to igus® testing method ➤ Page 24.67

DryLin® R Split Pillow Block TJUM-05, mm



Special Properties

- Split, anodized aluminum housing, bolted
- Contains JUM-02-XX liner
- Replacement of the liner without disassembling the shaft



Dimensions (mm)

Part No.	Nominal Size	Tolerance Bearing Inner Diameter	pmax. Dynamic Load P = 725 psi	pmax. Static Load P = 5075 psi	Weight (g)
TJUM-05-16	16	0.030 - 0.120	269	1888	105
TJUM-05-20	20	0.030 - 0.120	337	2360	137
TJUM-05-25	25	0.030 - 0.120	562	3934	253
TJUM-05-30	30	0.040 - 0.135	843	5901	377
TJUM-05-40	40	0.040 - 0.135	1348	9441	720

For a Low Clearance version use part number TJUM-35-XX

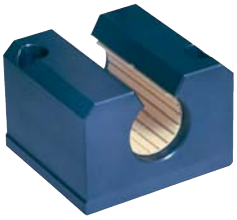
Part No.	d1	H ±0.02	H1	A	M	E ±0.15	S	S1	S2	N1	N2	L
TJUM-05-16	16	19	38	45	22.5	34	8.0	M 5	4.3	18	11	30
TJUM-05-20	20	23	45	53	26.5	40	9.5	M 6	5.3	22	13	30
TJUM-05-25	25	27	54	62	31.0	48	11.0	M 8	6.6	26	18	40
TJUM-05-30	30	30	60	67	33.5	53	11.0	M 8	6.6	29	18	50
TJUM-05-40	40	39	76	87	43.5	69	15.0	M10	8.4	38	22	60

* according to igus® testing method ➤ Page 24.67

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
RoHS info: www.igus.com/RoHS.asp

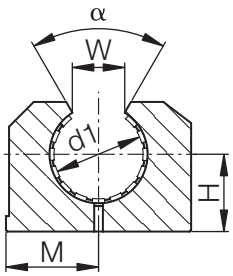
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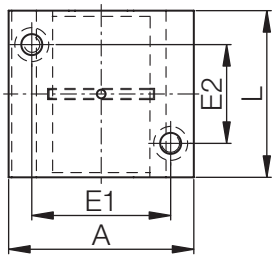
DryLin® R Open Pillow Block, Long Design Linear Bearing OJUM-06, mm

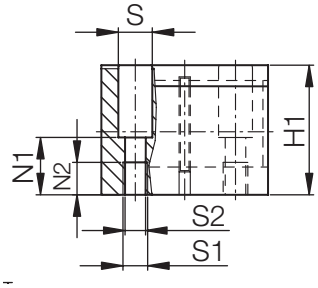


Special Properties

- Open, anodized aluminum housing, long design
- Contains JUMO-01-XX liner







Dimensions (mm)

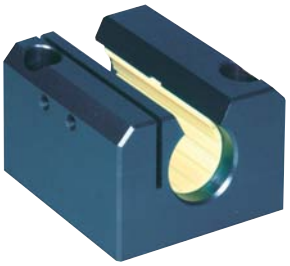
Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P = 725 psi			pmax. Static Load P = 5075 psi			Weight (kg)
			0°	90°	180°	0°	90°	180°	
OJUM-06-12	12	0.030 - 0.088	215	142	54	1510	999	377	0.095
OJUM-06-16	16	0.030 - 0.088	323	222	89	2266	1560	623	0.158
OJUM-06-20	20	0.030 - 0.091	505	404	202	3540	2832	1416	0.266
OJUM-06-25	25	0.030 - 0.091	815	663	342	5704	4646	2396	0.530
OJUM-06-30	30	0.040 - 0.110	1146	955	512	8025	6684	3584	0.818
OJUM-06-40	40	0.040 - 0.115	1798	1531	854	12588	10714	5979	1.485
OJUM-06-50	50	0.050 - 0.130	2810	2416	1377	19670	16919	9638	2.750

For a Low Clearance version use part number OJUM-36-XX

Part No.	d1	H +0.01	H1	A	M	E ±0.15	E2 ±0.15	S	S1	S2	N1	N2	W	α (r)	L
OJUM-06-12	12	18	28	43	21.5	32	23	8.0	M 5	4.3	16.5	11	10.2	78	39
OJUM-06-16	16	22	35	53	26.5	40	26	10.0	M 6	5.3	21.0	13	11.6	78	43
OJUM-06-20	20	25	42	60	30.0	45	32	11.0	M 8	6.6	24.0	18	12.0	60	54
OJUM-06-25	25	30	51	78	39.0	60	40	15.0	M10	8.4	29.0	22	14.5	60	67
OJUM-06-30	30	35	60	87	43.5	68	45	15.0	M10	8.4	34.0	22	16.6	57	79
OJUM-06-40	40	45	77	108	54.0	86	58	18.0	M12	10.5	44.0	26	21.0	56	91
OJUM-06-50	50	50	88	132	66.0	108	50	20.0	M16	13.5	49.0	34	25.5	54	113

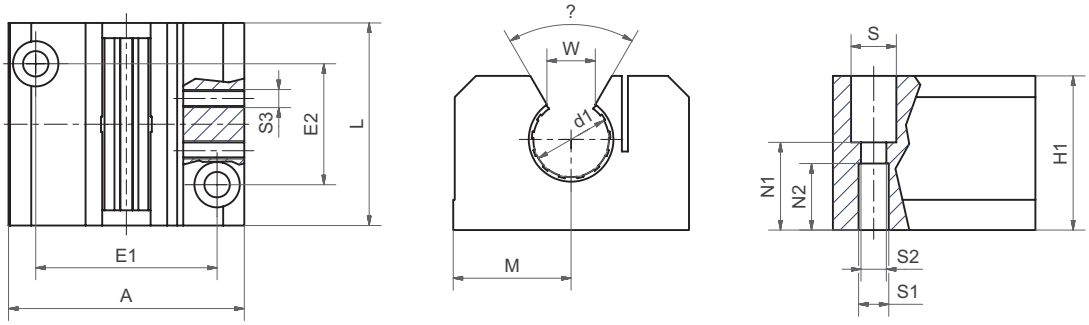
* according to igus® testing method ➤ Page 24.67

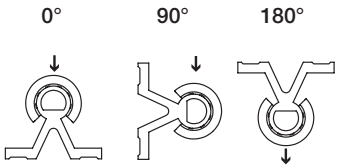
DryLin® R Adjustable Pillow Block, Long Design
Linear Bearing OJUME-06, mm



Special Properties

- Open, anodized aluminum housing, standard
- Contains JUMO-01-XX liner made of iglide® J is fitted as standard
- Adjustable clearance: with 2 set screws (DIN 913) one side of the block can be adjusted
- Recommended tolerance for the shaft: h6-h10 (see igus® supported shafts page 24.59
- Also available with the following liners:
  TUMO-01: for high temperatures up to 356°F, material iglide® T500 - Example: OTUM-06-16
- JUMO-11: with reduced maximum clearance, material iglide® J - Example: OJUM-20-16





Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. Dynamic Load P = 725 psi			pmax. Static Load P = 5075 psi			Weight (kg)
			0°	90°	180°	0°	90°	180°	
OJUME-06-12	12	0.030 - 0.088	215	142	54	1510	999	377	0.095
OJUME-06-16	16	0.030 - 0.088	323	222	89	2266	1560	623	0.158
OJUME-06-20	20	0.030 - 0.091	505	404	202	3540	2832	1416	0.266
OJUME-06-25	25	0.030 - 0.091	815	663	342	5704	4646	2396	0.530
OJUME-06-30	30	0.040 - 0.110	1146	955	512	8025	6684	3584	0.818
OJUME-06-40	40	0.040 - 0.115	1798	1531	854	12588	10714	5979	1.485
OJUME-06-50	50	0.050 - 0.130	2810	2416	1377	19670	16919	9638	2.750

For a Low Clearance version use part number OJUM-36-XX

Part No.	d1	H +0.01	H1	A	M	E ±0.15	E2 ±0.15	S	S1	S2	N1	N2	W	α (r)	L
OJUME-06-12	12	18	28	43	21.5	32	23	8.0	M 5	4.3	16.5	11	10.2	78	39
OJUME-06-16	16	22	35	53	26.5	40	26	10.0	M 6	5.3	21.0	13	11.6	78	43
OJUME-06-20	20	25	42	60	30.0	45	32	11.0	M 8	6.6	24.0	18	12.0	60	54
OJUME-06-25	25	30	51	78	39.0	60	40	15.0	M10	8.4	29.0	22	14.5	60	67
OJUME-06-30	30	35	60	87	43.5	68	45	15.0	M10	8.4	34.0	22	16.6	57	79
OJUME-06-40	40	45	77	108	54.0	86	58	18.0	M12	10.5	44.0	26	21.0	56	91
OJUME-06-50	50	50	88	132	66.0	108	50	20.0	M16	13.5	49.0	34	25.5	54	113

* according to igus® testing method ➤ Page 24.67

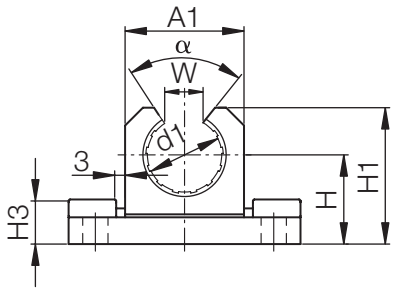
Telephone 1-888-803-1895
Fax 1-401-438-7680

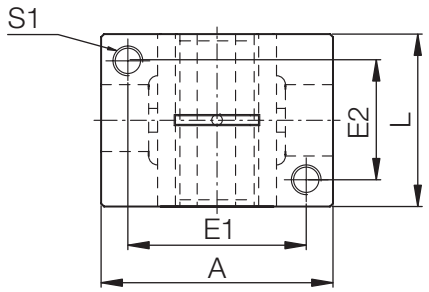
DryLin® R Open Floating Pillow Block, Long Design Linear Bearing OJUM-06 LL, mm

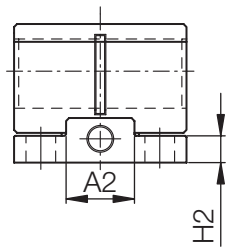


Special Properties

- Open, anodized aluminum housing, long design
- Contains JUMO-01-XX liner
- Compensation of parallelism errors up to 6mm
- Compensates for angular errors and bending of the shaft







Dimensions (mm)

Part No.	Nominal Size	Tolerance* Bearing Inner Diameter	pmax. [lbs] Static or Dynamic	pmax [lbs] Dynamic with Load at 180°	Weight [kg]
OJUM-06-12 LL	12	0.030 - 0.088	126	54	0.040
OJUM-06-16 LL	16	0.030 - 0.088	207	90	0.070
OJUM-06-20 LL	20	0.030 - 0.091	472	202	0.115
OJUM-06-25 LL	25	0.030 - 0.091	798	342	0.240
OJUM-06-30 LL	30	0.040 - 0.110	1191	512	0.370

For a Low Clearance version use part number OJUM-36-XX LL

Part No.	d1	H	H1	A	E1 ±0.15	E2 ±0.15	S1	L	A1	A2	H2	H3	W -1	α [°]
OJUM-06-12 LL	12	18	24.5	43	32	23	M 5	39	20	13	6	11	10.2	90
OJUM-06-16 LL	16	22	30.5	53	40	26	M 6	43	26	15	7	11	11.6	90
OJUM-06-20 LL	20	25	37	60	45	32	M 8	54	32	19	7	12.5	12	60
OJUM-06-25 LL	25	30	44	78	60	40	M10	67	40	23	9	15	14.5	60
OJUM-06-30 LL	30	35	52.5	87	68	45	M10	79	48	28	10	15	16.8	60

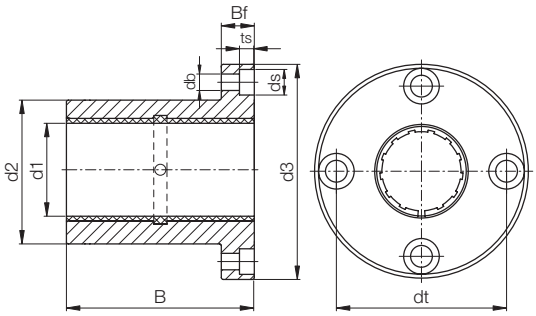
* according to igus® testing method ➤ Page 24.67

DryLin® R Flange Pillow Block, Round Design FJUM-01, mm



Special Properties

- Flange housing made of anodized aluminum, round flange
- Contains JUM-01-XX liner



Dimensions (mm)

Part No.	Nominal Size	Tolerance** Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)
FJZM-01-08*	8	0.032 - 0.070	215	1510	20
FJUM-01-10	10	0.030 - 0.088	136	1141	32
FJUM-01-12	12	0.030 - 0.088	215	1510	42
FJUM-01-16	16	0.030 - 0.088	323	2266	51
FJUM-01-20	20	0.030 - 0.091	505	3540	88
FJUM-01-25	25	0.030 - 0.091	815	5704	152
FJUM-01-30	30	0.040 - 0.110	1146	8025	266
FJUM-01-40	40	0.040 - 0.115	1798	12588	552
FJUM-01-50	50	0.050 - 0.130	2810	19670	853

For a Low Clearance version use part number FJUM-31-XX

Part No.	d1	d2 h7	dt	d3	B	Bf	ts	db	ds
FJZM-01-08*	8	16	24	32	25	8	3.1	3.5	6.0
FJUM-01-10	10	19	29	39	29	9	4.1	4.5	7.5
FJUM-01-12	12	22	32	42	32	9	4.1	4.5	7.5
FJUM-01-16	16	26	36	46	36	9	4.1	4.5	7.5
FJUM-01-20	20	32	43	54	45	11	5.1	5.5	9.0
FJUM-01-25	25	40	51	62	58	11	5.1	5.5	9.0
FJUM-01-30	30	47	62	76	68	14	6.1	6.6	11.0
FJUM-01-40	40	62	80	98	80	18	8.1	9.0	14.0
FJUM-01-50	50	75	94	112	100	18	8.1	9.0	15.0

* Nominal widths under 10mm are delivered with pressfit sleeve bearings

* according to igus® testing method ➤ Page 24.67

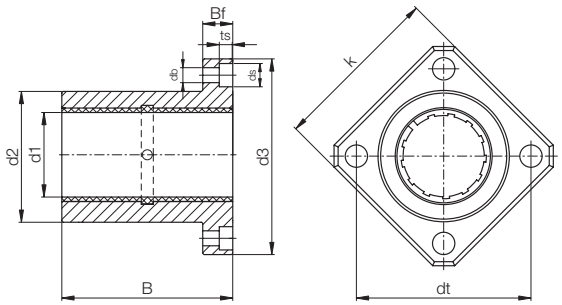
Telephone 1-888-803-1895
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Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® R Flange Pillow Block, Square Design FJUM-02, mm



Special Properties

- Flange housing made of anodized aluminum, square flange
- Contains JUM-01-XX liner



Dimensions (mm)

Part No.	Nominal Size	Tolerance** Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi	Weight (g)
FJZM-02-08*	8	0.032 - 0.070	215	1510	17
FJUM-02-10	10	0.030 - 0.088	163	1141	25
FJUM-02-12	12	0.030 - 0.088	215	1510	32
FJUM-02-16	16	0.030 - 0.088	323	2266	41
FJUM-02-20	20	0.030 - 0.091	505	3540	73
FJUM-02-25	25	0.030 - 0.091	815	5704	135
FJUM-02-30	30	0.030 - 0.110	1146	8025	228
FJUM-02-40	40	0.030 - 0.115	1798	12588	454
FJUM-02-50	50	0.030 - 0.130	2810	19670	735

For a Low Clearance version use part number FJUM-32-XX

Part No.	d1	d2 h7	d3	dt	k	B	Bf	ts	db	ds
FJZM-02-08*	8	16	32	24	25	25	8	3.1	3.5	6.0
FJUM-02-10	10	19	39	29	30	29	9	4.1	4.5	7.5
FJUM-02-12	12	22	42	32	32	32	9	4.1	4.5	7.5
FJUM-02-16	16	26	46	36	35	36	9	4.1	4.5	7.5
FJUM-02-20	20	32	54	43	42	45	11	5.1	5.5	9.0
FJUM-02-25	25	40	62	51	50	58	11	5.1	5.5	9.0
FJUM-02-30	30	47	76	62	60	68	14	6.1	6.6	11.0
FJUM-02-40	40	62	98	80	75	80	18	8.1	9.0	15.0
FJUM-02-50	50	75	112	94	88	100	18	8.1	9.0	14.0

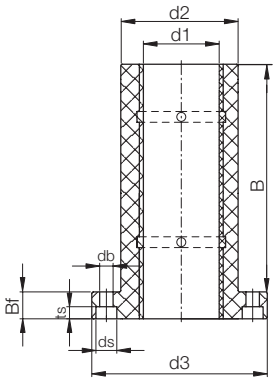
* Nominal widths under 10mm are delivered with pressfit sleeve bearings
* according to igus® testing method ➤ Page 24.67

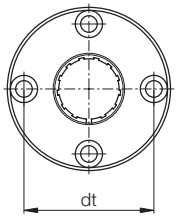
DryLin® R Twin Flange Pillow Block FJUMT-01, mm



Special Properties

- Flange housing made of anodized aluminum, round flange
- Contains 2 of the JUM-02-XX liners





Dimensions (mm)

Part No.	d1	d2 h7	d3	dt	k	B	Bf	ts	db	ds
FJUMT-01-08*	8	16	32	24	25	45	8	3.1	3.5	6.0
FJUMT-01-10	10	19	39	29	30	52	9	4.1	4.5	7.5
FJUMT-01-12	12	22	42	32	32	57	9	4.1	4.5	7.5
FJUMT-01-16	16	26	46	36	35	70	9	4.1	4.5	7.5
FJUMT-01-20	20	32	54	43	42	80	11	5.1	5.5	9.0
FJUMT-01-25	25	40	62	51	50	112	11	5.1	5.5	9.0
FJUMT-01-30	30	47	76	62	60	123	14	6.1	6.6	11.0
FJUMT-01-40	40	62	98	80	75	151	18	8.1	9.0	14.0
FJUMT-01-50	50	75	112	94	88	192	18	8.1	9.0	14.0

Part No.	Nominal Size	Tolerance** Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi
FJZMT-01-08*	8	0.032 - 0.070	430	3020
FJUMT-01-10	10	0.030 - 0.088	326	2282
FJUMT-01-12	12	0.030 - 0.088	430	3020
FJUMT-01-16	16	0.030 - 0.088	646	4532
FJUMT-01-20	20	0.030 - 0.091	1010	7080
FJUMT-01-25	25	0.030 - 0.091	1630	11408
FJUMT-01-30	30	0.040 - 0.110	2292	16050
FJUMT-01-40	40	0.040 - 0.115	3596	25176
FJUMT-01-50	50	0.050 - 0.130	5620	39340

For a Low Clearance version use part number FJUMT-31-XX

Comparison of Flange Length and Bearing Surface of FJUM and FJUMT

Part No.	Nominal Diameter (mm)	Flange Length (mm)			Effective Surface Area (mm²)		
		FJUM-01-..	FJUMT-01-..	Difference (%)	FJUM-01-..	FJUMT-01-..	Difference (%)
FJZMT-01-08	08*	25	45	+80	192	256	+33
FJUMT-01-10	10	29	52	+80	145	250	+72
FJUMT-01-12	12	32	57	+78	186	324	+74
FJUMT-01-16	16	36	70	+94	280	464	+66
FJUMT-01-20	20	45	80	+78	440	580	+32
FJUMT-01-25	25	58	112	+93	712	975	+37
FJUMT-01-30	30	68	123	+81	1005	1470	+46
FJUMT-01-40	40	80	151	+89	1580	2360	+49
FJUMT-01-50	50	100	192	+92	2475	3450	+39

* FJZMT-01-08 are equipped with 2 pieces JSM-0810-16
* Nominal widths under 10mm are delivered with pressfit sleeve bearings

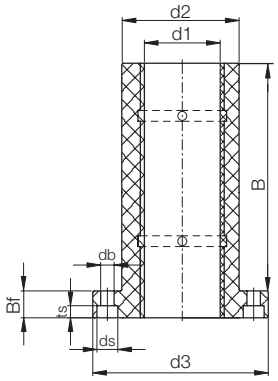
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Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

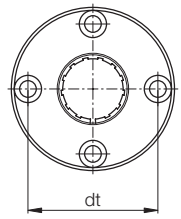
DryLin® R Twin Flange Pillow Block FJUMT-02, mm



Special Properties

- Flange housing made of anodized aluminum, square flange
- Contains 2 of the JUM-02-XX liners





Dimensions (mm)

Part No.	d1	d2 h7	d3	dt	k	B	Bf	ts	db	ds
FJUMT-02-08*	8	16	32	24	25	45	8	3.1	3.5	6.0
FJUMT-02-10	10	19	39	29	30	52	9	4.1	4.5	7.5
FJUMT-02-12	12	22	42	32	32	57	9	4.1	4.5	7.5
FJUMT-02-16	16	26	46	36	35	70	9	4.1	4.5	7.5
FJUMT-02-20	20	32	54	43	42	80	11	5.1	5.5	9.0
FJUMT-02-25	25	40	62	51	50	112	11	5.1	5.5	9.0
FJUMT-02-30	30	47	76	62	60	123	14	6.1	6.6	11.0
FJUMT-02-40	40	62	98	80	75	151	18	8.1	9.0	14.0
FJUMT-02-50	50	75	112	94	88	192	18	8.1	9.0	14.0

Part No.	Nominal Size	Tolerance** Bearing Inner Diameter	pmax. Dynamic Load P=725 psi	pmax. Static Load P=5075 psi
FJZMT-02-08*	8	0.032 - 0.070	430	3020
FJUMT-02-10	10	0.030 - 0.088	326	2282
FJUMT-02-12	12	0.030 - 0.088	430	3020
FJUMT-02-16	16	0.030 - 0.088	646	4532
FJUMT-02-20	20	0.030 - 0.091	1010	7080
FJUMT-02-25	25	0.030 - 0.091	1630	11408
FJUMT-02-30	30	0.040 - 0.110	2292	16050
FJUMT-02-40	40	0.040 - 0.115	3596	25176
FJUMT-02-50	50	0.050 - 0.130	5620	39340

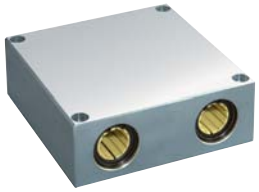
For a Low Clearance version use part number FJUMT-32-XX

Comparison of Flange Length and Bearing Surface of FJUM and FJUMT

Part No.	Nominal Diameter (mm)	Flange Length (mm)			Effective Surface Area (mm²)		
		FJUM-02-..	FJUMT-02-..	Difference (%)	FJUM-02-..	FJUMT-02-..	Difference (%)
FJZMT-02-08	08*	25	45	+80	192	256	+33
FJUMT-02-10	10	29	52	+80	145	250	+72
FJUMT-02-12	12	32	57	+78	186	324	+74
FJUMT-02-16	16	36	70	+94	280	464	+66
FJUMT-02-20	20	45	80	+78	440	580	+32
FJUMT-02-25	25	58	112	+93	712	975	+37
FJUMT-02-30	30	68	123	+81	1005	1470	+46
FJUMT-02-40	40	80	151	+89	1580	2360	+49
FJUMT-02-50	50	100	192	+92	2475	3450	+39

* FJZMT-02-08 are equipped with 2 pieces JSM-0810-12
* Nominal widths under 10mm are delivered with pressfit sleeve bearings

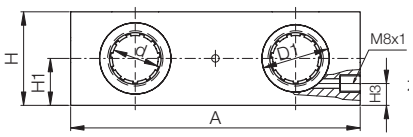
RQA - Quad block, Closed, mm

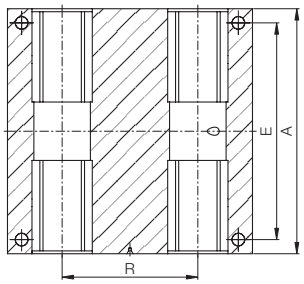


Quad block, with DryLin® R linear bearings

Special Properties

- Housing: aluminum
- Equipped with DryLin® R linear plain bearings, part no. RJUM-01-ø, RJUM-03-ø, or RJM-01
- Bearings are secured with retaining rings according to DIN 472
- Mounting bolts DIN 912-8.8, lock washer DIN 7980

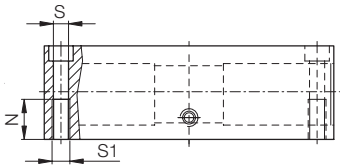




Also available as driven systems



HTS Page 25.11

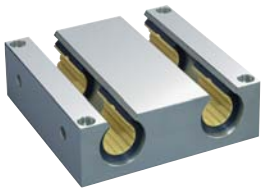


For a Low Clearance version use part number
RQA-31-XX for standard
RQA-33-XX for self-aligning

Dimensions (mm)

Standard with RJUM-01	Self-Aligning with RJUM-03	All Plastic with RJM-01	d	D1	A	H	H1	H3	R	N	E	S	S1
RQA-01-08	RQA-03-08	RQA-04-08	8	16	65	23	11.5	8	32	11	55	4.3	M5
RQA-01-12	RQA-03-12	RQA-04-12	12	22	85	32	16	13	42	13	73	5.3	M6
RQA-01-16	RQA-03-16	RQA-04-16	16	26	100	36	18	15	54	13	88	5.3	M6
RQA-01-20	RQA-03-20	RQA-04-20	20	32	130	46	23	19	72	18	115	6.6	M8
RQA-01-25	RQA-03-25	RQA-04-25	25	40	160	56	28	24	88	22	140	8.4	M10
RQA-01-30	RQA-03-30	RQA-04-30	30	47	180	64	32	27	96	26	158	10.5	M12
RQA-01-40	RQA-03-40	RQA-04-40	40	62	230	80	40	35	122	34	202	13.5	M16

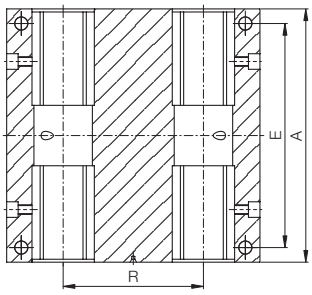
OQA - Quad Block, Open, mm

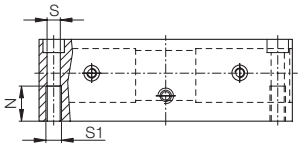


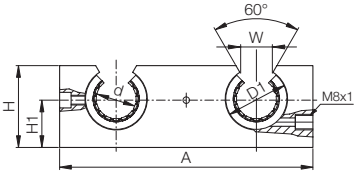
Quad block open with DryLin® R linear bearings

Special Properties

- Housing: aluminum
- Equipped with DryLin® R linear plain bearings, Part no. OJUM-01-ø or OJUM-03-ø
- Maintenance-free
- Mounting bolts DIN 912-8.8, lock washer DIN 7980
- Securing of the bearing in the housing is done using set screws







For a Low Clearance version use part number
OQA-31-XX for standard
OQA-33-XX for self-aligning

Dimensions (mm)

Standard with OJUM-01	Self-Aligning with OJUM-03	d	D1	A	H	H1	W	R	N	E	S	S1
OQA-01-12	OQA-03-12	12	22	85	30	18	14	42	13	73	5.3	M6
OQA-01-16	OQA-03-16	16	26	100	35	22	17	54	13	88	5.3	M6
OQA-01-20	OQA-03-20	20	32	130	42	25	17	72	18	115	6.8	M8
OQA-01-25	OQA-03-25	25	40	160	51	30	21	88	22	140	9.0	M10
OQA-01-30	OQA-03-30	30	47	180	60	35	21	96	26	158	10.5	M12
OQA-01-40	OQA-03-40	40	62	230	77	45	27	122	34	202	13.5	M16

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RTA - Pillow Block, Closed, Twin Design, mm

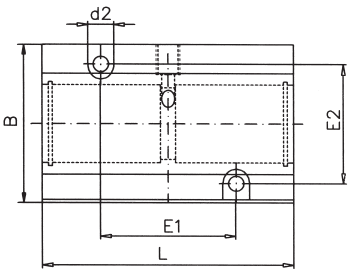


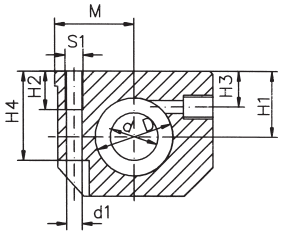
Pillow block ,twin design with DryLin® R linear plain bearings

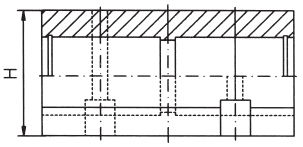
For a Low Clearance version use part number
RTA-31-XX for standard
RTA-33-XX for self-aligning

Special Properties

- Housing: aluminum
- Equipped with DryLin® R linear plain bearings, part no. RJUM-01-ø, RJUM-03-ø or. RJM-01
- Can be combined with DryLin® R housing bearing, Part No. RJUM-06-ø
- Bearings are secured with retaining rings according to DIN 472
- Mounting bolts DIN 912-8.8, lock washer DIN 7980



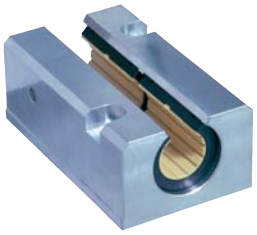




Dimensions (mm)

Part No. Standard with RJUM-01	Self-Aligning with RJUM-03	All Plastic with RJM-0	d	D H6	H	H1 +0.01 -0.02	H2	H3	H4	S1	B	L +0.3	M ±0.02	E1 ±0.15	E2 ±0.15	d1	d2
RTA-01-08	–	RTA-04-08	8	16	28	13	13	8	14	M 5	35	62	17.5	35	25	4.20	8
RTA-01-12	RTA-03-12	RTA-04-12	12	22	35	18	13	10	25	M 6	43	76	21.5	40	30	5.20	10
RTA-01-16	RTA-03-16	RTA-04-16	16	26	42	22	13	12	30	M 6	53	84	26.5	45	36	5.20	10
RTA-01-20	RTA-03-20	RTA-04-20	20	32	50	25	18	13	24	M 8	60	104	30.0	55	45	6.80	11
RTA-01-25	RTA-03-25	RTA-04-25	25	40	60	30	22	15	40	M10	78	130	39.0	70	54	8.60	15
RTA-01-30	RTA-03-30	RTA-04-30	30	47	70	35	26	16	48	M12	87	152	43.5	85	62	10.30	18
RTA-01-40	RTA-03-40	RTA-04-40	40	62	90	45	34	20	60	M16	108	176	54.0	100	80	14.25	20

OTA - Pillow Block, Open, Twin Design, mm



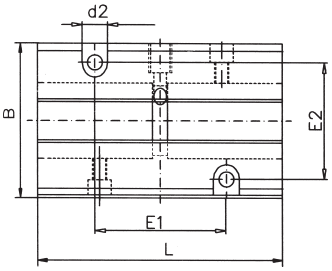
Pillow block, twin design, open with DryLin® R linear plain bearings

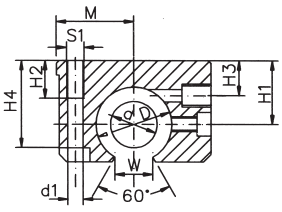
For a Low Clearance version use part number
OTA-31-XX for standard
OTA-33-XX for self-aligning

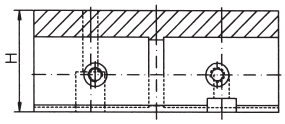
Click Here for Online Builder

Special Properties

- Housing: aluminum
- Equipped with DryLin® R linear plain bearings, Part No. OJUM-01-ø or OJUM-03-ø
- Can be combined with DryLin® R housing bearing, Part No. OJUM-06-ø
- Securing of the bearing in the housing is done using set screws
- Mounting bolts DIN 912-8.8, washer DIN 7980



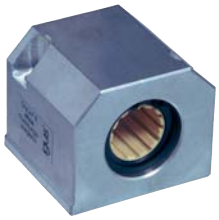




Dimensions (mm)

Part No. Standard with OJUM-01	Self-Aligning with OJUM-03	d	D H6	H	H1 +0.01 -0.02	H2	H3	H4	S1	B	L +0.3	M ±0.02	E1 ±0.15	E2 ±0.15	d1	d2	W
OTA-01-12	OTA-03-12	12	22	30	18	13	10	25	M 6	43	76	21.5	40	30	5.20	10	14
OTA-01-16	OTA-03-16	16	26	35	22	13	12	30	M 6	53	84	26.5	45	36	5.20	10	17
OTA-01-20	OTA-03-20	20	32	42	25	18	13	24	M 8	60	104	30.0	55	45	6.80	11	17
OTA-01-25	OTA-03-25	25	40	51	30	22	15	40	M10	78	130	29.0	70	54	8.60	15	21
OTA-01-30	OTA-03-30	30	47	60	35	26	16	48	M12	87	152	43.5	85	62	10.30	18	21
OTA-01-40	OTA-03-40	40	62	77	45	34	20	60	M16	108	176	54.0	100	80	14.25	20	27

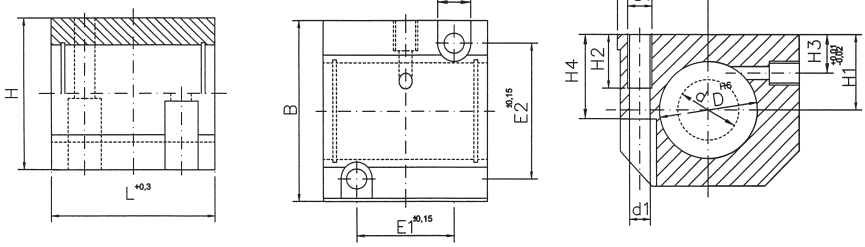
RGA Pillow Block, Closed, Long Design, mm



Special Properties

- Housing: aluminum
- Equipped with DryLin® R linear plain bearings, Part No. RJUM-01-ø, RJUM-03-ø or RJM-01
- Can be combined with DryLin® R housing bearing, Part No. RJUM-06-ø
- Bearings are secured with retaining rings according to DIN 472

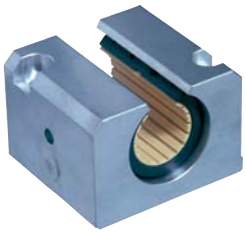
For a Low Clearance version
use part number
RGA-31-XX for standard
RGA-33-XX for self-aligning



Dimensions (mm)

Part No. Standard with RJUM-01	Self-Aligning with RJUM-03	All Plastic with RJM-01	d	D H6	H	H1 +0.01 -0.02	H2	H3	H4	S1	B	L ±0.03	M ±0.15	E1 ±0.15	E2	d1	d2
RGA-01-08	–	RGA-04-08	8	16	28	13	10	8	14	M 4	35	32	17.5	20	25	3.2	6
RGA-01-12	RGA-03-12	RGA-04-12	12	22	35	18	11	10	25	M 5	43	39	21.5	23	32	4.2	6
RGA-01-16	RGA-03-16	RGA-04-16	16	26	42	22	13	12	30	M 6	53	43	26.5	26	40	5.2	10
RGA-01-20	RGA-03-20	RGA-04-20	20	32	50	25	18	13	24	M 8	60	54	30.0	32	45	6.8	11
RGA-01-25	RGA-03-25	RGA-04-25	25	40	60	30	22	15	40	M10	78	67	39.0	40	60	8.6	15
RGA-01-30	RGA-03-30	RGA-04-30	30	47	70	35	22	16	48	M10	87	79	43.5	45	68	8.6	15
RGA-01-40	RGA-03-40	RGA-04-40	40	62	90	45	26	20	60	M12	108	91	54.0	58	86	10.3	18

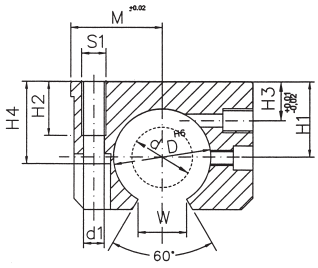
OGA Pillow Block, Open, Long Design, mm



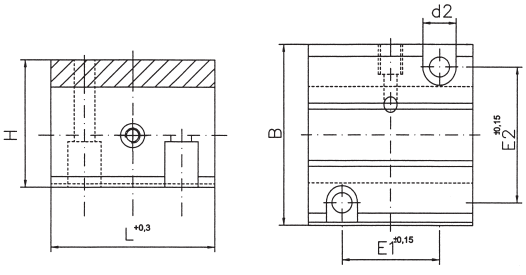
Special Properties

- Housing: aluminum
- Equipped with DryLin® linear plain bearings OJUM-01-ø oder OJUM-03-ø
- Can be combined with DryLin® R housing bearing OJUM-06-ø
- Securing of the bearing in the housing is done using set screws

For a Low Clearance version
use part number
OGA-31-XX for standard
OGA-33-XX for self-aligning



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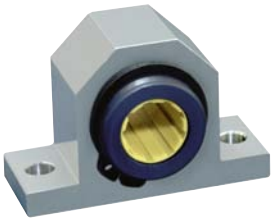
Dimensions (mm)

Part No.. Standard with OJUM-01	Self-Self-Aligning with OJUM-03	d	D H6	H	H1 +0.01 -0.02	H2	H3	H4	S1	B +0.3	L ±0.03	M ±0.15	E1 ±0.15	E2	d1	d2	W +0.6
OGA-01-12	OGA-03-12	12	22	28	18	11	8	25	M 5	43	39	21.5	23	32	4.2	8	14
OGA-01-16	OGA-03-16	16	26	35	22	13	12	30	M 6	53	43	26.5	26	40	5.2	10	17
OGA-01-20	OGA-03-20	20	32	42	25	18	13	24	M 8	60	54	30.0	32	45	6.8	11	17
OGA-01-25	OGA-03-25	25	40	51	30	22	15	40	M10	78	67	39.0	40	60	8.6	15	21
OGA-01-30	OGA-03-30	30	47	60	35	22	16	48	M10	87	79	43.5	45	68	8.6	15	21
OGA-01-40	OGA-03-40	40	62	77	45	26	20	60	M12	108	91	54.0	58	86	10.3	18	27

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

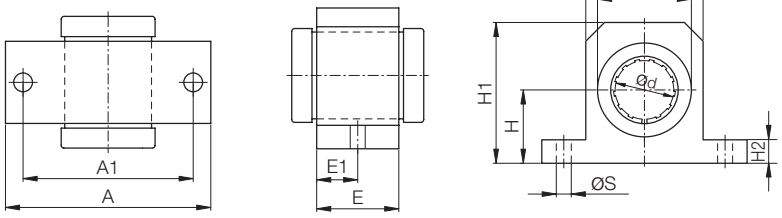
RGAS Pillow Block, Closed, Short Design, mm



For a Low Clearance version
use part number
RGAS-31-XX for standard
RGAS-33-XX for self-aligning

Special Properties

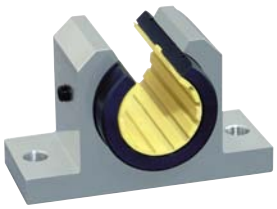
- Housing: aluminum
- Equipped with DryLin® R linear plain bearings, Part No. RJUM-01-ø, RJUM-03-ø or RJM-01
- Can be combined with DryLin® R housing bearing RJUM-06-ø
- Bearings are secured with retaining rings according to DIN 472



Dimensions (mm)

Part No. Standard with RJUM-01	Self-Aligning with RJUM-03	All Plastic with RJM-01	d	D	H	H1	A	A1	A2	E	E1	S
RGAS-01-12	RGAS-03-12	RGAS-04-12	12	22	18	35	52	42	30	20	10	5.3
RGAS-01-16	RGAS-03-16	RGAS-04-16	16	26	22	40.5	56	46	34	22	11	5.3
RGAS-01-20	RGAS-03-20	RGAS-04-20	20	32	25	48.0	70	58	40	28	14	6.4
RGAS-01-25	RGAS-03-25	RGAS-04-25	25	40	30	58.0	80	68	50	40	20	6.4
RGAS-01-30	RGAS-03-30	RGAS-04-30	30	47	35	67.0	88	76	58	48	24	6.4
RGAS-01-40	RGAS-03-40	RGAS-04-40	40	62	45	85.0	108	94	74	56	28	8.4

OGAS Pillow Block, Open, Short Design, mm

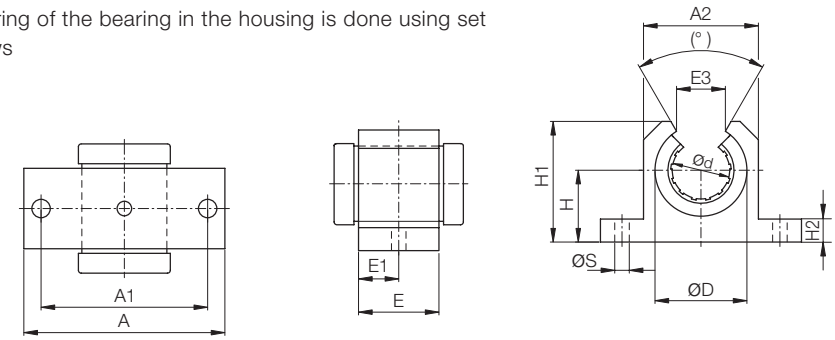


For a Low Clearance version
use part number
OGAS-31-XX for standard
OGAS-33-XX for self-aligning

Special Properties

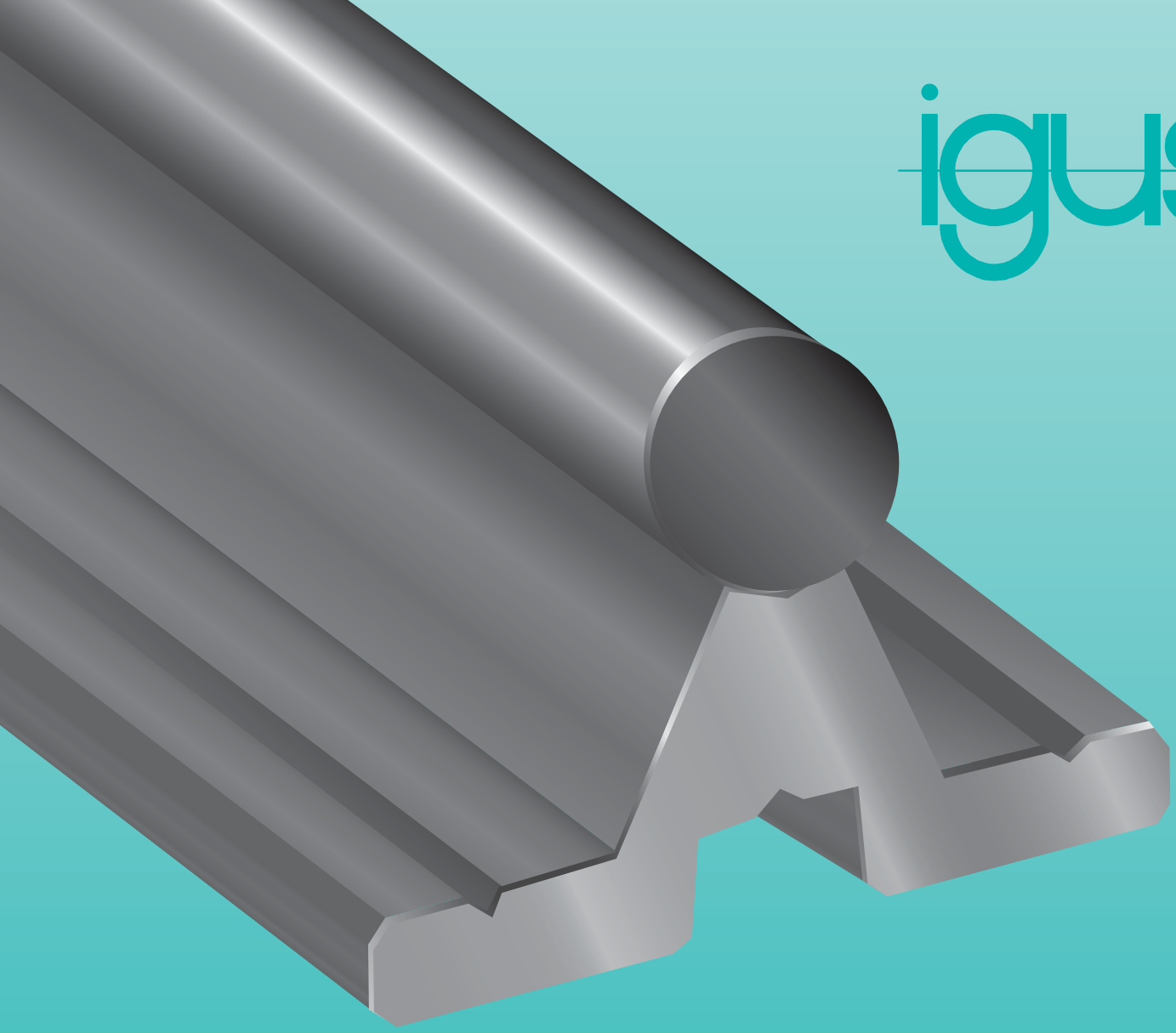
- Housing: aluminum
- Equipped with DryLin® R linear plain bearings, Part No. OJUM-01-ø or OJUM-03-ø
- Can be combined with DryLin® R housing bearing, Part No. OJUM-06-ø
- Securing of the bearing in the housing is done using set screws

Click Here for Online Builder



Dimensions (mm)

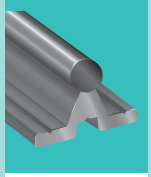
Part No. Standard with OJUM-01	Self-Aligning with OJUM-03	d	D	H	H1	A	A1	A2	E	E1	E3	(°)	S
OGAS-01-12	OGAS-03-12	12	22	18	28	52	42	30	20	10	14	78	5.3
OGAS-01-16	OGAS-03-16	16	26	22	33.5	56	46	34	22	11	17	78	5.3
OGAS-01-20	OGAS-03-20	20	32	25	42	70	58	40	28	14	17	60	6.4
OGAS-01-25	OGAS-03-25	25	40	30	51	80	68	50	40	20	21	60	6.4
OGAS-01-30	OGAS-03-30	30	47	35	60	88	76	58	48	24	21	54	6.4
OGAS-01-40	OGAS-03-40	40	62	45	77	108	94	74	56	28	27	54	8.4



DryLin® Metric Shafting

- Supported shafts available
- Lightweight aluminum
- Corrosion-resistant stainless steel
- Diameters from 6 to 50 mm





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Fax 1-401-438-7680

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E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Metric Shafting

	Aluminum			Steel				Stainless, hardened				Soft Stainless	
					SWUM		SWUMH		EWUM		EEWUM		
	AWM	AWUM	AWMR	SWM	SWUMN	SWMH	SWUMHN	EWM	EWUMN	EEWM	EEWUMN	EWMR	EWMS
Material	EN AW 6061/6063			Case hardened		Hard chromed		440c		420c		304	316
Ø 6	●			▲		▲		▲[2]		▲			
Ø 8	●			▲		▲		▲[2]		▲			
Ø 10	●	●		▲		▲		▲[2]		▲		▲	▲
Ø 12	●	●		▲	▲	▲	▲	▲	▲	▲	▲	▲	■
Ø 16	●	●		▲	▲	▲	▲	▲	▲	▲	▲	▲	■
Ø 20	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Ø 25	●	●	●	▲	▲	▲	▲	▲	▲	▲	▲	▲	■
Ø 30	●[1]	●		▲	▲	▲	▲	▲	▲	▲	▲	▲	■
Ø 40	●[1]	●		▲	▲	▲	▲	▲	▲	▲			
Ø 50	●[1]			▲	▲	▲	▲	▲	▲	▲	▲		
Tolerance	h8	–0.1	h9	h6	h6	h7	h7	h6	h6	h6	h6	h9	h9
Max. Length Ø 8–10	3000			3000		3000		3000		3000			
Max. Length Ø12–50	3000	4000	3000	6000	6000	6000	6000	6000	6000	6000	6000	3000	3000
Surface	Hard Anodized			Hardened/Ground		Hard Chrome		Hardened/Ground		Hardened/Ground		Drawn/Polished	
Surface Roughness	<0.6			0.15 - 0.3		0.15 - 0.3		0.15 - 0.3		0.15 - 0.3		0.3 - 0.6	
Surface Hardness	450-550 HV			60+4 HRC		60+4 HRC		52+8 HRC		52+8 HRC		Non Hardened	
Roundness	DIN EN 12020			<1/2 Tolerance		<1/2 Tolerance		<1/2 Tolerance		<1/2 Tolerance		<1/2 Tolerance	

Inch sizes are also available. See page 24.23

ISO Tolerances for Shafts (ISO 286-2)

	Nominal Shaft Size (mm)						
Over	3	6	10	18	30	40	50
Including	6	10	18	30	40	50	65
h6	+0/-0.008	+0/-0.009	+0/-0.011	+0/-0.013	+0/-0.016	+0/-0.016	+0/-0.019
h7	+0/-0.012	+0/-0.015	+0/-0.018	+0/-0.021	+0/-0.025	+0/-0.025	+0/-0.030
h8	+0/-0.018	+0/-0.022	+0/-0.027	+0/-0.033	+0/-0.039	+0/-0.039	+0/-0.046
h9	+0/-0.030	+0/-0.036	+0/-0.043	+0/-0.052	+0/-0.062	+0/-0.062	+0/-0.074
h10	+0/-0.048	+0/-0.058	+0/-0.070	+0/-0.084	+0/-0.100	+0/-0.100	+0/-0.120

Order Example

AWUM	-12	-500	-T1

- -T1: T2 Standard, T1 option
- -500: Length in mm
- -12: Ø in mm
- AWUM: Shafting Type

Example:
AWUM-12-500 hard anodized aluminum shaft, 12 mm OD, 500 mm length

DryLin® S Aluminum Shaft, mm



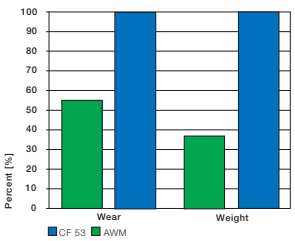
Properties

Material:	6061-T6
Tolerance:	h8
Roundness:	DIN 1798
Straightness:	DIN 1798
Hardness:	75 HB
Surface:	hard-anodized. oxidation (wear-resistant Al-oxide)

Layer Thickness:	> 40 µm
Surface Hardness:	450-550 HV
Roughness:	Ra < 0.5
Spec. Electr. Resistance:	$4*10^{11}$ Ohm mm²/m
Chemical Resistance:	2 < ph < 9

Dimensions (mm)

Part No.	Design	OD	Wall Thickness	ID	Max. Length	Weight (kg/m)
AWM-06- L in mm	Solid	6	-	-	3000	0.08
AWM-08- L in mm	Solid	8	-	-	3000	0.14
AWM-10- L in mm	Solid	10	-	-	3000	0.22
AWM-12- L in mm	Solid	12	-	-	3000	0.32
AWM-16- L in mm	Solid	16	-	-	3000	0.56
AWM-20- L in mm	Solid	20	-	-	3000	0.88
AWMR-20- L in mm	Hollow	20	2	16	3000	0.32
AWM-25- L in mm	Solid	25	-	-	3000	1.37
AWMR-25- L in mm	Hollow	30	3	19	3000	0.59
AWM-30- L in mm	Hollow	30 x 7.5	7.5	-	3000	1.48
AWM-40- L in mm	Hollow	40 x 10	10	20	3000	2.63
AWM-50- L in mm	Hollow	50 x 11	11	28	3000	3.75



Order example: AWM-16-500 corresponds to an aluminum shaft diameter of 16mm, 500 mm long
Inch sizes are also available. See page 24.23

Comparison of wear with iglide® J and weight between DryLin® aluminum shafts and cold rolled steel

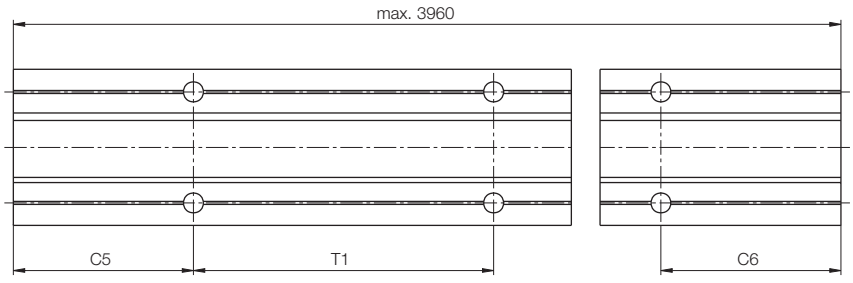
DryLin® Supported Aluminum Shaft, mm

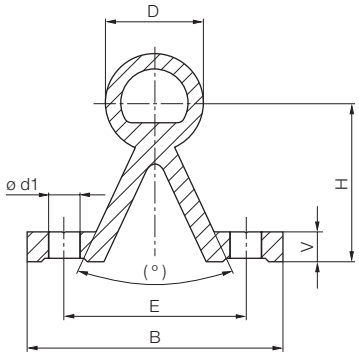


Properties

Material:	6063-T6, AlMgSi 0.5 F22 drawn
Roundness:	DIN 1798
Straightness:	DIN 1798
Hardness:	75 HB
Surface:	hard-anodized. oxidation (wear-resistant Al-oxide)

Layer Thickness:	> 40 µm
Surface Hardness:	450-550 HV
Roughness:	Ra < 0.5
Spec. Electr. Resistance:	$4*10^{11}$ Ohm mm²/m
Chemical Resistance:	2 < ph < 9





Dimensions (mm)

Part No.	D -0.1	B	H ±0.02	V	d1	(°)	E ±0.15	Bore Hole Spacing T1	C5/C6 min.	C5/C6 max.	Max. Length	Weight (kg/m)
AWUM-12- L in mm	12	40	22	5	4.5	50	29	75	20	57	3950	0.750
AWUM-16- L in mm	16	45	26	5	5.5	50	33	100	20	69	3950	1.000
AWUM-20- L in mm	20	52	32	6	6.6	50	37	100	20	69	3950	1.415
AWUM-25- L in mm	25	57	36	6	6.6	50	42	120	20	79	3950	1.805
AWUM-30- L in mm	30	69	42	7	9.0	50	51	150	20	94	3950	2.690

Order example: AWUM-16-500 corresponds to supported aluminum shaft diameter 16 mm, 500 mm long

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DryLin® Steel Shafting - SWM / SWMH



- Materials available
  1050 Case Hardened Steel
  1050 Case Hardened, Chrome-plated Steel
- Available supported or unsupported
- Max undersupport rail length - 600 mm
- T2 hole spacing standard
  T1 optional
- Symetric hole pattern C5 = C6

Dimensions (mm) – Case hardened steel (1050)

Part No.	d Tolerance ISO h6	Weight (kg/m)	Max. Length (mm)	Hardeness Depth (mm)
SWM-06	06	0.222	3000	0.8
SWM-08	08	0.359	4000	0.9
SWM-10	10	0.617	4000	0.9
SWM-12	12	0.888	6000	1.0
SWM-16	16	1.578	6000	1.2
SWM-20	20	2.466	6000	1.6
SWM-25	25	3.853	6000	1.8
SWM-30	30	5.549	6000	2.0
SWM-40	40	9.865	6000	2.2
SWM-50	50	15.413	6000	2.4

Dimensions (mm) – Chrome-plated, Case hardened steel (1050)

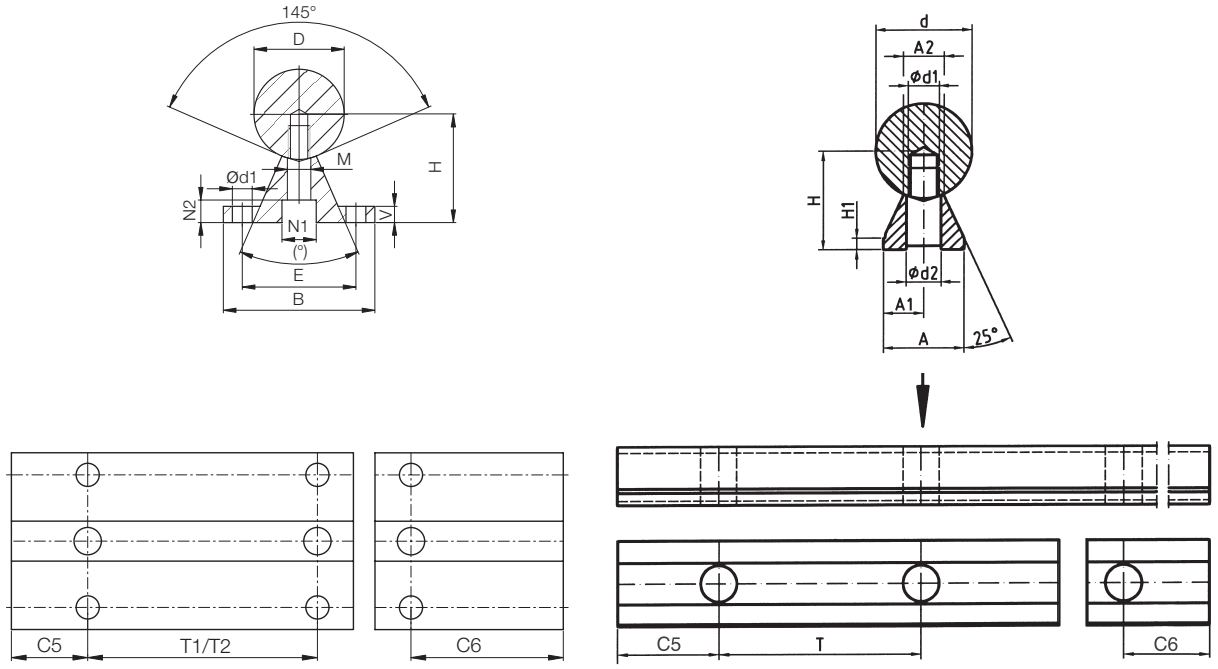
Part No.	d Tolerance ISO h7	Weight (kg/m)	Max. Length (mm)	Hardeness Depth (mm)
SWMH-06	06	0.222	3000	0.8
SWMH-08	08	0.359	4000	0.9
SWMH-10	10	0.617	4000	0.9
SWMH-12	12	0.888	6000	1.0
SWMH-16	16	1.578	6000	1.2
SWMH-20	20	2.466	6000	1.6
SWMH-25	25	3.853	6000	1.8
SWMH-30	30	5.549	6000	2.0
SWMH-40	40	9.865	6000	2.2
SWMH-50	50	15.413	6000	2.4

Order example: SWM-16-500 corresponds to supported aluminum shaft diameter 16 mm, 500 mm long

DryLin® R Supported Steel Shafting - SWUM / SWUMN

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinR.asp
RoHS info: www.igus.com/RoHS.asp

SWUM



SWUMN

Dimensions (mm) – Case hardened steel (1050)

Part No.	D (mm) h6	B (mm)	H (mm) ±0.02	V (mm)	N1 (mm)	N2 (mm)	d1 (mm)	M (mm)	(°)	E (mm)	T1* (mm) ±0.15	C5/C6 min. for T1	C5/C6 max. for T1	T2 (mm) Standard	C5/C6 min. for T2 Standard	C5/C6 max. for T2 Standard	Weight (kg/m)
SWUM-12	12	40	22	5	8.0	5.0	4.5	5.8	50	29	75	20	57	120	20	79	1.75
SWUM-16	16	45	26	5	9.5	6.0	5.5	7.0	50	33	100	20	69	150	20	94	2.64
SWUM-20	20	52	32	6	11.0	6.5	6.6	8.3	50	37	100	20	69	150	20	94	3.97
SWUM-25	25	57	36	6	14.0	8.5	6.6	10.8	50	42	120	20	79	200	20	119	5.65
SWUM-30	30	69	42	7	17.0	10.5	9.0	11.0	50	51	150	20	94	200	20	119	7.93
SWUM-40	40	73	50	8	17.0	10.5	9.0	15.0	50	55	200	20	119	300	20	169	12.88
SWUM-50	50	84	60	9	19.0	12.5	11.0	19.0	46	63	200	20	119	300	20	169	19.60

* T1 optional, T2 standard

For chrome-plated supported shafting use part number SWMH-XX, tolerance is h7

Dimensions (mm) – Chrome-plated, Case hardened steel (1050)

Part No.	d (mm) h6	H (mm)	H1 (mm) ±0.02	A (mm)	A1 (mm)	A2 (mm) ±0.02	d1	d2 (mm)	T (mm)	C5/C6 min.	C5/C6 max.	Gewicht (kg/m)
SWUMN-12	12	14.5	3	11	5.5	5.4	M4	4.5	75	20	57	1.62
SWUMN-16	16	18	3	14	7.0	7.0	M5	5.5	75	20	57	2.54
SWUMN-20	20	22	3	17	8.5	8.1	M6	6.6	75	20	57	3.81
SWUMN-25	25	26	3	21	10.5	10.3	M8	9.0	75	20	57	5.62
SWUMN-30	30	30	3	23	11.5	11.0	M10	11.0	100	20	69.5	7.63
SWUMN-40	40	39	4	30	15.0	15.0	M12	13.5	100	20	69.5	13.47
SWUMN-50	50	46	5	35	17.5	19.0	M14	15.5	100	20	69.5	20.31

Narrow undersupported rail comes unassembled

For chrome-plated supported shafting use part number SWUMHN-XX, tolerance is h7

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DryLin® R Stainless Steel Shafting - EWM / EEWM / EWMR / EWMS



- Materials available
  (440c) Hard stainless
  (420c) Hard stainless
  (304) Soft stainless
  (316) Soft stainless
- Supported or unsupported
- T2 hole spacing standard, T1 optional
- Max undersupport rail length - 600 mm
- Symetric hole pattern C5 = C6

Dimensions (mm) – Hardened Stainless (440c/1.4125)

Part No.	d ISO h6	Weight (kg/m)	Max. Length (mm)	Hardness Depth (mm)
EWM-06	06	0.222	3000	0.8
EWM-08	08	0.359	4000	0.9
EWM-10	10	0.617	4000	0.9
EWM-12	12	0.888	6000	1.0
EWM-16	16	1.578	6000	1.2
EWM-20	20	2.466	6000	1.6
EWM-25	25	3.853	6000	1.8
EWM-30	30	5.549	6000	2.0
EWM-40	40	9.865	6000	2.2
EWM-50	50	15.413	6000	2.4

Dimensions (mm) – Hardened Stainless (420c/1.4034)

Part No.	d ISO h6	Weight (kg/m)	Max. Length (mm)	Hardness Depth (mm)
EEWM-06	06	0.222	3000	0.8
EEWM-08	08	0.359	4000	0.9
EEWM-10	10	0.617	4000	0.9
EEWM-12	12	0.888	6000	1.0
EEWM-16	16	1.578	6000	1.2
EEWM-20	20	2.466	6000	1.6
EEWM-25	25	3.853	6000	1.8
EEWM-30	30	5.549	6000	2.0
EEWM-40	40	9.865	6000	2.2
EEWM-50	50	15.413	6000	2.4

Dimensions (mm) – Soft Stainless (304/1.4301)

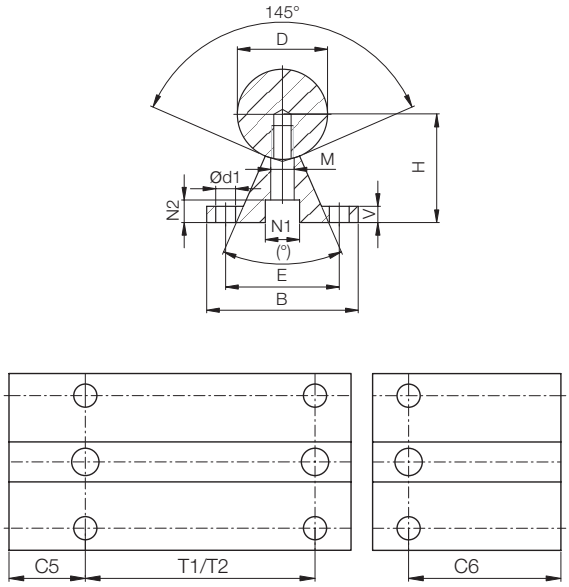
Part No.	d ISO h9	Weight (kg/m)	Max. Length (mm)
EWMR-10	10	0.617	4000
EWMR-12	12	0.888	6000
EWMR-16	16	1.578	6000
EWMR-20	20	2.466	6000
EWMR-25	25	3.853	6000
EWMR-30	30	5.549	6000

Dimensions (mm) – Soft Stainless (316/1.4571)

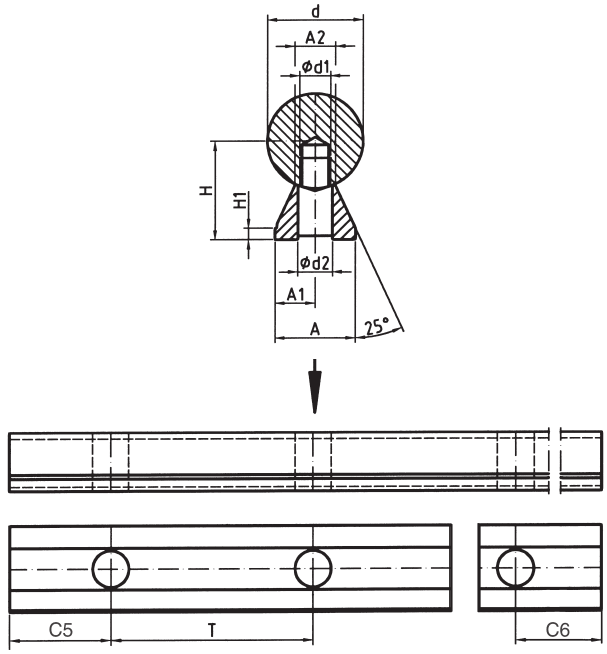
Part No.	d ISO h9	Weight (kg/m)	Max. Length (mm)
EWMS-10	10	0.617	4000
EWMS-20	20	2.466	6000

DryLin® Supported Stainless Steel - EWUM / EWUMN

EWUM



EWUMN



Dimensions (mm) – Supported Stainless (440c)

Part No.	D (mm) h6	B (mm)	H (mm) ±0.02	V (mm)	N1 (mm)	N2 (mm)	d1 (mm)	M (mm)	(°)	E (mm)	T1* (mm) ±0.15	C5/C6 min. for T1	C5/C6 max. for T1	T2 (mm) Standard	C5/C6 min. for T2 Standard	C5/C6 max. for T2 Standard	Weight (kg/m)
EWUM-12	12	40	22	5	8.0	5.0	4.5	5.8	50	29	75	20	57	120	20	79	1.75
EWUM-16	16	45	26	5	9.5	6.0	5.5	7.0	50	33	100	20	69	150	20	94	2.64
EWUM-20	20	52	32	6	11.0	6.5	6.6	8.3	50	37	100	20	69	150	20	94	3.97
EWUM-25	25	57	36	6	14.0	8.5	6.6	10.8	50	42	120	20	79	200	20	119	5.65
EWUM-30	30	69	42	7	17.0	10.5	9.0	11.0	50	51	150	20	94	200	20	119	7.93
EWUM-40	40	73	50	8	17.0	10.5	9.0	15.0	50	55	200	20	119	300	20	169	12.88
EWUM-50	50	84	60	9	19.0	12.5	11.0	19.0	46	63	200	20	119	300	20	169	19.60

* T1 optional, T2 standard

Dimensions (mm) – Narrow Supported Stainless (440c)

Part No.	d (mm) h6	H (mm)	H1 (mm) ±0.02	A (mm)	A1 (mm)	A2 (mm) ±0.02	d1	d2 (mm)	T (mm)	C5/C6 min.	C5/C6 max.	Gewicht (kg/m)
EWUMN-12	12	14.5	3	11	5.5	5.4	M4	4.5	75	20	57	1.62
EWUMN-16	16	18	3	14	7.0	7.0	M5	5.5	75	20	57	2.54
EWUMN-20	20	22	3	17	8.5	8.1	M6	6.6	75	20	57	3.81
EWUMN-25	25	26	3	21	10.5	10.3	M8	9.0	75	20	57	5.62
EWUMN-30	30	30	3	23	11.5	11.0	M10	11.0	100	20	69.5	7.63
EWUMN-40	40	39	4	30	15.0	15.0	M12	13.5	100	20	69.5	13.47
EWUMN-50	50	46	5	35	17.5	19.0	M14	15.5	100	20	69.5	20.31

Narrow supports are not assembled

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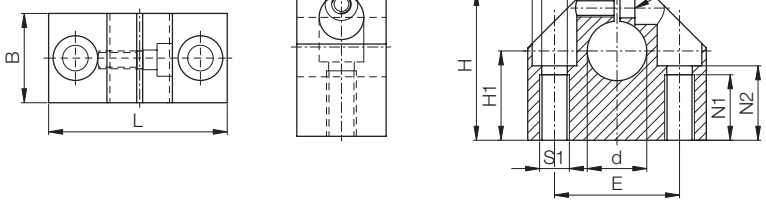
WA Shaft Block, Standard Design, mm



Special Properties

- Material: aluminum

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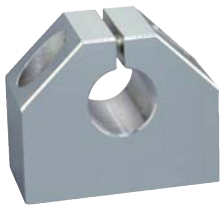


Dimensions (mm)

Part No.	d	B	H	H1 ±0,02	L	S1	S2	S3	E ±0,1	N1	N2	Weight (kg)
WA-08	8	18	28	15	32	M4	3.3	6	22	9	13.0	0.04
WA-12	12	20	35	20	43	M6	5.2	10	30	13	16.5	0.10
WA-16	16	24	42	25	53	M8	6.8	11	38	18	21.0	0.15
WA-20	20	30	50	30	60	M10	8.6	15	42	22	25.0	0.23
WA-25	25	38	60	35	78	M12	10.3	18	56	26	30.0	0.41
WA-30	30	40	70	40	87	M12	10.3	18	64	26	34.0	0.53
WA-40	40	48	90	50	108	M16	14.25	20	82	34	44.0	0.99
WA-50*	50	58	105	60	132	M20	17.5	26	100	43	49.0	1.25

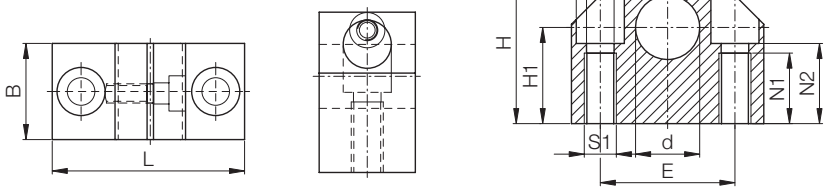
* on request

WAC Shaft Block, Compact Design, mm



Special Properties

- Material: aluminum



Dimensions (mm)

Part No.	d	B	H	H1 ±0.01	L	S1	S2	E ±0.12	N1	N2	SW	Weight (kg)
WAC-06*	6	16	27	15	32	M5	4.2	22	11	13	2.5	0.03
WAC-08	8	16	27	16	32	M5	4.2	22	11	13	2.5	0.03
WAC-10	10	18	33	18	40	M6	5.2	27	13	16	3.0	0.05
WAC-12	12	18	33	19	40	M6	5.2	27	13	16	3.0	0.05
WAC-14*	14	20	38	20	45	M6	5.2	32	13	18	3.0	0.07
WAC-16	16	20	38	22	45	M6	5.2	32	13	18	3.0	0.07
WAC-20	20	24	45	25	53	M8	6.8	39	18	22	4.0	0.12
WAC-25	25	28	54	31	62	M10	8.6	44	22	26	5.0	0.17
WAC-30	30	30	60	34	67	M10	8.6	49	22	29	5.0	0.22
WAC-40	40	40	76	42	87	M12	10.3	66	26	38	6.0	0.48
WAC-50*	50	50	92	50	103	M16	14.25	80	34	46	8.0	0.82

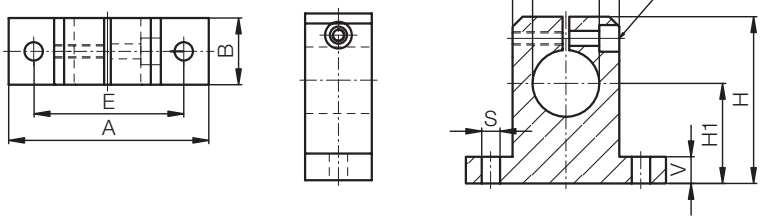
* on request

WAS Shaft Block, Narrow Design, mm



Special Properties

- Material: aluminum



Dimensions (mm)

Part No.	d	H	H1 ±0.02	A	A1	B	E	S	V	SW	Weight (kg)
WAS-08	8	27	15	32	16	10	25	4.5	5.0	2.5	0.012
WAS-12	12	35	20	42	20	12	32	5.5	5.5	3.0	0.023
WAS-16	16	42	25	50	26	16	40	5.5	6.5	3.0	0.035
WAS-20	20	50	30	60	32	20	45	5.5	8.0	3.0	0.067
WAS-25	25	58	35	74	38	25	60	6.6	9.0	4.0	0.140
WAS-30	30	68	40	84	45	28	68	9.0	10.0	5.0	0.200
WAS-40	40	86	50	108	56	32	86	11.0	12.0	6.0	0.480

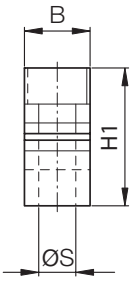
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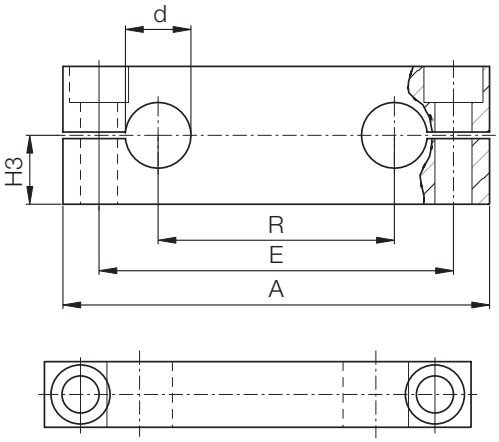
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TA Shaft End Support, Movable*, mm



Special Properties
- Material: aluminum
- Thread hole mount





Dimensions (mm)

Part No.	d	A	B	H1	H3 ±0,015	S	E	R	Weight (kg)
TA-08	8	65	12	22	11	M5	52	32	0.04
TA-12	12	85	14	28	14	M6	70	42	0.07
TA-16	16	100	18	32	16	M8	82	54	0.13
TA-20	20	130	20	42	21	M10	108	72	0.22
TA-25	25	160	25	52	26	M12	132	88	0.44
TA-30	30	180	25	58	29	M12	150	96	0.56
TA-40	40	230	30	72	36	M16	190	122	1.00

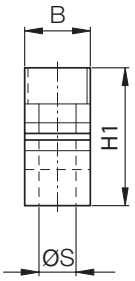
*To be used when linear glide carriage is mounted and shaft is driven

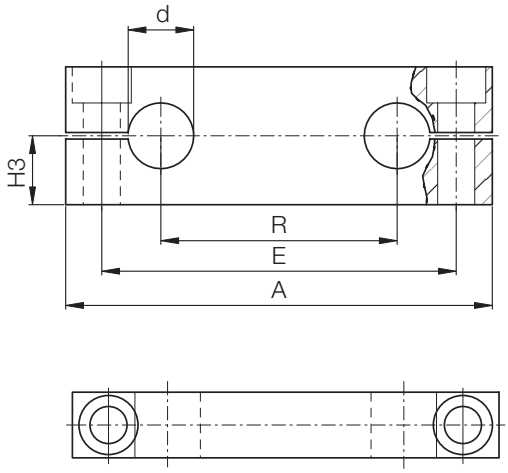
TAF Shaft End Support, Fixed*, mm



Special Properties
- Material: aluminum
- Plain bore

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Part No.	d	A	B	H1	H3 ±0,015	R	S	E	Weight (kg)
TAF-08	8	65	12	23	12.5	32	5.5	52	0.04
TAF-12	12	85	14	32	18.0	42	6.6	70	0.09
TAF-16	16	100	18	36	20.0	54	9.0	82	0.14
TAF-20	20	130	20	46	25.0	72	11.0	108	0.25
TAF-25	25	160	25	56	30.0	88	13.5	132	0.47
TAF-30	30	180	25	64	35.0	96	13.5	150	0.62
TAF-40	40	230	30	80	44.0	122	17.5	190	1.15

*To be used when shaft is stationary and the carriage is driven

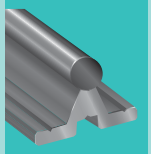
igus® Testing Method

igus® testing method for determining the tolerance of DryLin® Linear Plain Bearings

In order to ensure the function of the DryLin® linear plain bearing, it is necessary to use the bearing with a defined clearance. The quality control of this product line is performed with a cylinder gauge test. For this purpose, a certain force is defined, with which the cylinder gauge is loaded when the plain bearing is tested.

Part	Test Force (lbs)	Test Housing i.d.	min. Bearing øi (Cylinder Gauge Free)	max. Bearing øi (Cylinder Gauge Hangs)
JUM-01/02-10	0.221	12.000 mm	10.030 mm	10.070 mm
JUM-01/02-12	0.309	14.000 mm	12.030 mm	12.070 mm
JUM-01/02-16	0.419	18.000 mm	16.030 mm	16.070 mm
JUM-01/02-20	0.595	23.000 mm	20.030 mm	20.070 mm
JUM-01/02-25	0.838	28.000 mm	25.030 mm	25.070 mm
JUM-01/02-30	1.081	34.000 mm	30.040 mm	30.085 mm
JUM-01/02-40	1.588	44.000 mm	40.040 mm	40.085 mm
JUM-01/02-50	2.205	55.000 mm	50.050 mm	50.100 mm
JUI-01-06	0.221	0.4684 inch	0.3768 inch	0.3776 inch
JUI-01-08	0.309	0.5934 inch	0.5016 inch	0.5024 inch
JUI-01-10	0.419	0.7184 inch	0.6268 inch	0.6276 inch
JUI-01-12	0.595	0.8747 inch	0.7516 inch	0.7524 inch
JUI-01-16	0.838	1.1247 inch	1.0016 inch	1.0024 inch
JUI-01-20	1.081	1.4058 inch	1.2520 inch	1.2531 inch
JUI-01-24	1.588	1.6558 inch	1.5020 inch	1.5031 inch
JUI-01-32	2.205	2.1870 inch	2.0024 inch	2.0039 inch
RJM-01-08	0.221	16.000 mm	8.025 mm	8.061 mm
RJM-01-10	0.221	19.000 mm	10.025 mm	10.061 mm
RJM-01-12	0.309	22.000 mm	12.032 mm	12.075 mm
RJM-01-16	0.419	26.000 mm	16.032 mm	16.075 mm
RJM-01-20	0.595	32.000 mm	20.040 mm	20.092 mm
RJM-01-25	0.838	40.000 mm	25.040 mm	25.092 mm
RJM-01-30	1.081	47.000 mm	30.040 mm	30.092 mm
RJM-01-40	1.588	62.000 mm	40.050 mm	40.112 mm
RJM-01-50	2.205	75.000 mm	50.050 mm	50.112 mm
RJI-01-06	0.221	0.6250 inch	0.3762 inch	0.3776 inch
RJI-01-08	0.309	0.8750 inch	0.5013 inch	0.5030 inch
RJI-01-10	0.419	1.1250 inch	0.6265 inch	0.6282 inch
RJI-01-12	0.595	1.2500 inch	0.7516 inch	0.7536 inch
RJI-01-16	0.838	1.5625 inch	1.0035 inch	1.0056 inch
RJI-01-20	1.081	2.0000 inch	1.2520 inch	1.2544 inch
RJI-01-24	1.588	2.3750 inch	1.5020 inch	1.5044 inch
RJI-01-32	2.205	3.0000 inch	2.0024 inch	2.0053 inch

When using a plain bearing (JUM/RJM..) in connection with an adapter/housing (RJUM, OJUM, RGA..) the manufacturing tolerance of the housing bore (standard case: H7) is also added to the minimum play listed above. The total from these two values then produces the maximum possible bearing tolerance. Plain bearings of the dimensional series “Japan-Std.” (JUJ) are tested according to the same criteria of the JUM plain bearing.



Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Analysis Worksheet

Online Lifetime Calculation www.igus.com

Please enter as much data as possible.
Most applications questions can be answered with just a partial amount of data.
Please call us if you have any questions (Tel: 1-888-803-1895).
You may fax this worksheet to 401-438-7680

Application: .....

.....

Current guide system: .....

Installation position (1=horizontal, 2=vertical, 3=lateral): .....

Number of bearings per rail/shaft: .....Number of rails/shafts: .....

Type of drive: .....Drive force [lbs]: .....

Average speed: .....Maximum speed: .....

Length of stroke: .....Expected service life: .....

Operating time: .....

Ambient temperature .....Maximum temperature: .....

Surrounding medium: .....Lubrication: .....

Static Load: .....Dynamic Load: .....

For the following data, the drawings on the reverse side will help you!

Distance between bearings/carriages on a rail/shaft (wx) : .....

Distance between rails/shafts (b) : .....

Distance of the mass force in the x-direction (Sx) : .....

Distance of the mass force in the y-direction (Sy) : .....

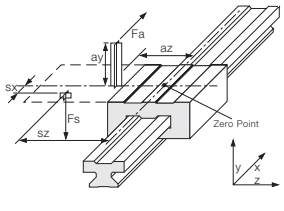
Distance of the mass force in the z-direction (Sz) : .....

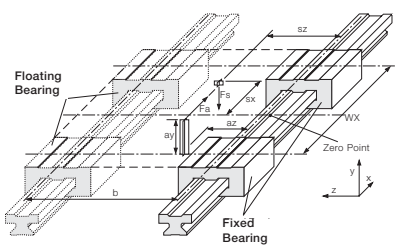
Distance of the drive force in the y-direction (ay) : .....

Distance of the drive force in the z-direction (az) : .....

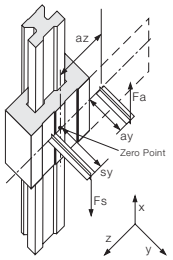
Please enter all the data you know and if possible make a schematic drawing.

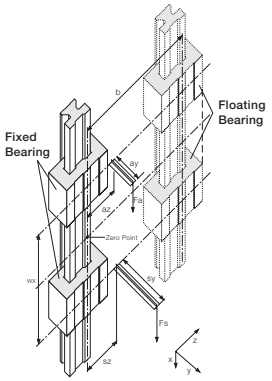
Horizontal Orientation



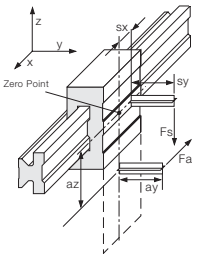


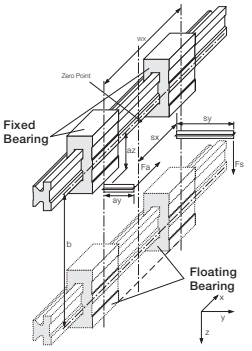
Vertical Orientation





Lateral Orientation





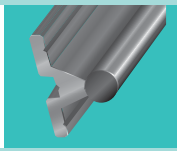


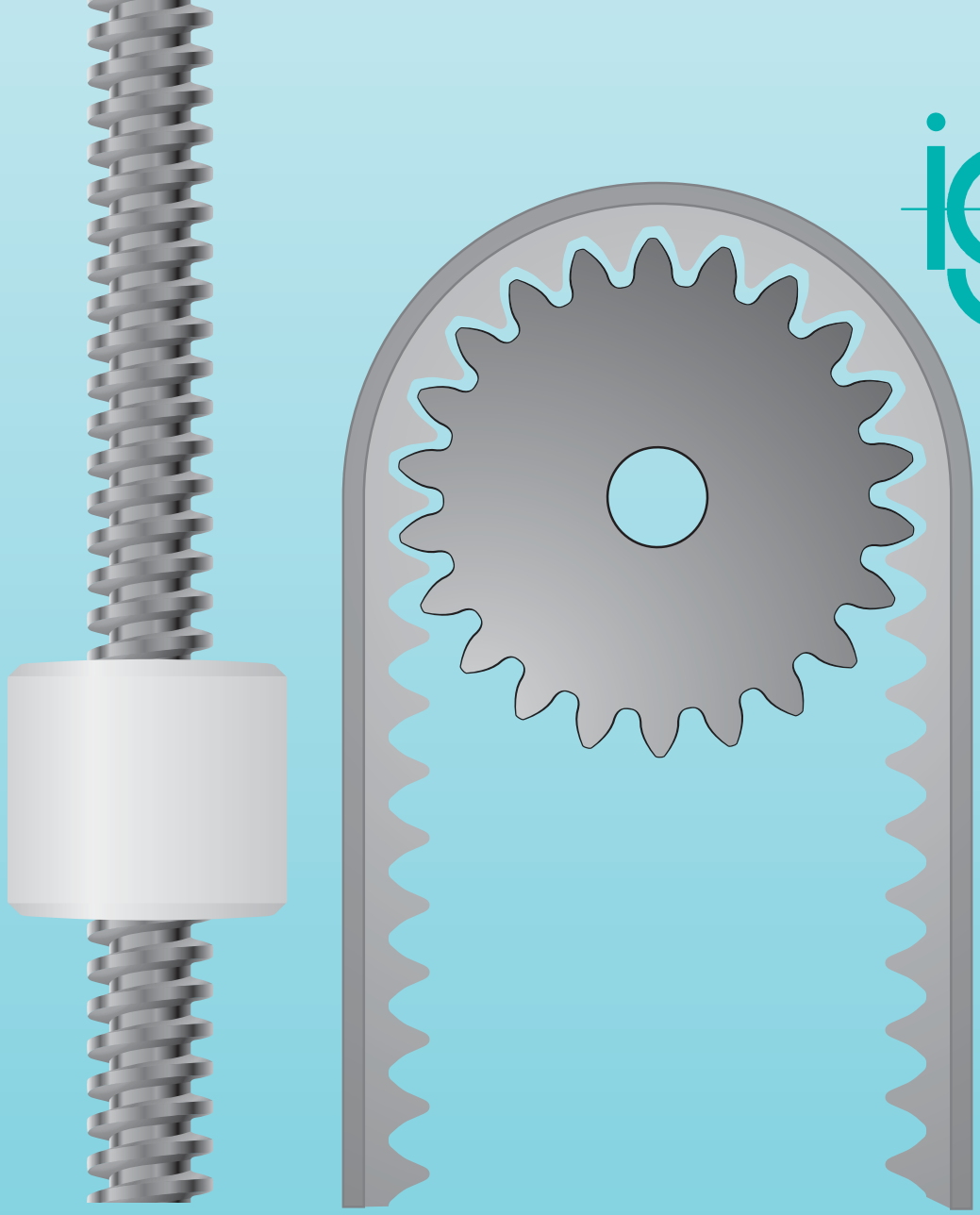
Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

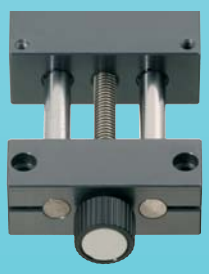
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QuickSpec: www.igus.com/qs/DryLin.asp

Telephone 1-888-803-1895
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DryLin® - Drive Engineering



DryLin®
HTS-Linear slide table

ideal for:
- High loads and low speed
- Format adjustments and easy positioning

for lower speed

also for high loads

low-priced, robust and compact

self-braking by friction



DryLin®
ZLW-belt drive

ideal for:
- Small loads and high speed
- Fast positioning

quick handling

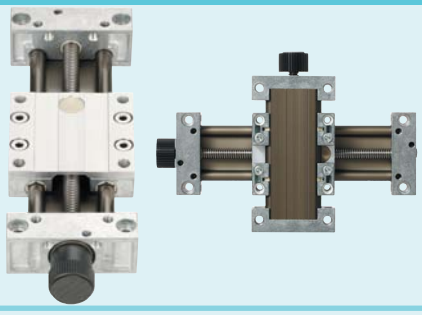
for lighter loads

cost-effective

corrosion resistant

DryLin® Slide Table Selection Guide

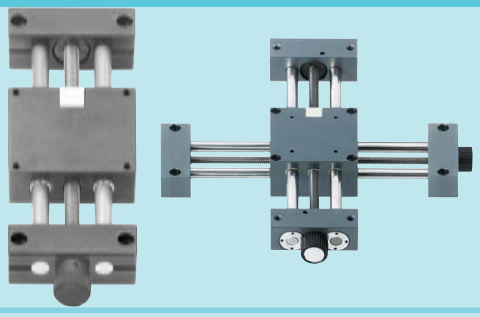
DryLin® SLW



Based on our innovative DryLin® W double rail system, the SLW offers a fully supported rail with resistance to twisting and deflection. SLW also offers a lower profile than most other standard lead-screw tables, and runs absolutely maintenance-free.

*Handwheel is optional

DryLin® HTS / HTSC/HTSS HTS-PL/HTS



Tough and adaptable, HTS is the most flexible system, and is available with several shaft and screw combinations, including hard-anodized aluminum and stainless steel. All HTS tables are designed to be simple bolt-on solutions. HTSC offers a compact carriage.

*Handwheel is optional

Features



Threaded nuts are available as separate parts. Please see Section 26 for more information.

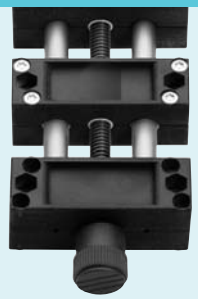
- Simple, bolt-on solution
- Resists twisting
- Maintenance-free
- No messy lubrication
- Ideal for positioning
- Saves assembly time and cost
- 316 stainless version available

- Flexible system offering several shaft/material combinations
- Completely maintenance-free
- Clean, oil-free operation
- Compact version available for design constraints
- Saves assembly time and cost
- XY and preloaded versions available

Properties

	DryLin® SLW	DryLin® HTS / HTSC/HTSS HTS-PL/HTS
Maximum Static Radial Load	Up to 1400 lbs	Up to 2200 lbs
Maximum Static Axial Load	350 lbs	550 lbs
Maximum Continuous Speed*	5.25 fpm	3.9 fpm
Maximum Stroke Length	3.28 ft (1000 mm)	4.10 ft (1250 mm)
Spindle type	M8 / TR 10x2 / TR 14x4 / TR 18x4	TR 10x2 / TR 18x4 / TR24x5
Rail Material	Hard Anodized Aluminum 316 Stainless Available	Hard Anodized Aluminum, Hardened Steel, Stainless Steel, Carbon Fiber
Carriage Material	Anodized Aluminum and Chromated Zinc 316 Stainless available	Anodized Aluminum
Temperature	-40°F to +194°F	-40°F to +194°F -58°F to +356°F option
Handwheel	Available	Available

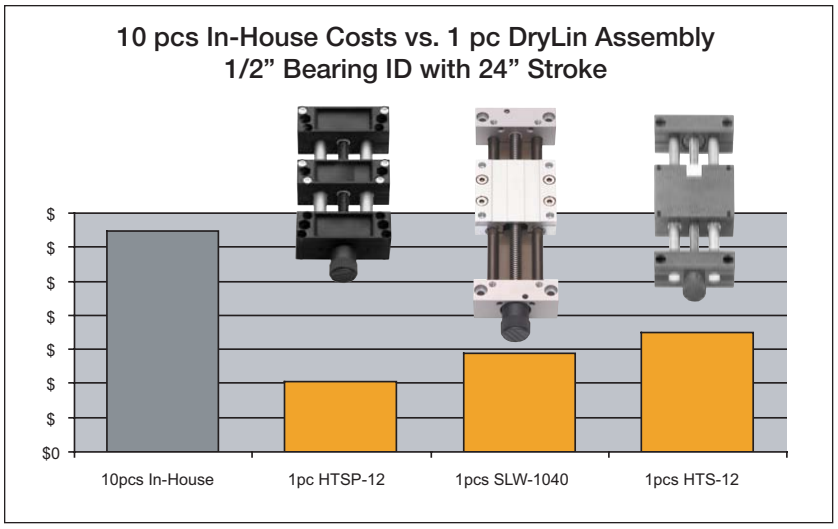
*Figure given reflects continuous motion with no cool-down period. Higher speed / loads are possible for non-continuous movement.

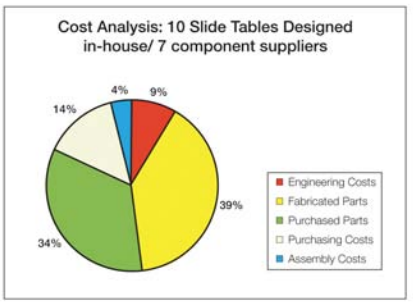
DryLin® HTSP	DryLin® Easy Tube	DryLin® ZLW
		
HTSP is the most cost-effective and lightweight unit available. Recommended for handling low weight applications by hand or low-speed motor. HTSP works especially well in corrosive environments. *Handwheel is optional	Simple, but an effective and solid design: That's the new DryLin® SET EasyTube. A complete system with few components for simple linear adjustments.	For higher speed applications the ZLW Belt-Drive system offers clean and quiet high performance. The system uses iglide® J glide pad technology, tough plastic end blocks, hard anodized aluminum rails, and requires no maintenance or lubrication. *Handwheel is optional
• Lightweight • Cost-effective • Corrosion resistant • Can use several shaft materials • Compact • Saves assembly time and cost • Also available in miniature size	• Totally lubrication-free • Corrosion-resistant when specified with a stainless leadscrew • Lightweight (aluminum and polymer) • Can be driven from both sides by hand or motor drive • Temperature resistant up to 176°F	• High speed linear movement up to 16 fps possible • Clean, oil-free operation • Corrosion resistant • Low friction iglide® J glide pads
Up to 315 lbs	Up to 90 lbs	Up to 65 lbs
45 lbs	45 lbs	—
3 fpm	—	16.4 fps
2.46 ft (750 mm)	NA	6.56 ft (2000 mm)
M8 / TR 10x2	M4 / TR 10x2 / TR 12x3	Belt Drive
Hard Anodized Aluminum, Hardened Steel, Stainless Steel, Carbon Fiber	Hard Anodized Aluminum, Hardened Steel, Stainless Steel, Carbon Fiber	Hard Anodized Aluminum
Plastic	iglide®	Anodized Aluminum and Chromated Zinc
-40°F to +194°F	-40°F to +194°F	+32°F to +122°F
Available	Available	Available

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Slide Table
DryLin Slide Tables vs. In-House Production



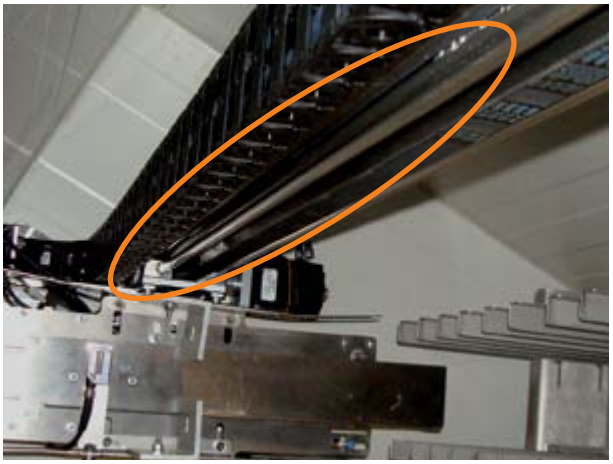


Reduce engineering/manufacturing time and costs

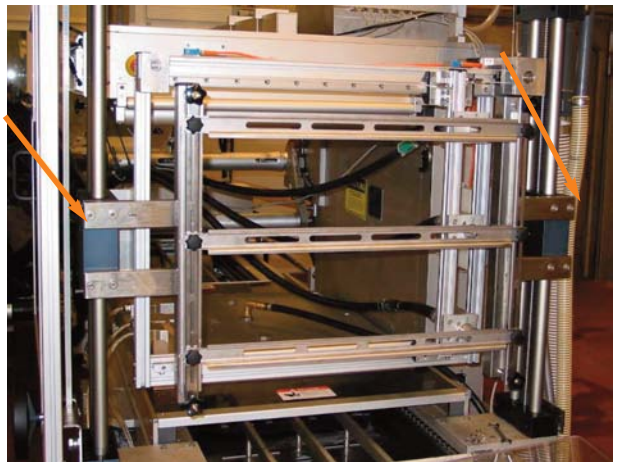
- Save on engineering costs
- Eliminate researching catalogs or internet
- Eliminate drawing or work instructions for assembly
- Eliminate checking specifications of lead screws, shafting, blocks, acme nuts and bearings
- Eliminate waiting for quotes/samples/phone calls from suppliers
- Eliminate designing fabricated parts
- Able to spend time on other aspects of design

Reduce purchasing costs

- More cost-efficient to place order using one Purchase Order rather than ten
- Save hidden costs of: Processing, expediting late parts, freight, potential returns/claims, downtime
- Spend time reducing other machine costs



This pizza vending machine can bake a cold storage pizza within two minutes and serve it to customers. All bearing components have to withstand the -4°F (-20°C), perfect for the DryLin® ZLW-LT (low-temp) belt drive.



Two linear slide tables used for height adjustment on this labeling machine



Leadscrew table used for fine adjustment on cut-off saw for aluminum profiles

DryLin® Linear Slide Table Introduction

At igus® we manufacture plastic bearings with the fundamental belief that they can help machinery last longer, at a lower cost, without the need for maintenance. DryLin® linear slide tables are the latest evolution of over 40-years of testing and development of plastic bearing materials. After noticing that many of our customers were fabricating their own linear systems with belts or leadscrews, with parts from multiple suppliers, we designed our own.

You can of course piece together your own leadscrew driven assembly – but why?
After you factor in the research, design, drawing, purchasing, QC, and assembly, you could have purchased a finished DryLin® unit from stock and designed several other aspects of your equipment – saving time and hidden costs.

- **Off-the-shelf, ready to ship assemblies in stock**
- **Cut-to-order lengths can ship in less than 1-2 days**
- **Custom machining possible**
- **Downloadable CAD**
- **One part number; one purchase order; one supplier**





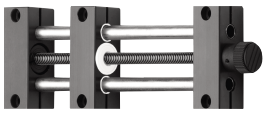
Call us at 888-803-1895 for:

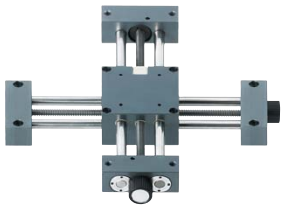
- Free Samples
- Technical Support
- Cost-Saving Ideas
- New Catalog

Leadscrew Assemblies



SLW: Great blend of performance and value

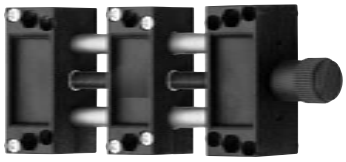




HTS(C): Our most flexible system, available in a variety of materials and configurations



Easy Tube: Simple design for low-cost positioning



HTSP: All-plastic table with aluminum or stainless shafting for low cost and corrosion resistance

Belt-Drive Assemblies



ZLW-1040 basic/standard configurations
Version LT for cold storage applications to -22°F (-30°C)
Version UW for underwater applications



ZLW-0630 basic/standard miniature slide
High performance for small spaces
.5" (31mm) height x 2.1" (54mm) width



ZAW-1040 cantilever axis
Lightweight and ideal for applications where you want the rail to move, and the carriage static, such as Z-axis applications



ZLW-1040-OD: Opposite drive
2 carriage opposite drive for bi-directional movement

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

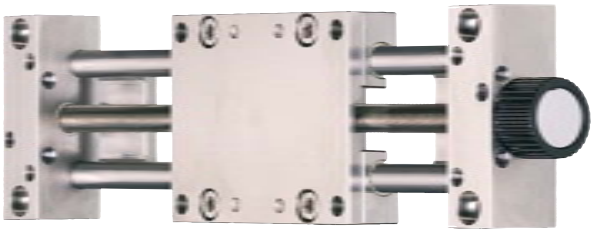
Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Slide Table
Advanced Plastic Lead Screw Assemblies



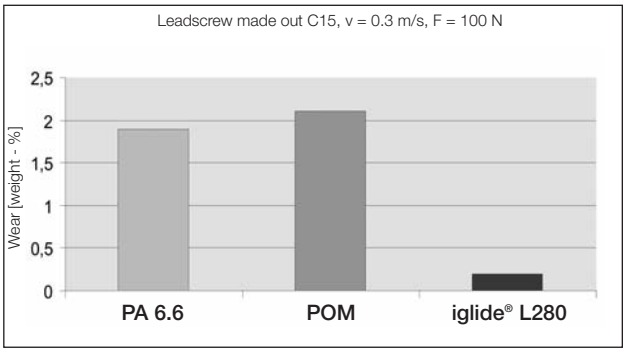
Tech support available at:
1-888-803-1895 or www.igus.com





igus leadscrew nuts were developed specifically to be bearing surfaces. The wear is much lower than simple plastics, and they do not require wet lubrication like bronze or other metallic nuts. The leadscrews are available in either mild or stainless steel.

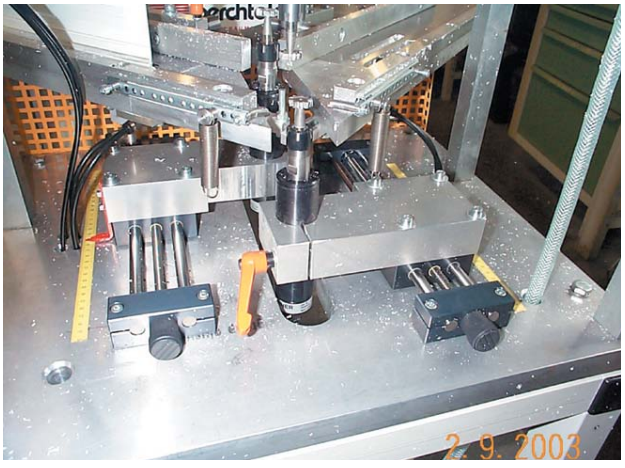
- **Better wear resistance than other plastics**
- **Constant coefficient of friction**
- **Downloadable CAD**
- **No oil/maintenance like bronze or brass**
- **Anti-backdriving/self-locking**
- **Quiet operation**
- **Work well in aggressive environments**
- **Custom machining available**
- **Anti-backlash and adjustable clearance optional**



Wear of iglide® vs. simple plastic leadscrew nuts 22.5 lb axial load, rotating at 1 fps on cold-rolled steel



Format adjustment using DryLin® Easy Tube



Leadscrew table used to position milling heads in aluminum window manufacturing

DryLin® Linear Slide Table

DryLin® linear leadscrew units have been developed for position settings of all types. The linear setting is achieved by means of leadscrew that can be operated manually or by low speed motor. The maximum linear continuous speed is 5.25 ft/min (1.6 m/min.) Use the graphs below to check suitability.

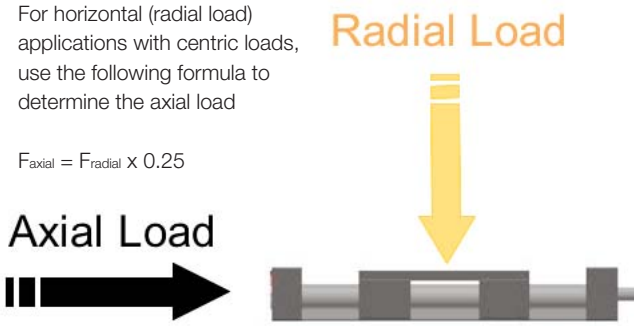
The following trapezoidal leadscrew drive sizes are used in DryLin® linear tables:

- TR 10x2: HTS-12, HTSC-12, HTSP-12*, SLW-1040, SLW-1040-ES, SET-25
- TR 14x4: SLW-1660
- TR 18x4: HTS-20, HTS-20, SLW-2080
- TR 24x5: HTS-30, HTS-30

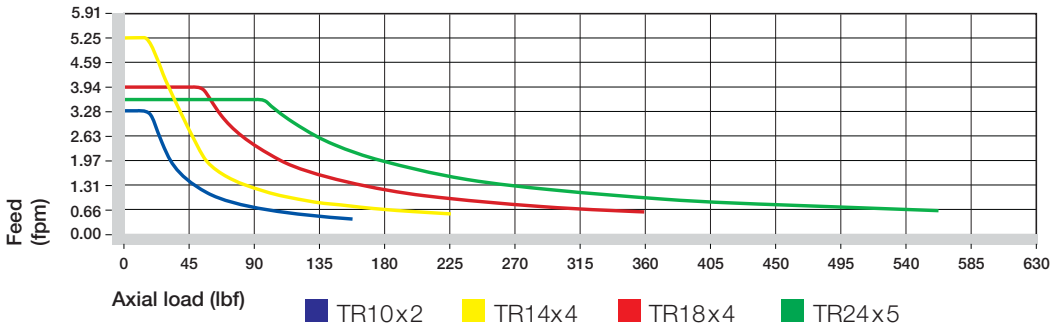
Please note that the loads given are axial loads. Radial loads are not given for trapezoidal leadscrews.
*HTSP-12, max lbf - 45 lbs

For horizontal (radial load) applications with centric loads, use the following formula to determine the axial load

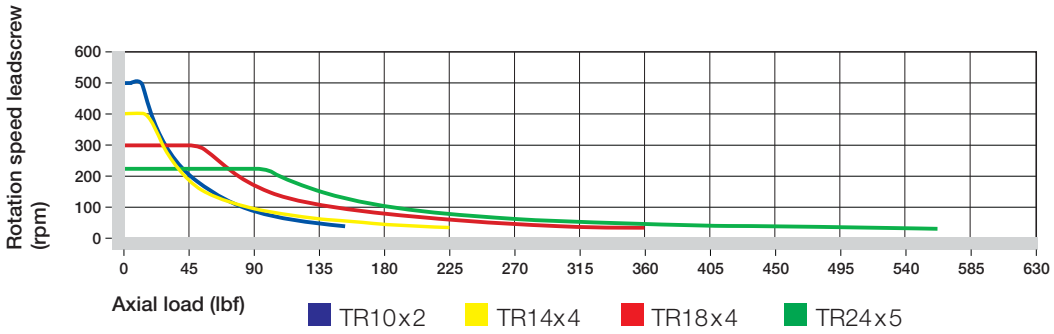
$F_{axial} = F_{radial} \times 0.25$



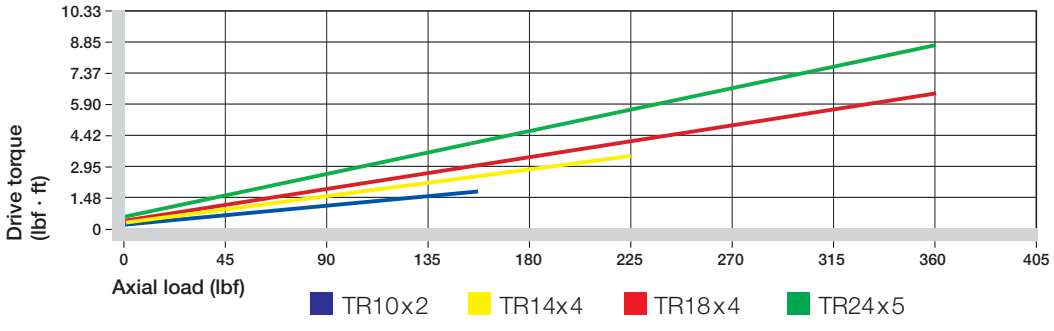
Maximum Feed (fpm)



Maximum permissible rotation speed leadscrew (rpm)



Drive Torque (lbf · ft)



PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

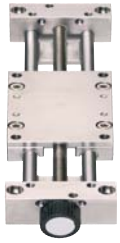


DryLin® Linear Slide Table - SLW

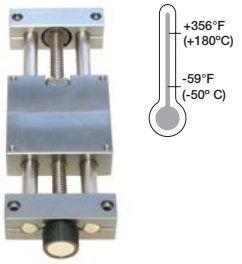
STAINLESS
SLW-1040-ES: All-stainless solution for corrosive environments

STAINLESS / WASHDOWN
HTS-HYD: Designed specifically for washdown, easy to clean and consists of only stainless steel and plastic

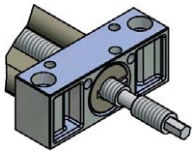
HIGH TEMPERATURE
HTS-HTX: Temperatures up to 356°F. Blocks are aluminum, spindle and shaft are stainless.



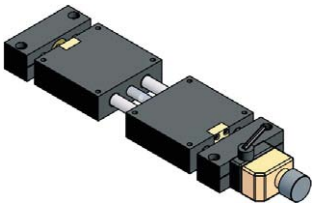




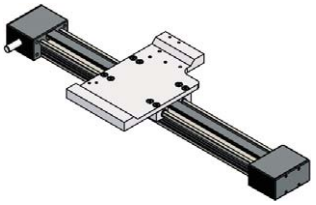
CUSTOM MACHINING CAPABILITY



SELF-CENTERING (left/right) Tables available



CUSTOM PLATE CAPABILITY

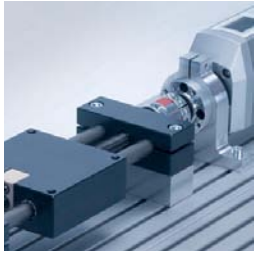




High dirt resistance



Cost-effective and reliable at the same time



Modular design, allows easy installation

Structure of the part number:

HTS - 12 - AWM - 150 - HR - ES

Leadscrew material

Leave blank	= Steel (standard)
ES	= Stainless steel
AL	= Hard anodized aluminum

Additional options

Leave blank	= Standard
HR	= Hand wheel
PA	= Position indicator
HK	= Leadscrew clamping
HK-PA-HR	= Different combinations
Z	= No machining (TR10x2)
PL	= preload
HTX	= High temp. version

Length of stroke

Shaft material

AWM	= Hard anodized aluminum
SWM	= Case-hardened steel
EWM	= Stainless steel

Dimensions

1040	= shaft Ø 10 mm, TR10x2 (SLW)
12	= shaft Ø 12 mm, TR10x2
1660	= shaft Ø 16 mm, TR14x4 (SLW)
20	= shaft Ø 20 mm, TR18x4
2080	= shaft Ø 20 mm, TR18x4 (SLW)
25	= shaft Ø 25 mm, TR10x2 (SET)
30	= shaft Ø 30 mm, TR24x5

Type

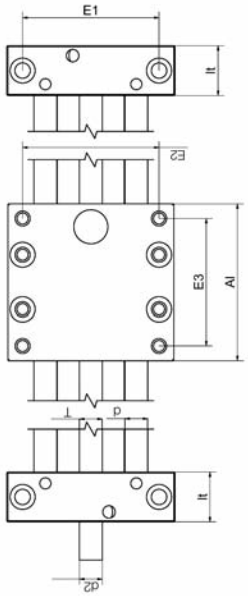
HTS	= Basic
HTSP	= Cost-effective
SLW	= Compact
HTSC	= Flexible
HTSS	= Fast
SET	= EasyTube

Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Slide Table - SLW Slide Table System
A good blend of performance and cost



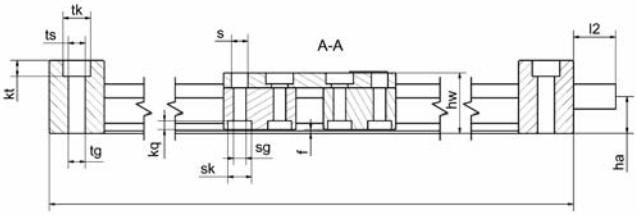
Based on our innovative DryLin® W double rail system, the SLW offers a fully supported rail with resistance to twisting and deflection. SLW also offers a lower profile than most other leadscrew tables and runs absolutely maintenance-free.



Component Materials

Part No.	End blocks	Carriages	Leadscrew
SLW-0630	Plastic	Zinc	Stainless Steel
SLW-1040-PL	Zinc*	Zinc	Mild Steel**
SLW-1040-ES	Stainless Steel	Stainless Steel	Stainless Steel
SLW-1080	Anodized AL	Zinc*	Mild Steel**
SLW-1660	Anodized AL	Zinc*	Mild Steel**
SLW-2080	Anodized AL	Zinc*	Mild Steel**

*Aluminum optional **Stainless Steel optional



Turn-To-Fit!

Can be assembled with Turn-To-Fit
For clearance adjustment see page 22.9

Length and weight (mm)

Part No.	Maximum stroke length (mm)	Linear travel mm/rev	Shaft weight (kg)	Additional weight (kg/100mm)	Max. static load-bearing capacity axial (N)	radial (N)
SLW-0630	300	1.25	0.2	0.08	50	200
SLW-1040	750	2	0.7	0.1	700	2800
SLW-1080	750	2	0.9	0.2	700	2800
SLW-1660	1000	4	1.5	0.3	1200	4600
SLW-2080	1000	5	3.0	0.4	1600	6400
All Stainless						
SLW-1040-ES	750	2	1.4	0.2	700	2800

Dimensions (mm)

Part No.	A –0.3	Al** –0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	hw	f	lt –0.1	tk	ts	tg
SLW-0630	54	60	20	40	45	51	100	17.5	1.2	20	11	6.2	–
SLW-1040	74	69	29	60	60	56	113	24	1.5	22	11	6.8	M8
SLW-1080	108	100	29	94	94	94	144	24	1.5	22	11	6.8	M8
SLW-1660	104	100	37	84	86	82	150	35	1.5	25	15	9.0	M10
SLW-2080	134	150	46	116	116	132	206	44	1.5	28	15	8.6	M10
All Stainless													
SLW-1040-ES	74	100	29	60	60	87	113	17	1.5	22	11	6.8	M8

Part No.	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
SLW-0630	8.0	4.5	7.0	M4	2.0	6	M8	15	M8	9.5
SLW-1040	6.4	6.6	9.5	M6	4.4	10	TR10x2	17	TR10x2*	14.5
SLW-1080	6.4	6.6	9.5	M6	4.4	10	TR10x2	17	TR10x2*	14.5
SLW-1660	8.6	9.0	11	M8	5.5	16	TR14x4	20	TR14x4*	18.5
SLW-2080	8.6	9.0	14.0	M8	5.5	20	TR18x4	26	12 h9	23.0
All Stainless										
SLW-1040-ES	6.4	6.6	9.5	M6	4.4	10	TR10X2	17	TR10X2*	14.5

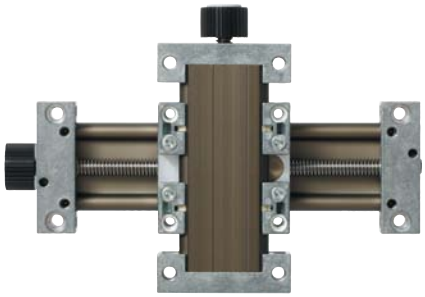
* end of leadscrew not machined/journaled

** Carriages also available in 100, 150, 200 and 250 mm lengths

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

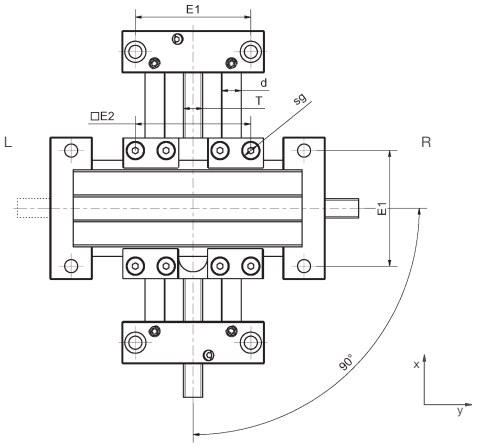
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Slide Table - SLW
XY Table

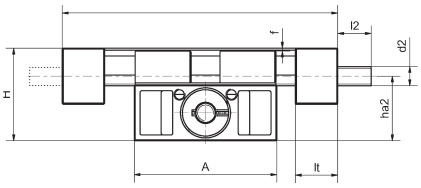


Turn-To-Fit!

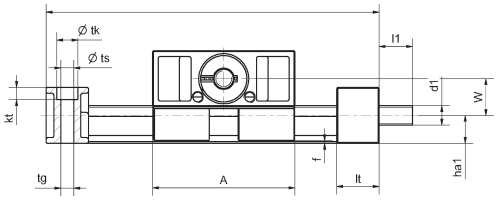
Can be assembled with Turn-To-Fit
for clearance adjustment (size 1040 only)



I + Stroke



I + Stroke



Component Materials

Part No.	End blocks	Carriages	Leadscrew	Maximum stroke
SLW-0630-XY	Plastic	Zinc	Stainless Steel	300
SLW-1040-XY	Zinc*	Zinc	Mild Steel**	750

*Aluminum optional **Stainless Steel optional

Dimensions [mm]

Part No.	Linear travel/rev	A –0.3 (mm)	H (mm)	E1 ±0.15 (mm)	E2 ±0.15 (mm)	Basic length lx (mm)	Basic length ly (mm)	f (mm)	lt (mm)	tk ±0.1 (mm)	ts (mm)	tg	kt (mm)
SLW-XY-0630	1.25	54	37.4	40	45	100	100	1.2	20	11	8	-	8
SLW-XY-1040	2	74	48	60	60	117	117	1.5	22	11	6.6	M8	6.4

Part No.	sg (mm)	d (mm)	T	l1 (mm)	d1 standard	d1 alternative	l2 (mm)	d2	d2 standard	ha1 alternative (mm)	ha2 (mm)	W ha2 – ha1 (mm)
SLW-XY-0630	M4	5	M8	15	M8	NA	15	M8	NA	9.5	27.9	18.4
SLW-XY-1040	M6	10	TR10x2	17	TR10x2	6h9	17	TR10x2	6h9	18	38	20

Order example:

The rotary knob on the y-axis can be ordered installed on the left or on the right side.

Order example for left SLW-XY-1040-**L**-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis.

Order example for left SLW-XY-1040-**R**-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis.

Lifetime calculation, CAD files online: www.igus.com

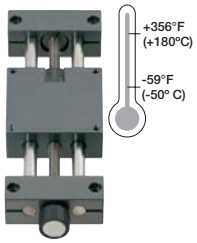
DryLin® Linear Slide Table - HTS Slide Table System Flexibility

Tough and adaptable, HTS is the most flexible system and is available with several shaft and screw combinations, including hard anodized aluminum abd stainless steel. All HTS tables are designed to be simple bolt-on solutions. HTSC offers a comp[act carriage.

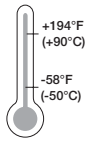


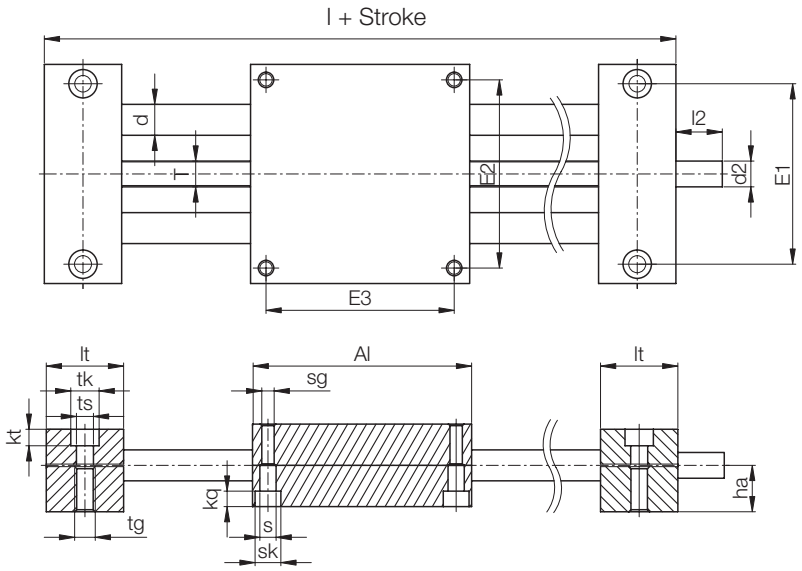
reddot design award winner 2006

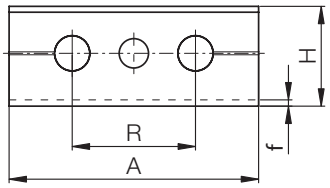
High temperature version HTS-HTX



Standard







Component Materials

Part No.	Shafting	End blocks/Carriages	Bearings	Leadscrew
HTS	Hard Anodized AL*	Anodized AL	igus®plastic	Mild Steel**
HTS-HX	Stainless 440C			Stainless 304

*Case hardened carbon (1050) & Hardened stainless (440C) optional
**Stainless (304SS) optional

Length (mm) and Weight

Part No.	Maximum stroke length (mm)	Linear travel/rev (mm)	Aluminum Shaft weight (kg)	Aluminum Shaft add'l weight (per 100 mm) (kg)	Steel Shaft weight (kg)	Steel Shaft add'l weight (per 100 mm) (kg)	Max. static load-bearing capacity axial (N)	Max. static load-bearing capacity radial (N)
HTS-12-AWM	750	2	1.1	0.1	1.3	0.2	700	2800
HTS-20-AWM	1000	4	3.2	0.3	3.9	0.6	1600	6400
HTS-30-AWM	1250	5	8.6	0.6	10.9	1.4	2500	10000
Hi Temperature (-59°F - 356°F)								
HTS-12-EWM-HTX**	750	2	1.1	0.1	1.3	0.2	700	2800

(1N = .225 lbs)

Dimensions (mm)

Part No.	A –0.3	Al –0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	R	f	lt ±0.1	tk	ts
HTS-12-AWM	85	85	34	70	73	73	145	42	2	30	11	6.6
HTS-20-AWM	130	130	48	108	115	115	202	72	2	36	15	9.0
HTS-30-AWM	180	180	68	150	158	158	280	96	4	50	20	13.5
Hi Temperature (-59°F - 356°F)												
HTS-12-EWM-HTX**	85	85	34	70	73	73	145	42	2	30	11	6.6

Part No.	tg	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
HTS-12-AWM	M8	6.4	6.3	10	M6	6.0	12	TR10 x 2	17	TR10 x 2*	18
HTS-20-AWM	M10	8.6	6.4	11	M8	7.0	20	TR18 x 4	26	12 h9	23
HTS-30-AWM	M16	12.6	11.0	18	M12	10.6	30	TR24 x 5	38	14 h9	36
Hi Temperature (-59°F - 356°F)											
HTS-12-EWM-HTX**	M8	6.4	6.3	10	M6	6.0	12	TR10 x 2	17	TR10 x 2*	18

* TR10x2 leadscrew end unmachined (10 mm OD x 2 mm pitch)
More dimensions in preparation. Bearing material: iglidur® T500

Order example:

More details on part no. options: ▶ **Page 25.8**

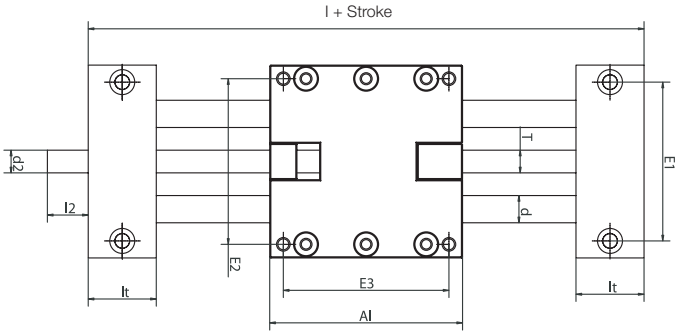
Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

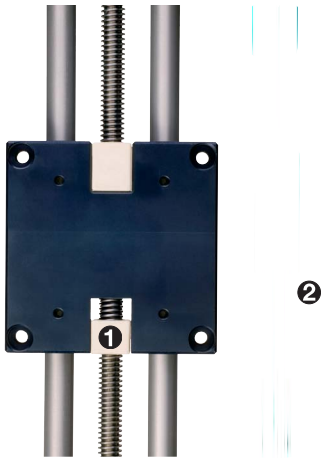
DryLin® Linear Slide Table - HTS-PL
Adjustable Clearance and Anti-Backlash



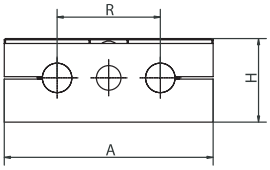
Properties

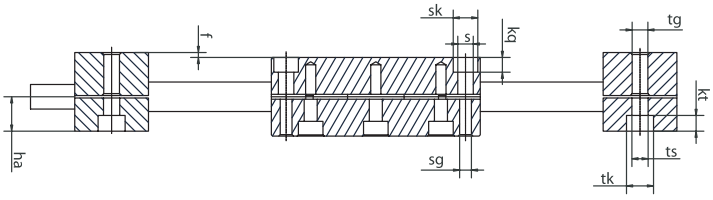
- Lubricant-free
- Preloaded trapezoidal lead screw nut, Pretension force 11.2 lbf (50 N)
- Radial clearance is adjustable from both sides
- Low weight





❶ Preloaded trapezoidal lead screw nut
❷ Radial clearance adjustable from both sides





Component Materials

Part No.	Shafting	End blocks/Carriages	Bearings	Leadscrew
HTS	Hard Anodized AL*	Anodized AL	igus®plastic	Mild Steel**

*Case hardened carbon (1050) & Hardened stainless (440C) optional
**Stainless (304SS) optional

Length (mm) and Weight

Part No.	Maximum stroke length (mm)	Linear travel/rev (mm)	Aluminum shaft weight (kg)	Aluminum shaft add 'l weight (per 100 mm) (kg)	Steel shaft weight (kg)	Steel shaft add 'l weight (per 100 mm) (kg)	Max. static load-bearing capacity axial (N)	Max. static load-bearing capacity radial (N)
HTS-12-AWM-PL	750	2	1.1	0.1	1.3	0.2	700	2800
HTS-20-AWM-PL	1000	4	3.2	0.3	3.9	0.6	1600	6400
HTS-30-AWM-PL	1250	5	8.6	0.6	10.9	1.4	2500	10000

(1N = .225 lbs)

Dimensions (mm)

Part No.	A –0.3	Al –0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	R	f	lt ±0.1	tk	ts
HTS-12-AWM-PL	85	85	34	70	73	73	145	42	2	30	11	6.6
HTS-20-AWM-PL	130	130	48	108	115	115	202	72	2	36	15	9.0
HTS-30-AWM-PL	180	180	68	150	158	158	280	96	4	50	20	13.5

Part No.	tg	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
HTS-12-AWM-PL	M8	6.4	6.3	10	M6	6.0	12	TR10x2	17	TR10x2*	18
HTS-20-AWM-PL	M10	8.6	6.4	11	M8	7.0	20	TR18x4	26	12 h9	23
HTS-30-AWM-PL	M16	12.6	11.0	18	M12	10.6	30	TR24x5	38	14 h9	36

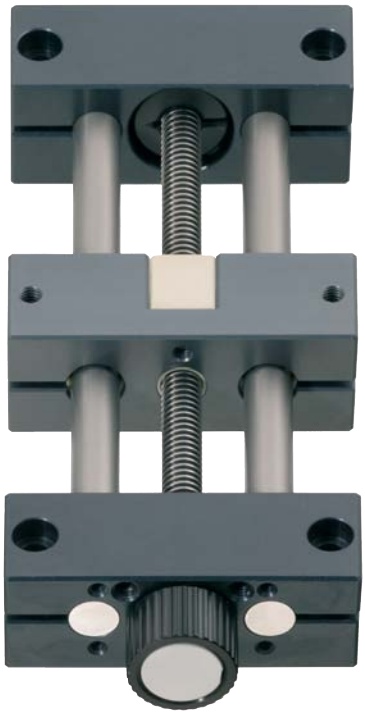
* TR10x2 leadscrew end unmachined

Lifetime calculation, CAD files online: www.igus.com

Order example:

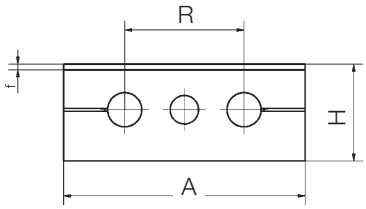
More details on part no. options: ▶ **Page 25.8**

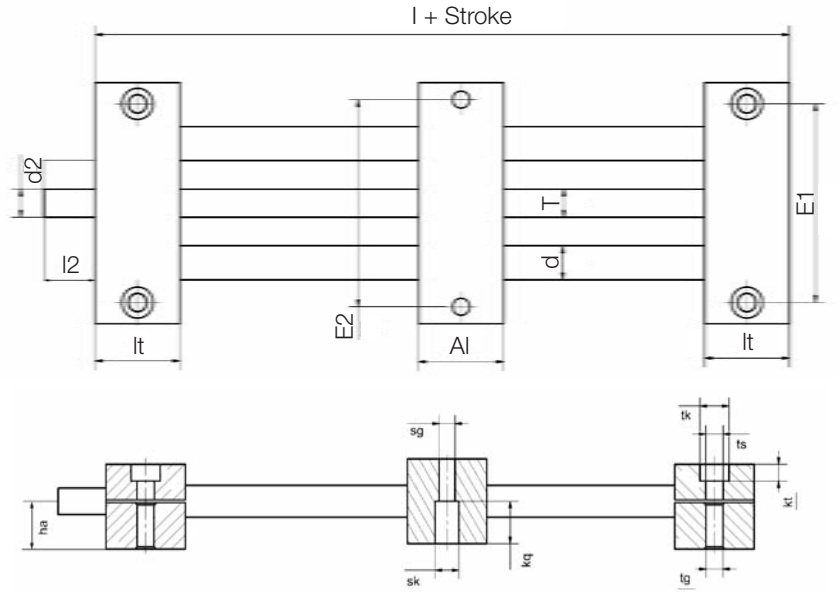
DryLin® Linear Slide Table - HTSC
Compact Carriages



Special properties

- Solid flexible design
- Ideal for 2 carriages
- Dry running and maintenance-free
- 3 sizes
- Adjustable radial clearance





Component Materials

Part No.	Shafting	End blocks/Carriages	Bearings	Leadscrew
HTSC	Hard Anodized AL*	Anodized AL	igus®plastic	Mild Steel**

*Case hardened carbon (1050) & Hardened stainless (440C) optional
**Stainless (304SS) optional

Length (mm) and Weight

Part No.	Maximum stroke length (mm)	Linear travel/rev (mm)	Aluminum shaft weight (kg)	Aluminum shaft add'l weight (per 100 mm) (kg)	Steel shaft weight (kg)	Steel shaft add'l weight (per 100 mm) (kg)	Max. static load-bearing capacity axial (N)	Max. static load-bearing capacity radial (N)
HTSC-12-AWM	750	2	0.7	0.1	0.8	0.2	700	2800
HTSC-20-AWM	1000	4	1.9	0.3	2.3	0.6	1600	6400
HTSC-30-AWM	1250	5	4.6	0.6	5.8	1.4	2500	10000

(1N = .225 lbs)
Size 40 and 50 available upon request

Dimensions (mm)

Part No.	A	Al –0.3	H –0.3	E1	E2 ±0.15	l ±0.15	R	f	lt	tk ±0.1	ts	tg
HTSC-12-AWM	85	30	34	70	73	90	42	2	30	11	6.6	M8
HTSC-20-AWM	130	36	48	108	115	108	72	2	36	15	9.0	M10
HTSC-30-AWM	180	50	68	150	158	150	96	4	50	20	13.5	M16

Part No.	kt ±0.1	sk	sg	kq	d	T	l2	d2 Standard	ha
HTSC-12-AWM	6.4	10	M6	6.0	12	TR10x2	17	TR10x2*	18
HTSC-20-AWM	8.6	11	M8	7.0	20	TR18x4	26	12 h9	23
HTSC-30-AWM	12.6	18	M12	10.6	30	TR24x5	38	14 h9	36

* TR10x2 supplied with leadscrew end unmachined

Lifetime calculation, CAD files online: www.igus.com

Order example:

More details on part no. options: ▶ Page 25.8

Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

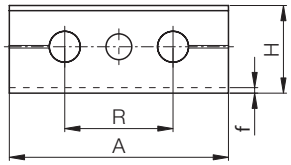
DryLin® Linear Slide Table - HTSS
Fast Pitch Leadscrews

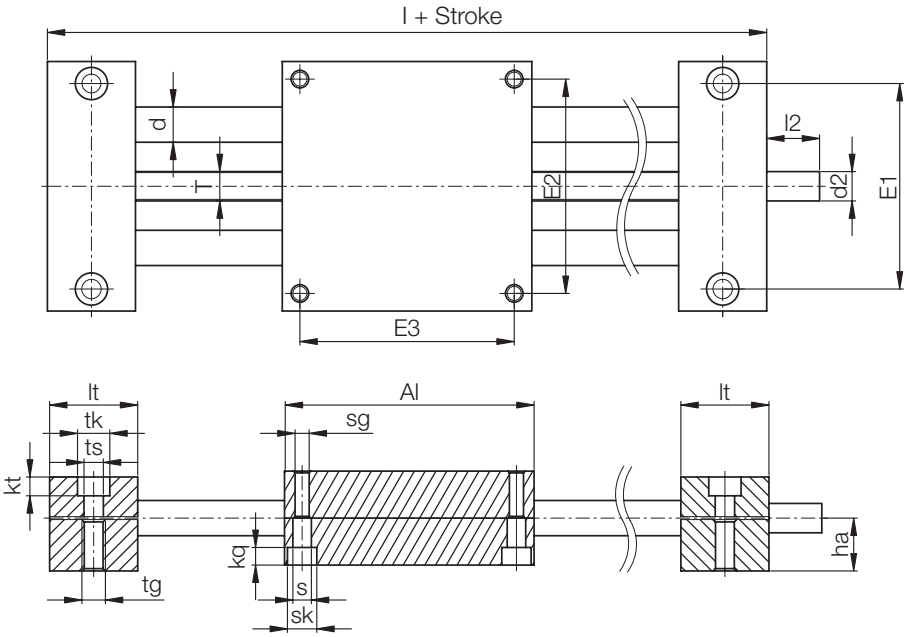


Special properties

- High helix pitch leadscrew
  HTSS-12 moves 50mm/revolution
  HTSS-20 moves 100mm/revolution
- High-speed solution
- Maintenance-free
- Dry running

reddot design award
winner 2006





Component Materials

Part No.	Shafting	End blocks/Carriages	Bearings	Leadscrew
HTSS	Hard Anodized AL*	Anodized AL	igus®plastic	Stainless

*Case hardened carbon (1050) & Hardened stainless (440C) optional

Length (mm) and Weight

Part No.	Linear travel/rev (mm)	Maximum stroke length (mm)	Aluminum shaft weight (kg)	Aluminum shaft add'l weight (per 100 mm) (kg)	Max. static load-bearing capacity axial (N)	Max. static load-bearing capacity radial (N)
HTSS-12-AWM	50	750	0.7	0.1	700	2800
HTSS-20-AWM	100	1000	1.9	0.3	1600	6400

(1N = .225 lbs)

Dimensions (mm)

Part No.	A –0.3	Al –0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	R	f	lt ±0.1	tk	ts	tg
HTSS-12-AWM	85	85	34	70	73	73	145	42	2	30	11	6.6	M8
HTSS-20-AWM	130	130	48	108	115	115	202	72	2	36	15	9.0	M10

Part No.	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
HTSS-12-AWM	6.4	6.3	10	M6	6.0	12	TR10x50	17	TR10x50*	18
HTSS-20-AWM	8.6	6.4	11	M8	7.0	20	TR18x100	26	12 h9	23

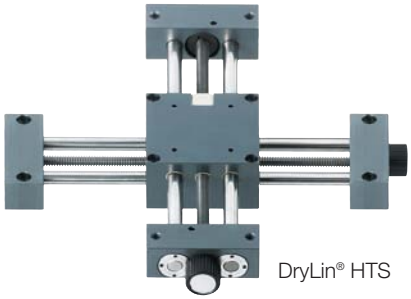
* TR10x50 supplied with leadscrew end unmachined
Available lead screws: 10 mm OD w/ 50 mm pitch
18 mm OD w/100 mm pitch

Order example:

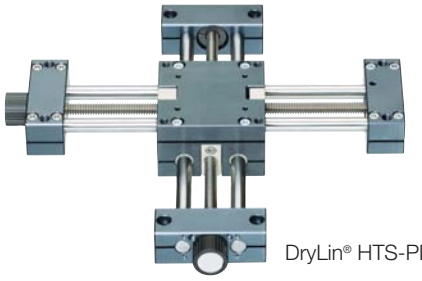
Lifetime calculation, CAD files online: www.igus.com

More details on part no. options: ▶ **Page 25.8**

DryLin® Linear Slide Table - HTS/HTS-PL
XY Table



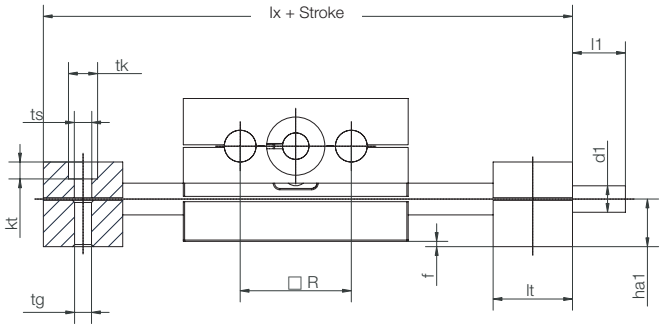
DryLin® HTS

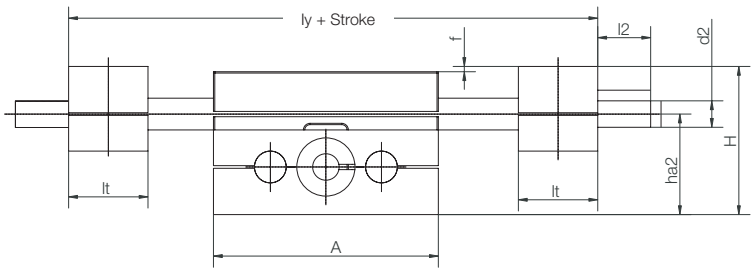


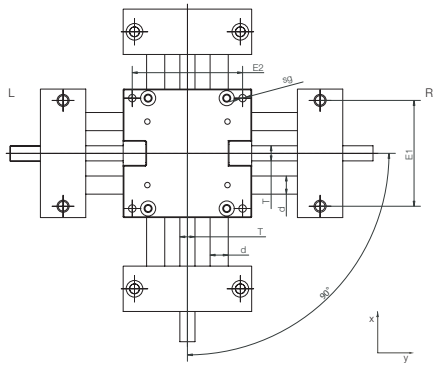
DryLin® HTS-PL

Special properties

- High precision, extreme stiffness and exact alignment, single piece carriage
- Available as standard and preloaded







Component Materials

Part No.	Shafting	End blocks/Carriages	Bearings	Leadscrew
HTS	Hard Anodized AL*	Anodized AL	igus®plastic	Mild Steel**

*Case hardened carbon (1050) & Hardened stainless (440C) optional
**Stainless (304SS) optional

Length (mm) and Weight

Part No.	Linear travel/ rev	A −0.3 (mm)	H (mm)	E1 ±0.15 (mm)	E2 ±0.15 (mm)	Basic length lx (mm)	Basic length ly (mm)	R (mm)	f (mm)	lt ±0.1 (mm)	tk (mm)	ts (mm)	tg	kt (mm)
HTS-XY-12	2	85	56	70	73	145	145	42	2	30	11	6.6	M8	6.4
HTS-XY-12-PL	2	85	56	70	73	145	145	42	2	30	11	6.6	M8	6.4
HTS-XY-20-EWM-PL	4	130	86	108	115	202	202	72	2	36	15	9.0	M10	8.6

Dimensions (mm)

Part No.	sg	d (mm)	T	l1 (mm)	d1 standard	d1 alternative	l2 (mm)	d2	d2 standard	ha1 alternative (mm)	ha2 (mm)	W ha2 – ha1 (mm)
HTS-XY-12	M6	12	TR10x2	17	TR 10x2	6h9	17	TR10x2	6h9	18	38	20
HTS-XY-12-PL	M6	12	TR10x2	17	TR 10x2	6h9	17	TR10x2	6h9	18	38	20

PL = HTS-Preload-version

Order example:

The rotary knob on the y-axis can be ordered installed on the left or on the right side.

Order example for left HTS-XY-12-**L**-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis.

Order example for left HTS-XY-12-**R**-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis.

Telephone 1-888-803-1895
Fax 1-401-438-7680

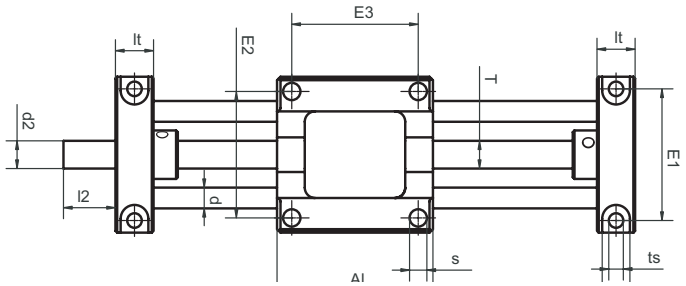
DryLin® Linear Slide Table - HTSP
Small, Low Cost and Corrosion Resistant

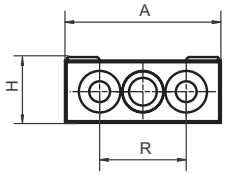
HTSP is the most cost-effective and lightweight unit available. Recommended for handling low weight applications by hand or low-speed motor. HTSP works well in corosive environments.

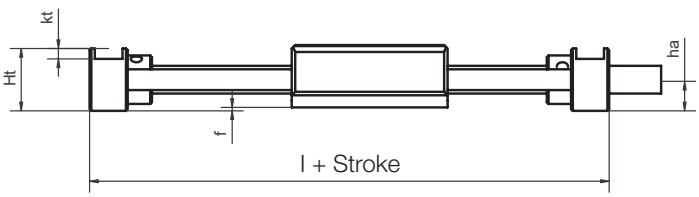


Properties

- Small version
- Very low weight
- Low cost
- Corrosion resistant
- Accessories available (rotary knob, position indicator …)
- Carriage and end blocks made from high performance polymers







Component Materials

Part No.	Shafting	End blocks/Carriages	Bearings	Leadscrew
HTSP	Hard Anodized AL*	Anodized AL	igus®plastic	Stainless Steel

*Case hardened carbon (1050) & Hardened stainless (440C) optional

Lengths (mm) and Weight

Part No.	Linear travel/rev	Maximum stroke length (mm)	Aluminum shaft weight (kg)	Aluminum shaft Add'l weight (kg) (per 100 mm)	Special properties
HTSP-01-06	1.25	300	0.11	0.06	Square carriage with four symmetrical connection bores

Dimensions (mm)

Part No.	A	Al	H	Ht	E1	E2	E3	l	R	f	lt	tk	ts
HTSP-01-06	45	45	19	18	38	36.5	36.5	67	25	1	11	8	4.2

Part No.	s	sg	d	T	l2	d2* standard	ha	Max. static load-bearing capacity axial (N)	radial (N)
HTSP-01-06	5.1	–	6	M8	15	M8	9	50	200

(1N = .225 lbs)

* Standard versions supplied with leadscrew end unmachined

Lifetime calculation, CAD files online: www.igus.com

Order example:

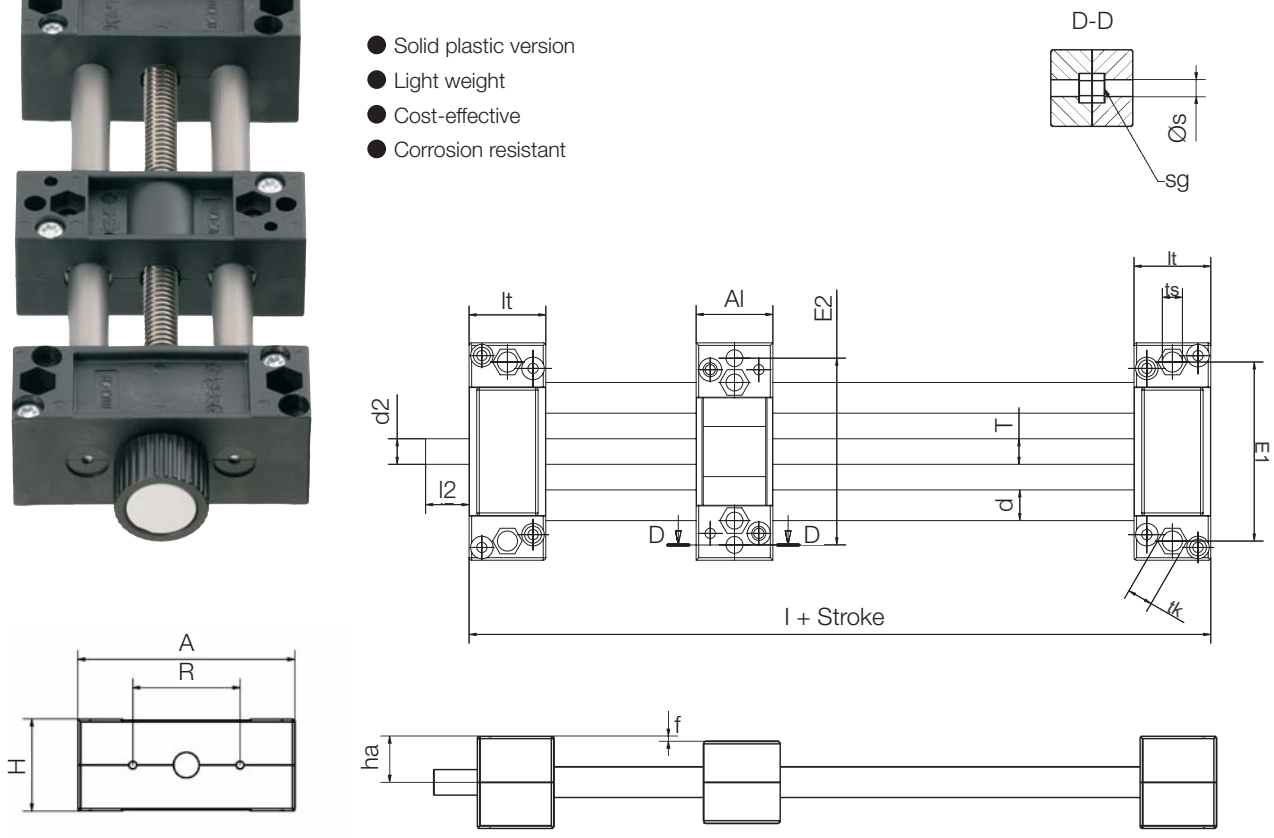
More details on part no. options: ▶ **Page 25.8**

DryLin® Linear Slide Table - HTSP
Low Cost and Corrosion Resistance

HTSP is the most cost-effective and lightweight unit available. Recommended for handling low weight applications by hand or low-speed motor. HTSP works well in corosive environments.

Special properties

- Solid plastic version
- Light weight
- Cost-effective
- Corrosion resistant



Component Materials

Part No.	Shafting	End blocks/Carriages	Bearings	Leadscrew
HTSP	Hard Anodized AL*	igus® plastic	igus®plastic	Mild Steel**

*Case hardened carbon (1050) & Hardened stainless (440C) optional
**Stainless (304SS) optional

Length (mm) and Weight

Part No.	Linear travel/rev	Maximum stroke length (mm)	Aluminum shaft weight (kg)	Aluminum shaft Add'l weight (kg) (per 100 mm)	Special properties
HTSP-01-12	2	750	0.35	0.11	Liners and TR nuts made from iglidur® J
HTSP-02-12	2	750	0.35	0.11	Bearing and nut integrated into carriage

Dimensions (mm)

Part No.	A	Al	H	E1	E2	E3	l	R	f	lt	tk	ts
HTSP-01-12	85	30	36	70	73	–	90	42	2	30	10	6.6
HTSP-02-12	85	30	36	70	73	–	90	42	2	30	10	6.6

Part No.	s	sg	d	T standard	l2	d2*	ha	Max. static load-bearing capacity axial (N)	radial (N)
HTSP-01-12	6.3	M6	12	TR10x2	17	TR10x2	16	45	800
HTSP-02-12	6.3	M6	12	TR10x2	17	TR10x2	16	45	800

(1N = .225 lbs)

* Standard versions supplied with leadscrew end unmachined

Lifetime calculation, CAD files online: www.igus.com

Order example:

More details on part no. options: ▶ **Page 25.8**

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

Telephone 1-888-803-1895
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Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Slide Table - SET
Easy Tube

+176°F (+80°C)
-58°F (-50°C)

3 Dimensions
2 Styles

This new addition to the DryLin® slide table range has a simple but solid design; the complete system only consists of a few components. The anodized aluminum tube guides the slide carriage and at the same time protects the leadscrew. The carriage and the trapezoidal nut are manufactured from a high performance polymer bearing material. The system runs without any lubrication, and gives a low friction value combined with an excellent wear rate. Also, iglide® plain bearings are used in the axial fixing of the leadscrew.



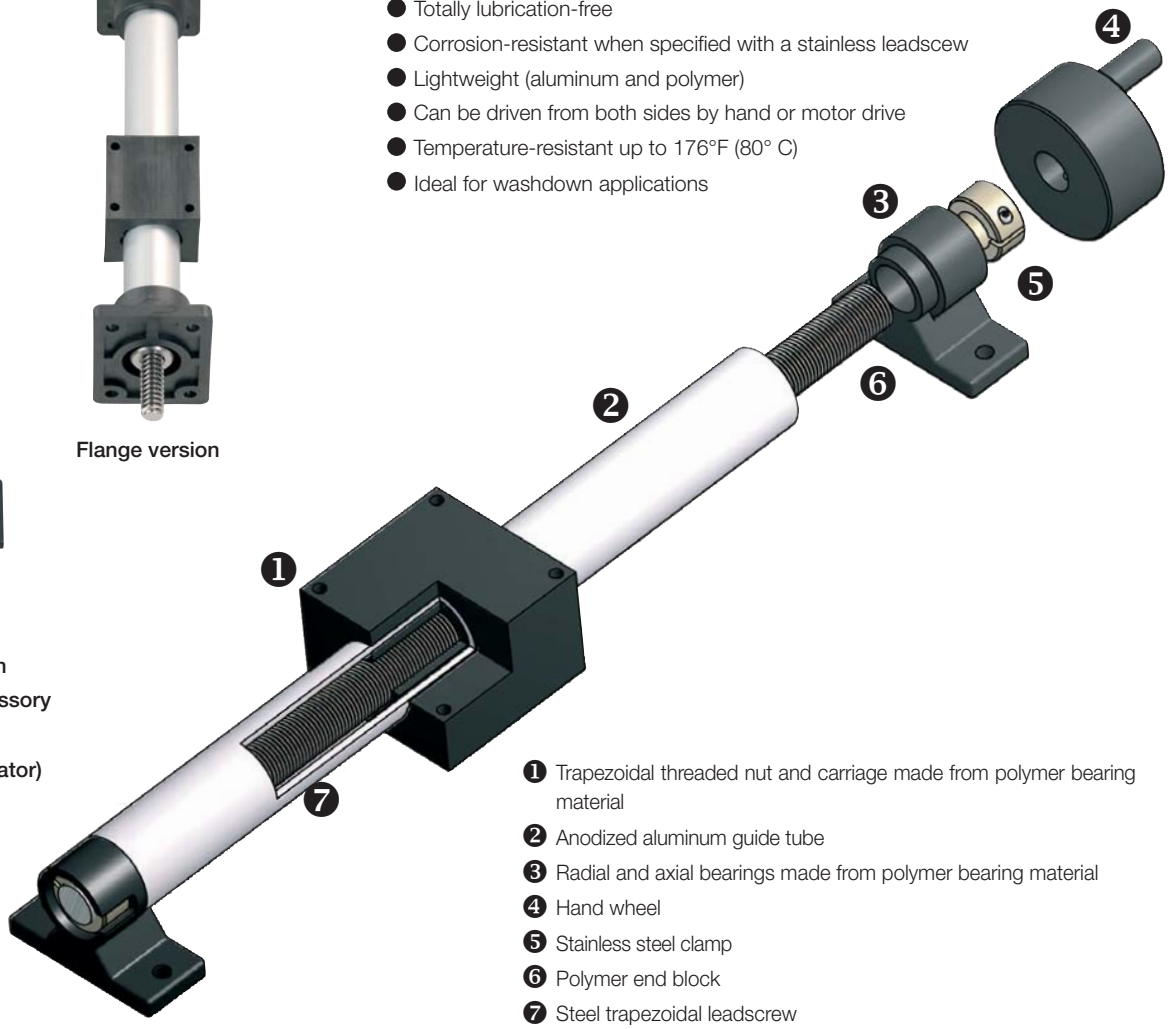
EasyTube with optional accessory (rotary knob, position indicator)



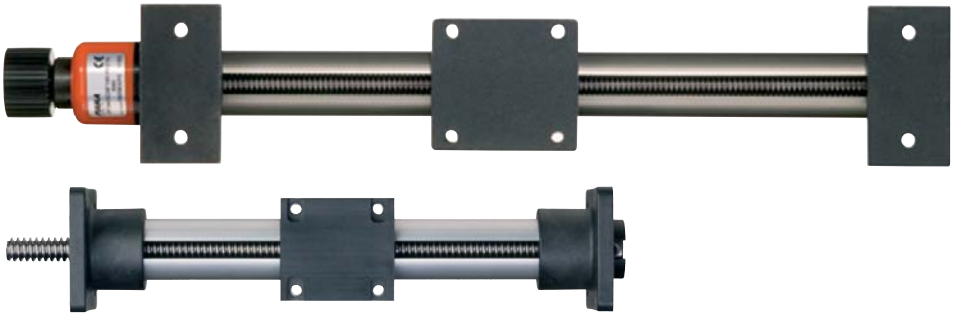
Flange version

Advantages

- Totally lubrication-free
- Corrosion-resistant when specified with a stainless leadscew
- Lightweight (aluminum and polymer)
- Can be driven from both sides by hand or motor drive
- Temperature-resistant up to 176°F (80° C)
- Ideal for washdown applications



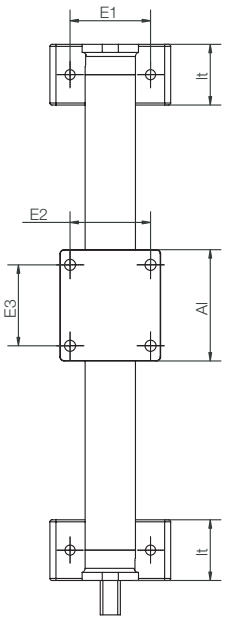
1. Trapezoidal threaded nut and carriage made from polymer bearing material
2. Anodized aluminum guide tube
3. Radial and axial bearings made from polymer bearing material
4. Hand wheel
5. Stainless steel clamp
6. Polymer end block
7. Steel trapezoidal leadscrew

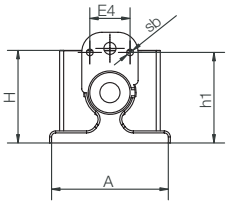


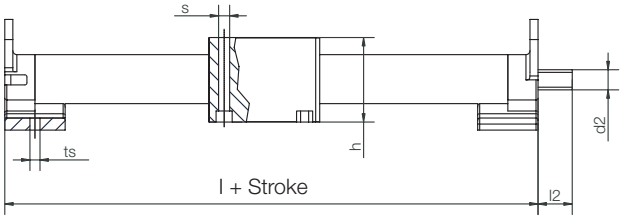
Flange version

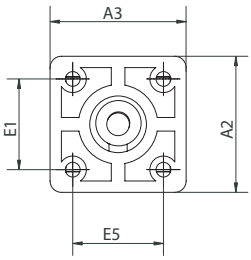
DryLin® Linear Slide Table - SET
Easy Tube











also available as flange version
(for axial fitting)

Stainless shaft/leadscrew available upon request

Length (mm) and Weight

Part No.	Linear travel/rev (mm)	Maximum stroke length (mm)	Aluminum Shaft weight (kg)	Aluminum Shaft add'l weight (per 100 mm) (kg)	Max. static load-bearing capacity axial (N)	Max. static load-bearing capacity radial (N)
SET-12-AWM	.7	200	0.05	0.03	10	20
SET-25-AWM	2	850	0.15	0.12	150	300
SET-30-AWM	3	850	0.20	0.21	200	400

(1N = .225 lbs)

Dimensions (mm)

Part No.	A	Al	H	E1	E2	E3	E4	l	h	h1	lt	ts	s	sb	l2	d2
SET-12-AWM	30	30	23.5	20	20	20	–	60	22	–	15	3.3	4.2	–	10	M4*
SET-25-AWM	60	55	44	40	40	40	20	115	39	45	30	5.2	5.2	M4	17	TR10x2*
SET-30-AWM	80	55	49	60	40	40	20	125	39	50	35	6.5	5.2	M4	20	TR12x3*

Dimensions (mm) – flange version

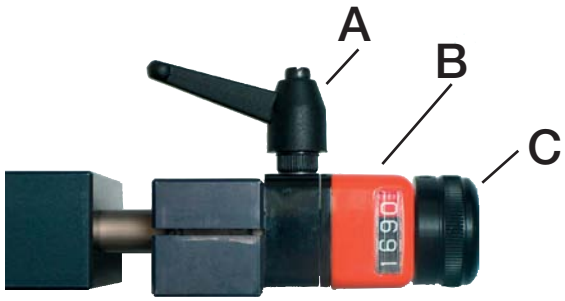
Part No.	A2	A3	H	E1	E2	E3	E5	l	h	lt	ts	s	l2	d2
SET-25-AWM-F	60	60	49	40	40	40	40	117	39	30	5.2	5.2	27	TR10x2*
SET-30-AWM-F	80	60	59	60	40	40	40	125	39	35	6.5	5.2	30	TR12x3*

* leadscrew end unmachined

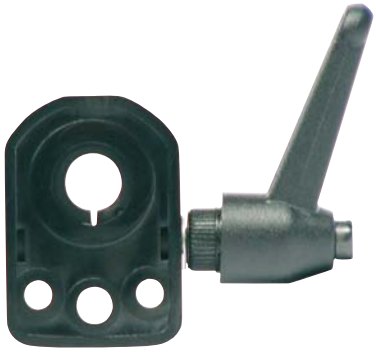
PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

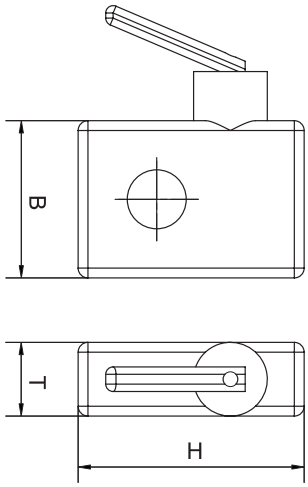
DryLin® Linear Slide Table - HTS Accessories



A - Leadscrew clamp



- Shaft clamping flange for attachment to the position indicator and subsequent mounting on the leadscrew
- Provides a mechanical brake to the lead-screw
- Material: Plastic housing with aluminum shaft clamp
- Color: Black



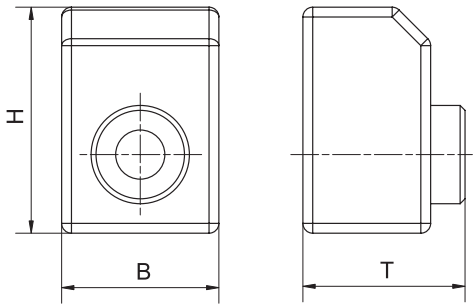
Part No.	HTS-HK-12	HTS-HK-16	HTS-HK-20	HTS-HK-30
Leadscrew size	TR10x2	TR14x4	TR18x4	TR24x5
Dimensions (BxHxT) in mm	32x46x15	32x46x15	32x46x15	32x46x15
Corresponding Slide Tables				
HTS	HTS-12		HTS-20	HTS-30
HTSC	HTSC-12		HTSC-20	HTSC-30
HTSP	HTSP-12			
SLW	SLW-1040*	SLW-1660*	SLW-2080*	
SET	SET-25			

* Only possible with an adapter plate

B - Position indicator



- Plastic analog indicator for adjustment and direct reading of slide position
- 4-digit counter (red digit indicates tenths)
- Counting takes place clockwise
- Color: Orange



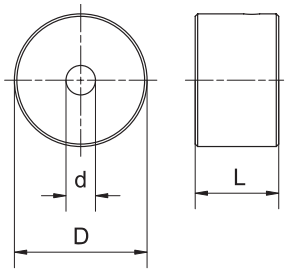
Part No.	HTS-PA-12	HTS-PA-16	HTS-PA-20	HTS-PA-30	HTS-PA-06
Leadscrew size	TR10x2	TR14x4	TR18x4	TR24x5	M8
Dimensions (BxHxT) in mm	32x46x33	32x46x33	32x46x33	32x46x33	22x33x31
Corresponding Slide Tables					
HTS	HTS-12		HTS-20	HTS-30	HTSP-01-06*
HTSC	HTSC-12		HTSC-20	HTSC-30	
HTSP	HTSP-12				
SLW	SLW-1040*	SLW-1660*	SLW-2080*		
SET	SET-25				

* Only possible with an adapter plate

C - Rotary knob



- Rotary knob for attachment to the end of the leadscrew
- For positioning
- Material: Aluminum and Polymer
- Color: Black



Dimensions (mm)

Part No.	HTS-HR-06	HTS-HR-12	HTS-HR-16	HTS-HR-20	HTS-HR-30
D	27	27	34	42	42
L	17	17	20	23	23
d	8	10	14	12	14
Corresponding Slide Tables					
HTS	–	HTS-12	–	HTS-20	HTS-30
HTSC	–	HTSC-12	–	HTSC-20	HTSC-30
HTSP	HTSP-06	HTSP-12	–	–	–
SLW	–	SLW-1040	SLW-1660	SLW-2080	–
SET	–	SET-25	–	–	–

Adapter plate (included)



- for position indicator and/or leadscrew clamp
- in the case of the HTSP-01-06, SLW-1040 and SLW-2080 series, the system is delivered with a fitted adapter plate

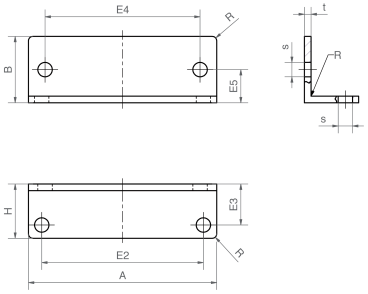


Order no. adapter plate	SWX-104002	SWX-166003	SWX-208002
For DryLin® SLW:	SLW-1040	SLW-1660	SLW-2080

Brackets for X-Y Axes







Part No.	A (mm)	H (mm)	B (mm)	E2 (mm)	E3 (mm)	E4 (mm)	E5 (mm)	s (mm)	t (mm)
HTS-WS-12	85	26.5	30	73	20.5	70	15	6.5	3
HTS-WS-20	130	36	35	108	18	115	35	8.5	5

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

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QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Slide Table
ZLW Belt-Drive System

- Developed for high-speed applications with low loads
- Extremely cost-effective versus ball bearing drive systems
- Work well in dirty, dusty environments AND clean environments
- Better for high accelerations than ball bearings
- Low-temperature and underwater versions available
- Quiet operation



ZLW-1040 (45mm H x 74mm W)

ZLW-1040-LCB: (Formerly ZLW-1040-B "basic") Low cost basic version uses a glass-reinforced neoprene belt and is meant for lower load and speed applications than version S

ZLW-1040-S: Standard table with steel-reinforced polyurethane belt, enhanced pulley system and other components for higher speed and load applications than version LC

ZLW-1040-UW: Specially made for underwater applications

ZLW-1040-LT: Low temperature version for temps -22°C

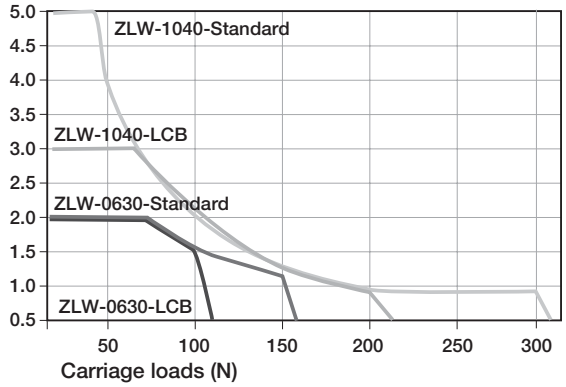


ZLW-0630 miniature version (31mm H x 54mm W)

ZLW-0630-LCB: (Formerly ZLW-0630-B "basic") Low cost basic version uses a glass-reinforced neoprene belt and is meant for lower load and speed applications than version S

ZLW-0630-S: Standard table with steel-reinforced polyurethane belt, enhanced pulley system and other components for higher speed and load applications than version LC

Maximum load
ZLW-0630/1040
100% operating time



The diagram accounts for the sum of all forces active on the carriage



ZLW used on plasma TV CNC cutting machine

All dimensions in mm (1 mm = 0.04") - 1 N = .225 lbs. See catalog for more details.

Technical Data

	Weight without stroke (kg)	Weight 100 mm stroke (kg)	Max. stroke length* (mm)	Linear travel per rev. (mm)	Gear-teeth	Toothed belt-material	Toothed belt-width (mm)	Toothed belt-tension N	Max. radial stress N (lbf)	Belt Pulley	Max. Speed at 60% operation (m/s)	Linear positioning tolerance
ZLW-1040												
LCB	0.9	0.14	2,000	66	RPP 3M	Neoprene with GF	15	150	200 (45)	ball bearing	3	±0.35
Standard	1.0	0.14	2,000	70	AT 5	PU + steel cord	16	200	300 (67)	ball bearing	5	±0.2
ZLW-0630												
LCB	0.43	0.08	1,000	54	HDT 3•4	Neoprene with GF	9	70	100 (22)	ball bearing	2	±0.2
Standard	0.43	0.08	1,000	54	MTD 3	PU + steel cord	9	100	150 (34)	ball bearing	2	±0.2

*Larger stroke lengths upon request

**These values were measured with maximum load in horizontal orientation

DryLin® Linear Slide Table - Assembly of the Belt Drive



ZAW-1040 cantilever axis
Lightweight and ideal for applications where you want the rail to move, and the carriage static, such as Z-axis applications



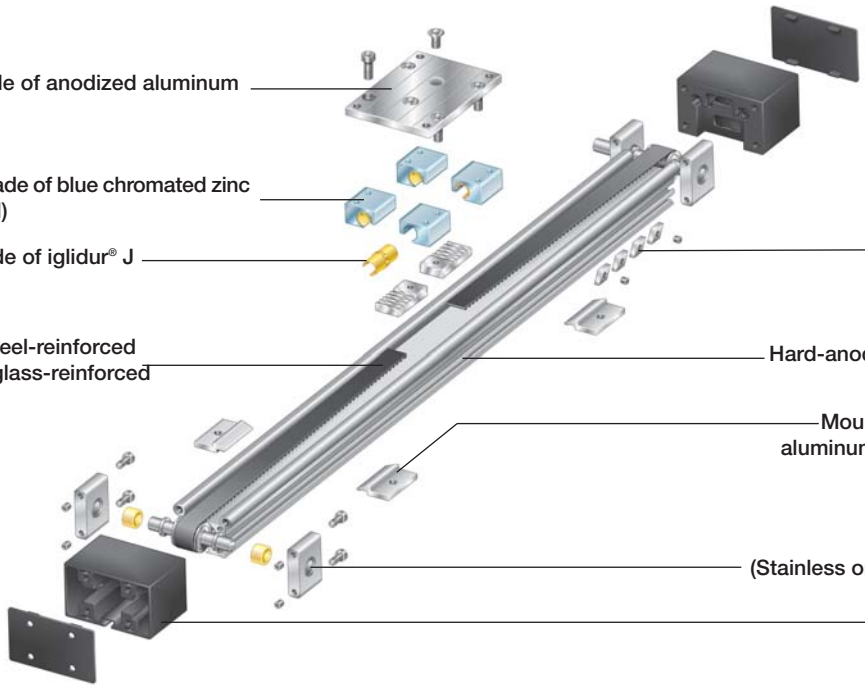
ZLW-1040-OD: Opposite drive
2 carriage opposite drive for bi-directional movement

Clearance Adjustment Available

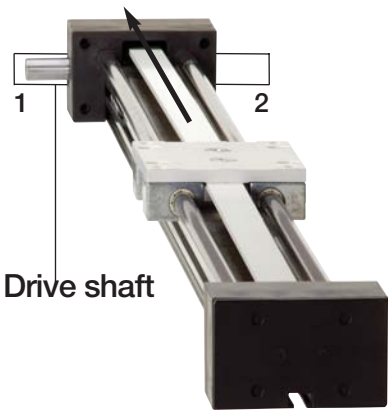


ZLW-1040 can be fitted with Turn-To-Fit carriages for clearance adjustment

Turn-To-Fit!



Right or left positioning for drive shaft.
Position determined by view towards x!
1 = Left drive shaft
2 = Right drive shaft
x = Line of vision



Assembly of the part number

ZLW	-1040	-02	-B	-100	L	XX

- XX: Stroke length in mm
- L: L = drive shaft on the left; R = drive shaft on the right; L/R = drive shafts left and right
- -100: Slide length in mm (Standard: 100, on request: 50/200 mm)
- -B: Size 1040: 100 (optional 150/200 mm); Size 0630: 60
- -02: B = LCB; S = Standard series
- -1040: Version 01 (optional) – Drive shaft with L250 plain bearings; Version 02 (faster speed) – Drive shafts with ball bearings
- -02: Size 1040 (Guide shaft diameter 10 / Shaft width 40 mm); Size 0630 (Guide shaft diameter 6 / Shaft width 30 mm)
- ZLW: DryLin® W toothed belt linear drive

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Fax 1-401-438-7680

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E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Linear Slide Table - ZLW 0630
Belt Drive



ZLW-0630-LCB: (Formerly ZLW-0630-B "basic") Low cost basic version uses a glass-reinforced neoprene belt and is meant for lower load and speed applications than version S

ZLW-0630-S: Standard table with steel-reinforced polyurethane belt, enhanced pulley system and other components for higher speed and load applications than version LC

Special properties

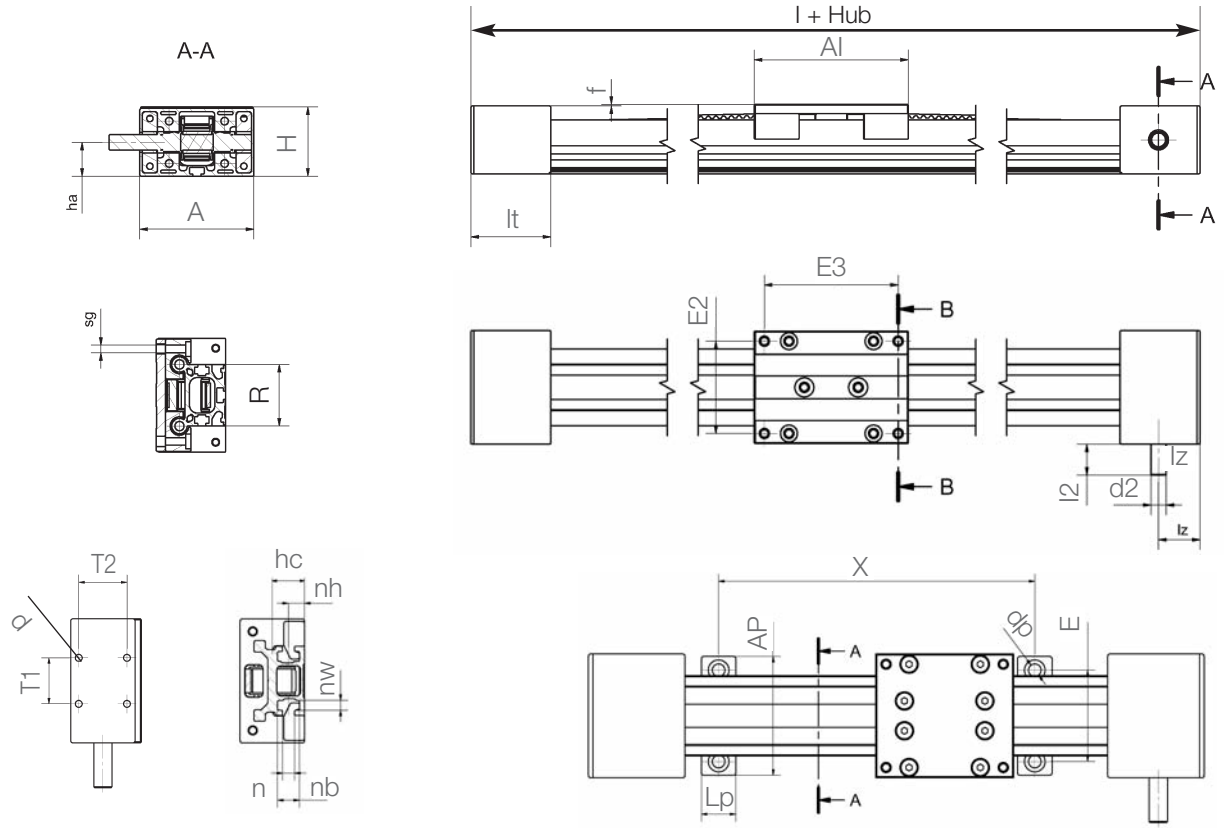
- Compact size
- Speeds up to 6.5 ft/s
- Maintenance-free
- For strokes up to 1000 mm
- Available in both LC and S versions

Technical Data

	Weight without stroke (kg)	Weight 100 mm stroke (kg)	max. stroke length* (mm)	Trans-mission (mm/U)	Gear-teeth	Toothed belt- -material	-width (mm)	-tension (N)	max. radial stress (N)	Pulley	max. speed at 60% operation (m/s)	Linear positioning tolerance
ZLW-0630												
LCB	0.43	0.08	1.000	54	AT 5	Neoprene with GF	9	70	100	ball bearing	2.5	±0.2
Standard	0.43	0.08	1.000	54	MTD3	PU + steel cord	9	100	100	ball bearing	2	±0.2

* Larger stroke lengths upon request.

** These values were measured with maximum load in horizontal orientation



Dimensions (mm) for LCB and S versions

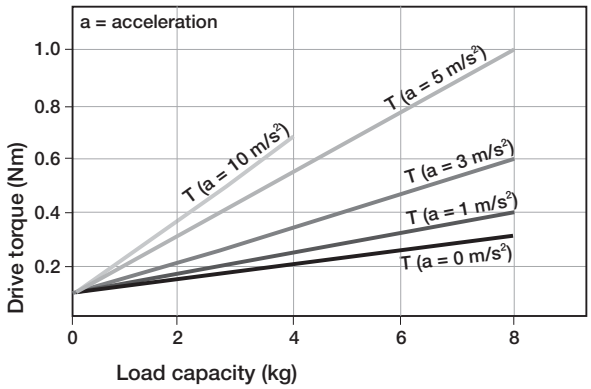
Part No.	A –0.3	Al	H	E2 ±0.15	l	hc	E3 ±0.15	R ±0.15	f	lt ±0.3	sg	ha	lz	l2	d2
ZLW-0630-02-...	54	60	31	45	144	13.5	51	30	3	42	M4	14	22	20	*8/10

Part No.	X	E ±0.2	AP –1	LP	dp	n	nb	nw	nh	T1 ±0.25	T2 ±0.25	d
ZLW-0630-02-...	variable	40	52	15	5.5	5.2	9.5	4.3	7	20	21	3.2

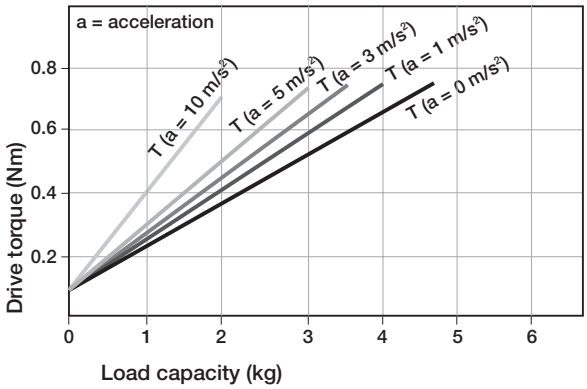
* 'LCB' version has a 6mm square output shaft with 10mm OD plastic adapter. Stainless adapter optional

DryLin® Linear Slide Table - ZLW 0630
Belt Drive

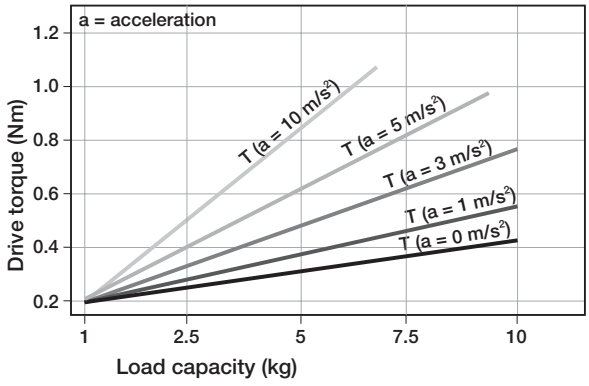
Horizontal orientation
ZLW-0630-02-LCB
Required drive torque*



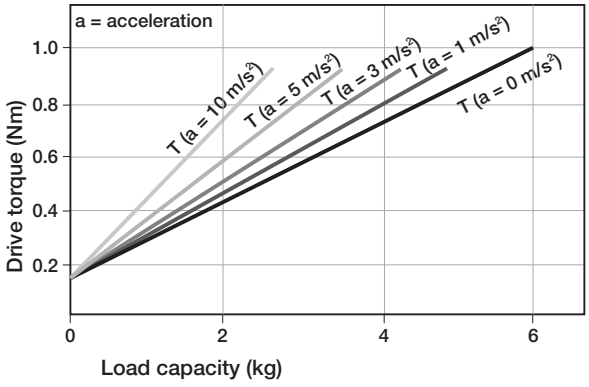
Vertical orientation
ZLW-0630-02-LCB
Required drive torque*



Horizontal orientation
ZLW-0630-02-S
Required drive torque*

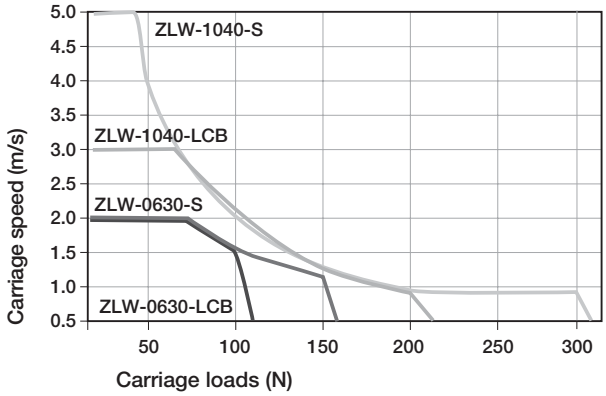


Vertical orientation
ZLW-0630-02-S
Required drive torque*



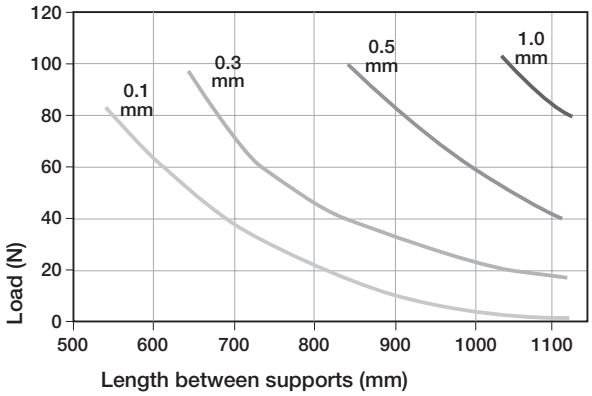
* Assumption: The moving mass is located in a circumscribed circle with a max. R = 100 mm to the middle of the guiding rail, max. permissible torque version 01: 1.3 Nm, a = 0 m/s²; version 02: 2.4 Nm, a = 0 m/s²; constant drive without nominal value acceleration

Maximum load
ZLW-0630/1040
100% operating time



The diagram accounts for the sum of all forces active on the carriage.

For unsupported applications
Rail deflection between supports
Versions LCB and S



Sag permissible up to maximum 2 mm.

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DryLin® Linear Slide Table - ZLW 1040
Belt Drive



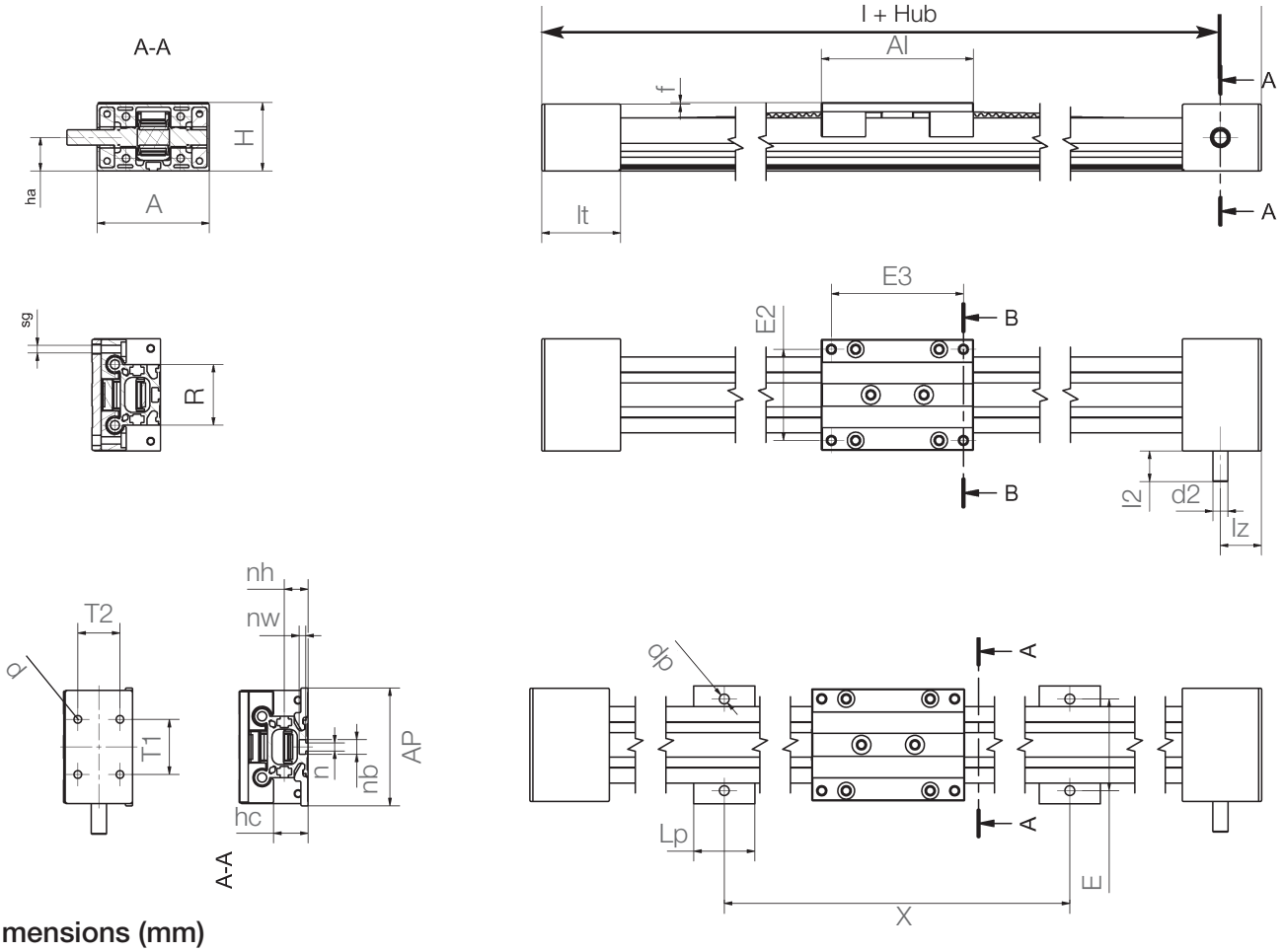
ZLW-1040-LCB: (Formerly ZLW-1040-B "basic") Cost-effective version uses a glass-reinforced neoprene belt and is meant for lower load and speed applications than version S

ZLW-1040-S: Standard table with steel-reinforced polyurethane belt, enhanced pulley system and other components for higher speed and load applications than version LC

Special properties

- High speed, up to 16.4 ft/s (5 m/s)
- Maintenance-free
- Lightweight
- Cost-effective versus other actuator systems
- Maximum stroke, 2000 mm

	Weight without stroke (kg)	Weight 100 mm stroke (kg)	max. stroke length* (mm)	Trans-mission (mm/U)	Gear-teeth	Toothed belt- -material	-width (mm)	-tension (N)	max. radial stress (N)	Pulley	max. speed at 60% operation (m/s)	Linear positioning tolerance
ZLW-1040												
LCB	0.9	0.14	2.000	66	RPP 3M	Neoprene with GF	15	150	200	ball bearing	3	±0.35
Standard	1.0	0.14	2.000	70	AT 5	PU + steel cord	16	200	300	ball bearing	5	±0.2



Dimensions (mm)

Part No.	A –0,3	Al	H	E2 ±0,15	l	hc	E3 ±0,15	R ±0,15	f	lt ±0,3	sg	ha	lz	l2	d2
ZLW-1040-02-...	74	100	45	60	204	22.5	87	40	1	52	M6	22	27	20	*10

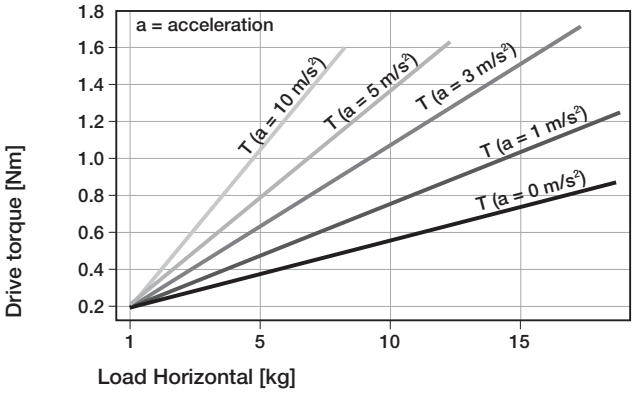
Part No.	X ±0.2	E –1	AP	LP	dp	n	nb	nw ±0.25	nh ±0.25	T1	T2	d
ZLW-1040-02-...	variable	60	78	40	6,4	5.2	9.5	4.3	15.5	36	26.5	5.0

* 'LCB' version has a 6mm square output shaft with 10mm OD plastic adapter. Stainless adapter optional

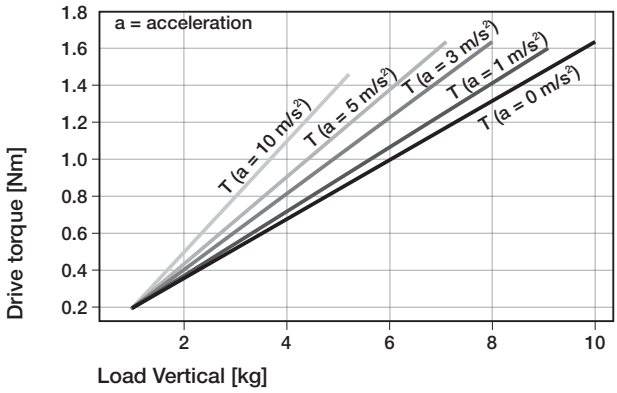
DryLin® Linear Slide Table - ZLW 1040
Belt Drive

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

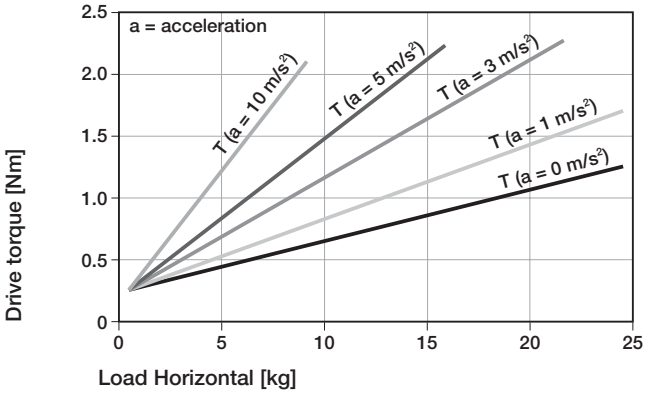
Horizontal orientation
ZLW-1040-02-LCB
Required drive torque, Nm



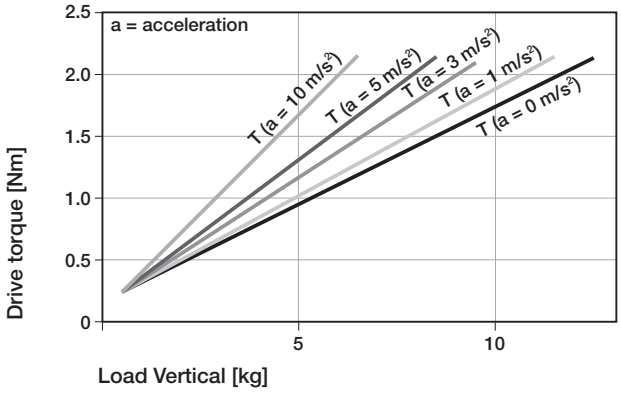
Vertical orientation
ZLW-1040-02-LCB
Required drive torque, Nm



Horizontal orientation
ZLW-1040-02-S
Required drive torque, Nm

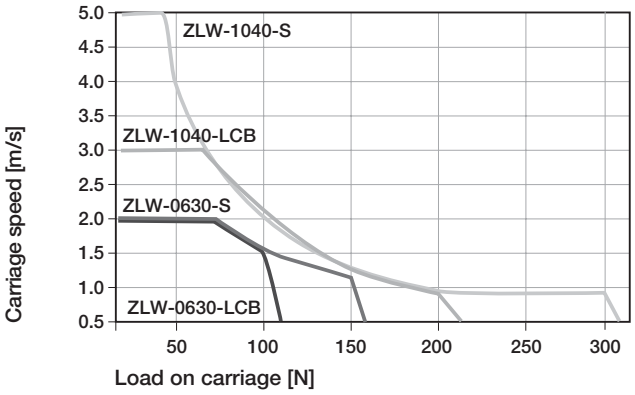


Vertical orientation
ZLW-1040-02-S
Required drive torque, Nm



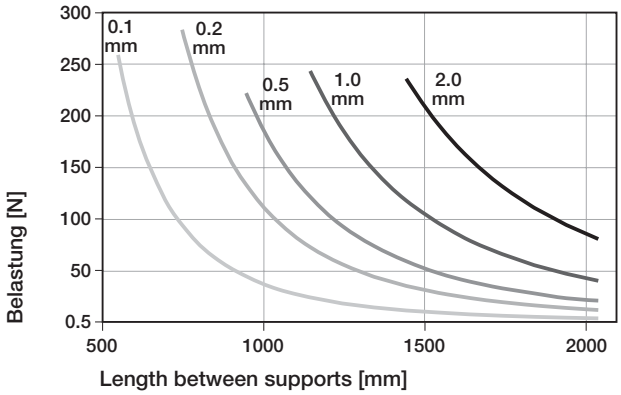
* Assumption: The moving mass is located in a circumscribed circle with a max. R = 100 mm to the middle of the guiding rail, max. permissible torque version 01: 1.3 Nm, a = 0 m/s²; version 02: 2.4 Nm, a = 0 m/s²; constant drive without nominal value acceleration

Maximum load comparison
ZLW-0630 and ZLW-1040
100% operating time



The diagram accounts for the sum of all forces active on the carriage.

For unsupported applications
Rail deflection between supports
Versions LCB and S



Sag permissible up to maximum 2 mm.

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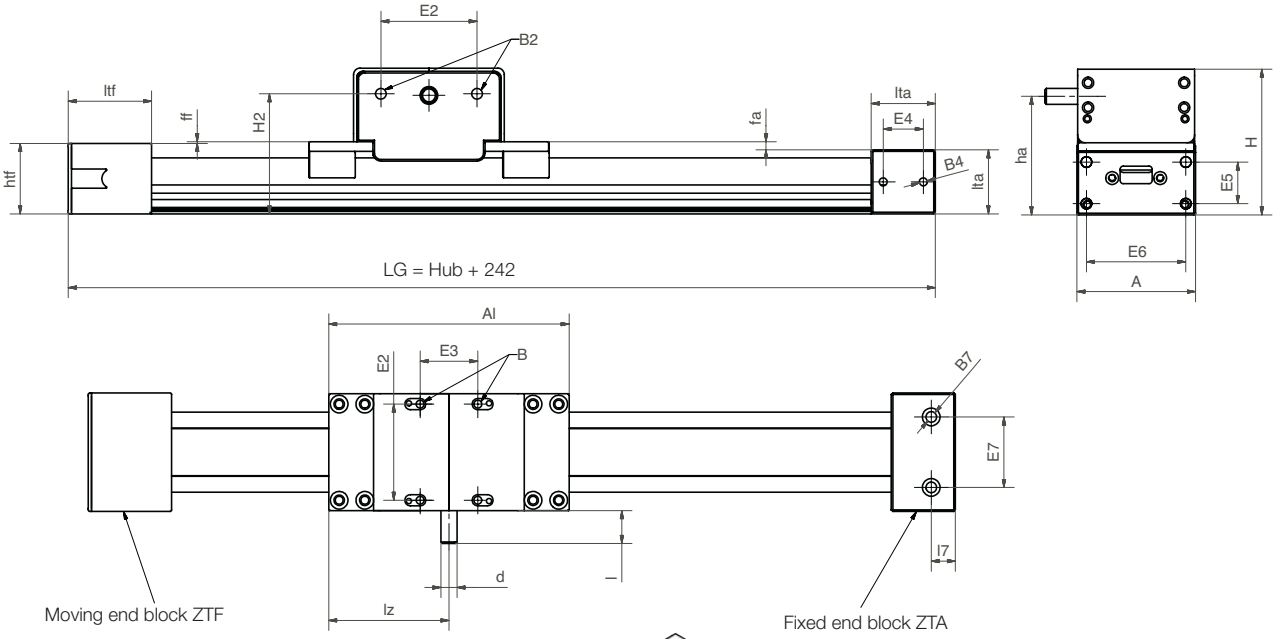
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

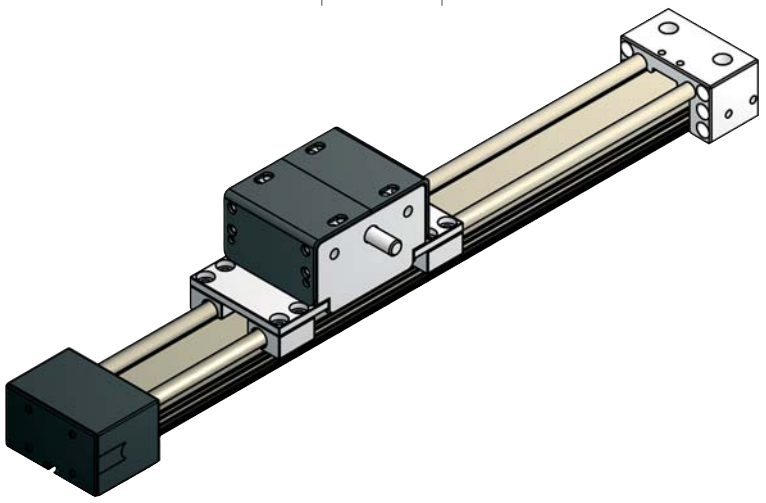
DryLin® Linear Slide Table - ZAW



Special properties

- Low weight
- Maintenance-free
- High rigidity
- Perfect for applications where the rail moves, but the carriage is stationary





Dimensions (mm)

Part No.	A −0.3 [mm]	H [mm]	LG Hub [mm]	Al ±0.3 [mm]	ha ±0.1 [mm]	d h9 [mm]	l +1 [mm]	lz [mm]	E2 ±0.15	E3 ±0.15 [mm]
ZAW-1040-02-R/L-LG	74	91	242	150	74	10	20	75	60	60

Part No.	B −0.3	B2	htf Hub [mm]	ltf ±0.3 [mm]	ff ±0.1 [mm]	fa h9 [mm]	lta +1 [mm]	E4 [mm]	B4 ±0.15	E5 ±0.15 [mm]	E6 [mm]
ZAW-1040-02-R/L-LG	M6	M8	44	52	2	5	40	25	M6	26	62

DryLin® Linear Slide Table - ZLW Belt Drive

The DryLin® ZLW belt drive can be fastened in different ways (clamp and slot nuts included in delivery):
The orientation of the drive is optional. Overhead installation is the best option against fouling.

1. **Clamping** offers an easy fastening option for the drive, on aluminum machine profilesand other surfaces. Part No. 75.40.
2. **Slot nuts** enable the mounting on 3 sides (1040: left, right, below) or 2 sides (0630: left, right) as well as the fixing of sensors and proximity switches.
3. **Screw connection:** Threaded holes are located at each end block face.

1. Clamp mount



Included in delivery

2. Slot nuts



Ideal for limit switches
Included in delivery

3. Screw connection



4 x M6/M4 (optional)

Directions for installation: The end blocks should not be used as a mechanical stop under any circumstances. A minimum spacing of 10 mm should be provided on both sides. The safety distance provided at both sides of the guide carriage can be reduced provided that it is ensured that the housings of the drive and end blocks do not collide with the mechanical parts. The igus® staff would be glad to provide you with more information on the fastening and connecting of the belt drive.
Call 888-803-1895, or write to sales@igus.com

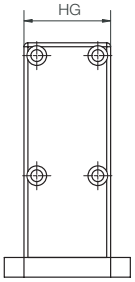
Motor flange



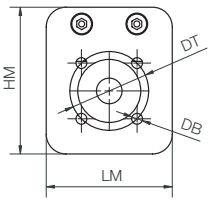
The motor flange can be fastened onto the end block with four screws. Different types of motor flanges are available.
Item no. SAX-104005

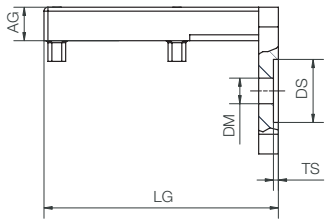
The DryLin® ZLW belt drive is also available with hand crank.











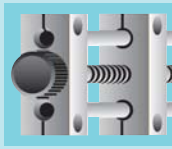
Dimensions in mm

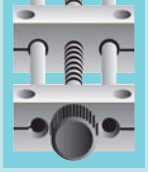
For ZLW-0630	Base plate			Motor mounting plate						
	LG	HG	AG	HM	LM	DT	DM	DS	TS	DB
NEMA170630	110.5	28	12	53	44	43.8	6	22	2.5	3.5
NEMA230630	120.5	28	12	59	56	66.7	10	38.1	2.5	4.5

For ZLW-1040	Base plate			Motor mounting plate						
	LG	HG	AG	HM	LM	DT	DM	DS	TS	DB
NEMA171040	138	44	17	63	44	43.8	6	22	2.5	3.5
NEMA231040	138	44	17	70.7	54.6	66.7	14	38.1	2.5	4.5
NEMA341040	138	44	17	85	85	49.5	16	73	2.5	6.5

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QuickSpec: www.igus.com/qs/DryLin.asp

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Fax 1-401-438-7680



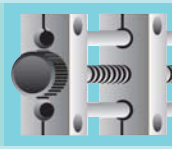


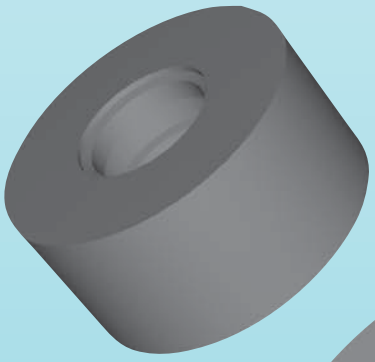
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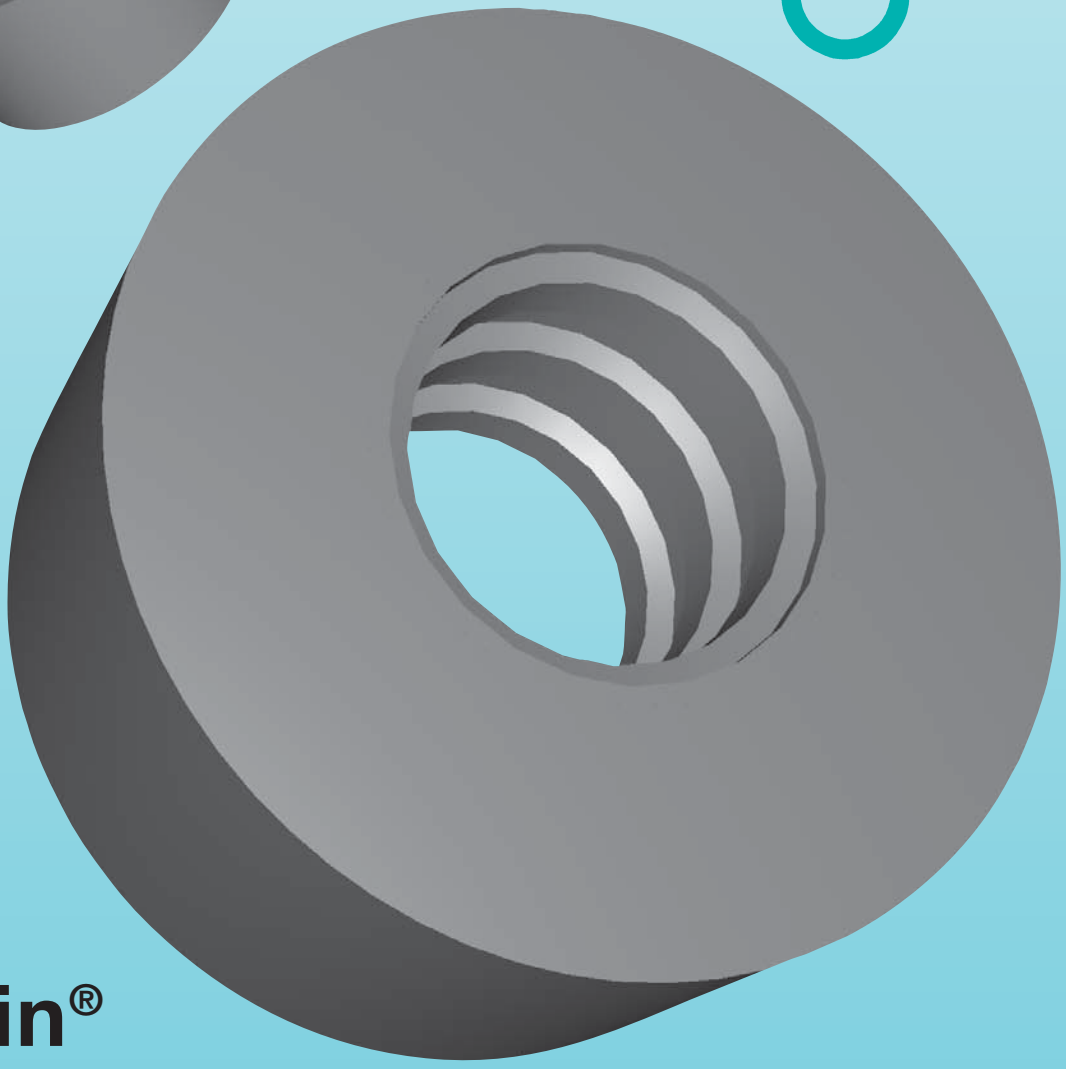
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QuickSpec: www.igus.com/qs/DryLin.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680





igus®



DryLin®
Trapezoidal Lead Screw Nuts

- Maintenance-free
- Resistant to dust and dirt
- Corrosion-free
- Lightweight
- iglide® L280 / iglide® J



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QuickSpec: www.igus.com/qs/DryLin.asp

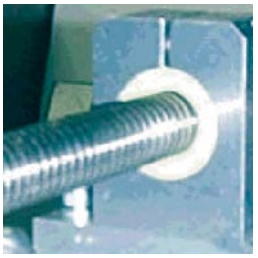
DryLin® Trapezoidal Lead Screw Nuts

Until now, there have been two types of trapezoidal lead screw nuts: lubricated metallic nuts, or maintenance free plastic versions with very restricted load capacity. iglide® trapezoidal lead screw nuts are now closing the gap: They are fully maintenance free and take high loads.

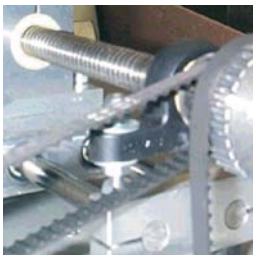
Technical Data

Sliding elements:	
	Maintenance-free
Material:	
	iglide® L280
	iglide® J
Temperature range:	
	-40°F to +194°F
	(-40 °C to +90 °C)





DryLin® trapezoid threaded nuts made of iglide® L280



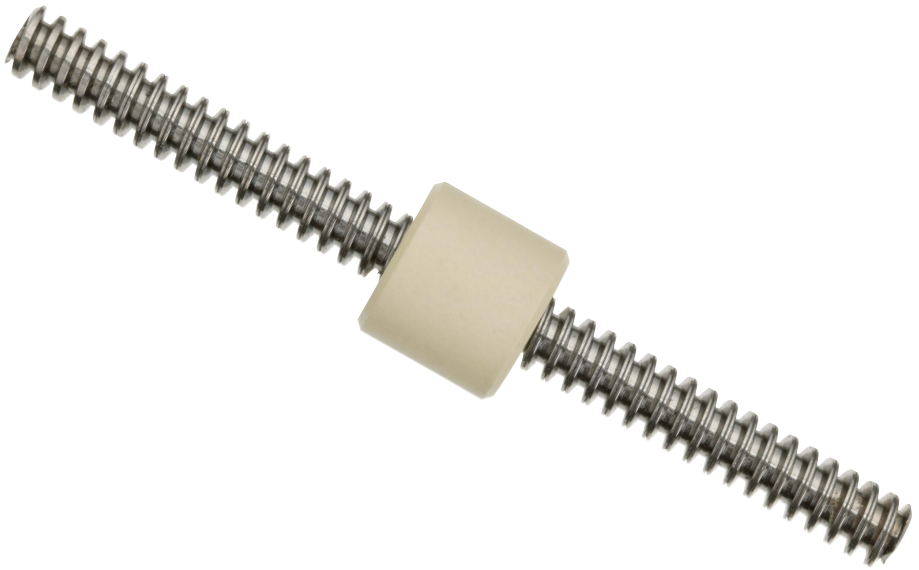
Trapezoid threaded nuts complement DryLin® maintenance-free linear bearings



Dimensions based on DIN 103

Advantages of DryLin® Threaded Nuts

- Self-lubricating
- Resistant to dirt
- Maintenance-free
- Best resistance to binding
- Corrosion-free
- Quiet operation
- Temperature resistant up to 194°F (90 °C)
- Trapezoidal lead screws manufactured from steel, stainless steel and anodized aluminum on request
- Left-handed leadscrew nuts on request
- Further information about iglide® L280 properties on Chapter 5

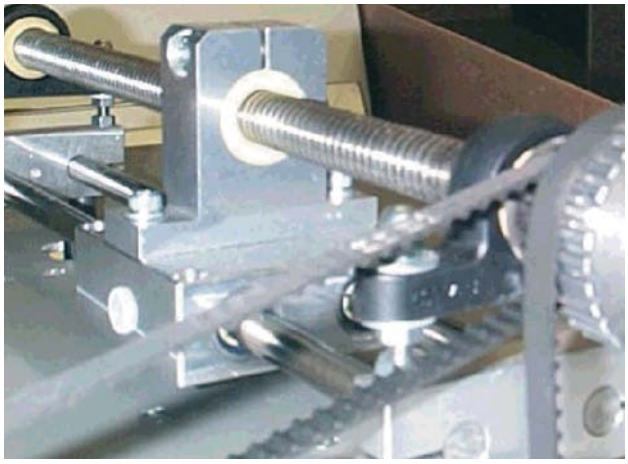


Special Properties

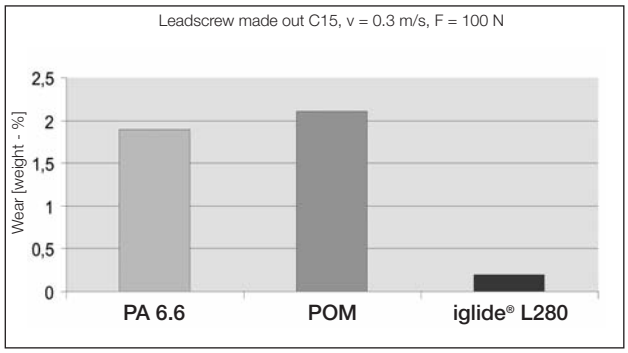
The new trapezoidal lead screw nuts add to the range of the maintenance-free and dry running products for linear technology. iglide® lead screw nuts offer considerable advantages over nuts which require maintenance and lubrication especially in applications using detergents, such as those for the packaging industry or in areas with high dust contamination (textile machines). The iglide® lead screw nuts are manufactured to DIN 103.

Ideal for wet environments

Trapezoidal lead screw nuts made from iglide® J material are well-suited for use in applications in high-humidity environments, especially in wet areas. The low moisture absorption of iglide® J has been proved over many years. For further information on iglide® J material, see Chapter 3.



iglide® trapezoidal lead screw nuts are the ideal complement to a DryLin® maintenance free linear bearing system



Wear at 100N axial load on a TR20x4 thread. Screw and nut have been cleaned before the test

Calculation of Trapezoidal Thread Load

The load capacity of the trapezoidal lead screw nuts made of high-performance polymers depends on the surface pressure, the speed and the resulting temperature. The temperature ratio will be affected by the frequency as well as by the lead screw material and its thermal properties.
The surface pressure of iglide® trapezoidal lead screw nut should not permanently exceed 5 MPa.

p x v Value$_{max}$ 0.08 MPa x m/s

The permissible feeds and speeds can be determined for each thread size with the pxv value and the running surfaces given in the dimension table.

Required (running surface)
$A_e = F_{axial} / p_{permissible}$ (mm²)

Selection of the thread size and determination of the effective surface pressure
$p_{eff} = F_{axial} / A_{e\ eff}$ (MPa)

Permissible sliding speed
$V_{slide} = p \times v_{max} / p_{eff}$ (m/s)

Maximum permissible RPM
$N = V_{slide} \times 1.000 \times 60 / (\pi \times d1)$ (1/min)

Feed speed
$V_{feed} = n \times P / 60.000$ (m/s)

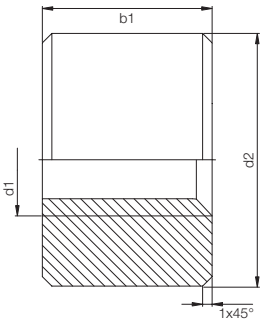
F_{axial}	Axial force
$P_{permissible}$	Max. permissible surface pressure 5 MPa
$P_{eff.}$	Effective surface pressure on a specific thread size
$A_{E\ eff}$	Effective supporting surface of the selected trapezoidal lead screw nut
P	Pitch
d1	Effective diameter

Calculation of trapezoidal thread loads

Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

DryLin® Threaded Nuts





Structure – Part No.

W S R M-22 15 TR10x2

Thread
b1
d2
Metric
Right Th.
Type
Material

Material:

W for iglide® L280
J for iglide® J*

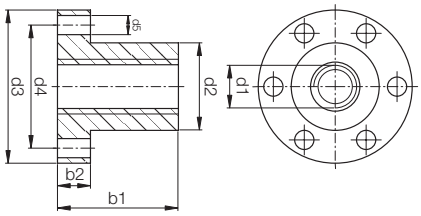
Dimensions (mm)

Part No. Short Version	Supporting surface (mm^2)	d1	d2	b1	TR d1 x P	Max. static F (N) (1N = .225 lb)
WSRM-2215TR10x2	212	10	22	15	TR 10 x 2	1060
WSRM-2215TR10x3	200	10	22	15	TR 10 x 3	1000
WSRM-2618TR12x3	296	12	26	18	TR 12 x 3	1480
WSRM-3021TR14x4	396	14	30	21	TR 14 x 4	1980
WSRM-3624TR16x2	564	16	36	24	TR 16 x 2	2820
WSRM-3024TR16x4	526	16	30	24	TR 16 x 4	2630
WSRM-3624TR16x4	526	16	36	24	TR 16 x 4	2830
WSRM-3027TR18x4	678	18	30	27	TR 18 x 4	3390
WSRM-4027TR18x4	678	18	40	27	TR 18 x 4	3390
WSRM-3025TR20x4	706	20	30	25	TR 20 x 4	3530
WSRM-4530TR20x4	848	20	45	30	TR 20 x 4	4240
WSRM-5036TR24x5	1214	24	50	36	TR 24 x 5	6070
WSRM-5039TR26x5	1438	26	50	39	TR 26 x 5	7190
WSRM-6042TR28x5	1680	28	60	42	TR 28 x 5	8400
WSRM-6045TR30x6	1906	30	60	45	TR 30 x 6	9530
Long Version						
WSRM-2220TR10x2	282	10	22	20	TR 10 x 2	1410
WSRM-2220TR10x3	266	10	22	20	TR 10 x 3	1330
WSRM-2624TR12x3	394	12	26	24	TR 12 x 3	1970
WSRM-3028TR14x4	526	14	30	28	TR 14 x 4	2630
WSRM-3632TR16x2	702	16	36	32	TR 16 x 2	3510
WSRM-3632TR16x4	752	16	36	32	TR 16 x 4	3760
WSRM-4036TR18x4	904	18	40	36	TR 18 x 4	4520
WSRM-4540TR20x4	1130	20	45	40	TR 20 x 4	5650
WSRM-5048TR24x5	1620	24	50	48	TR 24 x 5	8100
WSRM-5052TR26x5	1918	26	50	52	TR 26 x 5	9590
WSRM-6056TR28x5	2240	28	60	56	TR 28 x 5	11200
WSRM-6060TR30x6	2542	30	60	60	TR 30 x 6	12710

* Trapezoidal lead screw nuts made from iglide® J in various sizes are available upon request

DryLin® Trapezoidal Lead Screw Nuts





Dimensions (mm)

Part No. With Flange	Supporting surface (mm²)	d1	d2	d3	d4	d5	b1	b2	TR d1 x P	Max. static F (N) (1N = .225 lb)
WFRM-2525TR10x2	352	10	25	42	34	5	25	10	TR 10 x 2	1760
WFRM-2835TR12x3	576	12	28	48	38	6	35	12	TR 12 x 3	2880
WFRM-2835TR14x4	658	14	28	48	38	6	35	12	TR 14 x 4	3290
WFRM-2835TR16x4	768	16	28	48	38	6	35	12	TR 16 x 4	3840
WFRM-2835TR18x4	878	18	28	48	38	6	35	12	TR 18 x 4	4390
WFRM-3244TR20x4	1242	20	32	55	45	7	44	12	TR 20 x 4	6210
WFRM-3244TR24x5	1484	24	32	55	45	7	44	12	TR 24 x 5	7420
WFRM-3846TR26x5	1696	26	38	62	50	7	46	14	TR 26 x 5	8480
WFRM-3846TR28x5	1840	28	38	62	50	7	46	14	TR 28 x 5	9200
WFRM-3846TR30x6	1948	30	38	62	50	7	46	14	TR 30 x 6	9740

* Trapezoidal lead screw nuts made from iglide® J in various sizes are available upon request

Structure – Part No.

W F R M-22 15 TR10x2

- Thread
- b1
- d2
- Metric
- Right Thread
- Type
- Material

Material:

W for iglide® L280
J for iglide® J*

PDF: www.igus.com/pdf/DryLin.asp
Specs/CAD/RFQ: www.igus.com/DryLinN.asp
RoHS info: www.igus.com/RoHS.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680

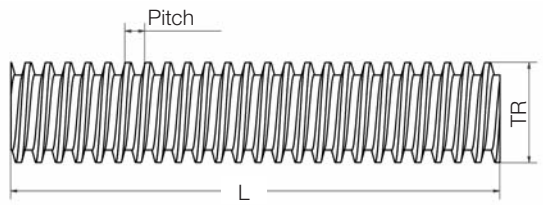
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/DryLin.asp

Leadscrew with trapezoidal thread



Special properties

- **Thread:** right and left
- **Material avaible:** Cold rolled steel; stainless steel
- **Design:** Length and reworking according to customer drawings
- **Manufacturing method:** reworked on precision machine tool



Dimensions (mm)

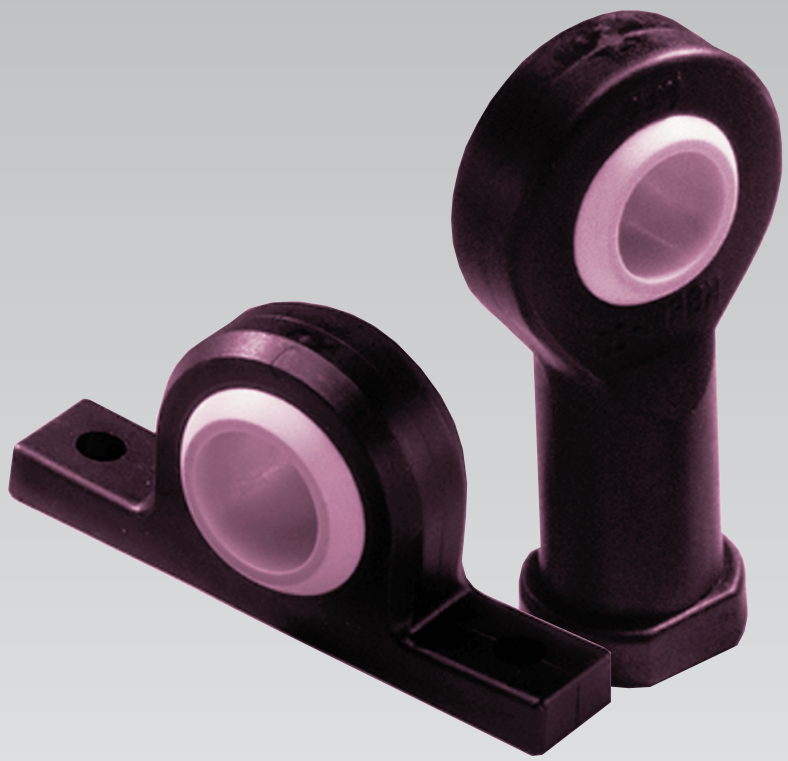
Part No.	Thread Length (mm)	TR	Pitch	Length (mm)
PTGSG-10x2-R/L	10		2	1000
PTGSG-10x3-R/L	10		3	1000
PTGSG-12x3-R/L	12		3	2000
PTGSG-14x4-R/L	14		4	3000
PTGSG-16x4-R/L	16		4	3000
PTGSG-18x4-R/L	18		4	3000
PTGSG-20x4-R/L	20		4	3000
PTGSG-24x5-R/L	24		5	3000
PTGSG-26x5-R/L	26		5	3000
PTGSG-28x5-R/L	28		5	3000
PTGSG-30x6-R/L	30		6	3000

Structure – Part No.

PTGSG-10x2-01-R-ES-1000

- Length mm
- ES = Stainless steel; leave blank = C15 steel
- R = Right Thread
- L = Left Thread
- Single start
- Diameter x Pitch
- Precision leadscrew with trapezoidal thread

Design Engineering with igubal®



igubal®

Spherical bearings made of high performance plastics	**P.**	27.4
igubal® Spherical Balls	**P.**	27.4
igubal® housing made of igumid G	**P.**	27.4
Loads	**P.**	27.5
Coefficients of Sliding Friction and Speed	**P.**	27.5
Application Temperatures	**P.**	27.5
Chemical Resistance	**P.**	27.5
Radiation Resistance	**P.**	27.6
UV Resistance	**P.**	27.6

igubal® Overview

igubal® Rod End Bearings





KARI-...
KALI-...
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KBRI-...
KBLI-...
Page 28.7



EBRI-...
EBLI-...
Page 28.8



KARM-...
KALM-...
Page 28.10
KARM-..(MH)
KALM-..(MH)
Page 28.10



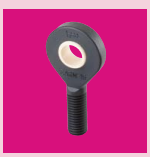
KBRM-...
KBLM-...
Page 28.12
KBRM-..(MH)
KBLM-..(MH)
Page 28.12



KARM CL-...
Page 28.14



KBRM CL-...
Page 28.15



EARM-...
EALM-...
Page 28.16



EBRM-...
EBLM-...
Page 28.18



EARM HT-...
EALM HT-...
Page 28.20



EBRM HT-...
EBLM HT-...
Page 28.21



PKRM-...
PKLM-...
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WGRM-...
AGRM-...
Page 28.23

igubal® Clevis Joints





GERI-...
GELI-...
Page 29.3
GERM-...
GELM-...
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GERMKE-...
GELMKE-...
Page 29.5



GEFM-...
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GBI-...
GBM-...
Page 29.6



GSR-...
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igubal® Pillow Blocks





KSTI-...
Page 30.4
KSTM-...
Page 30.5



KSTM-GT...
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ESTM-...
Page 30.7



ESTM-SL...
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igubal® Flange Bearings





EFSI-...
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EFSM-...
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EFOI-...
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EFOM-...
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KFSM-GT...
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EFOM HT-...
2-hole
Series E
metric
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EFSM HT-...
4-hole
Series E
metric
Page 31.10

igubal® Pivoting Bearings





KGLI-...
Page 32.3
KGLM-...
Page 32.4
EGLM-...
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KGLM
Slimline
Series K
metric
Page 32.6



KGLM-...
Low Cost
Page 32.7



ECLM-...
Clip
Page 32.8



ECLM-...
Clip
Heavy Duty
Page 32.9



EGFM-...
Page 32.10



EGZM-...
Page 32.11

igubal® Thrust Washers





SAM-...
Page 34.3

igubal® Spherical Balls





WKM-...
WKI-...
Series K, E
metric/inches
Page 57.3



WEM-...
WEI-...
Series K, E
metric/inches
Page 57.3



RKM-...
REM-...
Series K, E
metric
Page 57.4



XKM-...
XEM-...
Series K, E
metric
Page 57.4



JKM-...
JEM-...
Series K, E
metric
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UWEM-...
Series E
metric
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J4VEM-...
Series E
metric
Page 57.6

igubal® Bearings
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Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

igubal® Bearings

igubal® self-aligning maintenance-free plain bearings made of high-performance plastics

igubal® puts a complete system of self-aligning bearing elements — spherical bearings, pillow block spherical bearings and rod end bearings — at the developer's fingertips. Self-aligning bearings are easy to install, adapt to all angular deviations and replace special housings in many cases.
With igubal®, the user can take advantage of all the benefits of high-performance plastics: vibration dampening, ability to operate in liquids or chemicals, and resistance to dirt and dust which can impede the performance of greased metal components.
They are very lightweight: 80% lighter than steel. They save on installation space because of their small dimensions, and can save on cost at the time of purchase and in operation.
igubal® bearings are also extremely cost competitive due to the elimination of maintenance and installation costs.



Some models of the igubal® product line

Advantages of igubal®

- cost-effective
- maintenance-free
- lubrication-free
- resistant to dust and dirt
- corrosion-free
- can be used in liquid media
- vibration dampening
- inner race set in housings with very low clearance
- dirt can become embedded for shaft protection

igubal® Spherical Balls

In the igubal ® K series the standard spherical ball is made out of iglide® L280 material.
In the igubal® E series the standard spherical ball is made out of either the iglide® L280 or the iglide® R material. Additionally, the design of the igubal E series allows for specials to be made in any of the iglide materials to utilize their unique advantages.
Spherical balls made from the iglide® L280 material are known for its low coefficient of friction while running dry and extremely low tendency to stick-slip. This is especially important for low loads and very slow movements.
Spherical balls made from the iglide® R material offer a cost advantage and low moisture absorption while still maintaining a low coefficient of friction.



igubal® flange bearings in reflector telescopes at La Palma, Spain, in the adjustment of the individual reflectors

Advantages:

- tough, resistant thermoplastic alloy
- very low coefficients of friction while running dry
- high service life
- vibration dampening
- very good abrasion resistance
- excellent wear resistance
- Maintenance-free
- very good chemical resistance
- suitable for rotating, oscillating and linear movements
- also suitable for soft shafts



igubal® rod end bearings in the cylinder-controlled steps of an RV

igubal® housing made of igumid G

The housings are made out of igumid G, a highly shock-resistant, long fiber-reinforced plastic.

Advantages:

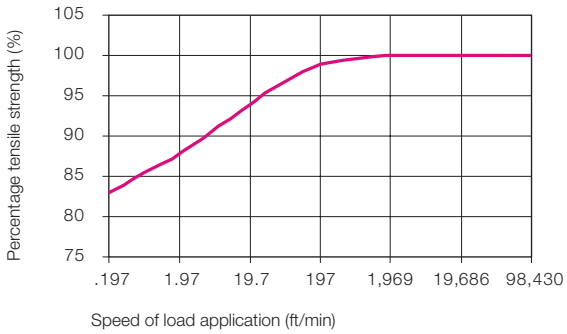
- lightweight
- high mechanical strength
- shock and impact resistant
- corrosion-free
- chemically resistant
- dimensionally stable



igubal® flange bearings as drive bearings in a conveyor system for bakery products

Loads

The load capacity of the maintenance-free igubal® bearing elements is very high at normal ambient temperatures. igubal® bearing elements absorb high forces and weigh only a fifth of traditional, metal bearing housings. The excellent dampening properties are based on the fact that the plastic material of the two-part bearing can absorb vibrations differently than steel.
However, plastic-specific properties, such as temperature and behavior under long-time stressing, must be taken into consideration when using igubal® bearings. The load capacity should therefore be checked in a performance test, particularly if they are to be used under continuous high loads and at elevated temperatures.



Effect of the speed of load application on the maximum tensile strength of igubal® rod end bearings

Coefficients of Sliding Friction and Speed

One important advantage of igubal® spherical bearings is that rapid, rotary movements of a mounted shaft take place directly in the spherical portion. In metallic rod ends, rotary motion takes place between the race and the spherical bearing. High speeds can be achieved with igubal® bearings.
igubal® bearings are used in such a way that the angular movements of the spherical bearings takes place at the outer diameter. In contrast, rotations of the shaft are supported directly in the I.D. of the spherical portion. The advantage, therefore, lies in the plastic vs. steel relationship. Plastic produces lower friction and permits high speeds, even when running dry.

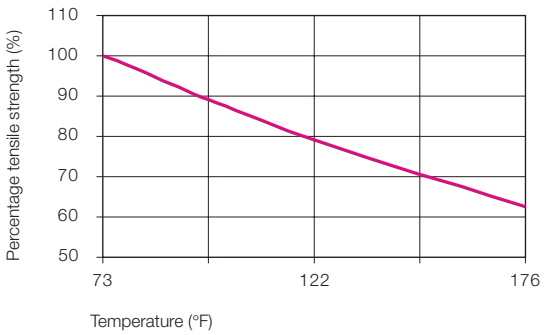
Application Temperatures

igubal® bearing elements can be used in temperatures from -22 to 176°F. The chart shows the effect of temperature on the loading capacity of the igubal® bearing elements.

Application Temperatures

Minimum	-	22°F
Maximum, long-term	+	176°F
Maximum, short-term	+	248°F

Applications temperatures of igubal® bearing elements



Effect of the temperature on the maximum tensile strength of igubal® rod end bearings

Chemical Resistance

Both the spherical ball made of iglide® L280 and the housing made of igumid G are resistant to weak lyes, weak acids and fuels, as well as all types of lubricants. You will find a chemicals table starting on Page 1.16. The moisture absorption of igubal® with iglide L280 is approximately 1.3% of weight in standard atmosphere. The saturation limit in water is 6.5%. The moisture absorption of igubal® with iglide® R is approximately .2% of weight in standard atmosphere. The saturation in water is 1.1%. This must be taken into account for these types of applications.

Medium	Resistance
Alcohol	Resistant
Chlorinated hydrocarbons	Resistant
Ester	Not Resistant
Greases, oils	Resistant
Ketones	Conditionally Resistant
Fuels	Resistant
Weak acids	Conditionally Resistant
Strong acids	Not Resistant
Weak lyes	Resistant
Strong lyes	Conditionally Resistant

Chemical resistance of igubal® bearing elements

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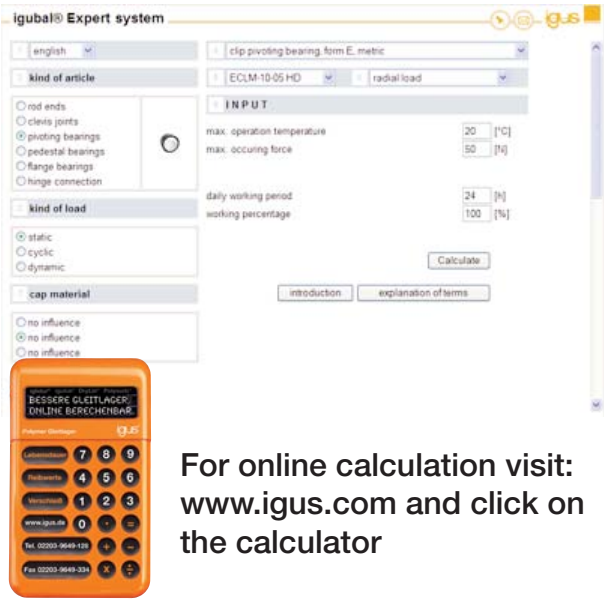
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E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

Radiation Resistance

Self-aligning igubal® plain bearings are resistant to radiation up to an intensity of 3 x 10^2 Gy.

UV Resistance

The corrosion resistance of the igubal® bearings give them special value for outside applications.
igubal® bearing elements are permanently resistant to UV radiation. A small change in color (dark coloration) of the spherical ball due to UV radiation does not effect the mechanical, electrical or thermal properties.



For online calculation visit: www.igus.com and click on the calculator

Areas of Application

igubal® bearing elements can be used without problems even in harsh environments. In moist or wet environments, the bearings are corrosion-resistant, and resistant to weak acids and lyes. The application temperatures range from -22 to 176°F. Resistance to dirt and dust is outstanding.
Seals are not necessary, even in extremely contaminated conditions. This is true for fine dust as well as coarse dirt, which is present in agricultural equipment. The housing is made of an impact-resistant composite material which tolerates high alternating loads.



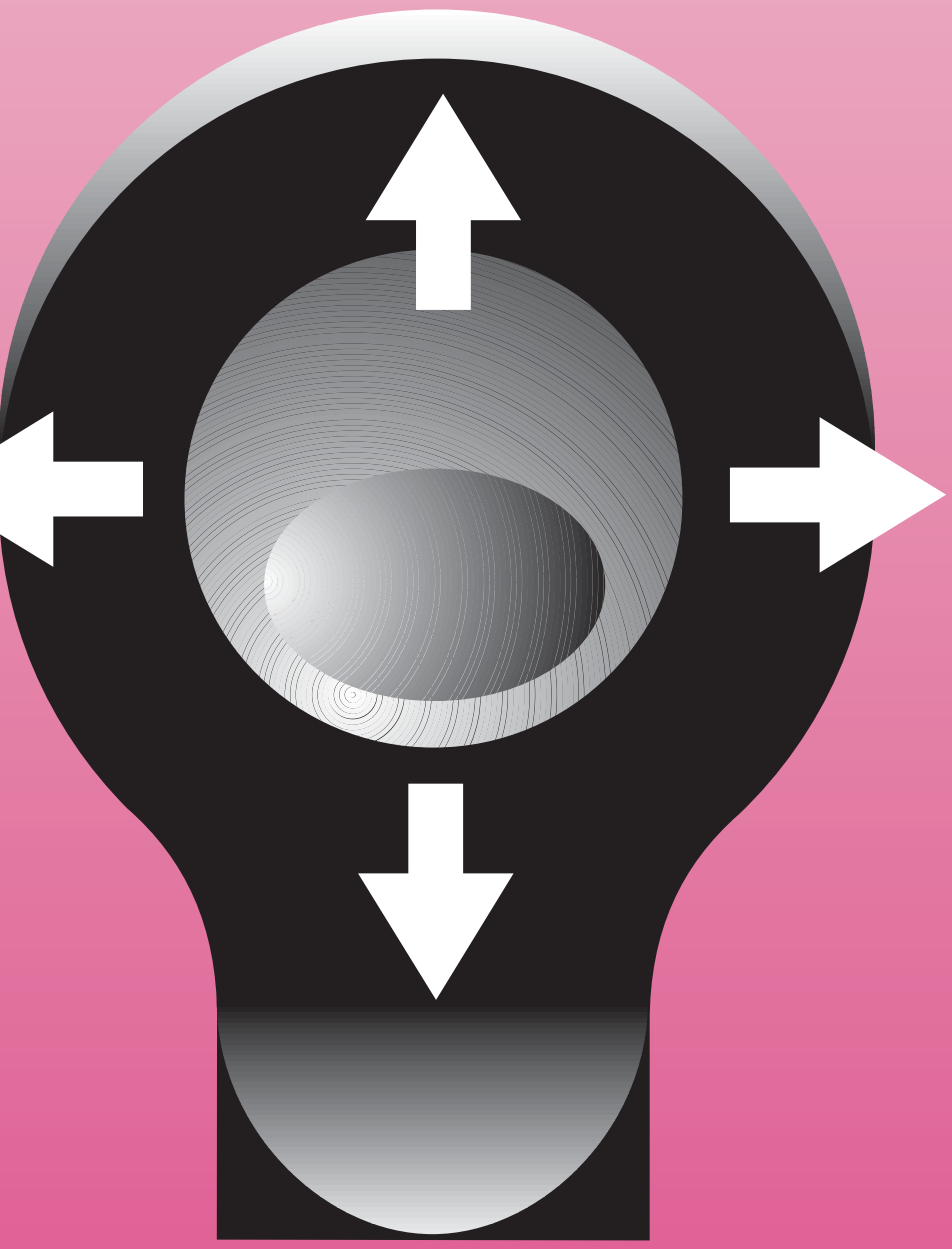
igubal® rod end bearings in the spring loaded rear axle of a bicycle



igubal® rod end bearing and spherical ball in a linear position sensor



igubal® flange bearings in the drive shaft of an outdoor cleaning machine



igus®

igubal® Rod End Bearings

- Maintenance-free, self-lubricating
- High strength under impact loads
- High tensile strength
- Compensation for alignment errors
- Compensation for edge loads
- Lightweight



igubal® Rod End Bearings

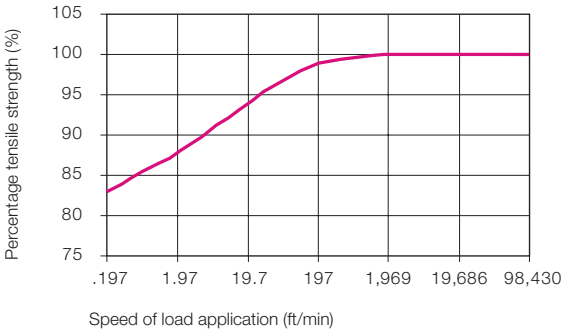
Special properties of igubal® Rod End Bearings:

- maintenance-free
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to dirt, dust and lint
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating and linear movements
- lightweight
- dimensional series K and E, dimensions according to standard DIN ISO 12240



Loads

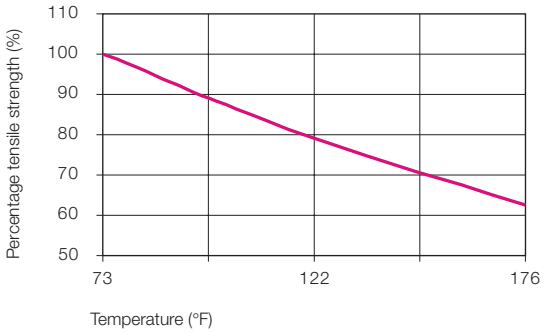
igubal® rod end bearings handle high loads at normal room temperatures, have excellent dampening properties and weigh only a fifth of traditional metallic rod end bearings. In applications with high continuous loads and high temperatures, the loading capacity of igubal® rod end bearings should be tested in an experiment that duplicates the application.



Effect of the speed of load application on the maximum tensile strength of igubal® rod end bearings

Coefficients of Friction and Speed

One important advantage of igubal® spherical bearings is that rapid, rotary movements of a mounted shaft take place directly in the spherical portion. In metallic rod ends, rotary motion takes place between the race and the spherical bearing. High speeds can be achieved with igubal® bearings.
igubal® bearings ares used in such a way that the angular movements of the spherical bearings take place at the spherical outer diameter. In contrast, rotations of the shaft are supported directly in the inner diameter of the spherical portion. The advantage, therefore, lies in the plastic vs. steel relationship. Plastic produces lower friction and permits high speeds, even when running dry.
The maintenance-free igubal® bearing system is also suited for linear and oscillating shaft movements.



Effect of the temperature on the maximum tensile strength of igubal® rod end bearings

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Product Range

igubal® rod end bearings are available in the dimensional series K and E for shaft diameters of .1875" to 1.00" (2 to 30 mm).

- Type A - with outer threads
- Type B - with inner threads

The dimensional series K is available in inch dimensions, as well as a special version containing a stainless steel sleeve in the inner race. This allows a significantly higher torque than for the standard plastic race.
Please ask us about quantities, availability and pricing.

Tolerances

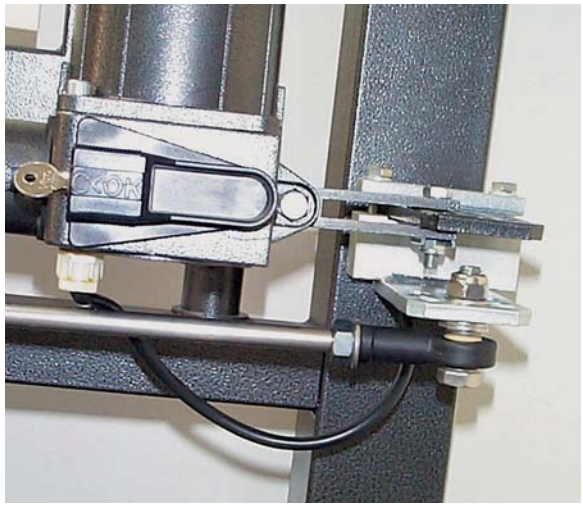
igubal® rod end bearings can be used at different tolerances depending on the individual application. As a standard program, they are designed with a large amount of bearing clearance, which permits secure operation even at high rotational speeds. The bore of the inner race is produced within a standard tolerance range. Shafts should also meet recommended tolerances. Please contact us with any questions regarding tolerances.
➤ Tolerance Table, Page 1.14

Thread Name	Pitch (mm)
M 2	0.40
M 3	0.50
M 4	0.70
M 5	0.80
M 6	1.00
M 8	1.25
M 10	1.50
M 10 F	1.25
M 12	1.75
M 12 F	1.25
M 14	2.00
M 16	2.00
M 16 F	1.50
M 18	1.50
M 20	2.50
M 20 M 20	1.50
M 22	1.50
M 24	2.00
M 27	2.00
M 30	2.00

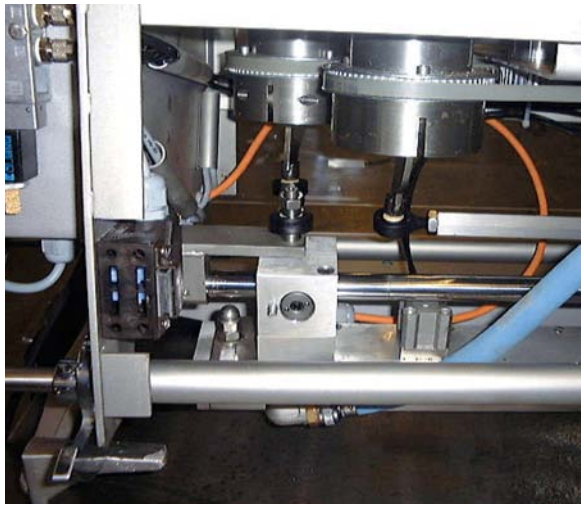
Thread pitches of the igubal® rod end bearings



igubal® rod end bearings in the spring loaded rear axle rocker of a bicycle



igubal® rod end bearings in the closing mechanism of an outdoor security gate



igubal® rod end bearings in a candy decorating machine

PDF: www.igus.com/pdf/igubal.asp
Specs/CAD/RFQ: www.igus.com/igubal.asp
RoHS info: www.igus.com/RoHS.asp

igubal® Rod End Bearings

Inch Dimensions - Outer Thread



KARI
KALI
Series K
Standard design with inch dimensions
Page 28.6

Inch Dimensions - Inner Thread



KBRI
KBLI
Series K
Standard design with inch dimensions
Page 28.7



EBRI
EBLI
Series E
Standard design with inch dimensions
Page 28.8

Metric Dimensions - Outer Thread



KARM
KALM
Series K
Standard design
Page 28.10



KARM
KALM
Series K
Standard design with metal sleeve (MH)
Page 28.10



KARM CL
Series K
2nd generation
Page 28.14



EARM
EALM
Series E
Page 28.16



EARM HT
EALM HT
Series E
High Temperature
Page 28.20

Metric Dimensions - Inner Thread



KBRM
KBLM
Series K
Standard design
Page 28.12



KBRM
KBLM
Series K
Standard design with metal sleeve (MH)
Page 28.12



KBRM CL
Series K
2nd generation
Page 28.15



EBRM
EBLM
Series E
Page 28.18



EBRM HT
EBLM HT
Series E
High Temperature
Page 28.21

igubal® Accessories for Rod End Bearings



PKRM
PKLM
Adapter bolt
Page 28.22



WGRM
Ball and Socket Joint (ellbow)
Page 28.23



AGRM
Ball and Socket Joint (axial)
Page 28.23



Clevis joint
with clevis pin and circlip
Page 29.3



Clevis joint
with spring-loaded pins
Page 29.5

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Structure for Part Numbers for igubal® Rod End Bearings

The part numbers of igubal® rod end bearings are designed according to the following system:

K B R M - 10 - MH

Series
K = **Series** K
E = **Series** E

Housing with
A = Outer thread
B = Inner thread

Thread design
L = Standard left hand
R = Standard right hand

Dimensional Standard
M = Metric
I = Inch

Nominal inside diameter

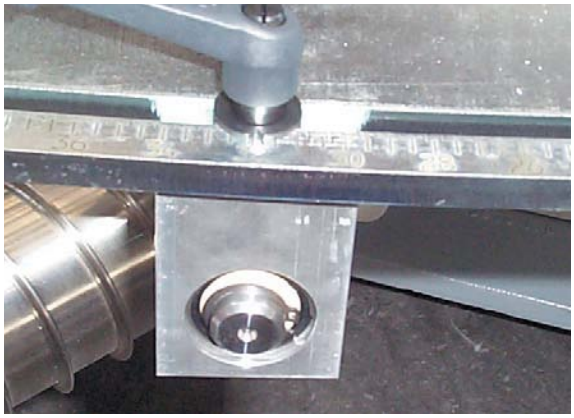
Design

CL = 2nd generation - only K series offering ability to change spherical ball material
F = fine thread pitch
HT = high temperature
MH = with metal sleeve
J = with spherical ball made from iglide® J
J4 = with spherical ball made from iglide® J4
R = with spherical ball made from iglide® R
X = with spherical bearing made from iglide® T500

The example given is the number for a rod end bearing of the dimensional series K with metric inner-right threading. The inner diameter of the spherical ball is 10 mm. It is a special design with a metal sleeve.

For the most part, the thread diameter of the bolt corresponds to the inner diameter — here it is M10. However, please pay attention to the following tables.

*The E series bearing is slightly thinner and costs less than its K series counterpart.



igubal® series E spherical bearings prevent failure as the result of contamination with textile fibers owing to the freedom from maintenance and the fact that lubrication is designed out. One further benefit is the price advantage over metallic products.
Part numbers: igubal® spherical bearing EGLM-20



igubal® spherical bearings as an insulating component in current collectors on subways. Pivoting and linear movements in this application are applied to the maintenance-free and corrosion-free high-performance polymers.
Part numbers: igubal® spherical bearing KGLM-22 and rod end bearing KAR(L)M-12

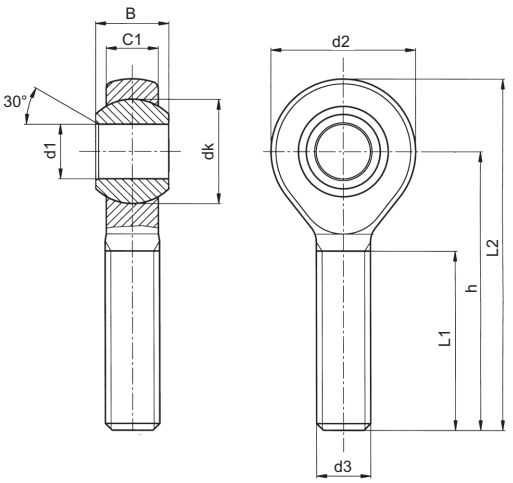
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igubal® Rod End Bearings - inch - KARI / KALI



- maintenance-free, self-lubricating
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to dirt, dust and lint
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating, and linear movements
- lightweight
- dimensional series K according to standard DIN ISO 12240



Load Data

Right Thread	Left-Thread	Maximum static Tensile Strength Short-term lbs	Maximum static Tensile Strength Long-term lbs	Maximum Radial Load Short-term lbs	Maximum Radial Load Long-term lbs	Minimum Thread Depth (inch)	Maximum Torque Strength through ball ft lbs	Maximum Thread Strength ft lbs
KARI-03	KALI-03	87	45	15	7	.525	.37	2.21
KARI-04	KALI-04	202	101	22	11	.700	.74	2.95
KARI-05	KALI-05	247	123	33	16	.875	1.48	7.38
KARI-06	KALI-06	337	168	78	39	.875	2.21	11.06
KARI-07	KALI-07	449	224	89	45	.962	4.43	18.44
KARI-08	KALI-08	562	281	101	50	1.050	6.64	25.82
KARI-10	KALI-10	786	393	134	67	1.137	8.85	36.88
KARI-12	KALI-12	876	438	224	112	1.226	18.44	51.63

Dimensions (inch)

Right-Thread	Left Thread	d1 E10	d2	d3	C1	B	h	L1	L2
KARI-03	KALI-03	.1900	.625	10-32	.234	.312	1.250	.750	1.563
KARI-04	KALI-04	.2500	.750	1/4-28	.250	.365	1.562	1.000	1.937
KARI-05	KALI-05	.3125	.875	5/16-24	.312	.437	1.875	1.250	2.313
KARI-06	KALI-06	.3750	1.000	3/8-24	.359	.500	1.938	1.250	2.438
KARI-07	KALI-07	.4375	1.125	7/16-20	.406	.562	2.125	1.375	2.688
KARI-08	KALI-08	.5000	1.312	1/2-20	.453	.625	2.428	1.500	3.094
KARI-10	KALI-10	.6250	1.500	5/8-18	.484	.750	2.625	1.625	3.375
KARI-12	KALI-12	.7500	1.750	3/4-16	.593	.875	2.875	1.750	3.750

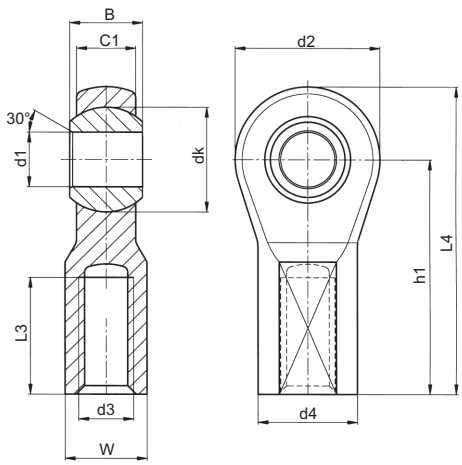
Right-Thread	Left Thread	Shaft Min.	Shaft Max.	Maximum Angle of Pivot	dk
KARI-03	KALI-03	.1888	.1900	25°	.438
KARI-04	KALI-04	.2485	.2500	25°	.516
KARI-05	KALI-05	.3110	.3125	25°	.625
KARI-06	KALI-06	.3735	.3750	22°	.718
KARI-07	KALI-07	.4358	.4375	22°	.828
KARI-08	KALI-08	.4983	.5000	22°	.938
KARI-10	KALI-10	.6233	.6250	22°	1.125
KARI-12	KALI-12	.7479	.7500	22°	1.312

Available for delivery

igubal® Rod End Bearings -inch - KBRI / KBLI



- maintenance-free, self-lubricating
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to dirt, dust and lint
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating and linear movements
- very low weight
- dimensional series K according to standard DIN ISO 12240



Load Data

Right Thread	Left Thread	Maximum static Tensile Strength		Maximum Radial Load		Minimum Thread Depth	Maximum Torque Thread Strength
		Short-term	Long-term	Short-term	Long-term		
		lbs	lbs	lbs	lbs	(inch)	ft lbs • force
KBRI-03	KBLI-03	203	102	67	34	.350	1.47
KBRI-04	KBLI-04	248	124	90	45	.480	3.68
KBRI-05	KBLI-05	383	192	112	56	.480	4.42
KBRI-06	KBLI-06	450	225	225	112	.568	5.16
KBRI-07	KBLI-07	518	259	270	135	.655	13.27
KBRI-08	KBLI-08	585	293	337	169	.743	16.96
KBRI-10	KBLI-10	1103	551	382	191	.962	22.12
KBRI-12	KBLI-12	1260	630	517	259	1.093	29.50
KBRI-16	KBLI-16	1349	674	584	293	1.488	33.92

Dimensions (inch)

Right-Thread	Left Thread	d1 E10	d2	d3	d4	C1	B	h1	L3	L4	W
KBRI-03	KBLI-03	.1900	.625	10-32	.406	.246	.312	1.062	.500	1.374	.312
KBRI-04	KBLI-04	.2500	.750	1/4-28	.469	.272	.365	1.312	.687	1.687	.375
KBRI-05	KBLI-05	.3125	.875	5/16-24	.500	.340	.437	1.375	.687	1.813	.437
KBRI-06	KBLI-06	.3750	1.000	3/8-24	.687	.394	.500	1.625	.812	2.125	.562
KBRI-07	KBLI-07	.4375	1.125	7/16-20	.750	.456	.562	1.812	.937	2.374	.625
KBRI-08	KBLI-08	.5000	1.312	1/2-20	.875	.487	.625	2.125	1.062	2.781	.750
KBRI-10	KBLI-10	.6250	1.500	5/8-18	1.000	.545	.750	2.500	1.375	3.250	.875
KBRI-12	KBLI-12	.7500	1.750	3/4-16	1.125	.676	.875	2.875	1.562	3.750	1.000
KBRI-16	KBLI-16	1.0000	2.750	1-12	1.625	1.000	1.375	4.125	2.125	5.500	1.500

Right-Thread	Left Thread	Shaft		Maximum Angle of Pivot	dk
		Min.	Max.		
KBRI-03	KBLI-03	.1888	.1900	25°	.438
KBRI-04	KBLI-04	.2485	.2500	25°	.516
KBRI-05	KBLI-05	.3110	.3125	25°	.625
KBRI-06	KBLI-06	.3735	.3750	22°	.718
KBRI-07	KBLI-07	.4358	.4375	22°	.828
KBRI-08	KBLI-08	.4983	.5000	22°	.938
KBRI-10	KBLI-10	.6235	.6250	22°	1.125
KBRI-12	KBLI-12	.7479	.7500	22°	1.312
KBRI-16	KBLI-16	.9980	1.000	20°	1.875

Available from stock

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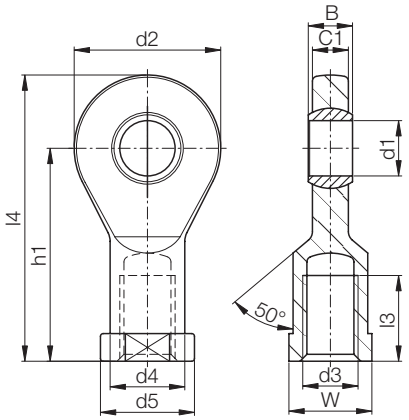
igubal® Rod End Bearings -inch - EBRI / EBLI



- standard ball made from iglide® L280, other options are available
- maintenance-free, self-lubricating
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to dirt, dust and lint
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating, and linear movements
- lightweight
- dimensional series E according to standard DIN ISO 12240

Load Data

Right-Thread	Left-Thread	Max. static Tensile Strength		Max. Cross Force		Min. Thread Depth	Max. Torque Strength Outer Threading	Max. Torque Strength Through Ball
		Short-term lbs	Long-term lbs	Short-term lbs	Long-term lbs	(mm)	ft lbs	ft lbs
EBRI-03	**EBLI-03**	292	146	34	17	8	.4	1.5
EBRI-04	**EBLI-04**	337	168	45	22	8	1.1	1.8
EBRI-05	**EBLI-05**	449	224	101	51	11	3.7	5.2
EBRI-06	**EBLI-06**	517	258	112	56	13	11.1	10.3
EBRI-07	**EBLI-07**	741	370	124	62	14	14.8	18.4
EBRI-08	**EBLI-08**	741	370	124	62	14	14.8	18.4
EBRI-10	**EBLI-10**	1079	539	180	90	18	18.4	22.1
EBRI-12	**EBLI-12**	1618	809	405	202	22	44.3	29.5



Dimensions (inch)

Right-Thread	Left Thread	d1 E10	d2	d3	d4	d5	C1	B	h1	l3	l4	W	Max. Angle of Pivot
EBRI-03	**EBLI-03**	0.1875	0.748	10/32	0.3543	0.4331	0.1732	0.1900	1.1811	0.4724	1.5551	0.35	30°
EBRI-04	**EBLI-04**	0.2500	0.827	1/4	0.4331	0.5118	0.1732	0.2500	1.1811	0.4724	1.5945	0.43	25°
EBRI-05	**EBLI-05**	0.3125	0.945	5/16	0.5118	0.6299	0.2362	0.3125	1.4173	0.6299	1.8898	0.55	22°
EBRI-06	**EBLI-06**	0.3750	1.142	3/8	0.5906	0.7480	0.2756	0.3750	1.6929	0.7087	2.2638	0.67	22°
EBRI-07	**EBLI-07**	0.4375	1.339	7/16	0.7087	0.8661	0.3150	0.4063	1.9685	0.7874	2.6378	0.75	18°
EBRI-08	**EBLI-08**	0.5000	1.339	1/2	0.7087	0.8661	0.3150	0.4063	1.9685	0.7874	2.6378	0.75	18°
EBRI-10	**EBLI-10**	0.6250	1.693	5/8	.827	1.023	0.4134	0.5000	2.5394	1.0433	3.3858	0.87	16°
EBRI-12	**EBLI-12**	0.7500	2.087	3/4	1.0630	1.3386	0.5118	0.6250	3.0315	1.2205	4.0748	1.18	14°

Available for delivery

➤ Tolerance Table, Page 1.14

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture
Available from stock



XKM: High temperatures



JKM: Low moisture absorption



standard spherical ball with metal sleeve

igubal® Rod End Bearings - mm - KARM / KALM



Standard Design



Design with Metal Sleeve (MH)

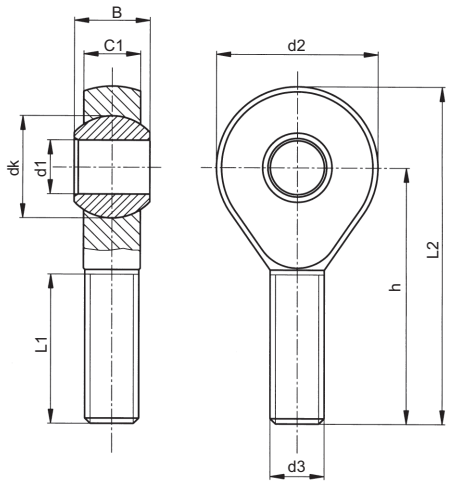
- maintenance-free self-lubricating
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to dirt, dust and lint
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating and linear movements
- lightweight
- dimensional series K according to standard DIN ISO 12240
- design with a metal sleeve in the inner race for increased thread strength

Load Data

Right-Thread	Left-Thread	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength Inner Threading	Max. Torque Strength	
		Short-term	Long-term	Short-term	Long-term			Without Metal Sleeve	With Metal Sleeve
		lbs	lbs	lbs	lbs	(mm)	ft lbs	ft lbs	ft lbs
KARM-05	KALM-05	180	90	18	9	13	.3	3.7	8.8
KARM-06	KALM-06	225	112	22	11	15	.4	7.4	11.1
KARM-08	KALM-08	382	191	45	22	18	1.5	8.9	29.5
KARM-10	KALM-10	562	281	67	33	20	3.7	14.8	36.9
KARM-10 F	KALM-10 F	562	281	67	33	20	2.2	14.8	36.9
KARM-12	KALM-12	607	303	89	45	22	4.4	22.1	51.6
KARM-12 F	KALM-12 F	607	303	89	45	22	4.4	22.1	51.6
KARM-14	KALM-14	764	382	157	78	25	8.9	25.8	55.3
KARM-16	KALM-16	876	438	179	89	26	12.5	29.5	81.1
KARM-16 F	KALM-16 F	876	438	179	89	26	12.5	29.5	81.1
KARM-18	KALM-18	944	472	224	112	29	14.8	33.2	110.6
KARM-20	KALM-20	1348	674	292	146	32	18.4	40.6	147.5
KARM-20 M20	KALM-20 M20	1348	674	292	146	32	18.4	40.6	147.5
KARM-22	KALM-22	1618	809	337	168	34	18.4	44.3	166.0
KARM-25	KALM-25	1686	843	427	213	39	33.2	47.9	191.8
KARM-30	KALM-30	1978	989	517	258	46	62.7	51.6	221.3

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igubal® Rod End Bearings - mm - KARM / KALM



Dimensions (mm)

Right-Thread	Left-Thread	d1 E10	d2	d3	C1	B	h	L1	L2
KARM-05	KALM-05	5	18	M05	6.0	8.0	33	19	42
KARM-06	KALM-06	6	20	M06	7.0	9.0	36	21	46
KARM-08	KALM-08	8	24	M08	9.0	12.0	42	25	55
KARM-10	KALM-10	10	30	M10	10.5	14.0	48	28	63
KARM-10 F	KALM-10 F	10	30	M10 x 1.25	10.5	14.0	48	28	63
KARM-12	KALM-12	12	34	M12	12.0	16.0	54	32	71
KARM-12 F	KALM-12 F	12	34	M12 x 1.25	12.0	16.0	54	32	71
KARM-14	KALM-14	14	38	M14	13.5	19.0	61	36	79
KARM-16	KALM-16	16	42	M16	15.0	21.0	66	37	88
KARM-16 F	KALM-16 F	16	42	M16 x 1.5	15.0	21.0	66	37	88
KARM-18	KALM-18	18	46	M18 x 1.5	16.5	23.0	72	41	96
KARM-20	KALM-20	20	50	M20 x 2.5	18.0	25.0	78	45	104
KARM-20 M20	KALM-20 M20	20	50	M20 x 1.5	18.0	25.0	78	45	104
KARM-22	KALM-22	22	56	M22 x 1.5	20.0	28.0	84	48	112
KARM-25	KALM-25	25	60	M24 x 2.0	22.0	31.0	94	55	125
KARM-30	KALM-30	30	70	M30 x 2.0	25.0	37.0	110	66	147

Right-Thread	Left-Thread	Shaft Min.	Shaft Max.	Maximum Angle of Pivot	dk
KARM-05	KALM-05	4.970	5.000	30°	11.10
KARM-06	KALM-06	5.970	6.000	29°	12.70
KARM-08	KALM-08	7.964	8.000	25°	15.80
KARM-10	KALM-10	9.964	10.000	25°	19.00
KARM-10 F	KALM-10 F	9.964	10.000	25°	19.00
KARM-12	KALM-12	11.957	12.000	25°	22.20
KARM-12 F	KALM-12 F	11.957	12.000	25°	22.20
KARM-14	KALM-14	13.957	14.000	25°	25.40
KARM-16	KALM-16	15.957	16.000	23°	28.50
KARM-16 F	KALM-16 F	15.957	16.000	23°	28.50
KARM-18	KALM-18	17.957	18.000	23°	31.70
KARM-20	KALM-20	19.948	20.000	23°	34.90
KARM-20 M20	KALM-20 M20	19.948	20.000	23°	34.90
KARM-22	KALM-22	21.948	22.000	22°	38.10
KARM-25	KALM-25	24.948	25.000	22°	42.80
KARM-30	KALM-30	29.948	30.000	22°	50.80

Rod end bearings can be ordered in metric dimensions with metal sleeve with the addition of MH after the part numbers listed here, i.e. for example: KARM-10 MH Available for delivery

➤ Tolerance Table, Page 1.14

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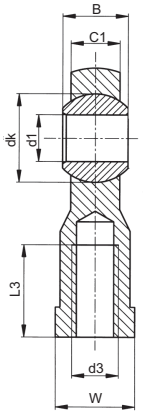
igubal® Rod End Bearings - mm - KBRM / KBLM

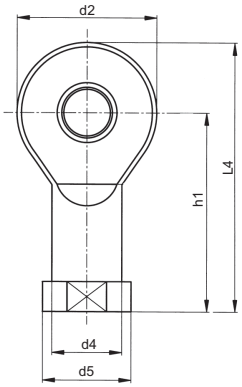


Standard Design



Design with Metal Sleeve (MH)





Special properties

- Maintenance-free dry running
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to dirt, dust and lint
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating and linear movements
- lightweight
- dimensional series K to standard DIN ISO 12240
- design with a metal sleeve in the inner race for increased torque strength

Load Data

Right-Thread	Left-Thread	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength Inner Threading	Max. Torque Strength	
		Short-term	Long-term	Short-term	Long-term			Without Metal Sleeve	With Metal Sleeve
		lbs	lbs	lbs	lbs	(mm)	ft lbs	ft lbs	ft lbs
KBRM-02	KBLM-02	134	67	13	6	4	.22	.74	1.5
KBRM-03	KBLM-03	179	89	22	11	5	.37	1.5	3.0
KBRM-05 M4	KBLM-05 M4	224	112	56	28	7	.55	3.7	8.9
KBRM-05	KBLM-05	224	112	56	28	7	.74	3.7	8.9
KBRM-06	KBLM-06	314	157	89	44	8	1.10	7.4	11.1
KBRM-08	KBLM-08	472	236	157	78	11	7.4	8.9	29.5
KBRM-10	KBLM-10	696	348	179	89	13	11.1	14.8	36.9
KBRM-10 F	KBLM-10 F	696	348	179	89	13	4.4	14.8	36.9
KBRM-12	KBLM-12	809	404	202	101	15	14.8	22.1	51.6
KBRM-12 F	KBLM-12 F	809	404	202	101	15	11.1	22.1	51.6
KBRM-14	KBLM-14	899	449	224	112	17	18.4	25.8	55.3
KBRM-16	KBLM-16	944	472	292	146	19	22.1	29.5	81.1
KBRM-16 F	KBLM-16 F	944	472	292	146	19	20.3	29.5	81.1
KBRM-18	KBLM-18	1034	517	359	179	21	33.2	33.2	110.6
KBRM-20	KBLM-20	1213	606	472	236	22	59.0	40.6	147.5
KBRM-20 M20	KBLM-20 M20	1213	606	472	236	22	44.3	40.6	147.5
KBRM-22	KBLM-22	1573	786	494	247	25	55.3	44.3	166.0
KBRM-25	KBLM-25	1910	955	517	258	28	88.5	44.3	191.8
KBRM-30	KBLM-30	2360	1180	562	281	34	99.5	44.3	221.3

Dimensions (mm)

Right-Thread	Left-thread	d1 E10	d2	d3	d4	d5	C1	B	h1	l3	l4	W
KBRM-02	KBLM-02	2	9	M02	4.0	4.6	3.0	4	12.5	6	17	SW04
KBRM-03	KBLM-03	3	13	M03	6.5	8.0	4.5	6	18.5	8	25	SW06
KBRM-05 M4	KBLM-05 M4	5	18	M04	9.0	12.0	6.0	8	27	10	36	SW09
KBRM-05	KBLM-05	5	18	M05	9.0	12.0	6.0	8	27	10	36	SW09
KBRM-06	KBLM-06	6	20	M06	10.0	13.0	7.0	9	30	12	40	SW11
KBRM-08	KBLM-08	8	24	M08	13.0	16.0	9.0	12	36	16	48	SW14
KBRM-10	KBLM-10	10	30	M10	15.0	19.0	10.5	14	43	20	58	SW17
KBRM-10 F	KBLM-10 F	10	30	M10 x 1.25	15.0	19.0	10.5	14	43	20	58	SW17
KBRM-12	KBLM-12	12	34	M12	18.0	22.0	12.0	16	50	22	67	SW19
KBRM-12 F	KBLM-12 F	12	34	M12 x 1.25	18.0	22.0	12.0	16	50	22	67	SW19
KBRM-14	KBLM-14	14	38	M14	20.0	25.0	13.5	19	57	25	76	SW22
KBRM-16	KBLM-16	16	42	M16	22.0	27.0	15.0	21	64	28	85	SW22
KBRM-16 F	KBLM-16 F	16	42	M16 x 1.5	22.0	27.0	15.0	21	64	28	85	SW22
KBRM-18	KBLM-18	18	46	M18 x 1.5	25.0	31.0	16.5	23	71	32	94	SW27
KBRM-20	KBLM-20	20	50	M20 x 2.5	28.0	34.0	18.0	25	77	33	102	SW30
KBRM-20 M20	KBLM-20 M20	20	50	M20 x 1.5	28.0	34.0	18.0	25	77	33	102	SW30
KBRM-22	KBLM-22	22	56	M22 x 1.5	30.0	37.0	20.0	28	84	37	112	SW32
KBRM-25	KBLM-25	25	60	M24 x 2.0	32.0	41.0	22.0	31	94	42	124	SW36
KBRM-30	KBLM-30	30	70	M30 x 2.0	37.0	50.0	25.0	37	110	51	145	SW41

Right-Thread	Left-Thread	Shaft Min.	Shaft Max.	Maximum Angle of Pivot	dk
KBRM-02	KBLM-02	1.975	2.000	30°	5.20
KBRM-03	KBLM-03	2.975	3.000	30°	7.90
KBRM-05 M4	KBLM-05 M4	4.970	5.000	30°	11.10
KBRM-05	KBLM-05	4.970	5.000	30°	11.10
KBRM-06	KBLM-06	5.970	6.000	29°	12.70
KBRM-08	KBLM-08	7.964	8.000	25°	15.80
KBRM-10	KBLM-10	9.964	10.000	25°	19.00
KBRM-10 F	KBLM-10 F	9.964	10.000	25°	19.00
KBRM-12	KBLM-12	11.957	12.000	25°	22.20
KBRM-12 F	KBLM-12 F	11.957	12.000	25°	22.20
KBRM-14	KBLM-14	13.957	14.000	23°	25.40
KBRM-16	KBLM-16	15.957	16.000	23°	28.50
KBRM-16 F	KBLM-16 F	15.957	16.000	23°	28.50
KBRM-18	KBLM-18	17.957	18.000	23°	31.70
KBRM-20	KBLM-20	19.948	20.000	23°	34.90
KBRM-20 M20	KBLM-20 M20	19.948	20.000	23°	34.90
KBRM-22	KBLM-22	21.948	22.000	22°	38.10
KBRM-25	KBLM-25	24.948	25.000	22°	42.80
KBRM-30	KBLM-30	29.948	30.000	22°	50.80

Rod end bearings can be ordered in metric dimensions with metal sleeve with the addition of MH after the part numbers listed here, i.e. for example: KBRM-10 MH
Available for delivery

➤ Tolerance Table, Page 1.14

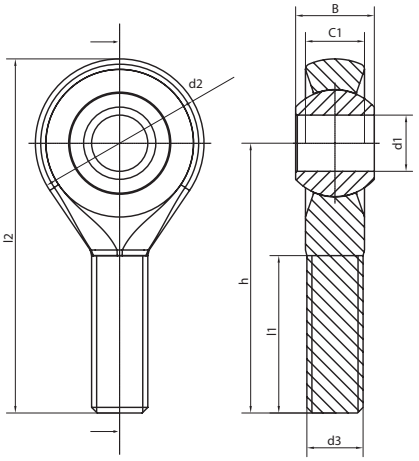
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igubal® Rod End Bearings - KARM CL

The new igubal®-rod end bearings have spherical balls made from iglide® L280 as standard. Other materials are optional





Special properties

- Smooth design has no dirt traps
- Compensation for alignment errors
- Light weight
- Excellent corrosion resistance
- Design with metal isleeve for higher torque strength available
- Left-hand thread version KALM in preparation

Load Data

Part Number	Maximum static tensile strength		Maximum radial load		Minimum thread depth	Max. torque strength outside thread	Max. torque though Ball	
	short-term (lbs)	long-term (lbs)	short-term (lbs)	long-term (lbs)	(mm)	(lbs · ft)	standard (lbs · ft)	MH (lbs · ft)
KARM-06 CL	225	113	22	11	15	.369	7.376	11.060
KARM-08 CL	382	191	45	22	18	1.475	8.851	29.500
KARM-10 CL	562	281	68	34	20	3.688	14.750	36.880
KARM-12 CL	607	304	90	45	22	4.425	22.130	51.630

Dimensions (mm)

Part Number	d1 E10	d2	d3	C1	B	h	l1	l2	Max. pivot angle
KARM-06 CL	6	20	M06	7.0	9.0	36	21	46	40°
KARM-08 CL	8	24	M08	9.0	12.0	42	25	55	35°
KARM-10 CL	10	30	M10	10.5	14.0	48	28	63	35°
KARM-12 CL	12	34	M12	12.0	16.0	54	32	71	35°

For rod end bearings with metal insert please add **MH** to the part number, e.g. KABM-10 CL **MH**.
For another spherical bearing material please add **J**, **R** or **X** to the part number, e.g. KARM-10 CL **J**.

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures



JKM: Low moisture absorption

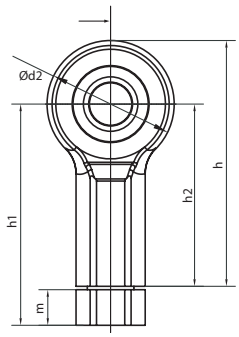


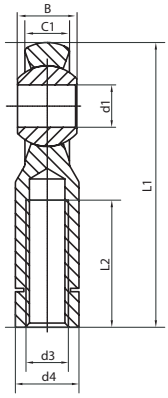
standard spherical ball with metal sleeve

igubal® Rod End Bearings - KBRM CL

The new igubal®-rod end bearings have spherical balls made from iglide® L280 as standard









Simple assembly due to the hexagonal body and the integrated lock nut.

Special properties

- Smooth design has no dirt traps
- Compensation for alignment errors
- Light weight
- Excellent corrosion resistance
- Design with metal sleeve for higher torque strength available
- Left-hand thread version KBLM in preparation

Load Data

Part Number	Maximum static tensile strength		Maximum radial load		Minimum thread depth	Max. torque strength outside thread	Max. torque though Ball	
	short-term (lbs)	long-term (lbs)	short-term (lbs)	long-term (lbs)	(mm)	(lbs · ft)	standard (lbs · ft)	MH (lbs · ft)
KBRM-06 CL	315	158	90	45	8	1.106	7.376	11.060
KBRM-08 CL	473	236	158	79	11	7.376	8.851	29.500
KBRM-10 CL	698	349	180	90	13	11.060	14.750	36.880

Dimensions (mm)

Part Number	d1 E10	d2	d3	d4	B	C1	h	h1	h2	L2	L1	Max. pivot angle
KBRM-06 CL	6	20	M06	SW10	9	7	40	5,7	30	20	46,5	40°
KBRM-08 CL	8	24	M08	SW13	12	9	48	7,5	36	25	56,3	35°
KBRM-10 CL	10	30	M10	SW15	14	10,5	58	52,2	43	30	67,2	35°

For rod end bearings with metal insert please add **MH** to the part number, e.g. KRBM-10 CL **MH**.
For another spherical bearing material please add **J**, **R** or **X** to the part number, e.g. KBRM-10 CL **J**.

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures



JKM: Low moisture absorption



standard spherical ball with metal sleeve

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Specs/CAD/RFQ: www.igus.com/igubal.asp
RoHS info: www.igus.com/RoHS.asp

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igubal® Rod End Bearing - mm - EARM / EALM



Special properties

- maintenance-free, self-lubricating
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating, and linear movements
- lightweight
- dimensional series E according DIN ISO 12240

Load Data

Right-Thread	Left-Thread	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength Outer Threading	Max. Torque Strength Through Ball
		Short-term lbs	Long-term lbs	Short-term lbs	Long-term lbs	(mm)	ft lbs	ft lbs
EARM-05	EALM-05	123	61	11	5	14	.3	1.5
EARM-06	EALM-06	191	95	18	9	14	.4	1.8
EARM-08	EALM-08	359	179	33	16	17	1.5	5.2
EARM-10	EALM-10	584	292	56	28	19	3.7	10.3
EARM-10 F	EALM-10 F	584	292	56	28	19	2.2	10.3
EARM-12	EALM-12	674	337	67	33	20	4.4	18.4
EARM-12 F	EALM-12 F	674	337	67	33	20	4.4	18.4
EARM-15	EALM-15	1011	505	89	45	24	9.2	22.1
EARM-17	EALM-17	1124	562	112	56	26	12.9	25.8
EARM-17 F	EALM-17 F	1124	562	112	56	26	15.5	25.8
EARM-20	EALM-20	1461	730	134	67	30	22.1	29.5
EARM-20 M20	EALM-20 M20	1461	730	134	67	30	18.4	29.5
EARM-25	EALM-25	1910	955	179	89	37	33.2	40.6
EARM-30	EALM-30	2248	1124	224	112	46	62.7	51.6

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures

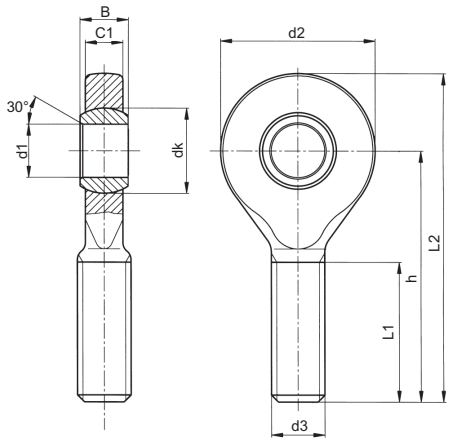


JKM: Low moisture absorption



standard spherical ball with metal sleeve

igubal® Rod End Bearing - mm - EARM / EALM



Dimensions (mm)

Right-Thread	Left Thread	d1 E10	d2	d3	C1	B	h	l1	l2	Max. Angle of Pivot
EARM-05	**EALM-05**	5	19	M05	4.4	6	36	20	45.5	33°
EARM-06	**EALM-06**	6	21	M06	4.4	6	36	20	46.5	27°
EARM-08	**EALM-08**	8	24	M08	6.0	8	41	24	53.0	24°
EARM-10	**EALM-10**	10	29	M10	7.0	9	47.5	27	62.0	24°
EARM-10 F	**EALM-10 F**	10	29	M10 x 1.25	7.0	9	47.5	27	62.0	24°
EARM-12	**EALM-12**	12	34	M12	8.0	10	54	29	71.0	21°
EARM-12 F	**EALM-12 F**	12	34	M12 x 1.25	8.0	10	54	29	71.0	21°
EARM-15	**EALM-15**	15	40	M14	10.0	12	63	34	83.0	21°
EARM-17	**EALM-17**	17	46	M16	11.0	14	69	37	92.0	21°
EARM-17 F	**EALM-17 F**	17	46	M16 x 1.5	11.0	14	69	37	92.0	18°
EARM-20	**EALM-20**	20	53	M20 x 1.5	13.0	16	80	43	106.5	16°
EARM-20 M20	**EALM-20 M20**	20	53	M20 x 2.5	13.0	16	80	43	106.5	16°
EARM-25	**EALM-25**	25	64	M24 x 2.0	17.0	20	97	53	129.0	16°
EARM-30	**EALM-30**	30	73	M30 x 2.0	19.0	22	113	65	149.5	13°

Available for delivery

➤ Tolerance Table, Page 1.14

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igubal® Rod End Bearings - mm - EBRM / EBLM



Special properties

- maintenance-free, self-lubricating
- high strength under impact loads
- very high tensile strength for varying loads
- compensation for alignment errors
- compensation for edge loads
- resistant to dirt, dust and lint
- resistant to corrosion and chemicals
- high vibration dampening capacity
- suitable for rotating, oscillating, and linear movements
- lightweight
- dimensional series E according to standard DIN ISO 12240

Load Data

Right-Thread	Left-Thread	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength Outer Threading	Max. Torque Strength Through Ball
		Short-term lbs	Long-term lbs	Short-term lbs	Long-term lbs	(mm)	ft lbs	ft lbs
EBRM-04	**EBLM-04**	180	90	22	11	7	.3	1.5
EBRM-05	**EBLM-05**	292	146	34	17	8	.4	1.5
EBRM-06	**EBLM-06**	337	168	45	22	8	1.1	1.8
EBRM-08	**EBLM-08**	449	224	101	51	11	3.7	5.2
EBRM-10	**EBLM-10**	517	258	112	56	13	11.1	10.3
EBRM-10 F	**EBLM-10 F**	517	258	112	56	13	4.4	10.3
EBRM-12	**EBLM-12**	741	370	124	62	14	14.8	18.4
EBRM-12 F	**EBLM-12 F**	741	370	124	62	14	11.1	18.4
EBRM-15	**EBLM-15**	1079	539	180	90	18	18.4	22.1
EBRM-17	**EBLM-17**	1191	595	247	124	19	22.1	25.8
EBRM-17 F	**EBLM-17 F**	1191	595	247	124	19	20.3	25.8
EBRM-20	**EBLM-20**	1618	809	405	202	22	44.3	29.5
EBRM-20 M20	**EBLM-20 M20**	1618	809	405	202	22	59.0	29.5
EBRM-25	**EBLM-25**	2248	1124	584	292	27	84.8	40.6
EBRM-30	**EBLM-30**	2360	1180	674	337	33	95.9	51.6

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures

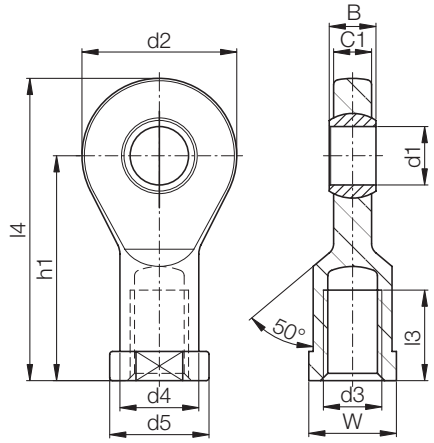


JKM: Low moisture absorption



standard spherical ball with metal sleeve

igubal® Rod End Bearings - mm - EBRM / EBLM



Dimensions (mm)

Right-Thread	Left Thread	d1 E10	d2	d3	d4	d5	C1	B	h1	l3	l4	W	Max. Angle of Pivot
EBRM-04	**EBLM-04**	4	15	M04	8.0	9.2	3.5	5	22.5	9.5	30.0	SW08	33°
EBRM-05	**EBLM-05**	5	19	M05	9.0	11	4.4	6	30	12	39.5	SW09	33°
EBRM-06	**EBLM-06**	6	21	M06	11.0	13	4.4	6	30	12	40.5	SW11	27°
EBRM-08	**EBLM-08**	8	24	M08	13.0	16	6.0	8	36	16	48.0	SW14	24°
EBRM-10	**EBLM-10**	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-10 F	**EBLM-10 F**	10	29	M10 x 1.25	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-12	**EBLM-12**	12	34	M12	18.0	22	8.0	10	50	20	67.0	SW19	21°
EBRM-12 F	**EBLM-12 F**	12	34	M12 x 1.25	18.0	22	8.0	10	50	20	67.0	SW19	21°
EBRM-15	**EBLM-15**	15	40	M14	21.0	26	10.0	12	61	26	81.0	SW22	21°
EBRM-17	**EBLM-17**	17	46	M16	24.0	30	11.0	14	67	27	90.0	SW27	21°
EBRM-17 F	**EBLM-17 F**	17	46	M16 x 1.5	24.0	30	11.0	14	67	27	90.0	SW27	18°
EBRM-20	**EBLM-20**	20	53	M20 x 1.5	27.0	34	13.0	16	77	31	103.5	SW30	16°
EBRM-20 M20	**EBLM-20 M20**	20	53	M20 x 2.5	27.0	34	13.0	16	77	31	103.5	SW30	16°
EBRM-25	**EBLM-25**	25	64	M24 x 2.0	34.0	41	17.0	20	94	38	126.5	SW36	16°
EBRM-30	**EBLM-30**	30	73	M30 x 2.0	41.0	48	19.0	22	110	47	146.5	SW41	13°

Available for delivery

➤ Tolerance Table, Page 1.14

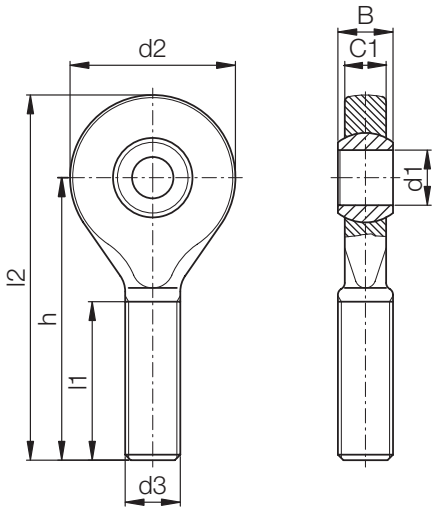
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igubal® Rod End Bearing - mm - EARM HT / EALM HT

The EARMHT / EALM HT version is for those applications with higher temperature requirements





Special properties

- For temperatures up to 392 °F
- Maintenance-free, self-lubricating
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation for alignment errors
- Compensation for edge loads
- Resistant to dirt, dust and lint
- Resistant to chemicals
- Underwater use
- High vibration dampening capacity
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional series K according to standard DIN ISO 12240

Dimensions (mm)

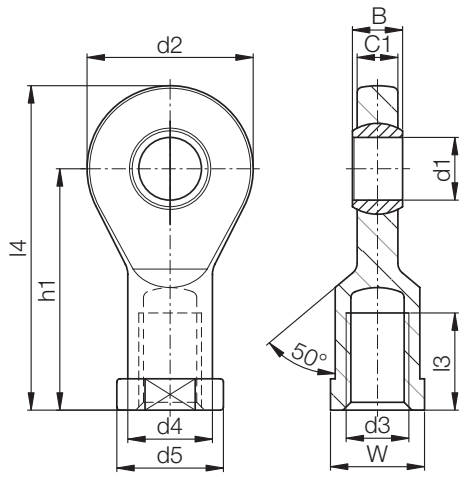
Part Number		d1 E10	d2	d3	C1	B	h1	l1	l2	Max. pivot angle
R.-hand thread	L.-hand thread									
EARM-06 HT	EALM-06 HT	6	21	M06	4.4	6	36	20	46.5	27°
EARM-08 HT	EALM-08 HT	8	24	M08	6.0	8	41	24	53.0	24°
EARM-10 HT	EALM-10 HT	10	29	M10	7.0	9	47.5	27	62.0	24°
EARM-12 HT	EALM-12 HT	12	34	M12	8.0	10	54	29	71.0	21°

Available from stock

igubal® Rod End Bearing - mm - EBRM HT / EBLM HT

The EBRMHT / EBLM HT version is for those applications with higher temperature requirements





Special properties

- For temperatures up to 392 °F
- Maintenance-free, self-lubricating
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation for alignment errors
- Compensation for edge loads
- Resistant to dirt, dust and lint
- Resistant to chemicals
- Underwater use
- High vibration dampening capacity
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional series K according to standard DIN ISO 12240

Dimensions (mm)

Part Number R.-hand thread	Part Number L.-hand thread	d1 E10	d2	d3	d4	d5	C1	B	h1	l3	l4	W	Max. pivot angle
EBRM-06 HT	**EBLM-06 HT**	6	21	M06	11.0	13	4.4	6	30	12	40.5	SW11	27°
EBRM-08 HT	**EBLM-08 HT**	8	24	M08	13.0	16	6.0	8	36	16	48.0	SW14	24°
EBRM-10 HT	**EBLM-10 HT**	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-12 HT	**EBLM-12 HT**	12	34	M12	18.0	22	8.0	10	50	20	67.0	SW19	21°

Available from stock

Telephone 1-888-803-1895
Fax 1-401-438-7680

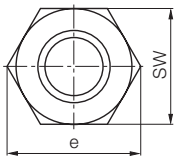
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

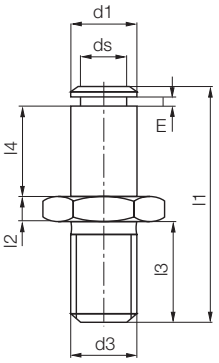
igubal® Adjusting Bolt - mm - PKRM / PKLM



The most significant properties:

- lightweight
- universal resistance to corrosion
- combined with rod end bearings of the dimensional series K
- high strength under impact loads
- vibration dampening
- easy to install
- available in left and right threads





Solid plastic hex bolts with pin serve as an accessory to the rod end bearings of the dimensional series K.
Like all “black” components of the igubal® bearing components, the igubal® adjusting hex bolts consist of the highly shock-resistant, long-fiber reinforced plastic igumid G.

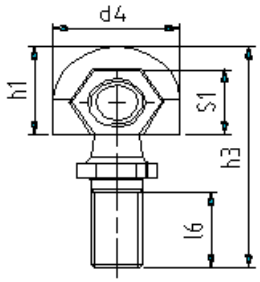
Load Data and Dimensions (mm)

Right-Thread	Left Thread	Max. Static Radial Load Short-term (lbs)	Max. Static Axial Tensile-Strength Short-term (lbs)	d1 (mm) h11	d3 Connection-Thread	SW Width-Across Flats	l1 Total-Length (mm)	l4 Length Adjusting Bolt (mm)	l3 Thread-Length (mm)
PKRM-05	**PKLM-05**	45	22	5	M05	SW 8	25.0	8.5	11.3
PKRM-06	**PKLM-06**	56	33	6	M06	SW 10	28.0	9.5	12.8
PKRM-08	**PKLM-08**	90	56	8	M08	SW 13	32.0	12.5	12.5
PKRM-10	**PKLM-10**	135	112	10	M10	SW 16	37.5	14.5	14.5
PKRM-12	**PKLM-12**	202	157	12	M12	SW 18	42.0	16.5	15.5
PKRM-14	**PKLM-14**	247	179	14	M14	SW 21	47.0	19.5	15.5
PKRM-16	**PKLM-16**	314	202	16	M16	SW 24	52.0	22.0	16.5
PKRM-18	**PKLM-18**	382	179	18	M18 x 1.5	SW 27	59.0	24.0	20.5
PKRM-20	**PKLM-20**	494	112	20	M20 x 1.5	SW 30	67.0	26.0	25.0

Available for delivery
Imperial sizes available. Minimum quantities may be required.
➤ Tolerance Table, Page 1.14

igubal® WGRM





- Connection for rotating and oscillating movement
- Lightweight and robust
- Easy and fast mounting
- Vibration dampening
- Resistant to dirt and dust

Dimensions (mm)

Part number	d1 +0.1 -0.1	d2	d4 +0.5 -0.5	l1 +0.2 -0.2	l2 +0.3 -0.3	l5	l6 min.	h3 +05 -0.5	a +0.3 -0.3	b +0.5 -0.5	e +0.5 -0.5	max. pivot angle
WGRM-05	8.0	M5	12.8	9.0	10.2	14.0	8.2	25.6	22.0	28.4	11.0	25°
WGRM-06	10.0	M6	14.8	11.0	12.5	16.0	10.5	30.9	25.0	32.4	13.0	25°
WGRM-08	13.0	M8	19.3	13.0	16.5	18.0	13.5	38.8	30.0	39.7	16.0	25°
WGRM-10	16.0	M10	24.0	16.0	20.0	20.0	16.0	47.0	35.0	47.0	18.0	25°

Load data

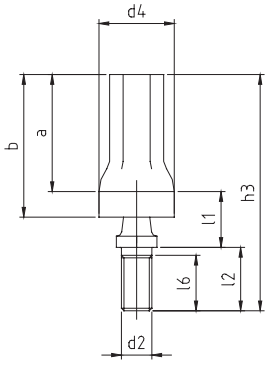
Part number	max. axial tensile force (lbs) (ball stud axis)	max. axial compressive force (lbs) (ball stud axis)	max. axial tensile force (lbs) (housing axis)	identical experiment (lbs) (metal ball stud)
WGRM-05	6.7	45.0	22.5	134.9
WGRM-06	7.9	67.4	31.5	179.8
WGRM-08	56.2	112.4	45.0	337.2
WGRM-10	112.4	202.3	89.9	427.1

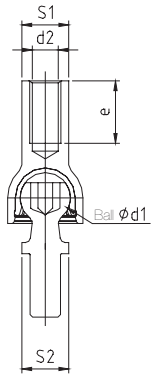
*MS=metal ball stud

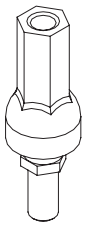
igubal® AGRM



- For all mechanical combinations
- Very easy assembling by hand
- Proportion from cohesion to assembling force ca. 10:1
- Maintenance free and predictable







Dimensions (mm)

Part No.	d1 +0.1 -0.1	d2	d4 +0.5 -0.5	l1 +0.2 -0.2	l2 +0.3 -0.3	l6 min.	h3 +0.5 -0.5	S1	S2	a +0.3 -0.3	b +0.5 -0.5	e min.	pivot angle Recom.	pivot angle max.
AGRM-08	13.0	M8	19.3	13.0	16.5	13.5	59.0	SW12	SW11	29.5	36.5	16.0	18°	25°

Load data

Part No.	max. static axial tensile strength short term (lbs)	max. static axial tensile strength long term (lbs)	max. static axial compressive strength short term (lbs)	max. static axial compressive strength long term (lbs)	max. assembling force (lbs)	measured min. cohesion (lbs)	factor	max. cyclic axial tensile/ compr. force (lbs)	max. torque housing (ft lbs)	max. torque ball stud (ft lbs)
AGRM-08	56.2	28.1	224.8	112.4	24.7	157.4	6.5	16.9	3.7	1.5

PDF: www.igus.com/pdf/igubal.asp
Specs/CAD/RFQ: www.igus.com/igubal.asp
RoHS info: www.igus.com/RoHS.asp

Telephone 1-888-803-1895
Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
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igubal® Spherical Bearing Analysis

Please photocopy, fill out and fax to 401-438-7680

Date:	Telephone: 1-888-803-1895 Fax: 1-401-438-7680
From: Telephone: Fax:	To: **igus®, inc.** Technical Sales iglide® Plastic Bearings P.O. Box 14349 East Providence, RI 02914

Please enter as much data as possible. If you prefer other measuring units, cross out the given unit and write your nest to it. Most applications questions can be answered with just a partial amount of data.
Please call us if you have any questions (Tel: 1-888-803-1895)

Rod End Bearing Type A ❍ (outer thread)
Rod End Bearing Type B ❍ (Inner thread)
Pillow Block ❍
Spherical Bearing ❍
Flange Bearing ❍ 2-Bolt
❍ 4-Bolt

Clevis Joint ❍ with pin and clip
❍ spring loaded hasp pin

Dimensional Series: ❍ E
❍ K

Threading: ❍ Standard thread
❍ Fine thread

Speed (fpm; 1/min):

_____

Type of movements:
❍ rotating _____

❍ pivoting by _____

_____degrees

❍ linear _____

Lubrication: ❍ dry
❍ Oil/grease
❍ Water

Shaft diameter (mm/inch): _____

Bearing load (lbs): _____

Outside temperature (°F):_____

Shaft material (e.g. steel, VA, plastic):

_____

_____

Average roughness Ra: _____

Target service life (hrs.): _____

Present bearing type:

_____

Surrounding media (e.g. acids, water, lyes...):

_____

Which problem can iglide® solve for you?

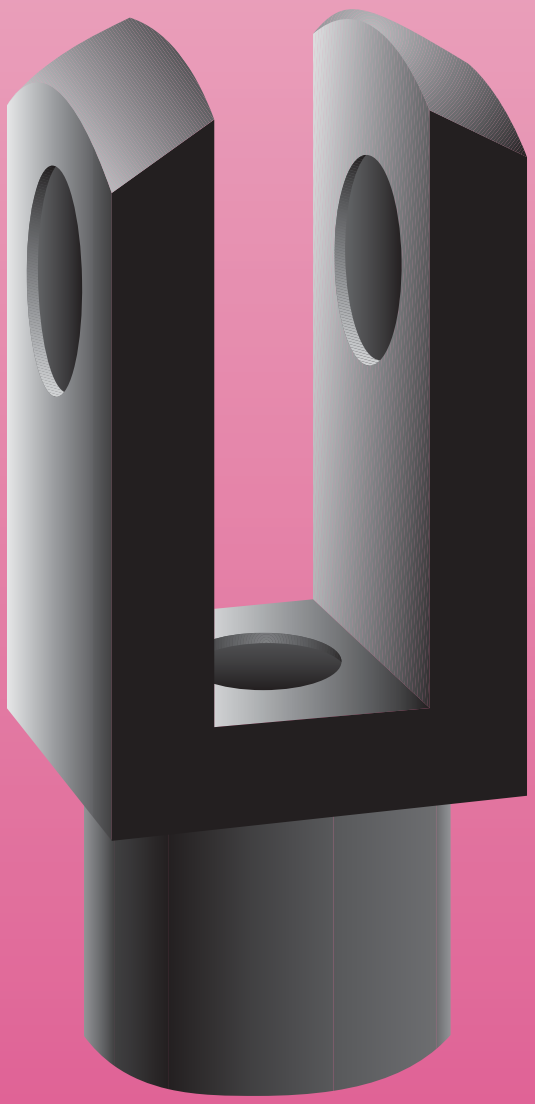
❍ dry running ❍ chemicals
❍ corrosion ❍ dirt
❍ vibration-dampening ❍ dust
❍ cost reduction ❍ weight

Other load characteristics:

_____

_____

Drawing:



igubal® Clevis Joint

- High tensile strength
- Vibration dampening
- Noise dampening
- Lightweight
- Can be used in combination with Rod End Bearings of the dimensional Series E



Telephone 1-888-803-1895
Fax 1-401-438-7680
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

igubal® Clevis Joint



The most significant properties:

- lightweight
- universal corrosion resistance
- high tensile strength
- can be used in combination with rod end bearings of the dimensional series E
- vibration dampening
- noise dampening
- available in left and right threads

igubal® clevis joints are all made of igumid G according to DIN 71752, which can be used in combination with the rod end bearings of the dimensional series E. Available components are clevis joint, clevis pin and clip or as an alternative, spring-loaded pin.

Part Selections

All of the components listed below are also available individually



Clevis joint with clevis pin and clip
GER(L)MK-



Clevis joint with spring-loaded pin
GER(L)MF-



Clevis joint with clevis pin and clip and rod end bearing
GER(L)MKE-



Clevis joint with spring loaded pin and rod end bearing
GER(L)MFE-

Structure of the part numbers for igubal® Clevis Joints

The part numbers of igubal clevis joints are designed according to the following system:

G E R M KE - 12 F

Model
G = Clevis Joint

Dimensional Series
E = dimensional series E

Thread design
L = left
R = right

Measuring system
M = metric

Options
None Standard
K = with clevis pin and clip
KE = with clevis pin, clip, and rod end bearing
F = with spring-loaded clasp pin
FE = with spring-loaded clasp pin and rod end bearing

Nominal dimension of inside diameter

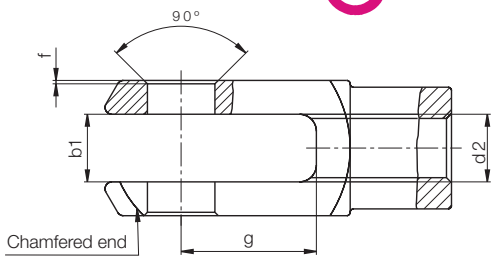
Design
No nomenclature indicates standard thread
F = Fine thread

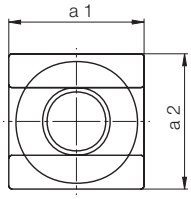
The example shows a complete clevis joint assembly of the dimensional series E with inner right threading in metric dimensions. The inner diameter of the spherical ball is 12mm. The thread bore has a metric fine threading (M12 x 1.25).

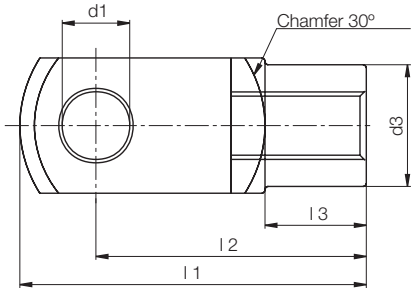
igubal® Clevis Joint - mm - GERI / GELI
GERIK/GELIK



- lightweight
- universal corrosion resistance
- high tensile strength
- Can be used in combination with rod end bearings of the dimensional series E
- vibration dampening
- noise dampening
- available in left and right thread







Dimensions (inch)

Right (Left) Thread	d1 H9	g h11	a1	a2 +0.3 -0.16	b1 B13	d2 Thread-Tolerance 6H	d3 +0.3 -0.3	f +0.3 -0.3	l1 +0.5 -0.5	l2 +0.3 -0.3	l3 +0.2 -0.2
GER(L)I-03	0.1875	0.394	0.394	0.394	0.197	10-32	0.354	.02	1.024	0.787	0.295
GER(L)I-04	0.2500	0.472	0.472	0.472	0.236	-28	0.394	.02	1.205	0.945	0.354
GER(L)I-05	0.3125	0.630	0.630	0.630	0.315	5/16-24	0.551	.02	1.638	1.260	0.472
GER(L)I-06	0.3750	0.787	0.787	0.787	0.394	3/8-24	0.709	.02	2.020	1.575	0.591
GER(L)I-07	0.4375	0.945	0.945	0.945	0.472	7/16-20	0.787	.02	2.413	1.890	0.709
GER(L)I-08	0.5000	1.102	1.063	1.063	0.551	1/2-20	0.945	.02	2.807	2.205	0.886

Load Data

Right (Left) Thread	Max. Static Axial Tensile Strength GERM Short-term (lbs)	Long-term (lbs)	Right (Left) Thread	Max. Static Axial Tensile Strength GERMK Short-term (lbs)	Long-term (lbs)
GER(L)I-03	225	112	**GER(L)IK-03**	202	90
GER(L)I-04	270	135	**GER(L)IK-04**	202	101
GER(L)I-05	607	303	**GER(L)IK-05**	472	236
GER(L)I-06	1056	528	**GER(L)IK-06**	674	404
GER(L)I-07	1281	640	**GER(L)IK-07**	787	393
GER(L)I-08	719	360	**GER(L)IK-08**	629	315

➤ Tolerance Table, Page 1.14

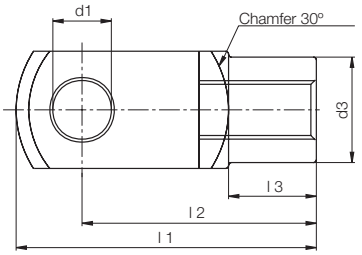
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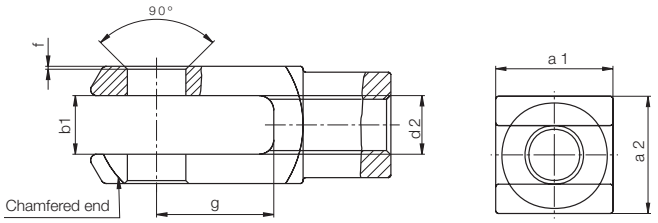
Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

igubal® Clevis Joint - mm - GERM/GELM GERMK/GELMK



- lightweight
- universal corrosion resistance
- high tensile strength
- Can be used in combination with rod end bearings of the dimensional series E
- vibration dampening
- noise dampening
- available in left and right thread





Load Data

Right (Left) Thread	Max. Static Axial Tensile Strength GERM Short-term (lbs)	Long-term (lbs)	Right (Left) Thread	Max. Static Axial Tensile Strength GERMK Short-term (lbs)	Long-term (lbs)
GER(L)M-04	179	90	GER(L)MK-04	135	67
GER(L)M-05 DIN M4	225	112	GER(L)MK-05 DIN M4	202	90
GER(L)M-05 DIN M5	225	112	GER(L)MK-05 DIN M5	180	90
GER(L)M-05	270	135	GER(L)MK-05	202	101
GER(L)M-06	314	157	GER(L)MK-06	292	146
GER(L)M-08	607	303	GER(L)MK-08	472	236
GER(L)M-10	1056	528	GER(L)MK-10	674	404
GER(L)M-10 F	1056	528	GER(L)MK-10 F	674	404
GER(L)M-12	1281	640	GER(L)MK-12	787	393
GER(L)M-12 F	1281	640	GER(L)MK-12 F	787	393
GER(L)M-14	1483	741	GER(L)MK-14	1371	685
GER(L)M-15	719	360	GER(L)MK-15	629	315
GER(L)M-16	1686	843	GER(L)MK-16	1573	786
GER(L)M-16 F	1686	843	GER(L)MK-16 F	1573	786
GER(L)M-20	2136	1068	GER(L)MK-20	2023	1012
GER(L)M-20	2136	1068	GER(L)MK-20	2023	1012

Dimensions (mm)

Right (Left) Thread	d1 H9	g h11	a1	a2 +0.3 -0.16	b1 B13	d2 Thread-Tolerance 6H	d3 +0.3 -0.3	f +0.3 -0.3	l1 +0.5 -0.5	l2 +0.3 -0.3	l3 +0.2 -0.
GER(L)M-04	4	8	8	8	4	M4	8.0	0.5	21.0	20	7.5
GER(L)M-05 DIN M4	5	10	10	10	5	M04	9	0.5	25.5	20	7.5
GER(L)M-05 DIN M5	5	10	10	10	5	M04	9	0.5	25.5	20	7.5
GER(L)M-05	5	12	12	12	6	M05	10.0	0.5	30.6	24.0	9.0
GER(L)M-06	6	12	12	12	6	M06	10.0	0.5	30.6	24.0	9.0
GER(L)M-08	8	16	16	16	8	M08	14.0	0.5	41.6	32.0	12.0
GER(L)M-10	10	20	20	20	10	M10	18.0	0.5	51.3	40.0	15.0
GER(L)M-10 F	10	20	20	20	10	M10x1.25	18.0	0.5	51.3	40.0	15.0
GER(L)M-12	12	24	24	24	12	M12	20.0	0.5	61.3	48.0	18.0
GER(L)M-12 F	12	24	24	24	12	M12x1.25	20.0	0.5	61.3	48.0	18.0
GER(L)M-14	14	28	27	27	14	M14	24.0	0.5	71.3	56.0	22.5
GER(L)M-15	15	28	27	27	14	M14	24.0	0.5	71.3	56.0	22.5
GER(L)M-16	16	32	32	32	16	M16	26.0	1.0	81.9	64.0	24.0
GER(L)M-16 F	16	32	32	32	16	M16x1.5	26.0	1.0	81.9	64.0	24.0
GER(L)M-20	20	40	40	40	20	M20x1.5	34.0	1.0	105.0	80.0	30.0
GER(L)M-20	20	40	40	40	20	M20x2.5	34.0	1.0	105.0	80.0	30.0

Imperial sizes available. Minimum quantities may be required.

➤ Tolerance Table, Page 1.14

igubal® Clevis Joint - mm - GERMKE / GELMKE



Load Data

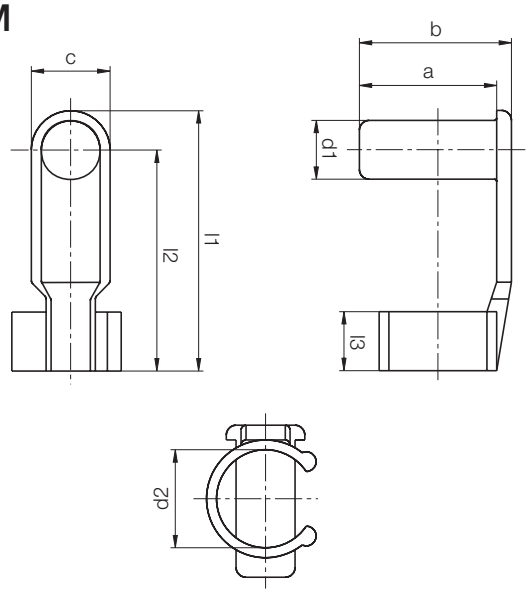
igubal® - Clevis Joints dimensional series E - complete joint assembly GERMKE/GELMKE, consisting of clevis joint GERM/GELM, clevis, pin, clip, and rod end bearing of the series EBRM/EBLM

Right-Thread	Left-Thread	Max. Static Axial Tensile Strength GERM Short-term (lbs)	Max. Static Axial Tensile Strength GERM Long-term (lbs)
GERMKE-05 M5	GELMKE-05 M5	202	101
GERMKE-06	GELMKE-06	292	146
GERMKE-08	GELMKE-08	449	224
GERMKE-10	GELMKE-10	517	258
GERMKE-10 F	GELMKE-10 F	517	258
GERMKE-12	GELMKE-12	741	370
GERMKE-12 F	GELMKE-12 F	741	370

igubal® Spring Loaded Pins - mm - GEFM



- single-piece construction
- easy to install
- maintenance-free
- can be used in combination with rod end bearings of the dimensional series E
- high stability



Dimensions (mm)

Part Number	d1 h11	d2	a	b	c	l1 ±0.5	l2	l3
GEFM-04	4	8	9.5	10.5	8	19	15	4.5
GEFM-05	5	10	14	15.5	8	27	23	6.5
GEFM-06	6	10	14	15.5	8	27	23	6.5
GEFM-08	8	14	19	21.0	11	35.5	30	8.0
GEFM-10	10	18	23	25.5	14	45	38	10.0
GEFM-12	12	20	28	31.0	16	53	45	12.0
GEFM-16	16	26	36	40.0	22	73	62	16.0

Imperial sizes available. Minimum quantities may be required.

➤ Tolerance Table, Page 1.14

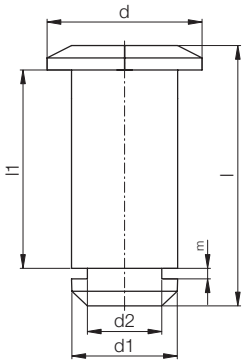
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igubal® Clevis Pin - inch/mm - GBI/GBM





Dimensions (mm)

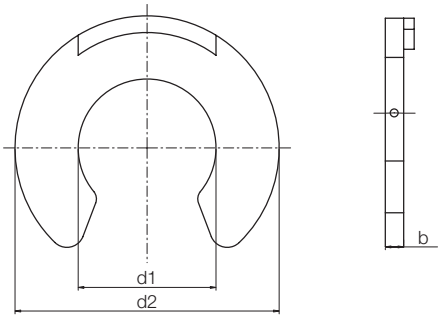
Part Number Pin	d1	d2	d	l	l1	m	Clip
GBI-03	.1875	.1260	.3125	.55	.3975	.0472	**GSR-04**
GBI-04	.2500	.1969	.3750	.65	.4764	.0512	**GSR-08**
GBI-05	.3125	.1969	.4375	.85	.6339	.0512	**GSR-08**
GBI-06	.3750	.2756	.5000	1.05	.7953	.0591	**GSR-10**
GBI-07	.4375	.3543	.6250	1.25	.9528	.0669	**GSR-12**
GBI-08	.5000	.3543	.7500	1.40	1.0709	.0669	**GSR-12**

Dimensions (inch)

Part Number Pin	d1	d2	d	l	l1	m	CLIP
GBM-04	4	3.2	7	12.50	8	1.05	GSR-04
GBM-05	5	4.0	8	16.50	12	1.15	GSR-06
GBM-05 DIN	5	4.0	8	14.50	10	1.15	GSR-06
GBM-06	6	4.0	9	16.50	12	1.15	GSR-06
GBM-08	8	5.0	12	21.50	16	1.15	GSR-08
GBM-10	10	7.0	15	27.00	20	1.35	GSR-10
GBM-12	12	9.0	18	31.50	24	1.50	GSR-12
GBM-14	14	12.0	22	36.00	27	1.70	GSR-16
GBM-15	15	12.0	23	36.00	27	1.70	GSR-16
GBM-16	16	12.0	24	42.00	32	1.70	GSR-16
GBM-17	17	12.0	25	42.00	32	1.70	GSR-16
GBM-20	20	15.0	30	51.00	40	2.00	GSR-20

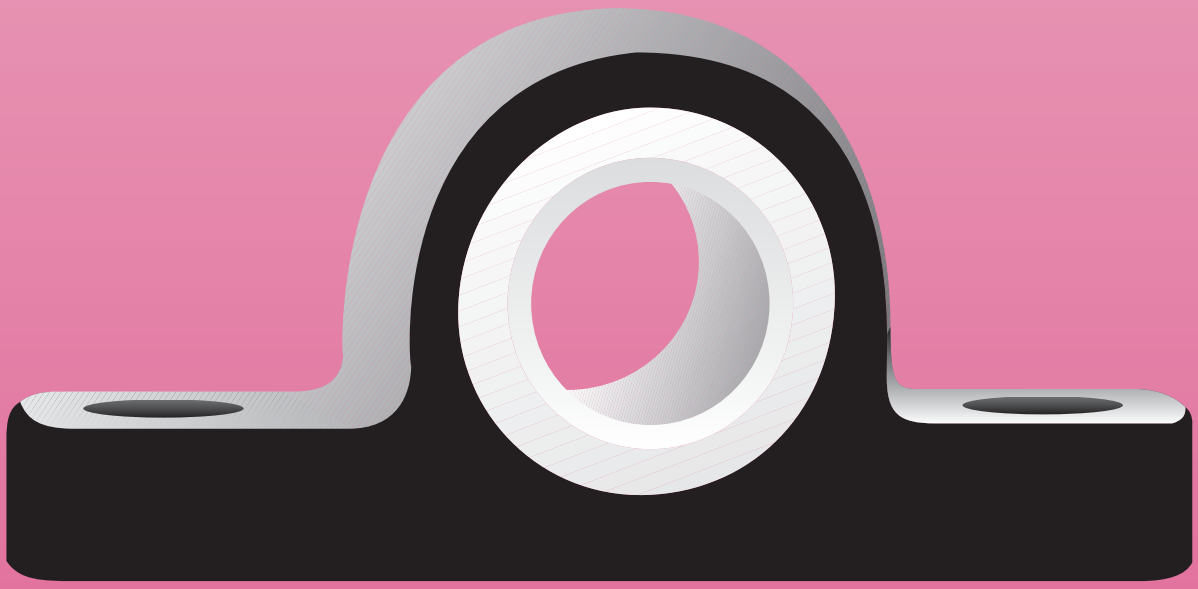
igubal® Clevis Clip - mm - GSR





Dimensions (mm)

Part Number Pin	d1	d2	b
GSR-04	3.20	7.0	1.00
GSR-06	4.00	9.0	1.10
GSR-08	5.00	11.0	1.10
GSR-10	7.00	14.0	1.30
GSR-12	9.00	18.5	1.40
GSR-16	12.00	23.0	1.60
GSR-20	15.00	28.0	1.90



igubal® Pillow Block Bearing

- Maintenance-free, self-lubricating
- High strength under impact loads
- High tensile strength
- Compensation for alignment errors
- Chemical resistant
- Lightweight



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igubal® Pillow Block Bearing

igubal® Pillow Block Bearings are bearing elements that are especially easy to install, able to compensate for alignment errors and prevent edge loads.



Product Range

igubal® pillow block bearings can be obtained in the standard dimensions for IDs of .1900" to 1.00" and for metric sizes of 5mm to 50 mm.

Areas of Application

The ability to pivot allows igubal® pillow block bearings to compensate for misalignment and possible shaft deflection. Applications in which these effects cannot be prevented are suited for igubal® pillow block bearings.

Tolerances

Maintenance-free igubal® pillow block bearings are designed with a tolerance in the inner diameter according to E10. The shaft should have a tolerance of H6 and h9. The recommended tolerances allow for changes in the bearing due to temperature.

➤ Tolerance Table, Page 1.14

Mounting

igubal® pillow block bearings are designed for mounting with 2 bolts. Precision mounting of the bearing is not necessary, since the spherical ball compensates for alignment errors.

Structure of Part Numbers for igubal® Pillow Block Bearings

The part numbers of igubal® pillow block bearings are designed according to the following system:

K ST M - 08

Dimensional Series
K = dimensional series K

Design
ST = Pillow Block

Measuring System
M = metric
I = inches

Nominal dimension of the inside diameter

The example shows a pillow block bearing of the dimensional series K with metric dimensions. The spherical ball has an inner diameter of 8 mm.



igubal® pillow block bearings in conveyor systems for the food industry (see pictures at the right for details)



igubal® pillow block bearings in a conveyor system



igubal® pillow block bearings in a conveyor system



Sideboard with integrated TV lifting mechanism (see picture at the right for details)

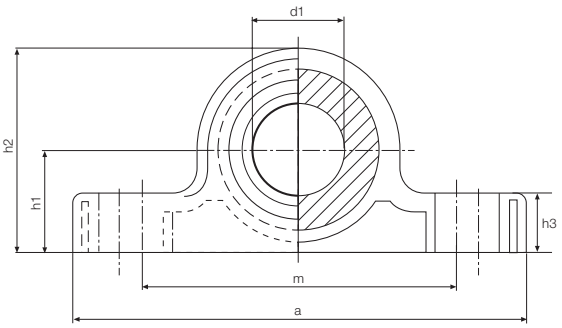


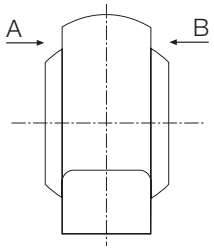
igubal® pillow block bearings with DryLin® T linear guide in the lifting mechanism

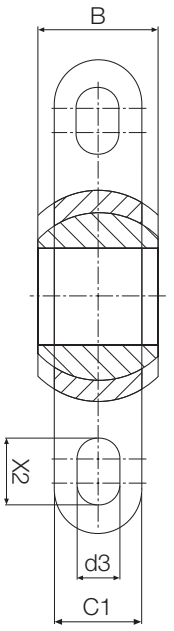
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igubal® Pillow Block Bearing - inch - KSTI









Special Properties

- Maintenance-free, self-lubricating
- High strength under impact loads
- High tensile strength for varying loads
- Compensation for alignment errors
- Compensation for edge loads
- Corrosion-resistant
- Chemical-resistant
- High vibration dampening capacity
- Suitable for rotating, oscillating and axial movements
- Lightweight

Load Data

Part Number	Maximum Static Tensile Strength Short-term (lbs)	Maximum Static Tensile Strength Long-term (lbs)	Maximum Static Axial Strength (lbs)	Maximum Torque for Longitudinal holes (ft lbs)
KSTI-03	124	62	79	0.4
KSTI-04	135	67	90	0.4
KSTI-05	180	90	112	0.6
KSTI-06	225	112	135	1.0
KSTI-07	247	124	157	1.8
KSTI-08	270	135	169	1.8
KSTI-10	472	236	202	1.8
KSTI-12	697	348	360	3.3
KSTI-16	1214	607	495	7.7

Dimensions (inch)

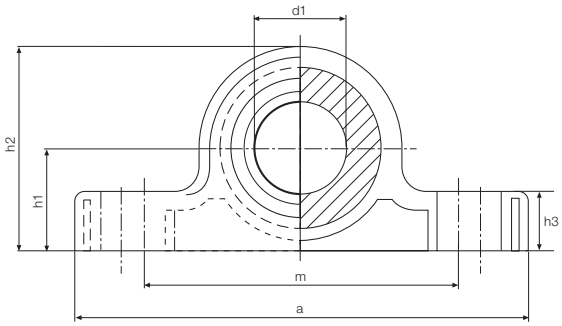
Part Number	a	d1 E10	B	C1	h1	h2	h3	m	d3	X2	Max. Angle of Pivot
KSTI-03	1.4000	.1900	.312	.234	.290	.566	.165	1.000	.137	.200	25°
KSTI-04	1.7500	.2500	.375	.250	.390	.705	.205	1.250	.137	.250	25°
KSTI-05	1.9500	.3125	.437	.312	.430	.824	.236	1.350	.150	.280	25°
KSTI-06	2.4000	.3750	.500	.359	.550	1.022	.376	1.800	.180	.300	22°
KSTI-07	2.5000	.4375	.562	.406	.570	1.082	.315	1.850	.205	.330	22°
KSTI-08	2.8000	.5000	.625	.453	.600	1.191	.354	2.000	.205	.380	22°
KSTI-10	3.3500	.6250	.750	.484	.700	1.409	.413	2.300	.205	.470	22°
KSTI-12	3.7500	.7500	.875	.593	.860	1.687	.472	2.700	.270	.530	22°
KSTI-16	5.0000	1.0000	1.375	1.005	1.100	2.163	.630	3.500	.520	.680	20°

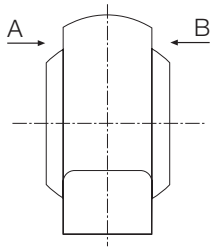
Available from stock

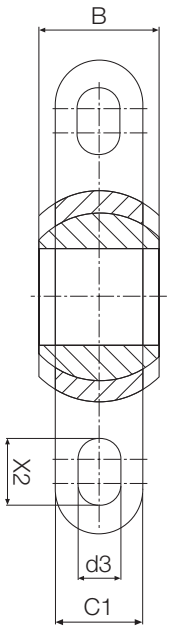
➤ Tolerance Table, Page 1.14

igubal® Pillow Block Bearing - mm - KSTM









Special Properties

- Maintenance-free, self-lubricating
- High strength under impact loads
- High tensile strength for varying loads
- Compensation for alignment errors
- Compensation for edge loads
- Corrosion-resistant
- Chemical-resistant
- High vibration dampening capacity
- Suitable for rotating, oscillating and axial movements
- Lightweight

Load Data

Part Number	Maximum Static Tensile Strength Short-term (lbs)	Maximum Static Tensile Strength Long-term (lbs)	Maximum Static Axial Compressive Strength (ft lbs)	Maximum Torque for Longitudinal holes
KSTM-05	157	78	90	0.4
KSTM-06	247	123	90	1.0
KSTM-08	292	146	180	1.0
KSTM-10	337	168	247	1.8
KSTM-12	494	247	259	1.8
KSTM-14	539	269	270	3.3
KSTM-16	674	337	405	3.3
KSTM-18	786	393	427	7.7
KSTM-20	1056	528	562	7.7
KSTM-22	1371	685	607	7.7
KSTM-25	1483	741	719	7.7
KSTM-30	1820	910	843	15.9

Dimensions (mm)

Part Number	a	d1 E10	B	C1	h1	h2	h3	m	d3	X2	Max. Angle of Pivot
KSTM-05	34	5	8	6.0	7	14	4	25	3.3	5	30°
KSTM-06	43	6	9	7.0	10	18	5.5	33	4.5	6	29°
KSTM-08	47	8	12	9.0	10	20	6	33	4.5	7	25°
KSTM-10	62	10	14	10.5	14	26	7.5	46	5.5	8	25°
KSTM-12	65	12	16	12.0	14	28	8.5	46	5.5	9	25°
KSTM-14	82	14	19	13.5	18	34	9.5	60	6.6	11	23°
KSTM-16	86	16	21	15.0	18	36	10.5	60	6.6	12	23°
KSTM-18	93	18	23	16.5	22	42	11.5	68	9.0	13	23°
KSTM-20	98	20	25	18.0	22	44	13	68	9.0	14	23°
KSTM-22	108	22	28	20.0	24	48	14	74	9.0	16	22°
KSTM-25	124	25	31	22.0	27	54	16	86	9.0	17	22°
KSTM-30	139	30	37	25.0	32	64	17	96	11.0	20	22°

Available from stock

➤ Tolerance Table, Page 1.14

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igubal® Pedestal Bearing - mm - KSTM-GT

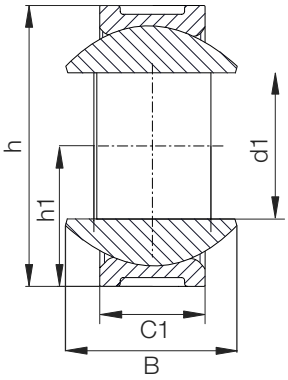
Familiar characteristics such as self-adjustment and zero-maintenance are now available with dimensions of 35, 40, 45 and 50 mm.

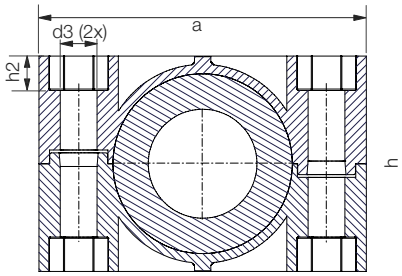


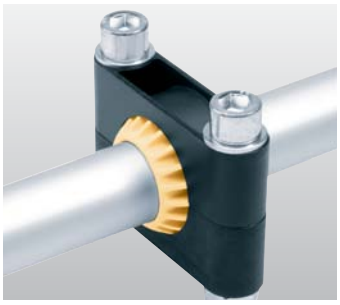
Special Properties

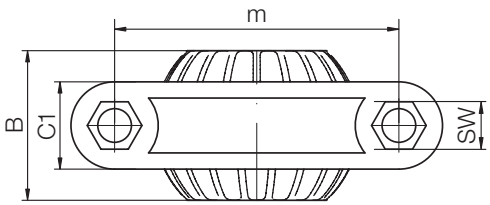
- High rigidity
- High fatigue strength
- Corrosion-proof
- Low weight
- Easy assembly and dismantling
- Maintenance-free spherical cap made of iglide® J











Dimensions (mm)

Part Number	d1 (E10)	d3	h	h1	h2	SW	a	m	C1	B	Max. Pivot Angle
KSTM-GT35*	35.0	13.5	79.0	39.5	12.6	19.0	120.5	91.0	29.5	48.5	24°
KSTM-GT40	40.0	13.5	79.0	39.5	12.6	19.0	120.5	91.0	29.5	48.5	24°
KSTM-GT45*	45.0	13.5	100.0	50.0	12.6	19.0	149.0	114.0	35.0	60.0	24°
KSTM-GT50	50.0	13.5	100.0	50.0	12.6	19.0	149.0	114.0	35.0	60.0	24°

*Diameter given by iglide J reducer

**Spherical balls are also available with split design

Load data

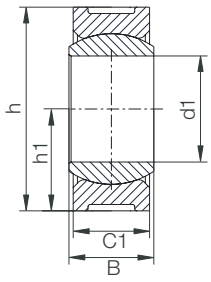
Part Number	Max. radial tensile strength		Max. axial tensile strength		Max. Torque	
	Short term (lbs)	Long term (lbs)	Short term (lbs)	Long term (lbs)	through ball (ft lbs)	fixing holes (ft lbs)
KSTM-GT35*	2473	1236	562	281	14.8	11.1
KSTM-GT40	2473	1236	562	281	14.8	11.1
KSTM-GT45*	3372	1686	674	337	14.8	14.8
KSTM-GT50	3372	1686	674	337	14.8	14.8

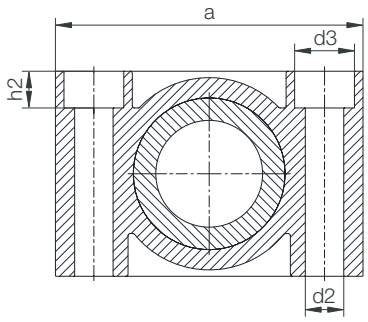
igubal® Pillow Block Bearing - mm - ESTM

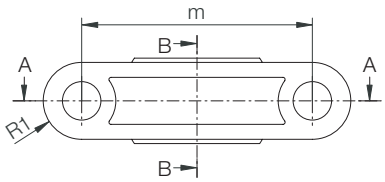


Special Properties

- High radial loads
- Can be used in liquid media
- Space-saving design
- Easy to install
- Predictable lifetime
- Maintenance-free, self-lubricating







Load Data

Part Number	Max. radial tensile strength		Max. radial compressive strength		Maximum axial strength		Maximum torque in the assembly
	Short term (lbs)	Long term (lbs)	Short term (lbs)	Long term (lbs)	Short term (lbs)	Long term (lbs)	(ft lbs)
ESTM-08	562	281	967	483	135	67	.96
ESTM-10	764	382	1191	596	157	79	1.84
ESTM-12	1012	506	1461	731	169	84	1.84
ESTM-16	1506	753	1911	955	247	124	3.32
ESTM-20	1911	955	2473	1293	315	157	3.32
ESTM-25	3035	1517	4159	2079	517	259	7.75
ESTM-30*	2248	1124	3709	1855	562	281	7.75

* Due to the different manufacturing method, the load values of the ESTM-30 are lower than ESTM-25

Dimensions (mm)

Part Number	d1	d2	d3	h	h1	h2	a	m	C1	B	R1	Max. Pivot Angle
ESTM-08	8.0	4.5	–	19	9.5	–	31.0	22.0	9.0	8.0	4.5	22°
ESTM-10	10.0	5.5	–	22	11	–	36.0	26.0	10.0	9.0	5.0	22°
ESTM-12	12.0	5.5	–	26	13	–	38.0	28.0	10.0	10.0	5.0	22°
ESTM-16	16.0	6.6	10.6	34.0	17.0	6.4	50.0	37.0	13.0	13.0	6.5	22°
ESTM-20	20.0	9.0	14.0	40.0	20.0	8.6	62.0	46.0	16.0	16.0	8.0	22°
ESTM-25	25.0	9.0	14.0	48.0	24.0	8.6	72.0	54.0	18.0	20.0	9.0	20°
ESTM-30	30.0	11.0	17.0	56.0	28.0	10.6	86.0	64.0	22.0	22.0	11.0	20°

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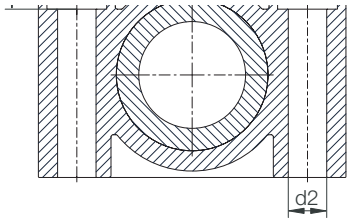
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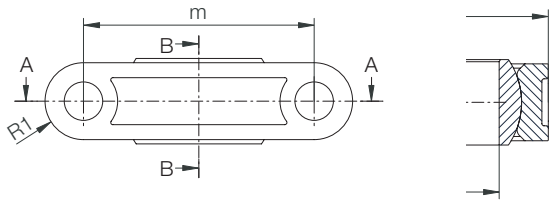
igubal® Pillow Block Bearing - mm - ESTM - SL



Special Properties

- Light weight
- Extremly space saving
- Mounts with cap screws
- Low cost
- Predictable lifetime
- Maintenance- and lubricant-free





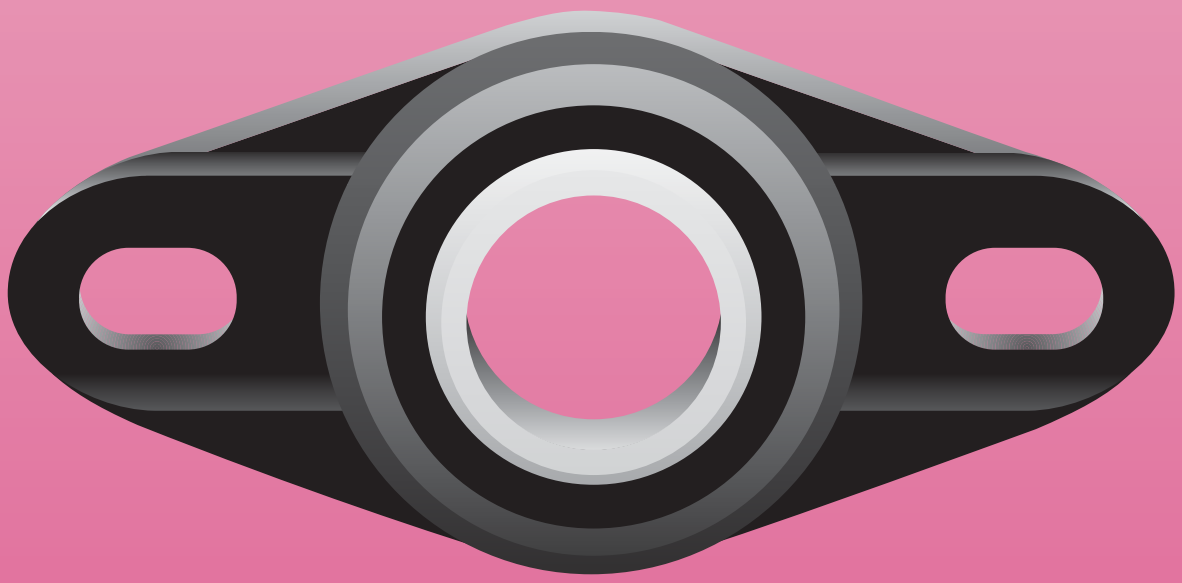
Load Data (mm)

Part Number	Max. radial tensile strength		Max. radial compressive strength		Maximum lateral strength		Maximum axial strength	
	Short term (lbs)	Long term (lbs)	Short term (lbs)	Long term (lbs)	Short term (lbs)	Long term (lbs)	Short term (lbs)	Long term (lbs)
ESTM-05-SL	337	169	315	157	202	101	34	17
ESTM-06-SL	337	169	315	157	202	101	34	17
ESTM-08-SL	360	180	315	157	214	107	22	11
ESTM-10-SL	360	180	315	157	214	107	22	11

Dimensions (mm)

Part Number	d1 (H10)	d2	dk	h	h1	h2	a	m	C1	R1	Max. Pivot Angle
ESTM-05-SL	5.0	2.5	8.9	18.0	10.0	6.5	16.0	10.0	6.0	8.0	17°
ESTM-06-SL	6.0	2.5	8.9	18.0	10.0	6.5	16.0	10.0	6.0	8.0	17°
ESTM-08-SL	8.0	2.5	10.5	19.0	10.0	6.5	18.0	12.0	6.0	9.0	17°
ESTM-10-SL	10.0	2.5	12.4	20.0	10.0	6.5	20.0	14.0	6.0	10.0	17°

igus®



igubal® Flange Bearing

- Maintenance-free, Self-lubricating
- High strength under impact loads
- High tensile strength
- Compensation for alignment errors
- Compensation for edge loads
- Resistant to chemicals
- Lightweight



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QuickSpec: www.igus.com/qs/igubal.asp

igubal® Flange Bearing

Like all igubal® products, they consist of a housing made of igumid G and a spherical balls made of either iglide® L280 or iglide® R for standard parts or with any iglide® material as a special. igubal flange bearing correspond to the dimensional series E and are offered with two or four mounting holes.





Areas of Application

Since igubal® flange bearings are made for maintenance-free use, they are especially suited for applications in which access to the bearing is limited, in moist or wet environments or clean-room environments. Thus, igubal® flange bearings are also found in electric toothbrushes, awnings, conveyor technology, bakery machines and agriculture.

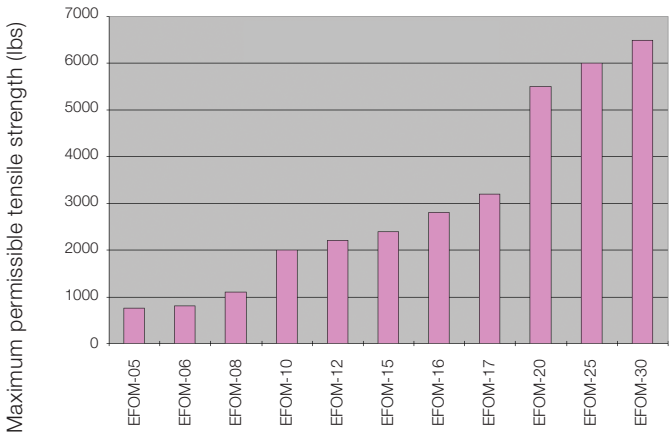
Installation

igubal® flange bearings are designed for mounting with 2 or 4 bolts, depending on the design. The 2-hole types are provided with elongated holes, which allow a problem-free adjustment. An exact positioning of the bearing housing is not necessary, since the spherical ball compensates for alignment errors.

Product Range

igubal® flange bearings with 2 and 4 mounting holes can be obtained in the standard dimensions with IDs of .190" to 1.00" and metric sizes of 5 to 50 mm. Please ask about additional dimensions.

Maximum permissible tensile strength forces



Structure for Part Numbers for igubal® Flange Bearings

The part numbers of igubal® flange bearings are designed according to the following system:

E F O M - 10

Dimensional Series
E = dimensional series E

Design
F = Flange Bearing

Housing
O = 2-hole
S = 4-hole

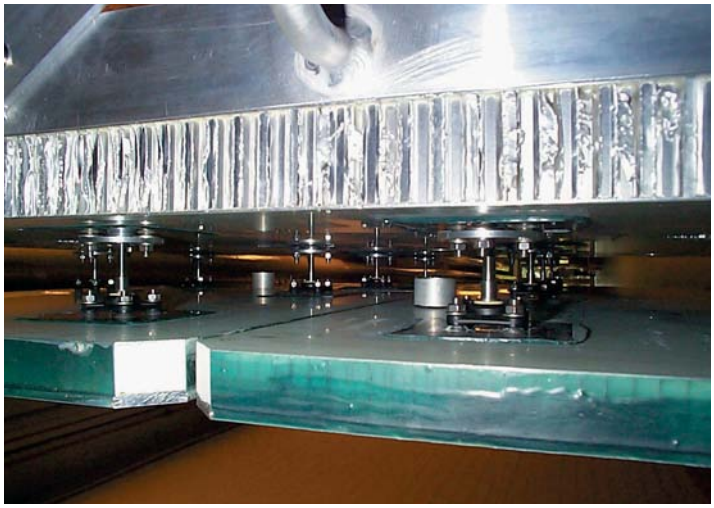
Measuring System
M = metric
I = inches

Nominal dimension of the inner diameter

The example shows a metric 2-hole flange bearing of the dimensional series E with a spherical ball inner diameter of 10 mm.



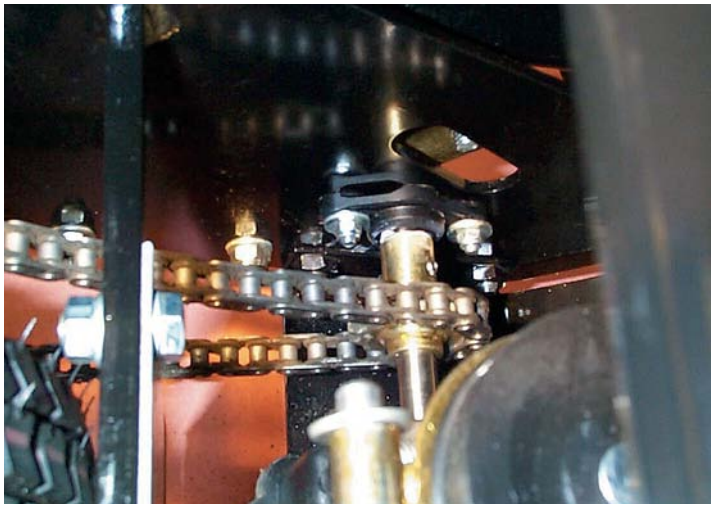
Reflector telescope in La Palma, Spain



igubal® flange bearing in the reflector adjustment of the telescope



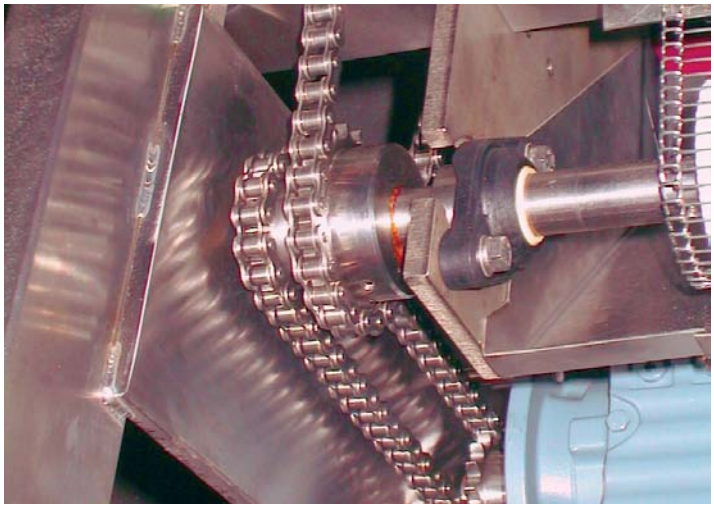
Outdoor cleaning machine



igubal® flange bearing in the drive shaft of the outdoor cleaning machine



Leaching system for bakery products



igubal® flange bearing in the drive of the conveyor belt

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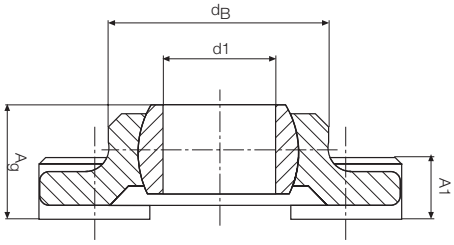
igubal® Flange Bearing, 4 Hole - Inch - EFSI

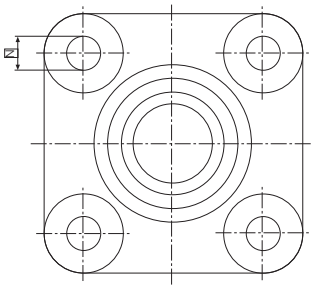


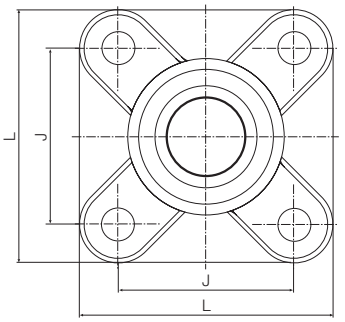
with 4 mounting holes

Special Properties

- housing made of igumid® G
- spherical ball made of highly wear-resistant iglide® L280 and iglide® R
- easy to install
- compensation for alignment errors
- universal corrosion resistance
- lightweight
- maintenance-free, self-lubricating







Dimensions (inch)

Part Number	d1 h10	dB	L Width	J	A1 Height of Plate	Ag Height Total	N Mounting Holes h13	Max. Permisible Load on the Spherical Ball (lbs)	Max. Permissible Tensile Strength Force (lbs)
EFSI-03	.190	.551	.984	.669	.177	.311	.126	45	225
EFSI-04	.250	.551	.984	.669	.177	.343	.126	45	225
EFSI-05	.313	.709	1.299	.866	.217	.413	.169	90	315
EFSI-06	.375	.866	1.496	1.024	.256	.484	.209	112	450
EFSI-07	.437	.984	1.575	1.102	.276	.520	.209	135	562
EFSI-08	.500	.984	1.575	1.102	.276	.520	.209	135	562
EFSI-10	.625	1.260	2.047	1.417	.354	.654	.252	281	719
EFSI-12	.750	1.575	2.559	1.772	.433	.787	.331	427	899
EFSI-16	1.000	1.909	2.913	2.047	.551	.965	.331	585	1259

Part Number	d1 h10	dB	L Width	J	A1 Height of Plate	Ag Height Total	N Mounting Holes h13	Max. Permisible Load on the Spherical Ball (lbs)	Max. Permissible Tensile Strength Force (lbs)
EFSI-03R	.190	.551	.984	.669	.177	.311	.126	45	225
EFSI-04R	.250	.551	.984	.669	.177	.343	.126	45	225
EFSI-05R	.313	.709	1.299	.866	.217	.413	.169	90	315
EFSI-06R	.375	.866	1.496	1.024	.256	.484	.209	112	450
EFSI-07R	.437	.984	1.575	1.102	.276	.520	.209	135	562
EFSI-08R	.500	.984	1.575	1.102	.276	.520	.209	281	562
EFSI-10R	.625	1.260	2.047	1.417	.354	.654	.252	427	719
EFSI-12R	.750	1.575	2.559	1.772	.433	.787	.331	585	899

Spherical ball material options ► Page 35.2

➤ Tolerance Table, Page 1.14



J4VEM:
Clearance-free



JEM: Low
Moisture absorption



REM:
Low Cost/Low Moisture
Available from stock

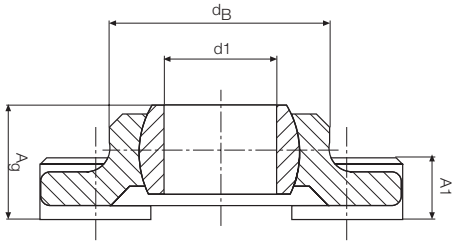
igubal® Flange Bearing, 4 Hole - mm - EFSM

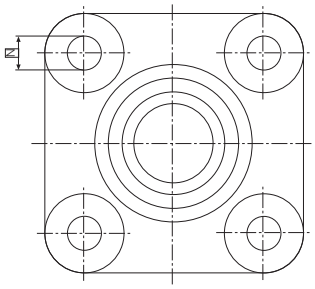


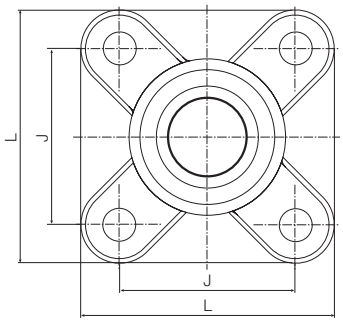
with 4 mounting holes

Special Properties

- housing made of igumid® G
- spherical ball made of highly wear-resistant iglide® L280 and iglide® R
- easy to install
- compensation for alignment errors
- universal corrosion resistance
- lightweight
- maintenance-free, self-lubricating







Dimensions (mm)

Part Number	d1 h10	dB	L Width	J	A1 Height of Plate	Ag Height Total	N Mounting Holes h13	Max. Permisible Load on the Spherical Ball (lbs)	Max. Permissible Tensile Strength Force (lbs)
EFSM-05	5	14.0	25.0	17.0	4.5	8.5	3.2	67	225
EFSM-06	6	14.0	25.0	17.0	4.5	8.5	3.2	67	225
EFSM-08	8	18.0	33.0	22.0	5.5	10.5	4.3	101	315
EFSM-10	10	22.0	38.0	26.0	6.5	12.0	5.3	157	450
EFSM-12	12	25.0	40.0	28.0	7.0	13.0	5.3	191	562
EFSM-15	15	30.0	49.0	34.0	8.5	15.5	6.4	247	674
EFSM-16	16	32.5	52.0	36.0	9.0	16.5	6.4	303	719
EFSM-17	17	35.0	54.0	38.0	10.0	18.0	6.4	360	764
EFSM-20	20	40.0	65.0	45.0	11.0	20.0	8.4	450	899
EFSM-25	25	48.5	74.0	52.0	14.0	25.0	8.4	540	1259
EFSM-30	30	55.0	85.0	60.0	15.0	26.0	10.5	629	1349

➤ Tolerance Table, Page 1.14

Spherical ball material options ► Page 35.2



J4VEM:
Clearance-free



JEM: Low
Moisture absorption



REM:
Low Cost/Low Moisture

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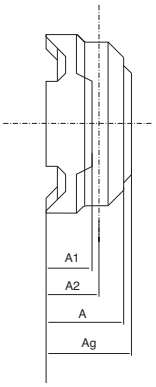
igubal® Flange Bearing, 2 Hole - inch - EFOI

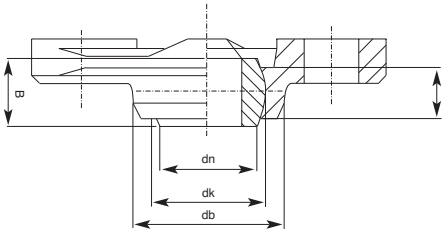


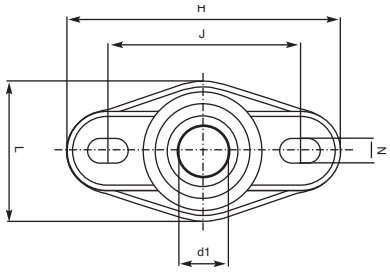
with 2 mounting holes

Special Properties

- Housing made of igumid® G
- Spherical ball made of highly wear-resistant iglide® L280 and iglide® R
- Easy to install
- Compensation for alignment errors
- Universal corrosion resistance
- Lightweight
- Maintenance-free, self-lubricating







Load Data and Dimensions (mm)

Part Number	d1	dn	dk	dB	H	L	J	A1	Ag	A	A2
EFOI-03	.1875	.315	.394	.551	1.331	.630	.945	.177	.312	.303	.217
EFOI-04	.2500	.315	.394	.551	1.331	.630	.945	.177	.342	.303	.217
EFOI-05	.3125	.315	.394	.709	1.740	.866	1.220	.217	.412	.374	.256
EFOI-06	.3750	.315	.394	.866	2.047	1.024	1.417	.256	.483	.433	.295
EFOI-07	.4375	.512	.630	.984	2.232	1.220	1.614	.276	.518	.472	.315
EFOI-08	.5000	.394	.512	.984	2.232	1.220	1.614	.276	.518	.472	.315
EFOI-10	.6250	.512	.630	1.260	2.858	1.496	2.087	.394	.683	.622	.433
EFOI-12	.7500	.590	.710	1.575	3.504	1.850	2.559	.433	.785	.728	.472
EFOI-16	1.0000	.768	.945	1.909	3.976	2.303	2.953	.551	.966	.925	.581

Part Number	N d x l	B	C1	Max. Angle of Pivot	Max. Permissible Load on the Spherical Ball (lbs)	Max. Permissible Tensile Strength Force (lbs)
EFOI-03	0.126 x 0.197	.190	0.173	33°	90	169
EFOI-04	0.126 x 0.197	.250	0.173	27°	112	180
EFOI-05	0.169 x 0.256	.313	0.236	24°	157	247
EFOI-06	0.210 x 0.315	.375	0.276	24°	191	450
EFOI-07	0.210 x 0.315	.406	0.315	21°	247	495
EFOI-08	0.210 x 0.315	.406	0.315	21°	247	495
EFOI-10	0.212 x 0.315	.500	0.374	24°	315	629
EFOI-12	0.331 x 0.492	.625	0.512	17°	405	1236
EFOI-16	0.331 x 0.492	.750	0.669	14°	674	1349

Spherical ball material options ► Page 35.2



J4VEM:
Clearance-free



JEM: Low
Moisture absorption



REM:
Low Cost/Low Moisture
Available from stock

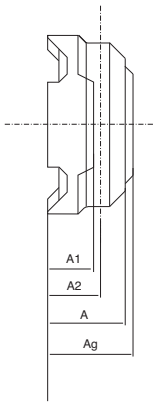
igubal® Flange Bearing, 2 Hole - mm - EFOM

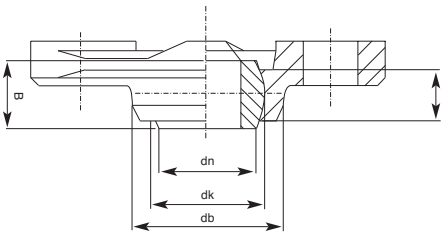


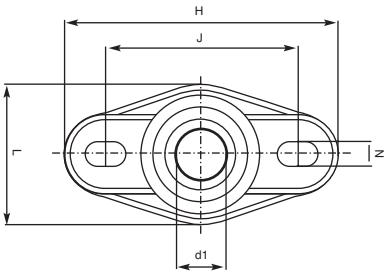
with 2 mounting holes

Special Properties

- Housing made of igumid® G
- Spherical ball made of highly wear-resistant iglide® L280 and iglide® R
- Easy to install
- Compensation for alignment errors
- Universal corrosion resistance
- Lightweight
- Maintenance-free, self-lubricating







Load Data and Dimensions (mm)

Part Number	d1 E10	dn	dk	dB	H	L	J ±0,1	A1	Ag	A	A2
EFOM-05	5	8.00	10.00	14.0	33.8	16.0	24.0	4.5	8.5	7.70	5.50
EFOM-06	6	8.00	10.00	14.0	33.8	16.0	24.0	4.5	8.5	7.70	5.50
EFOM-08	8	10.00	13.00	18.0	44.2	22.0	31.0	5.5	10.5	9.50	6.50
EFOM-10	10	13.00	16.00	22.0	52.0	26.0	36.0	6.5	12.0	11.00	7.50
EFOM-12	12	15.00	18.00	25.0	56.7	31.0	41.0	7.0	13.0	12.00	8.00
EFOM-15	15	18.50	22.00	30.0	68.6	36.0	50.0	8.5	15.5	13.00	8.50
EFOM-16	16	19.50	24.00	32.0	72.6	38.0	53.0	10.0	17.5	15.80	11.00
EFOM-17	17	*	*	35.0	74.6	41.0	55.0	10.0	18.0	*	*
EFOM-20	20	24.00	29.00	40.0	89.0	47.0	65.0	11.0	20.0	18.50	12.00
EFOM-25	25	29.00	35.00	48.5	101.0	58.5	75.0	14.0	25.0	23.50	14.75
EFOM-30	30	34.00	40.00	55.0	118.0	65.0	87.5	15.0	26.0	24.50	15.00

Part Number	N d x l	B	C1	Shaft Min.	Shaft Max.	Max. Angle of Pivot	Max. Permissible Load on the Spherical Ball (lbs)	Max. Permissible Tensile Strength Force (lbs)
EFOM-05	3.2 x 5.0	6.00	4.40	4.970	5.000	33°	56	169
EFOM-06	3.2 x 5.5	6.00	4.40	5.970	6.000	27°	56	180
EFOM-08	4.3 x 6.5	8.00	6.00	7.964	8.000	24°	156	247
EFOM-10	5.3 x 8.0	9.00	7.00	9.964	10.000	24°	191	450
EFOM-12	5.3 x 8.0	10.00	8.00	11.957	12.000	21°	247	495
EFOM-15	6.4 x 10.0	13.00	8.50	14.957	15.000	19°	292	540
EFOM-16	6.4 x 10.1	13.00	9.50	15.957	16.000	24°	314	629
EFOM-17	6.4 x 10.2	*	*	16.957	17.000	20°	359	719
EFOM-20	8.4 x 12.5	16.00	13.00	19.948	20.000	17°	404	1236
EFOM-25	8.4 x 12.6	20.00	17.00	24.948	25.000	14°	674	1349
EFOM-30	10.5 x 16.0	22.00	19.00	29.948	30.000	12°	787	1461

➤ Tolerance Table, Page 1.14

Spherical ball material options ► Page 35.2



J4VEM: Clearance-free



JEM: Low Moisture absorption



REM: Low Cost/Low Moisture

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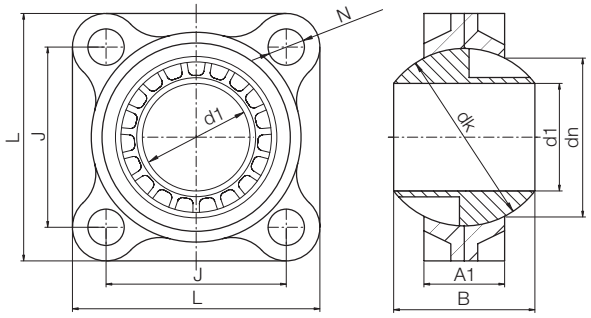
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QuickSpec: www.igus.com/qs/igubal.asp

igubal® Flange Bearing - KFSM-GT



Special Properties

- Preassembled delivery
- Resistant to dirt
- Light weight
- For high static loads
- High stiffness
- Predictable lifetime
- Maintenance-free dry running



Dimensions (mm)

Part No.	d1 (E10)	dn	dk	A1	B	J	L	N	Max. pivot angle
KFSM-GT35	35.0	59.0	66.0	30.0	48.5	66.0	92.0	13.5	24°
KFSM-GT40	40.0	59.0	66.0	30.0	48.5	66.0	92.0	13.5	24°
KFSM-GT45	45.0	72.0	82.0	40.0	60.0	78.0	104.0	13.5	24°
KFSM-GT50	50.0	72.0	82.0	40.0	60.0	78.0	104.0	13.5	24°

Load data

Part No.	Maximum static tensile strength short term (lbs)	Maximum static tensile strength long term (lbs)	Maximum static axial compressive strength short term (lbs)	Maximum static axial compressive strength long term (lbs)
KFSM-GT35	1124.0	562.0	1011.6	505.8
KFSM-GT40	1124.0	562.0	1011.6	505.8
KFSM-GT45	1348.8	674.4	1213.9	607.0
KFSM-GT50	1348.8	674.4	1213.9	607.0

Spherical ball material options ► Page 35.2



J4VEM: Clearance-free



JEM: Low Moisture absorption



REM: Low Cost/Low Moisture

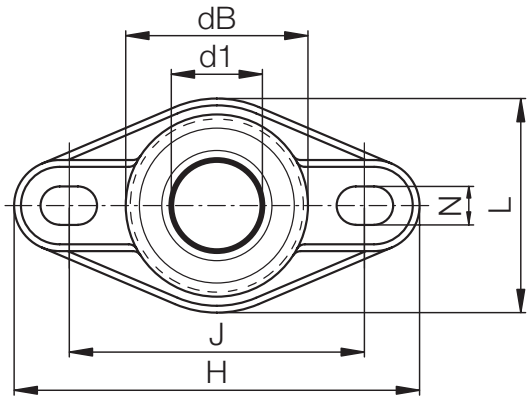
igubal® Flange Bearing - EFOM HT

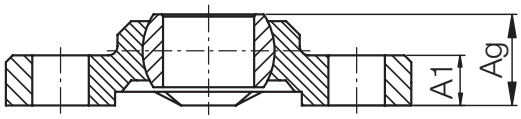


With 2 mounting holes

Special Properties

- Temperatures to 392°F
- iglide® T500 highly wear resistant spherical ball
- Easy to install
- Compensation for alignment errors
- Corrosion resistance
- Light weight
- Maintenance-free, self-lubricating
- Chemical resistant
- Can be used under water





Dimensions (mm)

Part No	d1 E10 ±0.1	dB	H Size	L Width	J Hole Pitch	A_1 Height of Plate	A_g Height Total	N Bore Diameter d x L	Max. Pivot Angle
EFOM-06 HT	6	14,0	33,8	16,0	24,0	4,5	8,5	3,2 x 5,5	27°
EFOM-08 HT	8	18,0	44,2	22,0	31,0	5,5	10,5	4,3 x 6,5	24°
EFOM-10 HT	10	22,0	52,0	26,0	36,0	6,5	12,0	5,3 x 8,0	24°
EFOM-12 HT	12	25,0	56,7	31,0	41,0	7,0	13,0	5,3 x 8,0	21°

Available from stock

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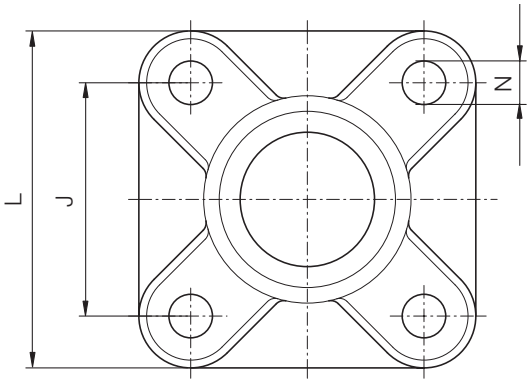
igubal® Flange Bearing - EFSM HT

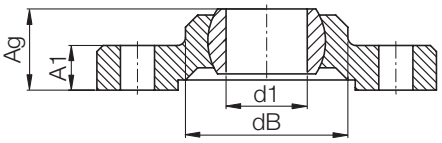


With 4 mounting holes

Special Properties

- Temperatures to 392°F
- iglide® T500 highly wear resistant spherical ball
- Easy to install
- Compensation for alignment errors
- Corrosion resistance
- Light weight
- Maintenance-free, self-lubricating
- Chemical resistant
- Can be used under water





Dimensions (mm)

igubal® – Flange Bearing EFSM HT with 4 Mounting Holes

Part Number	d1 E10	dB	L Width	J Hole Pitch ±0.1	A_1 Height of Plate	A_g Height Total	N Bore Diameter
EFSM-06 HT	6	14.0	25.0	17.0	4.5	8.5	3.2
EFSM-08 HT	8	18.0	33.0	22.0	5.5	10.5	4.3
EFSM-10 HT	10	22.0	38.0	26.0	6.5	12.0	5.3
EFSM-12 HT	12	25.0	40.0	28.0	7.0	13.0	5.3

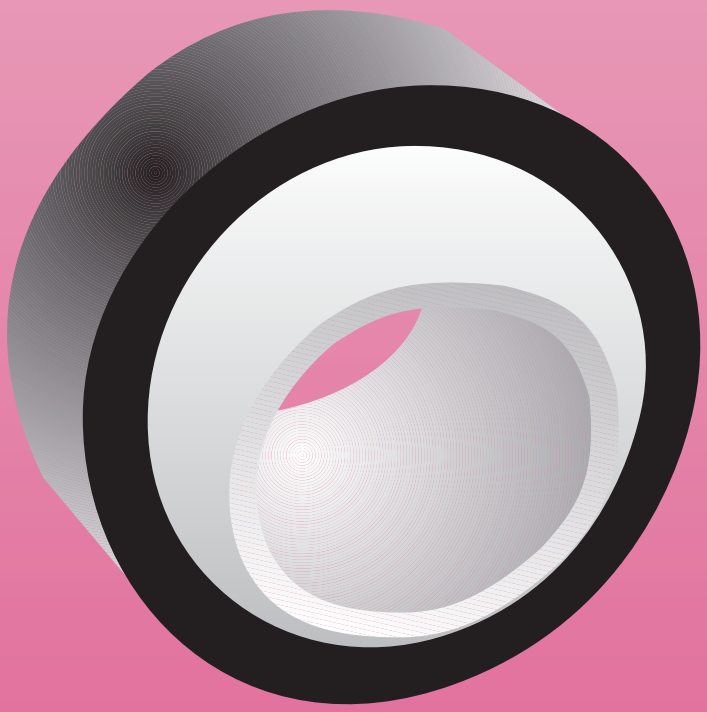
Available from stock

Clearance-free spherical ball option



J4VEM: Clearance-free spherical ball

► Page 34.6



igubal® Pivoting Bearing

- Easy to install
- Extremely cost-effective
- Resistant to chemicals
- Lightweight
- High strength



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igubal® Pivoting Bearing



igubal® Pivoting Bearings

The use of pivoting bearings is usually associated with high weight materials, difficult installation, and high costs. Most of the time, maintenance is still necessary over the long term, and the bearings are only corrosion-resistant in special designs. Often roller bearings or plain bearings malfunction prematurely due to high edge loads, or bearings must be readjusted, reamed, or retrofit in order to compensate for alignment errors.
igubal® pivoting bearings put an end to all of these disadvantages and open up many new possibilities for your engineering design.

igubal® Pivoting Bearings are:

- easy to install
- exceptionally cost-effective
- lightweight
- high strength

Area of Application

Ease of installation makes diverse applications possible for igubal® pivoting bearings. They can be used anywhere the self-adjusting feature offers design advantages or helps to simplify assembly.

Tolerances

Maintenance-free igubal® pivoting bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide plain bearings. Please contact an iglide® technical expert for support.

➤ Tolerance Table, Page 1.14

Installation

igubal® pivoting bearings are pressfit into a recommended housing bore and axially secured. An exact orientation of the bearing housing is not necessary, since the pivoting bearing compensates for alignment errors.

Dimensions

igubal® pivoting bearings are manufactured according to DIN ISO 12240 in the dimensional series K and E.
The product range provides dimensions from .19 to 1.0” and 3 to 30 mm. Please contact us if you need other dimensions.

Structure for the part numbers for igubal® pivoting bearings

The part numbers of igubal® pivoting bearings are designed according to the following system:

K GL M - 08

Dimensional series
K = dimensional series K
E = dimensional series E

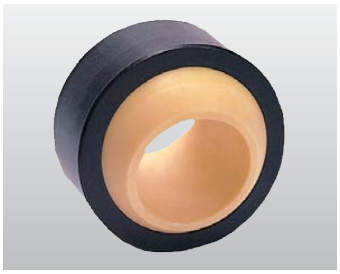
Design
GL = pivoting bearing

Measuring system
M = metric
I = inches

nominal dimensions of the inner diameter

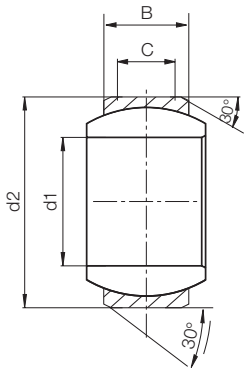
The example shows a metric pivoting bearing of the dimensional series K with a pivoting ball inner diameter of 8 mm.

igubal® Pivoting Bearing - inch - KGLI



Special Properties

- housing made of igumid G
- spherical ball made of highly wear-resistant iglide® L280
- easy to install
- compensation for alignment errors
- universal corrosion resistance
- lightweight
- maintenance-free, self-lubricating



Load Data and Dimensions (inch)

Part No.	d1 E10	d2 Inch	B Inch	C Inch	Maximum Angle of Pivot
KGLI-03	.1900	.5625	.312	.218	34°
KGLI-04	.2500	.6562	.375	.250	30°
KGLI-05	.3125	.7500	.437	.281	29°
KGLI-06	.3750	.8125	.500	.312	25°
KGLI-07	.4375	.9375	.562	.343	25°
KGLI-08	.5000	1.0625	.625	.390	25°
KGLI-10	.6250	1.1875	.750	.500	23°
KGLI-12	.7500	1.4375	.875	.593	23°
KGLI-16	1.0000	2.1250	1.375	1.005	23°

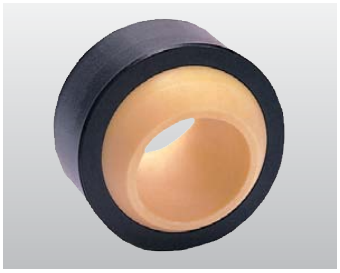
Part No.	Maximum Static Compressive Strength		Maximum Torque for the assembly	Housing Bore		Shaft Size	
	radial lbs	axial lbs	ft lbs	Min	Max.	Min.	Max.
KGLI-03	225	34	3.69	.5625	.5630	.1888	.1900
KGLI-04	337	56	7.37	.6562	.6568	.2485	.2500
KGLI-05	450	79	8.85	.7500	.7509	.3110	.3125
KGLI-06	629	90	14.75	.8125	.8134	.3735	.3750
KGLI-07	843	101	22.13	.9375	.9382	.4358	.4375
KGLI-08	955	112	25.82	1.0625	1.0632	.4983	.5000
KGLI-10	1191	169	29.50	1.1875	1.1882	.6233	.6250
KGLI-12	1911	191	40.57	1.4375	1.4383	.7479	.7500
KGLI-16	3057	562	47.94	2.1250	2.1258	.9988	1.0000

➤ Tolerance Table, Page 1.14
For housing bores (H7)
For shaft sizes (h7)

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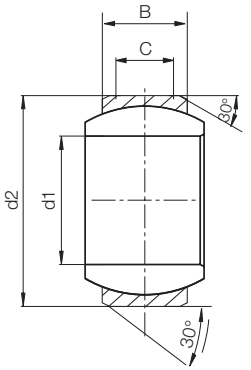
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E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

igubal® Pivoting Bearing - mm - KGLM



Special Properties

- housing made of igumid® G
- standard ball made from iglide® L280, other options are available
- easy to install
- compensation for alignment errors
- universal corrosion resistance
- lightweight
- maintenance-free, self-lubricating

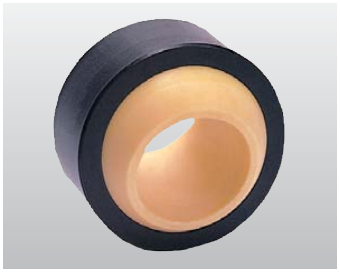


Load Data and Dimensions (mm)

Part No.	Maximum Static Compressive Strength Radial (lbs)	Axial (lbs)	Maximum Torque for the Assembly (ft lbs)	d1 mm E10	d2 mm	B mm	C mm	Maximum Angle of Pivot
KGLM-03	119	34	2.2	3	10	6	4.5	32°
KGLM-05	281	56	3.7	5	13	8	6.0	30°
KGLM-06	393	90	7.4	6	16	9	6.5	29°
KGLM-08	528	180	8.9	8	19	12	9.0	25°
KGLM-10	798	202	14.8	10	22	14	10.5	25°
KGLM-12	944	214	22.1	12	26	16	12.0	25°
KGLM-14	1281	270	25.8	14	28	19	13.5	23°
KGLM-16	1686	292	29.5	16	32	21	15.0	23°
KGLM-18	1910	315	33.2	18	35	23	16.5	23°
KGLM-20	2203	427	40.6	20	40	25	18.0	23°
KGLM-22	2630	584	44.3	22	42	28	20.0	22°
KGLM-25	3057	674	47.9	25	47	31	22.0	22°
KGLM-30	4496	731	51.6	30	55	37	25.0	22°

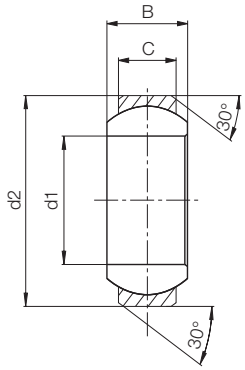
➤ Tolerance Table, Page 1.14
For housing bores (H7)
For shaft sizes (h7)

igubal® Pivoting Bearing - mm - EGLM



Special Properties

- housing made of igumid G
- standard ball made from iglide® L280, other options are available
- easy to install
- compensation for alignment errors
- universal corrosion resistance
- lightweight
- maintenance-free, self-lubricating



Load Data and Dimensions (mm)

Part No.	Maximum Static Compression Radial (lbs)	Axial (lbs)	Maximum Torque the Assembly (ft lbs)	d1 mm E10	d2 mm	B mm	C mm	Maximum Angle of Pivot
EGLM-04	135	11	1.5	4	12	5	3.0	37°
EGLM-05	213	22	1.5	5	14	6	4.0	33°
EGLM-06	236	28	1.8	6	14	6	4.0	27°
EGLM-08	303	39	5.2	8	16	8	5.0	24°
EGLM-10	449	67	10.3	10	19	9	6.0	24°
EGLM-12	505	101	18.4	12	22	10	7.0	21°
EGLM-15	775	112	22.1	15	26	12	9.0	21°
EGLM-16	876	135	23.6	16	28	13	9.5	21°
EGLM-17	921	157	25.8	17	30	14	10.0	21°
EGLM-20	1202	269	29.5	20	35	16	12.0	18°
EGLM-25	1843	393	40.6	25	42	20	16.0	16°
EGLM-30	2472	562	51.6	30	47	22	18.0	13°

➤ Tolerance Table, Page 1.14
For housing bores (H7)
For shaft sizes (h7)

Spherical ball material options ► Page 35.2


RKM:
Low Cost/Low Moisture


XKM: High temperatures


JKM: Low moisture absorption


standard spherical ball with metal sleeve

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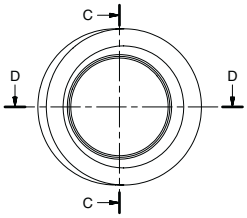
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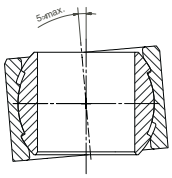
igubal® Pivoting Bearing - KGLM SL - Slimline

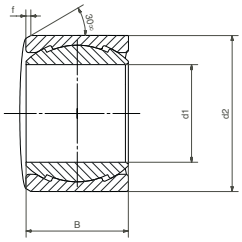


Special Properties

- extremely narrow installation space
- load data compares with KGLM
- angle compensation to 5°
- maintenance-free
- corrosion-free
- low weight







Load Data

Part Number	Max. static compressive strength (short term)		Max. static compressive strength (long term)	
	radial (lbs)	axial (lbs)	radial (lbs)	axial (lbs)
KGLM-08 SL	607	101	304	51
KGLM-10 SL	899	169	450	84
KGLM-12 SL	1012	169	506	84
KGLM-16 SL	1461	112	731	56

Dimensions (mm)

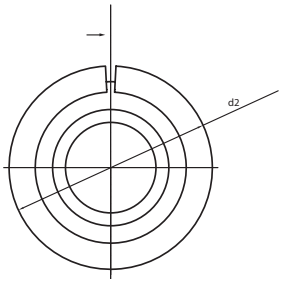
Part Number	d1 E10 (mm)	d2 (mm)	B (mm)	f (mm)	Max. Pivot Angle
KGLM-08 SL	8	14	9.0	0.5	5°
KGLM-10 SL	10	16	10.5	0.5	5°
KGLM-12 SL	12	18	12.0	0.5	5°
KGLM-16 SL	16	22	15.0	0.5	5°

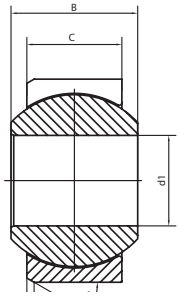
Available from stock



Special Properties

- standard ball made from iglide® L280, other options are available
- easy to fit
- low Cost





Load Data

Part Number	Max. static compressive strength (short term)		Max. static compressive strength (long term)	
	radial (lbs)	axial (lbs)	radial (lbs)	axial (lbs)
KGLM-10 LC	899	315	450	157
KGLM-12 LC	1214	337	607	169
KGLM-16 LC	1798	674	899	337
KGLM-20 LC	2248	1124	1124	562
KGLM-25 LC	3057	1686	1529	843
KGLM-30 LC	4496	2023	2248	1012

Dimensions (mm)

Part Number	d1 E10 (mm)	d2 (mm)	B (mm)	C (mm)	f (mm)	Max. Pivot Angle
KGLM-10 LC	10	22.0	14	10.5	0.8	25°
KGLM-12 LC	12	26.0	16	12	0.8	30°
KGLM-16 LC	16	32.0	21	15	0.8	30°
KGLM-20 LC	20	40.0	25	18	0.8	30°
KGLM-25 LC	25	47.0	31	22	0.8	30°
KGLM-30 LC	30	55.0	37	25	1.0	22°

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures



JKM: Low moisture absorption



standard spherical ball with metal sleeve

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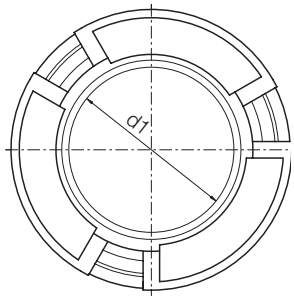
igubal® Pivoting Bearing - ECLM - Clip

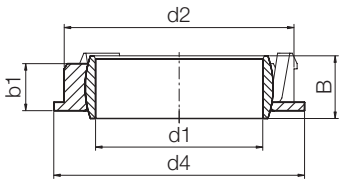


Interesting for many types of sheet metal applications

Special Properties

- standard ball made from iglide® J, other options are available
- Extremely easy installation - just clip into sheet metal
- No additional axial retainer required
- Extremely low installation space; space-saving thin wall design
- Maintenance-free iglide® spherical balls
- Diameters 6 to 16 mm





Dimensions (mm)

Part No.	Ø Ball Inside mm d1	Ball Width mm B	Ø Ball Outside mm dk	Ø Outside mm d2	Ø Flange mm d4	Thickness Housing mm b1	Pivoting Angle	Snap Groove Inner S1	Snap Groove Outer S2
ECLM-05-02	5	6	12.40	12	13	4.3	25°		
ECLM-06-02	6	6	12.40	16	17	4.3	18°		
ECLM-08-02	8	6	12.40	16	17	4.3	16°		
ECLM-10-03	10	6	12.40	16	17	4.5	12°	3.2	5.5
ECLM-12-03	12	6	14.20	18	19	4.5	12°	3.2	5.5
ECLM-16-03	16	6	18.00	22	24	4.5	12°	3.2	5.5

Part No.	Max. Static Short Term Force		Max. Static Long Term Force		Max. Cyclic Force	
	Maximum Radial Pressure lbs	Maximum Axial Pressure lbs	Maximum Radial Pressure lbs	Maximum Axial Pressure lbs	Maximum Radial Pressure lbs	Maximum Axial Pressure lbs
ECLM-05-02	157	5.62	79	2.70	47	1.69
ECLM-06-02	157	5.62	79	2.70	47	1.69
ECLM-08-02	225	5.62	112	2.70	67	1.69
ECLM-10-03	315	6.74	157	1.57	94	2.02
ECLM-12-03	405	7.87	202	2.25	121	2.25
ECLM-16-03	629	10.11	315	4.50	189	3.03

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture
Available from stock



XKM: High temperatures



JKM: Low moisture absorption

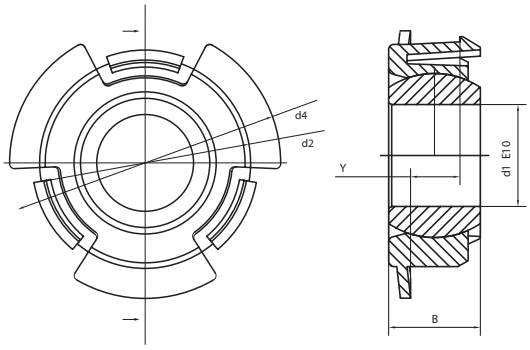


standard spherical ball with metal sleeve



Special Properties

- standard ball made from iglide® L280, other options are available
- High axial and radial loads
- Easily clips into sheet metal
- No additional axial fastening necessary
- Extremely compact design and installation
- Adjustment of axial and radial clearance by pre-loading
- Maintenance-free iglide® spherical balls
- For sheet thickness 5 mm



Load Data

Part Number	Maximum static Compression Force (Short term)		Maximum static long term Compression (Long term)	
	radial (N)	axial (N)	radial (N)	axial (N)
ECLM-10-05 HD	2500	150	1250	75

Dimensions [mm]

Part Number	Ø Spherical Ball d1 E10	Spherical Ball Width B	Ø outside d2 ±0.15	Ø Collar d4	Sheet-thickness Y ±0.1	Pivot Angle α
ECLM-10-05 HD	10,0	9,0	22,0	28	5,0	24°

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures



JKM: Low moisture absorption



standard spherical ball with metal sleeve

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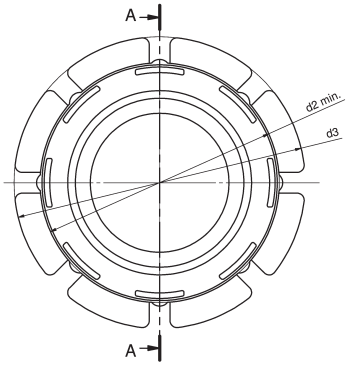
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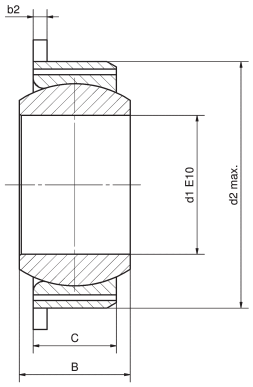
igubal® Pivoting Bearing - EGFM - Clip



Special Properties

- standard ball made from iglide® L280, other options are available
- maintenance-free, dry-running
- easy to fit
- can compensate for a housing tolerance of ±0.2 mm





Dimensions (mm)

Part No.	d1 (mm)	d2 min. (mm)	d2 max. (mm)	d3 (mm)	C (mm)	B (mm)	b2 (mm)	Housing min.	Housing max.	Max. pivoting angle
EGFM-08 T SL	8 (H10)	15.8	16.5	18	5.0	6	1.1	15.8	16.2	11°
EGFM-16 T	16 (E10)	29.8	30.6	35	9.5	13	1.5	29.8	30.2	21°
EGFM-20 T	20 (E10)	34.8	35.6	42	12.0	16	2.0	34.8	35.2	18°
EGFM-25 T	25 (E10)	41.8	42.6	50	16.0	20	2.0	41.8	42.2	16°
EGFM-30 T	30 (E10)	46.8	47.6	55	18.0	22	2.0	46.8	47.2	13°

Load data

Part Number	Maximum static Compression Force (Short term) radial (lbs)	axial (lbs)	Maximum static Compression Force (Long term) radial (lbs)	axial (lbs)
EGFM-08 T SL	247.3	33.7	123.6	16.8
EGFM-10 T	427.1	49.5	213.6	24.7
EGFM-12 T	562.0	60.7	281.0	30.4
EGFM-16 T	1348.9	134.9	674.4	67.4
EGFM-20 T	2023.3	179.8	1011.6	89.9
EGFM-25 T	3147.3	629.5	1573.7	314.7
EGFM-30 T	3821.8	674.4	1910.9	337.2

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures



JKM: Low moisture absorption

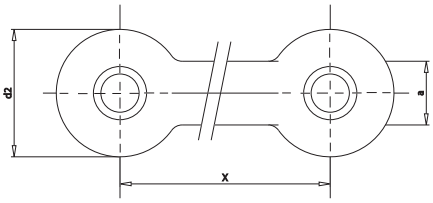


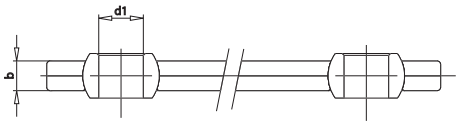
standard spherical ball with metal sleeve



Special Properties

- standard ball made from iglide® L280, other options are available
- maintenance-free, self-lubricating
- mechanical joining link between 2 components
- self-aligning to compensate for angular errors
- corrosion-resistant
- consistant movements
- special lengths often possible, please contact igus®





Structure for the part numbers for igubal® Double Joint bearings

The part numbers of igubal® double joint bearings are designed according to the following system:

E GZ M - 05 - 50

Dimensional series
E = dimensional series E

Design
GZ = double joint

Measuring system
M = metric

Nominal dimension of the inside diameter
d1

Distance between the spherical balls (on center)
X

Part No.	Maximum Static Tensile Strength		Maximum Static Axial Compressive Strength		d1	d2	X	b	a
	Short Term	Long Term	Short Term	Long Term	mm	mm	mm	mm	mm
	lbs	lbs	lbs	lbs	E10				
EGZM-04-25	247	124	292	146	04	20	25	4	10
EGZM-04-50	247	124	169	84	04	20	50	4	10
EGZM-04-75	247	124	112	56	04	20	75	4	10
EGZM-05-25	247	124	292	146	05	20	25	4	10
EGZM-05-50	247	124	169	84	05	20	50	4	10
EGZM-05-75	247	124	112	56	05	20	75	4	10
EGZM-06-25	247	124	292	146	06	20	25	4	10
EGZM-06-50	247	124	169	84	06	20	50	4	10
EGZM-06-75	247	124	112	56	06	20	75	4	10
EGZM-08-60	674	337	787	393	08	30	60	7	15
EGZM-08-100	674	337	427	214	08	30	100	7	15
EGZM-10-60	562	281	787	393	10	30	60	7	15
EGZM-10-100	562	281	427	214	10	30	100	7	15
EGZM-12-60	450	225	787	393	12	30	60	7	15
EGZM-12-100	450	225	427	214	12	30	100	7	15

➤ Tolerance Table, Page 1.14

Spherical ball material options ► Page 35.2



RKM:
Low Cost/Low Moisture



XKM: High temperatures



JKM: Low moisture absorption



standard spherical ball with metal sleeve

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Fax 1-401-438-7680

Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

igubal® Pivoting Bearing - Custom

Custom Solutions

- Custom-made igubal® spherical bearings starting from medium batch sizes
- Short delivery times
- Low-cost production
- We can manufacture spherical balls in different iglide® materials
- Maintenance-free



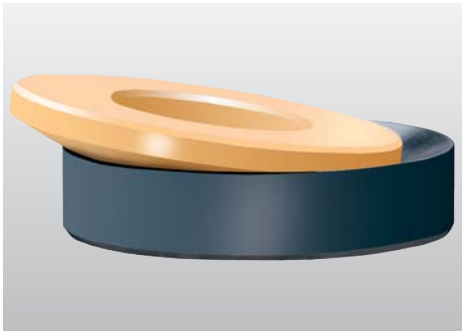


igubal® Spherical Thrust

- Easy to install
- Compensation for misalignment
- Compensation for edge loads
- Very good friction and wear properties



igubal® Spherical Thrust Bearing



The self-adjusting igubal® spherical thrust bearings are very easy to install and help to compensate for alignment errors and prevent edge loads.
The housing pad is made of the impact-resistant, thermoplastic composite material igumid G. The spherical disk is made to the same standard as iglide® L280 plain bearings. This combination produces especially good friction and wear properties.

Loads

The loading capacity of igubal® spherical thrust bearings is very high for standard ambient temperatures. For high continuous loads and high temperatures, the loading capacity of the thrust bearings should be tested to your application requirements in an experiment that duplicates the application.

Coefficients of Friction and Speeds

Taking into account the radial load, maximum surface speeds up to 98 fpm rotating are possible.

Installation

The housing pad is installed so that it is countersunk and secured. The spherical washer is loosely fitted in the socket and is held in place by the shaft that is placed into the bearing.

Product Range

igubal® spherical thrust bearings are provided as standards in dimensions from 5 to 20 mm. Please contact us if you need other dimensions

Structure for part numbers for igubal® spherical thrust bearings

The part numbers of igubal® spherical thrust bearings are designed according to the following system:

SA M - 16

Design
SA = Spherical thrust bearing

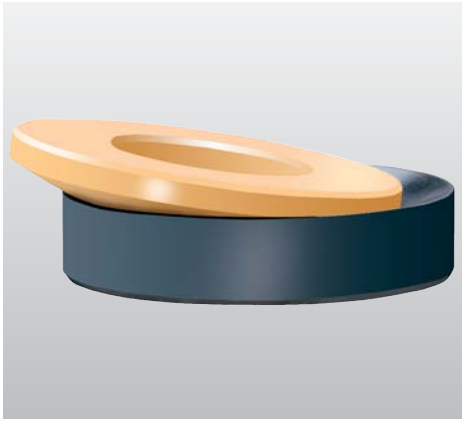
Measuring System
M = metric

Nominal dimension of the inner diameter

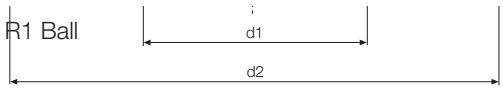
The example shows a spherical thrust bearing with metric dimensions and an inner diameter of 16mm.

igubal® Spherical Thrust Bearing
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Internet: http://www.igus.com
E-Mail: sales@igus.com
QuickSpec: www.igus.com/qs/igubal.asp

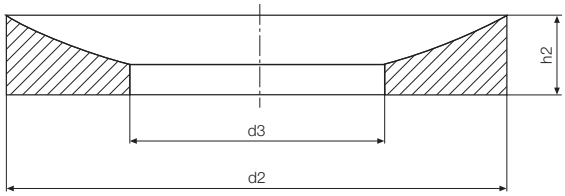
igubal® Spherical Thrust Bearing - mm - SAM



Spherical Disk



Ball Socket



Load Data

Part No.	Maximum Static Axial Tensile Strength Short-term (N)	Maximum Static Axial Tensile Strength Long-term (N)
SAM-05	899	449
SAM-06	1124	562
SAM-08	1798	899
SAM-10	2248	1124
SAM-12	2697	1348
SAM-16	3821	1910
SAM-20	4945	2492

Dimensions (mm)

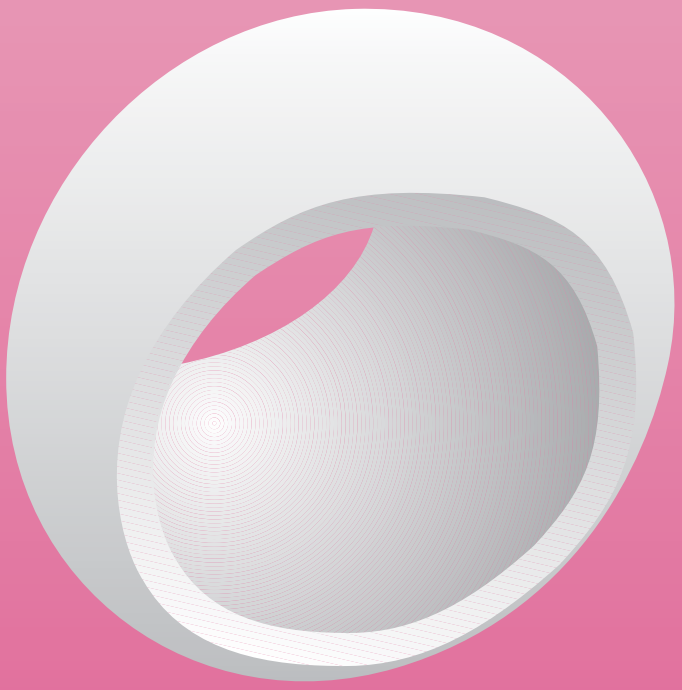
Part No.	d1 Ball Socket DIN 7168	d3 Spherical Disk DIN 7168	d2	h1 Ball Socket	h2 Spherical Disk	H Total Height	R1 Radius	Compensation Angle	Total-Weight (g)
SAM-05	7.0	5.2	15.0	3.0	3.5	4.7	15.0	3°	0.9
SAM-06	7.5	6.2	16.0	3.0	4.0	5.7	16.0	3°	1.1
SAM-08	10.0	8.2	20.0	4.0	5.0	6.4	20.0	2°	2.2
SAM-10	12.0	10.2	24.0	4.5	5.5	7.3	24.0	2°	3.4
SAM-12	14.5	12.2	30.0	5.0	6.0	7.9	32.0	2°	5.9
SAM-16	19.0	16.5	36.0	5.5	6.5	8.5	40.0	2°	8.5
SAM-20	23.0	20.2	44.0	6.0	7.0	8.4	45.0	2°	13.1

Available from stock

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Telephone 1-888-803-1895
Fax 1-401-438-7680





igubal® Spherical Balls

- Maintenance-free, self-lubricating
- Corrosion-resistant
- High compressive strength
- High elasticity
- Lightweight



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igubal® Spherical Balls



Every single iglide® material has its own special properties, which determines the suitability for your special applications and requirements.
Today, we offer you spherical bearings from iglide® materials L280 (standard), J, J4, R, UW and T500. You can find detailed information about every material in the catalog chapters, starting at page 2.1.

Special Properties:

- Maintenance-free, self-lubricating
- Suitable for rotating, oscillating and linear movements
- Light weight

Tolerances

The maintenance-free igubal® spherical bearings have an inside diameter tolerance of E10. The shaft should be tolerated h6 to h9.

Structure for Part Numbers of igubal® Spherical Bearings

The part numbers of igubal® Spherical bearings are designed according to the following system:

W E M - 12 - 10

Design
Spherical Bearing material
W = iglide® L280
R = iglide® R
X = iglide® T500
J = iglide® J
J4 = iglide® J4
UW = iglide® UW

Dimensonal series
K = K series
E = E series

Measuring System
M = metric
I = Inch

Nominal inside diameter

Width

Housing Bore Recommendations

METRIC

Nominal Size	Min.	Max.
8	16.000	16.018
10	19.000	19.021
12	22.000	22.021
16	26.000	26.021
20	32.000	32.025
25	40.000	40.025
30	47.000	47.025
40	62.000	62.030
50	75.000	75.030

Housing Bore Recommendations

INCH

Nominal Size	Min.	Max.
1/4	.5000	.5007
3/8	.6250	.6257
1/2	.8750	.8758
5/8	1.1250	1.1258
3/4	1.250	1.251
1	1.5625	1.563
1-1/4	2.000	2.001
1-1/2	2.3750	2.376
2	3.000	3.001

Spherical bearings – Material data

iglide® L280 (standard) –
extreme wear resistance
➤Chapter 7

iglide® R
low cost
low friction values
➤Chapter 3

iglide® T500
for high temperatures
resistant to chemicals
➤Chapter 12

iglide® J
low friction values
moisture absorption
➤Chapter 4

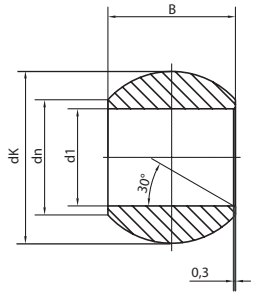
iglide® J4
➤ xx.x

iglide® UW
for under water applications
➤ xx.x

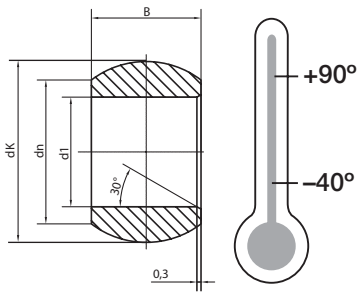
igubal® Spherical Balls - WKI, WEI

Standard – iglide® L280; extreme wear resistance









Dimensions (inch)

igubal® Spherical Balls WKI

Part No.	d1 E10	dn	dK	B
WKI-03	.1900	.307	.438	.312
WKI-04	.2500	.354	.516	.375
WKI-05	.3125	.447	.625	.437
WKI-06	.3750	.504	.718	.500
WKI-07	.4375	.601	.828	.562
WKI-08	.5000	.700	.938	.625
WKI-10	.6250	.838	1.125	.750
WKI-12	.7500	.978	1.312	.875
WKI-16	1.0000	1.269	1.750	1.375

Dimensions (inch)

igubal® Spherical Balls WEI

Part No.	d1 E10	dn	dK	B
WEI-03	.1900	.354	.402	.1900
WEI-04	.2500	.314	.402	.2500
WEI-05	.3125	.415	.520	.3125
WEI-06	.3750	.506	.630	.3750
WEI-07	.4375	.581	.709	.4063
WEI-08	.5000	.581	.709	.4063
WEI-10	.6250	.802	.945	.5000
WEI-12	.7500	.951	1.138	.6250
WEI-16	1.0000	1.180	1.398	.7500

Dimensions (mm)

igubal® Spherical Balls WKM

Part No.	d1 E10	dn	dK	B
WKM-02-04	2.00	3.90	5.20	4.00
WKM-03-06	3.00	5.10	7.90	6.00
WKM-05-08	5.00	7.70	11.10	8.00
WKM-06-09	6.00	8.90	12.70	9.00
WKM-08-12	8.00	10.30	15.80	12.00
WKM-10-14	10.00	12.90	19.00	14.00
WKM-12-16	12.00	15.40	22.20	16.00
WKM-14-19	14.00	16.80	25.40	19.00
WKM-16-21	16.00	19.30	28.50	21.00
WKM-18-23	18.00	21.80	31.70	23.00
WKM-20-25	20.00	24.30	34.90	25.00
WKM-22-28	22.00	25.80	38.10	28.00
WKM-25-31	25.00	29.50	42.80	31.00
WKM-30-37	30.00	34.80	51.00	37.00

Dimensions (mm)

igubal® Spherical Balls WEM

Part No.	d1 E10	dn	dK	B
WEM-04-05	4.00	6.25	8.25	5.00
WEM-05-06	5.00	8.00	10.20	6.00
WEM-06-06	6.00	8.00	10.20	6.00
WEM-08-08	8.00	10.00	13.20	8.00
WEM-10-09	10.00	13.00	16.00	9.00
WEM-12-10	12.00	15.00	18.00	10.00
WEM-15-12	15.00	18.00	22.00	12.00
WEM-17-14	17.00	20.00	25.10	14.00
WEM-20-16	20.00	24.00	28.90	16.00
WEM-25-20	25.00	29.00	35.50	20.00
WEM-30-22	30.00	34.00	40.90	22.00

Available from stock

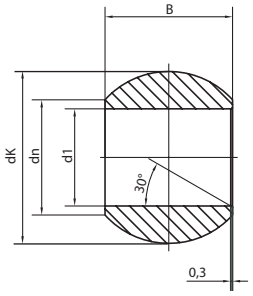
➤ Tolerance Table, Page 1.14

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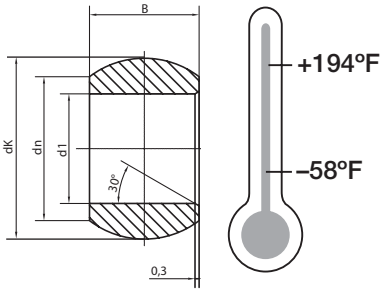
igubal® Spherical Balls - REI, REM, RKM

Low Cost – iglide® R, low friction values, low cost, low moisture absorption









Dimensions (Inch)

igubal® Spherical Bearings REI

Part Number	d1 E10	dn	dK	B
REI-03	.1900	.354	.402	.1900
REI-04	.2500	.314	.402	.2500
REI-05	.3125	.415	.520	.3125
REI-06	.3750	.506	.630	.3750
REI-07	.4275	.581	.709	.4063
REI-08	.5000	.581	.709	.4063
REI-10	.6250	.802	.945	.5000
REI-12	.7500	.951	1.138	.6250
REI-16	1.0000	1.180	1.138	.7500

Dimensions (mm)

igubal® Spherical Bearings REM

Part Number	d1 E10	dn	dK	B
REM-05-06	5.00	8.00	10.20	6.00
REM-06-06	6.00	8.00	10.20	6.00
REM-08-08	8.00	10.00	13.20	8.00
REM-10-09	10.00	13.00	16.00	9.00
REM-12-10	12.00	15.00	18.00	10.00

Dimensions (mm)

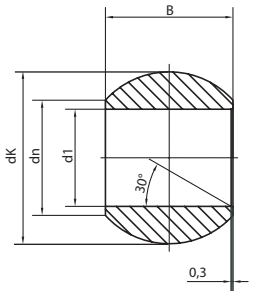
igubal® Spherical Bearings RKM

Part Number	d1 E10	dn	dK	B
RKM-10-14	10.00	12.90	19.00	14.00

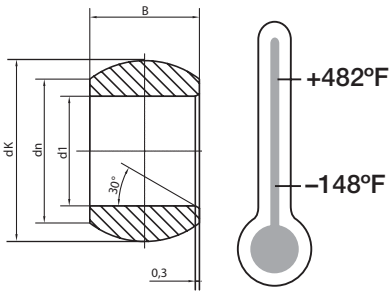
igubal® Spherical Balls - XKM, XEM

High Temperatures – iglide® T500, resistant to chemicals, high temperatures









Dimensions (mm)

igubal® Spherical Bearings XKM

Part Number	d1 E10	dn	dK	B
XKM-10-04	10.00	12.90	19.00	14.00

Available for delivery

➤ Tolerance Table, Page 1.14

Dimensions (mm)

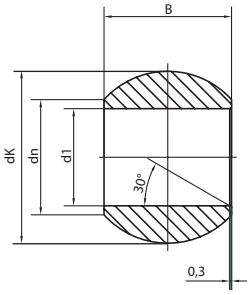
igubal® Spherical Bearings XEM

Part Number	d1 E10	dn	dK	B
XEM-06-06	6.00	8.00	10.20	6.00
XEM-08-08	8.00	10.00	13.20	8.00
XEM-10-09	10.00	13.00	16.00	9.00
XEM-12-10	12.00	15.00	18.00	10.00

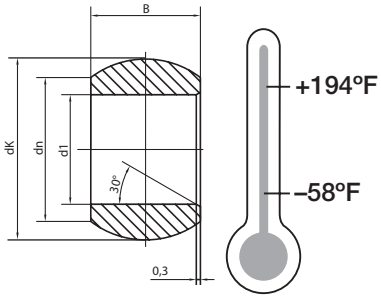
igubal® Spherical Balls - JKM, JEM

Low moisture absorption – iglide® J; low friction values









Dimensions (mm)

igubal® Spherical Bearings JKM

Part Number	d1 E10	dn	dK	B
JKM-10-04	10.00	12.90	19.00	14.00

Dimensions (mm)

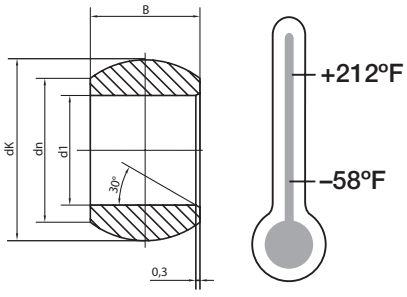
igubal® Spherical Bearings JEM

Part Number	d1 E10	dn	dK	B
JEM-04-05	4.00	6.25	8.25	5.00
JEM-05-06	5.00	8.00	10.20	6.00
JEM-06-06	6.00	8.00	10.20	6.00
JEM-08-08	8.00	10.00	13.20	8.00
JEM-10-09	10.00	13.00	16.00	9.00
JEM-12-10	12.00	15.00	18.00	10.00
JEM-15-12	15.00	18.00	22.00	12.00
JEM-16-13	16.00	19.50	24.00	13.00
JEM-17-14	17.00	20.00	25.10	14.00
JEM-20-16	20.00	24.00	28.90	16.00
JEM-25-20	25.00	29.00	35.50	20.00
JEM-30-22	30.00	34.00	40.90	22.00

igubal® Spherical Balls - UWEM

Under water applications – iglide® UW





Dimensions (mm)

igubal® Spherical Bearings UWEM

Part Number	d1 E10	dn	dK	B
UWEM-16-13	16.00	19.50	24.00	13.00
UWEM-17-14	17.00	20.00	25.10	14.00
UWEM-25-20	25.00	29.00	35.50	20.00
UWEM-30-22	30.00	34.00	40.90	22.00

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Specs/CAD/RFQ: www.igus.com/igubal.asp
RoHS info: www.igus.com/RoHS.asp

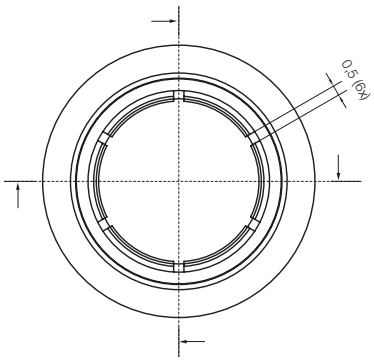
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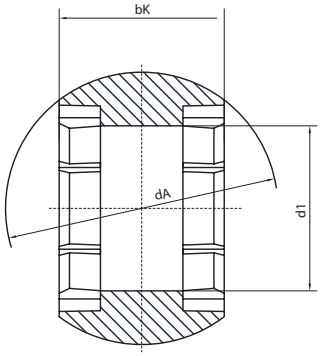
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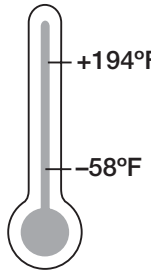
igubal® Spherical Balls -J4VEM

Low moisture absorption – iglide® J4; clearance-free









5 Sizes available: Ø 8. 10. 12. 16. 20 mm
combinable with:

igubal® Rod End Bearing	EA(L)RM	➤ Page 28.16
igubal® Rod End Bearing	EB(L)RM	➤ Page 28.18
igubal® Pillow Block Bearing	ESTM	➤ Page 30.7
igubal® Flange Bearing	EFOM	➤ Page 31.7
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Special Properties

- Can be combined with all housings from design range E
- Sizes 8 to 20 mm
- Pre-loaded
- Totally free from clearance. even in unloaded state
- Material: iglide® J4

Dimensions (mm)

Clearance-free Spherical Bearing

Part Number	d1 E10	dA	bK
J4VEM-08-08	8	13.2	8
J4VEM-10-09	10	16.0	9
J4VEM-12-10	12	18.0	10
J4VEM-16-13	16	24.0	13
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