KOP-FLEX® KD® DISC Couplings

KOP-FLEX KD Series of flexible shaft couplings provide reliable transmission of mechanical power from driving to driven machine where a low-maintenance, non-lubricated coupling is required.

KD® disc couplings are specifically designed to accommodate general purpose drive system applications such as centrifugal pumps, compressors, generators, cooling towers, machine tools, printing and pulp and paper machines.

KD couplings transmit torque and provide for both angular and axial misalignment between shafts with a coupling comprised of shaft mounted hubs connected through flexible disc packs with spacer or sleeve assemblies.

All KD couplings use stainless steel discs as flexible members, providing high strength and good corrosion resistance. Each disc pack withstands up to 1/2° continuous angular misalignment and its streamline design insures that the reaction load on equipment bearings is minimized. These disc pack couplings are inherently self-centering; additional provision for limited end float is not required.

Most disc packs are unitized and, along with self-locking nuts, they greatly reduce the number of loose parts, thus simplifying installation and replacement.

KD® disc couplings are now available in an expanded range of sizes and styles suitable for common installations from KOP-FLEX. Or if you need something special, we can design a coupling to meet your specific requirements.

KD®

Disc Couplings
Size 103 through 905

Non-Lubricated for Simplified Maintenance

Higher Torque Ratings, Similar to Gear Couplings

Excellent Balance Characteristics

Index:

	Page
Selection Procedure	104
Disc Pack Descriptions	104
Service Factors	106
Dynamic Balancing Guide	107
KD1 Close Coupled	108, 109
KD10 Close Coupled	110, 111
KD11 Close Coupled	112, 113
KD2 Spacer Coupling	114, 115
KD20 Spacer Coupling	116, 117
KD21 Spacer Coupling	118, 119
KD22 Spacer Coupling	120, 121
KD33 Cooling Tower Coupling	122

Selection Procedure

1. Coupling Style:
Select the appropriate KD coupling style for your application from the Product Overview & Index.

2. Coupling Size:
Step 1: Determine the proper service factor from page 106.

Step 2: Calculate the required kW/RPM, using the kW rating of the drive and the coupling speed (RPM) as shown below:

kW/RPM x SERVICE FACTOR = kW/RPM

Step 3: Select the coupling size having a rating sufficient to handle the required HP/100 RPM at the appropriate service factor.

Step 4: Verify that the maximum bore of the coupling selected is equal to or larger than either of the equipment shafts.

Step 5: Check the overall dimensions to ensure coupling will not interfere with the coupling guard, piping, or the equipment housings and that it will fit the required shaft separation.

3. Check Balance Requirements
Consult the Dynamic Balancing Guide on page 107 to help determine if balancing is required. Verify that the maximum operating speed does not exceed the maximum speed rating of the coupling.

The maximum speed rating does not consider lateral critical speed considerations for floating shaft applications.

4. Specify Shaft Separation
Specify the required shaft separation using standard length, if possible. Verify the actual shaft separation for a replacement application.

Note: Care must be exercised in proper selection of any shaft coupling. The Users must assure themselves that the design of the shaft to coupling hub connection is adequate for the duty intended.

Disc Pack Data

MT disc pack **[Medium Torque]**
unitized, 3 bolt disc with “prestretch” bushings that get pressed into the flanges, uses standard fasteners.
KD1, 2

HT disc pack **[High Torque]**
unitized, 3, 4 or 5 bolt discs, thicker for high torque, body fit bolts.
KD11, 20, 21, 22, 4, 41, 42

HS disc pack **[High Torque - Semi-unitized]**
same as HT but semi-unitized so that the discs can be dropped out between close-coupled hubs.
KD10

CT disc pack **[Cooling Tower]**
unitized, 3 bolt disc for cooling tower couplings, stainless steel components with body-fit bolts.
KD33

HM disc pack **[High Torque - Marine]**
same as HT but with coated discs, **for marine applications - DNV approved.**

LT disc pack **[Low Torque - Light Duty]**
non-unitized, most economical, body fit bolts.
KD5, 50, 51

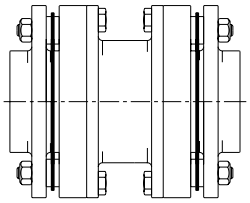
CLOSE COUPLED

KD1 with MT Disc Packs — Page 108, 109

Size Range 103 to 453
Bore Range 13 mm - 140 mm
Overview Unitized Disc Pack replaced without moving connected machines
Medium Duty Applications

KD10 with HS Disc Packs — 110, 111

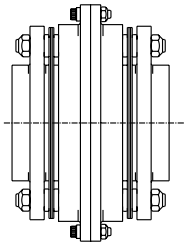
Size Range 103 to 905
Bore Range 13 mm - 292 mm
Overview Unitized Disc Pack replaced without moving connected machines
Heavy Duty Applications
Ratings Similar to Gear Couplings



KD1 & KD10

KD11 with HT Disc Packs — 112, 113

Size Range 103 to 905
Bore Range 13 mm - 292 mm
Overview Unitized Disc Pack
Heavy Duty Applications
Ratings Similar to Gear Couplings

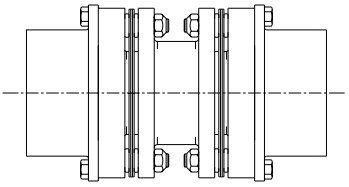


KD11

SPACER STYLES

KD2® with MT Disc Packs — 114, 115

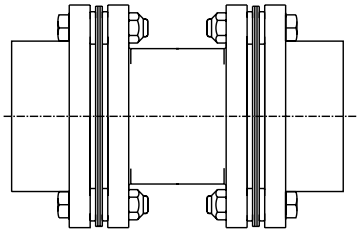
Size Range 053 to 453
Bore Range 13 mm - 184 mm
Overview “Drop-Out” Spacer Design
Factory Assembled Center Flex Section
Medium Duty Applications



KD2® & KD20

KD20 with HT Disc Packs — 116, 117

Size Range 204 to 905
Bore Range 25 mm - 343 mm
Overview “Drop-Out” Spacer Design
Factory Assembled Center Flex Section
High Torque Applications



KD21

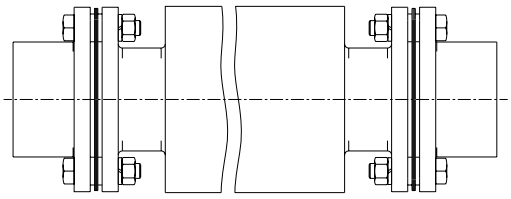
KD21 with HT Disc Packs — 118, 119

Size Range 103 to 905
Bore Range 13 mm - 343 mm
Overview Simple 3 Piece Spacer Design
Unitized “Drop-Out” Disc Pack
High Torque Applications

COOLING TOWER

KD33 with CT Disc Packs — 122

Size Range 153 to 303
Bore Range 13 mm - 114 mm
Overview Cooling Towers with Very Long Shaft Separation
Stainless Steel/Composite Tubes
Replaces most competitive Cooling Tower Couplings
Non-lubricated



KD33

Service Factors

Values listed are intended only as a general guide, and are typical of usual service requirements. For systems which frequently utilize the peak torque capability of the power source, verify that the magnitude of this peak torque does not exceed the 1.0 Service Factor Rating of the coupling selected. Applications which involve extreme repetitive shock or high-energy load absorption characteristics should be referred — with full particulars — to KOP-FLEX.

Values contained in the table are to be applied to smooth power sources such as electric motors and steam turbines. For drives involving internal combustion, engines of four or five cylinders, add 1.0 to the values listed, for six or more cylinders, add 0.5 to the values listed. For systems utilizing AC or DC Mill Motors as the prime mover refer to Note (1).

Application	Typical Service Factor
AGITATORS	
Pure Liquids	1.0
Liquids & Solids	1.25
Liquids — Variable Density	1.25
BLOWERS	
Centrifugal	1.0
Lobe	1.5
Vane	1.25
BRIQUETTE MACHINES	2.0
CAR PULLERS — Intermittent Duty	1.5
COMPRESSORS	
Centrifugal	1.0
Centriaxial	1.25
Lobe	1.5
Reciprocating — Multi-Cylinder	2.0
CONVEYORS — LIGHT DUTY UNIFORMLY FED	
Apron, Bucket, Chain, Flight, Screw	1.25
Assembly, Belt	1.0
Oven	1.5
CONVEYORS — HEAVY DUTY NOT UNIFORMLY FED	
Apron, Bucket, Chain, Flight, Oven	1.5
Assembly, Belt	1.25
Reciprocating, Shaker	2.5
CRANES AND HOISTS (NOTE 1 and 2)	
Main hoists, Reversing	2.5
Skip Hoists, Trolley & Bridge Drives	2.0
Slope	2.0
CRUSHERS	
Ore, Stone	3.0
DREDGES	
Cable Reels	1.75
Conveyors	1.5
Cutter Head Jig Drives	2.5
Maneuvering Winches	1.75
Pumps	1.75
Screen Drives	1.75
Stackers	1.75
Utility Winches	1.5
ELEVATORS (NOTE 2)	
Bucket	1.75
Centrifugal & Gravity Discharge	1.5
Escalators	1.5
Freight	2.5
FANS	
Centrifugal	1.0
Cooling Towers	1.5
Forced Draft	1.5
Induced Draft without Damper Control	2.0
FEEDERS	
Apron, Belt, Disc, Screw	1.25
Reciprocating	2.5
GENERATORS — (Not Welding)	1.0
HAMMER MILLS	2.0
LAUNDRY WASHERS — Reversing	2.0
LAUNDRY TUMBLERS	2.0
LINE SHAFT	1.5
LUMBER INDUSTRY	
Barkers — Drum Type	2.0
Edger Feed	2.0
Live Rolls	2.0
Log Haul — Incline	2.0
Log Haul — Well type	2.0
Off Bearing Rolls	2.0
Planer Feed Chains	1.75
Planer Floor Chains	1.75
Planer Tilting Hoist	1.75
Slab Conveyor	1.5
Sorting Table	1.5
Trimmer Feed	1.75
MARINE PROPULSION	
Main Drives	2.0
MACHINE TOOLS	
Bending Roll	2.0
Plate Planer	1.5
Punch Press — Gear Driven	2.0
Tapping Machines	2.5
Other Machine Tools	
Main Drives	1.5
Auxiliary Drives	1.25
METAL MILLS	
Draw Bench — Carriage	2.0
Draw Bench — Main Drive	2.0
Forming Machines	2.0
Slitters	1.5
Table Conveyors	
Non-Reversing	2.25
Reversing	2.5
Wire Drawing & Flattening Machine	2.0
Wire Winding Machine	1.75
METAL ROLLING MILLS (NOTE 1)	
Blooming Mills	*
Coilers, hot mill	2.0
Coilers, cold mill	1.25
Cold Mills	2.0
Cooling Beds	1.75
Door Openers	2.0
Draw Benches	2.0
Edger Drives	1.75
Feed Rolls, Reversing Mills	3.5
Furnace Pushers	2.5
Hot Mills	3.0
Ingot Cars	2.5
Kick-outs	2.5
Manipulators	3.0
Merchant Mills	3.0
Piercers	3.0
Pusher Rams	2.5
Reel Drives	1.75
Reel Drums	2.0
Reelers	3.0
Rod and Bar Mills	1.5
Roughing Mill Delivery Table	3.0
Runout Tables	
Reversing	3.0
Non-Reversing	2.0
Saws, hot & cold	2.5
Screwdown Drives	3.0
Skelp Mills	3.0
Slitters	3.0
Slabbing Mills	3.0
Soaking Pit Cover Drives	3.0
Straighteners	2.5
Tables, transfer & runout	2.0
Thrust Block	3.0
Traction Drive	3.0
Tube Conveyor Rolls	2.5
Unscramblers	2.5
Wire Drawing	1.5
MILLS, ROTARY TYPE	
Ball	2.25
Dryers & Coolers	2.0
Hammer	1.75
Kilns	2.0
Pebble & Rod	2.0
Pug	1.75
Tumbling Barrels	2.0
MIXERS	
Concrete Mixers	1.75
Drum Type	1.5
OIL INDUSTRY	
Chillers	1.25
Paraffin Filter Press	1.75
PAPER MILLS	
Barker Auxiliaries, Hydraulic	2.0
Barker, Mechanical	2.0
Barking Drum Spur Gear Only	2.25
Beater & Pulper	1.75
Bleacher	1.0
Calenders	2.0
Chippers	2.5
Coaters	1.0
Converting Machines, except Cutters, Platers	1.5
Couch Roll	1.75
Cutters, Platers	2.0
Cylinders	1.75
Disc Refiners	1.75
Dryers	1.75
Felt Stretcher	1.25
Felt Whipper	2.0
Jordans	1.75
Line Shaft	1.5
Log Haul	2.0
Pulp Grinder	1.75
Press Roll	2.0
Reel	1.5
Stock Chests	1.5
Suction Roll	1.75
Washers & Thickeners	1.5
Winders	1.5
PRINTING PRESSES	1.5
PULLERS — Barge Haul	2.0
PUMPS	
Centrifugal	1.0
Boiler Feed	1.5
Reciprocating	
Single Acting	
1 or 2 Cylinders	2.25
3 or more Cylinders	1.75
Double Acting	2.0
Rotary, Gear, Lobe, Vane	1.5
RUBBER INDUSTRY	
Mixer — Banbury	2.5
Rubber Calendar	2.0
Rubber Mill (2 or more)	2.25
Sheeter	2.0
Tire Building Machines	2.5
Tire & Tube Press Openers	1.0
Tubers & Strainers	2.0
SCREENS	
Air Washing	1.0
Grizzly	2.0
Rotary — Stone or Gravel	1.5
Traveling Water Intake	1.25
Vibrating	2.5
SEWAGE DISPOSAL EQUIPMENT	
Bar Screens	1.25
Chemical Feeders	1.25
Collectors, Circuline or Straightline	1.25
Dewatering Screens	1.25
Grit Collectors	1.25
Scum Breakers	1.25
Slow or Rapid Mixers	1.25
Sludge Collectors	1.25
Thickeners	1.25
Vacuum Filters	1.25
STEERING GEAR	1.0
STOKERS	1.0
WINCH	1.5
WINDLASS	1.75

* Refer to KOP-FLEX

NOTES

(1) Maximum Torque at the coupling must not exceed Rated Torque of the coupling.

(2) Check local and industrial safety codes.

Balancing requirements for a coupling are dependent on factors determined by the characteristics of the connected equipment. For this reason, the Balancing Charts should be used as a GUIDE ONLY to assist in determining whether or not balancing is required.

The Balancing Charts shown are based on AGMA 9000-C90 suggested balance classes for systems with “Average” sensitivity to unbalance. For systems with higher sensitivity to unbalance, balancing of the coupling may be required at lower speeds. For systems which are less sensitive to unbalance, couplings may be able to operate at higher speeds than those shown at lower balance levels. Therefore, in the absence of either a thorough system analysis or past user experience with a similar installation, these charts should be used as a GUIDE ONLY.

KD Couplings are available in several styles to meet the balance requirements of API 610, including the 8th Edition. Consult KOP-FLEX for details.

KD1 and KD10 couplings meet AGMA Class 8 balance levels as-manufactured (off-the-shelf) and may be component balanced to run at higher speeds. Refer to the ratings table for the maximum operating speeds for non-balanced and balanced couplings.

KD11 couplings are designed for higher speeds and meet AGMA Class 9 balance as-manufactured. KD11 couplings may be component balanced to meet Class 10 balance, and may be assembly balanced to Class 11.

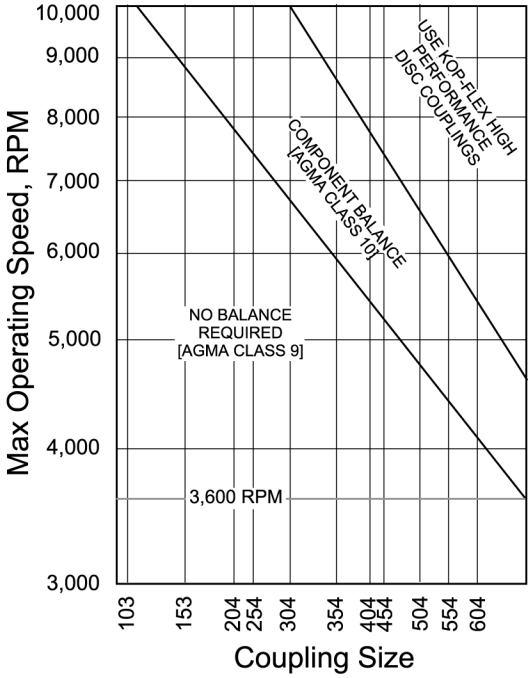
KD2, KD20, and KD21 couplings meet AGMA Class 9 balance balance levels as-manufactured and may be component balanced to meet Class 10 balance. KD2 and KD20 couplings may be assembly balanced to meet AGMA Class 11 balance. KD21 couplings are not assembly balanced. Refer to the charts on this page for balancing recommendations.

Balancing of sizes larger than 604 must be considered on a case-by-case basis. Consult KOP-FLEX for assistance.

For KD4, KD41 and KD42, and KD22 couplings, balance considerations should be reviewed on a case-by-case basis. Consult KOP-FLEX Engineering for assistance. KD5, 50 and 51 couplings are not balanced.

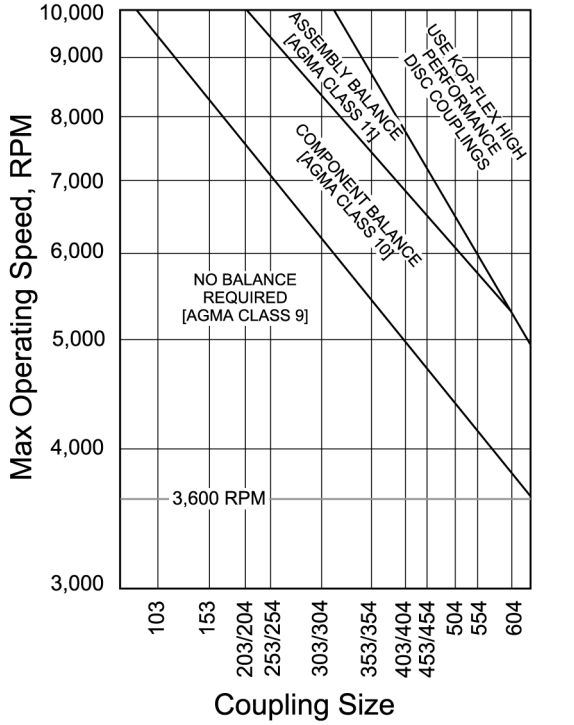
KD21 Balancing Chart for up to 457 mm Shaft Separation

Based on AGMA 9000-C90 for Average System Sensitivity



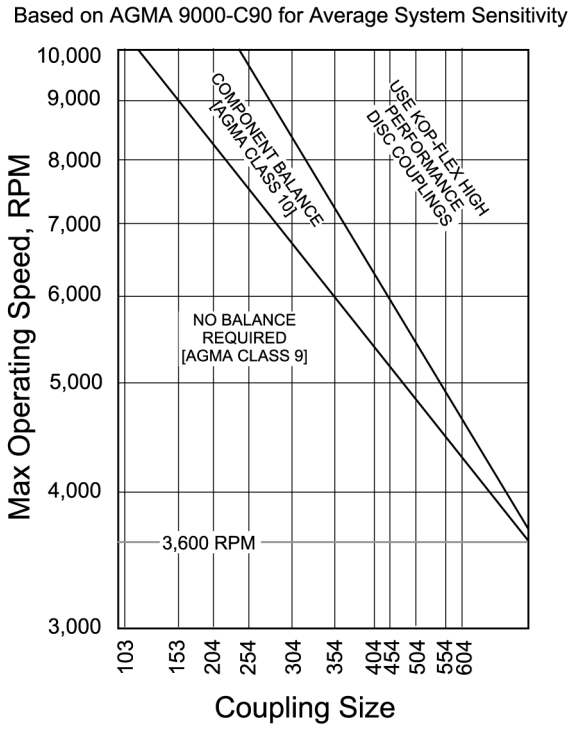
KD2 & KD20 Balancing Chart for up to 457 mm Shaft Separation

Based on AGMA 9000-C90 for Average System Sensitivity



KD11 Balancing Chart

Based on AGMA 9000-C90 for Average System Sensitivity



KD1 Close Coupled

The KD1 coupling is designed for close coupled applications with minimal to short distance between shaft ends and light to medium loading. It can directly replace most Rex/Thomas DBZ couplings and the unitized disc pack design makes the installation simpler and easier.

The KD1 is comprised of two hubs, two rings, two disc packs, and a piloted split spacer. The standard coupling hubs may be installed in any of three mounting positions for design and installation flexibility. The split spacer pilot gives the KD1 coupling improved dynamic balance characteristics and contains a design feature to safely hold the split spacer in place while the coupling is rotating.

KD1 disc packs are unitized to greatly reduce the number of loose parts. The split spacer simply drops away from the hubs for faster installation and replacement without moving connected machinery. The standard coupling balance meets AGMA Class 8 as manufactured, dynamic balance to AGMA Class 9 and conformance to API 610 are available options.

For higher power requirements, consider a KD10 disc coupling; or for higher speeds, check out a KD11 disc coupling.

KD1 Couplings use MT Disc Packs.

- **Medium Duty**
- **Minimal to Short Shaft Separations**
- **Split Spacer with Safety Pilot**
- **Replacement for Rex/Thomas DBZ**
- **Drop-Out, Unitized Disc Packs**

Complete Couplings

Coupling Size	Complete Coupling with 2 Std. Hubs		Complete Coupling with 1 Std. Hub and 1 Long Hub		Complete Coupling with 2 Long Hubs	
	Rough Bore	Finish Bore①	Rough Bore	Finish Bore①	Rough Bore	Finish Bore①
103	103 KD 1 SS	103 KD 1 SS FB	103 KD 1 SL	103 KD 1 SL FB	103 KD 1 LL	103 KD 1 LL FB
153	153 KD 1 SS	153 KD 1 SS FB	153 KD 1 SL	153 KD 1 SL FB	153 KD 1 LL	153 KD 1 LL FB
203	203 KD 1 SS	203 KD 1 SS FB	203 KD 1 SL	203 KD 1 SL FB	203 KD 1 LL	203 KD 1 LL FB
253	253 KD 1 SS	253 KD 1 SS FB	253 KD 1 SL	253 KD 1 SL FB	253 KD 1 LL	253 KD 1 LL FB
303	303 KD 1 SS	303 KD 1 SS FB	303 KD 1 SL	303 KD 1 SL FB	303 KD 1 LL	303 KD 1 LL FB
353	353 KD 1 SS	353 KD 1 SS FB	353 KD 1 SL	353 KD 1 SL FB	353 KD 1 LL	353 KD 1 LL FB
403	403 KD 1 SS	403 KD 1 SS FB	403 KD 1 SL	403 KD 1 SL FB	403 KD 1 LL	403 KD 1 LL FB
453	453 KD 1 SS	453 KD 1 SS FB	453 KD 1 SL	453 KD 1 SL FB	453 KD 1 LL	453 KD 1 LL FB

① All finish bores and keyways per AGMA 9002-A86 commercial standard tolerances.

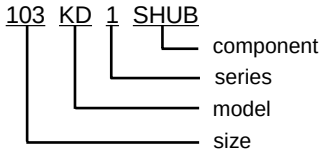
Component Parts

Description	Part Number
Standard Hub	SHUB
Long Hub	LHUB
*Center Assembly	CA
**MT Disc Pack Assembly	MTDP
**MT Disc Pack Fastener Set	MTFS
**Flange Fastener Set	FFSMT

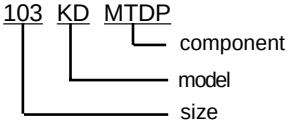
* Center Assembly includes (2) disc packs, (2) disc pack fastener sets.

** For Disc Packs and Fastener Sets, do not include "Series" number in the part number.

How to Order Components



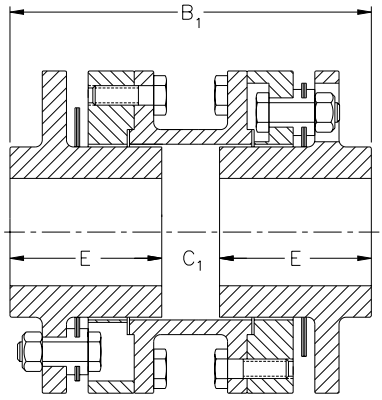
How to Order Disc Packs and Fastener Sets



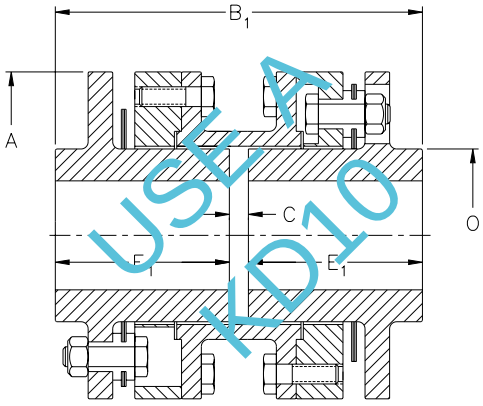
Selection Data

Size	Max. Bore (mm)	Coupling Rating (kW/RPM)	Torque Rating		Maximum Speed Not Balanced (RPM)	Maximum Speed Balanced (RPM)	Total ① Weight (kgs)	Total ① WR2 (kgm2)	Axial Capacity (mm)
			Continuous (kNm)	Peak (kNm)					
103	41	.03	.31	.61	5400	9700	3.67	.005	±1.5
153	57	.09	.89	1.78	4500	7500	8.98	.025	±1.9
203	70	.17	1.62	3.25	4100	6700	14.5	.054	±2.3
253	83	.18	2.67	5.33	3600	5600	23.4	.122	±2.7
303	99	.45	4.27	8.54	3200	5100	35.1	.251	±3.2
353	111	.75	7.12	14.2	2900	4400	58.5	.568	±3.8
403	127	1.2	11.0	22.0	2600	4000	85.7	1.09	±4.4
453	140	1.5	14.6	29.2	2400	3800	101	1.51	±5.1

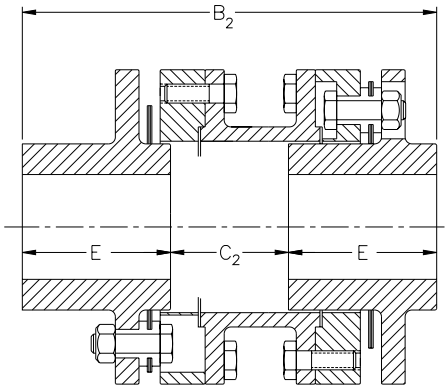
① Data based on maximum bores.



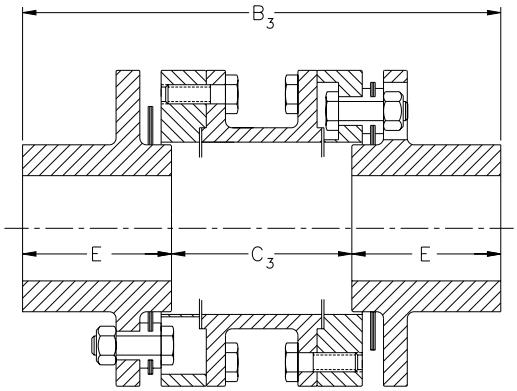
STANDARD HUBS



LONG HUBS



ONE HUB REVERSED



TWO HUBS REVERSED

Dimensional Data

Size	Rough Bore	A (mm)	B_1 (mm)	B_2 (mm)	B_3 (mm)	C (mm)	C_1 (mm)	C_2 (mm)	C_3 (mm)	E (mm)	E_1 (mm)	O (mm)
103	13	105	125	145	164	3	24	43	62	51	61	56
153	13	140	164	197	230	3	30	64	97	67	80	76
203	19	165	186	224	262	5	33	71	109	76	90	95
253	25	197	213	256	298	5	38	81	124	87	104	114
303	25	229	251	303	356	6	44	97	149	103	122	133
353	25	267	284	344	405	6	49	109	170	117	139	152
403	25	305	321	386	451	8	54	119	184	133	156	171
453	38	330	333	399	464	8	54	119	184	140	163	191

KD10 Close Coupled

The KD10 coupling is designed to work in place of standard close coupled gear coupling applications with minimal distance between shaft ends. The power capacity of the KD10 coupling is the highest in the industry, allowing the easiest conversion from a lubricated coupling to a low maintenance disc coupling.

The KD10 is comprised of two hubs, two rings, two disc packs, and a piloted split spacer. The standard coupling hubs may be installed in two mounting positions for design and installation flexibility. The split spacer pilot gives the KD10 coupling improved dynamic balance characteristics and contains a design feature to safely hold the split spacer in place while the coupling is rotating.

KD10 disc packs are semi-unitized to greatly reduce the number of loose parts. The split spacer simply drops away from the hubs for faster installation and replacement of the disc packs without moving connected machinery. The standard coupling balance meets AGMA Class 8 as manufactured, dynamic balance to AGMA Class 9 and conformance to API 610 are available options.

For higher speed requirements, consider a KD11 disc coupling.

KD10 couplings use HS Disc Packs.

- **Heavy Duty, Highest Power Capacity**
- **Minimal Shaft Separations**
- **Split Spacer with Safety Pilot**
- **Replacement for Standard Gear Couplings**
- **Drop-Out, Semi-Unitized Disc Packs**

Complete Couplings

Coupling Size	Complete Coupling with 2 Std. Hubs	
	Rough Bore	Finish Bore①
103	103 KD 10 SS	103 KD 10 SS FB
153	153 KD 10 SS	153 KD 10 SS FB
204	204 KD 10 SS	204 KD 10 SS FB
254	254 KD 10 SS	254 KD 10 SS FB
304	304 KD 10 SS	304 KD 10 SS FB
354	354 KD 10 SS	354 KD 10 SS FB
404	404 KD 10 SS	404 KD 10 SS FB
454	454 KD 10 SS	454 KD 10 SS FB
504	504 KD 10 SS	504 KD 10 SS FB
554	554 KD 10 SS	554 KD 10 SS FB
604	604 KD 10 SS	604 KD 10 SS FB
705	705 KD 10 SS	705 KD 10 SS FB
805	805 KD 10 SS	805 KD 10 SS FB
905	905 KD 10 SS	905 KD 10 SS FB

① All finish bores and keyways per AGMA 9002-A86 commercial standard tolerances.

Component Parts

Description	Part Number
Standard Hub	SHUB
*Center Assembly	CA
**HS Disc Pack Assembly	HSDP
**HS Disc Pack Fastener Set	HSFS
**Flange Fastener Set	FFSMT

* Center Assembly includes (2) disc packs, (2) disc pack fastener sets.

** For Disc Packs and Fastener Sets, do not include "Series" number in the part number.

How to Order Components

103 KD 10 SHUB

- SHUB — component
- 10 — series
- KD — model
- 103 — size

How to Order Disc Packs & Fastener Sets

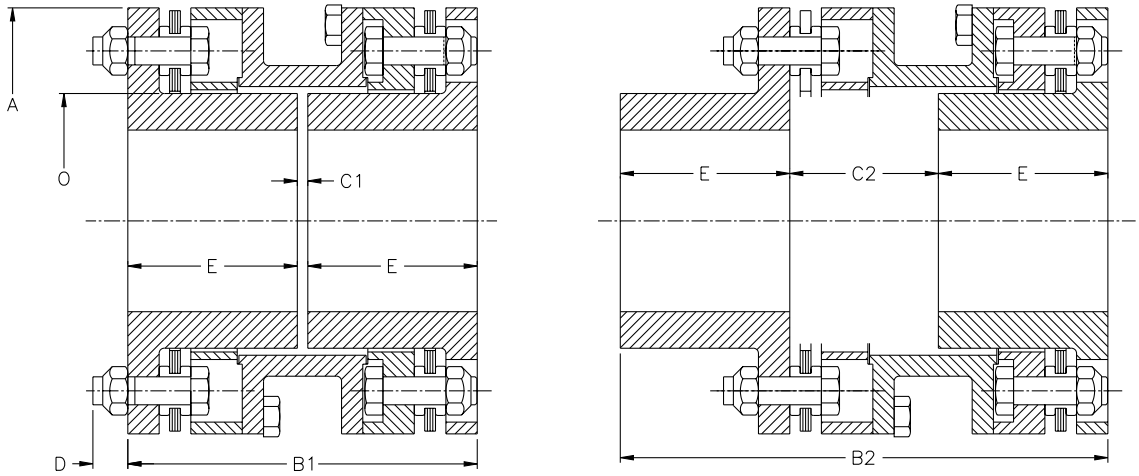
103 KD HSDP

- HSDP — component
- KD — model
- 103 — size

Selection Data

Size	Max. Bore (mm)	Coupling Rating (kW/RPM)	Torque Rating		Max. Speed Not Balanced (RPM)	Maximum Speed Balanced (RPM)	Total ① Weight (kgs)	Total ① WR2 (kgm2)	Axial Capacity (mm)
			Continuous (kNm)	Peak (kNm)					
103	38	.05	.45	.90	5400	9700	3.13	.005	±2.0
153	54	.16	1.54	3.07	4500	7500	7.94	.021	±2.6
204	67	.43	4.07	8.14	4100	6700	12.3	.043	±2.8
254	83	.62	5.88	11.8	3600	5600	21.4	.117	±3.6
304	95	1.1	10.1	20.1	3200	5100	35.4	.268	±4.3
354	108	1.8	16.4	32.8	2900	4400	60.8	.627	±5.1
404	121	2.5	24.3	48.6	2600	4000	87.5	1.13	±5.7
454	140	3.0	28.8	57.6	2400	3800	104	1.62	±6.4
504	146	4.3	40.7	81.4	2200	3500	143	2.53	±7.0
554	159	6.0	57.1	114	1900	3000	183	3.84	±7.6
604	171	7.8	74.6	149	1850	2900	254	6.50	±8.1
705	216	18	171	341	1800	2800	420	16.5	±6.9
805	241	27	237	475	1600	2500	308	29.9	±7.9
905	292	31	260	520	1500	2300	771	47.8	±10

① Data based on maximum bores.



ONE HUB REVERSED

Dimensional Data

Size	A (mm)	B_1 (mm)	B_2 (mm)	C_1 (mm)	C_2 (mm)	D (mm)	E (mm)	O (mm)
103	100	89	125	3	40	10	43	53
153	137	111	156	3	48	13	54	75
204	162	143	201	3	61	15	70	92
254	194	159	221	5	68	15	77	116
304	229	187	262	5	79	19	91	133
354	267	229	319	6	97	22	111	150
404	298	270	376	6	113	25	132	171
454	324	278	389	8	119	25	135	194
504	353	314	441	8	134	29	153	208
554	384	259	504	8	153	33	176	222
604	419	384	539	8	163	35	188	236
705	521	451	632	10	191	42	221	288
805	584	508	711	10	213	49	249	324
905	648	565	794	13	241	49	276	387

KD® Disc Couplings

KD11 Close Coupled

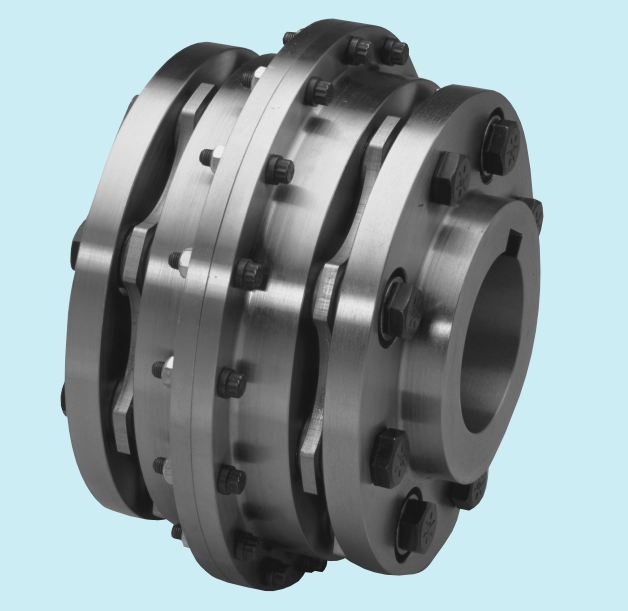
The KD11 coupling is designed to work in place of standard close coupled gear coupling applications with higher speed service. The power capacity of the KD11 coupling is the highest in the industry, allowing the easiest conversion from a lubricated coupling to a low maintenance disc coupling.

The KD11 is comprised of two hubs, two adapters, and two disc packs. The standard coupling hubs may be installed in any of three mounting positions for design and installation flexibility. The bolted adapters give the KD11 coupling the best dynamic balance characteristics and allow the connected equipment to be installed or removed while keeping each assembled half coupling undisturbed.

KD11 disc packs are unitized to greatly reduce the number of loose parts. The standard coupling balance meets AGMA Class 9 as manufactured, dynamic balance to AGMA Class 10 and 11, and conformance to API 610 are available options. The close tolerance bolts and safety overload washers insure superior performance and trouble free operation.

For lower speed requirements, consider a KD10 disc coupling; or for medium duty, check out a KD1 disc coupling.

KD11 couplings use HT Semi-Unitized Disc Packs.



- **Heavy Duty, Highest Power Capacity**
- **Minimal Shaft Separations**
- **Bolted Adapters for Higher Speeds**
- **Replacement for Standard Gear Couplings**
- **Unitized Disc Packs**

Complete Couplings

Coupling Size	Complete Coupling with 2 Std. Hubs	
	Rough Bore	Finish Bore①
103	103 KD 11 SS	103 KD 11 SS FB
153	153 KD 11 SS	153 KD 11 SS FB
204	204 KD 11 SS	204 KD 11 SS FB
254	254 KD 11 SS	254 KD 11 SS FB
304	304 KD 11 SS	304 KD 11 SS FB
354	354 KD 11 SS	354 KD 11 SS FB
404	404 KD 11 SS	404 KD 11 SS FB
454	454 KD 11 SS	454 KD 11 SS FB
504	504 KD 11 SS	504 KD 11 SS FB
554	554 KD 11 SS	554 KD 11 SS FB
604	604 KD 11 SS	604 KD 11 SS FB
705	705 KD 11 SS	705 KD 11 SS FB
805	805 KD 11 SS	805 KD 11 SS FB
905	905 KD 11 SS	905 KD 11 SS FB

① All finish bores and keyways per AGMA 9002-A86 commercial standard tolerances.

Component Parts

Description	Part Number
Standard Hub	SHUB
**HT Disc Pack Assembly	HTDP
**HT Disc Pack Fastener Set	HTFS
**Center Flange Fastener Set	CFFS

* For Disc Packs and Fastener Sets, do not include "Series" number in the part number.

How to Order Components

103 KD 11 SHUB

- SHUB — component
- 11 — series
- KD — model
- 103 — size

How to Order Disc Packs & Fastener Sets

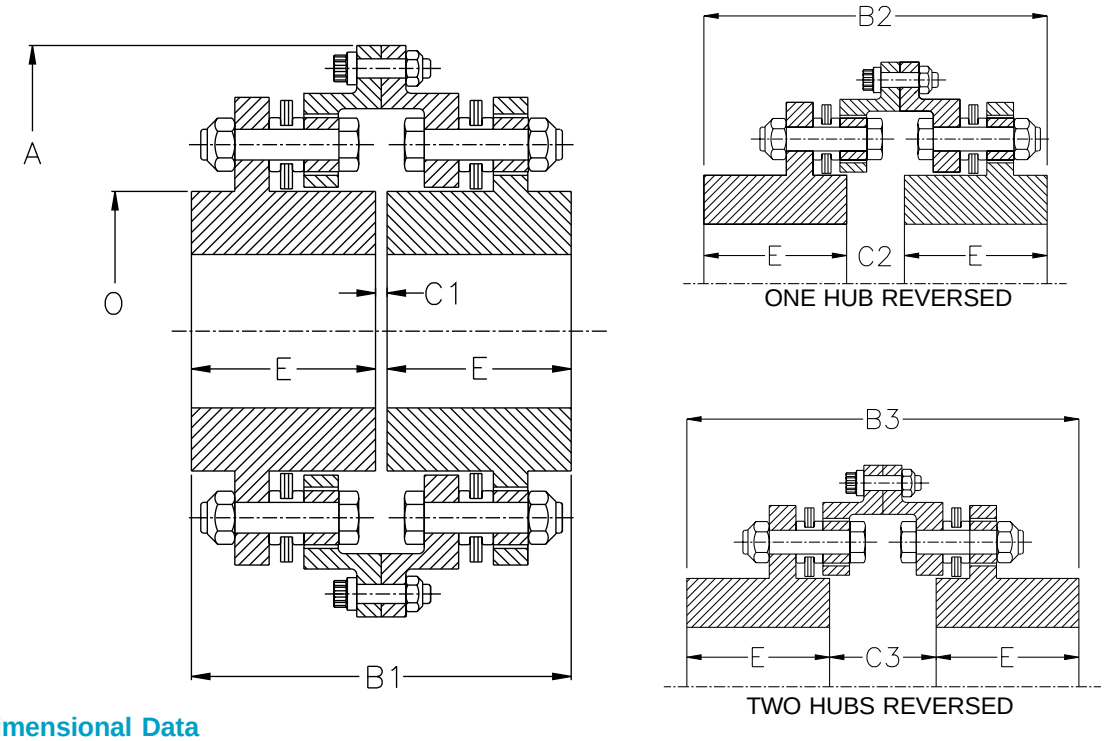
103 KD HTDP

- HTDP — component
- KD — model
- 103 — size

Selection Data

Size	Max. Bore (mm)	Coupling Rating (kW/RPM)	Torque Rating		Maximum ② Speed (RPM)	Total ① Weight (kgs)	Total ① WR2 (kgm2)	Axial Capacity (mm)
			Continuous (kNm)	Peak (kNm)				
103	38	.05	.45	.90	14200	4.08	.008	±2.0
153	54	.16	1.54	3.07	12500	8.44	.026	±3.6
204	67	.43	4.07	8.13	11100	13.2	.055	±2.8
254	83	.62	5.88	11.8	9900	19.9	.117	±3.6
304	95	1.1	10.1	20.1	8700	31.6	.246	±4.3
354	108	1.8	17.0	33.9	7500	50.3	.524	±5.1
404	121	2.5	24.3	48.6	6600	76.2	1.01	±5.7
454	140	3.0	28.8	57.6	6000	92.5	1.53	±6.4
504	146	4.3	40.7	81.4	5600	123	2.32	±7.0
554	159	6.0	57.1	114	4800	165	3.87	±7.6
604	171	7.8	74.6	149	4600	208	6.18	±8.1
705	216	18	171	341	3860	374	15.4	±6.9
805	241	27	261	522	3450	553	28.7	±7.9
905	292	31	294	588	1520	689	44.2	±10

① Data based on maximum bores.
② See Balance Specifications page 107.



Dimensional Data

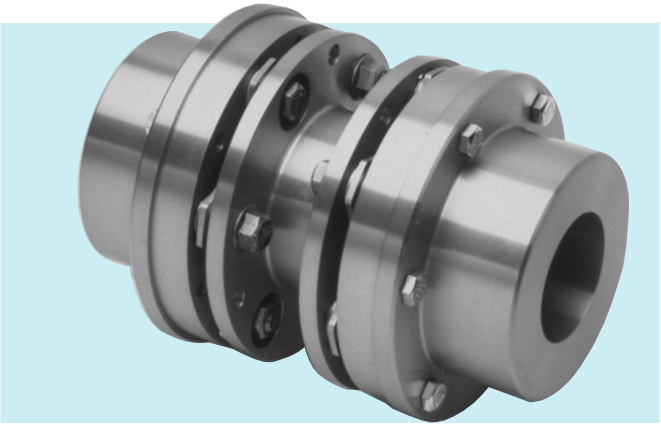
Size	A (mm)	B_1 (mm)	B_2 (mm)	B_3 (mm)	C_1 (mm)	C_2 (mm)	C_3 (mm)	E (mm)	O (mm)
103	138	86	116	146	3	33	64	42	53
153	183	105	142	149	3	40	77	51	75
204	198	127	165	203	3	41	79	62	92
254	236	157	183	210	5	31	57	76	116
304	270	183	214	244	5	36	67	89	133
354	312	216	254	292	6	44	83	105	150
404	354	241	292	343	6	57	108	117	171
454	395	268	316	363	8	56	103	130	194
504	424	294	342	390	8	56	104	143	208
554	475	313	368	423	8	63	118	152	222
604	508	338	399	459	8	69	129	165	236
705	610	416	483	549	10	76	143	203	288
805	683	457	547	627	10	90	170	229	324
905	762	521	599	678	13	91	170	254	387

KD2® Spacer Coupling

The KD2 coupling is designed for medium duty applications requiring moderate shaft separations, and was specifically engineered to meet API 610 specifications for industrial pump couplings. Consisting of three main parts, two hubs and a factory assembled flexible center section which installs or drops out as one unit, the KD2 greatly simplifies installation or maintenance.

The flexible center section is piloted to insure excellent dynamic balance; AGMA Class 9 is standard, as-manufactured. Dynamic balance to AGMA Class 10 or Class 11 are available options. An anti-flail safety feature is also included in the flexible center section assembly.

For higher power requirements, consider a KD20 disc coupling; or for economy duty, check out a KD21 disc coupling. If a flexible hub design is needed, look to the KD22 disc coupling.



- **Medium Duty**
- **Standard Shaft Separations for Industrial Pumps**
- **Factory Assembled Flexible Center Sections**
- **Designed Specifically for API 610**
- **High Flexible, Unitized Disc Packs**

KD2 couplings use MT Disc Packs.

KD2 Rough Bore Part Numbers

Coupling Size	Between Shaft Ends	Complete Coupling w/2 Std. Hubs Rough Bore	Complete Coupling w/1 Std. & 1 Long Hub Rough Bore	Complete Coupling w/2 Long Hubs Rough Bore	Complete Coupling w/1 Jumbo Hub & 1 Std. Hub	Complete Coupling w/2 Jumbo hubs	Complete Coupling w/1 Long & 1 Jumbo Hub	Center Assembly
053*	127	053 KD2 SS500	NA	NA	NA	NA	NA	NA
103	89	103 KD 2 SS350	103 KD 2 LS350	103 KD 2 LL350	103 KD 2 JS350	103 KD 2 JJ350	103 KD 2 JL350	103 KD 2 CA350
	111	103 KD 2 SS438	103 KD 2 LS438	103 KD 2 LL438	103 KD 2 JS438	103 KD 2 JJ438	103 KD 2 JL438	103 KD 2 CA438
	127	103 KD 2 SS500	103 KD 2 LS500	103 KD 2 LL500	103 KD 2 JS500	103 KD 2 JJ500	103 KD 2 JL500	103 KD 2 CA500
	178	103 KD 2 SS700	103 KD 2 LS700	103 KD 2 LL700	103 KD 2 JS700	103 KD 2 JJ700	103 KD 2 JL700	103 KD 2 CA700
153	111	153 KD 2 SS438	153 KD 2 LS438	153 KD 2 LL438	153 KD 2 JS438	153 KD 2 JJ438	153 KD 2 JL438	153 KD 2 CA438
	127	153 KD 2 SS500	153 KD 2 LS500	153 KD 2 LL500	153 KD 2 JS500	153 KD 2 JJ500	153 KD 2 JL500	153 KD 2 CA500
	178	153 KD 2 SS700	153 KD 2 LS700	153 KD 2 LL700	153 KD 2 JS700	153 KD 2 JJ700	153 KD 2 JL700	153 KD 2 CA700
203	127	203 KD 2 SS500	203 KD 2 LS500	203 KD 2 LL500	203 KD 2 JS500	203 KD 2 JJ500	203 KD 2 JL500	203 KD 2 CA500
	178	203 KD 2 SS700	203 KD 2 LS700	203 KD 2 LL700	203 KD 2 JS700	203 KD 2 JJ700	203 KD 2 JL700	203 KD 2 CA700
253	178	253 KD 2 SS700	253 KD 2 LS700	253 KD 2 LL700	253 KD 2 JS700	253 KD 2 JJ700	253 KD 2 JL700	253 KD 2 CA700
	203	253 KD 2 SS800	253 KD 2 LS800	253 KD 2 LL800	253 KD 2 JS800	253 KD 2 JJ800	253 KD 2 JL800	253 KD 2 CA800
303	178	303 KD 2 SS700	303 KD 2 LS700	303 KD 2 LL700	303 KD 2 JS700	303 KD 2 JJ700	303 KD 2 JL700	303 KD 2 CA700
	203	303 KD 2 SS800	303 KD 2 LS800	303 KD 2 LL800	303 KD 2 JS800	303 KD 2 JJ800	303 KD 2 JL800	303 KD 2 CA800
353	203	353 KD 2 SS800	353 KD 2 LS800	353 KD 2 LL800	353 KD 2 JS800	353 KD 2 JJ800	353 KD 2 JL800	353 KD 2 CA800
	229	353 KD 2 SS900	353 KD 2 LS900	353 KD 2 LL900	353 KD 2 JS900	353 KD 2 JJ900	353 KD 2 JL900	353 KD 2 CA900
403	229	403 KD 2 SS900	403 KD 2 LS900	403 KD 2 LL900	403 KD 2 JS900	403 KD 2 JJ900	403 KD 2 JL900	403 KD 2 CA900
453	229	453 KD 2 SS900	453 KD 2 LS900	453 KD 2 LL900	453 KD 2 JS900	453 KD 2 JJ900	453 KD 2 JL900	453 KD 2 CA900

* The size 053 does not use the piloted and preassembled flexible center section as do larger KD2 couplings. Size 053 components are: standard hubs, unitized disc packs, spacer and accessory fastener sets. The size 053 meets AGMA Class 8 as standard and can be balanced to AGMA Class 9.

①Note: For Finish Bore add FB to Part Number and specify bore.

① All finish bores and keyways per AGMA 9002-A86 commercial standard tolerances.

Component Parts

Description	Part Number
Standard Hub	SHUB
Long Hub	LHUB
Jumbo Hub	JHUB
*Center Assembly for x.xx Shaft Separation	CAXXX
**MT Disc Pack	MTDP
**MT Disc Pack Fastener Set	MTFS
**Flange Fastener Set	FFSMT
**Jumbo Hub Fastener Set	JFSHT

* Center Assembly includes (2) disc packs, (2) disc pack fastener sets.

** For Disc Packs and Fastener Sets, do not include "Series" number in the part number.

How to Order Components

103 KD 2 SHUB

- SHUB — component
- 2 — series
- KD — model
- 103 — size

How to Order Disc Packs and Fastener Sets

103 KD MTDP

- MTDP — component
- KD — model
- 103 — size

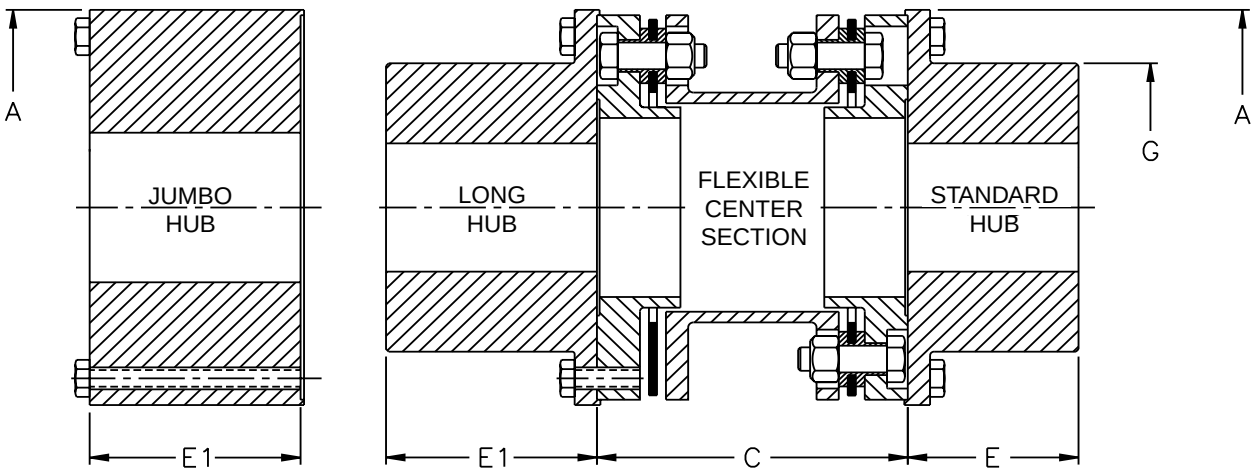
Selection Data

Size	Maximum Bores (mm)		Coupling Rating (kW/RPM)	Torque Rating		② Maximum Speed (RPM)	Total ① Weight (kgs)	Total ① WR² (kgm²)	Spacer Tube		Axial Capacity (mm)
	Std. & Long Hub	Jumbo Hub		Continuous (Nm)	Peak (Nm)				Weight (kgs)	WR² (kgm²)/m	
*053	44	N/A	.02	.23	.45	8200	3.49	.005	8.93	.005	±1.4
103	48	70	.03	.31	.61	17000	4.49	.006	7.86	.005	±1.5
153	73	102	.09	.89	1.78	14200	10.5	.027	9.64	.012	±1.9
203	83	117	.17	1.63	3.25	12800	16.1	.060	10.0	.019	±2.3
253	102	143	.28	2.67	5.33	11500	26.7	.139	13.0	.041	±2.7
303	121	165	.45	4.27	8.54	10000	40.6	.290	20.4	.087	±3.2
353	140	194	.75	7.12	14.2	8500	65.8	.633	28.0	.146	±3.8
403	159	222	1.2	11.0	22.0	7500	99.8	1.26	32.9	.228	±4.4
453	184	238	1.5	14.6	29.1	7000	118	1.81	35.9	.311	±5.1

* The size 053 does not use the piloted and pre-assembled flexible center section as do larger KD2 couplings. Size 053 components are: standard hubs, unitized disc packs, spacer and accessory fastener sets. The size 053 meets AGMA Class 8 as standard and can be balanced to AGMA Class 9.

① Data based on Min. "C" dimensions, maximum bores and standard hubs.

② See Balance Specifications page 107.



Dimensional Data

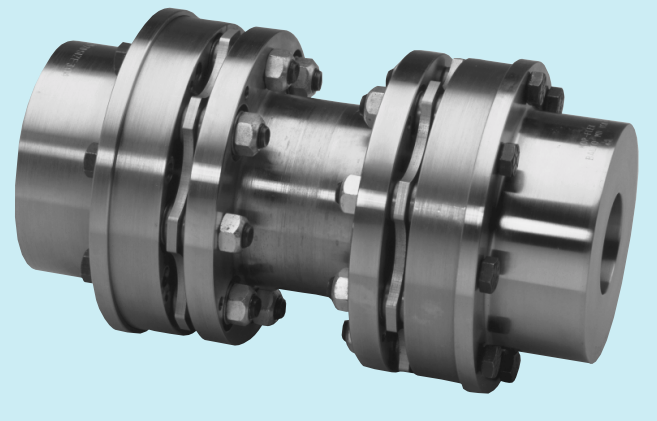
Size	Rough Bore	A (mm)	Max C' Bore (mm)	C Min. (mm)	E (mm)	E_1 (mm)	G (mm)	Stock "C" Dimension (mm)					
								89	111	127	178	203	229
*053	13	100	51	76	41	N/A	65	-		X	-	-	-
103	13	109	60	89	38	64	67	X	X	X	X	-	-
153	19	145	99	111	51	79	105	-	X	X	X	-	-
203	25	171	114	122	57	92	121	-	-	X	X	-	-
253	25	203	140	146	73	108	146	-	-	-	X	X	-
303	38	235	164	165	86	121	171	-	-	-	X	X	-
353	51	273	186	194	102	137	197	-	-	-	-	X	X
403	64	311	216	229	113	155	229	-	-	-	-	-	X
453	76	337	244	229	122	171	257	-	-	-	-	-	X

KD20 Spacer Coupling

The KD20 coupling is designed for heavy duty applications requiring moderate shaft separations, and was specifically engineered to meet API 610 specifications for industrial pump couplings. Consisting of three main parts; two hubs and a factory assembled flexible center section which installs or drops out as one unit, the KD20 greatly simplifies installation or maintenance.

The larger size couplings available in the KD20 Series allow application to larger, high power machines. The flexible center section is piloted to insure excellent dynamic balance; AGMA Class 9 is standard, as-manufactured. Dynamic balance to AGMA Class 10 or Class 11 are available options. The close tolerance bolts and safety overload washers insure superior performance and trouble free operation. An anti-flail safety feature is also included in the flexible center section assembly.

For smaller sizes or lower power requirements, consider a KD2 disc coupling; or for economy duty, check out a KD21 disc coupling. If a flexible hub design is needed, look to the KD22 disc coupling.



- **Heavy Duty, Larger Sizes**
- **Standard Shaft Separations for Industrial Pumps**
- **Factory Assembled Flexible Center Sections**
- **Designed Specifically for API 610**
- **High Power, Unitized Disc Packs**

KD20 Couplings use HT Disc Packs.

KD20 Rough Bore Part Numbers

Coupling Size	Between Shat End	Complete Coupling w/2 Std. Hubs Rough Bore	Complete Coupling w/1 Std. & 1 Long Hub Rough Bore	Complete Coupling w/2 Long Hubs Rough Bore	Complete Coupling w/1 Jumbo Hub & 1 Std. Hub	Complete Coupling w/2 Jumbo hubs	Complete Coupling w/1 Long & 1 Jumbo Hub	Center Assembly
204	178	204 KD 20 SS700	204 KD 20 LS700	204 KD 20 LL700	204 KD 20 JS700	204 KD 20 JJ700	204 KD 20 JL700	204 KD 20 CA700
	203	204 KD 20 SS800	204 KD 20 LS800	204 KD 20 LL800	204 KD 20 JS800	204 KD 20 JJ800	204 KD 20 JL800	204 KD 20 CA800
	229	204 KD 20 SS900	204 KD 20 LS900	204 KD 20 LL900	204 KD 20 JS900	204 KD 20 JJ900	204 KD 20 JL900	204 KD 20 CA900
	254	204 KD 20 SS1000	204 KD 20 LS1000	204 KD 20 LL1000	204 KD 20 JS1000	204 KD 20 JJ1000	204 KD 20 JL1000	204 KD 20 CA1000
	305	204 KD 20 SS1200	204 KD 20 LS1200	204 KD 20 LL1200	204 KD 20 JS1200	204 KD 20 JJ1200	204 KD 20 JL1200	204 KD 20 CA1200
	356	204 KD 20 SS1400	204 KD 20 LS1400	204 KD 20 LL1400	204 KD 20 JS1400	204 KD 20 JJ1400	204 KD 20 JL1400	204 KD 20 CA1400
254	178	254 KD 20 SS700	254 KD 20 LS700	254 KD 20 LL700	254 KD 20 JS700	254 KD 20 JJ700	254 KD 20 JL700	254 KD 20 CA700
	203	254 KD 20 SS800	254 KD 20 LS800	254 KD 20 LL800	254 KD 20 JS800	254 KD 20 JJ800	254 KD 20 JL800	254 KD 20 CA800
	229	254 KD 20 SS900	254 KD 20 LS900	254 KD 20 LL900	254 KD 20 JS900	254 KD 20 JJ900	254 KD 20 JL900	254 KD 20 CA900
	254	254 KD 20 SS1000	254 KD 20 LS1000	254 KD 20 LL1000	254 KD 20 JS1000	254 KD 20 JJ1000	254 KD 20 JL1000	254 KD 20 CA1000
	305	254 KD 20 SS1200	254 KD 20 LS1200	254 KD 20 LL1200	254 KD 20 JS1200	254 KD 20 JJ1200	254 KD 20 JL1200	254 KD 20 CA1200
	356	254 KD 20 SS1400	254 KD 20 LS1400	254 KD 20 LL1400	254 KD 20 JS1400	254 KD 20 JJ1400	254 KD 20 JL1400	254 KD 20 CA1400
304	178	304 KD 20 SS700	304 KD 20 LS700	304 KD 20 LL700	304 KD 20 JS700	304 KD 20 JJ700	304 KD 20 JL700	304 KD 20 CA700
	203	304 KD 20 SS800	304 KD 20 LS800	304 KD 20 LL800	304 KD 20 JS800	304 KD 20 JJ800	304 KD 20 JL800	304 KD 20 CA800
	229	304 KD 20 SS900	304 KD 20 LS900	304 KD 20 LL900	304 KD 20 JS900	304 KD 20 JJ900	304 KD 20 JL900	304 KD 20 CA900
	254	304 KD 20 SS1000	304 KD 20 LS1000	304 KD 20 LL1000	304 KD 20 JS1000	304 KD 20 JJ1000	304 KD 20 JL1000	304 KD 20 CA1000
	305	304 KD 20 SS1200	304 KD 20 LS1200	304 KD 20 LL1200	304 KD 20 JS1200	304 KD 20 JJ1200	304 KD 20 JL1200	304 KD 20 CA1200
	356	304 KD 20 SS1400	304 KD 20 LS1400	304 KD 20 LL1400	304 KD 20 JS1400	304 KD 20 JJ1400	304 KD 20 JL1400	304 KD 20 CA1400
354	229	354 KD 20 SS900	354 KD 20 LS900	354 KD 20 LL900	354 KD 20 JS900	354 KD 20 JJ900	354 KD 20 JL900	354 KD 20 CA900
	254	354 KD 20 SS1000	354 KD 20 LS1000	354 KD 20 LL1000	354 KD 20 JS1000	354 KD 20 JJ1000	354 KD 20 JL1000	354 KD 20 CA1000
	305	354 KD 20 SS1200	354 KD 20 LS1200	354 KD 20 LL1200	354 KD 20 JS1200	354 KD 20 JJ1200	354 KD 20 JJ1200	354 KD 20 CA1200
	356	354 KD 20 SS1400	354 KD 20 LS1400	354 KD 20 LL1400	354 KD 20 JS1400	354 KD 20 JJ1400	354 KD 20 JL1400	354 KD 20 CA1400
404	254	404 KD 20 SS1000	404 KD 20 LS1000	404 KD 20 LL1000	404 KD 20 JS1000	404 KD 20 JJ1000	404 KD 20 JL1000	404 KD 20 CA1000
	305	404 KD 20 SS1200	404 KD 20 LS1200	404 KD 20 LL1200	404 KD 20 JS1200	404 KD 20 JJ1200	404 KD 20 JL1200	404 KD 20 CA1200
	356	404 KD 20 SS1400	404 KD 20 LS1400	404 KD 20 LL1400	404 KD 20 JS1400	404 KD 20 JJ1400	404 KD 20 JL1400	404 KD 20 CA1400
454	254	454 KD 20 SS1000	454 KD 20 LS1000	454 KD 20 LL1000	454 KD 20 JS1000	454 KD 20 JJ1000	454 KD 20 JL1000	454 KD 20 CA1000
	305	454 KD 20 SS1200	454 KD 20 LS1200	454 KD 20 LL1200	454 KD 20 JS1200	454 KD 20 JJ1200	454 KD 20 JL1200	454 KD 20 CA1200
	356	454 KD 20 SS1400	454 KD 20 LS1400	454 KD 20 LL1400	454 KD 20 JS1400	454 KD 20 JJ1400	454 KD 20 JL1400	454 KD 20 CA1400

① All finish bores and keyways per AGMA 9002-A86 commercial standard tolerances.

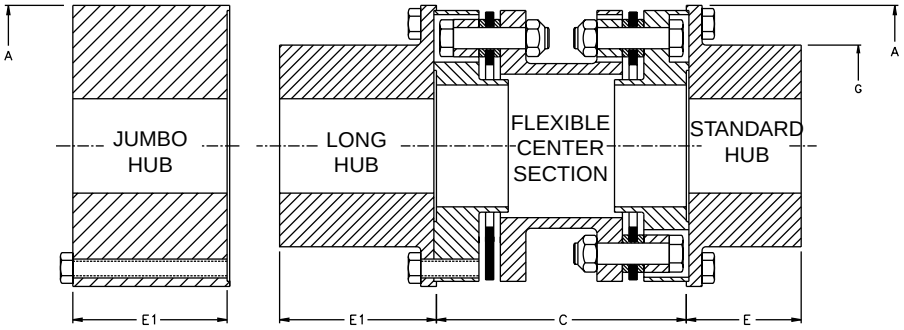
①**Note: For Finish Bore add FB to Part Number and specify bore.**

Selection Data

Size	Maximum Bores (mm)		Coupling Rating (kW/RPM)	Torque Rating		② Maximum Speed (RPM)	Total ① Weight (kgs)	Total ① WR² (kgm²)	Spacer Tube		Axial Capacity (mm)
	Std. & Long Hub	Jumbo Hub		Continuous (Nm)	Peak (Nm)				Weight (kgs)	WR² (kgm²)/m	
204	83	117	.43	4.07	8.14	13000	17.8	.067	14.5	.031	±2.8
254	102	143	.62	5.88	11.8	11200	27.8	.149	14.1	.050	±3.6
304	121	165	1.1	10.1	20.1	9900	47.2	.349	50.9	.093	±4.3
354	140	194	1.8	17.0	33.9	8800	78.0	.771	35.0	.197	±5.1
404	159	222	2.5	24.3	48.6	7800	114	1.44	39.5	.280	±5.7
454	081	238	3.0	28.8	57.6	7200	137	2.11	45.4	.427	±6.4
504	191	-	4.3	40.7	81.4	6600	194	3.40	65.5	.722	±7.0
554	210	-	6.0	57.1	114	6100	258	5.33	69.5	.862	±7.6
604	229	-	7.8	74.6	149	5600	352	8.64	93.0	1.33	±8.1
705	276	-	18	171	341	4500	617	22.7	168	3.50	±6.9
805	311	-	27	261	522	4000	934	44.0	225	5.85	±7.9
905	343	-	31	294	588	3600	1130	66.5	209	7.64	±10

① Data based on Min. "C" dimensions, maximum bores and standard hubs.

② See Balance Specifications page 107.



Dimensional Data

Size	A (mm)	Max C Bore (mm)	Min. C Bore (mm)	E (mm)	E_1 (mm)	G (mm)	N_o (mm)	N_i (mm)	Stock "C" Dimension (mm)					
									89	111	127	178	203	229
204	168	114	152	57	92	121	99	86	X	X	X	X	X	X
254	200	140	152	73	108	146	134	114	X	X	X	X	X	X
304	235	164	178	86	121	171	140	127	X	X	X	X	X	X
354	273	186	216	102	137	197	159	140	-	-	X	X	X	X
404	305	216	254	113	155	229	178	159	-	-	-	X	X	X
454	330	244	254	122	171	257	203	184	-	-	-	X	X	X
504	359	251	279	175	–	267	222	197	-	-	-	-	-	-
554	391	273	318	191	–	292	235	210	-	-	-	-	-	-
604	429	305	337	222	–	324	254	222	-	-	-	-	-	-
705	530	368	406	248	–	387	311	264	-	-	-	-	-	-
805	594	416	483	273	–	438	349	292	-	-	-	-	-	-
905	657	457	483	298	–	483	403	359	-	-	-	-	-	-

* Long hubs are available for sizes 204 to 454 only.

Component Parts

Description	Part Number
Standard Hub	SHUB
Long Hub	LHUB
Jumbo Hub	JHUB
*Center Assembly for x.xx Shaft Separation	CAXXX
**HT Disc Pack Assembly	HTDP
**HT Disc Pack Fastener Set	HTFS
**Flange Fastener Set	FFSHT
**Jumbo Hub Fastener Set	JFSHT

* Center Assembly includes (2) disc packs, (2) disc pack fastener sets.

** For Disc Packs and Fastener Sets, do not include "Series" number in the part number.

How to Order Components

103 KD 20 SHUB

- SHUB — component
- 20 — series
- KD — model
- 103 — size

How to Order Disc Packs and Fastener Sets

103 KD HTDP

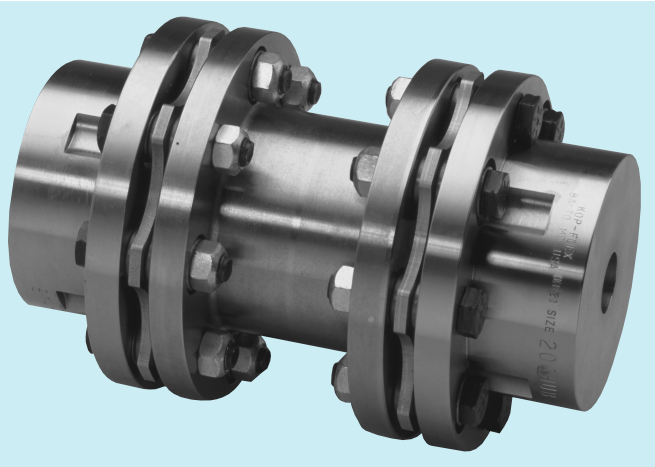
- HTDP — component
- KD — model
- 103 — size

KD21 Spacer Coupling

The KD21 coupling is designed for medium and heavy duty applications requiring moderate shaft separations. The minimal number of components yields an economical disc coupling solution to spacer applications. The larger sizes available in the KD21 Series allow application to larger, high power machines.

Consisting of three main parts; two hubs and a center spacer which installs or drops out using unitized disc packs, the KD21 simplifies installation or maintenance. The unitized disc packs and close tolerance bolts insure good dynamic balance; AGMA Class 9 is standard, as-manufactured. Dynamic balance to AGMA Class 10 and conformance to API 610 are available options. The close tolerance bolts and safety overload washers insure superior performance and trouble free operation.

If a coupling with a factory assembled flexible center section is desired, consider a KD20 or KD2 disc coupling; or for lower power requirements, check out a KD50 disc coupling. If a flexible hub design is needed, look to the KD22 disc coupling.



- **Heavy Duty, Larger Sizes**
- **Economical Spacer Series**
- **Standard Shaft Separations for Industrial Pumps**
- **Drop-Out, Unitized Disc Packs**

KD21 couplings use HT Disc Packs.

Coupling Size	Between Shaft Ends*	Complete Coupling with 2 Std. Hubs		Complete Coupling with 1 Std. Hub and 1 Long Hub	
		Rough Bore	Finish Bore	Rough Bore	Finish Bore
103	89	103 KD 21 SS350	103 KD 21 SS350 FB	103 KD 21 LS350	103 KD 21 LS350 FB
	127	103 KD 21 SS500	103 KD 21 SS500 FB	103 KD 21 LS500	103 KD 21 LS500 FB
153	127	153 KD 21 SS500	153 KD 21 SS500 FB	153 KD 21 LS500	153 KD 21 LS500 FB
204	127	204 KD 21 SS500	204 KD 21 SS500 FB	204 KD 21 LS500	204 KD 21 LS500 FB
	178	204 KD 21 SS700	204 KD 21 SS700 FB	204 KD 21 LS700	204 KD 21 LS700 FB
	229	204 KD 21 SS900	204 KD 21 SS900 FB	204 KD 21 LS900	204 KD 21 LS900 FB
	254	204 KD 21 SS1000	204 KD 21 SS1000 FB	204 KD 21 LS1000	204 KD 21 LS1000 FB
	305	204 KD 21 SS1200	204 KD 21 SS1200 FB	204 KD 21 LS1200	204 KD 21 LS1200 FB
254	127	254 KD 21 SS500	254 KD 21 SS500 FB	254 KD 21 LS500	254 KD 21 LS500 FB
	178	254 KD 21 SS700	254 KD 21 SS700 FB	254 KD 21 LS700	254 KD 21 LS700 FB
	229	254 KD 21 SS900	254 KD 21 SS900 FB	254 KD 21 LS900	254 KD 21 LS900 FB
	356	254 KD21 SS1400	254 KD21 SS1400 FB	254 KD 21 LS1400	254 KD 21 LS1400 FB
304	178	304 KD 21 SS700	304 KD 21 SS700 FB	304 KD 21 LS700	304 KD 21 LS700 FB
	229	304 KD 21 SS900	304 KD 21 SS900 FB	304 KD 21 LS900	304 KD 21 LS900 FB
	356	304 KD 21 SS1400	304 KD 21 SS1400 FB	304 KD 21 LS1400	304 KD 21 LS1400 FB
354	178	354 KD 21 SS700	354 KD 21 SS700 FB	354 KD 21 LS700	354 KD 21 LS700 FB
	229	354 KD 21 SS900	354 KD 21 SS900 FB	354 KD 21 LS900	354 KD 21 LS900 FB
	356	354 KD 21 SS1400	354 KD 21 SS1400 FB	354 KD 21 LS1400	354 KD 21 LS1400 FB
404	203	404 KD 21 SS800	404 KD 21 SS800 FB	404 KD 21 LS800	404 KD 21 LS800 FB
	356	404 KD 21 SS1400	404 KD 21 SS1400 FB	404 KD 21 LS1400	404 KD 21 LS1400 FB
454	203	454 KD 21 SS800	454 KD 21 SS800 FB	454 KD 21 LS800	454 KD 21 LS800 FB

* For non-standard shaft separations, spacers can be manufactured to order.

Component Parts

Description	Part Number
Standard Hub	SHUB
Long Hub	LHUB
*HT Disc Pack Assembly	HTDP
*HT Disc Pack Fastener Set	HTFS

* For Disc Packs and Fastener Sets, do not include "Series" number in the part number.

How to Order Components

103 KD 21 SHUB

- SHUB — component
- 21 — series
- KD — model
- 103 — size

How to Order Disc Packs and Fastener Sets

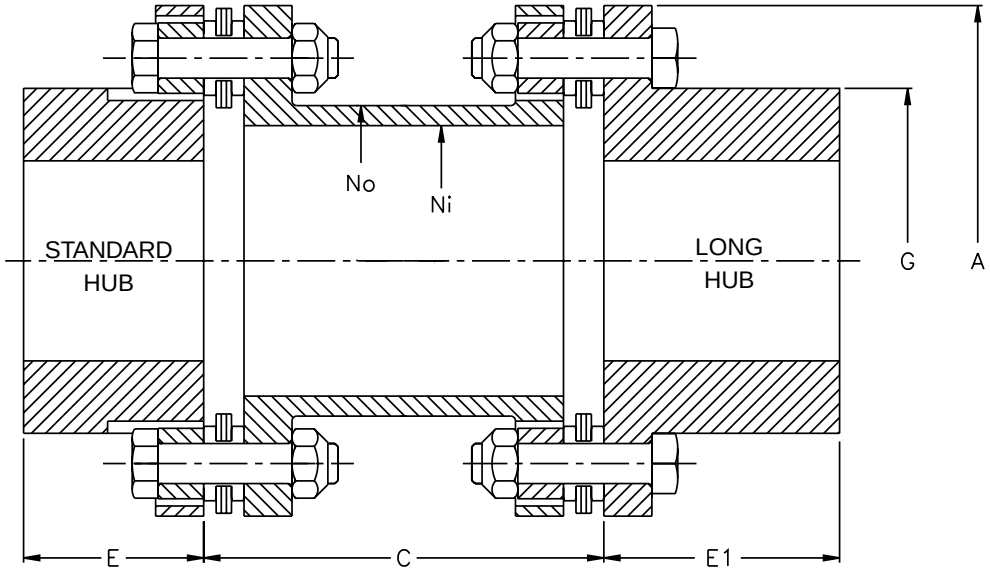
103 KD HTDP

- HTDP — component
- KD — model
- 103 — size

Selection Data

Size	Maximum Bores (mm)	Coupling Rating (kW/RPM)	Torque Rating		② Maximum Speed (RPM)	Total ① Weight (kgs)	Total ① WR² (kgm²)	Spacer Tube		Axial Capacity (mm)
			Continuous (Nm)	Peak (Nm)				Weight (kgs)	WR² (kgm²)/m	
103	44	.05	.45	.91	18200	3.54	.005	4.29	.003	±2.0
153	64	.16	1.54	3.07	14800	8.03	.020	6.96	.009	±3.6
204	76	.43	4.07	8.14	13000	13.5	.047	14.5	.031	±2.8
254	95	.62	5.88	11.8	11200	20.1	.098	14.1	.050	±3.6
304	114	1.1	10.1	20.1	9900	32.0	.218	20.9	.093	±4.3
354	127	1.8	17.0	33.9	8800	53.1	.481	35.0	.196	±5.1
404	140	2.5	24.3	48.6	7800	80.3	.923	39.5	.280	±5.7
454	162	3.0	28.8	57.6	7200	93.0	1.28	45.4	.427	±6.4
504	178	4.3	40.7	81.4	6600	138	2.19	65.5	.722	±7.0
554	197	6.0	57.1	114	6100	182	3.46	69.5	.862	±7.6
604	216	7.8	74.6	149	5600	232	5.22	93.0	1.33	±8.1
705	273	18	171	341	4500	418	14.7	168	3.50	±6.9
805	305	27	261	522	4000	612	27.5	225	5.85	±7.9
905	343	31	294	588	3600	771	42.8	211	7.79	±10

① Data based on min. “C” dimensions and maximum bores.
② See Balance Specifications page 107.



Dimensional Data

Size	A (mm)	Min. C (mm)	E (mm)	E_1* (mm)	G (mm)	N_o (mm)	N_i (mm)	Stock "C" Dimension (mm)							
								89	127	178	203	229	254	305	356
103	100	70	42	49	65	57	51	X	X	-	-	-	-	-	-
153	137	86	49	62	90	76	68	-	X	-	-	-	-	-	-
204	162	99	60	77	110	99	86	-	X	X	-	X	X	X	-
254	194	99	76	91	136	134	114	-	X	X	-	X	-	-	X
304	229	121	90	106	156	140	127	-	-	X	-	X	-	-	X
354	267	146	105	121	178	159	140	-	-	X	-	X	-	-	X
404	298	168	117	135	201	178	159	-	-	-	X	-	-	-	X
454	324	168	133	153	224	203	184	-	-	-	X	-	-	-	-
504	353	191	149	–	244	222	197	-	-	-	-	-	-	-	-
554	384	219	182	–	266	235	210	-	-	-	-	-	-	-	-
604	419	232	195	–	288	254	222	-	-	-	-	-	-	-	-
705	521	276	229	–	357	311	264	-	-	-	-	-	-	-	-
805	584	330	257	–	400	249	292	-	-	-	-	-	-	-	-
905	648	330	300	–	454	403	359	-	-	-	-	-	-	-	-

* Long hubs are available for sizes 103 to 454 only.

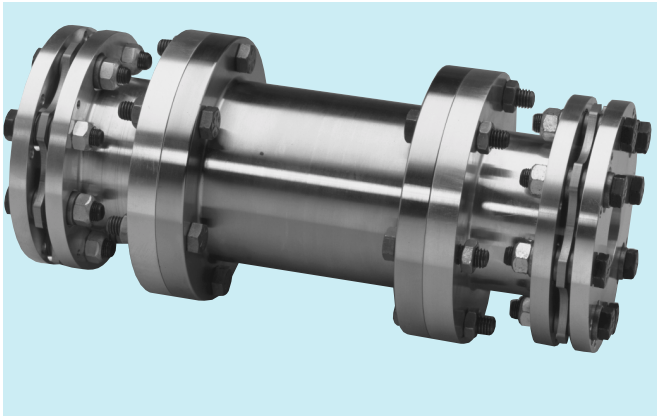
KD22 Spacer Coupling

The KD22 coupling is designed to be the most direct replacement for standard spacer style gear couplings and is meant for heavy duty applications where the flexible section must be located on the equipment shafts. The power capacity of the KD22 coupling is the highest in the industry, allowing the easiest conversion from a lubricated coupling to a low maintenance disc coupling.

Consisting of three main parts; two flexible half couplings and a center spacer which installs or drops out, the KD22 simplifies installation or maintenance and allows the connected equipment to be installed or removed keeping each half coupling completely assembled. The unitized disc packs and close tolerance bolts insure good dynamic balance; AGMA Class 8 is standard, as-manufactured. Dynamic balance to AGMA Class 9 and conformance to API 610 are available options.

The KD22 coupling employs standard gear coupling spacer flanges which can be used to provide standard electrical insulation or shear cartridge features.

For other spacer designs, consider KD20 or KD21 disc couplings; or for lower power requirements, check out a KD2 disc coupling.



- **Heavy Duty, Larger Sizes**
- **Flexible Shaft Hubs**
- **Reduced Overhung Weight**
- **High Power, Unitized Disc Packs**

KD22 couplings use HT Disc Packs.

Complete KD22 Couplings are made to order. Contact your local EPT representative to order.

Component Parts

Description	Part Number
Standard Hub	SHUB
*Flex Half	FH
*HT Disc Pack Assembly	HTDP
*HS Disc Pack Fastener Set	HSFS

* Flex Halves are designated by disc/spacer size, and include (1) disc pack and (1) disc pack fastener set.

** For Disc Packs Components, do not include "Series" number in the part number.

Spacer Flange Data

Coupling Size	Spacer Fastener		Spacer Flange Size
	Part No.	Wt.	
103	1 EB FS	1	1.0
153	1 1/2 EB FS	1	1.5
204	2 EB FS	1	2.0
254	2 1/2 EB FS	2	2.5
304	3 EB FS	3	3.0
354	3 1/2 EB FS	5	3.5
404	4 EB FS	5	4.0
454	4 1/2 EB FS	5	4.5
504	5 EB FS	7	5.0
554	5 1/2 EB FS	9	5.5
604	6 EB FS	14	6.0
705	7 EB FS	14	7.0
805	8 EB FS	28	8.0
905	9 EB FS	34	9.0

How to Order Hubs

103 KD 10 SHUB
- SHUB — component
- 10 — series
- KD — model
- 103 — size

Note: KD10 Hubs are used on KD22 Couplings.

How to Order Flex Halves

103/1.0 KD 42 FH
- FH — component
- 42 — series
- KD — model
- 103/1.0 — disc/spacer size

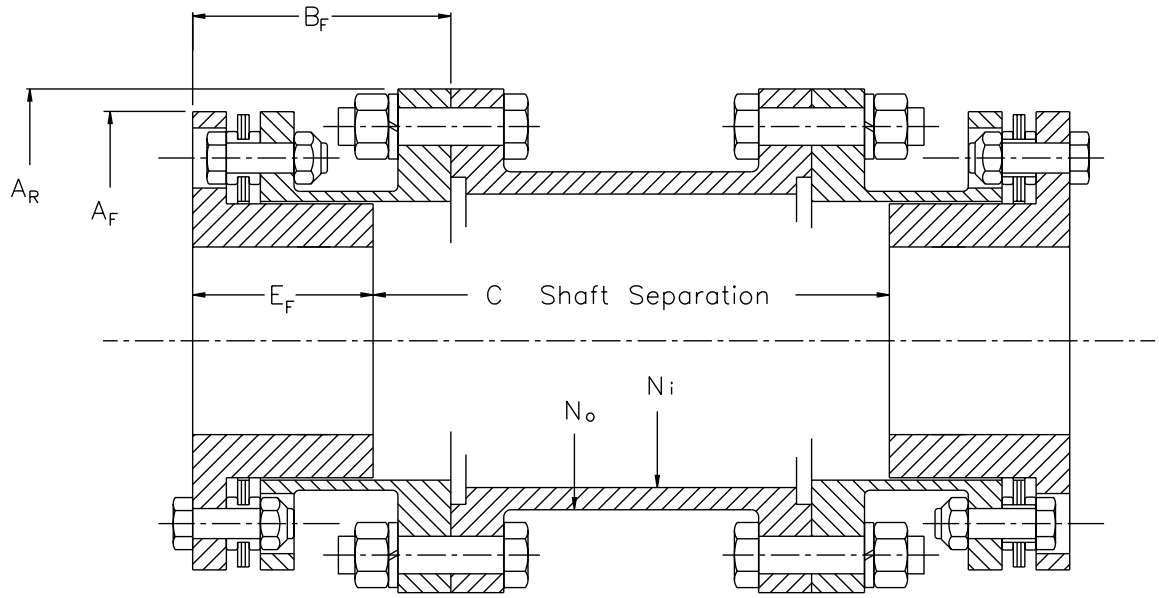
Note: KD42 Flex Halves are used on KD22 Couplings.
See Spacer Flange Data for sizes.

How to Order Disc Pack Components

103 KD HTDP
- HTDP — component
- KD — model
- 103 — size

Selection Data

Size	Maximum Bores (mm)	Max. Coupling Rating (kw/100 RPM)	Torque Rating		Maximum Speed (RPM)	Axial Capacity (mm)
			Continuous (Nm)	Peak (Nm)		
103	38	.05	.45	.90	17000	±2.0
153	54	.16	1.54	3.07	13500	±3.6
204	67	.43	4.07	8.14	12000	±2.8
254	83	.62	5.88	11.8	10600	±3.6
304	95	1.1	10.1	20.1	9800	±4.3
354	108	1.8	17.0	33.9	8400	±5.1
404	121	2.5	24.3	48.6	7400	±5.7
454	140	3.0	28.8	57.6	6750	±6.4
504	146	4.3	40.7	81.4	6000	±7.0
554	159	6.0	57.1	114	5500	±7.6
604	171	7.8	74.6	149	5100	±8.1
705	216	18	171	341	4500	±6.9
805	241	27	144	289	3950	±7.9
905	292	31	202	403	3300	±10



Dimensional Data

Size	A_F (mm)	A_R (mm)	B_F (mm)	E_F (mm)	Min. C (mm)	N_o (mm)	N_i (mm)
103	100	116	60	43	89	73	64
153	140	152	80	54	127	95	83
204	160	178	103	70	152	121	105
254	190	213	113	77	178	143	124
304	230	240	127	91	178	168	148
354	270	279	147	111	191	197	173
404	300	318	168	132	203	222	199
454	320	346	171	135	203	248	222
504	350	389	189	153	229	279	249
554	380	425	215	176	203	305	272
604	420	457	209	188	178	470	310
705	520	527	241	221	178	381	348
805	580	591	279	249	229	451	431
905	650	660	300	276	229	505	483

KD33 Cooling Tower

Designed specifically for cooling tower drives and long span applications, the KD33 coupling is easy to handle, install and maintain. The drive shaft is a corrosion resistant lightweight composite tube of either special fiberglass or carbon graphite fibers engineered to provide the optimum combination of strength and bending stiffness required of cooling tower couplings.

The coupling hubs, adapters, disc packs and hardware are all stainless steel for high strength and corrosion resistance. The unitized disc packs are capable of up to 1/2° continuous misalignment, which ensures trouble free operation using close tolerance bolts and standard drive shaft dynamic balance.

The couplings shown below are stocked and available for quick supply; two weeks standard delivery or 24 hour premium delivery is available.

For longer shaft spans or special designs, consult Kop-Flex.

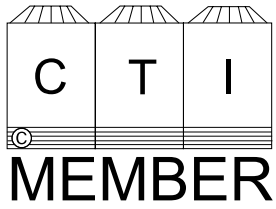
KD33 Couplings use CT Disc Packs.

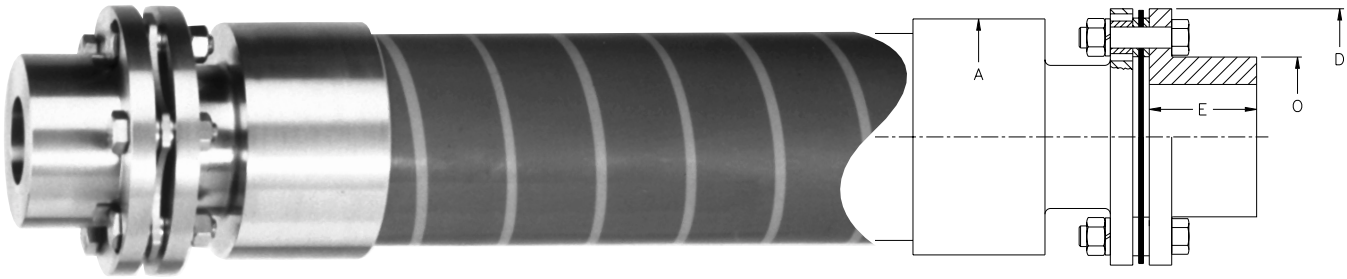
- **Composite Tubes for Low Weight and Corrosion Resistance**
- **Stainless Steel Metal Components**
- **Quick Delivery**
- **High Flexible, Unitized Disc Packs**

Part Numbers

Complete KD33 Coupling, Class 1 (Stainless Steel & Composite Shaft)
Shaft Separation Must Be Specified at Time of Order.

Size	Driveshaft	Maximum DBSE @ 1800 RPM	Maximum DBSE @ 1500 RPM	Complete Coupling Part No.	DiscPack Part No.	Disc Pack Fastener Set Part No.
153	4" (102 mm) Glass	2438	2667	153 KD 33 EG	153 KD CTDP	153 KD CTFS
153	4" (102 mm) Carbon	3302	3581	153 KD 33 C		
203	6" (152 mm) Glass	2997	3251	203 KD 33 EG	203 KD CTDP	203 KD CTFS
203	6" (152 mm) Carbon	4064	4369	203 KD 33 C		
253	6" (152 mm) Glass	2946	3251	253 KD 33 EG	253 KD CTDP	253 KD CTFS
253	6" (152 mm) Carbon	4064	4369	253 KD 33 C		





Selection and Dimensional Data

Size	Max Bore (inches)	Coupling Rating HP/100 RPM	Torque Rating (in-lb) Continuous	Torque Rating (in-lb) Peak	Nominal Tube Dia. (in)	Composite Tube Material	Maximum DBSE @ 1800 RPM (in)	Maximum DBSE @ 1500 RPM (in)	Dimensions A (in)	Dimensions E (in)	Dimensions O (in)	Dimensions D (in)
153	60	.09	.89	1.78	4" (102 mm)	E-GLASS	2438	2667	122	57	85	137
					4" (102 mm)	CARBON	3302	3581				
203	76	.17	1.63	3.25	6" (152 mm)	E-GLASS	2997	3251	175	64	108	162
					6" (152 mm)	CARBON	4064	4369				
253	95	.28	2.67	5.33	6" (152 mm)	E-GLASS	2997	3250	175	76	134	195
					6" (152 mm)	CARBON	4064	4369				