Table of Contents
Tapered Roller Bearings

Introduction

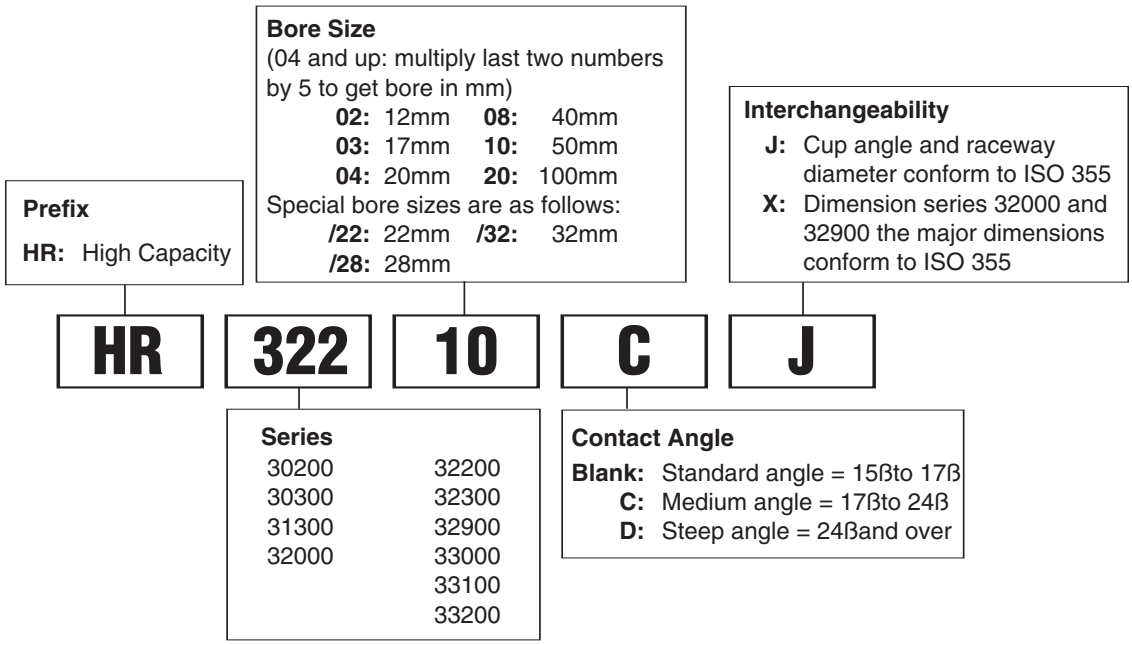
About NSK Tapered Roller Bearings

- HR Metric Taper Roller Bearings
- Inch Taper Roller Bearings

Tapered roller bearings are designed to take combined heavy radial loads and heavy thrust loads in one direction while operating at moderate speeds. The bearings shown are single row with a cone and cup (inner and outer rings) and a pressed steel retainer. **Metric** tapers feature a simplified part number for a complete bearing. **Inch** tapers require a part number for the cup and one for the cone. The difference between the metric and inch tapers is only in the dimensions of measure for the bearings.

NSK's patented **HR** metric taper offers extra capacity within the same boundary dimensions. This means that an ordinary metric taper can easily be replaced with NSK's **HR** metric taper.

Nomenclature — Metric Tapered Roller Bearings

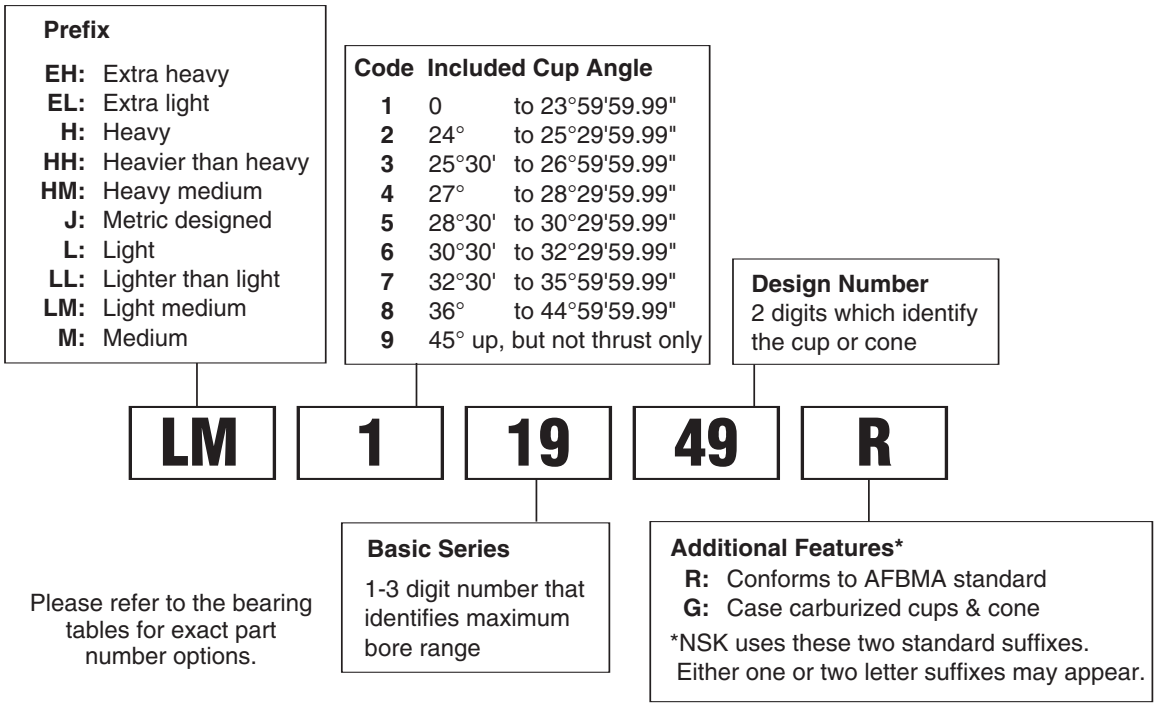


Please refer to the bearing tables for exact part number options.

Interchange — Metric Tapered Roller Bearings

DESCRIPTION		INTERCHANGE			
		NSK	SKF	Timken	FAG
Part Number	HIGH CAPACITY DESIGN	HR	--	--	--
	LIGHT	HR302xx	302xx	302xx	302xx
	MEDIUM	HR303xx	303xx	303xx	303xx
	MEDIUM, STEEP ANGLE	HR313xx	313xx	313xx	313xx
	EXTRA LIGHT, WIDE	HR329xx	329xx	329xx	329xx
	VERY LIGHT, WIDE	HR320xx	320xx	320xx	320xx
	LIGHT, WIDE	HR322xx	322xx	322xx	322xx
	MEDIUM, WIDE	HR323xx	323xx	323xx	323xx
	VERY LIGHT, EXTRA WIDE	HR330xx	330xx	330xx	330xx
	LIGHT, EXTRA WIDE	HR331xx	331xx	331xx	331xx
	MEDIUM, EXTRA WIDE	HR332xx	332xx	332xx	332xx
Suffix	MEDIUM CONTACT ANGLE	C	B	B	B
	STEEP CONTACT ANGLE	D	--	--	--
	MODIFIED INTERNAL DESIGN	X	X	X	X
	CONFORMS TO ISO 355	J	--	--	A

Nomenclature — Inch Tapered Roller Bearings



Interchange — Inch Tapered Roller Bearings

DESCRIPTION		INTERCHANGE			
		NSK	SKF	Timken	FAG
Prefix	EXTRA HEAVY	EH	EH	EH	KEH
	HEAVIER THAN HEAVY	HH	HH	HH	KHH
	HEAVY	H	H	H	KH
	HEAVY MEDIUM	HM	HM	HM	KHM
	MEDIUM	M	M	M	KM
	LIGHT MEDIUM	LM	LM	LM	KLM
	LIGHT	L	L	L	KL
	LIGHTER THAN LIGHT	LL	LL	LL	KLL
	EXTRA LIGHT	EL	EL	EL	KEL
Cup Angle	0° TO 23°59'59.99	1xxxx	1xxxx	1xxxx	1xxxx
	24° TO 25°29'59.99	2xxxx	2xxxx	2xxxx	2xxxx
	25°30' TO 26°59'59.99	3xxxx	3xxxx	3xxxx	3xxxx
	27° TO 28°29'59.99	4xxxx	4xxxx	4xxxx	4xxxx
	28°30' TO 30°29'59.99	5xxxx	5xxxx	5xxxx	5xxxx
	30°30' TO 32°29'59.99	6xxxx	6xxxx	6xxxx	6xxxx
	32°30' TO 35°59'59.99	7xxxx	7xxxx	7xxxx	7xxxx
	36° TO 44°59'59.99	8xxxx	8xxxx	8xxxx	8xxxx
	45° up, but not thrust only	9xxxx	9xxxx	9xxxx	9xxxx
	CONFORMS TO AFBMA STANDARD	R			
	CASE CARBURIZED CUP & CONE	G			

Tapered Roller Bearing Applications

Shown below are some common applications utilizing a tapered roller bearing design. The design allows for combinations of heavy radial and thrust loads with low to moderate speeds. This section covers only single row tapers although NSK manufactures a full line of two and four row tapers as well. For more details on multiple row tapered roller bearings, please see the Rolling Mill section of this catalog or contact an NSK representative.

Metric designs function the same as their inch series cousins, the difference lies in the units of measure. NSK metric tapers are standardly supplied with cup and cone together, while inch series bearings are available by the cup, cone, or cup and cone. The applications shown below are for either metric or inch bearings, with the equipment manufacturer choosing the preference of dimensional measurements. Metric tapers are usually found in equipment designed in Europe or Asia.

- Guide Boxes in Bar and Rod Mills
- Pumps and Compressors
- Cranes and Hoists
- Gears and Drives
- Stamping Presses
- Machine Tool Spindles
- Bow Thrusts on Ships
- Speed Reducers
- Transmissions
- Sheaves
- Conveyor and Transfer Equipment
- Coupling Equipment
- Construction Equipment
- Mining Equipment
- Oil Field Equipment
- Automotive Front and Rear Axles
- Plastic Forming Equipment
- Agriculture Equipment
- Motorcycle Wheels
- Pinion Shafts of Differential Gears
- Drum Shafts
- Crankshafts
- Crushers

Tapered Roller Bearings

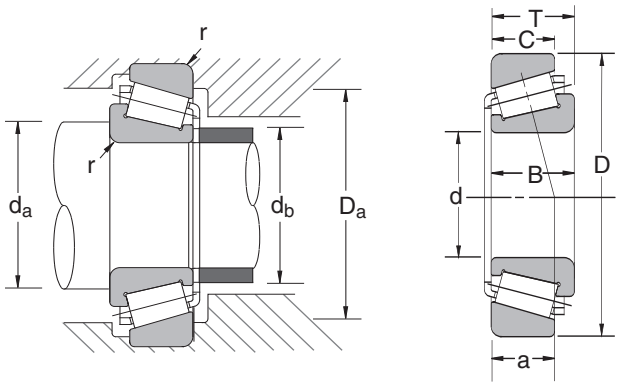
30200 Metric Series

Bore Diameter 15 – 320 mm
0.5906 – 12.5984 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR30202	15	0.5906	35	1.3780	11.75	0.4626	11	0.4331	10	0.3937	0.02	0.906	0.748	1.181
HR30203J	17	0.6693	40	1.5748	13.25	0.5217	12	0.4724	11	0.4331	0.04	1.024	0.906	1.339
HR30204J	20	0.7874	47	1.8504	15.25	0.6004	14	0.5512	12	0.4724	0.04	1.142	1.063	1.614
HR30205J	25	0.9843	52	2.0472	16.25	0.6398	15	0.5906	13	0.5118	0.04	1.339	1.220	1.811
HR30206J	30	1.1811	62	2.4409	17.25	0.6791	16	0.6299	14	0.5512	0.04	1.535	1.457	2.205
HR30207J	35	1.3780	72	2.8346	18.25	0.7185	17	0.6693	15	0.5906	0.06	1.811	1.693	2.480
HR30208J	40	1.5748	80	3.1496	19.75	0.7776	18	0.7087	16	0.6299	0.06	2.008	1.890	2.795
HR30209J	45	1.7717	85	3.3465	20.75	0.8169	19	0.7480	16	0.6299	0.06	2.205	2.087	2.992
HR30210J	50	1.9685	90	3.5433	21.75	0.8563	20	0.7874	17	0.6693	0.06	2.402	2.283	3.189
HR30211J	55	2.1654	100	3.9370	22.75	0.8957	21	0.8268	18	0.7087	0.06	2.638	2.520	3.583
HR30212J	60	2.3622	110	4.3307	23.75	0.9350	22	0.8661	19	0.7480	0.06	2.835	2.717	3.976
HR30213J	65	2.5591	120	4.7244	24.75	0.9744	23	0.9055	20	0.7874	0.06	3.031	3.071	4.370
HR30214J	70	2.7559	125	4.9213	26.25	1.0335	24	0.9449	21	0.8268	0.06	3.228	3.189	4.567
HR30215J	75	2.9528	130	5.1181	27.25	1.0728	25	0.9843	22	0.8661	0.06	3.425	3.346	4.764
HR30216J	80	3.1496	140	5.5118	28.25	1.1122	26	1.0236	22	0.8661	0.08	3.740	3.583	5.118
HR30217J	85	3.3465	150	5.9055	30.5	1.2008	28	1.1024	24	0.9449	0.08	3.937	3.819	5.512
HR30218J	90	3.5433	160	6.2992	32.5	1.2795	30	1.1811	26	1.0236	0.08	4.134	4.055	5.906
HR30219J	95	3.7402	170	6.6929	34.5	1.3583	32	1.2598	27	1.0630	0.08	4.449	4.331	6.220
HR30220J	100	3.9370	180	7.0866	37	1.4567	34	1.3386	29	1.1417	0.08	4.646	4.567	6.614
HR30221J	105	4.1339	190	7.4803	39	1.5354	36	1.4173	30	1.1811	0.08	4.843	4.843	7.008
HR30222J	110	4.3307	200	7.8740	41	1.6142	38	1.4961	32	1.2598	0.08	5.039	5.079	7.402
HR30224J	120	4.7244	215	8.4646	43.5	1.7126	40	1.5748	34	1.3386	0.08	5.433	5.551	7.992
HR30226J	130	5.1181	230	9.0551	43.75	1.7224	40	1.5748	34	1.3386	0.10	5.945	5.945	8.504
HR30228J	140	5.5118	250	9.8425	45.75	1.8012	42	1.6535	36	1.4173	0.10	6.339	6.457	9.291
30230	150	5.9055	270	10.6299	49	1.9291	45	1.7717	38	1.4961	0.10	6.732	6.929	10.079
30232	160	6.2992	290	11.4173	52	2.0472	48	1.8898	40	1.5748	0.10	7.126	7.559	10.866
30234	170	6.6929	310	12.2047	57	2.2441	52	2.0472	43	1.6929	0.12	7.756	7.992	11.496
30236	180	7.0866	320	12.5984	57	2.2441	52	2.0472	43	1.6929	0.12	8.150	8.386	11.890
30238	190	7.4803	340	13.3858	60	2.3622	55	2.1654	46	1.8110	0.12	8.543	8.976	12.677
30240	200	7.8740	360	14.1732	64	2.5197	58	2.2835	48	1.8898	0.12	8.937	9.528	13.465
30244	220	8.6614	400	15.7480	72	2.8346	68	2.6772	54	2.1260	0.12	9.724	10.512	15.039
30248	240	9.4488	440	17.3228	79	3.1102	72	2.8346	60	2.3622	0.12	10.512	11.339	16.614
30252	260	10.2362	480	18.8976	89	3.5039	80	3.1496	67	2.6378	0.16	11.535	12.441	18.031
30256	280	11.0236	500	19.6850	89	3.5039	80	3.1496	67	2.6378	0.16	12.323	13.346	18.819
30260	300	11.8110	540	21.2598	96	3.7795	85	3.3465	71	2.7953	0.16	13.110	13.976	20.394
30264	320	12.5984	580	22.8346	104	4.0945	92	3.6220	75	2.9528	0.16	13.898	15.000	21.969

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR30202	3530	3210	11.00	15.00	0.32	0.12
HR30203J	4520	4470	9.50	13.00	0.38	0.17
HR30204J	6270	6410	8.00	11.00	0.43	0.28
HR30205J	7190	7870	7.10	10.00	0.50	0.35
HR30206J	9670	10700	6.00	8.00	0.55	0.52
HR30207J	12100	13400	5.30	7.10	0.59	0.75
HR30208J	14300	15700	4.80	6.30	0.65	0.97
HR30209J	15400	17900	4.30	6.00	0.72	1.08
HR30210J	17100	20600	4.00	5.30	0.77	1.23
HR30211J	21200	25400	3.60	5.00	0.82	1.62
HR30212J	23400	27700	3.40	4.50	0.87	2.05
HR30213J	27400	33900	3.00	4.00	0.94	2.60
HR30214J	29700	36600	2.80	4.00	1.01	2.87
HR30215J	32100	40900	2.80	3.80	1.06	3.15
HR30216J	35300	43800	2.60	3.40	1.11	3.73
HR30217J	41400	52400	2.40	3.20	1.19	4.67
HR30218J	45200	57600	2.20	3.00	1.25	5.73
HR30219J	50100	64300	2.20	2.80	1.33	6.90
HR30220J	57300	74200	2.00	2.60	1.42	8.33
HR30221J	62900	82100	1.90	2.60	1.50	9.94
HR30222J	70800	94400	1.80	2.40	1.58	11.64
HR30224J	75300	101000	1.60	2.20	1.75	13.85
HR30226J	84300	114000	1.50	2.00	1.80	15.99
HR30228J	87700	116000	1.40	1.90	1.93	19.27
30230	97800	128000	1.30	1.70	1.98	23.59
30232	106000	137000	1.20	1.60	2.17	28.89
30234	118000	155000	1.10	1.50	2.35	35.50
30236	117000	156000	1.10	1.40	2.44	36.60
30238	130000	178000	1.00	1.30	2.47	44.32
30240	145000	200000	0.90	1.30	2.58	52.48
30244	182000	259000	0.85	1.10	2.94	74.09
30248	223000	315000	0.75	1.00	3.35	99.67
30252	268000	382000	0.67	0.90	3.72	133.84
30256	279000	427000	0.63	0.85	3.88	146.19
30260	324000	472000	0.60	0.80	4.14	177.72
30264	369000	544000	0.53	0.75	4.48	218.96

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

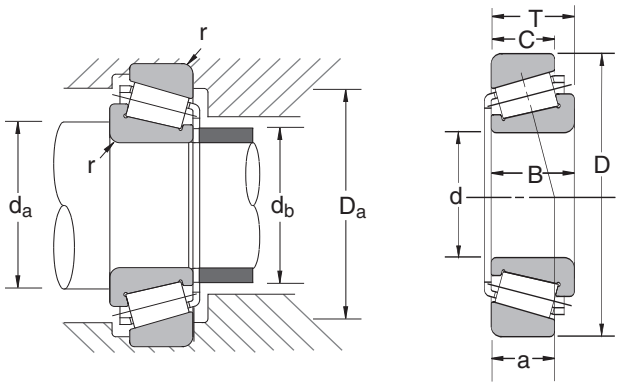
30300 Metric Series

Bore Diameter 15 – 260 mm
0.5906 – 10.2362 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR30302J	15	0.5906	42	1.6535	14.25	0.5610	13	0.5118	11	0.4331	0.04	0.945	0.866	1.417
HR30303J	17	0.6693	47	1.8504	15.25	0.6004	14	0.5512	12	0.4724	0.04	1.024	0.945	1.614
HR30304J	20	0.7874	52	2.0472	16.25	0.6398	15	0.5906	13	0.5118	0.06	1.220	1.063	1.732
HR303/22	22	0.8661	56	2.2047	17.25	0.6791	16	0.6299	14	0.5512	0.06	1.280	1.197	1.850
HR30305J	25	0.9843	62	2.4409	18.25	0.7185	17	0.6693	15	0.5906	0.06	1.417	1.339	2.126
HR303/28	28	1.1024	68	2.6772	19.75	0.7776	18	0.7087	15	0.5906	0.06	1.535	1.457	2.323
HR30306J	30	1.1811	72	2.8346	20.75	0.8169	19	0.7480	16	0.6299	0.06	1.614	1.575	2.480
HR303/32	32	1.2598	75	2.9528	21.75	0.8563	20	0.7874	17	0.6693	0.06	1.693	1.654	2.598
HR30307J	35	1.3780	80	3.1496	22.75	0.8957	21	0.8268	18	0.7087	0.06	1.850	1.772	2.795
HR30308J	40	1.5748	90	3.5433	25.25	0.9941	23	0.9055	20	0.7874	0.06	2.047	2.047	3.189
HR30309J	45	1.7717	100	3.9370	27.25	1.0728	25	0.9843	22	0.8661	0.06	2.244	2.283	3.583
HR30310J	50	1.9685	110	4.3307	29.25	1.1516	27	1.0630	23	0.9055	0.08	2.559	2.559	3.937
HR30311J	55	2.1654	120	4.7244	31.5	1.2402	29	1.1417	25	0.9843	0.08	2.756	2.795	4.331
HR30312J	60	2.3622	130	5.1181	33.5	1.3189	31	1.2205	26	1.0236	0.10	3.071	3.031	4.646
HR30313J	65	2.5591	140	5.5118	36	1.4173	33	1.2992	28	1.1024	0.10	3.268	3.268	5.039
HR30314J	70	2.7559	150	5.9055	38	1.4961	35	1.3780	30	1.1811	0.10	3.465	3.504	5.433
HR30315J	75	2.9528	160	6.2992	40	1.5748	37	1.4567	31	1.2205	0.10	3.661	3.740	5.827
HR30316J	80	3.1496	170	6.6929	42.5	1.6732	39	1.5354	33	1.2992	0.10	3.858	4.016	6.220
HR30317J	85	3.3465	180	7.0866	44.5	1.7520	41	1.6142	34	1.3386	0.10	4.173	4.252	6.535
HR30318J	90	3.5433	190	7.4803	46.5	1.8307	43	1.6929	36	1.4173	0.10	4.252	4.500	7.087
HR30319J	95	3.7402	200	7.8740	49.5	1.9488	45	1.7717	38	1.4961	0.10	4.449	4.685	7.480
HR30320J	100	3.9370	215	8.4646	51.5	2.0276	47	1.8504	39	1.5354	0.10	4.646	5.039	7.913
HR30321J	105	4.1339	225	8.8583	53.5	2.1063	49	1.9291	41	1.6142	0.10	4.843	5.272	8.307
HR30322J	110	4.3307	240	9.4488	54.5	2.1457	50	1.9685	42	1.6535	0.10	5.039	5.638	8.898
HR30324J	120	4.7244	260	10.2362	59.5	2.3425	55	2.1654	46	1.8110	0.10	5.433	6.067	9.685
30326	130	5.1181	280	11.0236	63.75	2.5098	58	2.2835	49	1.9291	0.12	6.181	6.614	10.315
30328	140	5.5118	300	11.8110	67.75	2.6673	62	2.4409	53	2.0866	0.12	6.575	7.087	11.102
30330	150	5.9055	320	12.5984	72	2.8346	65	2.5591	55	2.1654	0.12	6.969	7.598	11.890
30332	160	6.2992	340	13.3858	75	2.9528	68	2.6772	58	2.2835	0.12	7.362	8.071	12.677
30334	170	6.6929	360	14.1732	80	3.1496	72	2.8346	62	2.4409	0.12	7.756	8.701	13.465
30336	180	7.0866	380	14.9606	83	3.2677	75	2.9528	64	2.5197	0.12	8.150	9.173	14.252
30338	190	7.4803	400	15.7480	86	3.3858	78	3.0709	65	2.5591	0.16	8.780	9.764	14.882
30340	200	7.8740	420	16.5354	89	3.5039	80	3.1496	67	2.6378	0.16	9.173	9.961	15.669
30344	220	8.6614	460	18.1102	97	3.8189	88	3.4646	73	2.8740	0.16	9.961	11.142	17.244
30348	240	9.4488	500	19.6850	105	4.1339	95	3.7402	80	3.1496	0.16	10.748	12.126	18.819
30352	260	10.2362	540	21.2598	113	4.4488	102	4.0157	85	3.3465	0.16	11.299	13.228	20.394

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR30302J	5310	4740	9.50	13.00	0.37	0.22
HR30303J	6560	6000	8.50	12.00	0.41	0.30
HR30304J	7870	7530	7.50	10.00	0.46	0.38
HR303/22	8320	8210	7.16	9.71	0.49	0.46
HR30305J	10700	10300	6.30	8.50	0.52	0.59
HR303/28	12400	12500	6.00	8.00	0.57	0.75
HR30306J	13400	13500	5.30	7.50	0.59	0.89
HR303/32	14600	15600	5.30	7.10	0.63	0.98
HR30307J	17100	17800	4.80	6.70	0.66	1.19
HR30308J	20300	22700	4.30	5.60	0.77	1.67
HR30309J	25200	28600	3.80	5.30	0.83	2.23
HR30310J	29200	33300	3.40	4.80	0.91	2.82
HR30311J	33700	38400	3.20	4.30	0.97	3.59
HR30312J	39100	45200	3.00	4.00	1.02	4.48
HR30313J	45000	52400	2.60	3.60	1.10	5.53
HR30314J	51000	60200	2.40	3.40	1.17	6.68
HR30315J	56900	67400	2.40	3.20	1.25	8.00
HR30316J	62000	74200	2.20	3.00	1.34	9.42
HR30317J	69700	84300	2.00	2.80	1.41	11.20
HR30318J	77600	95500	1.94	2.64	1.47	13.04
HR30319J	83200	102000	1.86	2.53	1.52	15.25
HR30320J	95500	118000	1.72	2.34	1.63	18.54
HR30321J	102000	127000	1.64	2.23	1.70	21.00
HR30322J	109000	134000	1.53	2.08	1.77	24.29
HR30324J	120000	147000	1.41	1.92	1.97	30.69
30326	123000	152000	1.30	1.80	2.12	36.60
30328	135000	166000	1.20	1.60	2.26	44.32
30330	155000	193000	1.10	1.50	2.42	53.36
30332	172000	216000	1.00	1.40	2.54	62.62
30334	190000	243000	0.95	1.30	2.76	73.87
30336	210000	277000	0.90	1.30	2.85	86.66
30338	227000	301000	0.85	1.20	3.00	101.43
30340	232000	312000	0.85	1.20	3.20	115.32
30344	321000	447000	0.75	1.00	3.36	159.64
30348	373000	526000	0.67	0.95	3.65	204.18
30352	420000	593000	0.62	0.84	4.00	251.98

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

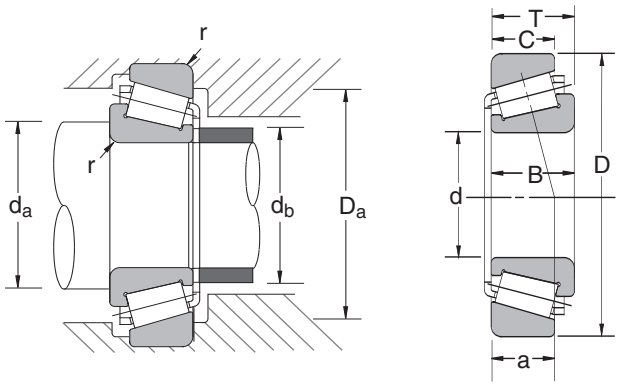
31300 Metric Series

Bore Diameter 25 – 150 mm
0.9843 – 5.9055 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR31305J	25	0.9843	62	2.4409	18.25	0.7185	17	0.6693	13	0.5118	0.06	1.398	1.346	2.087
HR31306J	30	1.1811	72	2.8346	20.75	0.8169	19	0.7480	14	0.5512	0.06	1.594	1.575	2.480
HR31307J	35	1.3780	80	3.1496	22.75	0.8957	21	0.8268	15	0.5906	0.06	1.791	1.764	2.795
HR31308J	40	1.5748	90	3.5433	25.25	0.9941	23	0.9055	17	0.6693	0.06	1.988	2.000	3.189
HR31309J	45	1.7717	100	3.9370	27.25	1.0728	25	0.9843	18	0.7087	0.06	2.185	2.244	3.583
HR31310J	50	1.9685	110	4.3307	29.25	1.1516	27	1.0630	19	0.7480	0.08	2.441	2.465	3.937
HR31311J	55	2.1654	120	4.7244	31.5	1.2402	29	1.1417	21	0.8268	0.08	2.638	2.657	4.331
HR31312J	60	2.3622	130	5.1181	33.5	1.3189	31	1.2205	22	0.8661	0.08	2.953	2.929	4.646
HR31313J	65	2.5591	140	5.5118	36	1.4173	33	1.2992	23	0.9055	0.08	3.150	3.157	5.039
HR31314J	70	2.7559	150	5.9055	38	1.4961	35	1.3780	25	0.9843	0.08	3.346	3.366	5.433
HR31315J	75	2.9528	160	6.2992	40	1.5748	37	1.4567	26	1.0236	0.08	3.543	3.618	5.827
HR31316J	80	3.1496	170	6.6929	42.5	1.6732	39	1.5354	27	1.0630	0.08	3.740	3.823	6.220
HR31317J	85	3.3465	180	7.0866	44.5	1.7520	41	1.6142	28	1.1024	0.10	4.055	4.055	6.535
HR31318J	90	3.5433	190	7.4803	46.5	1.8307	43	1.6929	30	1.1811	0.10	4.252	4.339	6.929
HR31319J	95	3.7402	200	7.8740	49.5	1.9488	45	1.7717	32	1.2598	0.10	4.449	4.528	7.323
HR31320J	100	3.9370	215	8.4646	51.5	2.0276	47	1.8504	34	1.3386	0.10	4.646	7.913	7.913
HR31321J	105	4.1339	225	8.8583	53.5	2.1063	49	1.9291	35	1.3780	0.10	4.843	8.307	8.307
HR31322J	110	4.3307	240	9.4488	54.5	2.1457	50	1.9685	36	1.4173	0.10	5.039	8.898	8.898
HR31324J	120	4.7244	260	10.2362	68	2.6771	62	2.4409	42	1.6535	0.10	5.433	9.685	9.685
HR31326J	130	5.1181	280	11.0236	63.75	2.5098	58	2.2835	39	1.5354	0.12	5.945	10.315	10.315
HR31328J	140	5.5118	300	11.8110	67.75	2.6673	62	2.4409	43	1.6929	0.12	6.339	11.102	11.102
HR31330J	150	5.9055	320	12.5984	72	2.8346	65	2.5591	45	1.7717	0.12	6.732	11.890	11.890

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR31305J	8540	9100	6.41	8.70	0.78	0.58
HR31306J	11000	11800	5.48	7.44	0.91	0.87
HR31307J	13900	15300	4.88	6.63	0.99	1.15
HR31308J	18000	20100	4.29	5.82	1.13	1.61
HR31309J	21500	24500	3.85	5.23	1.24	1.61
HR31310J	25600	29700	3.51	4.76	1.35	2.77
HR31311J	29400	34400	3.25	4.41	1.46	3.48
HR31312J	33900	39800	2.97	4.03	1.58	4.37
HR31313J	38900	46100	2.75	3.73	1.70	5.36
HR31314J	43200	51500	2.57	3.49	1.80	6.48
HR31315J	47400	56400	2.39	3.25	1.92	7.66
HR31316J	52800	63600	2.25	3.06	2.04	8.96
HR31317J	58700	70800	2.11	2.86	2.18	10.76
HR31318J	59300	70800	1.98	2.69	2.31	12.17
HR31319J	69700	84300	1.89	2.57	2.44	14.63
HR31320J	67200	114000	1.73	2.35	2.66	19.89
HR31321J	76400	121000	1.65	2.25	2.76	22.14
HR31322J	76400	136000	1.56	2.11	2.94	27.02
HR31324J	95500	164000	1.43	1.94	3.21	34.49
HR31326J	111300	184000	1.32	1.80	3.43	41.45
HR31328J	124800	215000	1.21	1.65	3.65	51.20
HR31330J	137100	247000	1.13	1.53	3.91	62.78

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

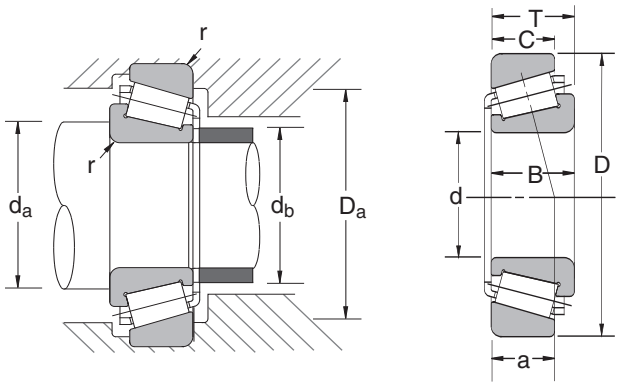
32000 Metric Series

Bore Diameter 20 – 320 mm
0.7874 – 12.5984 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR32004XJ	20	0.7874	42	1.6535	15	0.5906	15	0.5906	12	0.4724	0.02	1.102	0.945	1.457
HR320/22XJ	22	0.8661	44	1.7323	15	0.5906	15	0.5906	11.5	0.4528	0.02	1.182	1.064	1.537
HR32005XJ	25	0.9843	47	1.8504	15	0.5906	15	0.5906	11.5	0.4528	0.02	1.299	1.181	1.654
HR320/28XJ	28	1.1024	52	2.0472	16	0.6299	16	0.6299	12	0.4724	0.04	1.457	1.299	1.811
HR32006XJ	30	1.1811	55	2.1654	17	0.6693	17	0.6693	13	0.5118	0.04	1.535	1.378	1.929
HR320/32XJ	32	1.2598	58	2.2835	17	0.6693	17	0.6693	13	0.5118	0.04	1.614	1.457	2.047
HR32007XJ	35	1.3780	62	2.4409	18	0.7087	18	0.7087	14	0.5512	0.04	1.732	1.575	2.205
HR32008XJ	40	1.5748	68	2.6772	19	0.7480	19	0.7480	14.5	0.5709	0.04	1.929	1.772	2.441
HR32009XJ	45	1.7717	75	2.9528	20	0.7874	20	0.7874	15.5	0.6102	0.04	2.126	2.008	2.717
HR32010XJ	50	1.9685	80	3.1496	20	0.7874	20	0.7874	15.5	0.6102	0.04	2.323	2.205	2.913
HR32011XJ	55	2.1654	90	3.5433	23	0.9055	23	0.9055	17.5	0.6890	0.06	2.598	2.441	3.189
HR32012XJ	60	2.3622	95	3.7402	23	0.9055	23	0.9055	17.5	0.6890	0.06	2.795	2.598	3.386
HR32013XJ	65	2.5591	100	3.9370	23	0.9055	23	0.9055	17.5	0.6890	0.06	2.992	2.795	3.583
HR32014XJ	70	2.7559	110	4.3307	25	0.9843	25	0.9843	19	0.7480	0.06	3.189	3.031	3.976
HR32015XJ	75	2.9528	115	4.5276	25	0.9843	25	0.9843	19	0.7480	0.06	3.386	3.228	4.173
HR32016XJ	80	3.1496	125	4.9213	29	1.1417	29	1.1417	22	0.8661	0.06	3.583	3.504	4.567
HR32017XJ	85	3.3465	130	5.1181	29	1.1417	29	1.1417	22	0.8661	0.06	3.780	3.701	4.764
HR32018XJ	90	3.5433	140	5.5118	32	1.2598	32	1.2598	24	0.9449	0.06	4.016	3.898	5.157
HR32019XJ	95	3.7402	145	5.7087	32	1.2598	32	1.2598	24	0.9449	0.06	4.213	4.094	5.354
HR32020XJ	100	3.9370	150	5.9055	32	1.2598	32	1.2598	24	0.9449	0.06	4.409	4.291	5.551
HR32021XJ	105	4.1339	160	6.2992	35	1.3780	35	1.3780	26	1.0236	0.08	4.724	4.528	5.906
HR32022XJ	110	4.3307	170	6.6929	38	1.4961	38	1.4961	29	1.1417	0.08	4.921	4.764	6.299
HR32024XJ	120	4.7244	180	7.0866	38	1.4961	38	1.4961	29	1.1417	0.08	5.315	5.157	6.693
HR32026XJ	130	5.1181	200	7.8740	45	1.7717	45	1.7717	34	1.3386	0.08	5.709	5.669	7.480
HR32028XJ	140	5.5118	210	8.2677	45	1.7717	45	1.7717	34	1.3386	0.08	6.102	5.984	7.874
HR32030XJ	150	5.9055	225	8.8583	48	1.8898	48	1.8898	36	1.4173	0.08	6.614	6.457	8.386
HR32032XJ	160	6.2992	240	9.4488	51	2.0079	51	2.0079	38	1.4961	0.08	7.008	6.890	8.976
HR32034XJ	170	6.6929	260	10.2362	57	2.2441	57	2.2441	43	1.6929	0.08	7.402	7.362	9.764
HR32036XJ	180	7.0866	280	11.0236	64	2.5197	64	2.5197	48	1.8898	0.08	7.795	7.835	10.551
HR32038XJ	190	7.4803	290	11.4173	64	2.5197	64	2.5197	48	1.8898	0.08	8.189	8.228	10.945
HR32040XJ	200	7.8740	310	12.2047	70	2.7559	70	2.7559	53	2.0866	0.08	8.583	8.701	11.732
HR32044XJ	220	8.6614	340	13.3858	76	2.9921	76	2.9921	57	2.2441	0.12	9.488	9.606	12.835
HR32048XJ	240	9.4488	360	14.1732	76	2.9921	76	2.9921	57	2.2441	0.12	10.276	10.315	13.622
HR32052XJ	260	10.2362	400	15.7480	87	3.4252	87	3.4252	65	2.5591	0.12	11.299	11.299	15.039
HR32056XJ	280	11.0236	420	16.5354	87	3.4252	87	3.4252	65	2.5591	0.12	12.087	12.008	15.827
HR32060XJ	300	11.8110	460	18.1102	100	3.9370	100	3.9370	74	2.9134	0.12	12.874	12.992	17.402
HR32064XJ	320	12.5984	480	18.8976	100	3.9370	100	3.9370	74	2.9134	0.12	13.661	13.780	18.189

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR32004XJ	24600	6160	9.00	12.00	0.42	0.21
HR320/22XJ	25600	6610	8.50	11.00	0.44	0.23
HR32005XJ	27400	7420	8.00	11.00	0.46	0.26
HR320/28XJ	32000	8770	7.10	9.50	0.50	0.32
HR32006XJ	36000	10000	6.70	9.00	0.53	0.38
HR320/32XJ	37500	10600	6.30	8.50	0.56	0.42
HR32007XJ	43500	12500	5.60	8.00	0.59	0.51
HR32008XJ	52500	16000	5.30	7.10	0.59	0.62
HR32009XJ	60000	18700	4.50	6.30	0.65	0.78
HR32010XJ	61000	19600	4.30	6.00	0.70	0.84
HR32011XJ	81500	26300	3.80	5.30	0.78	1.25
HR32012XJ	85500	28600	3.60	5.00	0.82	1.34
HR32013XJ	86500	29700	3.40	4.50	0.88	1.42
HR32014XJ	104000	35500	3.20	4.30	0.93	1.92
HR32015XJ	109000	38400	3.00	4.00	0.99	2.04
HR32016XJ	140000	49900	2.80	3.60	1.06	2.91
HR32017XJ	143000	51900	2.60	3.60	1.11	3.04
HR32018XJ	170000	61400	2.40	3.20	1.17	3.92
HR32019XJ	173000	63600	2.40	3.20	1.23	4.15
HR32020XJ	176000	66100	2.20	3.00	1.28	4.30
HR32021XJ	204000	76400	2.00	2.80	1.35	5.47
HR32022XJ	236000	87700	2.00	2.60	1.41	6.81
HR32024XJ	242000	91000	1.80	2.40	1.56	7.21
HR32026XJ	320000	120000	1.60	2.20	1.73	11.16
HR32028XJ	325000	125000	1.60	2.20	1.83	11.73
HR32030XJ	375000	146000	1.40	2.00	1.96	14.55
HR32032XJ	425000	169000	1.30	1.80	2.09	17.49
HR32034XJ	505000	200000	1.20	1.70	2.23	23.37
HR32036XJ	640000	254000	1.20	1.60	2.38	31.53
HR32038XJ	650000	263000	1.10	1.50	2.49	32.85
HR32040XJ	760000	308000	1.00	1.40	2.65	41.67
HR32044XJ	885000	362000	0.95	1.30	2.90	53.80
HR32048XJ	920000	389000	0.85	1.20	3.11	57.77
HR32052XJ	1160000	486000	0.80	1.10	3.40	84.89
HR32056XJ	1180000	504000	0.71	1.00	3.61	89.52
HR32060XJ	1440000	607000	0.67	0.90	3.87	124.80
HR32064XJ	1510000	654000	0.63	0.85	4.11	132.30

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

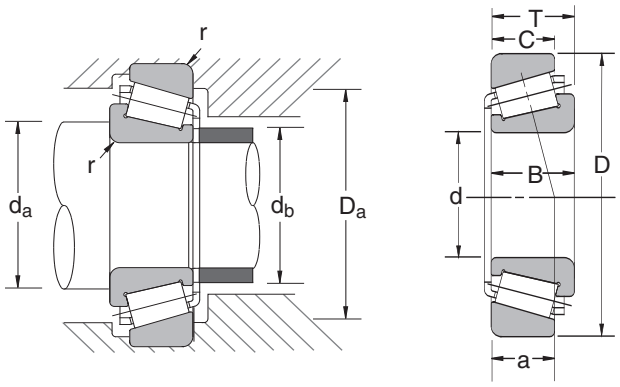
32200 Metric Series

Bore Diameter 17 – 320 mm
0.6693 – 12.5984 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR32203J	17	0.6693	40	1.5748	17.25	0.6791	16	0.6299	14	0.5512	1.00	1.024	0.874	1.339
HR32204J	20	0.7874	47	1.8504	19.25	0.7579	18	0.7087	15	0.5906	1.00	1.142	0.996	1.614
HR322/22	22	0.8661	50	1.9685	19.25	0.7579	18	0.7087	15	0.5906	1.00	1.220	1.118	1.732
HR32205J	25	0.9843	52	2.0472	19.25	0.7579	18	0.7087	16	0.6299	1.00	1.339	1.213	1.811
HR322/28	28	1.1024	58	2.2835	20.25	0.7972	19	0.7480	16	0.6299	1.00	1.457	1.358	0.000
HR32206J	30	1.1811	62	2.4409	21.25	0.8366	20	0.7874	17	0.6693	1.00	1.535	1.449	2.205
HR322/32	32	1.2598	75	2.9528	21.75	0.8563	20	0.7874	17	0.6693	1.00	1.614	1.504	0.000
HR32207J	35	1.3780	72	2.8346	24.25	0.9547	23	0.9055	19	0.7480	1.50	1.791	1.685	2.480
HR32208J	40	1.5748	80	3.1496	24.75	0.9744	23	0.9055	19	0.7480	1.50	1.988	1.909	2.795
HR32209J	45	1.7717	85	3.3465	24.75	0.9744	23	0.9055	19	0.7480	1.50	2.185	2.106	2.992
HR32210J	50	1.9685	90	3.5433	24.75	0.9744	23	0.9055	19	0.7480	1.50	2.382	2.272	3.189
HR32211J	55	2.1654	100	3.9370	26.75	1.0531	25	0.9843	21	0.8268	1.50	2.579	2.496	3.583
HR32212J	60	2.3622	110	4.3307	29.75	1.1713	28	1.1024	24	0.9449	1.50	2.776	2.705	3.976
HR32213J	65	2.5591	120	4.7244	32.75	1.2894	31	1.2205	27	1.0630	1.50	2.972	2.953	4.370
HR32214J	70	2.7559	125	4.9213	33.25	1.3091	31	1.2205	27	1.0630	1.50	3.169	3.150	4.567
HR32215J	75	2.9528	130	5.1181	33.25	1.3091	31	1.2205	27	1.0630	1.50	3.366	3.307	4.764
HR32216J	80	3.1496	140	5.5118	35.25	1.3878	33	1.2992	28	1.1024	2.00	3.622	3.543	5.118
HR32217J	85	3.3465	150	5.9055	38.5	1.5157	36	1.4173	30	1.1811	2.00	3.819	3.780	5.512
HR32218J	90	3.5433	160	6.2992	42.5	1.6732	40	1.5748	34	1.3386	2.00	4.016	4.016	5.906
HR32219J	95	3.7402	170	6.6929	45.5	1.7913	43	1.6929	37	1.4567	2.00	4.331	4.252	6.220
HR32220J	100	3.9370	180	7.0866	49	1.9291	46	1.8110	39	1.5354	2.00	4.528	4.528	6.614
HR32221J	105	4.1339	190	7.4803	53	2.0866	50	1.9685	43	1.6929	2.00	4.724	4.724	7.008
HR32222J	110	4.3307	200	7.8740	56	2.2047	53	2.0866	46	1.8110	2.00	4.921	5.000	7.402
HR32224J	120	4.7244	215	8.4646	61.5	2.4213	58	2.2835	50	1.9685	2.00	5.315	5.394	7.992
HR32226J	130	5.1181	230	9.0551	67.75	2.6673	64	2.5197	54	2.1260	2.50	5.827	5.787	8.504
HR32228J	140	5.5118	250	9.8425	71.75	2.8248	68	2.6772	58	2.2835	2.50	6.220	6.260	9.291
HR32230J	150	5.9055	270	10.6299	77	3.0315	73	2.8740	60	2.3622	2.50	6.614	6.732	10.079
HR32232J	160	6.2992	290	11.4173	84	3.3071	80	3.1496	67	2.6378	2.50	7.008	7.252	10.866
HR32234J	170	6.6929	310	12.2047	91	3.5827	86	3.3858	71	2.7953	3.00	7.520	7.756	11.496
HR32236J	180	7.0866	320	12.5984	91	3.5827	86	3.3858	71	2.7953	3.00	7.913	8.091	11.890
HR32238J	190	7.4803	340	13.3858	97	3.8189	92	3.6220	75	2.9528	3.00	8.307	8.528	12.835
HR32240J	200	7.8740	360	14.1732	104	4.0945	98	3.8583	82	3.2283	3.00	8.701	9.075	13.465
HR32244J	220	8.6614	400	15.7480	114	4.4882	108	4.2520	90	3.5433	3.00	9.724	10.118	14.882
32248	240	9.4488	440	17.3228	127	5.0000	120	4.7244	100	3.9370	3.00	10.512	11.220	16.457
32252	260	10.2362	480	18.8976	137	5.3937	130	5.1181	106	4.1732	4.00	11.535	12.008	17.795
32256	280	11.0236	500	19.6850	137	5.3937	130	5.1181	106	4.1732	4.00	12.323	12.795	18.583
32260	300	11.8110	540	21.2598	149	5.8661	140	5.5118	115	4.5276	4.00	13.110	13.858	20.157
32264	320	12.5984	580	22.8346	159	6.2598	150	5.9055	125	4.9213	4.00	13.898	15.079	21.732

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR32203J	6090	6290	9.72	13.20	0.44	0.23
HR32204J	7980	8430	8.47	11.49	0.50	0.36
HR322/22	8210	9100	7.75	10.51	0.53	0.40
HR32205J	8990	10100	7.23	9.81	0.53	0.42
HR322/28	10700	12100	6.48	8.80	0.58	0.54
HR32206J	11700	13500	6.10	8.28	0.61	0.65
HR322/32	12600	14600	5.87	7.97	0.62	0.74
HR32207J	15800	18800	5.30	7.10	0.70	1.01
HR32208J	17300	20300	4.80	6.30	0.74	1.21
HR32209J	18700	22900	4.30	6.00	0.79	1.33
HR32210J	19700	24500	4.00	5.30	0.83	1.42
HR32211J	24700	30800	3.60	5.00	0.89	1.90
HR32212J	29400	37500	3.40	4.50	0.95	2.60
HR32213J	35300	45400	3.00	4.00	1.07	3.42
HR32214J	35300	46100	2.80	4.00	1.13	3.65
HR32215J	37100	49200	2.80	3.80	1.17	3.80
HR32216J	43200	57100	2.60	3.40	1.20	4.70
HR32217J	47200	62300	2.40	3.20	1.33	5.81
HR32218J	57600	78700	2.20	3.00	1.42	7.52
HR32219J	65000	89900	2.20	2.80	1.55	9.30
HR32220J	73100	101000	2.00	2.60	1.63	11.14
HR32221J	80900	115000	1.90	2.60	1.76	13.78
HR32222J	89900	127000	1.80	2.40	1.86	16.20
HR32224J	98900	143000	1.60	2.20	2.05	19.85
HR32226J	119000	178000	1.50	2.00	2.24	25.02
HR32228J	137000	206000	1.40	1.90	2.38	31.43
HR32230J	158000	243000	1.29	1.75	2.55	39.36
HR32232J	179000	274000	1.20	1.62	2.78	49.96
HR32234J	209000	326000	1.11	1.50	3.01	61.75
HR32236J	216000	346000	1.06	1.44	3.10	65.71
HR32238J	250000	398000	1.00	1.35	3.17	77.56
HR32240J	272000	432000	0.94	1.27	3.35	94.01
HR32244J	326000	526000	0.83	1.13	3.80	130.97
32248	366000	614000	0.74	1.01	4.03	172.07
32252	427000	742000	0.69	0.93	4.57	226.60
32256	438000	776000	0.65	0.88	4.84	240.82
32260	499000	832000	0.58	0.79	5.18	290.61
32264	643000	1140000	0.54	0.73	5.58	384.80

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

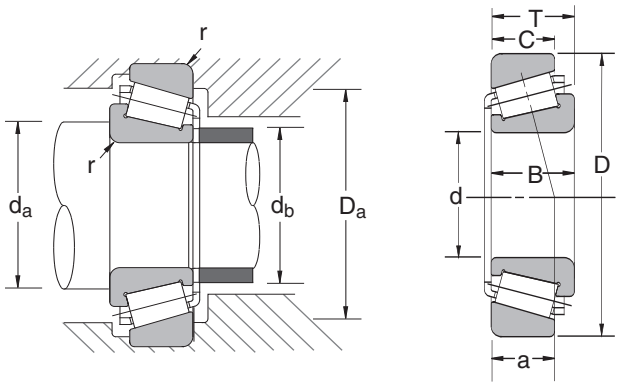
32300 Metric Series

Bore Diameter 17 – 240 mm
0.6693 – 9.4488 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
32303	17	0.6693	47	1.8504	20.25	0.7972	19	0.7480	16	0.6299	0.04	1.024	0.941	1.614
HR32304J	20	0.7874	52	2.0472	22.25	0.8760	21	0.8268	18	0.7087	0.06	1.201	1.024	1.693
HR32305J	25	0.9843	62	2.4409	25.25	0.9941	24	0.9449	20	0.7874	0.06	1.496	1.260	2.087
HR32306J	30	1.1811	72	2.8346	28.75	1.1319	27	1.0630	23	0.9055	0.06	1.693	1.496	2.480
HR32307J	35	1.3780	80	3.1496	32.75	1.2894	31	1.2205	25	0.9843	0.06	1.929	1.693	2.795
HR32308J	40	1.5748	90	3.5433	35.25	1.3878	33	1.2992	27	1.0630	0.06	2.126	1.969	3.189
HR32309J	45	1.7717	100	3.9370	38.25	1.5059	36	1.4173	30	1.1811	0.06	2.323	2.205	3.583
HR32310J	50	1.9685	110	4.3307	42.25	1.6634	40	1.5748	33	1.2992	0.08	2.677	2.441	3.937
HR32311J	55	2.1654	120	4.7244	45.5	1.7913	43	1.6929	35	1.3780	0.08	2.874	2.638	4.331
HR32312J	60	2.3622	130	5.1181	48.5	1.9094	46	1.8110	37	1.4567	0.10	3.189	2.913	4.646
HR32313J	65	2.5591	140	5.5118	51	2.0079	48	1.8898	39	1.5354	0.10	3.386	3.150	5.039
HR32314J	70	2.7559	150	5.9055	54	2.1260	51	2.0079	42	1.6535	0.10	3.583	3.386	5.433
HR32315J	75	2.9528	160	6.2992	58	2.2835	55	2.1654	45	1.7717	0.10	3.780	3.583	5.827
HR32316J	80	3.1496	170	6.6929	61.5	2.4213	58	2.2835	48	1.8898	0.10	3.976	3.858	6.220
HR32317J	85	3.3465	180	7.0866	63.5	2.5000	60	2.3622	49	1.9291	0.12	4.331	4.094	6.535
HR32318J	90	3.5433	190	7.4803	67.5	2.6575	64	2.5197	53	2.0866	0.12	4.528	4.291	6.929
HR32319J	95	3.7402	200	7.8740	71.5	2.8150	67	2.6378	55	2.1654	0.12	4.685	4.528	7.480
HR32320J	100	3.9370	215	8.4646	77.5	3.0512	73	2.8740	60	2.3622	0.12	4.925	4.925	7.913
HR32321J	105	4.1339	225	8.8583	81.5	3.2087	77	3.0315	63	2.4803	0.12	5.118	5.039	8.465
HR32322J	110	4.3307	240	9.4488	84.5	3.3268	80	3.1496	65	2.5591	0.12	5.319	5.477	8.898
HR32324J	120	4.7244	260	10.2362	90.5	3.5630	86	3.3858	69	2.7165	0.12	5.713	9.692	9.685
32326	130	5.1181	280	11.0236	98.75	3.8878	93	3.6614	78	3.0709	0.12	6.378	6.496	10.315
32328	140	5.5118	300	11.8110	107.75	4.2421	102	4.0157	85	3.3465	0.12	6.772	6.969	11.102
32330	150	5.9055	320	12.5984	114	4.4882	108	4.2520	90	3.5433	0.12	7.165	7.520	11.890
32332	160	6.2992	340	13.3858	121	4.7638	114	4.4882	95	3.7402	0.12	7.559	7.953	12.677
32334	170	6.6929	360	14.1732	127	5.0000	120	4.7244	100	3.9370	0.12	7.953	8.386	13.465
32336	180	7.0866	380	14.9606	134	5.2756	126	4.9606	106	4.1732	0.12	8.346	8.858	14.252
32340	200	7.8740	420	16.5354	146	5.7480	138	5.4331	115	4.5276	0.16	9.409	9.961	15.669
32344	220	8.6614	460	18.1102	154	6.0630	145	5.7087	122	4.8031	0.16	10.197	10.787	17.244
32348	240	9.4488	500	19.6850	165	6.4961	155	6.1024	132	5.1969	0.16	10.984	11.850	18.819

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
32303	7530	7190	8.74	11.86	0.49	0.39
HR32304J	10200	10700	8.00	11.00	0.55	0.53
HR32305J	14100	14800	6.30	8.50	0.61	0.83
HR32306J	18000	19900	5.60	7.50	0.71	1.26
HR32307J	22300	25000	5.00	6.70	0.81	1.69
HR32308J	27000	32600	4.30	6.00	0.92	2.32
HR32309J	32400	39800	3.80	5.30	0.98	3.13
HR32310J	39600	49500	3.60	4.80	1.10	4.15
HR32311J	45900	58000	3.20	4.30	1.18	5.27
HR32312J	52400	66300	3.00	4.00	1.24	6.53
HR32313J	60000	76400	2.80	3.80	1.34	7.94
HR32314J	67400	87700	2.60	3.40	1.42	9.59
HR32315J	76400	100000	2.40	3.20	1.53	11.71
HR32316J	86600	114000	2.20	3.00	1.63	14.00
HR32317J	92200	120000	2.00	2.80	1.71	16.12
HR32318J	101000	133000	2.00	2.60	1.83	18.96
HR32319J	111000	95000	1.90	2.60	1.93	22.00
HR32320J	127000	134000	1.70	2.40	2.09	28.00
HR32321J	151000	205000	1.70	2.20	2.17	32.00
HR32322J	152000	205000	1.50	2.00	2.30	38.50
HR32324J	173000	238000	1.40	1.90	2.46	48.00
32326	187000	259000	1.30	1.80	2.72	58.65
32328	221000	324000	1.20	1.60	3.01	74.75
32330	252000	382000	1.10	1.50	3.21	91.29
32332	272000	398000	1.00	1.40	3.43	106.50
32334	308000	461000	1.00	1.30	3.59	125.69
32336	342000	515000	0.95	1.30	3.80	147.29
32340	409000	645000	0.80	1.10	4.20	200.43
32344	454000	719000	0.75	1.00	4.52	251.37
32348	567000	922000	0.67	0.90	4.85	319.73

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

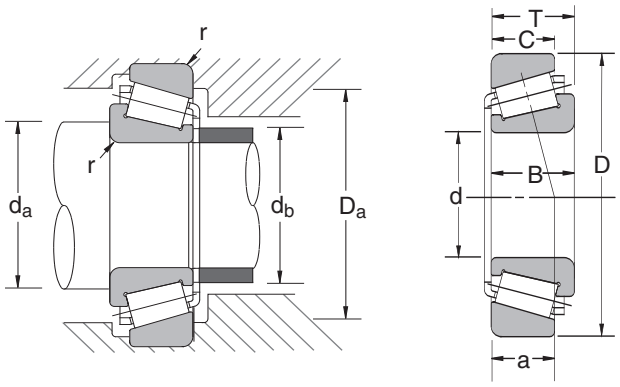
32900 Metric Series

Bore Diameter 30 – 400 mm
1.1811 – 15.7480 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR32906J	30	1.1811	47	1.8504	12	0.4724	12.0000	0.4724	9	0.3543	0.01	1.339	0.053	1.732
HR32907J	35	1.3780	55	2.1654	14	0.5512	14.0000	0.5512	11.5	0.4528	0.02	1.693	0.067	1.969
HR32908J	40	1.5748	62	2.4409	15	0.5906	15.0000	0.5906	12	0.4724	0.02	1.890	0.074	2.244
HR32909J	45	1.7717	68	2.6772	15	0.5906	15.0000	0.5906	12	0.4724	0.02	2.087	0.082	2.480
HR32910J	50	1.9685	72	2.8346	15	0.5906	15.0000	0.5906	12	0.4724	0.02	2.283	0.090	2.638
HR32911J	55	2.1654	80	3.1496	17	0.6693	17.0000	0.6693	14	0.5512	0.04	2.520	0.099	2.913
HR32912J	60	2.3622	85	3.3465	17	0.6693	17.0000	0.6693	14	0.5512	0.04	2.717	0.107	3.110
HR32913J	65	2.5591	90	3.5433	17	0.6693	17.0000	0.6693	14	0.5512	0.04	2.913	0.115	3.307
HR32914J	70	2.7559	100	3.9370	20	0.7874	20.0000	0.7874	16	0.6299	0.04	3.110	0.122	3.701
HR32915J	75	2.9528	105	4.1339	20	0.7874	20.0000	0.7874	16	0.6299	0.04	3.307	0.130	3.898
HR32916J	80	3.1496	110	4.3307	20	0.7874	20.0000	0.7874	16	0.6299	0.04	3.504	0.138	4.094
HR32917J	85	3.3465	120	4.7244	23	0.9055	23.0000	0.9055	18	0.7087	0.06	3.780	0.149	4.370
HR32918J	90	3.5433	125	4.9213	23	0.9055	23.0000	0.9055	18	0.7087	0.06	3.976	0.157	4.567
HR32919J	95	3.7402	130	5.1181	23	0.9055	23.0000	0.9055	18	0.7087	0.06	4.173	0.164	4.764
HR32920J	100	3.9370	140	5.5118	25	0.9843	25.0000	0.9843	20	0.7874	0.06	4.409	0.174	5.197
HR32921J	105	4.1339	145	5.7087	25	0.9843	25.0000	0.9843	20	0.7874	0.06	4.606	0.181	5.394
HR32922J	110	4.3307	150	5.9055	25	0.9843	25.0000	0.9843	20	0.7874	0.06	4.803	0.189	5.591
HR32924J	120	4.7244	165	6.4961	29	1.1417	29.0000	1.1417	23	0.9055	0.06	5.236	0.206	6.142
HR32926J	130	5.1181	180	7.0866	32	1.2598	32.0000	1.2598	25	0.9843	0.06	5.709	0.225	6.850
HR32928J	140	5.5118	190	7.4803	32	1.2598	32.0000	1.2598	25	0.9843	0.06	6.102	0.240	7.087
HR32930J	150	5.9055	210	8.2677	38	1.4961	38.0000	1.4961	30	1.1811	0.08	6.614	0.260	7.874
HR32932J	160	6.2992	220	8.6614	38	1.4961	38.0000	1.4961	30	1.1811	0.08	7.008	0.276	8.189
HR32934J	170	6.6929	230	9.0551	38	1.4961	38.0000	1.4961	30	1.1811	0.08	7.362	0.290	8.701
HR32936J	180	7.0866	250	9.8425	45	1.7717	45.0000	1.7717	34	1.3386	0.08	7.913	0.312	9.370
HR32938J	190	7.4803	260	10.2362	45	1.7717	45.0000	1.7717	34	1.3386	0.08	8.268	0.326	9.764
HR32940J	200	7.8740	280	11.0236	51	2.0079	51.0000	2.0079	39	1.5354	0.10	8.819	0.347	10.669
HR32944J	220	8.6614	300	11.8110	51	2.0079	51.0000	2.0079	39	1.5354	0.10	9.567	0.377	11.339
HR32948J	240	9.4488	320	12.5984	51	2.0079	51.0000	2.0079	39	1.5354	0.10	10.394	0.409	12.126
HR32952J	260	10.2362	360	14.1732	63.5	2.5000	63.5000	2.5000	48	1.8898	0.10	11.299	0.445	13.701
HR32956J	280	11.0236	380	14.9606	63.5	2.5000	63.5000	2.5000	48	1.8898	0.10	12.126	0.477	14.055
HR32960J	300	11.8110	420	16.5354	76	2.9921	76.0000	2.9921	57	2.2441	0.12	13.189	0.519	15.512
32964	320	12.5984	440	17.3228	76	2.9921	72.0000	2.8346	63	2.4803	0.10	13.940	13.190	16.220
HR32968J	340	13.3858	460	18.1102	76	2.9921	76.0000	2.9921	57	2.2441	0.10	14.724	0.580	17.047
HR32972J	360	14.1732	480	18.8976	76	2.9921	76.0000	2.9921	57	2.2441	0.10	15.512	0.611	17.795
32976	380	14.9606	520	20.4724	87	3.4252	82.0000	3.2283	71	2.7953	0.12	16.024	16.024	19.764
32980	400	15.7480	540	21.2598	87	3.4252	82.0000	3.2283	71	2.7953	0.12	16.811	16.850	20.551

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR32906J	3960	5490	7.50	10.00	0.36	0.16
HR32907J	6160	8770	6.30	8.50	0.42	0.27
HR32908J	7640	10600	5.60	7.50	0.45	0.36
HR32909J	7760	11400	5.00	67.00	0.48	0.41
HR32910J	8090	12100	4.50	6.30	0.53	0.43
HR32911J	10200	16700	4.30	5.60	0.57	0.62
HR32912J	11000	19000	3.80	5.30	0.61	0.67
HR32913J	11000	19400	3.60	5.00	0.66	0.71
HR32914J	15700	25400	3.20	4.50	0.69	1.09
HR32915J	16300	27000	3.20	4.30	0.74	1.17
HR32916J	16900	28800	3.00	4.50	0.78	1.23
HR32917J	21000	35300	3.20	4.30	0.82	1.76
HR32918J	21800	37500	3.00	4.00	0.87	1.85
HR32919J	22000	38700	2.80	3.80	0.91	1.93
HR32920J	26300	46100	2.60	3.60	0.95	2.60
HR32921J	26800	47700	2.40	3.40	1.00	2.71
HR32922J	27700	50400	2.20	3.20	1.04	2.84
HR32924J	36200	63600	2.20	3.00	1.15	3.97
HR32926J	45000	82100	2.20	2.80	1.24	5.42
HR32928J	46300	87700	1.90	2.60	1.32	5.82
HR32930J	63200	117000	1.50	2.00	1.44	8.93
HR32932J	66500	128000	1.40	1.90	1.52	9.53
HR32934J	66100	126000	1.40	1.80	1.64	9.79
HR32936J	78700	154000	1.30	1.70	2.12	14.46
HR32938J	82100	161000	1.20	1.60	2.18	15.06
HR32940J	108000	210000	1.10	1.50	2.13	21.28
HR32944J	110000	223000	1.00	1.40	2.33	22.71
HR32948J	112000	234000	0.90	1.30	2.56	24.48
HR32952J	164000	326000	0.80	1.10	2.75	41.01
HR32956J	172000	355000	0.80	1.10	2.96	44.10
HR32960J	227000	472000	0.70	1.00	3.15	69.24
32964	202000	423000	0.70	0.90	3.32	70.56
HR32968J	234000	499000	0.60	0.80	3.58	75.63
HR32972J	243000	526000	0.60	0.80	3.81	79.60
32976	270000	569000	0.55	0.74	3.75	109.15
32980	279000	602000	0.52	0.70	3.97	116.20

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

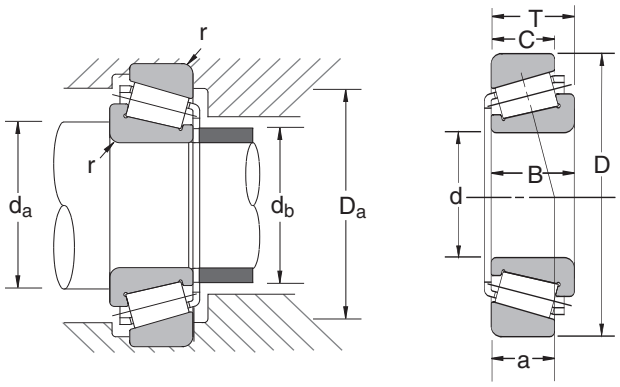
33000 Metric Series

Bore Diameter 25 – 120 mm
0.9843 – 4.7244 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR33005J	25	0.9843	47	1.8504	17	0.6693	17	0.6693	14	0.5512	0.02	1.299	1.142	1.654
HR33006J	30	1.1811	55	2.1654	20	0.7874	20	0.7874	16	0.6299	0.04	1.535	1.378	1.929
HR33007J	35	1.3780	62	2.4409	21	0.8268	21	0.8268	17	0.6693	0.04	1.732	1.575	2.205
HR33008J	40	1.5748	68	2.6772	22	0.8661	22	0.8661	18	0.7087	0.04	1.929	1.772	2.441
HR33009J	45	1.7717	75	2.9528	24	0.9449	24	0.9449	19	0.7480	0.04	2.126	2.008	2.717
HR33010J	50	1.9685	80	3.1496	24	0.9449	24	0.9449	19	0.7480	0.04	2.323	2.165	2.913
HR33011J	55	2.1654	90	3.5433	27	1.0630	27	1.0630	21	0.8268	0.06	2.598	2.441	3.189
HR33012J	60	2.3622	95	3.7402	27	1.0630	27	1.0630	21	0.8268	0.06	2.795	2.598	3.386
HR33013J	65	2.5591	100	3.9370	27	1.0630	27	1.0630	21	0.8268	0.06	2.992	2.795	3.583
HR33014J	70	2.7559	110	4.3307	31	1.2205	31	1.2205	25.5	1.0039	0.06	3.189	3.071	3.976
HR33015J	75	2.9528	115	4.5276	31	1.2205	31	1.2205	25.5	1.0039	0.06	3.386	3.268	4.173
HR33016J	80	3.1496	125	4.9213	36	1.4173	36	1.4173	29.5	1.1614	0.06	3.583	3.465	4.567
HR33017J	85	3.3465	130	5.1181	36	1.4173	36	1.4173	29.5	1.1614	0.06	3.780	3.701	4.764
HR33018J	90	3.5433	140	5.5118	39	1.5354	39	1.5354	32.5	1.2795	0.06	4.016	3.898	5.157
HR33019J	95	3.7402	145	5.7087	39	1.5354	39	1.5354	32.5	1.2795	0.06	4.213	4.094	5.354
HR33020J	100	3.9370	150	5.9055	39	1.5354	39	1.5354	32.5	1.2795	0.06	4.409	4.213	5.551
HR33021J	105	4.1339	160	6.2992	43	1.6929	43	1.6929	34	1.3386	0.08	4.724	4.528	5.906
HR33022J	110	4.3307	170	6.6929	47	1.8504	47	1.8504	37	1.4567	0.08	4.921	4.764	6.299
HR33024J	120	4.7244	180	7.0866	48	1.8898	48	1.8898	38	1.4961	0.08	5.236	5.197	6.693

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR33005J	6970	8540	8.00	11.00	0.46	0.26
HR33006J	9440	12100	6.70	9.00	0.52	0.46
HR33007J	11000	14600	5.60	8.00	0.56	0.59
HR33008J	13300	18300	5.30	7.10	0.57	0.71
HR33009J	15100	21200	4.80	6.30	0.64	0.91
HR33010J	15800	23400	4.30	6.00	0.69	1.00
HR33011J	20600	31000	3.80	5.30	0.76	1.45
HR33012J	21600	33700	3.60	5.00	0.79	1.57
HR33013J	21900	35100	3.40	4.50	0.83	1.68
HR33014J	28600	45900	3.00	4.30	0.87	2.45
HR33015J	29900	49500	3.00	4.00	0.91	2.60
HR33016J	38700	63400	2.80	3.60	1.00	3.66
HR33017J	40500	68600	2.60	3.60	1.04	3.86
HR33018J	49500	80900	2.40	3.20	1.10	4.87
HR33019J	51900	87700	2.40	3.20	1.13	5.07
HR33020J	52800	91000	2.20	3.00	1.15	5.25
HR33021J	57600	97800	2.00	2.80	1.22	6.68
HR33022J	66100	116000	2.00	2.60	1.33	8.47
HR33024J	67400	121000	1.80	2.40	1.44	9.50

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

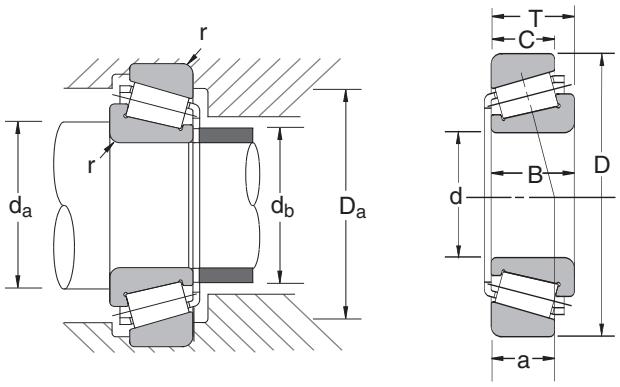
33100 Metric Series

Bore Diameter 45 – 110 mm
1.7717 – 4.3307 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR33109J	45	1.7717	80	3.1496	26	1.0236	26	1.0236	20.5	0.8071	0.06	2.205	2.008	2.795
HR33110J	50	1.9685	85	3.3465	26	1.0236	26	1.0236	20	0.7874	0.06	2.402	2.205	2.992
HR33111J	55	2.1654	95	3.7402	30	1.1811	30	1.1811	23	0.9055	0.06	2.598	2.441	3.386
HR33112J	60	2.3622	100	3.9370	30	1.1811	30	1.1811	23	0.9055	0.06	2.795	2.677	3.583
HR33113J	65	2.5591	110	4.3307	34	1.3386	34	1.3386	26.5	1.0433	0.06	2.992	2.874	3.976
HR33114J	70	2.7559	120	4.7244	37	1.4567	37	1.4567	29	1.1417	0.06	3.228	3.110	4.370
HR33115J	75	2.9528	125	4.9213	37	1.4567	37	1.4567	29	1.1417	0.06	3.425	3.268	4.567
HR33116J	80	3.1496	130	5.1181	37	1.4567	37	1.4567	29	1.1417	0.06	3.622	3.465	4.764
HR33117J	85	3.3465	140	5.5118	41	1.6142	41	1.6142	32	1.2598	0.08	3.937	3.701	5.118
HR33118J	90	3.5433	150	5.9055	45	1.7717	45	1.7717	35	1.3780	0.08	4.134	3.937	5.512
HR33120J	100	3.9370	165	6.4961	52	2.0472	52	2.0472	40	1.5748	0.08	4.528	4.370	6.102
HR33122J	110	4.3307	180	7.0866	56	2.2047	56	2.2047	43	1.6929	0.08	4.961	4.764	6.693

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR33109J	18900	25400	4.50	6.00	0.75	1.22
HR33110J	20000	28300	4.30	5.60	0.80	1.32
HR33111J	25200	35500	3.80	5.00	0.88	1.93
HR33112J	25900	37300	3.40	4.80	0.93	2.01
HR33113J	33300	49000	3.20	4.30	1.02	2.91
HR33114J	39800	58900	3.00	4.00	1.10	3.77
HR33115J	40900	61800	2.80	3.80	1.15	3.97
HR33116J	41800	65000	2.60	3.60	1.20	4.15
HR33117J	51700	82100	2.40	3.40	1.29	5.53
HR33118J	58200	91000	2.40	3.20	1.39	6.92
HR33120J	70800	116000	2.10	2.80	1.59	9.70
HR33122J	82100	137000	1.90	2.60	1.74	12.20

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

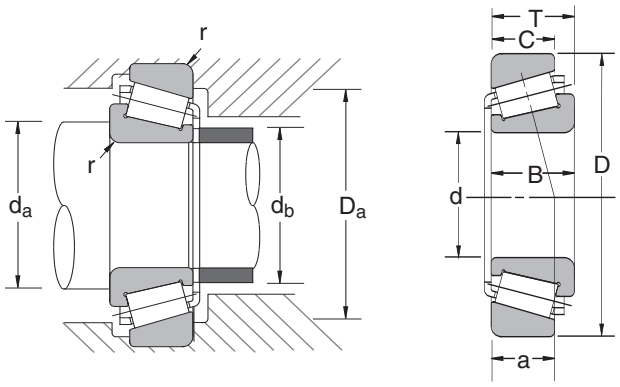
33200 Metric Series

Bore Diameter 25 – 100 mm
0.9843 – 3.9370 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR33205J	25	0.9843	52	2.0472	22	0.8661	22	0.8661	18	0.7087	0.71	1.339	1.142	1.811
HR33206J	30	1.1811	62	2.4409	25	0.9843	25	0.9843	19.5	0.7677	0.77	1.535	1.378	2.205
HR33207J	35	1.3780	72	2.8346	28	1.1024	28	1.1024	22	0.8661	0.87	1.811	1.614	2.480
HR33208J	40	1.5748	80	3.1496	32	1.2598	32	1.2598	25	0.9843	0.98	2.008	1.811	2.795
HR33209J	45	1.7717	85	3.3465	32	1.2598	32	1.2598	25	0.9843	0.98	2.205	2.008	2.992
HR33210J	50	1.9685	90	3.5433	32	1.2598	32	1.2598	24.5	0.9646	0.96	2.402	2.205	3.189
HR33211J	55	2.1654	100	3.9370	35	1.3780	35	1.3780	27	1.0630	1.06	2.638	2.441	3.583
HR33212J	60	2.3622	110	4.3307	38	1.4961	38	1.4961	29	1.1417	1.14	2.835	2.677	3.976
HR33213J	65	2.5591	120	4.7244	41	1.6142	41	1.6142	32	1.2598	1.26	3.031	2.913	4.370
HR33214J	70	2.7559	125	4.9213	41	1.6142	41	1.6142	32	1.2598	1.26	3.228	3.071	4.567
HR33215J	75	2.9528	130	5.1181	41	1.6142	41	1.6142	31	1.2205	1.22	3.425	3.268	4.764
HR33216J	80	3.1496	140	5.5118	46	1.8110	46	1.8110	35	1.3780	1.38	3.740	3.504	5.118
HR33217J	85	3.3465	150	5.9055	49	1.9291	49	1.9291	37	1.4567	1.46	3.937	3.740	5.512
HR33220J	100	3.9370	180	7.0866	63	2.4803	63	2.4803	48	1.8898	1.89	4.646	4.524	6.378

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR33205J	10680	12700	7.50	10.00	0.56	0.49
HR33206J	14950	17900	6.00	8.00	0.63	0.78
HR33207J	19450	24300	5.30	7.10	0.72	1.19
HR33208J	24050	30800	4.80	6.30	0.82	1.64
HR33209J	24950	33000	4.30	6.00	0.87	1.80
HR33210J	26530	37100	4.00	5.30	0.91	1.91
HR33211J	31700	43400	3.60	5.00	0.99	2.60
HR33212J	37320	51900	3.40	4.50	1.09	3.44
HR33213J	45410	63400	3.00	4.00	1.15	4.50
HR33214J	46990	67200	2.80	4.00	1.20	4.74
HR33215J	48330	70800	2.80	3.80	1.24	4.96
HR33216J	57550	86600	2.60	3.40	1.37	6.46
HR33217J	63170	93300	2.40	3.20	1.47	7.87
HR33220J	92170	143000	1.97	2.67	1.81	14.91

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

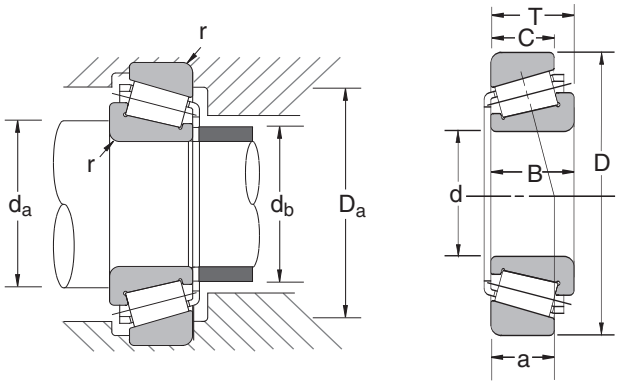
Tapered Roller Bearings

Metric Series - Medium Angle
30200C Series

Bore Diameter 20 – 85 mm
0.7874 – 3.3465 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR30204C	20	0.7874	47	1.8504	15.25	0.6004	14	0.5512	12	0.4724	0.039	1.143	1.024	1.615
HR302/22C	22	0.8661	50	1.9685	15.25	0.6004	14	0.5512	12	0.4724	0.039	1.221	1.143	1.734
HR30205C	25	0.9843	52	2.0472	16.25	0.6398	15	0.5906	12	0.4724	0.039	1.340	1.261	1.812
HR302/28C	28	1.1024	58	2.2835	17.25	0.6791	16	0.6299	12	0.4724	0.039	1.458	1.340	2.049
HR30206C	30	1.1811	62	2.4409	17.25	0.6791	16	0.6299	12	0.4724	0.059	1.537	1.418	2.206
HR302/32C	32	1.2598	65	2.5591	18.25	0.7185	17	0.6693	13	0.5118	0.039	1.615	1.537	2.325
HR30207C	35	1.3780	72	2.8346	18.25	0.7185	17	0.6693	13	0.5118	0.059	1.812	1.734	2.482
HR30208C	40	1.5748	80	3.1496	19.75	0.7776	18	0.7087	14	0.5512	0.059	2.009	1.931	2.797
HR30209C	45	1.7717	85	3.3465	20.75	0.8169	19	0.7480	15	0.5906	0.059	2.206	2.087	2.992
HR30210C	50	1.9685	90	3.5433	21.75	0.8563	20	0.7874	16	0.6299	0.059	2.403	2.283	3.189
30216C	80	3.1496	140	5.5118	28.25	1.1122	26	1.0236	20	0.7874	0.118	3.743	3.622	5.118
30217C	85	3.3465	150	5.9055	30.50	1.2008	28	1.1024	22	0.8661	0.118	3.940	3.858	5.512

*Maximum fillet which corner radius of bearing will clear.



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR30204C	5370	5400	8.00	11.00	0.51	0.269
HR302/22C	6110	6630	7.50	10.00	0.51	0.305
HR30205C	6320	7080	6.70	9.50	0.57	0.330
HR302/28C	7640	8660	6.30	8.50	0.67	0.445
HR30206C	7980	8320	5.60	7.50	0.70	0.525
HR302/32C	10200	11800	5.60	7.50	0.67	0.590
HR30207C	10600	12300	5.00	6.70	0.77	0.715
HR30208C	24100	29000	4.50	6.00	0.85	0.935
HR30209C	14200	17600	4.30	5.60	0.84	1.050
HR30210C	15700	20900	3.80	5.30	0.95	1.190
30216C	33000	42700	2.60	3.40	1.33	3.600
30217C	38400	50800	2.40	3.20	1.43	4.500

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

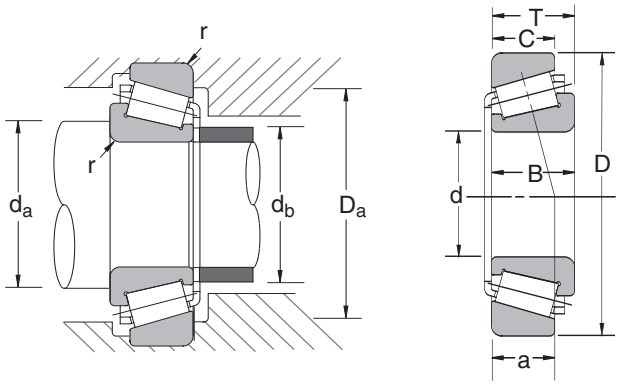
Metric Series - Medium Angle
30300C Series

Bore Diameter 20 – 95 mm
0.7874 – 3.7402 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR30304C	20	0.7874	52	2.0472	16.25	0.6398	16	0.6299	12	0.4724	0.079	1.221	1.064	1.694
HR303/22C	22	0.8661	56	2.2047	17.25	0.6791	16	0.6299	13	0.5118	0.039	1.300	1.182	1.852
HR30305C	25	0.9843	62	2.4409	18.25	0.7185	17	0.6693	14	0.5512	0.059	1.418	1.379	2.088
HR303/28C	28	1.1024	68	2.6772	19.75	0.7776	18	0.7087	14	0.5512	0.059	1.537	1.497	2.325
HR30306C	30	1.1811	72	2.8346	20.75	0.8169	19	0.7480	14	0.5512	0.079	1.615	1.497	2.482
HR303/32C	32	1.2598	75	2.9528	21.75	0.8563	20	0.7874	16	0.6299	0.039	1.694	1.694	2.600
HR30307C	35	1.3780	80	3.1496	22.75	0.8957	21	0.8268	16	0.6299	0.059	1.852	1.734	2.797
HR30308C	40	1.5748	90	3.5433	25.25	0.9941	23	0.9055	18	0.7087	0.059	2.049	1.970	3.191
HR30309C	45	1.7717	100	3.9370	27.25	1.0728	25	0.9843	19	0.7480	0.059	2.246	2.246	3.583
HR30310C	50	1.9685	110	4.3307	29.25	1.1516	27	1.0630	20	0.7874	0.079	2.561	2.559	3.937
30314C	70	2.7559	150	5.9055	38.00	1.4961	35	1.3780	27	1.0630	0.138	3.467	3.425	5.433
30319C	95	3.7402	200	7.8740	49.50	1.9488	45	1.7717	36	1.4173	0.157	4.570	4.685	7.323

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR30304C	6970	6500	8.00	11.00	0.53	0.370
HR303/22C	7760	7640	6.70	9.50	0.63	0.440
HR30305C	9440	10100	6.00	8.50	0.65	0.585
HR303/28C	11100	11400	5.60	7.50	0.69	0.740
HR30306C	12700	12500	5.30	7.10	0.73	0.860
HR303/32C	13400	15400	5.00	6.70	0.74	0.980
HR30307C	15300	15800	4.80	6.30	0.80	1.120
HR30308C	19000	21000	4.30	5.60	0.89	1.580
HR30309C	23200	26300	3.60	5.00	1.00	2.170
HR30310C	26800	31000	3.40	4.50	1.10	2.760
30314C	45200	53100	2.40	3.40	1.44	6.200
30319C	78700	96700	1.90	2.60	1.92	15.000

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

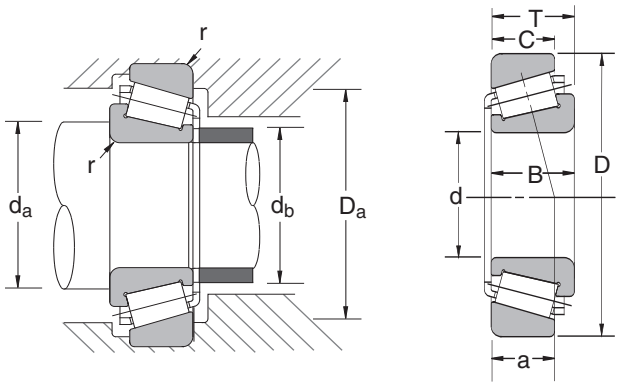
Metric Series - Medium Angle
32200C Series

Bore Diameter 20 – 60 mm
0.7874 – 2.3622 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR32204C	20	0.7874	47	1.8504	19.25	0.7579	18	0.7087	15	0.5906	0.059	1.143	0.984	1.615
HR322/22C	22	0.8661	50	1.9685	19.25	0.7579	18	0.7087	15	0.5906	0.039	1.221	1.143	1.734
HR32205C	25	0.9843	52	2.0472	19.25	0.7579	18	0.7087	15	0.5906	0.039	1.340	1.182	1.812
HR322/28C	28	1.1024	58	2.2835	20.25	0.7972	19	0.7480	15	0.5906	0.059	1.458	1.300	2.049
HR32206C	30	1.1811	62	2.4409	21.25	0.8366	20	0.7874	16	0.6299	0.059	1.537	1.379	2.206
HR322/32C	32	1.2598	65	2.5591	22.25	0.8760	21	0.8268	17	0.6693	0.039	1.615	1.537	2.325
HR32207C	35	1.3780	72	2.8346	24.25	0.9547	23	0.9055	18	0.7087	0.059	1.812	1.655	3.664
HR32208C	40	1.5748	80	3.1496	24.75	0.9744	23	0.9055	18	0.7087	0.059	2.009	1.850	2.797
HR32209C	45	1.7717	85	3.3465	24.75	0.9744	23	0.9055	18	0.7087	0.059	2.206	2.047	2.992
HR32210C	50	1.9685	90	3.5433	24.75	0.9744	23	0.9055	18	0.7087	0.079	2.403	2.283	3.189
32212C	60	2.3622	110	4.3307	29.75	1.1713	28	1.1024	22	0.8661	0.098	2.837	2.677	3.976

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR32204C	7080	7530	8.50	11.00	0.57	0.355
HR322/22C	7530	8880	7.50	10.00	0.60	0.390
HR32205C	7870	9440	7.10	9.50	0.62	0.415
HR322/28C	9440	11200	6.30	8.50	0.64	0.530
HR32206C	10800	12600	6.00	8.00	0.70	0.630
HR322/32C	11100	13500	5.60	7.50	0.80	0.730
HR32207C	13600	16100	5.00	7.10	0.81	0.950
HR32208C	16600	20300	4.80	6.30	0.85	1.200
HR32209C	17000	21500	4.30	6.00	0.96	1.300
HR32210C	17600	23200	4.00	5.40	0.98	1.380
32212C	23600	29200	3.40	4.50	1.08	2.450

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

Tapered Roller Bearings

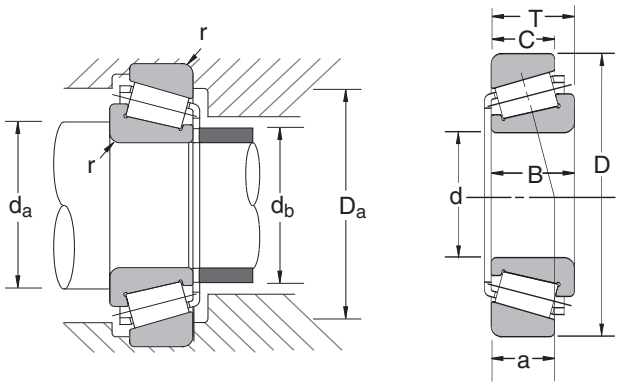
Metric Series - Medium Angle
32300C Series

Bore Diameter 20 – 75 mm
0.7874 – 2.9528 inch

Bearing Number	Nominal Bearing Dimensions										Preferred Shoulder Diameters (in)			
	d		*D*		*T*		*B*		*C*					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	*r* *	d_a(min)	d_b(max)	D_a(max)
HR32304C	20	0.7874	52	2.0472	22.25	0.8760	21	0.8268	17	0.6693	0.059	1.300	1.024	1.694
HR323/28C	28	1.1024	68	2.6772	25.75	1.0138	24	0.9449	19	0.7480	0.059	1.615	1.379	2.325
HR32305C	25	0.9843	62	2.4409	25.25	0.9941	24	0.9449	19	0.7480	0.059	1.497	1.300	2.088
HR323/32C	32	1.2598	75	2.9528	29.75	1.1713	28	1.1024	22	0.8661	0.059	1.773	1.615	2.600
HR32306C	30	1.1811	72	2.8346	28.75	1.1319	27	1.0630	22	0.8661	0.079	1.694	1.418	2.482
HR32307C	35	1.3780	80	3.1496	32.75	1.2894	31	1.2205	24	0.9449	0.059	1.931	1.734	2.797
HR32308C	40	1.5748	90	3.5433	35.25	1.3878	33	1.2992	25	0.9843	0.059	2.128	1.891	3.191
HR32309C	45	1.7717	100	3.9370	38.25	1.5059	36	1.4173	28	1.1024	0.059	2.325	2.206	3.583
HR32310C	50	1.9685	110	4.3307	42.25	1.6634	40	1.5748	31	1.2205	0.079	2.677	2.323	3.937
32312C	60	2.3622	130	5.1181	48.50	1.9094	46	1.8110	35	1.3780	0.138	3.191	2.913	4.646
32314C	70	2.7559	150	5.9055	54.00	2.1260	51	2.0079	39	1.5354	0.138	3.585	3.346	5.433
32315C	75	2.9528	160	6.2992	58.00	2.2835	55	2.1654	43	1.6929	0.138	3.782	3.543	5.827

*Maximum fillet which corner radius of bearing will clear.

Application Data
Bearing Tolerances — Table 10.17 thru Table 10.21 on page 318-21
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number	Basic Load Ratings (lbs)		Limiting Speeds (1000 RPM)		Effective Load Center (inches)	Bearing Weight (Approx.)
	C_r	C_{or}	Grease	Oil	a	lbs
HR32304C	9440	10000	7.50	10.00	0.65	0.515
HR323/28C	14400	15600	5.60	7.50	0.83	0.980
HR32305C	12500	14400	6.30	8.50	0.77	0.805
HR323/32C	19000	21400	5.00	7.10	0.87	1.370
HR32306C	17100	19400	5.60	7.50	0.83	1.220
HR32307C	20000	24700	4.80	6.30	0.93	1.700
HR32308C	24100	29000	4.30	5.60	1.06	2.270
HR32309C	29900	37800	3.80	5.00	1.21	3.050
HR32310C	36900	49000	3.60	4.80	1.32	4.050
32312C	44100	56000	3.00	4.00	1.57	6.150
32314C	58900	76400	2.40	3.40	1.74	8.950
32315C	69700	94400	2.40	3.20	1.88	11.600

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

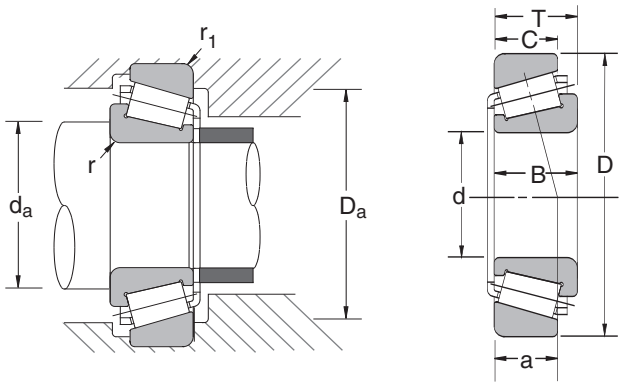
Tapered Roller Bearings

Inch Series

Bore Diameter 12.700 – 30.213 mm
.5000 – 1.1895 inch
½ – 1 3⁄16 fractional inch

Bearing Number		Basic Bearing Dimensions								
		d Cone		*D Cup*		*T Assembly*		*B Cone*	*C Cup*	*Eff.Load Center a*
Cone	**Cup**	**inch**	**mm**	**inch**	**mm**	**inch**	**mm**	**inch**	**inch**	**inch**
A4050	A4138	0.5000	12.700	1.3775	34.988	0.4330	10.998	0.4326	0.3437	0.33
A4059	A4138	0.5906	15.000	1.3775	34.988	0.4330	10.998	0.4326	0.3437	0.33
A6062	A6157	0.6250	15.875	1.5745	39.992	0.4730	12.014	0.4391	0.3750	0.41
11590	11520	0.6250	15.875	1.6875	42.862	0.5625	14.288	0.5625	0.3750	0.52
A6067	A6157	0.6690	16.993	1.5745	39.992	0.4730	12.014	0.4391	0.3750	0.41
LM11749	LM11710	0.6875	17.462	1.5700	39.878	0.5450	13.843	0.5750	0.4200	0.34
A6075	A6157	0.7500	19.050	1.5745	39.992	0.4730	12.014	0.4391	0.3750	0.41
LM11949	LM11910	0.7500	19.050	1.7810	45.237	0.6100	15.494	0.6550	0.4750	0.39
05075	05185	0.7500	19.050	1.8504	47.000	0.5662	14.381	0.5662	0.4375	0.41
09067	09195	0.7500	19.050	1.9380	49.225	0.7100	18.034	0.7500	0.5625	0.42
09078	09195	0.7500	19.050	1.9380	49.225	0.7813	19.845	0.8480	0.5625	0.42
09067	09196	0.7500	19.050	1.9380	49.225	0.8350	21.209	0.7500	0.6875	0.55
09074	09194	0.7500	19.050	1.9380	49.225	0.9063	23.020	0.8480	0.6875	0.55
05079	05185	0.7874	20.000	1.8504	47.000	0.5662	14.381	0.5662	0.4375	0.41
M12649	M12610	0.8437	21.430	1.9687	50.005	0.6900	17.526	0.7200	0.5500	0.44
LM12749	LM12710	0.8661	22.000	1.7810	45.237	0.6100	15.494	0.6550	0.4750	0.40
LM12749	LM12711	0.8661	22.000	1.8110	46.000	0.6100	15.494	0.6550	0.4750	0.40
07087	07196	0.8750	22.225	1.9687	50.005	0.5313	13.495	0.5614	0.3750	0.42
07098	07204	0.9835	24.981	2.0470	51.994	0.5910	15.011	0.5614	0.5000	0.48
07097	07196	0.9843	25.000	1.9687	50.005	0.5313	13.495	0.5614	0.3750	0.42
07097	07204	0.9843	25.000	2.0470	51.994	0.5910	15.011	0.5614	0.5000	0.48
07100	07196	1.0000	25.400	1.9687	50.005	0.5313	13.495	0.5614	0.3750	0.42
L44643	L44610	1.0000	25.400	1.9800	50.292	0.5600	14.224	0.5800	0.4200	0.43
15101	15245	1.0000	25.400	2.4409	62.000	0.7500	19.050	0.8125	0.5625	0.52
15100	15250X	1.0000	25.400	2.5000	63.500	0.8125	20.638	0.8125	0.6250	0.58
23100	23256	1.0000	25.400	2.5625	65.088	0.8750	22.225	0.8450	0.6250	0.79
L44649	L44610	1.0625	26.988	1.9800	50.292	0.5600	14.224	0.5800	0.4200	0.43
L45449	L45410	1.1417	29.000	1.9800	50.292	0.5600	14.224	0.5800	0.4200	0.43
15117	15245	1.1811	30.000	2.4409	62.000	0.7500	19.050	0.8125	0.5625	0.52
15117	15250	1.1811	30.000	2.5000	63.500	0.8125	20.638	0.8125	0.6250	0.58
M86649	M86610	1.1875	30.162	2.5312	64.292	0.8438	21.433	0.8438	0.6563	0.71
15118	15245	1.1895	30.213	2.4409	62.000	0.7500	19.050	0.8125	0.5625	0.52

Application Data
Bearing Tolerances — Table 10.22 thru Table 10.26 on page 322-24
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number		Preferred Shoulder Diameters									
		Cone (r*) (inch)	Cup (r_1*) (inch)	d_a(inch)		D_a(inch)		Basic Load Ratings (lbf)		Approximate Component Weight (lbs)	
Cone	Cup			max	min	min	max	C_r	C_{or}	Cone	Cup
A4050	A4138	0.05	0.05	0.73	0.67	1.14	1.26	2640	2450	0.07	0.05
A4059	A4138	0.03	0.05	0.77	0.75	1.14	1.26	2640	2450	0.07	0.05
A6062	A6157	0.05	0.05	0.87	0.81	1.34	1.46	3360	3530	0.09	0.07
11590	11520	0.06	0.06	0.96	0.89	1.36	1.56	3890	3860	0.13	0.09
A6067	A6157	0.03	0.05	0.87	0.83	1.34	1.46	3360	3530	0.09	0.07
LM11749	LM11710	0.05	0.05	0.91	0.85	1.34	1.46	5060	5050	0.12	0.06
A6075	A6157	0.04	0.05	0.94	0.91	1.34	1.46	3360	3530	0.08	0.07
LM11949	LM11910	0.05	0.05	0.98	0.93	1.56	1.63	6410	6500	0.18	0.10
05075	05185	0.05	0.05	0.98	0.93	1.59	1.67	5360	5370	0.16	0.10
09067	09195	0.05	0.05	1.00	0.94	1.65	1.75	8000	7950	0.24	0.14
09078	09195	0.05	0.05	1.00	0.94	1.65	1.75	8000	7950	0.27	0.14
09067	09196	0.05	0.06	1.00	0.94	1.63	1.75	8000	7950	0.24	0.19
09074	09194	0.06	0.14	1.02	0.94	1.54	1.75	8000	7950	0.26	0.18
05079	05185	0.06	0.05	1.04	0.94	1.59	1.67	5360	5370	0.15	0.10
M12649	M12610	0.05	0.05	1.08	1.00	1.73	1.81	8680	9020	0.24	0.13
LM12749	LM12710	0.05	0.05	1.08	1.02	1.56	1.63	6570	7500	0.17	0.08
LM12749	LM12711	0.05	0.05	1.08	1.02	1.57	1.67	6570	7500	0.17	0.09
07087	07196	0.05	0.04	1.12	1.06	1.75	1.85	10000	12500	0.21	0.07
07098	07204	0.06	0.05	1.22	1.14	1.77	1.89	10000	12500	0.18	0.13
07097	07196	0.06	0.04	1.22	1.14	1.75	1.85	10000	12500	0.21	0.07
07097	07204	0.06	0.05	1.22	1.14	1.77	1.89	10000	12500	0.21	0.13
07100	07196	0.04	0.04	1.20	1.16	1.75	1.85	10000	12500	0.18	0.07
L44643	L44610	0.05	0.05	1.24	1.16	1.75	1.85	6210	7190	0.19	0.08
15101	15245	0.03	0.05	1.28	1.24	2.17	2.28	10400	11900	0.47	0.18
15100	15250X	0.14	0.06	1.50	1.24	2.17	2.32	10400	11900	0.47	0.25
23100	23256	0.06	0.06	1.54	1.36	2.09	2.48	10100	10700	0.46	0.31
L44649	L44610	0.14	0.05	1.48	1.22	1.75	1.85	6210	7190	0.17	0.08
L45449	L45410	0.14	0.05	1.56	1.30	1.75	1.89	6010	7670	0.17	0.08
15117	15245	0.05	0.05	1.44	1.38	2.17	2.28	10400	11900	0.40	0.18
15117	15250	0.05	0.05	1.44	1.38	2.20	2.32	10400	11900	0.40	0.25
M86649	M86610	0.06	0.06	1.61	1.50	2.13	2.40	11500	14500	0.46	0.28
15118	15245	0.14	0.05	1.63	1.40	2.17	2.28	10400	11900	0.39	0.18

*Maximum fillet which corner radius of bearing will clear.

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

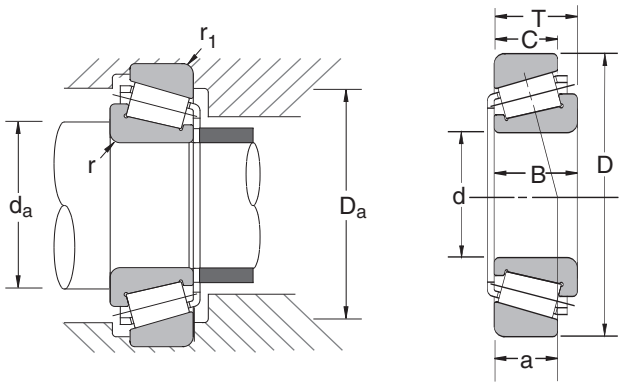
Tapered Roller Bearings

Inch Series (continued)

Bore Diameter 31.750 – 45.242 mm
1.2500 – 1.7812 inch
1 ¼ – 1 25⁄32 fractional inch

Bearing Number		Basic Bearing Dimensions								
		d Cone		*D Cup*		*T Assembly*		*B Cone*	*C Cup*	*Eff.Load Center a*
Cone	**Cup**	**inch**	**mm**	**inch**	**mm**	**inch**	**mm**	**inch**	**inch**	**inch**
LM67048	LM67010	1.2500	31.750	2.3280	59.131	0.6250	15.875	0.6600	0.4650	0.51
15123	15245	1.2500	31.750	2.4409	62.000	0.7150	18.161	0.7500	0.5625	0.52
15125	15245	1.2500	31.750	2.4409	62.000	0.7500	19.050	0.8125	0.5625	0.52
15126	15245	1.2500	31.750	2.4409	62.000	0.7500	19.050	0.8125	0.5625	0.52
15126	15250	1.2500	31.750	2.5000	63.500	0.8125	20.638	0.8125	0.6250	0.58
14125A	14276	1.2500	31.750	2.7170	69.012	0.7813	19.845	0.7710	0.6250	0.61
14123A	14274	1.2500	31.750	2.7170	69.012	1.0625	26.982	1.0520	0.6250	0.61
M88048	M88010	1.3125	33.338	2.6875	68.262	0.8750	22.225	0.8750	0.6875	0.76
14130	14274	1.3125	33.338	2.7170	69.012	0.7813	19.845	0.7710	0.6250	0.61
LM48548	LM48510	1.3750	34.925	2.5625	65.088	0.7100	18.034	0.7200	0.5500	0.56
14136A	14276	1.3750	34.925	2.7170	69.012	1.0625	26.982	1.0520	0.6250	0.61
14137A	14276	1.3750	34.925	2.7170	69.012	0.7813	19.845	0.7710	0.6250	0.61
14138A	14276	1.3750	34.925	2.7170	69.012	0.7813	19.845	0.7710	0.6250	0.61
25877	25821	1.3750	34.925	2.8750	73.025	0.9375	23.812	0.9688	0.7500	0.62
L68149	L68110	1.3780	35.000	2.3280	59.131	0.6250	15.875	0.6600	0.4700	0.53
L68149	L68111	1.3780	35.000	2.3622	60.000	0.6250	15.875	0.6600	0.4700	0.53
HM89449	HM89410	1.4375	36.512	3.0000	76.200	1.1563	29.370	1.1250	0.9063	0.94
JL69349	JL69310	1.4961	38.000	2.4803	63.000	0.6693	17.000	0.6693	0.5315	0.57
LM29749	LM29710	1.5000	38.100	2.5625	65.088	0.7100	18.034	0.7200	0.5500	0.54
2788	2729	1.5000	38.100	3.0000	76.200	0.9375	23.812	1.0100	0.7500	0.62
2788	2720	1.5000	38.100	3.0000	76.200	0.9375	23.812	1.0100	0.7500	0.62
18590	18520	1.6250	41.275	2.8750	73.025	0.6562	16.667	0.6875	0.5000	0.55
LM501349	LM501310	1.6250	41.275	2.8910	73.431	0.7700	19.558	0.7800	0.5800	0.64
LM501349	LM501314	1.6250	41.275	2.8910	73.431	0.8437	21.430	0.7800	0.6537	0.71
26882	26822	1.6250	41.275	3.1250	79.375	0.9375	23.812	1.0000	0.7500	0.64
342	332	1.6250	41.275	3.1496	80.000	1.1250	28.575	1.1801	0.7018	0.58
25577	25523	1.6880	42.875	3.2650	82.931	1.0625	26.988	1.0000	0.8750	0.82
25580	25520	1.7500	44.450	3.2650	82.931	0.9375	23.812	1.0000	0.7500	0.69
3578	3525	1.7500	44.450	3.4375	87.312	1.1875	30.162	1.2160	0.9375	0.79
3782	3720	1.7500	44.450	3.6718	93.264	1.1875	30.162	1.1930	0.9375	0.87
LM102949	LM102910	1.7812	45.242	2.8910	73.431	0.7700	19.558	0.7800	0.6200	0.59
LM603049	LM603011	1.7812	45.242	3.0625	77.788	0.7812	19.842	0.7812	0.5937	0.69

Application Data
Bearing Tolerances — Table 10.22 thru Table 10.26 on page 322-24
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number		Preferred Shoulder Diameters									
		Cone (r*) (inch)	Cup (r_1*) (inch)	d_a(inch)		D_a(inch)		Basic Load Ratings (lbf)		Approximate Component Weight (lbs)	
Cone	Cup			max	min	min	max	C_r	C_{or}	Cone	Cup
LM67048	LM67010	0.14	0.05	1.67	1.42	2.05	2.20	7800	9300	0.26	0.14
15123	15245	0.14	0.05	1.67	1.44	2.17	2.28	10400	11900	0.34	0.18
15125	15245	0.14	0.05	1.67	1.44	2.17	2.28	10400	11900	0.36	0.18
15126	15245	0.03	0.05	1.46	1.44	2.17	2.28	10400	11900	0.37	0.18
15126	15250	0.03	0.05	1.46	1.44	2.20	2.32	10400	11900	0.37	0.25
14125A	14276	0.14	0.05	1.73	1.48	2.36	2.48	10600	12600	0.48	0.29
14123A	14274	0.16	0.13	1.63	1.48	2.32	2.48	10600	12600	0.57	0.29
M88048	M88010	0.05	0.06	1.67	1.62	2.28	2.56	12500	15900	0.51	0.20
14130	14274	0.14	0.13	1.77	1.52	2.32	2.48	10400	12600	0.45	0.29
LM48548	LM48510	0.14	0.05	1.81	1.57	2.28	2.40	10700	13000	0.36	0.19
14136A	14276	0.03	0.05	1.63	1.57	2.36	2.48	10400	12600	0.50	0.29
14137A	14276	0.06	0.05	1.65	1.57	2.36	2.48	10400	12600	0.42	0.29
14138A	14276	0.14	0.05	1.81	1.57	2.36	2.48	10400	12600	0.42	0.29
25877	25821	0.06	0.03	1.69	1.59	2.56	2.68	16000	19300	0.67	0.36
L68149	L68110	0.14	0.05	1.79	1.54	2.05	2.20	7830	10500	0.24	0.12
L68149	L68111	0.14	0.05	1.79	1.54	2.09	2.20	7830	10500	0.24	0.14
HM89449	HM89410	0.14	0.13	2.13	1.76	2.44	2.87	17600	23900	0.83	0.55
JL69349	JL69310	0.14	0.05	1.85	1.63	2.20	2.41	8600	11700	0.29	0.13
LM29749	LM29710	0.09	0.05	1.81	1.67	2.32	2.44	9480	12400	0.34	0.17
2788	2729	0.14	0.03	1.97	1.71	2.68	2.76	16500	20500	0.68	0.41
2788	2720	0.14	0.13	1.97	1.71	2.60	2.76	16500	20500	0.68	0.41
18590	18520	0.14	0.06	2.09	1.81	2.60	2.72	10000	120800	0.45	0.19
LM501349	LM501310	0.14	0.03	2.09	1.83	2.64	2.76	12200	15100	0.48	0.24
LM501349	LM501314	0.14	0.03	2.09	1.83	2.60	2.76	12200	15100	0.48	0.28
26882	26822	0.14	0.03	2.13	1.85	2.80	2.91	16200	20900	0.75	0.41
342	332	0.14	0.05	2.09	1.81	2.87	2.95	15300	12100	0.92	0.32
25577	25523	0.14	0.09	2.17	1.93	2.83	3.03	17200	22200	0.83	0.54
25580	25520	0.14	0.03	2.24	1.97	2.91	3.03	17200	22200	0.78	0.41
3578	3525	0.14	0.13	2.24	2.01	2.95	3.19	21600	26900	1.04	0.67
3782	3720	0.14	0.03	2.28	2.05	3.23	3.46	23200	30700	1.47	0.64
LM102949	LM102910	0.14	0.03	2.20	1.97	2.68	2.76	12000	16900	0.45	0.22
LM603049	LM603011	0.14	0.03	2.24	1.97	2.80	2.91	12600	16000	0.53	0.27

*Maximum fillet which corner radius of bearing will clear.

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating

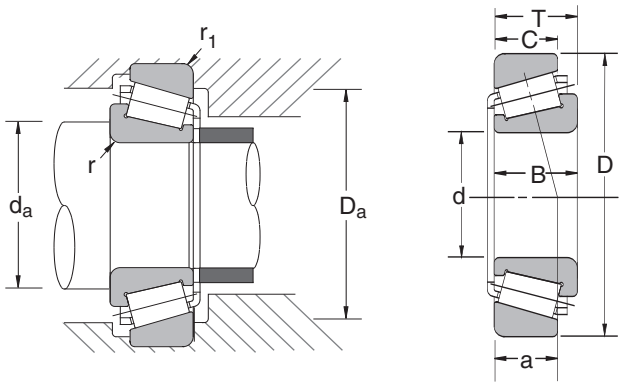
Tapered Roller Bearings

Inch Series (continued)

Bore Diameter 45.242 – 92.075 mm
1.7812 – 3.625 inch
1 25/32 – 3 5/8 fractional inch

Bearing Number		Basic Bearing Dimensions								
		d Cone		*D Cup*		*T Assembly*		*B Cone*	*C Cup*	*Eff.Load Center a*
Cone	**Cup**	**inch**	**mm**	**inch**	**mm**	**inch**	**mm**	**inch**	**inch**	**inch**
LM603049	LM603012	1.7812	45.242	3.0625	77.788	0.8437	21.430	0.7812	0.6562	0.75
25590	25520	1.7960	45.618	3.2650	82.931	0.9375	23.812	1.0000	0.7500	0.69
25590	25523	1.7960	45.618	3.2650	82.931	1.0625	26.988	1.0000	0.8750	0.82
18690	18620	1.8125	46.038	3.1250	79.375	0.6875	17.462	0.6875	0.5313	0.61
368A	362A	2.0000	50.800	3.5000	88.900	0.8125	20.638	0.8750	0.6501	0.65
368A	362A	2.0000	50.800	3.5000	88.900	0.8125	20.638	0.8750	0.6501	0.65
387A	382A	2.2500	57.150	3.8125	96.838	0.8268	21.000	0.8640	0.6250	0.71
387A	382A	2.2500	57.150	3.8750	98.425	0.8268	21.000	0.8640	0.7018	0.71
3982	3920	2.5000	63.500	4.4375	112.712	1.1875	30.162	1.1830	0.9375	1.01
39585	39520	2.5000	63.500	4.4375	112.712	1.1875	30.162	1.1875	0.9375	0.93
HM212047	HM212047	2.5000	63.500	4.8125	122.238	1.5000	38.100	1.5100	1.1700	1.07
3984	3920	2.6250	66.675	4.4375	112.712	1.1875	30.162	1.1830	0.9375	1.01
39590	39520	2.6250	66.675	4.4375	112.712	1.1875	30.162	1.1875	0.9375	0.93
560	553X	2.6250	66.675	4.8125	122.238	1.5000	38.100	1.4440	1.1875	1.13
560	552A	2.6250	66.675	4.8750	123.825	1.5000	38.100	1.4400	1.1875	1.13
33287	33462	2.8750	73.025	4.6250	117.475	1.1875	30.162	1.1875	1.9375	1.08
567	563	2.8750	73.025	5.0000	127.000	1.4375	36.512	1.4240	1.1250	1.12
495	493	3.0000	76.200	5.3750	136.525	1.1875	30.162	1.1720	0.8750	1.16
575	572	3.0000	76.200	5.5115	139.992	1.4375	36.512	1.4212	1.1250	1.23
47686	47620	3.2500	82.550	5.2500	133.350	1.3125	33.338	1.3125	1.0313	1.14
580	572	3.2500	82.550	5.5115	139.992	1.4375	36.512	1.4212	1.1250	1.23
663	653	3.2500	82.550	5.7500	146.050	1.6250	41.275	1.6250	1.2500	1.31
749	742	3.3475	85.027	5.9090	150.089	1.7502	44.455	1.8375	1.4375	1.28
497	493	3.3750	85.725	5.3750	136.525	1.1875	30.162	1.1720	1.8750	1.16
665A	653	3.3750	85.725	5.7500	146.050	1.6250	41.275	1.6250	1.2500	1.31
593	592A	3.5000	88.900	6.0000	152.400	1.5625	39.688	1.4300	1.1875	1.46
598	592A	3.6250	92.075	6.0000	152.400	1.5625	39.688	1.4300	1.1875	1.46
598A	592A	3.6250	92.075	6.0000	152.400	1.5625	39.688	1.4300	1.1875	1.46

Application Data
Bearing Tolerances — Table 10.22 thru Table 10.26 on page 322-24
Shaft & Housing Fits — Table 10.31 on page 328



Bearing Number		Preferred Shoulder Diameters									
		Cone (r*) (inch)	Cup (r_1*) (inch)	d_a(inch)		D_a(inch)		Basic Load Ratings (lbf)		Approximate Component Weight (lbs)	
Cone	Cup			max	min	min	max	C_r	C_{or}	Cone	Cup
LM603049	LM603012	0.14	0.03	2.24	1.97	2.76	2.91	12600	16000	0.53	0.31
25590	25520	0.14	0.03	2.28	2.01	2.91	3.03	17200	22300	0.74	0.44
25590	25523	0.14	0.09	2.28	2.01	2.83	3.03	17200	22300	0.74	0.54
18690	18620	0.11	0.06	2.20	2.01	2.80	2.91	10300	12800	0.45	0.27
368A	362A	0.06	0.05	2.28	2.20	3.19	3.31	16400	19100	0.76	0.36
368A	362A	0.06	0.05	2.44	2.20	3.19	3.31	16400	19100	0.75	0.36
387A	382A	0.14	0.03	2.72	2.44	3.50	3.62	16400	20100	0.88	0.39
387A	382A	0.14	0.03	2.72	2.44	3.54	3.62	16400	20100	0.88	0.50
3982	3920	0.14	0.13	3.03	2.80	3.90	4.17	27000	39800	1.71	0.99
39585	39520	0.14	0.13	3.03	2.80	3.98	4.21	54900	91000	1.97	0.79
HM212047	HM212047	0.28	0.13	3.43	2.87	4.25	4.57	42300	55100	3.17	1.31
3984	3920	0.14	0.13	3.15	2.91	3.90	4.17	27000	39800	1.54	0.99
39590	39520	0.14	0.13	3.15	2.91	3.98	4.21	31900	45400	1.79	0.79
560	553X	0.14	0.13	3.19	2.95	4.25	4.53	41800	68600	2.51	1.51
560	552A	0.14	0.13	3.19	2.95	4.29	4.57	41800	68600	2.51	1.67
33287	33462	0.14	0.13	3.43	3.15	4.09	4.41	26800	40200	1.62	0.97
567	563	0.14	0.13	3.46	3.19	4.41	4.72	37300	52600	2.54	1.44
495	493	0.25	0.13	3.86	3.39	4.80	5.12	29200	43200	2.60	1.21
575	572	0.14	0.13	3.62	3.39	4.92	5.24	39300	58400	3.53	1.78
47686	47620	0.14	0.13	3.82	3.54	4.69	5.04	33900	53100	2.51	1.27
580	572	0.14	0.13	3.86	3.58	4.92	5.24	93300	51900	3.02	1.78
663	653	0.14	0.13	3.90	3.62	5.16	5.47	46500	66500	4.12	1.95
749	742	0.14	0.13	3.98	3.74	5.28	5.59	59600	83200	4.76	2.34
497	493	0.14	0.13	3.90	3.66	4.80	5.12	29200	43200	2.16	1.21
665A	653	0.25	0.13	4.21	3.74	5.16	5.47	46500	66500	3.77	1.95
593	592A	0.14	0.13	4.09	3.86	5.31	5.67	41100	64100	3.77	2.31
598	592A	0.14	0.13	4.21	3.98	5.31	5.67	41100	64100	3.44	2.31
598A	592A	0.25	0.13	4.45	3.98	5.31	5.67	41100	64100	3.46	2.31

*Maximum fillet which corner radius of bearing will clear.

C_r = Dynamic Radial Load Rating
C_{or} = Static Radial Load Rating