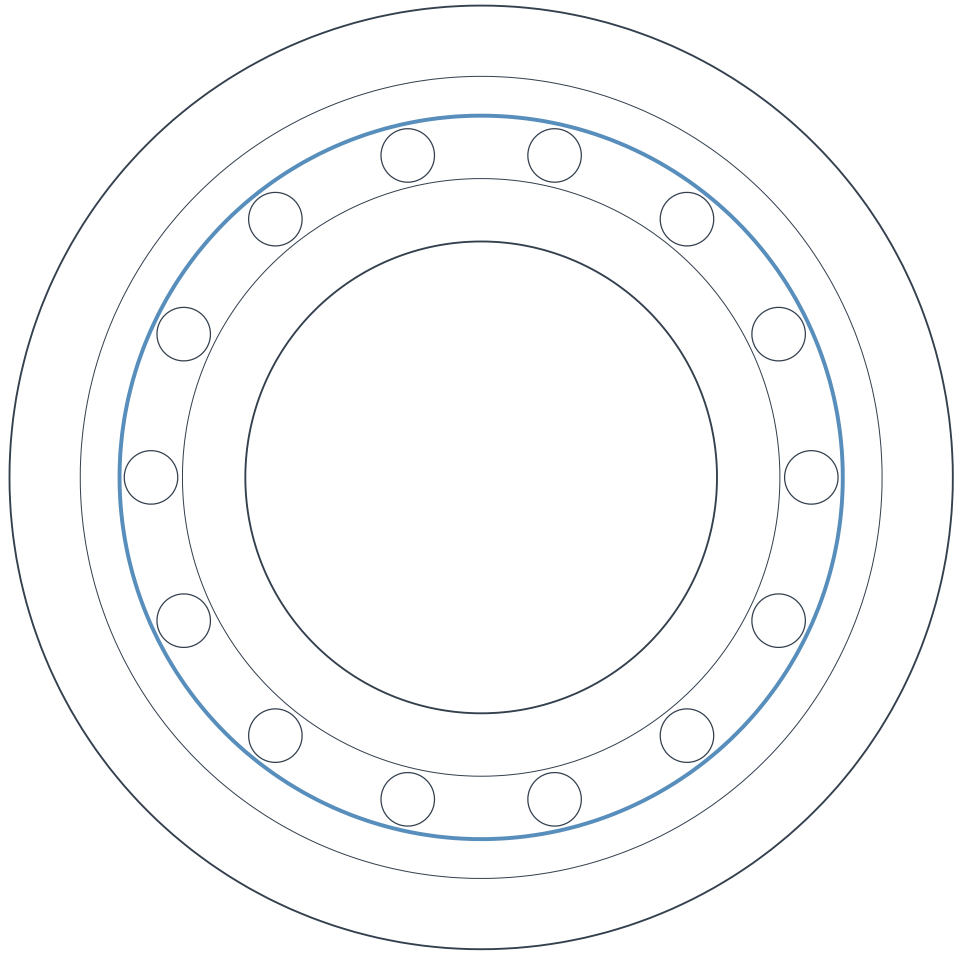


FLT

Rolling Bearings

کاتالوگ بلبرینگ و رولبرینگ FLT

استعلام قیمت و خرید بلبرینگ FLT ←

BRAND برند	ORIGIN کشور سازنده	PRODUCTS محصولات	PAGES تعداد صفحات	LANGUAGE زبان
FLT	Poland	Ball & roller bearings	52	English

FŁT BEARINGS

TURNING IDEAS



FŁT 2013

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FŁT Deep groove ball bearings 3

FŁT Angular contact ball bearings 17

FŁT Self- aligning ball bearings 23

FŁT Thrust ball bearings 27

FŁT Needle roller bearings 33

- Drawn cup needle roller bearings (with open and closed ends) 36

FŁT Cylindrical roller bearings 37

FŁT Spherical roller bearings 45

FŁT Tapered roller bearings 55

- Special and inch size tapered roller bearings 61

FŁT Special ball and roller bearings 71

- Ball bearings for automotive and agriculture applications 73
- Y- bearings 76
- Ball bearings. Track rollers. Support rollers. Mast Guide bearings 78
- Automotive bearings - Wheel Hub. 80
- Cylindrical roller bearings 81

FŁT Spherical plain bearings 83

FŁT Spherical roller thrust bearings 85

FŁT Balls. Needle Rollers 87

- Steel balls 88
- Needle rollers 89

Bearing Data – General 90

All FLT factories conform to quality control and quality assurance systems in accordance with ISO 9001 standards.
This catalog contains basic information on FLT bearings.
Our FLT specialists would help you regarding our product whenever the need would arise.

GENERAL INFORMATION

Materials: Bearing rings and rolling elements are produced of through hardened bearing high chrome carbon steel. Bearing cages are produced of pressed steel. brass or polyamid/nylon. However. in standard executions. pressed steel cage is used.

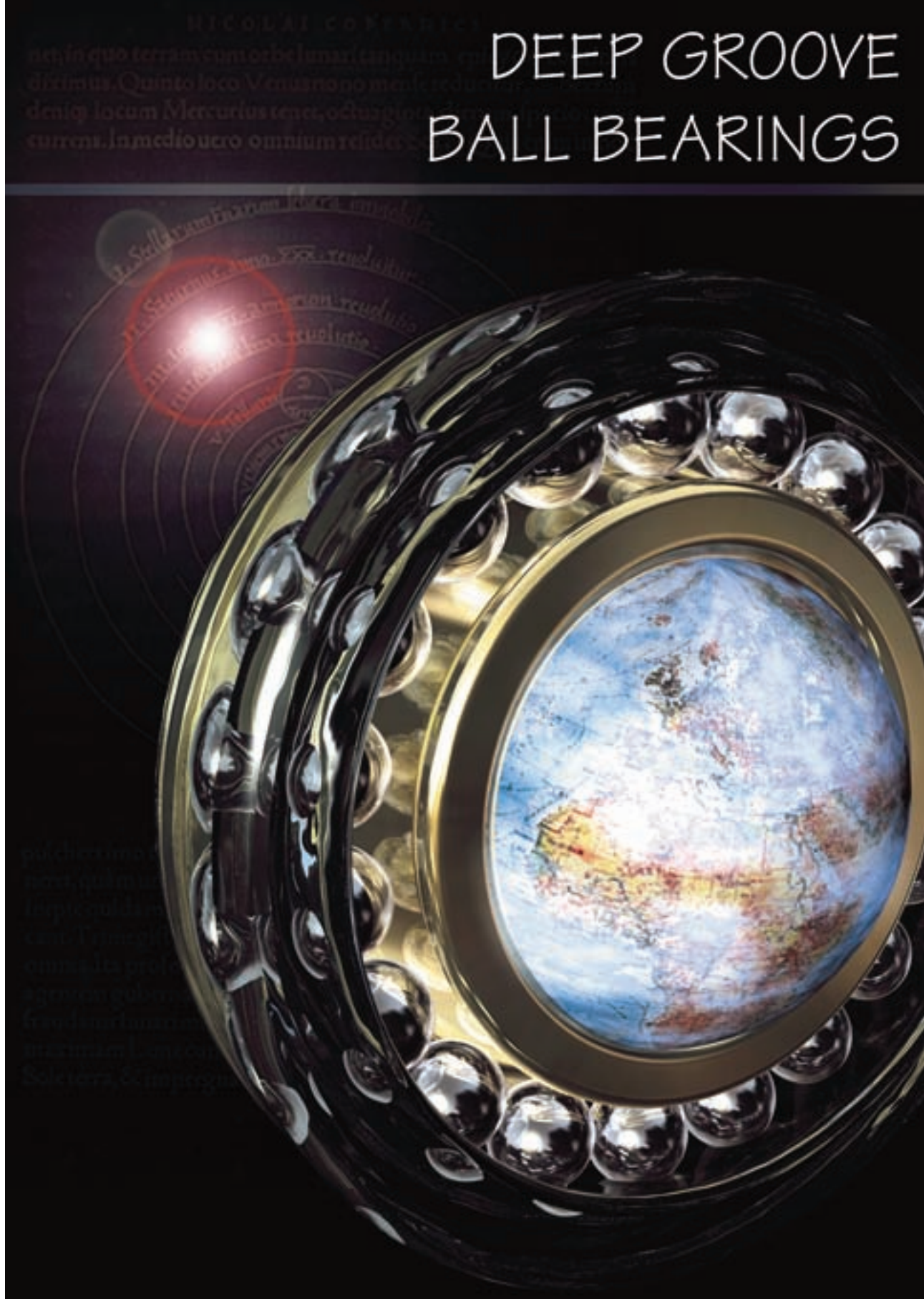
Dimensions: Boundary dimensions of standard bearings conform to ISO 15. ISO 355 and ISO 104 standards.
Dimensions of special bearings are not standardized.

Tolerances: Dimensional and running accuracy conform to ISO 492. ISO 578. ISO 199 and ISO 582 standards.
FLT bearings are produced mainly in tolerance class 0 (P0).

Internal clearance: Clearance of standard bearings conforms to ISO 5753 standard. Bearings of different clearances can be supplied upon request.

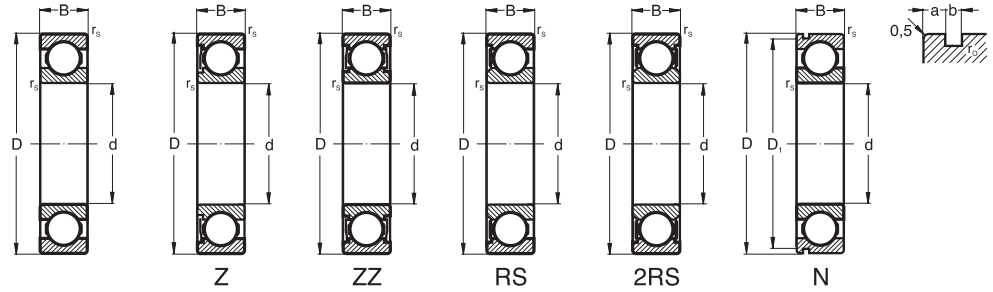
Basic load rating: C and Co ratings in the catalogue are calculated in accordance with ISO 281 and ISO 76 standards.

Basic rating life: can be calculated in accordance with ISO 281 and ISO 76 standards. This also applies to adjusted rating life with the use of factors a1. a2 and a3. Tests have confirmed that factors a2 and a3 can be used for calculating adjusted rating life.



FŁT Deep groove ball

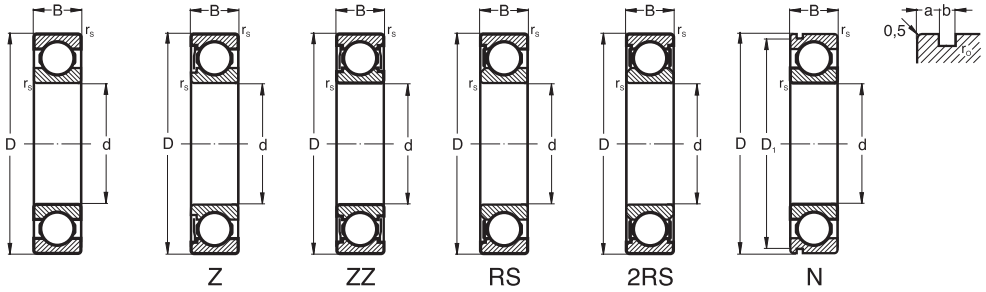
Single row



SUFFIX	Deep groove ball bearings (single row)
Z	metal shield at one side of the bearing
ZZ	metal shields at both sides of the bearing
RS	rubber seal at one side of the bearing
2RS	rubber seals at both sides of the bearing
N	snap ring groove in outer ring
ZN	shield at one side of the bearing and snap ring groove at the other side
M	machined brass cage
MA	machined brass cage centred on the outer ring
TN	polyamid cage
P6	accuracy to ISO tollerance class 6
P5	accuracy to ISO tollerance class 5
C0	standard clearance (not mentioned/marked on bearing)
C2	radial clearance less the normal
C3	radial clearance greater than normal
C4	radial clearance greater than C3
P63	accuracy to ISO class P6 and clearance C3

FŁT Deep groove ball bearings

Single row

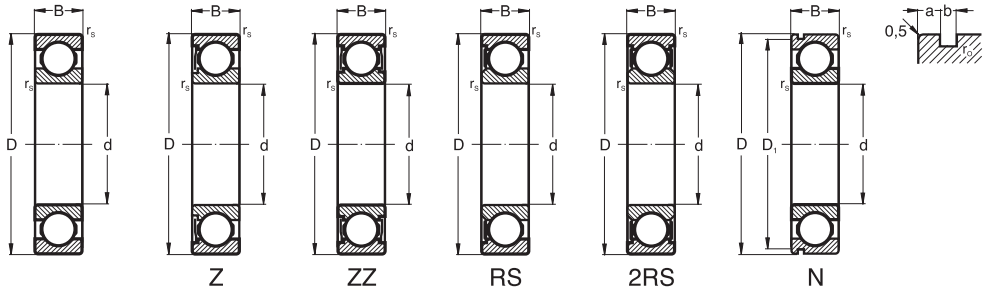


DIMENSIONS							BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATION	MODIFICATION					
d	D	B	rs min	D_1 ~	a ~	b	r_o max	dynamic C	static C_o	grease*	oil	~		Z	ZZ	RS	2RS	N	ZN
mm								kN		r/min		kg							
3	10	4	0.15					0.64	0.22	40 000	48 000	0.001	**623**		●				
4	13	5	0.2					0.98	0.30	48 000	56 000	0.003	**624**	●	●	●	●		
	16	5	0.3					1.73	0.67	34 000	40 000	0.006	**634**		●	●			
5	13	4	0.2					1.08	0.42	38 000	45 000	0.003	**695**		●				
	16	5	0.3					1.10	0.38	43 000	50 000	0.005	**625**	●	●	●	●		
	19	6	0.3					2.60	1.10	32 000	38 000	0.009	**635**		●				
6	15	5	0.2					1.48	0.60	38 000	45 000	0.004	**696**		●				
	19	6	0.3					2.24	0.92	36 000	43 000	0.009	**626**	●	●	●	●		
	22	7	0.3					2.54	1.36	30 000	36 000	0.003	**636**		●				
7	19	6	0.3					2.88	1.08	28 000	36 000	0.008	**607**	●	●	●	●		
	22	7	0.3					3.28	1.35	32 000	38 000	0.010	**627**	●	●	●	●		
8	16	5	0.3					1.31	0.53	36 000	43 000	0.003	**688**		●				
	22	7	0.3					3.30	1.40	32 000	38 000	0.012	**608**	●	●	●	●		
	24	8	0.3					3.35	1.40	28 000	34 000	0.017	**628**	●	●	●	●		
	28	9	0.3					4.30	1.98	28 000	34 000	0.021	**638**		●				
9	17	5	0.3					1.37	0.71	34 000	40 000	0.004	**689**		●				
	24	7	0.3					3.35	1.45	30 000	36 000	0.014	**609**	●	●	●	●		
	26	8	0.6					4.58	2.02	26 000	32 000	0.020	**629**	●	●	●	●		
10	22	6	0.3					2.20	0.84	30 000	36 000	0.010	**61900**				●		
	26	8	0.3					4.58	2.02	28 000	34 000	0.019	**6000**	●	●	●	●		
	30	9	0.6	28.17	2.06	1.35	0.4	5.05	2.28	24 000	30 000	0.032	**6200**	●	●	●	●	●	
	35	11	0.6					7.65	3.49	20 000	26 000	0.058	**6300**	●	●	●	●		
12	21	5	0.3					1.52	0.67	30 000	36 000	0.006	**61801**				●		
	24	6	0.3					1.52	0.67	28 000	34 000	0.012	**61901**				●		
	28	8	0.3					5.10	2.40	26 000	32 000	0.022	**6001**	●	●	●	●		
	32	10	0.6	30.15	2.06	1.35	0.4	6.90	3.20	22 000	28 000	0.037	**6201**	●	●	●	●	●	●
	32	14	0.6	34.77	2.06	1.35	0.4	6.90	3.20	19 000	24 000	0.052	**62201**				●		
	37	12	1.0					9.71	4.36	19 000	24 000	0.060	**6301**	●	●	●	●		
15	28	7	0.3					1.65	0.80	24 000	28 000	0.017	**61902**		●		●		
	32	8	0.3					5.60	2.85	22 000	28 000	0.027	**16002**		●				
	32	9	0.3	30.15	2.06	1.35	0.4	5.60	2.85	22 000	28 000	0.030	**6002**	●	●	●	●		
	35	11	0.6	33.17	2.06	1.35	0.4	7.74	3.83	19 000	24 000	0.045	**6202**	●	●	●	●	●	●
	35	14	0.6					7.65	3.60	20 000	24 000	0.053	**62202**			●	●		
	42	13	1.0	39.75	2.06	1.35	0.4	11.37	5.50	17 000	20 000	0.082	**6302**	●	●	●	●		
17	30	7	3.0					4.36	2.32	22 000	28 000	0.018	**61903**						
	35	8	0.3					6.00	3.25	19 000	24 000	0.030	**16003**		●				
	35	10	0.3	33.17	2.06	1.35	0.4	6.00	3.25	19 000	24 000	0.039	**6003**	●	●	●	●		
	40	12	0.6	38.10	2.06	1.35	0.4	9.57	4.86	17 000	20 000	0.065	**6203**	●	●	●	●	●	●
	47	14	1.0	44.60	2.46	1.35	0.4	12.80	6.68	16 000	19 000	0.115	**6303**	●	●	●	●		
	62	17	1.1	59.61	3.28	1.90	0.6	23.00	11.90	12 000	15 000	0.270	**6403**	●					
20	32	7	0.3					3.45	2.24	17 000	22 000	0.018	**61804**	●					
	37	9	0.3					6.37	3.65	17 000	22 000	0.038	**61904**	●			●		
	42	8	0.3					7.93	4.46	18 000	22 000	0.050	**16004**						
	42	12	0.6	39.75	2.06	1.35	0.4	9.40	5.05	17 000	20 000	0.069	**6004**	●	●	●	●		
	47	14	1.0	44.60	2.46	1.35	0.4	12.80	6.68	15 000	18 000	0.106	**6204**	●	●	●	●	●	●
	47	18	1.0					12.70	6.55	10 000	13 000	0.131	**62204**			●	●		
	52	15	1.1	49.73	2.46	1.35	0.4	15.94	8.07	13 000	16 000	0.144	**6304**	●	●	●	●	●	●
	72	19	1.1	68.81	3.28	1.90	0.6	30.05	15.00	10 000	13 000	0.400	**6404**						

*Limiting speeds for bearings in RS and 2RS amount to only two-thirds of the values given in the Table

FŁT Deep groove ball bearings

Single row

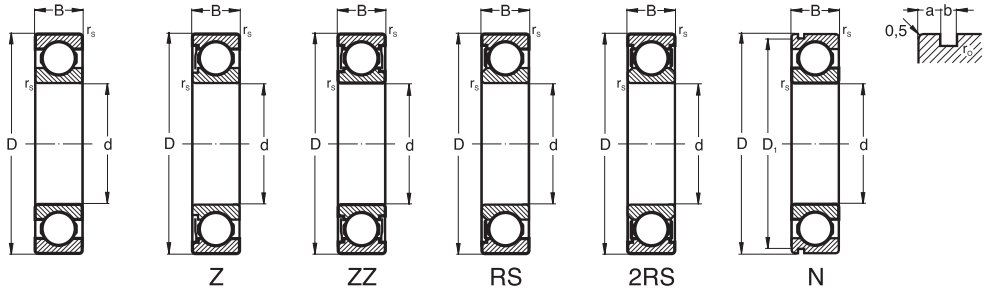


DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATION	MODIFICATION					
d	D	B	rs min	D_1	a ~	b	r_o max	dynamic C	static C_o	grease*	oil	~		Z	ZZ	RS	2RS	N	ZN
			mm					kN		r/min		kg							
25	37	7	0.3					3.80	2.80	19 000	24 000	0.021	**61805**		●				
	42	9	0.3					7.02	4.30	17 000	22 000	0.045	**61905**				●		
	47	8	0.3					9.07	5.28	14 000	17 000	0.060	**16005**	●					
	47	12	0.6	44.60	2.06	1.35	0.4	11.25	6.49	15 000	18 000	0.080	**6005**	●	●	●	●	●	
	52	15	1.0	49.73	2.46	1.35	0.4	14.04	7.90	12 000	15 000	0.129	**6205**	●	●	●	●	●	●
	52	18	1.0					14.04	7.90	12 000	15 000	0.153	**62205**				●		
	62	17	1.1	59.61	3.28	1.90	0.6	22.41	11.78	11 000	14 000	0.232	**6305**	●	●	●	●	●	●
	80	21	1.5	76.81	3.88	1.90	0.6	36.00	19.30	9 000	11 000	0.530	**6405**					●	
30	42	7	0.3					4.15	3.35	16 000	19 000	0.025	**61806**		●		●		
	47	9	0.3					7.28	4.55	16 000	19 000	0.051	**61906**				●		
	55	9	0.3					11.20	7.35	12 000	15 000	0.085	**16006**						
	55	13	1.0	52.60	2.06	1.35	0.4	13.24	8.22	12 000	15 000	0.116	**6006**	●	●	●	●	●	
	62	16	1.0	59.61	3.28	1.90	0.6	19.49	11.35	10 000	13 000	0.200	**6206**	●	●	●	●	●	
	62	20	1.0					19.46	11.31	7 500	9 000	0.236	**62206**			●	●		
	62	20	1.0	68.81	3.28	1.90	0.6	28.70	15.80	9 000	11 000	0.346	**6306**	●	●	●	●	●	
	90	23	1.5	86.79	3.88	2.70	0.6	43.30	24.00	8 500	10 000	0.375	**6406**						●
35	47	7	0.3					4.45	3.20	13 000	16 000	0.030	**61807**						
	55	10	0.6					9.50	6.80	10 000	13 000	0.076	**61907**				●		
	62	9	0.3					12.20	8.80	10 000	13 000	0.110	**16007**	●	●				
	62	14	1.0	59.61	2.06	1.35	0.6	15.90	10.30	10 000	13 000	0.155	**6007**	●	●	●	●	●	●
	62	20	1.0					16.00	10.30	10 000	13 000	0.210	**63007**				●		
	72	17	1.1	68.81	3.28	1.90	0.6	25.70	15.30	9 000	11 000	0.288	**6207**	●	●	●	●	●	●
	80	21	1.5	76.81	3.28	1.90	0.6	33.60	21.00	8 500	10 000	0.457	**6307**	●	●	●	●	●	●
	100	25	1.5	96.80	3.88	2.70	0.6	54.60	30.60	7 000	8 500	0.952	**6407**		●			●	
40	62	12	0.6					13.70	10.00	10 500	12 500	0.110	**61908**						
	68	9	0.3					13.20	10.20	9 500	12 000	0.125	**16008**	●					
	68	15	1.0	64.82	2.49	1.90	0.6	16.80	11.50	9 500	12 000	0.192	**6008**	●	●	●	●	●	●
	80	18	1.1	76.81	3.28	1.90	0.6	29.10	17.90	8 500	10 000	0.366	**6208**	●	●	●	●	●	●
	90	23	1.5	86.79	3.28	2.70	0.6	40.70	24.00	7 500	9 000	0.633	**6308**	●	●	●	●	●	●
	110	27	2.0	106.81	3.88	2.70	0.6	64.10	34.60	6 700	8 000	1.230	**6408**						
45	68	12	0.6					14.00	10.80	10 000	12 000	0.130	**61909**		●				
	75	10	0.6					15.60	12.20	9 000	11 000	0.170	**16009**						
	75	16	1.0	71.83	2.49	1.90	0.6	21.20	15.20	9 000	11 000	0.250	**6009**	●	●	●	●	●	●
	85	19	1.1	81.81	3.28	1.90	0.6	32.70	20.50	7 500	9 000	0.407	**6209**	●	●	●	●	●	●
	100	25	1.5	96.80	3.28	2.70	0.6	53.00	32.10	6 700	8 000	0.833	**6309**	●	●	●	●	●	●
	120	29	2.0	115.21	4.06	3.10	0.6	76.90	45.00	6 000	7 000	1.530	**6409**					●	
50	72	12	0.6					14.60	11.80	9 500	12 000	0.140	**61910**	●					
	80	10	0.6					16.20	13.20	8 500	10 000	0.180	**16010**						
	80	16	1.0	76.81	2.49	1.90	0.6	21.80	16.60	8 500	10 000	0.261	**6010**	●	●	●	●	●	●
	90	20	1.1	86.79	3.28	1.90	0.6	35.10	23.20	7 000	8 500	0.463	**6210**	●	●	●	●	●	●
	110	27	2.0	106.81	3.28	2.70	0.6	61.80	37.90	6 300	7 500	1.070	**6310**	●	●	●	●	●	●
	130	31	2.1	125.22	4.06	3.10	0.6	91.60	54.30	5 300	6 300	1.880	**6410**					●	
55	90	11	0.6					16.40	14.20	7 500	9 000	0.260	**16011**						
	90	18	1.1	86.79	2.87	2.70	0.6	28.30	21.30	7 500	9 000	0.385	**6011**	●	●	●	●	●	●
	100	21	1.5	96.80	3.28	2.70	0.6	43.40	29.20	6 300	7 500	0.607	**6211**	●	●	●	●	●	●
	120	29	2.0	115.21	4.06	3.10	0.6	71.50	44.60	5 600	6 700	1.370	**6311**	●	●	●	●	●	
	140	33	2.1	135.23	4.90	3.10	0.6	100.00	62.00	5 000	6 000	2.300	**6411**					●	

*Limiting speeds for bearings in RS and 2RS amount to only two-thirds of the values given in the Table

FŁT Deep groove ball bearings

Single row

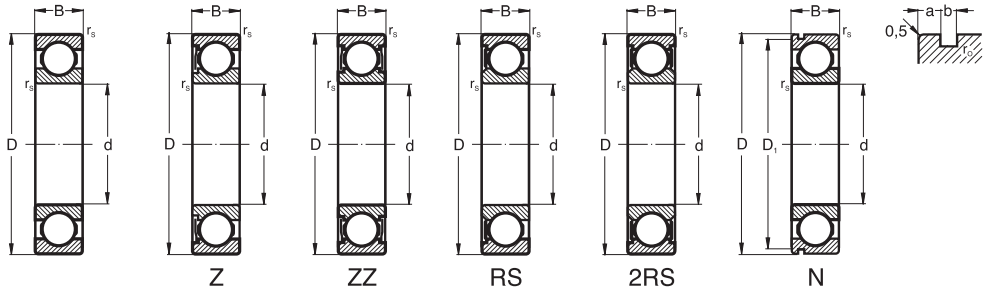


DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATION	MODIFICATION					
d	D	B	rs min	D_1	a ~	b	r_o max	dynamic C	static C_o	grease*	oil	~		Z	ZZ	RS	2RS	N	ZN
mm								kN		r/min		kg							
60	85	13	1.0					16.30	14.30	7 500	9 000	0.210	**61912**				●		
	95	11	0.6					20.00	17.60	6 700	8 000	0.280	**16012**						
	95	18	1.1	91.82	2.87	2.70	0.6	29.40	23.20	6 700	8 000	0.415	**6012**	●	●	●	●	●	●
	110	22	1.5	106.81	3.28	2.70	0.6	46.10	33.10	6 000	7 000	0.783	**6212**	●	●	●	●	●	●
	130	31	2.1	125.22	4.06	3.10	0.6	81.80	51.80	5 000	6 000	1.790	**6312**	●	●			●	●
	150	35	2.1	145.25	4.90	3.10	0.6	109.00	70.00	4 800	5 600	2.770	**6412**					●	
65	100	11	0.6					21.20	19.60	6 700	8 000	0.300	**16013**						
	100	18	1.1	96.80	2.87	2.70	0.6	30.50	25.20	6 300	7 500	0.435	**6013**	●	●	●	●	●	●
	120	23	1.5	115.21	4.06	2.70	0.6	57.20	40.00	5 300	6 300	0.990	**6213**	●	●	●	●	●	●
	140	33	2.1	135.23	4.90	3.10	0.6	93.00	56.00	4 800	5 600	2.080	**6313**	●	●	●	●	●	●
	160	37	2.1	155.22	4.90	3.10	0.6	118.00	78.60	4 500	5 300	3.300	**6413**					●	
70	90	10	0.6					12.50	12.50	6 700	8 000	0.140	**61814**		●				
	110	20	1.1	106.81	2.87	3.10	0.6	38.00	30.90	6 000	7 000	0.600	**6014**	●	●	●	●	●	●
	125	24	1.5	120.22	4.06	3.10	0.6	62.20	44.00	5 000	6 000	1.070	**6214**	●	●	●	●	●	●
	150	35	2.1	145.24	4.90	3.10	0.6	104.00	63.00	4 500	5 300	2.520	**6314**	●	●	●	●	●	●
	180	42	3.0	173.66	5.69	3.50	0.6	143.00	104.00	3 800	4 500	4.830	**6414**					●	
75	115	13	0.6					28.50	27.00	5 600	6 700	0.460	**16015**						
	115	20	1.1	111.81	2.87	3.10	0.6	39.50	33.60	5 600	6 700	0.630	**6015**	●	●		●	●	
	130	25	1.5	125.22	4.06	3.10	0.6	66.20	49.30	4 800	5 600	1.180	**6215**	●	●		●	●	
	160	37	2.1	155.22	4.90	3.10	0.6	113.40	77.00	4 300	5 000	3.000	**6315**	●	●	●	●	●	
	190	45	3.0	183.64	5.69	3.50	0.6	153.00	114.00	3 600	4 300	6.800	**6415**					●	
80	125	14	0.6					32.00	31.00	5 300	6 300	0.609	**16016**						
	125	22	1.1	120.22	2.87	3.10	0.6	47.60	39.70	5 300	6 300	0.850	**6016**	●		●	●	●	
	140	26	2.0	135.23	4.90	3.10	0.6	72.70	53.00	4 500	5 300	1.400	**6216**	●	●	●	●	●	
	170	39	2.1	163.65	5.69	3.50	0.6	124.00	80.00	3 800	4 500	3.600	**6316**		●		●	●	
	200	48	3.0	193.65	5.69	3.50	0.6	163.00	125.00	2 500	3 200	8.000	**6416**					●	
85	110	13	1.0					19.30	20.00	5 300	6 300	0.270	**61817**						
	120	18	1.1					32.00	29.00	5 300	6 300	0.550	**61917**						
	130	22	1.1	125.22	2.87	3.10	0.6	49.50	43.00	5 000	6 000	0.890	**6017**		●		●	●	
	150	28	2.0	145.24	4.90	3.10	0.6	77.00	59.00	4 300	5 000	1.790	**6217**				●	●	
	180	41	3.0	173.66	5.69	3.50	0.6	133.00	90.00	3 600	4 300	4.230	**6317**		●		●	●	
90	140	16	1.0					41.50	39.00	4 500	5 300	0.860	**16018**						
	140	24	1.5	135.23	3.71	3.10	0.6	58.20	46.60	4 800	5 600	1.160	**6018**	●	●			●	
	160	30	2.0	155.22	4.90	3.10	0.6	102.40	75.90	3 800	4 500	2.150	**6218**		●		●	●	
	190	43	3.0	183.64	5.69	3.50	0.6	143.00	98.00	3 400	4 000	4.900	**6318**		●		●	●	
95	130	18	1.0					33.80	33.50	5 300	6 300	0.610	**61919**						
	145	24	1.5	140.23	3.71	3.10	0.6	60.50	53.70	4 500	5 300	1.210	**6019**		●			●	
	170	32	2.1	163.65	5.69	3.50	0.6	108.70	81.70	3 600	4 300	2.620	**6219**	●		●	●	●	
	200	45	3.0	193.65	5.69	3.50	0.6	153.00	110.00	3 200	3 800	5.620	**6319**				●	●	
100	150	24	1.5	145.24	3.71	3.10	0.6	60.10	54.20	4 300	5 000	1.250	**6020**	●			●	●	
	180	34	2.1	173.66	5.69	3.50	0.6	122.10	92.70	3 400	4 000	3.140	**6220**		●			●	
	215	47	3.0					175.00	131.00	3 000	3 600	7.000	**6320**		●		●		
105	130	13	1.1					16.30	19.00	5 300	6 300	0.320	**61821**						
	160	26	2.0	155.22	3.71	3.10	0.6	72.50	65.50	4 000	4 800	1.540	**6021**					●	
	190	36	2.1	183.64	5.69	3.50	0.6	133.00	104.50	3 200	3 800	3.700	**6221**				●	●	
	225	49	3.0					173.00	146.00	2 800	3 400	8.050	**6321**					●	

*Limiting speeds for bearings in RS and 2RS amount to only two-thirds of the values given in the Table

FŁT Deep groove ball bearings

Single row

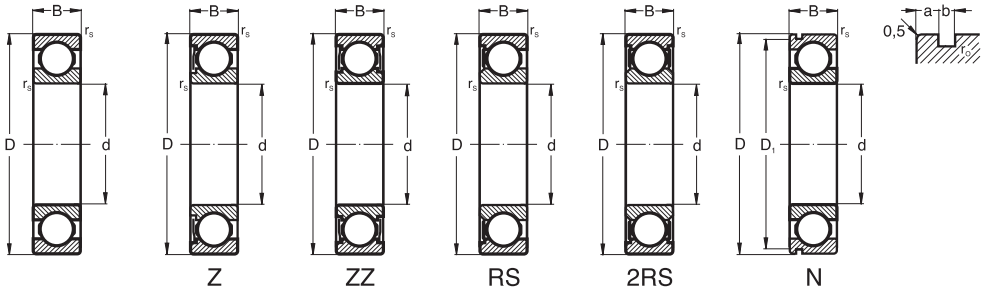


DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATION	MODIFICATION					
d	D	B	rs min	D_1	a ~	b	r_o max	dynamic C	static C_o	grease*	oil	~		Z	ZZ	RS	2RS	N	ZN
mm								kN		r/min		kg							
110	140	16	1.0					28.10	26.00	4 800	5 600	0.500	**61822**			●	●		
	170	19	1.0					57.00	57.00	3 800	4 500	1.520	**16022**						
	170	28	2.0	163.65	3.71	3.50	0.6	82.00	72.80	3 800	4 500	1.960	**6022**		●			●	
	200	38	2.1	193.65	5.69	3.50	0.6	144.10	117.00	3 000	3 600	4.360	**6222**		●			●	
	240	50	3.0					207.00	167.00	2 600	3 200	9.540	**6322**		●				
120	165	22	1.1					55.30	57.00	4 300	5 000	1.200	**61924**						
	180	19	1.0					63.70	64.00	4 000	4 800	1.600	**16024**						
	180	28	2.0	173.66	3.71	3.50	0.6	84.00	61.00	3 400	4 000	2.070	**6024**		●			●	
	215	40	2.1					153.00	112.00	2 800	3 400	5.150	**6224**						
	260	55	3.0					217.00	180.00	2 400	3 000	14.600	**6324**		●				
130	165	18	1.1					39.00	46.50	3 350	4 000	0.860	**61826**				●		
	200	22	1.1					78.00	81.50	3 200	3 800	2.420	**16026**						
	200	33	2.0	193.65	5.69	3.50	0.6	106.00	78.00	3 200	3 800	3.700	**6026**		●		●	●	
	230	40	3.0					168.00	125.00	2 600	3 200	5.820	**6226**						
	280	58	4.0					230.00	193.00	2 200	2 800	18.200	**6326**						
140	175	18	1.0					39.00	46.50	3 400	4 000	0.860	**61828**				●		
	210	22	1.1					63.00	69.00	3 000	3 600	2.550	**16028**						
	210	33	2.0					110.00	83.00	3 000	3 600	3.900	**6028**			●	●		
	250	42	3.0					177.00	137.00	2 400	3 000	7.470	**6228**						
	300	62	4.0					255.00	224.00	2 000	2 600	21.800	**6328**						
150	190	20	1.1					48.00	61.00	3 200	3 800	1.140	**61830**						
	225	35	2.1					124.00	98.00	2 600	3 200	4.800	**6030**						
	270	45	3.0					190.00	149.00	2 000	2 600	10.100	**6230**						
	320	65	4.0					291.00	255.00	1 900	2 400	26.200	**6330**						
160	200	20	1.1					52.00	62.00	3 000	3 600	1.190	**61832**						
	240	25	1.5					99.50	108.00	2 400	3 000	3.800	**16032**						
	240	38	2.1					138.00	105.00	2 400	3 000	5.890	**6032**						
	290	48	3.0					203.00	164.00	1 900	2 400	14.300	**6232**						
170	215	22	1.1					62.00	73.50	2 200	3 400	1.560	**61834**						
	260	28	1.5					119.00	129.00	2 200	2 800	5.000	**16034**						
	260	42	2.1					168.00	133.00	1 900	2 800	7.920	**6034**						
	310	52	4.0					228.00	196.00	1 800	2 400	17.500	**6234**						
180	225	22	1.1					62.40	81.50	2 400	3 000	2.000	**61836**						
	280	31	2.0					138.00	146.00	2 000	2 600	6.500	**16036**						
	280	46	2.1					189.00	156.00	2 000	2 600	10.300	**6036**						
	320	52	4.0					256.00	230.00	1 800	2 200	18.300	**6236**						
190	240	24	1.5					76.10	98.00	2 200	2 800	2.600	**61838**						
	290	31	2.0					150.00	166.00	2 000	2 600	7.100	**16038**						
	290	46	2.1					196.00	167.00	2 000	2 600	10.800	**6038**						
	340	55	4.0					269.00	248.00	1 800	2 000	23.000	**6238**						
200	250	24	1.5					68.00	85.00	2 400	3 000	2.800	**61840**						
	310	34	2.0					168.00	190.00	1 900	2 400	8.850	**16040**						
	310	51	2.1					219.00	190.00	1 900	2 400	13.900	**6040**						
	360	58	4.0					280.00	267.00	1 700	2 000	28.200	**6240**						
220	270	24	1.5					73.50	96.50	2 200	2 800	2.880	**61844**						
240	300	28	2.0					96.40	126.10	1 900	2 400	4.800	**61848**						
	360	37	2.1					178.00	220.00	1 700	2 000	12.700	**16048**						
260	320	28	2.0					111.00	163.00	1 700	2 000	4.800	**61852**						

*Limiting speeds for bearings in RS and 2RS amount to only two-thirds of the values given in the Table

FŁT Deep groove ball bearings

Single row



DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATION	MODIFICATION					
d	D	B	rs min	D_1	a ~	b	r_o max	dynamic C	static C_o	grease*	oil	~		Z	ZZ	RS	2RS	N	ZN
mm								kN		r/min		kg							
280	350	33	2.0					142.70	182.90	1 600	1 900	7.630	**61856**						
300	380	38	2.1					150.00	196.00	1 500	1 800	10.700	**61860**						
320	400	38	2.1					153.00	212.00	1 400	1 700	11.300	**61864**						
340	420	38	2.1					156.00	220.00	1 300	1 600	11.900	**61868**						
360	440	38	2.1					156.00	233.00	1 300	1 600	12.600	**61872**						
380	480	46	2.0					237.50	351.50	1 200	1 500	20.700	**61876**						
460	580	56	3.0					290.00	480.00	950	1 200	35.800	**61892**						
480	600	56	3.0					300.00	500.00	900	1 100	38.000	**61896**						
560	680	56	3.0					310.00	570.00	800	950	43.500	**618/560**						
600	730	60	3.0					355.00	670.00	700	900	50.500	**618/600**						

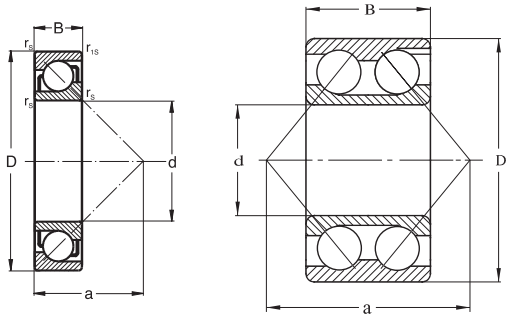
*Limiting speeds for bearings in RS and 2RS amount to only two-thirds of the values given in the Table

ANGULAR CONTACT BALL BEARINGS



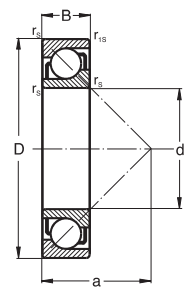
FŁT Angular contact ball bearings

Single and double row



SUFFIX	Angular contact ball bearings (single and double row)
A	modified internal desing – contact angle 30⁰
B	modified internal desing – contact angle 40⁰
2RS	rubber seals at both sides of the bearing
P6	accuracy to ISO tollerance class 6
P5	accuracy to ISO tollerance class 5
X1	dimensions non conformity with the international standard
MA	solid brass cage centred in the outer ring
FA	solid steel cage centred in the outer ring
V	bearing without cage with full quantity of rolling elements
N2M	bearing with two retaining slots and brass cage

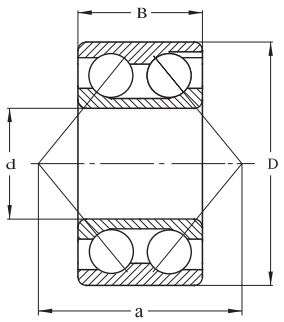
Single row



DIMENSIONS						BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	D	B	r_s min	r_{1s} min	a ~	dynamic C	static C_o	grease	oil	~	
	mm					kN		r/min		kg	
17	40	12	0.6	0.3	16.0	10.8	5.30	14 000	19 000	0.070	**7203B**
	47	14	1.0	0.6	20.5	14.8	7.15	12 000	17 000	0.120	**7303B**
20	47	14	1.0	0.6	21.0	13.3	6.55	11 000	16 000	0.112	**7204B**
	52	15	1.1	0.6	17.0	18.0	9.30	10 000	15 000	0.150	**7304B**
25	52	15	1.0	0.6	23.5	14.7	7.65	9 500	14 000	0.135	**7205B**
	62	17	1.1	0.6	26.5	24.6	12.80	8 500	12 000	0.234	**7305B**
30	62	17	1.0	0.6	27.0	20.4	13.50	8 500	12 000	0.208	**7206X1B**
	72	19	1.1	0.6	31.0	34.4	21.20	7 500	10 000	0.362	**7306B**
35	72	17	1.1	0.6	31.0	27.0	18.30	7 500	10 000	0.295	**7207B**
	80	21	1.5	1.0	34.5	36.3	24.10	7 000	9 500	0.475	**7307B**
40	80	18	1.1	0.6	34.0	35.7	25.70	6 700	9 000	0.382	**7208B**
	90	23	1.5	1.0	39.0	49.7	30.20	6 300	8 500	0.657	**7308B**
45	85	19	1.1	0.6	37.0	35.7	27.00	6 300	8 500	0.430	**7209B**
	100	25	1.5	1.0	43.0	58.0	40.10	5 600	7 500	0.875	**7309B**
50	90	20	1.1	0.6	39.0	37.0	24.80	5 600	7 500	0.485	**7210B**
	110	27	2.0	1.0	47.0	67.5	47.80	5 000	6 700	1.140	**7310B**
55	100	21	1.5	1.0	43.0	46.5	29.40	5 300	7 000	0.635	**7211B**
	120	29	2.0	1.0	52.0	79.0	47.50	4 500	6 000	1.450	**7311B**
60	110	22	1.5	1.0	47.0	56.0	35.80	4 800	6 300	0.820	**7212B**
	130	31	2.1	1.1	55.0	90.5	54.00	4 300	5 600	1.810	**7312B**
65	120	23	1.5	1.0	50.0	64.0	42.20	4 300	5 600	1.020	**7213B**
	140	33	2.1	1.1	60.0	106.0	75.40	4 000	5 300	2.220	**7313B**
70	125	24	1.5	1.0	53.0	69.0	46.60	4 300	5 600	1.120	**7214B**
	150	35	2.1	1.1	64.0	120.0	86.00	3 600	4 800	2.700	**7314B**
75	130	25	1.5	1.0	56.0	71.0	49.00	4 000	5 300	1.230	**7215B**
	160	37	2.1	1.1	68.0	125.0	80.00	3 400	4 500	3.150	**7315B**
80	140	26	2.0	1.0	59.0	80.0	56.00	3 600	4 800	1.500	**7216B**
	170	39	2.1	1.1	72.0	135.0	90.00	3 200	4 300	4.180	**7316B**
85	150	28	2.0	1.0	64.0	90.5	64.00	3 400	4 500	1.800	**7217B**
	180	41	3.0	1.1	76.0	145.0	100.00	3 000	4 000	4.900	**7317B**
90	160	30	2.0	1.0	67.0	106.0	75.00	3 200	4 300	2.300	**7218B**
	190	43	3.0	1.1	80.0	155.0	112.00	2 900	3 800	5.760	**7318B**
95	170	32	2.1	1.1	71.0	121.0	86.50	3 000	4 000	3.000	**7219B**
	200	45	3.0	1.1	84.0	171.0	129.00	2 500	3 400	6.680	**7319B**
100	180	34	2.1	1.1	76.0	130.0	91.00	2 800	3 800	3.320	**7220B**
	215	47	3.0	1.1	90.0	191.0	150.00	2 400	3 200	7.180	**7320B**

FŁT Angular contact ball bearings

Double row with filling slots



Four-point contact ball bearings

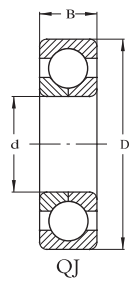


Fig. 1

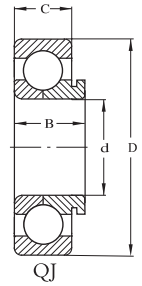


Fig. 2

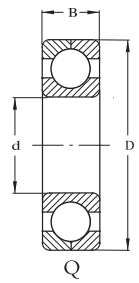


Fig. 3

DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS	MODYFICATION	
d	D	B	r_s min	a ~	dynamic C	static C_o	grease*	oil	~		ZZ	2RS
	mm				kN		r/min		kg			
10	30	14	1.0	19	7.92	5.20	16 000	22 000	0.05	**3200**	●	●
12	32	15.9	1.0	22	9.68	6.40	15 000	20 000	0.06	**3201**	●	●
15	35	15.9	1.0	23	9.13	6.20	13 000	18 000	0.07	**3202**	●	●
	42	19.0	1.0	27	15.10	10.60	10 000	15 000	0.13	**3302**	●	●
17	40	17.5	1.0	27	12.50	9.00	10 000	15 000	0.10	**3203**	●	●
	47	22.2	1.0	31	20.90	15.00	9 500	14 000	0.19	**3303**	●	●
20	47	20.6	1.0	31	17.20	12.70	9 000	13 000	0.17	**3204**	●	●
	52	22.2	1.1	34	20.90	15.60	8 500	12 000	0.23	**3304**	●	●
25	52	20.6	1.0	35	22.0	13.4	8 000	11 000	0.19	**3205**	●	●
	62	25.4	1.1	41	28.9	26.4	7 500	10 000	0.37	**3305**	●	●
30	62	23.8	1.0	41	27.2	27.0	7 000	9 500	0.32	**3206**	●	●
	72	30.2	1.1	47	44.5	27.0	6 300	8 500	0.59	**3306**	●	●
35	72	27.0	1.1	47	34.5	35.3	6 000	8 000	0.48	**3207**	●	●
	80	34.9	1.5	54	57.0	35.5	5 600	7 500	0.82	**3307**	●	●
40	80	30.2	1.1	52	49.0	32.0	5 600	7 500	0.65	**3208**	●	●
	90	36.5	1.5	58	53.6	56.6	5 000	6 700	0.95	**3308**	●	●
45	85	30.2	1.1	56	52.5	36.5	5 000	6 700	0.71	**3209**	●	●
	100	39.7	1.5	65	73.1	79.4	4 500	6 000	1.40	**3309**	●	●
50	90	30.2	1.1	59	60.0	42.5	4 800	6 300	0.76	**3210**	●	●
	110	44.4	2.0	73	104.0	72.0	4 000	5 300	1.95	**3310**	●	●
55	100	33.3	1.5	64	57.2	54.0	4 300	5 600	1.05	**3211**	●	●
60	110	36.5	1.5	71	72.1	68.0	3 800	5 000	1.40	**3212**	●	●
55	120	49.2	2.0	80	95.2	88.0	3 600	4 800	2.55	**3311**	●	●
60	130	54.0	2.5	85	112.0	106.0	3 400	4 500	3.25	**3312**	●	●
65	120	38.1	1.5	76	78.1	75.0	3 600	4 800	1.75	**3213**	●	●
70	125	39.7	2.1	81	78.1	76.5	3 200	4 300	1.90	**3214**	●	●
	150	63.5	2.1	109	143.0	166.0	3 000	4 000	4.87	**3314**		
75	130	41.3	2.1	84	84.2	85.2	3 200	4 300	2.10	**3215**	●	●
80	140	44.4	2.1	91	101.0	104.0	2 800	3 800	2.65	**3216**	●	●
	170	68.3	2.1	113	176.0	212.0	3 600	4 000	6.95	**3316**		

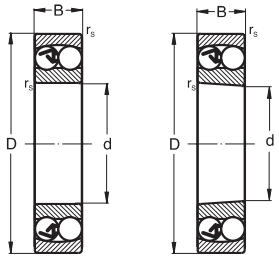
DIMENSIONS			BASIC LOAD RATING		MODIFICATION			BASIC DESIGNATIONS	MASS	FIG No
d	D	B/C	dynamic C	static C_o	V	MA	FA		~	
	mm		kN						kg	
40	80	22/18	59.0	50.0		●		**QJ 208 X**	0.45	2
45	85	19	61.5	55.0				**QJ 209**	0.52	1
	100	25	93.5	77.0		●		**QJ 309**	1.04	1
55	120	29	139.0	119.0		●		**QJ 311X**	0.74	1
	120	29	139.0	119.0				**QBJ 55**	1.58	1
65	100	18	55.0	61.5		●		**QJ 1013X**	0.51	1
130	280	58	444.0	580.0		●		**QJ 326**	19.50	1
140	300	62	486.0	2.0		●		**QJ 328**	24.00	1
170	260	42	315.0	453.0		●		**QJ 1034**	9.50	1
180	380	75	638.0	1030.0		●		**QJ 336**	47.50	1
220	340	56	431.0	724.0		●		**QJ 1044**	22.80	1
	460	88	845.0	1530.0		●		**QJ 344**	73.00	1
260	480	90	493.0	762.0		●		**QJ 1252M**	28.50	1
320	580	92	984.0	2139.0				**QJ 264 N2M**	121.00	1
360	540	82	680.0	1490.0		●		**QJ 1072**	70.00	1
530	710	82	903.0	2390.0			●	**QJ 19/530**	105.48	1
630	850	100	1150.0	3400.0			●	**QJ 19/630**	162.00	1
670	820	69	821.0	2460.0	●			**Q 18/670**	82.40	3
900	1180	122	1610.0	5690.0			●	**QJ 19/900**	379.40	1

* Limiting speeds for bearing in 2RS amount to only two-thirds of the values given in the Table

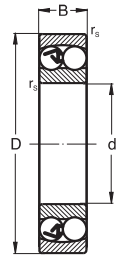
SELF-ALIGNING BALL BEARINGS

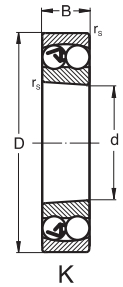


FŁT Self-aligning ball bearings



K



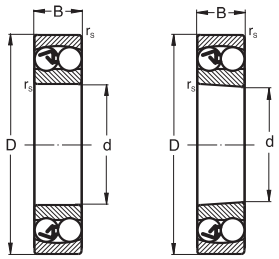


K

SUFFIX	Self-aligning ball bearings
K	tapered bored (1:12 on diameter)
P6	accuracy to ISO tolerance class 6
C3	radial clearance greater than normal
C4	radial clearance greater than C3
2RS	rubber seals at both sides of the bearing

DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS	MODIFICATION	
d	D	B	r_s	dynamic C	static C_o	grease	oil	~		K	2RS
mm				kN		r/min		kg			
10	30	9	1.0	4.25	1.40	24 000	30 000	0.03	**1200**		
12	32	10	1.0	4.80	1.53	22 000	28 000	0.04	**1201**		
15	35	11	1.0	5.85	2.08	19 000	24 000	0.05	**1202**		
17	40	12	1.0	6.10	2.45	18 000	22 000	0.07	**1203**		
20	47	18	1.0	9.80	3.90	10 000	-	0.14	**2204**		●
25	52	15	1.0	12.00	3.30	13 000	16 000	0.14	**1205**	●	
	52	18	1.0	12.50	3.45	13 000	16 000	0.18	**2205**	●	●
	62	17	1.0	17.80	5.05	9 500	12 000	0.26	**1305**	●	
30	62	16	1.0	15.67	4.70	10 000	13 000	0.22	**1206**	●	
	62	20	1.0	15.30	4.55	9 500	12 000	0.26	**2206**	●	●
	72	19	1.1	21.35	6.34	9 000	11 000	0.39	**1306**	●	
	72	27	1.1	31.40	8.67	8 500	10 000	0.50	**2306**	●	
35	72	17	1.1	15.80	5.15	9 000	11 000	0.32	**1207**	●	
	72	23	1.1	21.65	6.68	8 500	10 000	0.40	**2207**	●	●
	80	21	1.5	25.10	7.94	7 500	9 000	0.51	**1307**	●	
	80	31	1.5	39.40	11.10	7 000	8 500	0.68	**2307**	●	
40	80	18	1.1	19.22	6.50	8 500	10 000	0.42	**1208**	●	
	80	23	1.1	22.26	7.37	7 500	9 000	0.51	**2208**	●	●
	90	23	1.5	29.51	9.76	6 700	8 000	0.72	**1308**	●	
	90	33	1.5	44.85	13.38	6 300	7 500	0.93	**2308**	●	
45	85	19	1.1	21.82	7.37	7 500	9 000	0.47	**1209**	●	
	85	23	1.1	23.29	8.15	7 000	8 500	0.55	**2209**	●	
	100	25	1.5	38.10	12.90	6 300	7 500	0.96	**1309**	●	
	100	36	1.5	54.11	16.47	5 600	6 700	1.25	**2309**	●	
50	90	20	1.1	22.72	8.09	7 000	8 500	0.53	**1210**	●	
	90	23	1.1	23.26	8.47	6 300	7 500	0.59	**2210**	●	
	110	27	2.0	43.34	14.16	5 600	6 700	1.20	**1310**	●	
	110	40	2.0	64.38	20.00	5 300	6 300	1.65	**2310**	●	
55	100	21	1.5	26.75	10.03	6 300	7 500	0.71	**1211**	●	
	100	25	1.5	26.35	9.93	6 000	7 000	0.81	**2211**	●	
	120	29	2.0	51.32	18.05	5 000	6 000	1.60	**1311**	●	
	120	43	2.0	75.27	23.78	4 800	5 600	2.10	**2311**	●	
60	110	22	1.5	30.16	11.56	5 600	6 700	0.90	**1212**	●	
	110	28	1.5	33.94	12.55	5 300	6 300	1.10	**2212**	●	
	130	31	2.1	57.12	20.74	4 500	5 300	1.95	**1312**	●	
	130	46	2.1	86.80	27.84	4 500	5 300	2.60	**2312**	●	
65	120	23	1.5	31.00	12.37	5 300	6 300	1.15	**1213**	●	
	130	31	1.5	43.53	16.35	5 000	6 000	1.45	**2213**	●	
	140	33	2.1	61.97	22.86	4 300	5 000	2.45	**1313**	●	
	140	48	2.1	96.23	32.38	4 000	4 900	3.25	**2313**	●	

FŁT Self-aligning ball bearings



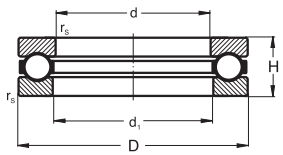
K

DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS	MODIFICATION	
d	D	B	r_s	dynamic C	static C_o	grease	oil	~		K	2RS
mm				kN		r/min		kg			
70	125	24	1.5	34.64	13.68	5 000	6 000	1.25	**1214**	●	
	125	31	1.5	40.00	17.00	4 800	5 600	1.50	**2214**	●	
	150	35	2.1	74.29	27.68	4 000	4 800	3.00	**1314**	●	
	150	51	2.1	110.00	37.50	3 800	4 500	3.90	**2314**	●	
75	130	25	1.5	38.85	15.55	4 800	5 600	1.35	**1215**	●	
	130	31	1.5	44.00	18.00	4 500	5 300	1.60	**2215**	●	
	160	37	2.1	79.16	29.87	3 900	4 500	3.55	**1315**	●	
	160	55	2.1	122.00	42.50	3 400	4 000	4.70	**2315**	●	
80	140	26	2.0	39.82	16.94	4 500	5 300	1.65	**1216**	●	
	140	33	2.0	71.00	28.50	4 000	4 800	2.00	**2216**	●	
	170	39	2.1	88.35	33.01	3 600	4 300	4.20	**1316**	●	
	170	58	2.1	145.00	51.67	3 200	3 800	6.10	**2316**	●	
85	150	28	2.0	49.22	20.48	4 200	4 800	2.10	**1217**	●	
	150	36	2.0	57.94	23.61	3 800	4 500	2.50	**2217**	●	
	180	41	3.0	97.59	37.82	3 400	4 000	5.00	**1317**	●	
	180	60	3.0	140.00	51.00	3 000	3 600	7.10	**2317**	●	
90	160	30	2.0	54.94	22.22	3 800	4 500	2.50	**1218**	●	
	160	40	2.0	71.00	28.50	3 600	4 300	3.40	**2218**	●	
	190	43	3.0	116.27	44.80	2 800	3 400	8.45	**1318**	●	
95	170	32	2.1	64.00	27.00	3 600	4 300	3.10	**1219**	●	
	170	43	2.1	83.00	34.00	3 200	3 800	4.10	**2219**	●	
	200	67	3.0	163.00	64.00	2 600	3 200	8.80	**2319**	●	
100	180	34	2.1	69.12	29.48	3 400	4 000	3.70	**1220**	●	
	180	46	2.1	76.50	51.00	3 200	3 800	5.00	**2220**	●	

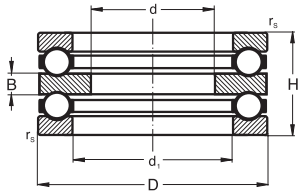


FŁT Thrust ball bearings

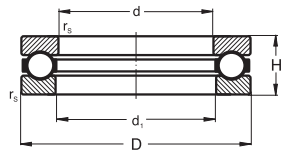
Single direction



double direction



Single direction

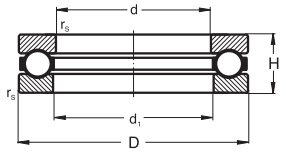


SUFFIX	Thrust ball bearings
M	machined brass cage
U	bearing with sphered housing washer and aligning seating washer

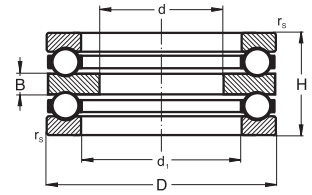
DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	d_1	D	H	r_s min	dynamic C	static C_o	grease	oil	~	
mm					kN		r/min		kg	
10	11.00	24	9	0.3	10.00	14.0	7 000	9 500	0.020	**51100**
	11.00	26	11	1.0	10.00	14.0	6 000	8 000	0.030	**51200**
12	13.00	26	9	0.3	10.40	15.3	6 700	9 000	0.022	**51101**
15	16.00	28	9	0.3	9.36	14.0	6 300	8 500	0.230	**51102**
17	18.00	30	9	0.3	9.65	15.3	6 300	8 500	0.025	**51103**
	18.00	35	12	1.0	12.70	22.0	5 300	7 000	0.053	**51203**
20	21.00	35	10	0.3	12.70	20.8	5 600	7 500	0.038	**51104**
	22.00	40	14	0.6	22.40	37.5	4 500	6 000	0.083	**51204**
25	26.00	42	11	0.6	15.60	29.0	4 800	6 300	0.061	**51105**
	27.00	47	15	0.6	28.00	50.0	4 000	5 300	0.110	**51205**
	27.00	52	18	1.0	33.50	55.9	3 900	5 000	0.180	**51305**
30	32.00	47	11	0.6	14.93	30.4	4 500	6 000	0.068	**51106**
	32.00	52	16	0.6	25.50	46.6	4 500	6 000	0.144	**51206**
	32.00	60	21	1.0	37.80	67.8	3 000	4 000	0.270	**51306**
35	37.00	52	12	0.6	17.40	37.5	4 300	5 600	0.085	**51107**
	37.00	62	18	1.0	35.30	67.1	3 800	5 000	0.220	**51207**
	37.00	68	24	1.0	56.00	85.0	3 000	4 000	0.390	**51307**
	38.35	66	16		33.30	77.5	3 500		0.216	**CBK-287A**
40	42.00	60	13	0.6	25.10	56.5	3 800	5 000	0.120	**51108**
	42.00	68	19	1.0	40.00	80.1	3 800	5 000	0.270	**51208**
	42.00	78	26	1.0	57.50	109.3	2 000	3 000	0.550	**51308**
45	47.00	65	14	0.6	25.30	59.5	3 800	5 000	0.150	**51109**
	47.00	73	26	1.0	28.90	80.1	3 000	4 000	0.320	**51209**
	47.00	85	28	1.0	71.50	138.3	1 800	2 600	0.690	**51309**
50	52.00	70	14	0.6	27.10	69.0	3 400	4 500	0.160	**51110**
	52.00	78	22	1.0	41.80	92.4	3 000	4 000	0.390	**51210**
	52.00	95	31	1.1	86.40	170.8	1 800	2 600	1.000	**51310**
55	57.00	78	16	0.6	32.80	85.8	3 000	4 000	0.240	**51111**
	57.00	90	25	1.0	63.50	139.1	2 000	3 000	0.610	**51211**
	57.00	105	35	1.1	113.00	225.8	1 600	2 200	1.340	**51311**
60	62.00	85	17	1.0	39.10	103.0	2 600	3 600	0.290	**51112**
	62.00	95	26	1.0	62.20	139.1	2 000	3 000	0.690	**51212**
	62.00	110	35	1.1	117.00	246.4	1 600	2 200	1.430	**51312**
65	67.00	90	18	1.0	40.60	113.0	2 400	3 200	0.340	**51113**
	67.00	100	27	1.0	63.90	149.0	1 800	2 600	0.770	**51213**
	67.00	115	36	1.1	127.00	231.0	1 200	1 700	1.570	**51313**
70	72.00	95	18	1.0	40.20	117.0	2 400	3 200	0.360	**51114**
	72.00	105	27	1.0	65.60	159.0	1 800	2 620	0.810	**51214**
	72.00	125	40	1.1	153.00	275.0	1 200	1 700	2.060	**51314**
75	77.00	100	19	1.0	44.30	122.9	2 200	3 200	0.420	**51115**
	77.00	110	27	1.0	67.20	169.0	1 800	2 600	0.860	**51215**
	77.00	135	44	1.5	171.00	319.0	1 100	1 600	2.680	**51315**
80	82.00	105	19	1.0	44.90	128.5	2 000	3 000	0.430	**51116**
	82.00	115	28	1.0	68.70	179.0	1 700	2 400	0.950	**51216**
	82.00	140	44	1.5	178.00	348.0	1 000	1 500	2.820	**51316**
85	87.00	110	19	1.0	45.50	134.1	2 000	3 000	0.460	**51117**
	87.00	125	31	1.0	97.50	250.0	1 600	2 200	1.200	**51217**
	88.00	150	49	1.5	190.00	397.0	950	1 400	3.060	**51317**
90	92.00	120	22	1.0	58.00	167.3	1 800	2 600	0.680	**51118**
	93.00	135	35	1.1	119.00	300.0	1 500	2 000	1.700	**51218**
	93.00	155	50	1.5	190.00	400.0	850	1 200	3.980	**51318**
100	102.00	135	25	1.0	74.30	218.6	1 700	2 400	0.990	**51120M**
	103.00	150	38	1.1	138.00	358.0	1 300	1 800	2.360	**51220**
	103.00	170	55	1.5	215.00	517.0	850	1 200	5.110	**51320**
110	112.00	145	25	1.0	76.80	238.4	1 600	2 200	1.080	**51122**
	113.00	160	38	1.1	141.00	380.0	1 200	1 700	2.570	**51222**
	113.00	190	63	1.5	267.00	704.0	800	1 100	7.870	**51322M**
120	122.00	155	25	1.0	79.20	258.3	1 600	2 200	1.160	**51124**
	123.00	170	39	1.1	153.00	383.0	1 200	1 700	2.860	**51224**
	123.00	210	70	2.0	311.00	869.0	750	1 000	10.900	**51324M**
130	132.00	170	30	1.0	105.00	336.2	1 400	1 900	1.870	**51126M**
	133.00	190	45	1.5	192.00	548.0	950	1 400	4.190	**51226M**
	134.00	225	75	2.1	332.00	705.0	700	950	13.300	**51326**
140	142.00	180	31	1.0	105.70	350.2	1 300	1 800	2.070	**51128M**
	143.00	200	46	1.5	195.00	578.0	950	1 400	4.880	**51228M**
	144.00	240	80	2.1	370.00	912.0	630	900	15.900	**51328**
150	152.00	190	31	1.0	108.00	328.0	1 200	1 700	2.180	**51130**
	153.00	215	50	1.5	224.00	589.0	900	1 300	6.190	**51230**
	154.00	250	80	2.1	382.00	981.0	500	800	16.700	**51330**
160	162.00	200	31	1.0	120.30	448.3	1 200	1 700	2.330	**51132M**
	163.00	225	51	1.5	230.00	608.0	850	1 200	6.670	**51232**
	164.00	270	87	3.0	470.00	1 570.0	630	850	18.600	**51332**
170	172.00	215	34	1.1	135.00	417.0	1 100	1 600	3.310	**51134**
	173.00	240	55	1.5	270.00	721.0	800	1 100	8.290	**51234**
180	183.00	225	34	1.1	135.00	431.0	1 000	1 500	3.480	**51136**
	183.00	250	56	1.5	275.00	750.0	800	1 100	8.850	**51236**
190	193.00	240	37	1.1	171.00	529.0	950	1 400	4.060	**51138**
	194.00	270	62	2.0	319.00	898.0	750	1 000	11.900	**51238**

FŁT Thrust ball bearings

Single direction



Double direction

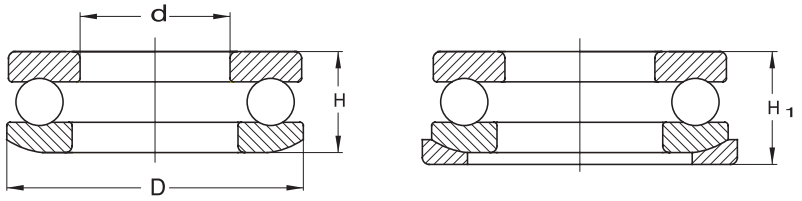


DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	d_1	D	H	r_s min	dynamic C	static C_o	grease	oil	~	
mm					kN		r/min		kg	
200	203.00	250	37	1.1	183.70	715.0	950	1 400	4.240	**51140M**
	204.00	280	62	2.0	334.00	1 175.0	750	1 000	12.400	**51240M**
	205.00	340	110	4.0	679.00	2 610.0	480	630	43.000	**51340**
220	223.00	270	37	1.1	175.00	598.0	900	1 300	4.620	**51144**
	224.00	300	63	2.0	336.00	1 233.0	700	950	13.700	**51244M**
240	243.00	300	45	1.5	240.00	973.7	800	1 100	7.550	**51148M**
	244.00	340	78	2.1	436.00	1 724.0	600	800	23.600	**51248M**
260	263.00	320	45	1.5	245.00	1 034.0	800	1 100	8.110	**51152M**
	264.00	360	79	2.1	460.00	1 878.0	450	630	25.600	**51252M**
280	283.00	350	53	1.5	329.90	1 391.0	700	950	12.200	**51156M**
	284.00	380	80	2.1	465.00	1 967.0	400	560	27.600	**51256M**
300	304.00	380	62	2.0	406.70	1 801.0	630	850	17.500	**51160M**
	304.00	420	95	2.1	580.00	2 320.0	360	500	43.100	**51260M**
	304.00	420	95	3.0	580.00	2 680.0	480	630	42.100	**51260**
320	324.00	400	63	2.0	408.80	1 863.0	600	800	18.900	**51164M**
	325.00	440	95	3.0	632.00	2 460.0	450	600	44.500	**51264M**
340	344.00	420	64	2.0	622.00	2 934.0	600	800	20.300	**51168M**
360	364.00	440	65	2.0	430.40	2 111.0	560	750	21.800	**51172M**
500	505.00	600	80	2.1	550.00	3 350.0	430	560	47.000	**511/500**
	505.00	670	135	1.2	1010.00	6 800.0	250	350	135.00	**512/500**

DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	d_1	D	H	r_s min	dynamic C	static C_o	grease	oil	~	
mm					kN		r/min		kg	
40	52	78	39	9	1.0	0.6	41.8	92.4	3 000	4 000	0.71	**52210**
	52	95	58	14	1.1	0.6	86.4	170.8	1 800	2 600	1.86	**52310**
45	57	90	45	10	1.0	0.6	63.5	139.1	3 000	4 000	1.12	**52211**
	57	105	64	15	1.1	0.6	112.5	225.8	1 600	2 200	2.51	**52311**
50	62	95	46	10	1.0	0.6	62.2	139.1	2 000	3 000	1.25	**52212**
	62	110	64	15	1.1	0.6	117.0	246.4	1 600	2 200	2.86	**52312**
55	67	100	47	10	1.0	0.6	63.9	149.0	1 800	2 600	1.36	**52213**
	67	115	65	15	1.1	0.6	127.0	231.0	1 200	1 700	2.90	**52313**
	72	105	47	10	1.0	0.6	65.6	159.0	1 800	2 600	1.48	**52214**
	72	125	72	16	1.1	1.0	153.0	275.0	1 200	1 700	3.90	**52314**
60	77	110	47	10	1.0	1.0	67.2	169.0	1 800	2 600	1.57	**52215**
	77	135	79	18	1.5	1.0	171.0	319.0	1 100	1 600	4.83	**52315**
65	82	115	48	10	1.0	1.0	68.7	179.0	1 700	2 400	1.69	**52216**
	82	140	79	18	1.5	1.0	178.0	348.0	1 000	1 500	5.06	**52316**
70	88	124	55	12	1.0	1.0	92.8	238.0	1 600	2 200	2.34	**52217**
	88	160	87	19	1.5	1.0	190.0	397.0	950	1 400	6.43	**52317**
75	93	135	62	14	1.1	1.0	101.3	263.9	1 500	2 000	3.22	**52218**
	93	155	88	19	1.5	1.0	190.0	400.0	850	1 200	6.60	**52318**
85	103	150	67	15	1.1	1.0	138.0	358.0	1 300	1 800	4.29	**52220**
	103	170	97	21	1.5	1.0	215.0	517.0	850	1 200	8.90	**52320**

FŁT Thrust ball bearings

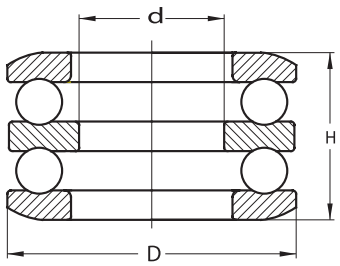
Single-direction with sphered housing washer and aligning seating

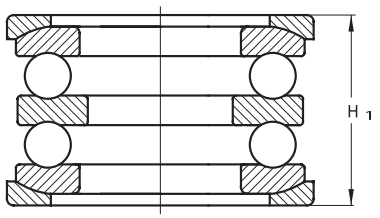


U

DIMENSIONS			BASIC LOAD RATING		MODIFICATION		BASIC DESIGNATIONS	MASS
d	D	H/H1	dynamic C	static C_o	M	MU		~
mm			kN					kg
110	190	/67.2	265.00	560.0	●	●	**53322**	2.050
200	280	65.3	334.0	1180.0	●		**53240**	11.40
220	300	65.6/75	336.0	1230.0	●	●	**53244**	16.80

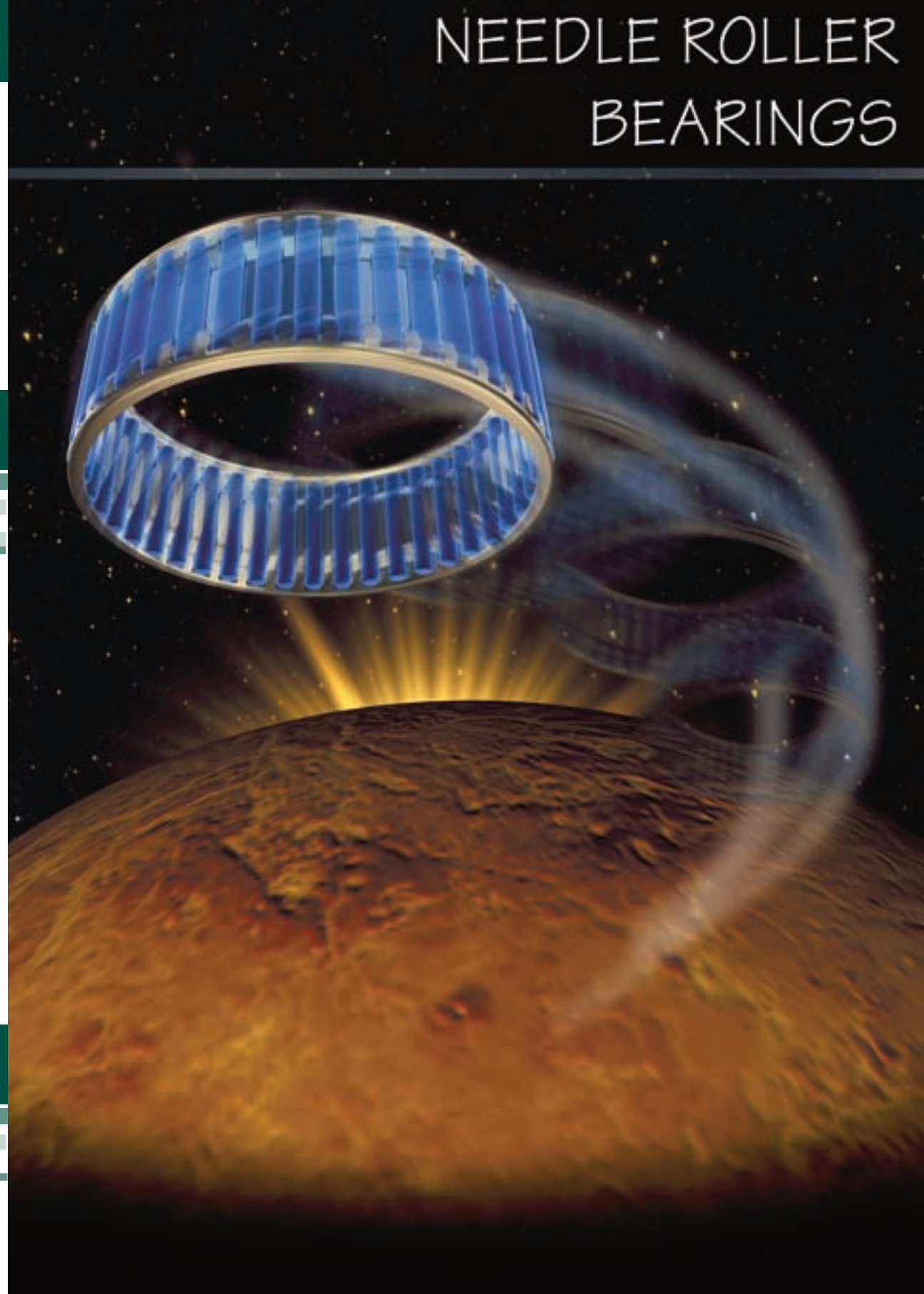
Double-direction with aligning seat washers



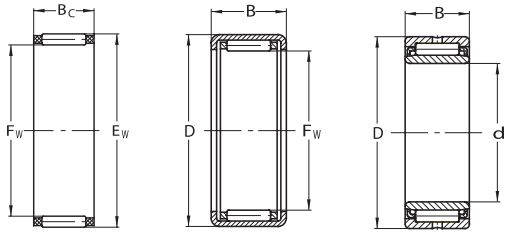


U

DIMENSIONS			BASIC LOAD RATING		MODIFICATION			BASIC DESIGNATIONS	MASS
d	D	H/H1	dynamic C	static C_o	M	U	MU		~
mm			kN						kg
45	95	49.6 / 55	63.5	139.0	●	●		**54211**	1.40
100	220	131.2 / 143	311.0	869.0	●	●	●	**T-54324**	23.30



Drawn cup needle roller bearings. Needle roller bearings



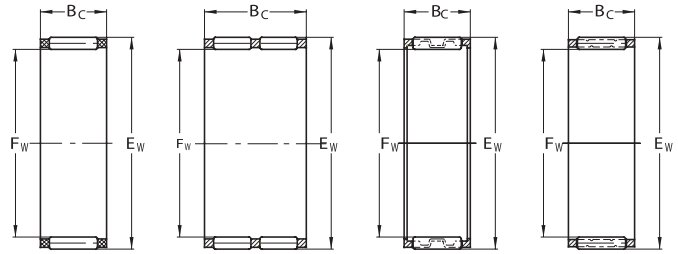


Fig. 1 Fig. 2 Fig. 3 Fig. 4

PREFIX	SUFFIX	Needle roller bearings
KBK		special cage for gudgeon pin bearing
KZK		special cage for crank pin bearing
	TNG	polyamid cage
	V	bearing without cage with full quantity of rolling elements

DIMENSIONS			BASIC LOAD RATING		BEARING DESIGNATIONS	MASS	FIG No
Fw	Ew	Bc	dynamic C	static C_o		~	
mm			kN			kg	
12.00	18.000	12.0	9.25	8.75	**K 12x18x12 TNG**	0.0060	1
14.00	18.000	10.0	6.80	8.30	**K14x18x10**	0.0048	1
15.00	25.000	37.0	34.60	37.50	**612-735 TN**	0.0420	1
16.00	20.000	10.0	7.60	9.70	**K16x20x10**	0.0057	1
	20.000	23.0	13.40	19.50	**KK 16x20x23 TNG**	0.0080	2
	22.000	12.0	10.60	11.10	**KZK 16x22x12**	0.0095	3
18.00	22.000	17.0	9.60	13.10	**KBK 18x22x17**	0.0108	4
19.05	28.575	36.5	40.40	48.80	**612-695 TNG**	0.0460	1
	28.575	43.0	46.00	57.50	**612-696 TNG**	0.0560	1
19.30	25.300	19.8	18.40	23.70	**F-52590**	0.0172	1
20.00	26.000	17.0	19.90	24.80	**K 20x26x17**	0.0182	1
22.00	29.000	16.0	17.80	21.20	**KZK 22x29x16**	0.0156	3
25.40	33.336	25.4	36.20	51.00	**C 162116**	0.0726	1
28.00	33.000	13.0	14.90	22.80	**K 28x33x13**	0.0152	1
30.00	34.000	32.5	24.20	51.00	**KK 30x34x32.5 TNG**	0.0194	2
35.00	40.000	30.0	24.70	47.00	**KK 35x40x30**	0.0430	2
40.00	45.000	17.0	23.50	46.00	**K 40x45x17**	0.0254	1
45.00	53.000	21.0	38.90	66.00	**K 45x53x21**	0.0580	1

FŁT Drawn cup needle roller bearings (with open and closed ends)

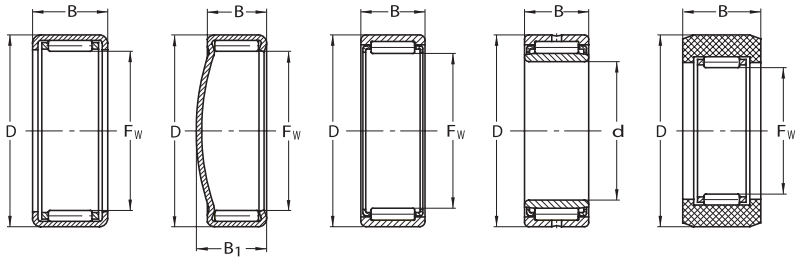
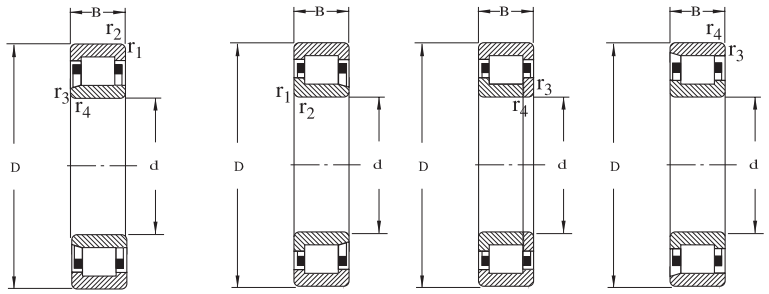


Fig. 1 Fig. 2 Fig. 3 Fig. 4 Fig. 5

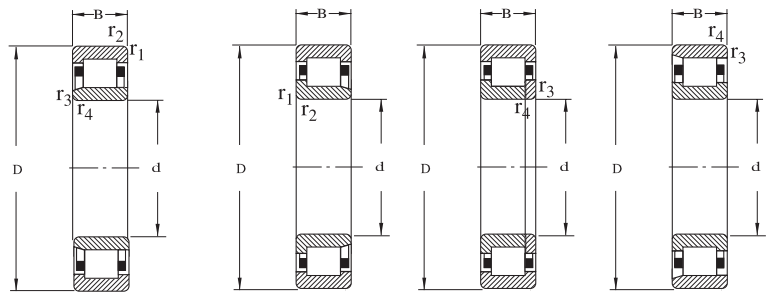
DIMENSIONS				BASIC LOAD RATING		BEARING DESIGNATIONS	MASS	FIG No
Fw	D	B	B_1	dynamic C	static C_o		~	
mm				kN			kg	
5.000	9.000	9.00		2.01	1.75	**HK 0509**	0.0020	1
6.000	10.000	9.00		2.22	2.04	**RHNA 061009**	0.0026	1
10.000	15.000	9.60		5.90	8.30	**311-687V**	0.0066	2
	16.000	8.95	10.15	6.50	7.30	**F-43088**	0.0070	2
	16.000	12.00		5.30	5.55	**RHNA 101612**	0.0080	1
	14.000	10.00		4.55	5.70	**HK1010**	0.0040	1
12.000	16.000	10.00		4.15	5.80	**HK1210**	0.0052	1
	18.000	9.95	10.70	8.25	10.40	**F-82868**	0.0090	2
	18.000	9.95		8.25	10.40	**311-748 V**	0.0090	2
14.000	20.000	12.00		6.10	7.75	**HK 1412**	0.0105	1
15.000	21.000	12.00		7.00	8.40	**HK1512**	0.0111	1
15.875	20.638	12.70		7.00	10.90	**SCE 108**	0.0109	1
17.000	23.000	22.00		12.50	20.60	**RHNA 172322 A**	0.0217	1
18.000	24.000	12.00		7.10	9.90	**HK1812**	0.0131	1
	24.000	16.00		10.30	16.30	**HK 1816**	0.0175	1
19.000	36.100	19.00		10.60	13.20	**373-692 X1**	0.0280	5*
	37.700	19.00		10.60	13.20	**373-692**	0.0280	5*
	38.000	19.00		10.60	13.20	**373-692 X2**	0.0280	5*
19.050	25.400	19.05		13.70	21.20	**SCE 1212**	0.0226	1
22.248	34.925	25.40		29.40	37.40	**313-641**	0.0870	3
25.000	32.000	20.00		17.80	31.50	**HK 2520**	0.0341	1
	42.000	17.00		23.50	30.50	**NA 4905**	0.0913	4
25.400	38.100	25.40		31.90	43.10	**F-92090**	0.0900	3
30.000	42.000	17.00		23.50	30.50	**RNA 4905**	0.0610	3
	37.000	26.00		25.80	53.50	**HK 3026**	0.0594	1
	38.000	20.00		21.50	37.30	**RHNA 303820 X1**	0.0460	1
	47.000	17.00		25.50	39.00	**NA4906**	0.0810	4
31.750	44.450	25.40		35.80	53.00	**F-92091**	0.1088	3
	47.625	31.75		56.00	77.00	**313-644**	0.1850	3
34.925	14.275	12.70		11.80	21.90	**SCE 228**	0.0280	1
35.000	41.000	12.00		11.30	19.40	**HK 3512**	0.0277	1
41.161	49.327	16.10		21.10	39.00	**F-47905**	0.0516	1
50.800	60.325	25.40		37.70	78.00	**SCE 3216**	0.1080	1
60.000	68.000	20.000		30.50	72.00	**HK6020**	0.0860	1

*Fig. no. 5 – Needle roller bearing with rubber sleeve.





NU NJ NUP N

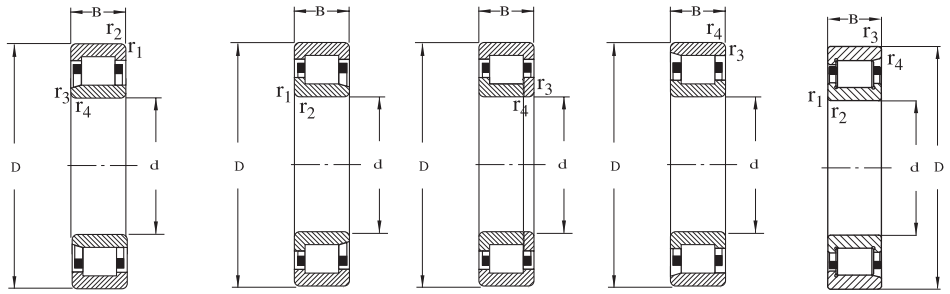


NU NJ NUP N

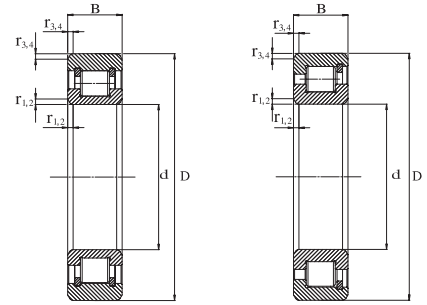
PREFIX	SUFFIX	Cylindrical roller bearings
R		separable bearing without removable inner (RNU) or outer ring (RN)
	E	modifited internal design - increased capacity
	M	machined brass cage
	MA	machined brass cage centred on the outer ring
	MB	machined brass cage centred on the inner ring
	TN	polyamid cage
	P6	accuracy to ISO tollerance class 6
	C2	radial clearance less than normal
	C3	radial clearance greater than normal
	C4	radial clearance greater than C3
	P63	accuracy to ISO class 6 and clearance greater than normal
	P64	accuracy to ISO class 6 and clearance greater than C3
	V	bearing without cage with full quantity of rolling elements

DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS	MASS ~	SKETCH
d	D	B	$r_{1.2}$ min	$r_{3.4}$ min	dynamic C	static C_o	grease	oil			
mm					kN		r/min			kg	
15	35	11	0.6	0.3	12.50	10.2	18 000	22 000	**N202E**	0.048	N
	35	11	0.6	0.3	12.50	10.2	18 000	22 000	**NU202E**	0.048	NU
	35	11	0.6	0.3	12.50	10.2	18 000	22 000	**NJ202E**	0.048	NJ
	35	11	0.6	0.3	12.50	10.2	18 000	22 000	**NUP202E**	0.048	NUP
	35	11	0.6	0.3	12.50	10.2	18 000	22 000	**NJ202ETNT**	0.047	NJ
17	40	12	0.6	0.3	19.70	17.0	15 000	18 000	**NJ203E**	0.090	NJ
	40	12	0.6	0.3	19.80	17.1	15 000	18 000	**NJ203E TNT**	0.070	NJ
20	47	14	1.0	0.6	25.10	22.0	13 000	16 000	**N204E**	0.110	N
	47	14	1.0	0.6	25.10	22.0	13 000	16 000	**NU204E**	0.110	NU
	47	14	1.0	0.6	25.10	22.0	13 000	16 000	**NJ204E**	0.110	NJ
	47	14	1.0	0.6	25.10	22.0	13 000	16 000	**NUP204E**	0.110	NUP
	47	18	1.0	0.6	29.70	27.5	13 000	16 000	**NJ2204**	0.140	NJ
25	52	15	1.0	0.6	28.60	27.0	11 000	14 000	**N205E**	0.130	N
	52	15	1.0	0.6	28.60	27.0	11 000	14 000	**NU205E**	0.130	NU
	52	15	1.0	0.6	28.60	27.0	11 000	14 000	**NJ205E**	0.130	NJ
	52	15	1.0	0.6	28.60	27.0	11 000	14 000	**NUP205E**	0.130	NUP
	52	18	1.0	0.6	27.50	26.8	11 000	14 000	**NJ2205M**	0.160	NJ
	52	18	1.0	0.6	27.50	26.8	11 000	14 000	**NUP2205**	0.160	NUP
	62	17	1.1	1.1	40.20	36.5	9 500	12 000	**N305E**	0.240	N
	62	17	1.1	1.1	40.20	36.5	9 500	12 000	**NU305E**	0.240	NU
	62	17	1.1	1.1	40.20	36.5	9 500	12 000	**NJ305E**	0.240	NJ
	62	17	1.1	1.1	40.20	36.5	9 500	12 000	**NUP305E**	0.240	NUP
	62	24	1.1	1.1	42.70	40.9	9 500	12 000	**NU2305EM**	0.400	NU
	62	24	1.1	1.1	42.70	40.9	9 500	12 000	**NJ2305EM**	0.400	NJ
30	62	16	1.0	0.6	36.00	35.5	8 500	11 000	**N206E**	0.220	N
	62	16	1.0	0.6	36.00	35.5	8 500	11 000	**NU206E**	0.220	NU
	62	16	1.0	0.6	36.00	35.5	8 500	11 000	**NJ206E**	0.220	NJ
	62	16	1.0	0.6	36.00	35.5	8 500	11 000	**NUP206E**	0.220	NUP
	62	20	1.0	0.6	48.90	49.8	8 500	11 000	**NUP2206EM**	0.260	NUP
	62	20	1.0	0.6	44.00	48.1	8 500	11 000	**NJ2206E**	0.310	NJ
	72	19	1.1	1.1	49.20	48.2	8 000	10 000	**N306E**	0.380	N
	72	19	1.1	1.1	49.20	48.2	8 000	10 000	**NU306E**	0.380	NU
	72	19	1.1	1.1	49.20	48.2	8 000	10 000	**NJ306E**	0.380	NJ
	72	19	1.1	1.1	49.20	48.2	8 000	10 000	**NUP306E**	0.380	NUP
	90	23	1.5	1.5	57.20	53.0	7 000	9 000	**NJ406**	0.730	NJ
35	72	17	1.1	0.6	46.50	48.0	7 500	9 500	**N207E**	0.340	N
	72	17	1.1	0.6	46.50	48.0	7 500	9 500	**NU207E**	0.340	NU
	72	17	1.1	0.6	46.50	48.0	7 500	9 500	**NJ207E**	0.340	NJ
	72	17	1.1	0.6	46.50	48.0	7 500	9 500	**NUP207E**	0.340	NUP
	72	23	1.1	1.1	49.00	51.2	7 500	9 500	**NJ2207E**	0.450	NJ
	80	21	1.5	1.1	62.00	63.2	7 000	9 000	**N307E**	0.500	N
	80	21	1.5	1.1	62.00	63.2	7 000	9 000	**NU307E**	0.500	NU
	80	21	1.5	1.1	62.00	63.2	7 000	9 000	**NJ307E**	0.500	NJ
	80	21	1.5	1.1	62.00	63.2	7 000	9 000	**NUP307E**	0.500	NUP
40	80	18	1.5	1.1	51.50	53.0	7 000	9 000	**N208E**	0.390	N
	80	18	1.5	1.1	51.50	53.0	7 000	8 000	**NJ208E**	0.390	NJ
	80	18	1.5	1.1	51.50	53.0	7 000	8 000	**NUP208E**	0.390	NUP
	80	23	1.1	1.1	64.30	67.6	7 000	8 000	**NJ2208E**	0.490	NJ
	90	33	1.5	1.5	113.20	121.1	6 300	7 500	**NJ2308E**	0.950	NJ
	90	23	1.5	1.5	76.80	77.8	6 300	8 000	**N308E**	0.670	N
	90	23	1.5	1.5	76.80	77.8	6 300	8 000	**NU308E**	0.670	NU
	90	23	1.5	1.5	76.80	77.8	6 300	8 000	**NJ308E**	0.670	NJ
	90	23	1.5	1.5	76.80	77.8	6 300	8 000	**NUP308E**	0.670	NUP
	110	27	2.0	2.0	90.50	89.8	5 600	6 700	**NUP408E**	1.150	NUP
	110	27	2.0	2.0	90.50	89.8	5 600	6 700	**NJ408**	1.150	NJ

FŁT Cylindrical roller bearings



NU NJ NUP N NF

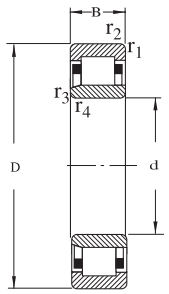


CBK NCF

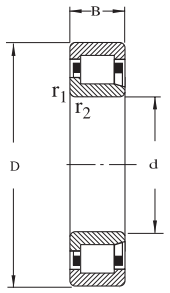
DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS	MASS ~	SKETCH
d	D	B	$r_{1,2}$ min	$r_{3,4}$ min	dynamic C	static C_o	grease	oil			
mm					kN		r/min			kg	
45	85	19	1.1	1.1	58.50	63.8	6 300	8 000	**N209E**	0.450	N
	85	19	1.1	1.1	58.50	63.8	6 300	8 000	**NU209E**	0.450	NU
	85	19	1.1	1.1	58.50	63.8	6 300	8 000	**NJ209E**	0.450	NJ
	85	19	1.1	1.1	58.50	63.8	6 300	8 000	**NUP209E**	0.450	NUP
	85	23	1.1	1.1	64.30	67.8	6 300	8 000	**NJ2209E**	0.540	NJ
	100	36	1.5	1.5	138.80	155.7	5 600	6 700	**NJ2309E**	1.290	NJ
	100	25	1.5	1.5	93.00	98.0	5 600	7 000	**N309E**	0.950	N
	100	25	1.5	1.5	93.00	98.0	5 600	7 000	**NU309E**	0.950	NU
	100	25	1.5	1.5	93.00	98.0	5 600	7 000	**NJ309E**	0.950	NJ
	100	25	1.5	1.5	93.00	98.0	5 600	7 000	**NUP309E**	0.950	NUP
	100	25	1.5	1.5	93.00	98.0	5 600	7 000	**NF309E**	0.950	NF
50	80	16	1.0	0.6	31.00	34.0	8 000	9 500	**NU1010M**	0.320	NU
	90	20	1.1	1.1	61.20	69.2	6 000	7 500	**N210E**	0.510	N
	90	20	1.1	1.1	61.20	69.2	6 000	7 500	**NU210E**	0.510	NU
	90	20	1.1	1.1	61.20	69.2	6 000	7 500	**NJ210E**	0.510	NJ
	90	20	1.1	1.1	61.20	69.2	6 000	7 500	**NUP210E**	0.510	NUP
	90	23	1.1	1.1	64.20	73.6	6 000	7 500	**NJ2210EM**	0.650	NJ
	90	23	1.1	1.1	64.20	73.6	6 000	7 500	**NU2210E**	0.650	NU
	110	27	2.0	2.0	105.00	112.0	5 300	6 700	**N310E**	1.200	N
	110	27	2.0	2.0	105.00	112.0	5 300	6 700	**NU310E**	1.200	NU
	110	27	2.0	2.0	105.00	112.0	5 300	6 700	**NJ310E**	1.200	NJ
	110	27	2.0	2.0	105.00	112.0	5 300	6 700	**NUP310E**	1.200	NUP
55	100	21	1.5	1.1	80.20	95.5	5 300	6 700	**N211E**	0.680	N
	100	21	1.5	1.1	80.20	95.5	5 300	6 700	**NU211E**	0.680	NU
	100	21	1.5	1.1	80.20	95.5	5 300	6 700	**NJ211E**	0.680	NJ
	100	21	1.5	1.1	80.20	95.5	5 300	6 700	**NUP211E**	0.680	NUP
	100	25	1.5	1.1	75.30	87.2	5 300	6 700	**NJ2211EM**	0.770	NJ
	120	29	2.0	2.0	128.00	138.0	4 800	6 000	**N311E**	1.530	N
	120	29	2.0	2.0	128.00	138.0	4 800	6 000	**NU311E**	1.530	NU
	120	29	2.0	2.0	128.00	138.0	4 800	6 000	**NJ311E**	1.530	NJ
	120	29	2.0	2.0	128.00	138.0	4 800	6 000	**NUP311E**	1.530	NUP
	140	33	2.1	2.1	145.00	141.0	4 200	5 700	**NU411**	2.920	NU
60	110	22	1.5	1.5	89.80	102.0	5 000	6 300	**N212E**	0.840	N
	110	22	1.5	1.5	89.80	102.0	5 000	6 300	**NU212E**	0.840	NU
	110	22	1.5	1.5	89.80	102.0	5 000	6 300	**NJ212E**	0.840	NJ
	110	22	1.5	1.5	89.80	102.0	5 000	6 300	**NUP212E**	0.840	NUP
	110	28	1.5	1.5	101.00	123.0	5 000	6 300	**NJ2212E**	1.090	NJ
	130	31	2.1	2.1	142.00	155.0	4 500	5 600	**N312E**	1.940	N
	130	31	2.1	2.1	142.00	155.0	4 500	5 600	**NU312E**	1.940	NU
	130	31	2.1	2.1	142.00	155.0	4 500	5 600	**NJ312E**	1.940	NJ
	130	31	2.1	2.1	142.00	155.0	4 500	5 600	**NUP312E**	1.940	NUP

DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS	MASS ~	SKETCH
d	D	B	$r_{1,2}$ min	$r_{3,4}$ min	dynamic C	static C_o	grease	oil			
mm					kN		r/min			kg	
65	120	23	1.5	1.5	102.00	118.0	4 500	5 600	**N213E**	1.050	N
	120	23	1.5	1.5	102.00	118.0	4 500	5 600	**NU213E**	1.050	NU
	120	23	1.5	1.5	102.00	118.0	4 500	5 600	**NJ213E**	1.050	NJ
	120	23	1.5	1.5	102.00	118.0	4 500	5 600	**NUP213E**	1.050	NUP
	140	33	2.1	2.1	170.00	188.0	4 000	5 000	**N313E**	2.420	N
	140	33	2.1	2.1	170.00	188.0	4 000	5 000	**NU313E**	2.420	NU
	140	33	2.1	2.1	170.00	188.0	4 000	5 000	**NJ313E**	2.420	NJ
	140	33	2.1	2.1	170.00	188.0	4 000	5 000	**NUP313E**	2.420	NUP
70	125	24	1.5	1.5	112.00	135.0	4 300	5 300	**N214E**	1.290	N
	125	24	1.5	1.5	112.00	135.0	4 300	5 300	**NU214E**	1.290	NU
	125	24	1.5	1.5	112.00	135.0	4 300	5 300	**NJ214E**	1.290	NJ
	125	24	1.5	1.5	112.00	135.0	4 300	5 300	**NUP214E**	1.290	NUP
	125	31	1.5	1.5	119.00	151.0	4 300	5 300	**NJ2214E**	1.700	NJ
	150	35	2.1	2.1	195.00	220.0	3 800	4 800	**N314E**	2.900	N
	150	35	2.1	2.1	195.00	220.0	3 800	4 800	**NU314E**	2.900	NU
	150	35	2.1	2.1	195.00	220.0	3 800	4 800	**NJ314E**	2.900	NJ
	150	35	2.1	2.1	195.00	220.0	3 800	4 800	**NUP314E**	2.900	NUP
75	115	20	1.1	1.1	58.30	39.0	5 600	6 700	**NU1015**	0.740	NU
	130	25	1.5	1.5	125.00	155.0	4 000	5 000	**N215E**	1.450	N
	130	25	1.5	1.5	125.00	155.0	4 000	5 000	**NU215E**	1.450	NU
	130	25	1.5	1.5	125.00	155.0	4 000	5 000	**NJ215E**	1.450	NJ
	130	25	1.5	1.5	125.00	155.0	4 000	5 000	**NUP215E**	1.450	NUP
	160	37	2.1	2.1	228.00	260.0	3 600	4 500	**N315E**	3.590	N
	160	37	2.1	2.1	228.00	260.0	3 600	4 500	**NU315E**	3.590	NU
	160	37	2.1	2.1	228.00	260.0	3 600	4 500	**NJ315E**	3.590	NJ
	160	37	2.1	2.1	228.00	260.0	3 600	4 500	**NUP315E**	3.590	NUP
80	125	22	1.1	1.1	59.20	77.8	4 300	5 300	**NU1016E**	1.000	NU
	140	26	2.0	2.0	132.00	165.0	3 800	4 800	**N216E**	1.740	N
	140	26	2.0	2.0	132.00	165.0	3 800	4 800	**NU216E**	1.740	NU
	140	26	2.0	2.0	132.00	165.0	3 800	4 800	**NJ216E**	1.740	NJ
	140	26	2.0	2.0	132.00	165.0	3 800	4 800	**NUP216E**	1.740	NUP
	170	39	2.1	2.1	245.00	282.0	3 400	4 300	**N316E**	4.050	N
	170	39	2.1	2.1	245.00	282.0	3 400	4 300	**NU316E**	4.050	NU
	170	39	2.1	2.1	245.00	282.0	3 400	4 300	**NJ316E**	4.050	NJ
	170	39	2.1	2.1	245.00	282.0	3 400	4 300	**NUP316E**	4.050	NUP
85	180	41	3.0	3.0	280.00	332.0	3 200	4 000	**NU317**	4.800	NU
90	160	30	2.0	2.0	172.00	215.0	3 400	4 300	**N218E**	2.440	N
	160	30	2.0	2.0	172.00	215.0	3 400	4 300	**NU218E**	2.440	NU
	160	30	2.0	2.0	172.00	215.0	3 400	4 300	**NJ218E**	2.440	NJ
	160	30	2.0	2.0	172.00	215.0	3 400	4 300	**NUP218E**	2.440	NUP
	190	43	3.0	3.0	298.00	348.0	3 000	3 800	**N318E**	6.070	N
	190	43	3.0	3.0	298.00	348.0	3 000	3 800	**NU318E**	6.070	NU
	190	43	3.0	3.0	298.00	348.0	3 000	3 800	**NJ318E**	6.070	NJ
	190	43	3.0	3.0	298.00	348.0	3 000	3 800	**NUP318E**	6.070	NUP

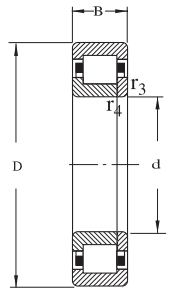
FŁT Cylindrical roller bearings



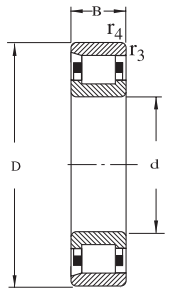
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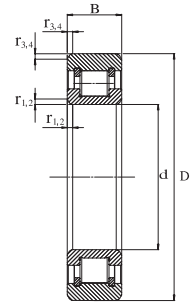
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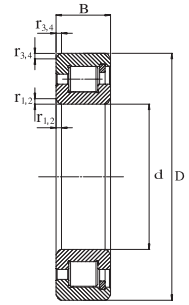
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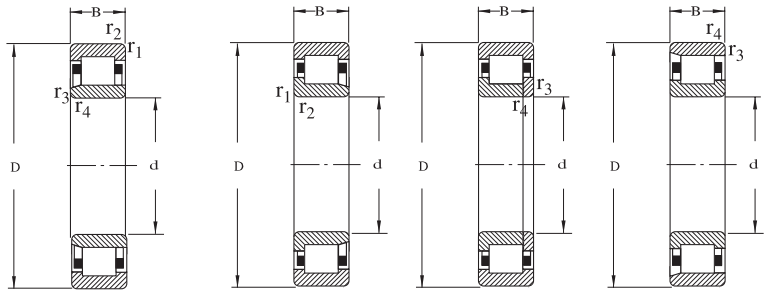


NCF

DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS	MASS ~	SKETCH
d	D	B	$r_{1.2}$ min	$r_{3.4}$ min	dynamic C	static C_o	grease	oil			
mm					kN		r/min			kg	
95	170	32	2.1	2.1	208.00	262.0	3 200	4 000	**N219E**	2.900	N
	170	32	2.1	2.1	208.00	262.0	3 200	4 000	**NU219E**	2.900	NU
	170	32	2.1	2.1	208.00	262.0	3 200	4 000	**NJ219E**	2.900	NJ
	170	32	2.1	2.1	208.00	262.0	3 200	4 000	**NUP219E**	2.900	NUP
	200	45	3.0	3.0	315.00	380.0	2 800	3 600	**N319E**	6.620	N
	200	45	3.0	3.0	315.00	380.0	2 800	3 600	**NU319E**	6.620	NU
	200	45	3.0	3.0	315.00	380.0	2 800	3 600	**NJ319E**	6.620	NJ
	200	45	3.0	3.0	315.00	380.0	2 800	3 600	**NUP319E**	6.620	NUP
100	140	24	1.1	1.1	132.00	199.0	1 000	2 200	**NCF2920V**	1.140	NCF
	180	34	2.1	2.1	235.00	302.0	3 000	3 800	**N220E**	3.340	N
	180	34	2.1	2.1	235.00	302.0	3 000	3 800	**NU220E**	3.340	NU
	180	34	2.1	2.1	235.00	302.0	3 000	3 800	**NJ220E**	3.340	NJ
	180	34	2.1	2.1	235.00	302.0	3 000	3 800	**NUP220E**	3.340	NUP
	180	46	2.1	2.1	318.00	440.0	3 000	3 800	**NU2220E**	4.860	NU
	215	47	3.0	3.0	365.00	425.0	2 600	3 200	**N320E**	8.040	N
	215	47	3.0	3.0	365.00	425.0	2 600	3 200	**NU320E**	8.040	NU
	215	47	3.0	3.0	365.00	425.0	2 600	3 200	**NJ320E**	8.040	NJ
	215	47	3.0	3.0	365.00	425.0	2 600	3 200	**NUP320E**	8.040	NUP
105	190	36	2.1	2.1	185.00	235.0	2 800	3 600	**N221**	4.000	N
	190	36	2.1	2.1	185.00	235.0	2 800	3 600	**NU221**	4.000	NU
	190	36	2.1	2.1	185.00	235.0	2 800	3 600	**NJ221**	4.000	NJ
	190	36	2.1	2.1	185.00	235.0	2 800	3 600	**NUP221**	4.000	NUP
	190	36	2.1	2.1	224.00	238.0	2 800	3 600	**NJ221E**	4.000	NJ
	225	49	3.0	3.0	322.00	392.0	2 200	3 000	**N321**	9.900	N
	225	49	3.0	3.0	322.00	392.0	2 200	3 000	**NU321**	9.900	NU
	225	49	3.0	3.0	322.00	392.0	2 200	3 000	**NJ321**	9.900	NJ
	225	49	3.0	3.0	322.00	392.0	2 200	3 000	**NUP321**	9.900	NUP
110	150	24	1.1	1.0	137.00	213.0	900	1 900	**NCF2922V**	1.230	NCF
	170	28	2.0	1.1	115.00	155.0	3 000	3 800	**NJ1022**	2.300	NJ
	200	38	2.1	2.1	278.00	360.0	2 600	3 400	**N222**	5.080	N
	200	38	2.1	2.1	278.00	360.0	2 600	3 400	**NU222**	5.080	NU
	200	38	2.1	2.1	278.00	360.0	2 600	3 400	**NJ222**	5.080	NJ
	200	38	2.1	2.1	278.00	360.0	2 600	3 400	**NUP222**	5.080	NUP
	240	50	3.0	3.0	352.00	428.0	2 000	2 800	**N322**	11.100	N
	240	50	3.0	3.0	352.00	428.0	2 000	2 800	**NU322**	11.100	NU
	240	50	3.0	3.0	352.00	428.0	2 000	2 800	**NJ322**	11.100	NJ
	240	50	3.0	3.0	352.00	428.0	2 000	2 800	**NUP322**	11.100	NUP
	280	65	4.0	4.0	515.00	600.0	1 800	2 400	**NU422**	22.000	NU

DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS	MASS ~	SKETCH
d	D	B	$r_{1.2}$ min	$r_{3.4}$ min	dynamic C	static C_o	grease	oil			
mm					kN		r/min			kg	
120	180	28	2.1	2.0	163.00	234.0	3 000	3 800	**NU1024**	2.550	NU
	215	40	2.1	2.1	322.00	422.0	2 200	3 000	**N224**	6.220	N
	215	40	2.1	2.1	322.00	422.0	2 200	3 000	**NU224**	6.220	NU
	215	40	2.1	2.1	322.00	422.0	2 200	3 000	**NJ224**	6.220	NJ
	215	40	2.1	2.1	322.00	422.0	2 200	3 000	**NUP224**	6.220	NUP
	215	40	2.1	2.1	247.00	249.0	2 200	3 000	**NJ224E**	6.320	NJ
	260	86	3.0	3.0	735.00	1 050.0	2 000	2 600	**NJ2324EM**	23.600	NJ
	260	55	3.0	3.0	440.00	522.0	1 900	2 600	**N324**	14.000	N
	260	55	3.0	3.0	440.00	522.0	1 900	2 600	**NU324**	14.000	NU
	260	55	3.0	3.0	440.00	522.0	1 900	2 600	**NJ324**	14.000	NJ
	260	55	3.0	3.0	440.00	522.0	1 900	2 600	**NUP324**	14.000	NUP
	310	72	5.0	5.0	748.00	883.0	1 900	2 400	**NU424**	30.600	NU
130	180	30	1.5	1.5	210.00	350.0	750	1 600	**NCF2926V**	2.300	NCF
	230	40	3.0	3.0	258.00	352.0	2 000	2 800	**N226**	7.150	N
	230	40	3.0	3.0	258.00	352.0	2 000	2 800	**NU226**	7.150	NU
	230	40	3.0	3.0	258.00	352.0	2 000	2 800	**NJ226**	7.150	NJ
	230	40	3.0	3.0	258.00	352.0	2 000	2 800	**NUP226**	7.150	NUP
	280	58	4.0	4.0	492.00	620.0	1 700	2 200	**N326**	18.500	N
	280	58	4.0	4.0	492.00	620.0	1 700	2 200	**NU326**	18.500	NU
	280	58	4.0	4.0	492.00	620.0	1 700	2 200	**NJ326**	18.500	NJ
	280	58	4.0	4.0	492.00	620.0	1 700	2 200	**NUP326**	18.500	NUP
140	250	42	3.0	3.0	302.00	415.0	1 800	2 400	**N228**	9.000	N
	250	42	3.0	3.0	302.00	415.0	1 800	2 400	**NU228**	9.000	NU
	250	42	3.0	3.0	302.00	415.0	1 800	2 400	**NJ228**	9.000	NJ
	250	42	3.0	3.0	302.00	415.0	1 800	2 400	**NUP228**	9.000	NUP
	250	68	3.0	3.0	553.00	799.0	1 800	2 400	**NJ2228EM**	15.900	NJ
	300	62	4.0	4.0	545.00	690.0	1 600	2 000	**N328**	22.800	N
	300	62	4.0	4.0	545.00	690.0	1 600	2 000	**NU328**	22.800	NU
	300	62	4.0	4.0	545.00	690.0	1 600	2 000	**NJ328**	22.800	NJ
	190	30	1.5	1.1	220.00	390.0	750	1 500	**NCF2928V**	2.450	NCF
150	225	35	2.1	1.5	208.00	310.0	2 600	3 200	**NU1030EM**	4.990	NU
	270	45	3.0	3.0	360.00	490.0	1 700	2 200	**N230**	11.600	N
	270	45	3.0	3.0	360.00	490.0	1 700	2 200	**NU230E**	11.600	NU
	320	65	4.0	4.0	595.00	765.0	1 500	1 900	**N330**	26.400	N
	320	65	4.0	4.0	595.00	765.0	1 500	1 900	**NU330**	26.400	NU
	270	73	3.0	3.0	735.00	930.0	2 000	2 600	**NU2230M**	19.200	NU
160	240	38	2.1	1.5	245.00	255.0	2 400	3 000	**NU1032M**	6.200	NU
	290	80	3.0	3.0	787.00	1 146.0	1 900	2 400	**NU2232E**	24.300	NU
	290	48	3.0	3.0	405.00	552.0	1 600	2 000	**N232**	14.700	N
	290	48	3.0	3.0	405.00	552.0	1 600	2 000	**NJ232E**	14.700	NJ
	340	68	4.0	4.0	628.00	825.0	1 400	1 800	**N332**	32.200	N
	340	68	4.0	4.0	628.00	825.0	1 400	1 800	**NU332E**	32.200	NU
	220	36	2.0	1.1	297.00	540.0	630	1 200	**NCF2932V**	4.100	NCF

FŁT Cylindrical roller bearings



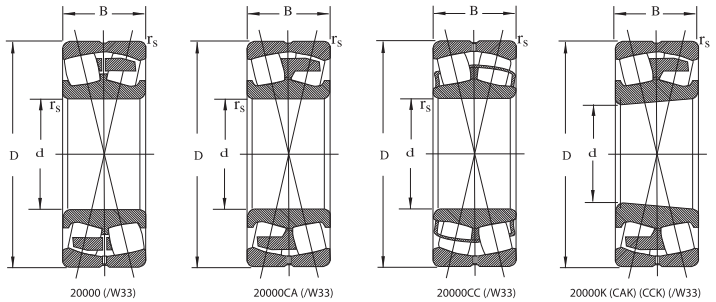
NU NJ NUP N

DIMENSIONS					BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS	MASS ~	SKETCH
d	D	B	$r_{1.2}$ min	$r_{3.4}$ min	dynamic C	static C_o	grease	oil			
mm					kN		r/min			kg	
170	230	36	2.0	2.0	330.00	560.0	600	1 200	**NCF2934V**	4.250	NCF
	310	52	4.0	4.0	425.00	650.0	1 500	1 900	**N234**	18.700	N
	360	72	4.0	4.0	715.00	952.0	1 300	1 700	**N334**	37.200	N
180	320	52	4.0	4.0	425.00	650.0	1 400	1 800	**N236**	20.000	N
	380	75	4.0	4.0	835.00	1 100.0	1 200	1 600	**N336**	42.500	N
	380	75	4.0	4.0	905.00	1 150.0	1 500	1 800	**NJ336E**	42.500	NJ
	250	42	2.0	2.0	39.30	70.1	560	1 000	**NCF2936V**	6.200	NCF
190	340	92	4.0	4.0	917.00	1 313.0	1 600	1 900	**NU2238E**	37.800	NU
200	280	48	2.1	2.1	550.00	940.0	530	1 000	**NCF2940V**	9.150	NCF
220	270	24	1.5	1.5	181.00	385.0	900	1 100	**NCF1844V**	2.800	NCF
	400	65	4.0	4.0	1 060.00	1 290.0	1 500	1 800	**NU244**	38.100	NU
	400	65	4.0	4.0	1 060.00	1 290.0	1 500	1 800	**NUP244**	38.100	NUP
240	300	28	2.0	2.0	240.00	490.0	900	1 000	**NCF1848V**	4.400	NCF
270	360	60	2.1	1.5	790.00	1 460.0	750	950	**NCF2952V**	18.500	NCF
280	380	60	2.1	2.1	853.00	1 670.0	700	900	**NCF2956V**	19.700	NCF
340	460	72	3.0	3.0	1 100.00	2 360.0	560	700	**NCF2968V**	34.800	NCF
380	480	46	2.1	1.5	627.00	1 290.0	530	600	**NCF1876V**	19.200	NCF
400	540	82	4.0	4.0	1 532.00	3 336.0	480	600	**NCF2980V**	54.300	NCF
420	560	82	4.0	4.0	1 120.00	2 640.0	850	1 000	**NJ2984**	56.900	NJ
560	750	112	5.0	5.0	2 000.00	4 725.0	600	750	**NJ29/560**	140.000	NJ
22	47	18	2.0	1.0	35.00	26.0	-	-	**CBK-497 ***	0.140	CBK
30	61.935	19.05	2.7	1.0	37.00	44.0	-	-	**CBK-239 ***	0.270	CBK
49.930	80	15	0.3	0.3	28.00	33.0	-	-	**CBK-238 ***	0.270	CBK

* - bearings without cage with full quqntity of rollers

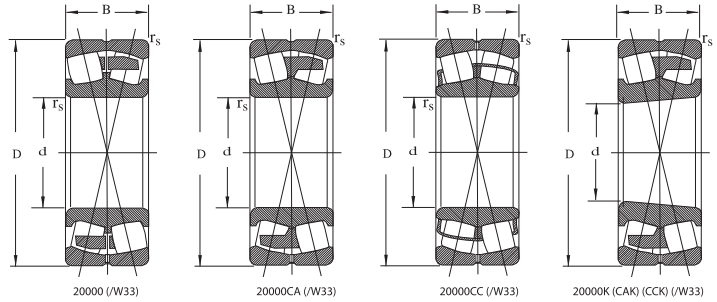


FŁT Spherical roller bearings



20000 (/W33) 20000CA (/W33) 20000CC (/W33) 20000K (CAK) (CCK) (/W33)

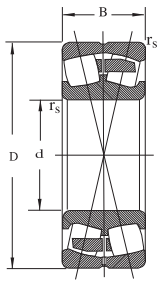
SUFFIX	Spherical roller bearings
CA	no middle flange on inner ring. machined brass cage
CC	flangeless inner ring. pressed steel cage
MB	flanges on inner ring. machined brass cage
K	tapered bore (1:12 on diameter)
K30	tapered bore (1:30 on diameter)
W33	lubrication groove and three holes in outer ring
C3	radial clearance greater than normal
C4	radial clearance greater than C3



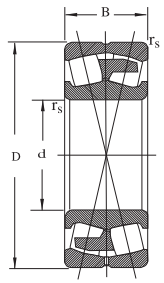
20000 (/W33) 20000CA (/W33) 20000CC (/W33) 20000K (CAK) (CCK) (/W33)

DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS		MASS
d	D	B	$r_{1.2}$ min	dynamic C	static C_o	grease	oil	cylindrical bore	tapered bore	~
mm				kN		r/min				kg
20	52	15.0	1.1	30.80	31.20	6 000	7 500	**21304CA**		0.170
25	52	18.0	1.0	43.0	46.00	8 000	10 000	**22205CC**	**22205CCK**	0.190
	52	18.0	1.0	43.0	46.00	8 000	10 000	**22205CA**	**22205CAK**	0.190
	52	18.0	1.0	41.0	43.70	8 000	10 000	**22205CTNI**		0.180
	62	17.0	1.0	41.5	44.20	5 300	6 700	**21305CA**		0.280
30	62	20.0	1.0	34.50	39.30	5 300	6 700	**22206MB**	**22206MBK**	0.290
	62	20.0	1.0	57.00	60.00	6 300	8 000	**22206CC**	**22206CCK**	0.300
	62	20.0	1.0	57.00	60.00	6 700	8 500	**22206CA**	**22206CAK**	0.330
	72	19.0	1.1	55.80	62.00	4 500	6 000	**21306CA**	**21306CAK**	0.410
35	72	23.0	1.1	46.6	61.30	4 800	6 000	**22207MB**	**22207MBK**	0.430
	72	23.0	1.1	78.0	86.00	5 300	6 700	**22207CC**	**22207CCK**	0.470
	72	23.0	1.1	78.0	86.00	5 600	7 000	**22207CA**	**22207CAK**	0.440
	80	21.0	1.5	63.5	73.20	5 600	7 000	**21307CA**	**21307CAK**	0.540
40	80	23.0	1.1	51.30	70.60	4 500	5 600	**22208MB**	**22208MBK**	0.560
	80	23.0	1.1	88.00	94.00	5 000	6 000	**22208CC**	**22208CCK**	0.530
	80	23.0	1.1	88.00	94.00	5 000	6 300	**22208CA**	**22208CAK**	0.520
	90	23.0	1.5	86.20	90.40	3 600	4 500	**21308CA**	**21308CAK**	0.740
	90	33.0	1.5	75.70	93.20	4 000	5 000	**22308MB**	**22308MBK**	1.040
	90	33.0	1.5	125.00	140.00	4 300	5 300	**22308CC**	**22308CCK**	1.040
	90	33.0	1.5	125.00	140.00	4 500	6 000	**22308CA**	**22308CAK**	1.040
45	85	23.0	1.1	54.0	75.00	4 000	5 000	**22209MB**	**22209MBK**	0.590
	85	23.0	1.1	90.0	105.00	4 500	5 600	**22209CC**	**222209CCK**	0.590
	85	23.0	1.1	90.0	105.00	4 500	6 000	**22209CA**	**22209CAK**	0.580
	100	25.0	1.1	102.6	110.40	3 200	4 000	**21309CA**	**21309CAK**	1.020
	100	36.0	1.5	111.0	144.00	3 600	4 500	**22309MB**	**22309MBK**	1.390
	100	36.0	1.5	150.0	175.00	3 800	4 800	**22309CC**	**22309CCK**	1.380
	100	36.0	1.1	150.0	175.00	4 000	5 300	**22309CA**	**22309CAK**	1.380
50	90	23.0	1.1	54.00	75.00	3 800	4 800	**22210MB**	**22210MBK**	0.690
	90	23.0	1.1	93.00	110.00	4 000	5 000	**22210CC**	**22210CCK**	0.630
	90	23.0	1.1	93.00	110.00	4 300	5 300	**22210CA**	**22210CAK**	0.630
	110	27.0	2.0	120.00	140.00	2 800	3 800	**21310CA**	**21310CAK**	1.300
	110	40.0	2.0	132.00	175.00	3 400	4 300	**22310MB**	**22310MBK**	1.830
	110	40.0	2.0	185.00	216.00	3 400	4 300	**22310CC**	**22310CCK**	1.850
	110	40.0	2.0	185.00	216.00	3 800	4 800	**22310CA**	**22310CAK**	1.790
55	100	25.0	1.5	62.0	90.00	3 400	4 300	**22211MB**	**22211MBK**	0.860
	100	25.0	1.5	115.0	140.00	3 600	4 500	**22211CC**	**22211CCK**	0.860
	100	25.0	1.5	115.0	140.00	3 800	5 000	**22211CA**	**22211CAK**	0.850
	120	29.0	2.0	150.0	175.00	2 600	3 400	**21311CA**	**21311CAK**	1.650
	120	43.0	2.0	160.0	204.00	3 000	3 800	**22311MB**	**22311MBK**	2.300
	120	43.0	2.0	220.0	258.00	3 000	3 800	**22311CC**	**22311CCK**	2.350
	120	43.0	2.0	220.0	258.00	3 400	4 300	**22311CA**	**22311CAK**	2.310

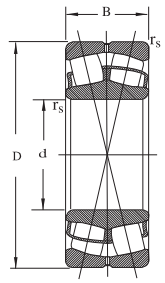
FŁT Spherical roller bearings



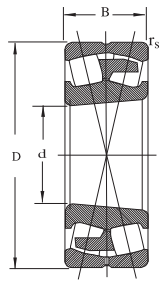
20000 (/W33)



20000CA (/W33)



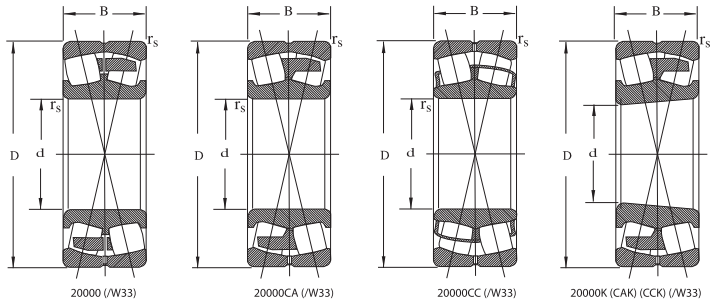
20000CC (/W33)



20000K (CAK) (CCK) (/W33)

DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS		MASS
d	D	B	$r_{1.2}$ min	dynamic C	static C_o	grease	oil	cylindrical bore	tapered bore	~
mm				kN		r/min				kg
60	110	28.0	1.5	84.00	126.00	3 200	4 000	**22212MB**	**22212MBK**	1.200
	110	28.0	1.5	135.00	163.00	3 200	4 000	**22212CC**	**22212CCK**	1.120
	110	28.0	1.5	135.00	163.00	3 600	4 500	**22212CA**	**22212CAK**	1.200
	130	31.0	2.1	162.00	195.00	2 400	3 200	**21312CA**	**21312CAK**	2.080
	130	46.0	2.1	173.00	232.00	2 800	3 600	**22312MB**	**22312MBK**	2.880
	130	46.0	2.1	250.00	298.00	2 800	3 600	**22312CC**	**22312CCK**	2.950
	130	46.0	2.1	250.00	298.00	3 200	4 000	**22312CA**	**22312CAK**	2.920
65	120	31.0	1.5	91.0	132.00	2 800	3 600	**22213MB**	**22213MBK**	1.550
	120	31.0	1.5	165.0	203.00	2 800	3 600	**22213CC**	**22213CCK**	1.520
	120	31.0	1.5	165.0	203.00	3 200	4 000	**22213CA**	**22213CAK**	1.510
	140	33.0	2.1	201.0	237.00	2 200	3 000	**21313CA**	**21313CAK**	2.570
	140	48.0	2.1	194.0	260.00	2 400	3 200	**22313MB**	**22313MBK**	3.490
	140	48.0	2.1	280.0	350.00	2 400	3 200	**22313CC**	**22313CCK**	3.550
	140	48.0	2.1	280.0	350.00	3 000	3 800	**22313CA**	**22313CAK**	3.510
70	125	31.0	1.5	98.00	146.00	2 600	3 400	**22214MB**	**22214MBK**	1.660
	125	31.0	1.5	175.00	221.00	3 000	3 800	**22214CC**	**22214CCK**	1.600
	125	31.0	1.5	175.00	221.00	3 000	3 800	**22214CA**	**22214CAK**	1.630
	150	35.0	2.1	212.00	268.00	2 000	2 800	**21314CA**	**21314CAK**	3.110
	150	51.0	2.1	237.00	325.00	2 200	3 000	**22314MB**	**22314MBK**	4.210
	150	51.0	2.1	315.00	375.00	2 200	3 000	**22314CC**	**22314CCK**	4.350
	150	51.0	2.1	315.00	375.00	2 800	3 400	**22314CA**	**22314CAK**	4.320
75	130	31.0	1.5	98.0	146.00	2 400	4 200	**22215MB**	**22215MBK**	1.730
	130	31.0	1.5	180.0	232.00	2 400	3 200	**22215CC**	**22215CCK**	1.820
	130	31.0	1.5	180.0	232.00	3 000	3 800	**22215CA**	**22215CAK**	1.690
	160	37.0	2.1	238.0	302.00	1 900	2 600	**21315CA**	**21315CAK**	3.760
	160	55.0	2.1	270.0	400.00	2 000	2 800	**22315MB**	**22315MBK**	5.230
	160	55.0	2.1	365.0	451.00	2 000	2 800	**22315CC**	**22315CCK**	5.280
	160	55.0	2.1	365.0	451.00	2 600	3 200	**22315CA**	**22315CAK**	5.890
80	140	33.0	2.0	119.00	185.00	2 200	3 000	**22216MB**	**22216MBK**	2.280
	140	33.0	2.0	200.00	265.00	2 200	3 000	**22216CC**	**22216CCK**	2.130
	140	33.0	2.0	200.00	265.00	2 800	3 400	**22216CA**	**22216CAK**	2.260
	170	39.0	2.1	260.00	332.00	1 800	2 400	**21316CA**	**21316CAK**	4.470
	170	58.0	2.1	297.00	417.00	1 900	2 600	**22316MB**	**22316MBK**	6.300
	170	58.0	2.1	413.00	513.00	2 400	3 000	**22316CA**	**22316CAK**	6.320
85	150	36.0	2.0	149.0	235.00	2 000	2 800	**22217MB**	**22217MBK**	2.830
	150	36.0	2.0	250.0	315.00	2 000	2 800	**22217CC**	**22217CCK**	2.670
	150	36.0	2.0	250.0	315.00	2 600	3 200	**22217CA**	**22217CAK**	2.870
	180	41.0	3.0	298.0	385.00	1 700	2 200	**21317CA**	**21317CAK**	5.230
	180	60.0	3.0	317.0	453.00	1 800	2 400	**22317MB**	**22317MBK**	7.360
	180	60.0	3.0	447.0	556.00	2 200	2 800	**22317CA**	**22317CAK**	7.270
90	160	40.0	2.0	173.00	280.00	1 900	2 600	**22218MB**	**22218MBK**	4.000
	160	40.0	2.0	280.00	355.00	1 900	2 600	**22218CC**	**22218CCK**	3.280
	160	40.0	2.0	280.00	355.00	2 400	3 000	**22218CA**	**22218CAK**	3.670
	160	52.4	2.0	370.00	500.00	1 900	2 600	**23218CA**	**23218CAK**	4.550
	190	43.0	3.0	320.00	420.00	1 600	2 200	**21318CA**	**21318CAK**	6.170
	190	64.0	3.0	376.00	558.00	1 700	2 200	**22318MB**	**22318MBK**	8.880
	190	64.0	3.0	500.00	641.00	2 200	2 600	**22318CA**	**22318CAK**	8.630
95	170	43.0	2.1	218.0	332.00	1 800	2 400	**22219MB**	**22219MBK**	4.550
	170	43.0	2.1	305.0	393.00	2 200	2 800	**22219CA**	**22219CAK**	4.570
	200	45.0	3.0	355.0	485.00	1 700	2 200	**21319CA**	**21319CAK**	7.150
	200	67.0	3.0	397.0	587.00	1 600	2 000	**22319MB**	**22319MBK**	10.380
	200	67.0	3.0	556.0	709.00	2 000	2 600	**22319CA**	**22319CAK**	9.970
100	165	52.0	2.1	350.00	550.00	1 700	2 200	**23120CA**	**23120CAK**	4.430
	180	46.0	2.1	229.00	369.00	1 700	2 200	**22220MB**	**22220MBK**	5.120
	180	46.0	2.1	350.00	456.00	2 200	2 600	**22220CA**	**22220CAK**	5.010
	180	60.3	2.1	450.00	650.00	1 600	2 200	**23220CA**	**23220CAK**	6.520
	215	47.0	3.0	385.00	530.00	1 600	2 000	**21320CA**	**21320CAK**	8.810
	215	73.0	3.0	464.00	688.00	1 400	1 800	**22320MB**	**22320MBK**	13.000
	215	73.0	3.0	640.00	840.00	1 900	2 400	**22320CA**	**22320CAK**	12.800
110	170	45.0	2.1	288.0	456.00	2 200	3 000	**23022MB**	**23022MBK**	3.950
	170	45.0	2.0	310.0	500.00	2 200	3 000	**23022CA**	**23022CAK**	3.800
	180	56.0	2.0	420.0	650.00	1 600	2 000	**23122CA**	**23122CAK**	5.580
	180	69.0	2.0	500.0	840.00	1 600	2 000	**24122CA**	**24122CAK**	6.630
	200	53.0	2.1	297.0	479.00	1 500	1 900	**22222MB**	**22222MBK**	7.000
	200	53.0	2.1	445.0	585.00	1 900	2 400	**22222CA**	**22222CAK**	7.320
	200	69.8	2.1	580.0	830.00	1 500	1 900	**23222CA**	**23222CAK**	9.460
	240	50.0	3.0	460.0	635.00	1 400	1 800	**21322CA**	**21322CAK**	11.800
	240	80.0	3.0	561.0	857.00	1 200	1 600	**22322MB**	**22322MBK**	17.850
	240	80.0	3.0	780.0	1 000.00	1 700	2 200	**22322CA**	**22322CAK**	17.500
120	180	46.0	2.0	304.00	501.00	2 000	2 800	**23024MB**	**23024MBK**	4.300
	180	46.0	2.0	330.00	550.00	2 000	2 800	**23024CA**	**23024CAK**	4.170
	180	60.0	2.0	430.00	750.00	1 500	2 000	**24024CA**	**24024CAK**	5.050
	200	62.0	2.0	500.00	755.00	1 400	1 800	**23124CA**	**23124CAK**	7.850
	200	80.0	2.0	650.00	1 100.00	1 400	1 800	**24124CA**	**24124CAK**	9.650
	215	58.0	2.1	352.00	582.00	1 300	1 700	**22224MB**	**2222MBK**	9.070
	215	58.0	2.1	535.00	700.00	1 700	2 200	**22224CA**	**22224CAK**	9.140
	215	76.0	2.1	610.00	955.00	1 300	1 700	**23224CA**	**23224CAK**	11.700
	260	86.0	3.0	664.00	1 022.00	1 100	1 500	**22324MB**	**22324MBK**	22.380
	260	86.0	3.0	890.00	1 154.00	1 500	1 900	**22324CA**	**22324CAK**	22.200

FŁT Spherical roller bearings

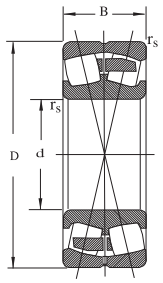


20000 (/W33) | 20000CA (/W33) | 20000CC (/W33) | 20000K (CAK) (CCK) (/W33)

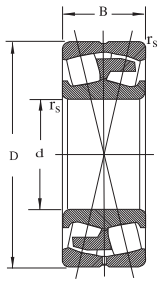
DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS		MASS
d	D	B	$r_{1.2}$ min	dynamic C	static C_o	grease	oil	cylindrical bore	tapered bore	~
mm				kN		r/min				kg
130	200	52.0	2.0	386.0	630.00	1 900	2 600	**23026MB**	**23026MBK**	6.120
	200	52.0	2.0	420.0	710.00	1 900	2 600	**23026CA**	**23026CAK**	5.990
	200	69.0	2.0	472.0	852.00	1 400	1 800	**24026CA**	**24026CAK**	7.550
	210	64.0	2.0	560.0	840.00	1 300	1 700	**23126CA**	**23126CAK**	8.490
	210	80.0	2.0	585.0	1 030.00	1 300	1 700	**24126CA**	**24126CAK**	10.300
	230	64.0	3.0	420.0	729.00	1 200	1 600	**22226MB**	**22226MBK**	11.380
	230	64.0	3.0	600.0	860.00	1 600	2 000	**22226CA**	**22226CAK**	11.200
	230	80.0	3.0	678.0	1 080.00	1 200	1 600	**23226CA**	**23226CAK**	13.800
	280	93.0	4.0	744.0	1 170.00	950	1 300	**22326MB**	**22326MBK**	28.170
	280	93.0	4.0	1 020.0	1 340.00	1 400	1 800	**22326CA**	**22326CAK**	27.500
140	210	53.0	2.0	294.00	654.00	950	1 300	**23028MB**	**23028MBK**	6.300
	210	53.0	2.0	460.00	765.00	1 800	2 400	**23028CA**	**23028CAK**	6.400
	210	53.0	2.0	460.00	765.00	1 800	2 400	**23028CC**	**23028CCK**	6.400
	210	69.0	2.0	488.00	895.00	1 300	1 700	**24028CA**	**24028CAK**	8.010
	225	68.0	2.1	610.00	970.00	1 200	1 600	**23128CA**	**23128CAK**	10.200
	225	85.0	2.1	750.00	1 320.00	1 200	1 600	**24128CA**	**24128CAK**	12.500
	250	68.0	3.0	492.00	829.00	1 000	1 400	**22228MB**	**22228MBK**	14.200
	250	68.0	3.0	710.00	1 000.00	1 400	1 700	**22228CA**	**22228CAK**	14.480
	250	88.0	3.0	900.00	1 360.00	1 100	1 500	**23228CA**	**23228CAK**	18.100
	300	102.0	4.0	925.00	1 340.00	900	1 200	**22328MB**	**22328MBK**	34.840
	300	102.0	4.0	1 200.00	1 620.00	1 300	1 700	**22328CA**	**22328CAK**	34.600
150	225	56.0	2.1	338.0	790.00	900	1 200	**23030MB**	**23030MBK**	8.190
	225	56.0	2.1	510.0	855.00	1 700	2 200	**23030CA**	**23030CAK**	8.120
	225	75.0	2.1	650.0	1 200.00	1 200	1 500	**24030CA**	**24030CAK**	10.100
	250	80.0	2.1	830.0	1 300.00	1 100	1 400	**23130CA**	**23130CAK**	15.700
	250	100.0	2.1	890.0	1 600.00	1 100	1 400	**24130CA**	**24130CAK**	19.000
	270	73.0	3.0	523.0	900.00	950	1 300	**22230MB**	**22230MBK**	18.420
	270	73.0	3.0	820.0	1 200.00	1 300	1 600	**22230CA**	**22230CAK**	18.000
	270	96.0	3.0	948.0	1 540.00	1 100	1 400	**23230CA**	**23230CAK**	23.200
	320	108.0	4.0	1 050.0	1 790.00	850	1 100	**22330MB**	**22330MBK**	42.340
	320	108.0	4.0	1 370.0	1 850.00	1 200	1 500	**22330CA**	**22330CAK**	42.000
160	240	60.0	2.1	379.00	850.00	850	1 100	**23032MB**	**23032MBK**	9.600
	240	60.0	2.1	590.00	980.00	1 700	2 200	**23032CA**	**23032CAK**	9.480
	240	80.0	2.1	780.00	1 420.00	1 100	1 400	**24032CA**	**24032CAK**	12.200
	270	86.0	2.1	950.00	1 510.00	1 000	1 300	**23132CA**	**23132CAK**	19.800
	270	109.0	2.1	1 040.00	1 880.00	1 000	1 300	**24132CA**	**24132CAK**	24.400
	290	80.0	3.0	660.00	1 170.00	900	1 200	**22232MB**	**22232MBK**	22.200
	290	80.0	3.0	950.00	1 330.00	1 200	1 500	**22232CA**	**22232CAK**	22.950
	290	104.0	3.0	1 200.00	1 880.00	1 100	1 400	**23232CA**	**23232CAK**	29.400
	340	114.0	4.0	1 070.00	1 820.00	800	1 000	**22332MB**	**22332MBK**	51.000
	340	114.0	4.0	1 420.00	1 930.00	950	1 300	**22332CA**	**22332CAK**	51.900

DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS		MASS
d	D	B	$r_{1.2}$ min	dynamic C	static C_o	grease	oil	cylindrical bore	tapered bore	~
mm				kN		r/min				kg
170	260	67.0	2.1	458.0	1 040.00	800	1 000	**23034MB**	**23034MBK**	13.000
	260	67.0	2.1	715.0	1 100.00	1 600	2 000	**23034CA**	**23034CAK**	12.900
	260	90.0	2.1	820.0	1 520.00	1 000	1 300	**24034CA**	**24034CAK**	16.700
	280	88.0	2.1	900.0	1 550.00	1 000	1 300	**23134CA**	**23134CAK**	21.100
	280	109.0	2.1	1 070.0	1 930.00	1 000	1 300	**24134CA**	**24134CAK**	25.500
	310	86.0	4.0	740.0	1 330.00	850	1 100	**22234MB**	**22234MBK**	29.000
	310	86.0	4.0	1 100.0	1 520.00	1 100	1 400	**22234CA**	**22234CAK**	28.100
	310	110.0	4.0	1 350.0	2 100.00	900	1 200	**23234CA**	**23234CAK**	35.700
	360	120.0	4.0	1 180.0	2 120.00	750	950	**22334MB**	**22334MBK**	60.000
	360	120.0	4.0	1 550.0	2 140.00	950	1 300	**22334CA**	**22334CAK**	59.300
180	280	74.0	2.1	556.00	1 260.00	750	950	**23036MB**	**23036MBK**	17.600
	280	74.0	2.1	850.00	1 410.00	1 400	1 800	**23036CA**	**23036CAK**	17.000
	280	100.0	2.1	980.00	1 800.00	950	1 200	**24036CA**	**24036CAK**	22.100
	300	96.0	3.0	1 100.00	1 900.00	900	1 200	**23136CA**	**23136CAK**	26.900
	300	118.0	3.0	1 250.00	2 210.00	900	1 200	**24136CA**	**24136CAK**	32.000
	320	86.0	4.0	757.00	1 410.00	800	1 000	**22236MB**	**22236MBK**	30.000
	320	86.0	4.0	1 140.00	1 600.00	1 100	1 300	**22236CA**	**22236CAK**	29.400
	320	112.0	4.0	1 280.00	2 170.00	850	1 100	**23236CA**	**23236CAK**	37.900
	380	126.0	4.0	1 290.00	2 330.00	700	900	**22336MB**	**22336MBK**	70.000
	380	126.0	4.0	1 730.00	2 460.00	900	1 200	**22336CA**	**22336CAK**	70.400
190	290	75.0	2.1	570.0	1 260.00	700	900	**23038MB**	**23038MBK**	20.000
	290	75.0	2.1	905.0	1 515.00	1 300	1 700	**23038CA**	**23038CAK**	18.000
	290	100.0	2.1	975.0	1 910.00	900	1 200	**24038MB**	**24038MBK**	23.000
	290	100.0	2.1	1 000.0	1 900.00	900	1 200	**24038CA**	**24038CAK**	23.000
	320	104.0	3.0	1 200.0	2 120.00	850	1 100	**23138CA**	**23138CAK**	33.600
	320	128.0	3.0	1 410.0	2 590.00	850	1 100	**24138CA**	**24138CAK**	40.200
	340	92.0	4.0	842.0	1 555.00	750	950	**22238MB**	**22238MBK**	37.400
	340	92.0	4.0	1 200.0	1 800.00	800	1 100	**22238CA**	**22238CAK**	36.200
	340	120.0	4.0	1 550.0	2 500.00	800	1 100	**23238CA**	**23238CAK**	46.100
	400	132.0	5.0	1 430.0	2 600.00	670	850	**22338MB**	**22338MBK**	81.000
	340	92.0	4.0	1 860.0	2 650.00	850	1 100	**22338CA**	**22338CAK**	78.800
200	310	82.0	2.1	597.00	1 340.00	670	850	**23040MB**	**23040MBK**	24.000
	310	82.0	2.1	1 050.00	1 720.00	670	850	**23040CA**	**23040CAK**	23.000
	310	109.0	2.1	1 290.00	2 120.00	850	1 100	**24040MB**		31.600
	310	109.0	2.1	1 180.00	2 260.00	850	1 100	**24040CA**	**24040CAK**	29.300
	340	112.0	3.0	1 280.00	2 100.00	800	1 000	**23140CA**	**23140CAK**	41.600
	340	140.0	3.0	1 680.00	3 000.00	800	1 000	**24140CA**	**24140CAK**	49.900
	360	98.0	4.0	947.00	1 790.00	700	900	**22240MB**	**22240MBK**	47.700
	360	98.0	4.0	1 310.00	2 010.00	750	1 000	**22240CA**	**22240CAK**	43.900
	360	128.0	4.0	1 650.00	2 700.00	750	1 000	**23240CA**	**23240CAK**	55.400
	420	138.0	5.0	1 530.00	2 880.00	630	800	**22340MB**	**22340MBK**	94.000
	420	138.0	5.0	2 050.00	3 000.00	850	110	**22340CA**	**22340CAK**	94.000
	280	60.0	5.0	550.00	1 100.00	1 000	1 400	**23940CA**	**23940CAK**	11.900

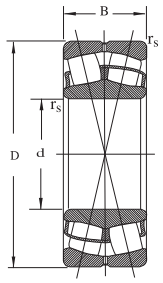
FŁT Spherical roller bearings



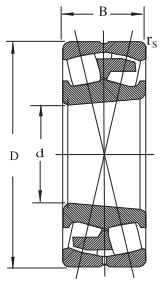
20000 (/W33)



20000CA (/W33)



20000CC (/W33)



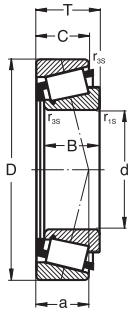
20000K (CAK) (CCK) (/W33)

DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS		MASS
d	D	B	$r_{1.2}$ min	dynamic C	static C_o	grease	oil	cylindrical bore	tapered bore	~
mm				kN		r/min				kg
220	340	90.0	3.0	783.0	1 860.00	600	750	**23044MB**	**23044MBK**	28.800
	340	90.0	3.0	1 100.0	1 900.00	600	750	**23044CA**	**23044CAK**	29.200
	340	118.0	3.0	1 350.0	2 580.00	750	1 000	**24044CA**	**24044CAK**	38.100
	370	120.0	4.0	1 570.0	2 820.00	700	950	**23144CA**	**23144CAK**	51.500
	370	150.0	4.0	1 500.0	2 400.00	730	1 300	**24144MB**		68.000
	370	150.0	4.0	1 880.0	3 400.00	730	1 300	**24144CA**	**24144CAK**	65.600
	400	108.0	4.0	1 200.0	2 280.00	630	800	**22244MB**	**22244MBK**	61.500
	400	108.0	4.0	1 600.0	2 410.00	630	800	**22244CA**	**22244CAK**	58.400
	400	144.0	4.0	2 070.0	3 620.00	670	900	**23244CA**	**23244CAK**	78.500
	460	145.0	5.0	1 740.0	3 290.00	560	700	**22344MB**	**22344MBK**	120.000
	460	145.0	5.0	3 230.0	3 400.00	750	950	**22344CA**	**22344CAK**	119.000
240	360	92.0	3.0	820.00	2 120.00	530	670	**23048MB**	**23048MBK**	35.500
	360	118.0	3.0	1 400.00	2 850.00	700	950	**24048CA**	**24048CAK**	40.800
	400	128.0	4.0	1 790.00	3 220.00	670	850	**23148CA**	**23148CAK**	63.700
	440	120.0	4.0	1 950.00	3 000.00	700	900	**22248CA**	**22248CAK**	82.400
	500	155.0	5.0	2 680.00	4 010.00	670	850	**22348CA**	**22348CAK**	150.000
260	400	104.0	4.0	1 450.0	2 700.00	500	630	**23052MB**	**23052MBK**	51.500
	400	140.0	4.0	1 790.0	3 740.00	630	850	**24052CA**	**24052CAK**	62.400
	440	144.0	4.0	2 550.0	3 900.00	600	800	**23152MB**	**23152MBK**	90.200
	440	144.0	4.0	2 550.0	3 900.00	600	800	**23152CA**	**23152CAK**	88.200
	480	130.0	5.0	2 240.0	3 450.00	1 080	1 100	**22252MB**	**22252MBK**	110.000
	480	174.0	5.0	2 900.0	4 800.00	630	800	**23252CA**	**23252CAK**	142.000
280	380	75.0	2.1	897.0	980.00	1 000	1 400		**23956CAK**	26.000
	420	106.0	4.0	1 110.00	2 760.00	450	560	**23056MB**	**23056MBK**	62.000
	420	106.0	4.0	1 550.00	2 950.00	560	750	**23056CA**	**23056CAK**	57.000
	560	146.0	5.0	2 350.00	4 400.00	560	750	**23156CA**	**23156CAK**	95.100
	500	176.0	5.0	2 980.00	5 200.00	600	750	**23256CA**	**23256CAK**	148.000
	420	140.0	4.0	1 980.00	3 980.00	600	750	**24056CA**	**24056CAK**	68.000
	460	180.0	5.0	2 680.00	5 150.00	560	700	**24156CA**	**24156CAK**	113.000
	500	130.0	5.0	2 320.00	3 700.00	1 010	1 100	**22256CA**	**22256CAK**	110.000
300	460	118.0	4.0	1 920.0	3 600.00	800	1 000	**23060CA**	**23060CAK**	71.500
	500	160.0	5.0	2 600.0	4 900.00	600	750	**23160CA**	**23160CAK**	130.000
	460	160.0	4.0	2 480.0	5 150.00	560	700	**24060CA**	**24060CAK**	97.600
	540	192.0	5.0	3 450.0	6 200.00	560	1 000	**23260CA**	**23260CAK**	195.000
320	440	90.0	3.0	1 310.00	2 750.00	940	1 100	**23964CA**	**23964CAK**	41.000
	480	121.0	4.0	2 040.00	4 000.00	910	1 100	**23064CA**	**23064CAK**	79.900
	540	176.0	5.0	3 200.00	5 800.00	650	950	**23164CA**	**23164CAK**	170.000
340	520	133.0	5.0	2 360.0	4 550.00	850	1 000	**23068CA**	**23068CAK**	105.000
	580	190.0	5.0	4 050.0	6 700.00	500	630	**23168MB**	**23168MBK**	216.000
	620	224.0	6.0	4 900.0	7 600.00	500	630	**23268MB**	**23268MBK**	305.000
	620	224.0	6.0	4 900.0	7 600.00	500	630	**23268CA**	**23268CAK**	290.000
	520	180.0	5.0	3 050.0	6 500.00	500	630	**24068CA**	**24068CAK**	143.000

DIMENSIONS				BASIC LOAD RATING		LIMITING SPEEDS		BASIC DESIGNATIONS		MASS
d	D	B	$r_{1.2}$ min	dynamic C	static C_o	grease	oil	cylindrical bore	tapered bore	~
mm				kN		r/min				kg
360	540	180.0	5.0	3 250.0	6 800.00	450	560		**24072CAK30**	145.000
	600	192.0	5.0	3 800.00	7 350.00	560	850	**23172CA**	**23172CAK**	230.000
	650	232.0	6.0	4 900.00	9 200.00	450	560	**23272MB**	**23272MBK**	349.000
380	560	180.0	5.0	3 150.00	6 800.00	480	600		**24076MBK30**	153.000
	620	194.0	5.0	3 400.00	7 350.00	400	500		**23176CAK**	244.000
400	540	106.0	4.0	1 830.0	4 150.00	710	900	**23980CA**	**23980CAK**	72.900
	720	256.0	6.0	5 700.0	10 800.00	375	700	**23280CA**	**23280CAK**	469.000
440	600	118.0	5.0	2 450.0	4 900.00	670	850	**23988CA**		99.500
	650	157.0	6.0	3 400.00	7 100.00	610	750	**23088CA**	**23088CAK**	190.000
	720	226.0	6.0	5 150.00	10 300.00	400	500	**23188CA**	**23188CAK**	370.000
	720	280.0	6.0	6 400.00	13 200.00	255	600	**24188ECA**	**24188ECAK**	453.000
480	700	165.0	6.0	3 630.00	7 270.00	380	480	**23096MB**		216.000
	870	310.0	7.5	6 750.0	15 200.00	340	430	**23296CA**	**23296CAK**	835.000
500	720	167.0	6.0	3 900.00	8 500.00	520	670	**230/500CA**	**230/500CAK**	233.000
560	750	140.0	5.0	3 050.0	7 350.00	340	430	**239/560CA**	**239/560CAK**	183.000
600	800	150.0	5.0	3 900.0	8 300.00	320	400	**239/600CA**		220.000
630	920	212.0	7.0	6 700.0	12 500.00	260	340	**230/630CA**		485.000
	920	212.0	7.5	6 300.00	13 700.00	385	500	**230/630MB**	**230/630MBK**	496.000
710	1 030	315.0	10.0	9 370.00	22 800.00	190	260	**240/710CA**		895.000
850	1 030	136.0	5.0	3 340.0	10 000.00	260	530	**238/850CA**	**238/850CAK**	240.000

TAPERED ROLLER BEARINGS



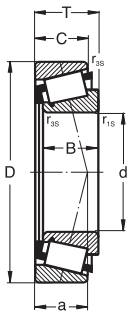


SUFFIX	Single row Tapered roller bearings
A	modified internal design-increased capacity
P6	accuracy to ISO tolerance class 6
X	boundary dimensions altered to conform to ISO standards
FD	solid collapsible steel cage
B	Increased contact angle

DIMENSIONS									BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	D	B	C	T	r_{1s} min	r_{2s} min	r_{3s} min	a ~	dynamic C	static C_o	grease	oil	~	
					mm				kN		r/min		kg	
15	35	11.0	10.0	11.75	0.60	0.6	0.3	10	15.0	14.3	12 000	16 000	0.057	**30202A**
	42	13.0	11.0	14.25	1.00	1.0	0.3	10	22.9	21.6	10 000	15 000	0.094	**30302A**
17	40	12.0	11.0	13.25	1.00	1.0	0.3	10	19.3	18.8	9 000	13 000	0.070	**30203A**
	47	14.0	12.0	15.25	1.00	1.0	0.3	10	26.0	25.7	8 500	12 000	0.130	**30303A**
	47	19.0	16.0	20.25	1.00	1.0	0.3	12	35.3	36.3	8 000	11 000	0.170	**32303A**
20	42	15.0	12.0	15.00	0.60	0.6	0.3	10	25.1	28.2	9 000	13 000	0.100	**32004X**
	47	14.0	12.0	15.25	1.00	1.0	0.3	11	27.5	28.0	8 000	11 000	0.120	**30204A**
	52	15.0	13.0	16.25	1.50	1.5	0.6	11	31.6	32.0	8 000	11 000	0.170	**30304A**
	52	21.0	18.0	22.25	1.50	1.5	0.6	11	44.0	45.5	7 500	11 000	0.230	**32304A**
25	47	15.0	11.5	15.00	0.60	0.6	0.3	12	28.0	34.1	8 000	11 000	0.120	**32005X**
	52	15.0	13.0	16.25	1.00	1.0	0.3	12	32.6	35.5	7 500	10 000	0.160	**30205A**
	62	17.0	15.0	18.25	1.50	1.5	0.6	13	44.6	43.0	6 700	9 000	0.260	**30305A**
	62	17.0	13.0	18.25	1.50	1.5	0.6	20	38.0	40.0	5 600	7 500	0.220	**31305A**
	52	18.0	15.0	19.25	1.00	1.0	0.3	18	41.3	49.2	7 000	9 500	0.190	**32205A**
	52	22.0	18.0	22.00	1.00	1.0	0.3	14	47.1	55.8	6 700	9 000	0.230	**33205A**
	62	24.0	20.0	25.25	1.50	1.5	0.6	15	65.0	69.3	6 000	8 000	0.360	**32305A**
30	55	17.0	13.0	17.00	1.00	1.0	0.3	14	35.7	46.8	6 700	9 000	0.170	**32006XA**
	62	16.0	14.0	17.25	1.00	1.0	0.3	14	40.2	44.0	6 300	8 500	0.230	**30206A**
	62	16.0	14.0	17.25	1.00	1.0	0.3	14	45.5	50.5	6 300	8 500	0.230	**30206XA**
	62	20.0	17.0	21.25	1.00	1.0	0.3	15	50.1	57.0	6 300	8 500	0.290	**32206A**
	62	25.0	19.5	25.00	1.00	1.0	0.3	16	63.8	75.4	5 600	7 500	0.370	**33206A**
	72	19.0	16.0	20.75	1.50	1.5	0.6	15	56.1	56.0	5 600	7 500	0.390	**30306A**
	72	27.0	23.0	28.75	1.50	1.5	0.6	18	76.5	85.0	5 300	7 000	0.540	**32306A**
	72	19.0	14.0	20.75	1.50	1.5	0.6	22	47.3	50.0	5 000	6 700	0.370	**31306A**
35	62	18.0	14.0	18.00	1.00	1.0	0.3	15	36.4	47.1	6 000	8 000	0.220	**32007XA**
	72	17.0	15.0	18.25	1.50	1.5	0.6	15	51.2	56.0	5 300	7 000	0.330	**30207A**
	72	23.0	19.0	24.25	1.50	1.5	0.6	17	66.0	78.0	5 300	7 000	0.490	**32207A**
	72	28.0	22.0	28.00	1.55	1.5	0.6	18	82.6	101.7	5 500	7 400	0.520	**33207A**
	80	21.0	18.0	22.75	2.00	1.5	0.6	16	72.1	73.5	5 000	6 700	0.520	**30307A**
	80	31.0	25.0	32.75	2.00	1.5	0.6	20	95.2	106.0	4 800	6 300	0.720	**32307A**
	80	21.0	15.0	22.75	2.00	1.5	0.6	25	59.7	63.9	4 500	6 000	0.500	**31307A**
40	68	19.0	14.5	19.00	1.00	1.0	0.3	15	54.0	71.0	5 300	7 000	0.270	**32008X**
	68	19.0	14.5	19.00	1.00	1.0	0.3	15	54.0	71.0	5 300	7 000	0.270	**32008XA**
	80	18.0	16.0	19.75	1.50	1.5	0.6	16	63.4	70.2	4 800	6 300	0.420	**30208A**
	80	23.0	19.0	24.75	1.50	1.5	0.6	19	74.8	86.5	4 800	6 300	0.530	**32208A**
	80	32.0	25.0	32.00	1.50	1.5	0.6	21	105.8	135.5	4 500	6 000	0.720	**33208A**
	90	23.0	20.0	25.25	2.00	1.5	0.6	19	85.8	95.0	4 500	6 000	0.740	**30308A**
	90	33.0	27.0	35.25	2.00	1.5	0.6	23	117.9	142.7	4 000	5 300	0.990	**32308A**
	90	33.0	27.0	35.25	2.00	1.5	0.6	23	115.7	147.8	4 300	5 600	1.040	**32308B**
	90	23.0	17.0	25.25	2.00	1.5	0.6	28	73.7	81.5	4 000	5 300	0.680	**31308A**
45	75	20.0	15.5	20.00	1.00	1.0	0.3	52	61.0	86.5	4 800	6 300	0.340	**32009A**
	75	20.0	15.5	20.00	1.00	1.0	0.3	17	58.4	81.4	4 800	6 300	0.340	**32009XA**
	85	19.0	16.0	20.75	1.50	1.5	0.6	18	66.0	76.5	4 500	6 000	0.470	**30209A**
	85	19.0	16.0	20.75	1.50	1.5	0.6	18	67.9	83.6	4 300	6 000	0.470	**30209XA**
	85	23.0	19.0	24.75	1.50	1.5	0.6	20	80.9	98.0	4 500	6 000	0.590	**32209A**
	85	32.0	25.0	32.00	1.50	2.0	0.5	22	99.5	124.0	4 000	5 300	0.820	**33209X**
	85	32.0	25.0	32.00	1.50	1.5	0.6	22	109.5	145.1	4 300	5 600	0.770	**33209A**
	100	25.0	22.0	27.25	2.00	1.5	0.6	21	108.0	120.0	4 000	5 300	0.990	**30309A**
	100	36.0	30.0	38.25	2.00	1.5	0.6	25	140.0	170.0	3 600	4 800	1.330	**32309A**
	100	25.0	18.0	27.25	2.00	1.5	0.6	31	87.6	101.1	3 400	4 500	0.910	**31309A**
	100	36.0	30.0	38.25	2.00	1.5	0.6	30	145.3	189.4	3 600	4 800	1.400	**32309B**
50	80	20.0	15.5	20.00	1.00	1.0	0.3	18	61.1	89.0	4 500	6 000	0.370	**32010X**
	80	24.0	19.0	24.00	1.00	1.0	0.3	17	76.8	110.9	4 300	5 600	0.430	**33010A**
	85	26.0	20.0	26.00	1.50	1.5	0.6	20	89.3	124.1	4 300	5 600	0.590	**33110A**
	90	20.0	17.0	21.75	1.50	1.5	0.6	19	76.5	91.5	4 300	5 600	0.540	**30210A**
	90	23.0	19.0	24.75	1.50	1.5	0.6	21	82.5	100.0	4 300	5 600	0.630	**32210A**
	90	32.0	24.5	32.00	1.50	1.5	0.6	23	112.9	154.6	4 000	5 300	0.830	**33210A**
	110	27.0	23.0	29.25	2.50	2.0	0.6	23	131.4	150.0	3 600	4 800	1.200	**30310A**
	110	40.0	33.0	42.25	2.50	2.0	0.6	27	174.0	244.0	3 200	4 300	1.740	**32310AX1**
	110	40.0	33.0	42.25	2.50	2.0	0.6	33	177.5	236.1	3 400	4 500	1.890	**32310B**
	110	27.0	19.0	29.25	2.50	2.0	0.6	34	105.0	138.0	3 200	4 300	1.160	**31310A**
55	90	23.0	17.5	23.00	1.50	1.5	0.6	20	80.2	117.2	4 000	5 300	0.560	**32011A**
	90	23.0	17.5	23.00	1.50	1.5	0.6	20	80.2	117.2	3 800	5 000	0.550	**32011X**
	95	30.0	23.0	30.00	1.50	1.5	0.6	22	114.0	163.0	3 800	5 000	0.894	**33111A**
	100	21.0	18.0	22.75	2.00	1.5	0.6	20	90.3	106.3	3 800	5 000	0.720	**30211A**
	100	25.0	21.0	26.75	2.00	1.5	0.6	22	106.0	129.0	3 800	5 000	0.840	**32211A**
	100	35.0	27.0	35.00	2.00	1.5	0.6	25	138.0	190.0	3 400	4 500	1.200	**33211A**
	120	29.0	25.0	31.50	2.50	2.0	0.6	24	135.0	179.0	3 200	4 300	1.530	**30311A**
	120	43.0	35.0	45.50	2.50	2.0	0.6	29	200.0	275.0	3 000	4 000	2.200	**32311A**
	120	43.0	35.0	45.50	2.50	2.0	0.6	36	203.0	271.4	3 000	4 000	2.370	**32311B**
	120	29.0	21.0	31.50	2.50	2.0	0.6	37	118.3	131.8	2 800	3 800	1.500	**31311A**

FŁT Tapered roller bearings

Single row

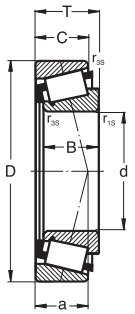


DIMENSIONS									BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	D	B	C	T	r_{1s} min	r_{2s} min	r_{3s} min	a ~	dynamic C	static C_o	grease	oil	~	
mm									kN		r/min		kg	
60	85	17.0	14.0	17.00	1.00	1.0	0.3	16	46.0	78.0	4 000	5 300	0.290	**32912X**
	95	23.0	17.5	23.00	1.50	1.5	0.6	21	81.7	122.2	3 800	5 000	0.590	**32012X**
	95	27.0	21.0	27.00	1.50	1.5	0.6	20	96.5	150.0	3 800	5 000	0.730	**33012A**
	100	30.0	23.0	30.00	1.50	1.5	0.6	23	117.1	173.2	3 400	4 500	0.890	**33112A**
	110	22.0	19.0	23.75	2.00	1.5	0.6	22	98.0	125.0	3 400	4 500	0.860	**30212A**
	110	28.0	24.0	29.75	2.00	1.5	0.6	24	126.0	174.0	3 400	4 500	1.100	**32212A**
	110	38.0	29.0	38.00	2.00	1.5	0.5	28	165.8	231.4	3 200	4 300	1.510	**33212A**
	130	31.0	26.0	33.50	3.00	2.5	1.0	26	167.0	210.0	3 000	4 000	1.900	**30312A**
	130	46.0	37.0	48.50	3.00	2.5	1.0	31	229.0	323.0	2 600	3 600	2.800	**32312A**
	130	31.0	22.0	33.50	3.00	2.5	1.0	39	134.0	172.0	2 600	3 600	1.830	**31312A**
65	100	23.0	17.5	23.00	1.50	1.5	0.6	22	84.2	127.0	3 400	4 500	0.630	**32013X**
	110	34.0	26.5	34.00	1.50	1.5	0.5	26	142.8	220.4	3 200	4 300	1.300	**33113A**
	120	23.0	20.0	24.75	2.00	1.5	0.6	23	115.0	150.0	3 000	4 000	1.100	**30213A**
	120	31.0	27.0	32.75	2.00	1.5	0.6	27	160.9	221.7	3 000	4 000	1.500	**32213A**
	120	41.0	32.0	41.00	2.00	1.5	0.6	29	202.2	281.6	2 800	3 800	2.050	**33213A**
	140	33.0	28.0	36.00	3.00	2.5	1.0	28	194.0	249.0	2 600	3 600	2.300	**30313A**
	140	48.0	39.0	51.00	3.00	2.5	1.0	33	260.0	360.0	2 400	3 400	3.400	**32313A**
	140	33.0	23.0	36.00	3.00	2.5	1.0	42	156.0	197.0	2 200	3 200	2.250	**31313A**
70	100	20.0	16.0	20.00	1.00	1.0	0.3	18	68.5	110.0	3 400	4 600	0.480	**32914X**
	110	25.0	19.0	25.00	1.50	1.5	0.6	23	101.0	153.0	3 200	4 300	0.840	**32014X**
	110	31.0	25.5	31.00	1.50	1.5	0.5	22	134.4	220.4	3 000	4 000	1.070	**33014A**
	125	24.0	21.0	26.25	2.00	1.5	0.6	25	125.0	166.0	3 000	4 000	1.220	**30214A**
	125	31.0	27.0	33.25	2.00	1.5	0.6	28	155.0	228.0	2 800	3 800	1.560	**32214A**
	150	35.0	30.0	38.00	3.00	2.5	1.0	29	220.0	282.0	2 400	3 400	2.900	**30314A**
	150	51.0	42.0	54.00	3.00	2.5	1.0	36	296.0	429.0	2 200	3 400	4.100	**32314A**
	150	35.0	25.0	38.00	3.00	2.5	0.8	47	187.0	231.0	2 000	3 000	2.850	**31314A**
75	115	25.0	19.0	25.00	1.50	1.5	0.6	25	103.1	160.2	3 000	4 000	0.900	**32015X**
	115	31.0	25.5	31.00	1.50	1.5	0.6	23	133.1	221.2	3 000	4 000	1.120	**33015A**
	130	25.0	22.0	27.25	2.00	1.5	0.6	27	135.0	182.0	2 800	3 800	1.330	**30215A**
	130	31.0	27.0	33.25	2.00	1.5	0.6	29	160.0	234.0	2 600	3 600	1.620	**32215A**
	160	37.0	31.0	40.00	3.00	2.5	1.0	31	242.0	318.0	2 200	3 200	3.400	**30315A**
	160	55.0	45.0	58.00	3.00	2.5	1.0	38	344.0	494.0	2 000	3 000	5.000	**32315A**
	160	37.0	26.0	40.00	3.00	2.5	1.0	50	194.0	250.0	1 800	2 600	3.500	**31315A**
	130	41.0	31.0	41.00	2.00	1.5	0.6	32	192.0	302.0	2 400	3 400	2.250	**33215A**
80	125	29.0	22.0	29.00	1.50	1.5	0.6	27	138.0	216.0	2 600	3 600	1.300	**32016X**
	130	37.0	29.0	37.00	2.00	2.0	0.6	30	181.0	317.0	2 600	3 600	1.600	**33116A**
	140	26.0	22.0	28.25	2.50	2.0	0.6	28	147.0	203.0	2 400	3 400	1.590	**30216A**
	140	33.0	29.0	35.25	2.50	2.0	0.6	30	184.0	263.0	2 400	3 400	2.000	**32216A**
	140	46.0	35.0	46.00	2.50	2.0	0.6	35	245.7	361.8	2 400	3 400	2.830	**33216A**
	170	39.0	33.0	42.50	3.00	2.5	1.0	33	271.0	377.0	2 000	3 000	4.000	**30316A**
	170	58.0	48.0	61.50	3.00	2.5	1.0	41	378.0	545.0	1 900	2 800	5.900	**32316A**

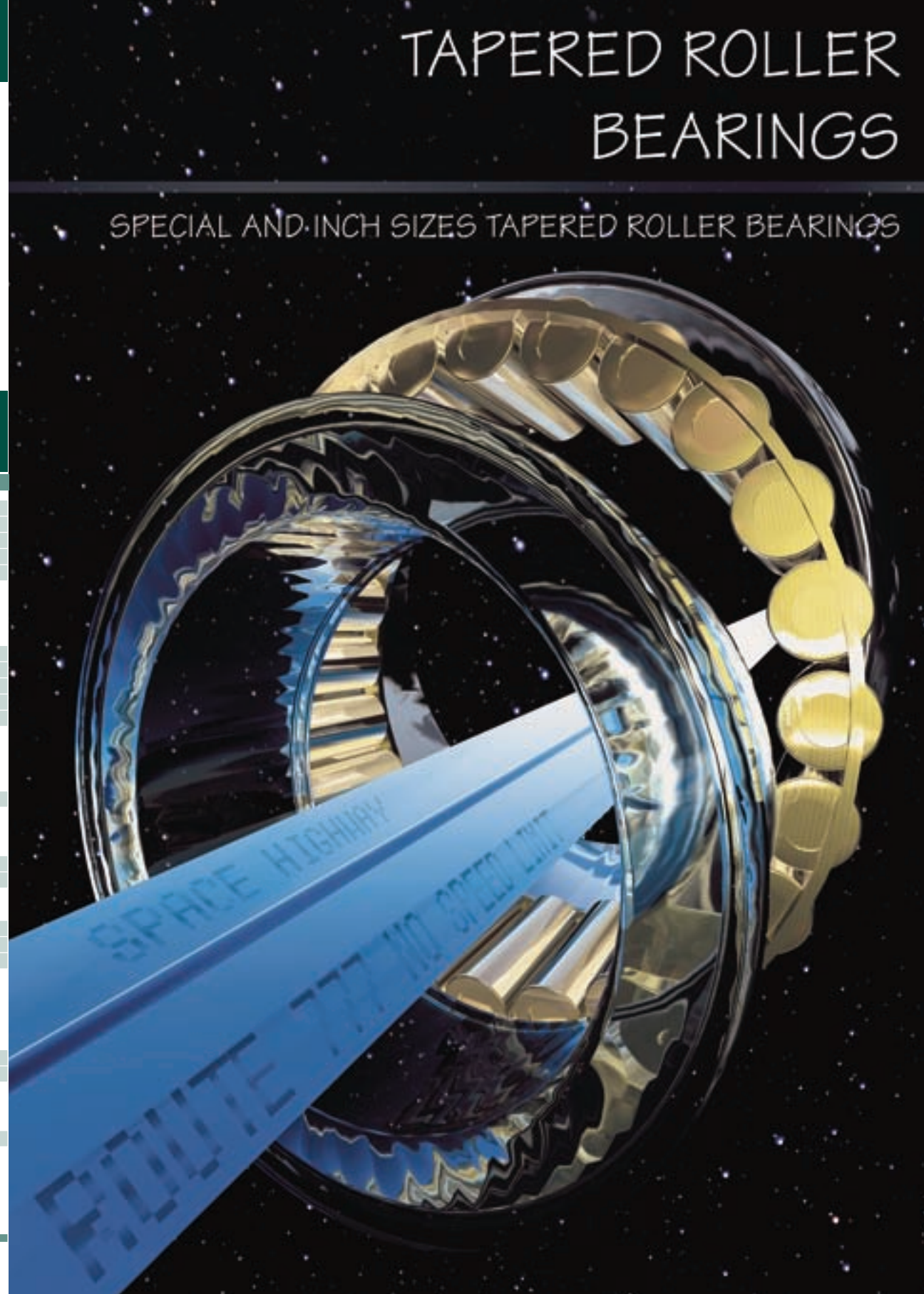
DIMENSIONS									BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	D	B	C	T	r_{1s} min	r_{2s} min	r_{3s} min	a ~	dynamic C	static C_o	grease	oil	~	
mm									kN		r/min		kg	
85	130	29.0	22.0	29.00	1.50	1.5	0.6	28	139.8	220.3	2 600	3 600	1.320	**32017X**
	140	41.0	32.0	41.00	2.50	2.0	0.6	32	215.7	354.2	2 400	3 400	2.450	**33117A**
	150	49.0	37.0	49.00	2.50	2.0	0.6	42	296.0	444.0	2 200	3 200	3.670	**33217A**
	150	28.0	24.0	30.50	2.50	2.0	0.6	30	171.0	239.0	2 200	3 200	2.000	**30217A**
	150	36.0	30.0	38.50	2.50	2.0	0.6	33	212.0	309.0	2 200	3 200	2.500	**32217A**
	180	41.0	34.0	44.50	4.00	3.0	1.0	35	305.0	399.0	1 900	2 800	4.700	**30317A**
	180	60.0	49.0	63.50	4.00	3.0	1.0	42	406.0	597.0	1 800	2 600	6.950	**32317A**
90	140	32.0	24.0	32.00	2.00	1.5	0.6	30	168.0	270.0	2 200	3 600	1.750	**32018X**
	150	45.0	35.0	45.00	2.50	2.0	0.6	35	262.0	419.0	2 000	3 200	3.180	**33118A**
	160	30.0	26.0	32.50	2.50	2.0	0.6	31	194.0	273.0	2 000	3 000	2.490	**30218A**
	160	40.0	34.0	42.50	2.50	2.0	0.6	36	248.0	377.0	2 000	3 000	3.300	**32218A**
	190	43.0	36.0	46.50	4.00	3.0	1.0	36	327.0	439.0	1 800	2 600	5.500	**30318A**
	190	64.0	53.0	67.50	4.00	3.0	1.0	44	429.0	639.0	1 800	2 400	8.230	**32318A**
95	145	32.0	24.0	32.00	2.00	1.5	0.5	32	174.0	281.0	2 200	3 200	1.790	**32019X**
	145	39.0	32.5	39.00	2.00	1.5	0.5	29	231.0	390.0	2 200	3 200	2.260	**33019A**
	170	32.0	27.0	34.50	3.00	2.5	1.0	33	217.0	305.0	1 900	2 800	2.960	**30219A**
	170	43.0	37.0	45.50	3.00	2.5	1.0	39	282.0	431.0	1 900	2 800	4.000	**32219A**
	170	58.0	44.0	58.00	3.00	2.5	1.0	42	377.0	568.0	1 900	2 800	5.500	**33219A**
	200	45.0	38.0	49.50	4.00	3.0	1.0	39	372.0	472.0	1 800	2 600	6.500	**30319A**
	200	67.0	55.0	71.50	4.00	3.0	1.0	47	485.0	721.0	1 700	2 400	9.550	**32319A**
100	150	32.0	24.0	32.00	2.00	1.5	0.5	33	173.1	291.7	2 200	3 000	1.850	**32020X**
	150	39.0	32.5	39.00	2.00	1.5	0.5	29	229.5	391.5	2 200	3 200	2.330	**33020A**
	145	22.5	17.5	24.00	3.00	3.0	0.6	30	125.0	190.0	2 200	3 200	1.150	**T4CB100**
	180	34.0	29.0	37.00	3.00	2.5	1.0	35	245.0	346.0	1 900	2 800	3.540	**30220A**
	180	46.0	39.0	49.00	3.00	2.5	1.0	41	337.0	476.0	1 800	2 600	4.760	**32220A**
	180	63.0	48.0	63.00	3.00	2.5	1.0	45	430.0	655.0	1 700	2 400	6.710	**33220A**
	215	47.0	39.0	51.50	4.00	3.0	1.0	40	412.0	527.0	1 700	2 400	4.900	**30320A**
	215	73.0	60.0	77.50	4.00	3.0	1.0	51	553.0	847.0	1 600	2 200	12.100	**32320A**
105	160	35.0	26.0	35.00	2.50	2.0	0.6	34	196.0	316.0	1 900	2 800	2.400	**32021X**
	160	43.0	34.0	43.00	2.50	2.5	0.6	35	264.7	453.5	2 000	3 000	3.000	**33021X**
	190	36.0	30.0	39.00	3.00	2.5	1.0	37	268.0	383.0	1 800	2 600	4.250	**30221A**
	190	50.0	43.0	53.00	3.00	2.5	1.0	44	367.0	575.0	1 800	2 600	5.900	**32221A**
	225	49.0	41.0	53.50	4.00	3.0	1.0	41	440.0	535.0	1 600	2 200	9.150	**30321A**
	225	77.0	63.0	81.50	4.00	3.0	1.0	54	598.0	934.0	1 400	1 900	16.000	**32321A**
110	170	38.0	29.0	38.00	2.50	2.0	0.6	37	245.7	403.4	1 900	2 800	3.020	**32022X**
	170	47.0	37.0	47.00	2.50	2.0	0.6	34	303.0	536.0	1 800	2 600	3.850	**33022A**
	180	56.0	43.0	56.00	2.50	2.0	0.6	44	373.0	639.0	1 800	2 600	5.550	**33122A**
	200	38.0	32.0	41.00	3.00	2.5	1.0	39	301.0	434.0	1 700	2 400	5.000	**30222A**
	200	53.0	46.0	56.00	3.00	2.5	1.0	46	390.0	631.0	1 700	2 400	6.900	**32222A**
	240	50.0	42.0	54.50	4.00	3.0	1.0	43	480.0	635.0	1 600	2 200	10.700	**30322A**
	240	80.0	65.0	84.50	4.00	3.0	1.0	56	674.0	1 030.0	1 400	1 900	19.300	**32322A**

FŁT Tapered roller bearings

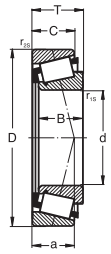
Single row



DIMENSIONS									BASIC LOAD RATING		LIMITING SPEEDS		MASS	BASIC DESIGNATIONS
d	D	B	C	T	r_{1s} min	r_{2s} min	r_{3s} min	a ~	dynamic C	static C_o	grease	oil	~	
mm									kN		r/min		kg	
120	180	38.0	29.0	38.00	2.50	2.0	0.6	40	242.0	404.0	1 800	2 600	3.180	**32024X**
	215	40.0	34.0	43.50	3.00	2.5	1.0	43	334.0	491.0	1 600	2 200	6.010	**30224A**
	215	58.0	50.0	61.50	3.00	2.5	1.0	51	440.0	727.0	1 600	2 200	8.750	**32224A**
	260	55.0	46.0	59.50	4.00	3.0	1.0	47	537.0	705.0	1 500	2 000	13.800	**30324A**
	260	86.0	69.0	90.50	4.00	3.0	1.0	60	773.0	1 115.0	1 200	1 600	24.000	**32324**
130	185	27.0	21.0	29.00	3.00	3.0		35	152.0	235.0	1 600	2 200	1.970	**T4CB130**
	200	45.0	34.0	45.00	2.50	2.0	0.6	42	314.0	540.0	1 600	2 200	4.950	**32026A**
	230	40.0	34.0	43.75	4.00	3.0	1.0	45	369.0	490.0	1 500	2 000	7.600	**30226A**
	230	64.0	54.0	67.75	4.00	3.0	1.0	56	576.0	884.0	1 400	1 800	11.400	**32226A**
140	190	32.0	25.0	32.00	2.00	1.5	0.5	33	193.0	357.0	1 800	2 600	2.550	**32928**
	195	27.0	21.0	29.00	3.00	3.0		41	188.0	300.0	1 500	2 000	2.410	**T4CB140**
	250	42.0	36.0	45.75	4.00	3.0	1.0	47	418.0	570.0	1 400	1 900	8.650	**30228A**
	250	68.0	58.0	71.75	4.00	3.0	1.0	60	675.0	1 050.0	1 200	1 600	14.400	**32228A**
	300	102.0	85.0	107.75	5.00	4.0	1.0	71	1 220.0	1 650.0	1 300	1 700	34.700	**32328FD**
150	210	38.0	30.0	38.00	3.00	2.0	1.0	36	284.0	530.0	1 800	2 600	3.920	**32930**
	225	48.0	36.0	48.00	3.00	2.0	1.0	50	390.0	695.0	1 500	2 000	6.310	**32030X**
	270	45.0	38.0	49.00	4.00	3.0	1.0	50	429.0	560.0	1 300	1 800	11.000	**30230A**
	270	73.0	60.0	77.00	4.00	3.0	1.0	64	756.0	1 180.0	1 100	1 500	18.200	**32230A**
160	290	80.0	67.0	84.00	4.00	3.0	1.0	69	856.5	1 435.0	1 000	1 400	23.100	**32232P6X**
170	260	57.0	43.0	57.00	3.00	2.0	1.0	57	465.0	800.0	1 200	1 700	10.600	**32034X**
	310	86.0	71.0	91.00	5.00	4.0	1.0	74	1 020.0	1 640.0	1 000	1 300	28.500	**32234A**
	230	30.0	23.0	32.00	1.50	2.0	0.6	42	221.0	395.0	1 400	1 900	4.170	**32934**
180	320	86.0	70.0	91.00	5.00	4.0	1.0	78	803.0	1 200.0	950	1 400	26.660	**32236**
	240	30.0	23.0	32.00	3.50	3.6	0.8	48	244.0	434.0	1 400	1 700	3.600	**T4DB180X1**
190	290	64.0	48.0	64.00	3.00	2.5	0.8	63	653.0	1 180.0	1 100	1 600	14.800	**32038XP6X**
	340	92.0	75.0	97.00	5.00	4.0	1.0	83	1 120.0	1 780.0	900	1 300	35.400	**32238A**
200	270	34.0	27.0	37.00	3.00	3.0	0.8	54	315.0	570.0	1 200	1 700	5.200	**T4DB200**
	310	70.0	53.0	70.00	3.00	2.5	0.8	67	720.0	1 400.0	900	1 200	19.100	**32040X**
	280	51.0	39.0	51.00	2.50	2.5	0.8	53	473.0	950.0	1 300	1 800	9.500	**32940A**
220	300	51.0	39.0	51.00	3.00	2.5	1.3	59	448.0	911.0	1 000	1 500	10.100	**32944**
	340	76.0	57.0	76.00	4.00	3.0	1.0	73	850.0	1 660.0	950	1 400	24.700	**32044X**
	340	76.0	57.0	76.00	4.00	3.0	1.0	73	869.0	1 570.0	900	1 300	24.500	**32044XP5**
	400	65.0	54.0	72.00	4.00	4.0	1.0	68	951.0	1 330.0	850	1 200	34.500	**30244**
	400	108.0	90.0	114.00	4.00	4.0	1.0	98	1 510.0	2 470.0	800	1 100	59.000	**32244**
240	320	56.0	46.0	57.00	3.00	2.0		58	616.0	1 320.0	900	1 300	12.500	**T2EE240**
	360	76.0	57.0	76.00	4.00	3.0	1.0	79	671.0	1 610.0	850	1 200	26.200	**32048X**
260	400	87.0	65.0	87.00	5.00	4.0	1.3	86	1 120.0	2 070.0	800	1 100	38.700	**32052X**
	540	102.0	80.0	112.00	6.00	6.0	2.0	98	1 910.0	2 580.0	630	850	110.960	**30352FD**
	380	63.5	48.0	63.50	3.00	2.5	1.3		672.0	1 370.0	800	1 100	19.900	**32956**
320	480	100.0	74.0	100.00	5.00	4.0	1.0	104	1 500.0	3 150.0	630	850	61.900	**32064X**

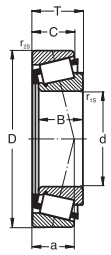


FŁT Special and inch size tapered roller bearings



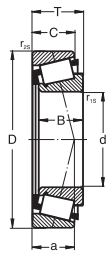
SHAFT	DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	DESIGNATION		CALCULATION FACTORS		
mm	d	D	T	B	C	r_{s1} min	r_{s2} max	a ~	dynamic C	static C_o	grease	oil	~	FŁT	Equivalent	e	y_1	y_o
	mm								kN		r/min		kg					
15.000	15.0000	35.0000	11.0000	10.7500	8.5000	0.7000	1.2500	8.0	15.3	13.8	11 000	16 000	0.047	**CBK 170B**	**639209 (SKF)**	0.45	1.30	0.70
	15.0000	42.0000	13.0000	13.5000	10.0000	1.0000	1.0000	9.0	21.4	22.0	11 000	16 000	0.054	**CBK 257**	**336658 (SKF) 639213 (SKF)**	0.40	1.50	0.83
17.462	17.4620	39.8780	13.4830	14.6050	10.6680	1.3000	1.3000	9.0	20.7	20.2	9 000	13 000	0.081	**LM 11749/LM11710**	**K-LM 11749/K-LM 11710**	0.28	2.10	1.10
	0.6875	*1.5700*	*0.5450*	*0.5750*	*0.4200*	*0.0500*	*0.0500*											
19.050	19.0500	45.2370	15.4940	16.6370	12.0650	1.3000	1.3000	10.0	27.5	27.5	8 500	12 000	0.120	**CBK 087**	**K-LM 11949/K-LM 11910**	0.30	2.00	1.10
	0.7500	*1.7810*	*0.6100*	*0.6550*	*0.4750*	*0.0500*	*0.0500*											
20.000	20.0000	43.0000	13.2500	12.0000	11.0000	3.0000	1.5000	10.0	21.4	21.7	8 500	12 000	0.084	**CBK 173B**	**639329 (SKF)**	0.38	1.60	0.90
21.430	21.4300	50.0050	17.5260	18.2880	13.9700	1.3000	1.3000	11.0	35.0	36.5	8 000	11 000	0.170	**M 12649/M 12610**	**K-M 12649/K-M 12610**	0.28	2.10	1.10
	0.8437	*1.9687*	*0.6900*	*0.7200*	*0.5500*	*0.0500*	*0.0500*											
21.987	21.9870	45.2370	15.4940	16.6370	12.0650	1.3000	1.3000	10.0	27.0	30.0	8 000	11 000	0.120	**LM 12749/LM 12710**	**K-LM 12749/KL-M 12710**	0.31	1.90	1.10
	0.8656	*1.7810*	*0.6100*	*0.6550*	*0.4750*	*0.0500*	*0.0500*											
22.000	22.0000	41.0000	14.4000	14.6000	11.4000	1.0000	1.0000	10.0	18.4	21.2	8 000	11 000	0.096	**CBK 323B**	**442327N (SKF)**	0.26	0.27	1.25
23.000	23.0000	52.0000	15.0000	14.2600	12.7000	3.0000	1.5000	11.0	27.1	29.3	7 500	10 000	0.126	**CBK 258**	**639175 (SKF)**	0.40	1.51	0.83
25.400	25.4000	50.2920	14.2240	14.7320	10.6680	1.3000	1.3000	11.0	25.5	29.0	7 500	10 000	0.130	**513-720**	**K-L44643/K-L 44610**	0.37	1.60	0.90
	1.0000	*1.9800*	*0.5600*	*0.5800*	*0.4200*	*0.0500*	*0.0500*											
25.400	*25.4000*	*57.1500*	*19.4310*	*19.4310*	*14.7320*	*1.5000*	*1.5000*	*16.0*	*42.0*	*48.5*	*6 900*	*9 200*	*0.240*	***M 84548/M84510***	***M 84548/M84510***	*0.55*	*1.10*	*0.60*
	1.0000	*2.2500*	*0.7650*	*0.7650*	*0.5800*	*0.0600*	*0.0600*											
25.400	25.4000	59.5300	23.3680	23.1140	18.2880	0.8000	1.5000	11.0	50.0	58.0	6 300	9 000	0.320	**CBK 247**	**K-M 84249 / K-M 84210**	0.55	1.10	0.60
	1.0000	*2.3437*	*0.8200*	*0.8100*	*0.5625*	*0.0300*	*0.0600*											
26.000	26.0000	52.0000	15.0000	14.2600	12.7000	2.8000	1.5000	11.0	27.1	29.3	7 500	10 000	0.138	**CBK 171**	**63174 (SKF)**	0.40	1.51	0.83
26.988	26.9880	50.2920	14.2240	14.7320	10.6680	3.5000	1.3000	11.0	25.5	29.0	7 500	10 000	0.110	**L 44649/L 44610**	**K-L 44649/K-L 44610**	0.37	1.60	0.90
	1.0625	*1.9800*	*0.5600*	*0.5800*	*0.4200*	*0.1400*	*0.0500*											
29.000	29.0000	50.2920	14.2240	14.7320	10.6680	3.5000	1.3000	11.0	25.4	31.8	7 000	9 500	0.110	**L 45449/L 45410**	**L-45449/L45410**	0.37	1.60	0.90
	1.1417	*1.9800*	*0.5600*	*0.5800*	*0.4200*	*0.1400*	*0.0500*								***331274 (SKF)***			
30.162	30.1620	64.2920	21.4330	21.4330	16.6700	1.5000	1.5000	18.0	49.0	60.0	6 300	8 000	0.350	**CBK 248**	**K-M86649/K-M 86610**	0.55	1.10	0.50
	1.1875	*2.5312*	*0.8438*	*0.8438*	*0.6563*	*0.1400*	*0.1400*											
31.750	31.7500	59.1310	15.8750	16.7640	11.8110	3.5000	1.3000	13.0	33.0	44.0	6 300	8 000	0.180	**CBK 088**	**K-LM 67048/L-LM 67010**	0.41	1.50	0.80
	1.2500	*2.3280*	*0.6250*	*0.6600*	*0.4650*	*0.1400*	*0.0500*											
31.750	31.7500	62.0000	18.1610	19.0500	14.2880	4.0000	1.3000	13.0	48.5	57.0	6 000	8 000	0.240	**15123/15245**	**K-15123/K-15245**	0.35	1.70	0.90
	1.2500	*2.4409*	*0.7150*	*6.7500*	*0.5625*	*0.1600*	*0.0500*											
31.750	31.7500	69.0120	19.8450	19.5830	15.8750	3.5000	1.3000	15.0	53.9	67.0	5 600	7 500	0.350	**14125A/14276**	**K-14125A/K-14276**	0.37	1.60	0.80
	1.2500	*2.4170*	*0.7813*	*0.7710*	*0.6250*	*0.1400*	*0.0500*											
31.750	31.7500	69.8500	23.8120	25.3570	19.0500	0.8000	1.3000	17.0	70.1	83.2	5 600	7 500	0.440	**2580/2523**	**2580/2523**	0.27	2.19	1.21
	1.2500	*2.7500*	*0.9375*	*0.9983*	*0.7500*	*0.0315*	*0.0512*											
33.338	33.3380	76.2000	29.3700	28.5750	23.0200	0.8000	2.0000	23.0	78.1	106.0	4 800	6 300	0.680	**CBK 093**	**K-HM 99443/K-HM 89410**	0.54	1.10	0.60
	1.3125	*3.0000*	*1.1563*	*1.1250*	*0.9063*	*0.0300*	*0.0800*											
34.925	34.9250	65.0880	18.0340	18.2880	13.9700	3.6000	1.3000	14.0	43.2	50.9	5 600	7 500	0.300	**CBK 333**	**K-LM 48548/K-LM 48510**	0.37	1.60	0.90
	1.3750	*2.5625*	*0.7100*	*0.7200*	*0.5500*	*0.1400*	*0.0500*											
34.925	34.9250	69.0120	19.9450	19.5830	15.8750	1.5000	1.3000	15.0	53.0	59.6	5 600	7 500	0.340	**CBK 348**	**K-14137A/K-14276**	0.38	1.60	0.90
	1.3750	*2.7170*	*0.7813*	*0.7710*	*0.6250*	*0.0600*	*0.0500*											
34.925	34.9250	72.2340	25.4000	25.4000	19.8420	2.5000	2.5000	21.0	66.0	87.0	5 300	7 000	0.450	**HM 88649/88610**	**HM 88649/88610**	0.55	1.10	0.60
34.925	34.9250	73.0250	23.8120	24.6090	19.0500	1.5000	2.3000	15.0	64.8	78.1	5 300	7 000	0.470	**CBK 350**	**K-25877/K-25820**	0.29	2.00	1.10
	1.3750	*2.8750*	*0.9375*	*0.9688*	*0.7500*	*0.0600*	*0.0900*											
34.925	34.9250	76.2000	29.3700	28.5750	23.0200	3.5000	3.3000	23.0	79.0	106.5	4 800	6 300	0.660	**CBK 094**	**K-HM 89446/K-HM 89410**	0.54	1.10	0.60
	1.3750	*3.0000*	*1.1563*	*1.2500*	*0.9063*	*0.1400*	*0.1300*											
34.988	34.9880	59.9740	15.8750	16.7640	11.9380	3.5000	1.3000	13.0	33.0	44.0	6 000	8 000	0.172	**513-719**	**K-L-68149/K-L 68111**	0.43	1.40	0.80
	1.3775	*2.3612*	*0.6250*	*0.6600*	*0.4700*	*0.1400*	*0.0500*											
35.000	35.0000	60.0000	15.8750	18.4600	11.9380	2.0000	1.3000	13.0	33.0	44.0	5 000	6 700	0.170	**JL 68145/JL 68111 Z**	**K-JL 68145/K-JL 68111**	0.43	1.40	0.80
35.000	35.0000	80.0000	32.0000	32.0000	25.0000	1.5000	0.3000	13.0	99.0	134.0	5 000	6 700	0.810	**514-747**		0.36	1.48	0.92
36.000	36.0000	68.0000	16.5000	16.5000	13.7500	1.5000	1.5000	15.0	36.4	40.6	5 000	6 700	0.280	**CBK 091**	**639180 (SKF)**	0.44	1.40	0.75
36.512	36.5120	76.2000	29.3700	28.5750	23.0200	3.5000	3.3000	23.5	78.0	105.0	5 100	6 800	0.626	**HM89449/HM89410**	**HM89449/HM89410**	0.55	1.10	0.60
	1.4375	3.0000	1.1563	1.1250	0.9063	0.1400	0.1300											

FŁT Special and inch size tapered roller bearings



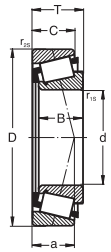
SHAFT	DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	DESIGNATION		CALCULATION FACTORS		
mm	d	D	T	B	C	r_{s1} min	r_{s2} max	a ~	dynamic C	static C_o	grease	oil	~	FŁT	Equivalent	e	y_1	y_o
	mm								kN		r/min		kg					
38.000	38.0000	63.0000	17.0000	17.0000	13.5000	1.3000	1.3000	15.0	40.5	56.5	5 300	7 000	0.200	**JL 69349/JL 69310**	**JL 69349/JL 69310**	0.42	1.40	0.80
38.000	38.0000	63.0000	17.1000	17.0000	13.5000	2.0000	1.5000	14.0	44.0	59.0	5 300	7 000	0.200	**513-716A**	**K-JL 69349A/K-JL69399**	0.43	1.40	0.80
38.100	38.1000	65.0880	18.0340	18.2880	13.9700	2.3000	1.3000	13.0	42.9	57.0	5 600	7 500	0.240	**LM 29749/LM 29710**	**LM 29749/LM 29710**	0.33	1.80	1.00
	1.5000	*2.5625*	*0.7100*	*0.7200*	*0.5500*	*0.0900*	*0.0500*											
	38.1000	79.3750	29.3700	29.7710	23.8120	4.0000	4.0000	21.0	90.5	120.0	5 000	6 700	0.690	**514-809**	**3490/3420**	0.37	1.60	0.88
39.000	39.0000	72.0150	21.5000	20.6400	16.7400	2.0000	0.5000	15.0	48.7	60.6	4 800	6 300	0.370	**CBK 187**	**639330 (SKF)**	0.40	1.50	0.82
40.000	40.0000	70.0000	17.0000	16.5000	14.2500	1.8000	1.3000	15.0	38.8	48.7	4 800	6 300	0.310	**CBK 172**	**639163 (SKF)**	0.44	1.35	0.74
41.275	41.2750	72.1100	19.5580	19.8120	14.7320	2.2000	1.5000	16.0	55.2	68.6	4 800	6 300	0.320	**514-873**		0.40	1.50	0.83
	1.6250	*2.8390*	*0.7700*	*0.7800*	*0.5800*	*0.0866*	*0.0591*											
41.275	41.2750	73.4310	19.5580	19.8120	14.7320	3.5000	1.3000	16.0	55.5	69.5	4 800	6 300	0.330	**LM 501349/LM 501310**	**K-LM 501349/K-LM 501310**	0.40	1.50	0.80
	1.6250	*2.8910*	*0.7700*	*0.7800*	*0.5800*	*0.1400*	*0.0500*											
41.275	41.2750	82.5500	26.5430	25.6540	20.1930	3.5000	3.3000	22.0	73.1	92.3	4 500	6 000	0.620	**CBK 387**	**K-M 802048/K-M 802011**	0.54	1.10	0.60
	1.6250	*3.2500*	*1.0450*	*1.0900*	*0.7900*	*0.1400*	*0.1300*											
41.275	41.2750	104.7750	36.5120	36.5120	28.5750	1.6000	3.3000	29.0	142.0	198.0	2 400	3 400	1.690	**HM 807035/807010**	**HM 807035/807010**			
44.450	44.4500	82.9310	23.8130	25.4000	19.0500	3.5000	0.8000	17.0	81.5	107.0	4 500	6 000	0.570	**25580/25520**	**K-25580/K-25520**	0.33	1.80	1.00
	1.7500	*3.2650*	*0.9375*	*1.0000*	*0.7500*	*0.7400*	*0.0300*											
44.450	*44.4500*	*87.3120*	*30.1620*	*30.8860*	*23.8120*	*3.5000*	*3.3000*	*20.1*	*94.0*	*117.0*	*4 400*	*5 900*	*0.779*	***3578/3525***	***3578/3525***	*0.31*	*1.96*	*1.08*
	1.7500	*3.4375*	*1.1875*	*1.2160*	*0.9375*	*0.1400*	*0.1300*											
44.450	44.4500	88.9000	30.1620	29.3700	23.0200	3.5000	3.4000	26.0	101.0	127.0	4 000	5 300	0.850	**HM 803149/HM 803110**	**HM 803149/HM 803110**	0.55	1.10	0.60
44.450	44.4500	95.2500	27.7830	28.5750	22.2250	0.8000	0.8000	20.0	105.0	137.0	4 000	5 300	0.990	**CBK 327**	**K-33885/K-33822**	0.33	1.80	1.00
	1.7500	*3.7500*	*1.0938*	*1.1250*	*0.8750*	*0.0300*	*0.0300*											
44.450	44.4500	95.2500	30.9580	28.5750	22.2250	3.6000	0.8000	30.0	97.9	119.0	4 300	5 600	1.110	**CBK 334**	**K-HM 903249/K-HM 903210**	0.75	0.80	0.45
	1.7500	*3.7500*	*1.2188*	*1.1250*	*0.8750*	*0.1400*	*0.0300*											
44.450	*44.4500*	*104.7750*	*36.5120*	*36.5120*	*28.5750*	*3.5000*	*3.4000*	*29.0*	*159.0*	*223.0*	*3 600*	*4 800*	*1.590*	***HM 807040/HM 807010***	***HM 807040/HM 807010***	*0.49*	*1.23*	*0.68*
	1.7500	*4.1250*	*1.4375*	*1.4375*	*1.1250*	*0.1400*	*0.1300*											
45.618	45.6180	82.9310	23.8120	25.4000	19.0500	3.6000	0.8000	17.0	74.2	96.0	4 500	6 000	0.550	**CBK 349**	**K-25590/K-25520**	0.33	1.80	1.00
	1.7900	*3.2650*	*0.9375*	*1.0000*	*0.7500*	*0.1400*	*0.0300*											
45.987	45.9870	74.9760	18.0000	18.0000	14.0000	1.5000	1.5000	16.0	47.3	63.2	4 800	6 300	0.310	**CBK 331A**	**K-LM 503349/K-LM 503310**	0.40	1.50	0.80
	1.8105	*2.9518*	*0.7087*	*0.7087*	*0.5512*	*0.0600*	*0.0600*											
47.625	47.6250	96.8380	21.0000	21.9460	15.8750	0.8000	0.8000	18.0	74.5	76.0	3 800	5 500	0.730	**CBK 351**	**K-386A/K-382A**	0.35	1.70	0.90
	1.8750	*3.8125*	*0.8268*	*0.8640*	*0.6250*	*0.0300*	*0.0300*											
49.213	49.2130	103.1880	43.6580	44.4750	36.5120	3.5000	3.3000	27.0	179.0	241.0	3 800	5 000	1.730	**5395/5335**	**5395/5335**	0.30	2.02	1.11
50.000	50.0000	84.0000	22.0000	22.0000	17.5000	3.5000	1.5000	19.7	69.5	94.5	4 300	5 700	0.466	**JLM704649/JLM704610**	**JLM704649/JLM704610**	0.44	1.37	0.75
	1.9685	3.3071	0.8661	0.8661	0.6693	0.1400	0.0600											
50.000	50.0000	110.0000	22.0000	21.9960	18.8250	1.5000	1.0000	21.2	91.6	125.0	3 200	4 300	1.050	**396A/394A**	**396A/394A**	0.40	1.49	0.80
	1.9685	*4.3307*	*0.8661*	*0.8600*	*0.7411*	*0.0600*												
50.800	50.8000	93.2640	30.1620	30.3020	23.8120	3.5000	3.3000	22.0	99.6	138.5	4 000	5 300	0.840	**3780/3720**	**3780/3720**	0.34	1.77	0.97
	2.0000	*3.6718*	*1.1875*	*1.1930*	*0.9375*	*0.1378*	*0.1299*											
50.800	50.8000	95.2500	27.7830	28.5750	22.2250	3.5000	0.8000	20.0	105.0	134.0	4 000	5 300	0.880	**CBK 322**	**K-33889/K33822**	0.33	1.80	1.00
	2.0000	*3.7500*	*1.0938*	*1.1250*	*0.8750*	*0.1400*	*0.0300*											
50.800	50.8000	100.0000	35.0000	35.0000	27.0000	2.0000	2.0000	29.0	135.7	178.2	4 000	5 300	0.920	**CBK 393**	**331305 (SKF)**	0.40	1.50	0.83
50.800	50.8000	104.7750	30.1620	30.9580	23.8120	2.3000	3.3000	23.0	130.0	169.0	3 500	4 700	1.230	**45285/45520**	**45285/45520**	0.33	1.80	0.99
	2.0000	4.1250	1.1875	1.2188	0.9375	0.0900	0.1300											
50.800	50.8000	104.7750	36.5120	36.5120	28.5750	3.5000	3.3000	29.0	130.0	192.0	3 400	4 500	1.500	**CBK 347**	**K-HM 807046/K-HM 807010**	0.47	1.27	0.70
	2.0000	*4.1250*	*1.4375*	*1.4375*	*1.1250*	*0.1400*	*0.1300*											
55.000	55.0000	93.0000	50.8000		39.8000	3.3000	0.3000		134.0	227.0	3 000	4 000	1.407	**CBK-260**				
57.000	57.0000	85.0000	18.5000	19.0000	14.0000	1.5000	1.5000	20.0	53.0	52.0	3 400	4 500	0.330	**CBK 494**	**639352 (SKF)**	0.32	1.80	1.00
57.150	57.1500	104.7750	27.7830	29.3170	24.6050	2.4000	3.3000	24.0	114.0	148.0	3 200	4 300	1.050	**CBK 335**		0.32	1.88	1.00
	2.2500	*4.1250*	*1.0938*	*1.1543*	*0.9688*	*0.1000*	*0.1300*											
57.150	57.1500	104.7750	30.1620	29.3170	24.6050	2.3000	3.3000	-7.1	117.3	151.9	3 200	4 300	1.230	**462/453**	**462/453**	0.34	1.79	0.98
	57.1500	112.7120	30.1620	30.1620	23.8120	3.5000	3.3000	23.0	127.0	159.0	3 200	4 300	1.400	**514-765**	**K-39581/K-39520**	0.33	1.80	1.00
	2.2500	*4.4375*	*1.1875*	*11.8750*	*0.9375*	*0.4000*	*0.1300*											

FŁT Special and inch size tapered roller bearings



SHAFT	DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	DESIGNATION		CALCULATION FACTORS		
mm	d	D	T	B	C	r_{s1} min	r_{s2} max	a ~	dynamic C	static C_o	grease	oil	~	FŁT	Equivalent	e	y_1	y_o
	mm								kN		r/min		kg					
60.000	60.0000	127.0000	36.5130	36.5130	26.9880	3.5000	1.5000	32.0	165.0	228.0	3 000	4 000	2.050	**CBK 261**	**K-HM 813839/K-HM 813810**	0.52	1.15	0.63
60.000	60.0000	135.0000	33.5500	30.9500	22.0000	3.0000	2.5000	41.0	143.0	176.0	2 600	3 600	2.500	**400371**	**400371 (CBF)**	0.83	0.73	0.40
63.500	63.5000	95.0000	17.0000	15.5000	11.5500	2.0000	2.0000	19.0	37.5	55.0	3 400	4 500	0.300	**CBK 200**	**431629 (SKF)**	0.78	1.77	0.42
65.000	65.0000	95.0000	17.0000	16.0000	13.0000	1.0000	1.0000	21.0	42.2	64.5	3 400	4 500	0.380	**514-683**		0.49	1.23	0.68
65.000	65.0000	105.0000	24.0000	23.0000	28.5000	3.0000	1.0000	24.0	94.0	128.0	3 300	4 500	0.810	**JLM 710949/JLM 710910**	**JLM 710949/JLM 710910**	0.45	1.32	0.73
	65.0000	120.0000	39.0000	38.5000	32.0000	1.5000	1.5000	21.3	197.0	261.0	2 800	3 900	2.063	**CBK-278A**				
	65.0000	110.0000	28.0000	28.0000	22.5000	3.0000	2.8000	24.5	136.0	191.0	3 400	4 600	1.071	**JM511946/JM511910**	**JM511946/JM511910**	0.40	1.49	0.82
	2.5591	*4.3307*	*1.1024*	*1.1024*	*0.8858*													
66.675	66.6750	110.0000	22.0000	21.9960	18.8240	0.8000	1.3000	21.0	91.5	114.0	3 200	4 300	0.790	**CBK 336**	**K-395A/K-394A**	0.40	1.50	0.80
	2.6250	*4.3307*	*0.8661*	*0.8660*	*0.7411*	*0.0300*	*0.0500*											
66.675	66.6750	110.0000	22.0000	21.9960	22.0000	0.8000	1.3000	21.0	88.2	117.9	3 200	4 300	0.840	**395A/394A**	**395A/394A**	0.40	1.49	0.82
	2.6250	*4.3307*	*0.8661*	*0.8660*	*0.8661*	*0.0315*	*0.0512*											
66.675	66.6750	110.0000	*30.1620*	*30.0480*	*23.8120*	*3.5000*	*3.3000*	*25.5*	*129.0*	*191.0*	*3 200*	*4 300*	*1.060*	***3984/3927X***	***3984/3927X***	*0.40*	*1.49*	*0.82*
	2.6250	*4.3307*	*1.1875*	*1.1830*	*0.9375*	*0.1400*	*0.1300*											
66.675	66.6750	112.7120	30.1620	30.0480	23.8120	3.5000	3.3000	25.0	132.0	183.0	3 200	4 300	1.150	**CBK 337**	**K-3984/K-3920**	0.41	1.47	0.80
70.000	70.0000	136.5250	46.0380	46.0380	36.5130	2.2000	2.2000	26.0	229.6	356.3	2 400	3 400	3.150	**CBK 262**	**K-H 715347/K-H 715311**	0.48	1.24	0.68
	2.7559	*5.3750*	*1.8125*	*1.8125*	*1.4375*	*0.0900*	*0.0900*											
72.000	72.0000	99.2400	17.0000	16.0000	13.0000	1.0000	1.0000	19.0	51.0	82.5	3 400	4 500	0.360	**514-685**		0.37	1.62	0.89
73.025	73.0250	112.7120	25.4000	25.4000	19.0500	3.5000	3.3000	26.0	97.4	155.2	3 000	4 000	0.880	**29685/29620**	**29685/29620**	0.49	1.23	0.68
	2.8750	*4.4375*	*1.0000*	*1.0000*	*0.7500*	*0.1378*	*0.7299*											
73.025	73.0250	112.7120	25.4000	25.4000	19.0500	3.6000	3.3000	26.0	96.0	149.0	3 000	4 000	0.890	**CBK 344**	**K-29685/K-29620**	0.48	1.25	0.70
	2.8750	*4.4375*	*1.0000*	*1.0000*	*0.7500*	*0.1400*	*0.7300*											
73.025	73.0250	117.4750	30.1620	30.1620	23.8120	3.5000	3.3000	26.0	119.8	181.1	3 000	4 000	1.170	**33287/33462**	**33287/33462**	0.44	1.38	0.76
	2.8750	*4.6250*	*1.1875*	*1.1875*	*0.9375*	*0.7378*	*0.7299*											
75.000	75.0000	115.0000	25.0000	25.0000	19.0000	3.0000	2.5000	25.0	102.8	153.1	2 600	3 600	0.870	**JLM714149/JLM714110**	**JLM714149/JLM714110**	0.46	1.31	0.72
75.000	75.0000	120.0000	31.0000	29.5000	25.0000	3.0000	2.5000	29.0	131.0	197.0	2 900	3 900	1.290	**JM714249/JM714210**	**JM714249/JM714210**	0.44	1.35	0.74
	2.9528	4.7244	1.2205	1.1614	0.9843	0.1200	0.1000											
76.200	76.2000	136.5250	30.1630	29.7690	22.2250	3.6000	3.2000	29.0	145.0	220.0	2 400	3 400	1.850	**CBK 528**	**K-495A/K-493**	0.44	1.35	0.80
	3.0000	*5.3750*	*1.1875*	*1.1720*	*0.8750*	*0.7400*	*0.7300*											
76.200	76.2000	139.9920	36.5120	36.0980	28.5750	2.5000	2.0000	32.0	197.0	262.0	2 200	3 200	2.390	**515-764**	**575S/572**	0.41	1.43	0.79
	3.0000	*5.5115*	*7.4375*	*1.4212*	*1.1250*	*0.0984*	*0.0787*											
78.000	78.0000	106.0000	17.0000	17.7500	13.1250	2.0000	1.0000	19.0	58.5	97.5	3 200	4 300	0.430	**514-874**		0.37	1.60	0.88
80.000	80.0000	130.0000	35.0000	34.0000	28.5000	3.0000	2.5000	30.0	181.0	286.0	2 200	3 200	1.770	**515-1210**	**JM515649/JM515610**	0.39	1.55	0.85
82.000	82.0000	140.0000	36.5120	36.0980	28.5750	10.0000	3.5000	31.0	171.0	252.0	2 200	3 200		**515-813**		0.40	1.49	0.82
82.550	82.5500	125.4120	25.4000	25.4000	19.8450	3.6000	1.6000	25.0	113.0	159.0	2 600	3 600	1.100	**CBK 338**	**K-27687/K-27620**	0.40	1.49	0.82
	3.2500	*4.9375*	*1.0000*	*1.0000*	*0.7813*	*0.7400*	*0.0600*											
82.550	82.5500	133.3500	33.3380	33.3380	26.1950	3.5000	3.3000	29.0	142.4	219.3	2 400	3 400	1.690	**47686/47620**	**47686/47620**	0.40	1.48	0.82
	3.2500	*5.2500*	*1.3125*	*1.3125*	*1.0373*	*0.7378*	*0.7299*											
88.900	88.9000	152.4000	39.6880	39.6880	30.1620	6.4000	3.3000	37.0	234.0	324.8	2 000	3 000	2.800	**515-745**	**K-593A/K-592**	0.40	1.49	0.82
	3.5000	*6.0000*	*1.5625*	*1.4300*	*1.1875*	*0.2500*	*0.7300*											
90.000	90.0000	147.0000	40.0000	40.0000	32.5000	7.0000	3.5000	31.0	226.0	349.0	2 200	3 200	2.500	**HM218248/HM218210**	**K-HM218248/K-HM218210**	0.33	1.80	1.00
90.000	90.0000	145.0000	35.0000	34.0000	27.0000	6.0000	2.5000	33.4	207.0	320.0	2 200	3 200	2.110	**515-121**	**JM 718149/JM 718110**	0.44	1.35	0.74
90.000	90.0000	147.0000	40.0000	40.0000	32.5000	5.8000	3.5000	30.0	226.0	349.0	2 200	3 200	2.480	**515-1005**		0.33	1.80	0.99
95.000	95.0000	135.0000	20.0000	20.0000	14.0000	5.0000	2.5000		76.5	133.0	2 500	3 200	0.850	**515-838**	**JL819349/JL819310**	0.58	1.03	0.57
95.250	95.2500	136.5250	122.2350			0.3000	1.0000		318.0	753.0	1 800	2 600	4.707	**CBK-184**				
96.838	96.8380	148.4300	28.5750	28.9710	21.4330	3.5000	3.5000	31.0	130.0	196.0	2 200	3 200	1.650	**CBK-529**	**K-42381/K-42584**	0.49	1.20	0.70
	3.8725	*5.8937*	*1.1250*	*1.1406*	*0.8438*	*0.7400*	*0.7400*											
99.974	99.9740	156.9750	42.0000	42.0000	34.0000	8.0000	3.5000	32.0	257.0	420.0	2 000	3 000	2.820	**HM220149/HM220110**	**HM220149/HM220110**	0.33	1.80	0.99
100.000	100.0000	160.0000	41.0000	40.0000	32.0000	2.0000	2.0000	32.0	250.0	396.0	1 900	2 800	3.050	**CBK 263**	**K-JHM 720249/K-JHM 720210**	0.46	1.31	0.72
100.000	100.0000	145.0000	24.0000	22.5000	17.5000	3.0000	3.0000	30.0	113.0	165.0	2 000	3 000	1.130	**JP10049/JP10010**	**JP10049/JP10010**	0.47	1.27	0.70
107.950	107.9500	158.7500	23.0200	21.4380	15.8750	3.5000	3.3000	37.0	97.0	145.0	1 900	2 800	1.400	**CBK 339**	**K-37425/K-37625**	0.61	0.98	0.54
	4.2500	*6.2500*	*0.9063*	*0.8440*	*0.6250*	*0.7400*	*0.7300*											

FŁT Special and inch size tapered roller bearings



SHAFT	DIMENSIONS								BASIC LOAD RATING		LIMITING SPEEDS		MASS	DESIGNATION		CALCULATION FACTORS		
mm	d	D	T	B	C	r_{s1} min	r_{s2} max	a ~	dynamic C	static C_o	grease	oil	~	FŁT	Equivalent	e	y_1	y_o
	mm								kN		r/min		kg					
109.539	109.5390	158.7500	23.0200	21.4380	15.8750	3.5000	3.3000	37.0	95.5	142.2	1 900	2 800	1.300	**515-761**	**37431 A/37625**	0.61	0.98	0.54
	4.3125	*6.2500*	*0.9063*	*0.8440*	*0.6250*	*0.7400*	*0.7300*											
110.000	110.0000	180.0000	41.2750	41.2750	30.1630	3.5000	3.3000	42.0	264.0	432.0	1 800	2 600	1.650	**CBK 264**	**K-64432/K-64708**	0.50	1.20	0.66
110.000	110.0000	165.0000	35.0000	35.0000	26.5000	5.0000	2.5000	32.0	200.0	352.0	1 800	2 600	2.450	**JM822049/JM822010**	**JM822049/JM822010**	0.50	1.20	0.66
120.000	120.0000	170.0000	27.0000	25.0000	19.5000	3.0000	3.0000	35.0	178.0	283.0	1 800	2 600	1.700	**JP12049/JP 12010**	**JP12049/JP 12010**	0.47	1.27	0.70
130.000	130.0000	185.0000	29.0000	27.0000	21.0000	3.0000	3.0000	8.9	181.5	290.0	1 800	2 600	2.160	**JP13049/JP13010**	**JP13049/JP13010**	0.47	1.27	0.70
133.350	133.3500	177.0080	25.4000	26.1950	20.6380	1.5000	1.5000	29.2	139.0	288.0	1 800	2 600	1.800	**515-1106**	**L327249/L327210**	0.35	1.72	0.95
140.000	140.0000	195.0000	29.0000	27.0000	21.0000	3.0000	3.0000	11.9	206.1	344.0	1 700	2 300	2.310	**JP14049A/JP14010**	**JP14049A/JP14010**	0.50	1.19	0.66
142.875	142.8750	200.0250	41.2750	39.6880	34.1300	8.0000	3.3000	38.0	277.0	535.0	1 600	2 100	3.740	**48684/48620**	**48684/48620**	0.34	1.78	1.00
146.050	146.0500	193.6750	28.5750	28.5750	23.0200	1.5000	1.5000	33.5	168.0	352.0	1 600	2 200	2.330	**515-822**	**36690/36620**	0.37	1.60	0.89
152.400	152.4000	192.0880	25.0000	24.0000	19.0000	2.0000	2.0000	35.0	130.0	261.0	1 600	2 100	1.530	**L630349/L630310**	**L630349/L630310**	0.42	1.44	0.79
	6.0000	7.5625	0.9843	0.9449	0.7480	0.0800	0.0800											
158.750	158.7500	205.5830	23.8120	23.8120	18.2580	1.5000	1.5000	33.0	135.0	263.0	1 500	2 000	1.930	**516-819**	**L-432349/L-432310**	0.37	1.60	0.89
196.850	196.8500	241.3000	23.8120	23.0170	17.4620	1.5000	1.5000	17.5	154.8	321.6	1 000	1 500	2.120	**LL639249/LL639210**	**LL639249/LL639210**	0.42	1.44	0.79
	196.8500	254.0000	28.5750	27.7830	21.4330	1.5000	1.5000	14.2	180.5	365.9	1 000	1 500	3.370	**L540049/L540010**	**L540049/L540010**	0.40	1.51	0.83
215.900	215.9000	290.0100	31.7500	31.7500	22.2250	3.5000	3.3000	13.0	284.0	493.0	1 000	1 500	5.530	**543085/543114**	**543085/543114**	0.39	1.50	0.80
231.775	231.7750	317.5000	47.6250	52.3880	36.5120	3.2000	3.2000	49.9	500.0	980.0	1 300	2 000	10.500	**LM245848/LM245810**	**LM245848/LM245810**	0.31	1.90	1.10
247.650	247.6500	346.0750	63.5000	63.5000	50.8000	6.4000	6.4000	62.2	682.0	1 390.0	850	1 200	17.400	**M348499/M348410**	**M348499/M348410**	0.34	1.75	0.97
304.800	304.8000	393.7000	50.8000	50.8000	38.1000	6.4000	3.0000	61.5	590.0	1 320.0	1 000	1 500	14.500	**517-1208**	**L357049/L357010**	0.36	1.67	0.92
381.000	381.0000	479.4250	49.2130	47.6000	34.9000	6.4000	3.3000	91.9	595.0	1 450.0	600	800	18.200	**518-1206**		0.50	1.21	0.67
381.050	381.0500	479.4750	49.2130	47.6250	34.9250	8.0000	3.2000	42.5	443.0	1 070.0	600	800	20.000	**CBK-433**	**L865547/L865512**	0.49	1.21	0.67
406.400	406.4000	508.0000	61.9120	61.9120	47.6250	3.3000	3.3000	20.3	842.0	2 230.0	670	900	26.300	**L467549/L467510**	**L467549/L467510**	0.37	1.64	0.89
409.575	409.5750	546.1000	87.3120	87.3120	68.2620	6.4000	6.4000	17.7	1 360.0	3 200.0	260	360	54.800	**518-1141**	**M667948/667911**	0.42	1.44	0.79
536.575	536.5750	820.0000	152.0000	146.0000	112.0000	6.0000	5.0000	9.0	3 950.0	7 960.0			273.000	**518-1142**		0.43	1.41	0.78
635.000	635.0000	933.4500	179.3880	177.8000	141.2880	11.9000	6.4000	-14.0	5 080.0	11 600.0			410.000	**518-1144**		0.33	1.80	0.99

SPECIAL BALL AND ROLLER BEARINGS



Deep groove ball bearings

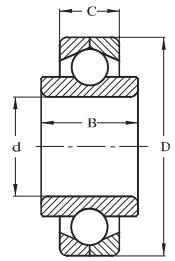


Fig. 1

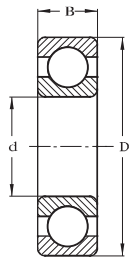


Fig. 2

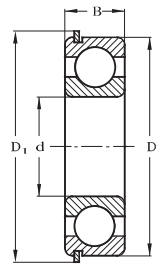


Fig. 3

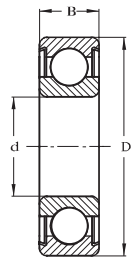


Fig. 4

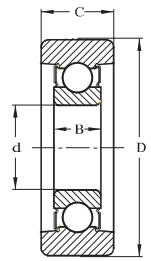


Fig.5

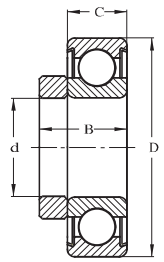


Fig. 6

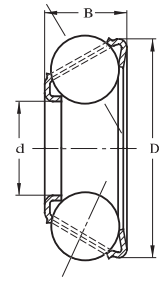


Fig. 7

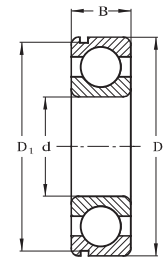
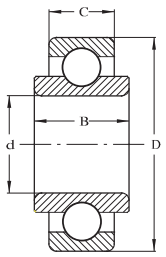


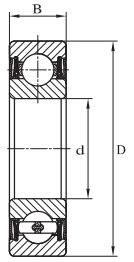
Fig.8

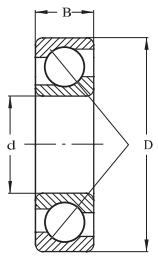
DIMENSIONS d	D/D1		B/C		BASIC LOAD RATING dynamic C	static C_o	BEARING DESIGNATIONS	MASS ~	FIG No
mm					kN			kg	
25.000	52		25	15	19.7	13.1	**113-1048**	0.171	1
	62		12		16.6	9.6	**68305**	0.173	2
	62		14		20.6	11.2	**68341**	0.190	2
28.000	67	73.6	18		25.0	13.8	**114-618 NR**	0.289	3
28.575	71.425		20.638		28.2	15.8	**MS-11**	0.330	2
28.580	71.425		20.638		29.7	15.7	**CBK-296**	0.306	2
30.000	42		7	6	4.1	3.3	**113-817**	0.250	9
	55		16		13.2	8.3	**113-945-2RS3-2BRS3**	0.175	16
	57		16		13.2	8.3	**113-867TNG 2RSRS6**	0.177	16
	62		16		22.5	14.7	**133-759**	0.212	11
	62		16		16.0	10.3	**113-1065-2RS3-2BRS8**	0.250	16
	75	80.4	19		30.0	16.1	**CBK-083-2RSP66**	0.380	17
	65		21		21.2	12.4	**CBK-086 B**	0.330	4
	84		19	27.3	28.2	15.8	**CBK-468**	0.623	5
34.800	72		31.5	21.5	25.7	15.3	**114-755-2RS**	0.424	6

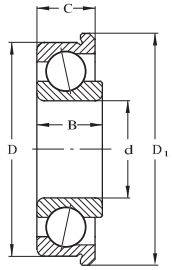
*R5-20 – Bearing with radial clearance 5-20 µm
2RSZ– Bearing with seals and shields

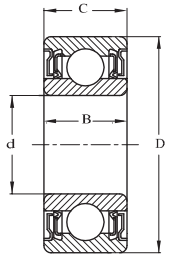
Deep groove ball bearings

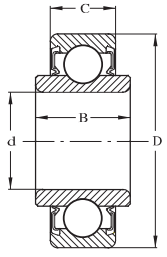

Fig. 9

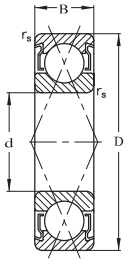

Fig. 10

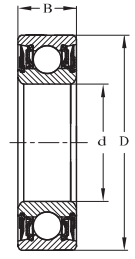

Fig. 11

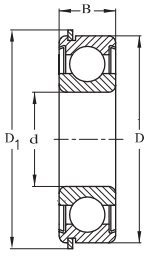

Fig. 12


Fig. 13

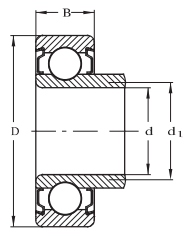

Fig. 14

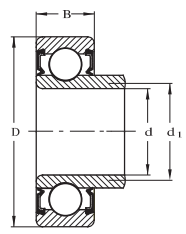

Fig. 15

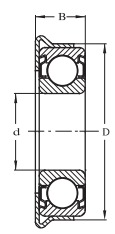

Fig. 16

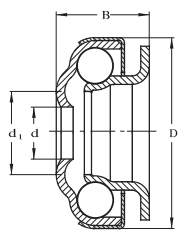

Fig. 17

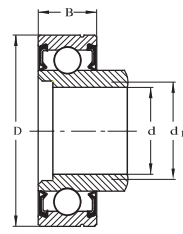
Clutch's ball bearings for cars. trucks and tractors

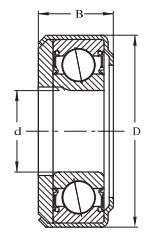

Fig. 1

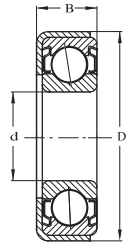

Fig. 2

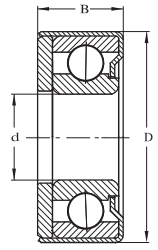

Fig. 3

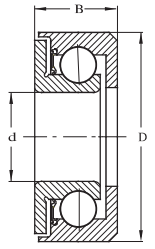

Fig. 4

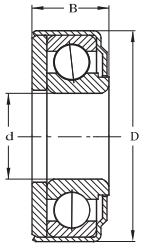

Fig. 5

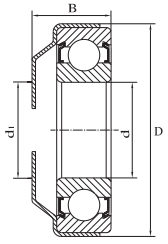

Fig. 6

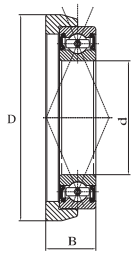

Fig. 7


Fig. 8


Fig. 9


Fig. 10


Fig. 11


Fig. 12

DIMENSIONS					BASIC LOAD RATING		BEARING DESIGNATIONS	MASS ~	FIG No
d	D	D1	B	C	dynamic C	static C_o			
mm					kN			kg	
35.000	62		16		16.0	10.3	**113-818-2RS**	0.179	10
	72		25	25	25.7	15.3	**114-865-2RSZ* C3**	0.406	13
	85	91.6	23		33.5	18.3	**114-942-2RSNR**	0.606	17
	93.5		21	37.25	25.8	18.3	**11/6307-2RSA R5-20***	1.020	5
	96.25		21	37.25	25.8	18.3	**12/6307-2RS R5-20***	1.240	5
	97		21	37.25	25.8	18.3	**12/6307-2RSA R5-20**	1.240	5
37.000	55		11.25		22.5	14.8	**CBK-361**	0.061	7
38.892	80		27.5	21	29.1	17.9	**114-743-2RSRC5**	0.460	14
40.000	80		27	21	29.1	17.9	**114-732-2RSR**	0.425	14
45.000	75		19	16	21.0	15.2	**114-751-2RS**	0.400	14
	75		19		21.0	15.2	**114-878(9)BTNG2RS-2RS3S0**	0.290	16
	85		50	19	32.7	20.5	**114-771**	0.630	9
	85		27	21	32.7	20.5	**88509**	0.580	14
	75		19		21.0	15.2	**114-1110TNG 2RS3-2BRS3**	0.400	16
50.000	80		16		33.0	31.0	**134-956-ZZ**	0.290	15
	80		16		33.0	31.0	**134-956-2RS**	0.300	15
52.413	90		18		28.3	21.3	**114-741**	0.392	2
55.000	90		22		28.3	21.3	**114-1015-2RS-2BRS**	0.450	16
	100		21		66.3	55.0	**134-955-2Z**	0.604	15
60.000	110		55	22	46.1	33.1	**114-772**	1.148	9
	80		12		20.2	19.2	**114-940TN**	0.109	2
	110		26		46.1	33.1	**114-1019-2RSR2-2BRS2**	0.850	16
70.000	110		26		38.0	30.9	**114-980-2RSR2-2BRS2**	0.760	16
	115		26		30.9	38.0	**114-1151-2RSR2-2BRS2**	0.800	16
75.000	115		26		39.5	33.5	**114-1046-2RSR2-2BRS**	0.810	16
85.000	115		26		19.2	19.8	**114-1079TNG 2RSR2-2BRS2**	0.750	16
110.000	160		30		43.6	44.5	**115-1189TNG 2RS**	1.780	4
140.000	215	225	43	38	116.0	139.0	**CBK - 031**	7.450	12

DIMENSIONS			PRESSURE DIAMETER	BASIC LOAD RATING		BEARING DESIGNATIONS	MASS ~	FIG No
d	D	B	d1	dynamic C	static C_o			
mm			mm	kN			kg	
29.500	52.7	15.000	34.0	11.9	8.0	**173-722**	0.069	4
30.000	55.0	13.000	34.0	13.2	8.3	**CBK-206-2Z**	0.135	1
	55.0	13.000	34.0	13.2	8.3	**CBK-206-2RS**	0.135	2
30.700	53.0	15.000	39.5	11.9	8.0	**173-723**	0.068	4
32.000	58.0	14.500		13.2	8.3	**CBK-182A**	0.130	3
35.900	62.0	14.000	39.5	16.0	10.3	**CBK-269**	0.153	1
	62.0	14.000	39.5	11.6	10.3	**CBK-269ZRS**	0.153	1
37.000	62.0	14.000	39.5	16.0	10.3	**CBK-269X1**	0.163	1
	62.0	14.000	39.5	16.0	8.2	**CBK-302**	0.300	5
50.000	81.6	25.000		21.8	16.6	**114-733**	0.440	6
	90.5	22.000		33.0	31.0	**174-1075**	0.445	12
52.388	84.5	19.250		21.8	16.6	**CBK-197**	0.260	7
	84.3	27.000	54.0	21.8	16.6	**114-791-2Z**	0.380	11
52.413	91.6	22.800		28.3	21.3	**114-742**	0.560	8
55.000	92.0	28.500		28.3	21.3	**114-744TNRS**	0.660	9
63.505	100.0	21.971		30.5	25.2	**CBK-297**	0.560	10
65.000	100.0	21.971		30.5	25.2	**CBK-297X1**	0.535	10
75.000	117.0	27.000		39.5	33.5	**114-740**	0.870	6

A – Changed internal design
2Z – Bearing with two shields
2RS – Bearing with two rubber seals
TNRS – Bearing with plastic cage and rubber seals

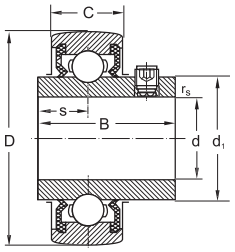


Fig. 1

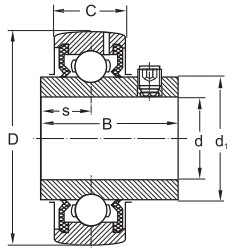


Fig. 2

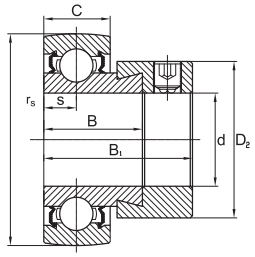


Fig. 3

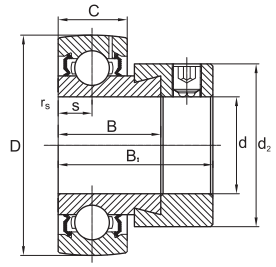


Fig. 4

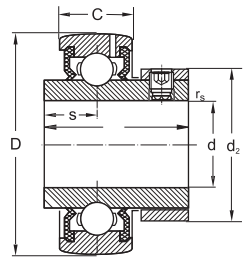


Fig. 5

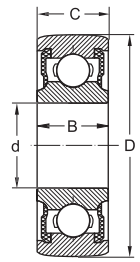


Fig. 6

SHAFT	DIMENSIONS									BASIC LOAD RATING		MASS	FIG No	DESIGNATION		
	d	D	B	B_1	C	r_s min	S	d_1	d_2	dynamic C	static C_o	~		FŁT	SKF	KOYO
	mm									kN		kg				
20	20	47.0	31.0		14	0.6				-	6.55	0.140	4	**FD204**	**YAR204**	
25	25	52.0	34.1		15	0.6				-	7.80	0.170	4	**FD205**	**YAR205**	
30	30	62.0	39.1		19	1.0	15.9	40.70		19.50	11.35	0.320	1	**C206**		
	30	62.0	39.1		19	1.0	15.9	40.70		19.50	11.35	0.320	2	**FC206**	**YAR 206**	UC206
	30	62.0	23.8	35.7	18	1.0	9.0		45.00	19.50	11.35	0.300	3	**D206**		SA206M
	30	62.0	23.8	35.7	18	1.0	9.0		45.00	19.50	11.35	0.300	4	**FD206**	**YET206**	
	30	62.0	16.0		16	1.0				19.50	11.35	0.180	6	**K62062RS**	**1726206-2RS1**	
35	35	72.0	42.9		20	1.1	17.5	46.90		19.70	15.30	0.570	1	**C207**		
	35	72.0	42.9		20	1.1	17.5	46.90		19.70	15.30	0.570	2	**FC207**	**YAR207**	UC207
	35	72.0	25.4	38.9	19	1.1	9.5		56.50	19.70	15.30	0.480	3	**D207**		SA207M
	35	72.0	25.4	38.9	19	1.1	9.5		56.50	19.70	15.30	0.480	4	**FD207**	**YET207**	
	35	72.0	42.9		20	1.1	17.5		58.90	19.70	15.30	0.590	5	**FB207**		
	35	72.0	17.0		17	1.1				19.70	15.30	0.250	6	**K62072RS**	**1726207-2RS1**	
40	40	80.0	49.2		21	1.1	19.0	52.40		22.40	17.90	0.640	2	**FC208**	**YAR208**	UC208
	40	80.0	29.7	43.7	21	1.1	11.0		60.00	22.40	17.90	0.590	4	**FD208**	**YET208**	
	40	80.0	49.2		19	1.1	19.0		66.50	22.40	17.90	0.720	5	**FB208**		
	40	80.0	18.0		18	1.1				29.10	17.90	0.320	6	**K62082RS**	**1726208-2RS1**	
	40	67.5	52.0		32	1.5	22.0	67.50		62.00	37.90	1.890	1	**114-981 2RS 2Z**		
	40	95.0	52.0		28	1.1	19.0	55.20		40.70	23.90	1.117	1	**114-708(728) 2RS**		
45	45	85.0	49.2		22	1.1	19.0	57.40		25.20	20.50	0.680	2	**FC209**	**YAR209**	UC209
	45	85.0	29.7	43.7	22	1.1	11.0		63.50	25.20	20.50	0.660	4	**FD209**	**YET209**	
	45	85.0	19.0		19	1.1				32.70	20.50	0.370	6	**K6209 2RS**	**1726209-2RS1**	
	45	85.0	30.0		22	1.0	15.0	56.57		25.20	20.50	0.550	1	**114-802K**		
50	50	90.0	51.6		24	1.1	19.0	62.40		35.10	23.20	0.800	2	**FC210**	**YAR210**	UC210
	50	90.0	51.6		22	1.1	19.0		79.00	35.10	23.20	1.000	5	**FB210**		
55	55	100.0	55.6		25	1.5	22.2	68.70		33.40	29.20	1.110	2	**FC211**	**YAR211**	UC211
	55	100.0	55.6		25	1.5	22.2		88.00	33.40	29.20	1.350	5	**FB211**		

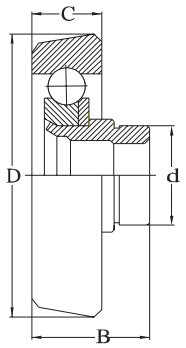


Fig. 1

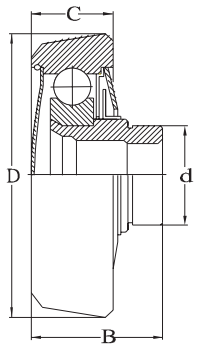


Fig. 2

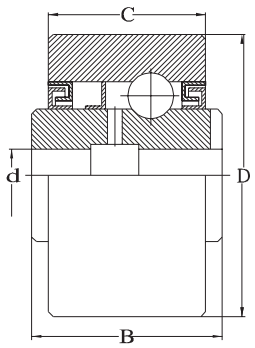


Fig. 3

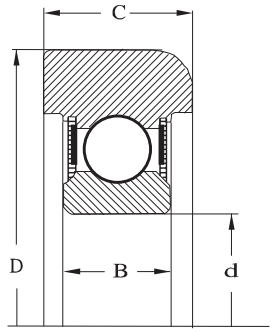


Fig. 4

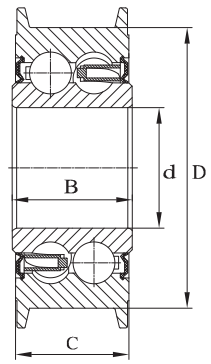


Fig. 5

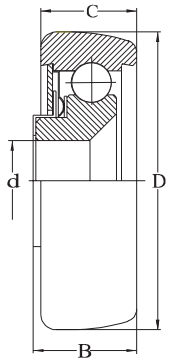


Fig. 6

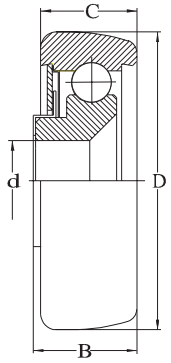


Fig. 7

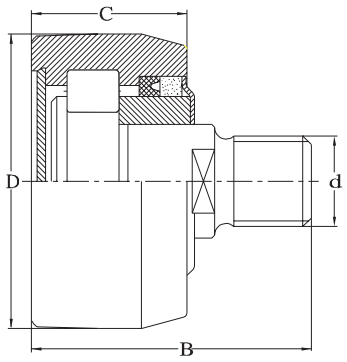


Fig. 8

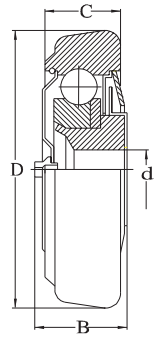


Fig. 9

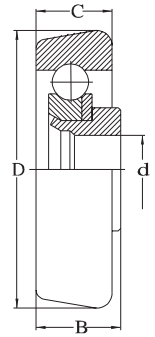


Fig. 10

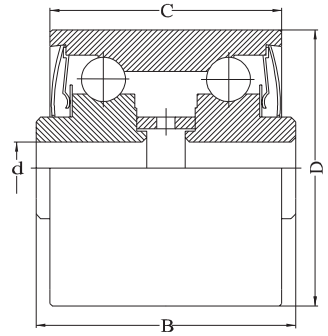


Fig. 11

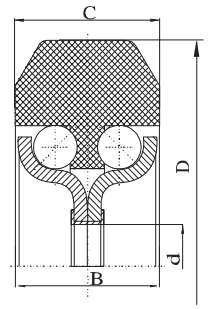


Fig. 12

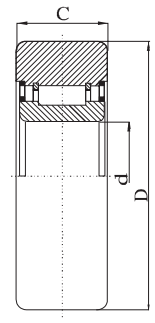


Fig. 13

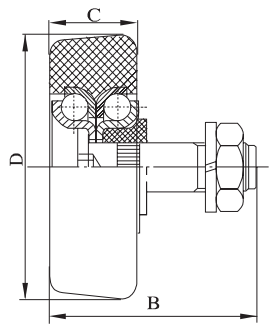


Fig. 14

DIMENSIONS				BASIC LOAD RATING		BEARING DESIGNATIONS	MASS ~	FIG No
d	D/D1	B/C		dynamic C	static C_o			
mm				kN			kg	
9.55	50.500	15.3	16			**NG-2WHEEL**	0.051	12
12.20	71.400	55.5	52	50.0	37.0	**124-659DV-2Z**	1.151	11
	71.400	71.0	65.1	50.0	37.0	**124-662DV-2Z**	1.440	11
14.05	63.000	44.0	34.5	16.0	7.9	**CBK-191**	0.669	3
16.00	59.000	20.5	19	14.0	7.9	**CBK-274B**	0.227	6
	59.000	20.5	19	14.0	7.9	**CBK-274C**	0.227	7
16.05	76.000	50.0	39	28.2	15.8	**CBK-196**	1.046	3
	60.325	46.8	19.3			**FW-100-2-3/8**	0.163	14
20.00	52.000	59.0	30.6	25.0	21.7	**CBK-320**	0.512	8
	80.000	52.0	27	21.2	10.9	**CBK-188**	0.780	2
	80.000	52.0	27	30.3	18.7	**CBK-188 VA***	0.840	1
23.00	82.000	26.5	24	23.7	13.4	**CBK-189**	0.566	9
	82.000	26.5	24	34.4	23.4	**CBK-189 V***	0.620	10
25.40	82.000	29.5	27	28.2	15.8	**CBK-243 B**	0.620	6
	82.000	29.5	27	28.2	15.8	**CBK-243 C**	0.620	7
28.00	134.000	33.5	30	43.4	29.2	**CBK-195A**	2.330	9
40.00	99.000	23.0	27	40.7	23.9	**114-841-2RS**	1.125	4
	100.000	23.0	27	40.7	23.9	**114-842-2RS**	1.125	4
	101.000	23.0	27	40.7	23.9	**114-869-2RS**	1.004	4
	102.000	23.0	27	40.7	23.9	**114-870-2RS**	1.036	4

DIMENSIONS				BASIC LOAD RATING		BEARING DESIGNATIONS	MASS ~	FIG No
d	D/D1	B/C		dynamic C	static C_o			
mm				kN			kg	
45.00	105.000	41.0	38	52.0	39.9	**174-1057 TNG-2RS**	1.270	5
	114.000	25.0	30	53.0	31.7	**114-851-2RS**	1.410	4
	115.000	25.0	30	53.0	31.7	**114-850-2RS**	1.460	4
	116.000	25.0	30	53.0	31.7	**114-886-2RS**	1.500	4
	117.000	25.0	32	53.0	31.7	**114-902-2RS**	1.630	4
	118.000	25.0	32	53.0	31.7	**114-903-2RS**	1.670	4
	119.000	25.0	32	53.0	31.7	**114-947-2RS**	1.710	4
	120.000	25.0	32	53.0	31.7	**114-948-2RS**	1.760	4
50.00	129.000	27.0	34	62.0	37.9	**115-914-2RS**	2.090	4
	130.000	27.0	34	62.0	37.9	**115-915-2RS**	2.140	4
	131.000	27.0	34	62.0	37.9	**115-916-2RS**	2.190	4
	132.000	27.0	34	62.0	37.9	**115-946-2RS**	2.250	4
55.00	136.652		46.304	144.0	231.0	**675-815-2RS**	3.860	13
60.00	149.000	31.0	36	82.0	52.0	**115-933**	2.987	4
	150.000	31.0	36	82.0	52.0	**115-934**	3.051	4
	151.000	31.0	36	82.0	52.0	**115-935**	3.115	4
72.70	174.625		61.925	279.0	424.0	**675-846-2RS**	8.300	13

*Bearings without cage with full quantity of rolling elements

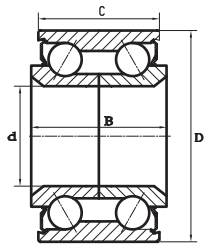


Fig. 1

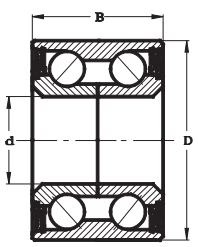


Fig. 2

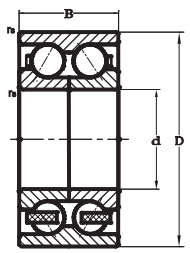


Fig. 3

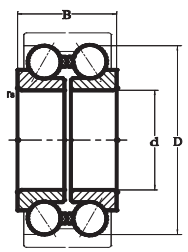


Fig. 4

SHAFT	DIMENSIONS d	D	B	C	r_{1s} min	BASIC LOAD RATING dynamic C	static C_o	LIMITING SPEEDS grease	oil	DESIGNATION FŁT	MASS ~	FIG No
	mm					kN		r/min			kg	
30	30	60.000	37.000	37.0	2.5	37.80	31.10	7 000		**CBK-199TNG**	0.450	1
	30	60.000	37.000	37.0	2.5	36.90	30.40	7 000		**CBK-199BTNG**	0.450	2
	30	60.030	37.000	37.0	2.5	37.80	31.10	7 000		**CBK-441TNG**	0.450	1
	30	60.030	37.000	37.0	3.2	37.80	31.10	7 000		**CBK-441BTNG**	0.450	2
	30	60.030	37.000	37.0	0.3	37.80	31.10	7 000		**133-637TNG-2RS**	0.450	1
34	34	64.000	37.000	37.0	2.4	42.20	35.40	6 300		**133-639BATNG**	0.430	2
	34	66.000	37.000	37.0	2.4	42.20	35.40	6 300		**134-1009TNG 2RS**	0.440	2
35	34	64.000	37.000	37.0	2.4	42.20	35.40	6 300		**133-639BATN-2RS-2RSS6**	0.430	2
	35	66.000	33.000	33.0	2.5	43.70	36.80	6 300		**134-781TNG-2RS**	0.440	1
	35	68.000	37.000	37.0	2.5	43.60	37.20	6 300		**134-643DTNG-2RS**	0.490	1
	35	68.000	37.000	37.0	2.5	43.60	37.20	6 300		**134-738BTNG-2RS**	0.430	2
	35	68.015	37.000	37.0	2.5	41.70	35.50	6 300		**134-863TNG-2RS**	0.563	1
37	37	72.000	37.000	37.0	2.4	44.20	39.70	5 000		**134-964TNG-2RS**	0.577	1
39	39	68.000	37.000	37.0	3.2	39.80	26.30	5 600		**134-746BDTNG-2RS**	0.420	2
	39	72.000	37.000	37.0	2.4	44.20	39.70	5 000		**134-725BTNG-2RS**	0.500	2
40	40	72.000	37.000	37.0	2.4	44.20	39.70	5 000		**134-797BTNG-2RS**	0.540	2
42	42	80.000	42.000	42.0	2.4	65.00	55.50	5 000		**134-739BTNG-2RS**	0.753	2
	42	80.000	42.000	42.0	2.4	65.00	55.50	5 000		**134-806BTNG-2RS**	0.800	2
48	48	82.000	37.000	33.0	3.2	53.00	50.00	5 000		**134-905TNGRS6RS**	0.631	1
100	100	125.000	29.000		1.0	34.30	43.70	3 200		**135-1042TNG**	0.640	3
110	110	140.000	30.000		1.0	43.00	57.00	2 800		**135-954TNG**	0.908	3
130	130	172.000	38.000		1.0	86.70	109.80	2 300		**135-929TNG**	1.870	3
160	160	204.576	53.000		1.8	171.00	263.00		2 200	**166-1012TNG**	2.620	4
190	190	254.035	70.126		2.5	281.00	440.00		1 700	**166-997TNG**	5.290	4
200	200	280.446	93.126		2.5	385.00	620.00		1 500	**167-994TNG**	9.220	4
230	230	311.446	91.626		3.0	405.00	700.00		1 400	**167-995TNG**	10.640	4

Bearings without cage with full quantity of rolling elements

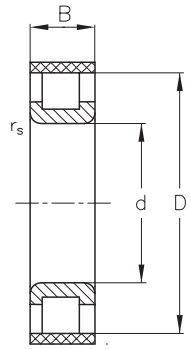


Fig. 1

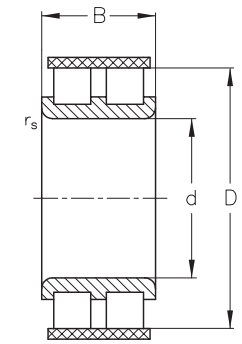


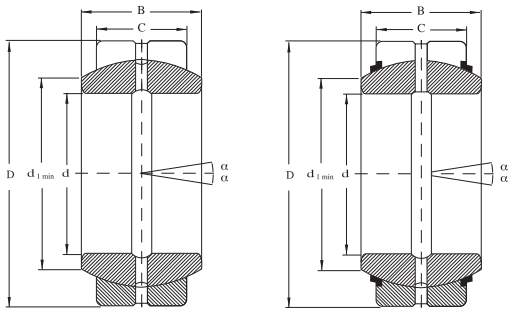
Fig. 2

DIMENSIONS d	D	B	r_s min	FŁT	BASIC LOAD RATING dynamic C	static C_o	LIMITING SPEEDS grease	oil	MASS ~	FIG No
mm					kN		r/min		kg	
18	30.52	13.0	2.0	**263-899**	19.9	21.2	4 600	6 200	0.044	1
20	36.81	16.0	2.6	**263-919**	27.5	27.9	3 900	5 200	0.061	1
	33.90	16.0	2.6	**263-1023**	27.0	30.0	3 900	5 200	0.065	1
24	40.25	26.0	2.5	**263-904**	44.0	59.8	3 400	4 600	0.137	2
25	42.51	12.0	2.6	**263-1122**	21.9	21.8	3 100	4 100	0.070	1
	46.52	18.0	3.0	**263-898**	45.0	48.1	3 100	4 100	0.156	1
	42.51	16.0	2.5	**263-1021**	31.2	34.4	3 100	4 100	0.095	1
	40.25	26.0	2.5	**263-1092**	44.0	59.8	3 100	4 100	0.175	2
	42.55	18.0	3.0	**263-1105**	40.5	47.8	3 100	4 100	0.110	1
30	49.60	26.0	3.0	**263-920**	57.1	70.4	2 800	3 800	0.217	2
	49.60	26.0	3.0	**263-922**	57.1	70.4	2 800	3 800	0.188	2
	49.60	25.0	3.0	**263-1089**	57.1	70.4	2 800	3 800	0.183	2
32	51.75	29.0	3.0	**263-1017**	71.5	95.5	2 600	3 500	0.232	2
	46.60	25.0	3.0	**263-1022**	54.3	82.5	2 600	3 500	0.159	2
38	52.95	28.0	3.0	**263-921**	59.2	97.0	2 500	3 400	0.195	2
40	57.81	34.0	3.2	**263-1177**	86.0	141.0	2 300	3 000	0.291	2
	61.74	28.0	3.5	**263-918**	70.6	90.6	2 300	3 000	0.279	2
	61.74	32.0	3.0	**263-917**	85.4	115.8	2 300	3 000	0.329	2
	61.74	38.0	1.1	**263-962**	101.0	143.0	2 300	3 000	0.377	2
	75.63	78.0	1.1	**264-175**	248.0	325.0				2
42	60.75	37.0	3.0	**263-924**	100.7	156.9	2 300	3 000	0.347	2
44	62.97	37.0	2.5	**263-1020**	103.5	164.4	2 100	2 800	0.267	2
45	66.85	37.5	3.5	**263-923**	106.0	157.0	2 100	2 800	0.428	2
	72.33	40.0	1.1	**263-1024**	131.0	195.0	1 800	2 500	0.489	2
	83.88	85.0	1.1	**264-176**	275.0	380.0			1.820	2
50	72.33	42.0	1.1	**263-963**	131.0	195.0	1 800	2 500	0.500	2
	94.75	44.0	6.2	**264-1018**	178.0	237.0	1 400	1 900	1.270	2
	72.00	31.0	4.0	**264-1064**	114.8	178.7	1 800	2 500	0.391	2
55	94.80	100	1.1	**264-177**	330	475			2.43	2
65	110.00	110	1.5	**264-178**	455	660			3.63	2
75	127.55	120	2.0	**265-175**	550	860				2
80	141.92	130	2.0	**265-180**	730	1110				2
95	155.87	150	2.0	**265-181**	860	1400				2

SPHERICAL PLAIN BEARINGS



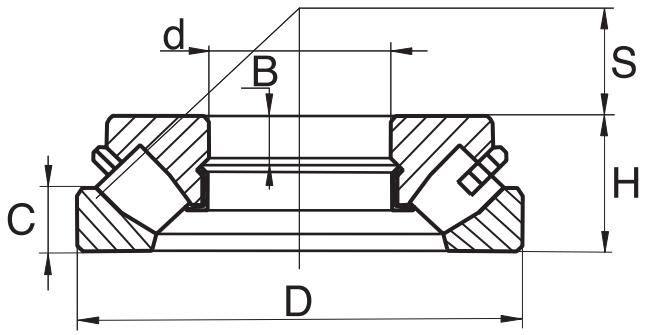
FŁT Spherical plain bearings



DIMENSIONS						BASIC LOAD RATING		BASIC DESIGNATIONS		MASS
d	D	B	C	d_1 min	α°	dynamic C	static C_o			~
mm						kN				kg
15	26	12	9	16.6	8	18.0	45	**GE15ES**		0.032
20	35	16	12	21.8	9	31.5	78	**GE20ES**		0.065
25	42	20	16	27.7	7	51.0	127	**GE25ES**		0.120
30	47	22	18	34.0	6	62.0	310	**GE30ES**	**GE30ES - 2RS**	0.150
35	55	25	20	39.0	6	80.0	400	**GE35ES**	**GE35ES - 2RS**	0.230
40	62	28	22	45.0	7	100.0	500	**GE40ES**	**GE40ES - 2RS**	0.310
45	68	32	25	50.0	7	127.0	637	**GE45ES**	**GE45ES - 2RS**	0.410
50	75	35	28	55.0	6	156.0	780	**GE50ES**	**GE50ES - 2RS**	0.560
60	90	44	36	66.0	6	245.0	1 220	**GE60ES**	**GE60ES - 2RS**	1.010
70	105	49	40	77.0	6	315.0	1 560	**GE70ES**	**GE70ES - 2RS**	1.530
80	120	55	45	88.0	6	400.0	2 000	**GE80ES**	**GE80ES - 2RS**	2.280
90	130	60	50	98.0	5	490.0	2 450	**GE90ES**	**GE90ES - 2RS**	2.730
100	150	70	55	109.0	7	610.0	3 050	**GE100ES**	**GE100ES - 2RS**	4.380
110	160	70	55	120.0	6	655.0	3 250	**GE110ES**	**GE110ES - 2RS**	4.800
120	180	85	70	130.0	6	950.0	4 750	**GE120ES**	**GE120ES - 2RS**	7.950
140	210	90	70	150.0	7	1 071.0	5 355	**GE140ES**	**GE140ES - 2RS**	10.980
160	230	105	80	170.0	8	1 360.0	6 800	**GE160ES**	**GE160ES - 2RS**	13.980
180	260	105	80	192.0	6	1 496.0	7 480	**GE180ES**	**GE180ES - 2RS**	18.580



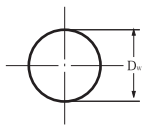
FŁT Spherical roller thrust bearings



DIMENSIONS						BASIC LOAD RATING		BASIC DESIGNATIONS	MASS ~
d	D	H	B	C	S	dynamic C	static C_o		
mm						kN			kg
60	130	42	15	20.0	38	335	900	**29412M**	2.23
65	140	45	16	21.0	42	380	1 020	**29413M**	3.03
70	150	48	17	23.0	44	430	1 200	**29414M**	3.70
80	170	54	19	26.0	50	550	1 560	**29416M**	5.28
85	180	58	21	27.3	54	510	1 450	**29417M**	7.19
100	210	67	43	32.0	62	836	2 500	**29420**	7.50
	210	67	24	32.4	62	680	1 900	**29420M**	11.20
110	190	48	26	35.0	69	950	2 800	**29322M**	13.10
	230	73	26	34.5	69	780	2 340	**29422M**	14.70
120	210	54	19	22.2	70	686	2 223	**29324**	7.35
	210	54	18	25.9	70	520	1 740	**29324M**	7.96
	250	78	28	36.6	74	915	2 770	**29424M**	18.50
130	270	85	31	41.0	81	1 250	3 900	**29426M**	19.00
140	240	60	22	29.0	82	800	2 700	**29328M**	9.90
160	270	67	24	32.0	92	965	3 350	**29332M**	13.60
	320	95	34	47.1	99	1 430	4 370	**29432M**	35.90
190	380	115	41	54.9	117	1 930	4 010	**29438M**	55.50
260	420	95	32	47.5	148	1 370	6 080	**29352E**	51.50
300	480	109	54	54.0	168	2 280	10 396	**29360M**	72.60
340	620	170	82	84.0	201	5 200	19 300	**29468M**	197.00
380	600	132	44	63.0	216	3 340	14 000	**29376**	140.00
	670	175	65	85.0	230	6 400	24 500	**29476**	260.00
400	620	132		64.0	225	3 295	15 865	**29380M**	146.00
	710	185		92.3	234	5 730	25 800	**29480M**	300.00
440	780	206	74	100.0	260	765	30 000	**29488EMB**	393.00



FŁT Steel balls



NOMINAL DIAMETER D		MASS PER 1000 BALLS
mm	inch	kg
3.969	5/32	0.254
4.5		0.3707
4.762	3/16	0.439
5.000		0.509
5.556	7/32	0.698
6.000		0.879
6.35	1/4	1.042
7.000		1.395
7.144	9/32	1.483
7.938	5/16	2.035
8.000		2.083
8.731	11/32	2.708
9.525	3/8	3.516
10.000		4.068
10.319	13/32	4.469
11.112	7/16	5.582
11.509	29/64	6.202
11.906	15/32	6.867
12.000		7.026
12.303	31/64	7.576
12.5		7.946
12.7	1/2	8.333
13.494	17/32	9.996
14.288	9/16	11.87
15.081	19/32	13.96
15.875	5/8	16.28
16.669	21/32	18.84
17.462	11/16	21.662
18.000		23.728
18.256	23/32	24.753
19.05	3/4	28.13
19.844	25/32	31.791
20.000		32.547
20.638	13/16	35.762
21.431	27/32	40.044
22.000		43.319
22.225	7/8	44.662
23.019	29/32	49.68
23.812	15/16	54.929
24.606	31/32	60.609
25.000		63.568
25.4	1	66.67

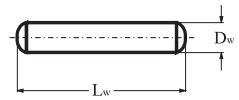
NOMINAL DIAMETER D		MASS PER 1000 BALLS
mm	inch	kg
26.988	1 1/16	79.97
28.575	1 1/8	94.9
30.162	1 3/16	111.6
31.75	1 1/4	130.2
33.338	1 5/16	150.7
34.925	1 3/8	173.3
36.512	1 7/16	198.000
38.1	1 1/2	225.000
40.000		260.375
41.275	1 5/8	286.1
42.862	1 11/16	320.359
44.45	1 3/4	357.301
45.000		370.729
47.625	1 7/8	439.465

Big balls only on special order

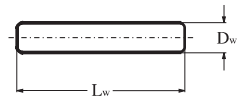
50.8	2	533.348
52.387	2 1/16	584.911
53.975	2 1/8	639.73
57.15	2 1/4	759.396
60.325	2 3/8	893.123
63.5	2 1/2	1 042.000
66.675	2 5/8	1 206.000
69.85	2 3/4	1 386.000
76.2	3	1 800.000
79.375	3 1/8	2 035.000
80.000		2 083.000
90.000		2 966.000
100.000		4 069.000
108.000		5 126.000
110.000		5 416.000
120.000		7 031.000
130.000		8 938.000
150.000		13 733.000
180.000		23 727.000
200.000		32 547.000
250.000		63 578.000

Material carbon chromium steel.
Hardness: 60-66 HRC.
Tolerances: grade G10 to G100. The dimensional and form accuracy to ISO 3290

FŁT Needle rollers



Forme A



Forme B

DESIGNATIONS	DIMENSIONS Dw	DIMENSIONS Lw	MASS PER 1000 PCS
	mm		kg
2.0 x 6.8 B	2.0000	6.8	0.166
2.0 x 7.8 A	2.0000	7.8	0.184
2.0 x 8.8 B	2.0000	8.8	0.215
2.0 x 9.05 B	2.0000	9.05	0.221
2.0 x 9.3 A	2.0000	9.3	0.221
2.0 x 9.4 A	2.0000	9.4	0.223
2.0 x 9.8 A	2.0000	9.8	0.233
2.0 x 10.2 A	2.0000	10.2	0.243
2.0 x 10.4 A	2.0000	10.4	0.247
2.0 x 10.8 A	2.0000	10.8	0.257
2.0 x 11.2 A	2.0000	11.2	0.266
2.0 x 11.7 B	2.0000	11.7	0.289
2.0 x 11.8 A	2.0000	11.8	0.282
2.0 x 12.8 A	2.0000	12.8	0.306
2.0 x 13.8 A	2.0000	13.8	0.33
2.0 x 15.8 A	2.0000	15.8	0.379
2.0 x 17.8 A	2.0000	17.8	0.428
2.0 x 19.8 A	2.0000	19.8	0.477
2.5 x 7.8 A	2.5	7.8	0.281
2.5 x 9.8 A	2.5	9.8	0.358
2.5 x 9.8 B	2.5	9.8	0.374
2.5 x 17.8 B	2.5	17.8	0.679
2.5 x 19.8 A	2.5	19.8	0.739
3.0 x 13.8 B	3.0000	13.8	0.758
3.5 x 15.8 A	3.5	12.8	1.14
3.5 x 17.8 A	3.5	17.8	1.29
3.5 x 19.8 A	3.5	19.8	1.44
4.0 x 11.8 B	4.0000	12.8	1.152
4.0 x 15 B	4.0000	15.00	1.465
4.0 x 23.8 B	4.0000	23.8	2.324
4.0 x 29.8 B	4.0000	29.8	2.91
4.0 x 32 A	4.0000	32.00	3.065
5.0 x 19.8 B	5.0000	19.8	3.021
5.0 x 23.8 A	5.0000	23.8	3.531
5.0 x 25.8 A	5.0000	25.8	3.836
5.0 x 29.8 A	5.0000	29.8	4.447
6.0 x 17.8 B	6.0000	17.8	3.911
6.0 x 21.8 A	6.0000	21.8	4.578
6.0 x 21.8 B	6.0000	21.8	4.789
6.35 x 21.59 B	6.35	21.59	5.312

Material: carbon chromium steel
Hardness: 58-65 HRC (670-840 HV)
Tolerances: grade G2. G3 and G5 in accordance with ISO 3096

Bearings tolerances
Normal tolerances for radial (except taper roller bearings)

Inner ring

d		Δdmp		Vdp DIAMETER SERIES			Vdmp	ΔBs		VBs	Kia
				8.9	0.1	2.3.4					
over	incl.	high	low	max	max	max	max	high	low	max	max
mm		µm		µm			µm	µm		µm	µm
2.5	10	0	-8	10	8	6	6	0	-120	15	10
10	18	0	-8	10	8	6	6	0	-120	20	10
18	30	0	-10	13	10	8	8	0	-120	20	13
30	50	0	-12	15	12	9	9	0	-120	20	15
50	80	0	-15	19	19	11	11	0	-150	25	20
80	120	0	-20	25	25	15	15	0	-200	25	25
120	180	0	-25	31	31	19	19	0	-250	30	30
150	250	0	-30	38	38	23	23	0	-300	30	40
250	315	0	-35	44	44	26	26	0	-350	35	50

Outer ring

d		ΔDmp		Vdp DIAMETER SERIES			BEARINGS WITH SHIELDS OR SEALS*	Vdmp	ΔCs,	VCs	Kea
				8.9	0.1	2.3.4					
over	incl.	high	low	max	max	max	max	max			max
mm		µm		µm			µm	µm			µm
6	18	0	-8	10	8	6	10	6			15
18	30	0	-9	12	9	7	12	7	Values are identical to those for inner ring of the same bearing (ΔBs'. VBs)		15
30	50	0	-11	14	11	8	16	8			20
50	80	0	-13	16	13	10	20	10			25
80	120	0	-15	19	19	11	26	11			35
120	150	0	-18	23	23	14	30	14			40
150	180	0	-25	31	31	19	38	19			45
180	250	0	-30	38	38	23		23			50
250	315	0	-35	44	44	26		26			60
315	400	0	-40	50	50	30		30			70
400	500	0	-45	56	56	34		34			80

*Applies only to bearings of Diameter series 2. 3 and 4

Bearings tolerances
Class P6 tolerances for radial bearings (except taper roller bearings)

Inner ring

d		Δdmp		Vdp DIAMETER SERIES			Vdmp	ΔBs		VBs	Kia
				8.9	0.1	2.3.4					
over	incl.	high	low	max	max	max	max	high	low	max	max
mm		µm		µm			µm	µm		µm	µm
2.5	10	0	-7	9	7	5	5	0	-120	15	6
10	18	0	-7	9	7	5	5	0	-120	20	7
18	30	0	-8	10	8	6	6	0	-120	20	8
30	50	0	-10	13	10	8	8	0	-120	20	10
50	80	0	-12	15	15	9	9	0	-150	25	10
80	120	0	-15	19	19	11	11	0	-200	25	13

Outer ring

d		ΔDmp		Vdp DIAMETER SERIES			BEARINGS WITH SHIELDS OR SEALS*	Vdmp	ΔCs,	VCs	Kea
				8.9	0.1	2.3.4					
over	incl.	high	low	max	max	max	max	max			max
mm		µm		µm			µm	µm			µm
6	18	0	-7	9	7	5	9	5	Values are identical to those for inner ring of the same bearing (ΔBs'. VBs)		8
18	30	0	-8	10	8	6	10	6			9
30	50	0	-9	11	9	7	13	7			10
50	80	0	-11	14	11	8	16	8			13
80	120	0	-13	16	16	10	20	10			18
120	150	0	-15	19	19	11	25	11			20

*Applies only to bearings of Diameter series 0. 1. 2. 3 and 4

Bearings tolerances
Normal tolerances for taper roller bearings (metric sizes)

Inner ring and bearing width

d		ΔdmP		VDp	VDmp	ΔBs		Kia	ΔTs		ΔT1s		ΔT2s	
over	incl.	high	low	max	max	high	low	max	high	low	high	low	high	low
mm		µm		µm	µm	µm		µm	µm		µm		µm	
10	18	0	-12	12	9	0	-120	15	+200	0	+100	0	+100	0
18	30	0	-12	12	9	0	-120	18	+200	0	+100	0	+100	0
30	50	0	-12	12	9	0	-120	20	+200	0	+100	0	+100	0
50	80	0	-15	15	11	0	-150	25	+200	0	+100	0	+100	0
80	120	0	-20	20	15	0	-200	30	+200	-200	+100	-100	+100	-100
120	180	0	-25	25	19	0	-250	35	+350	-250	+150	-150	+200	-100
180	250	0	-30	30	23	0	-300	50	+350	-250	+150	-150	+200	-100

Outer ring

D		ΔDmp		VDp	VDmp	ΔCs	Kea
over	incl.	high	low	max	max		max
mm		µm		µm	µm	µm	µm
18	30	0	-12	12	9	Values are identical to those for inner ring of the same bearing (ΔBs)	18
30	50	0	-14	14	11		20
50	80	0	-16	16	12		25
80	120	0	-18	18	14		35
120	150	0	-20	20	15		40
150	180	0	-25	25	19		45
180	250	0	-30	30	23		50
250	315	0	-35	35	26		60
315	400	0	-40	40	30		70

Bearings tolerances
Tolerance for thrust bearings

Shaft washer

d		TOLERANCE CLASS PO. P6			TOLERANCE CLASS	
		ΔDmp		VDp	PO	P6
					Si*	Si*
over	incl.	high	low	max	max	max
mm		µm			µm	
	18	0	-8	6	10	5
18	30	0	-10	8	10	5
30	50	0	-12	9	10	6
50	80	0	-15	11	10	7
80	120	0	-20	15	15	8
120	180	0	-25	19	15	9
180	250	0	-30	23	20	10
250	315	0	-35	26	25	13
315	400	0	-40	30	30	15
400	500	0	-45	34	30	18
500	630	0	-50	38	35	21

*For double direction bearings. the value for the single direction bearing having the same outside diameter applies

Housing washer

D		TOLERANCE CLASS			
		ΔDmp		VDp	Se
over	incl.	high	low	max	
mm		µm		µm	
18	30	0	-13	10	
30	50	0	-16	12	
50	80	0	-19	14	
80	120	0	-22	17	Values are identical to those for inner ring of the same bearing (Si)
120	180	0	-25	19	
180	250	0	-30	23	
250	315	0	-35	26	
315	400	0	-40	30	
400	500	0	-45	34	
500	630	0	-50	38	
630	800	0	-75	55	
800	1000	0	-100	75	

Tolerances of hardened carbon chromium steel balls (ISO 3290)

GRADE	BALL DIAMETER D_W		TOLERANCES V_{Dws}	t_{Dw}	R_a	V_{DwL}	GAUGE INTERVAL l	GAUGE MEAN VALUES (deviation range)				
	over	incl.	max	max	max	max						
	mm		µm				µm	µm				
G3	-	12.7	0.08	0.08	0.012	0.13	0.5	-5...	-0.5	0	+0.5...	+5
G5	-	12.7	0.13	0.13	0.020	0.25	1	-5...	-1	0	+1...	+5
G10	-	25.4	0.25	0.25	0.025	0.5	1	-9...	-1	0	+1...	+9
G16	-	25.4	0.4	0.4	0.032	0.8	2	-10...	-2	0	+2...	+10
G20	-	25.4	0.5	0.5	0.040	1	2	-10...	-2	0	+2...	+10
G28	25.4	50.8	0.7	0.7	0.050	1.4	2	-12...	-2	0	+2...	+12
G40	-	101.6	1	1	0.080	2	4	-16...	-4	0	+4...	+16
G100	101.6	152.4	2.5	2.5	0.125	5	5	-20...	-5	0	+5...	+20
	152.4	175	2.5	2.5	0.125	5	10	-40...	-10	0	+10...	+40
G200	175	250	5	5	0.200	10	15	-60...	-15	0	+15...	+60

Internal Clearances

Radial internal clearance of deep groove ball bearings

BORE DIAMETER d		RADIAL INTERNAL CLEARANCE									
		C2		NORMAL		C3		C4		C5	
over	incl.	min	max	min	max	min	max	min	max	min	max
mm		µm		µm		µm		µm		µm	
2.5	**10**	0	7	2	13	8	23	14	29	20	37
10	**18**	0	9	3	18	11	25	18	33	25	45
18	**24**	0	10	5	20	13	28	20	36	28	48
24	**30**	1	11	5	20	13	28	23	41	30	53
30	**40**	1	11	6	20	15	33	28	46	40	64
40	**50**	1	11	6	23	18	36	30	51	45	73
50	**65**	1	15	8	28	23	43	38	61	55	90
65	**80**	1	15	10	30	25	51	46	71	65	105
80	**100**	1	18	12	36	30	58	53	84	75	120
100	**120**	2	20	15	41	36	66	61	97	90	140
120	**140**	2	23	18	48	41	81	71	114	105	160
140	**160**	2	23	18	53	46	91	81	130	120	180
160	**180**	2	25	20	61	53	102	91	147	135	200
180	**200**	2	30	25	71	63	117	107	163	150	230
200	**225**	4	32	28	82	73	132	120	187	175	255

Internal Clearances

Radial internal clearance of self-aligning ball bearings

BORE DIAMETER		RADIAL INTERNAL CLEARANCE							
d		C2		NORMAL		C3		C4	
over	incl.	min	max	min	max	min	max	min	max
mm		µm		µm		µm		µm	
Bearings with cylindrical bore									
2.5	**6**	1	8	5	15	10	20	15	25
6	**10**	2	9	6	17	12	25	19	33
10	**14**	2	10	6	19	13	26	21	35
14	**18**	3	12	8	21	15	28	23	37
18	**24**	4	14	10	23	17	30	25	39
24	**30**	5	16	11	24	19	35	29	46
30	**40**	6	18	13	29	23	40	34	53
40	**50**	6	19	14	31	25	44	37	57
50	**65**	7	21	16	36	30	50	45	69
65	**80**	8	24	18	40	35	60	54	83
80	**100**	9	27	22	48	42	70	64	96
100	**120**	10	31	25	56	50	83	75	114
120	**140**	10	38	30	68	60	100	90	135
Bearings with tapered bore									
18	**24**	7	17	13	26	20	33	28	42
24	**30**	9	20	15	28	23	39	33	50
30	**40**	12	24	19	35	29	46	40	59
40	**50**	14	27	22	39	33	52	45	65
50	**65**	18	32	27	47	41	61	56	80
65	**80**	23	39	35	57	50	75	69	98
80	**100**	29	47	42	68	62	90	84	116
100	**120**	35	56	50	81	75	108	100	139

Internal Clearances

Radial internal clearance of cylindrical roller bearings

BORE DIAMETER		RADIAL INTERNAL CLEARANCE							
d		C2		NORMAL		C3		C4	
over	incl.	min	max	min	max	min	max	min	max
mm		µm		µm		µm		µm	
-	**24**	0	25	20	45	35	60	50	75
24	**30**	0	25	20	45	35	60	50	75
30	**40**	5	30	25	50	45	70	60	85
40	**50**	5	35	30	60	50	80	70	100
50	**65**	10	40	40	70	60	90	80	110
65	**80**	10	45	40	75	65	100	90	125
80	**100**	15	50	50	85	75	110	105	140
100	**120**	15	55	50	90	85	125	125	165
120	**140**	15	60	60	105	100	145	145	190
140	**160**	20	70	70	120	115	165	165	215
160	**180**	25	75	75	125	120	170	170	220
180	**200**	35	90	90	145	140	195	195	250
200	**225**	45	105	105	165	160	220	220	280
225	**250**	45	110	110	175	170	235	235	300
250	**280**	55	125	125	195	190	260	260	330
280	**315**	55	130	130	205	200	275	275	350
315	**355**	65	145	145	225	225	305	305	385
355	**400**	100	190	190	280	280	370	370	460
400	**450**	110	210	210	310	310	410	410	510
450	**500**	110	220	220	330	330	440	440	550
500	**560**	120	240	240	360	360	480	480	600

Internal Clearances

Radial internal clearance of spherical roller bearings with cylindrical bore

BORE DIAMETER		RADIAL INTERNAL CLEARANCE									
d		C2		NORMAL		C3		C4		C5	
over	incl.	min	max	min	max	min	max	min	max	min	max
mm		µm		µm		µm		µm		µm	
18	**24**	10	20	20	35	35	45	45	60	60	75
24	**30**	15	25	25	40	40	55	55	75	75	95
30	**40**	15	30	30	45	45	60	60	80	80	100
40	**50**	20	35	35	55	55	75	75	100	100	125
50	**65**	20	40	40	65	65	90	90	120	120	150
65	**80**	30	50	50	80	80	110	110	145	145	180
80	**100**	35	60	60	100	100	135	135	180	180	225
100	**120**	40	75	75	120	120	160	160	210	210	260
120	**140**	50	95	95	145	145	190	190	240	240	300
140	**160**	60	110	110	170	170	220	220	280	280	350
160	**180**	65	120	120	180	180	240	240	310	310	390
180	**200**	70	130	130	200	200	260	260	340	340	430
200	**225**	80	140	140	220	220	290	290	380	380	470
225	**250**	90	150	150	240	240	320	320	420	420	520
250	**280**	100	170	170	260	260	350	350	460	460	570
280	**315**	110	190	190	280	280	370	370	500	500	630
315	**355**	120	200	200	310	310	410	410	550	550	690
355	**400**	130	220	220	340	340	450	450	600	600	750
400	**450**	140	240	240	370	370	500	500	660	660	820
450	**500**	140	260	260	410	410	550	550	720	720	900
500	**560**	150	280	280	440	440	600	600	780	780	1000
560	**630**	170	310	310	480	480	650	650	850	850	1100
630	**710**	190	350	350	530	530	700	700	920	920	1190
710	**800**	210	390	390	580	580	770	770	1010	1010	1300

Internal Clearances

Radial internal clearance of spherical roller bearings with tapered bore

BORE DIAMETER		RADIAL INTERNAL CLEARANCE									
d		C2		NORMAL		C3		C4		C5	
over	incl.	min	max	min	max	min	max	min	max	min	max
mm		µm		µm		µm		µm		µm	
24	**30**	20	30	30	40	40	55	55	75	-	-
30	**40**	25	35	35	50	50	65	65	85	85	105
40	**50**	30	45	45	60	60	80	80	100	100	130
50	**65**	40	55	55	75	75	95	95	120	120	160
65	**80**	50	70	70	95	95	120	120	150	150	160
80	**100**	55	80	80	110	110	140	140	180	180	230
100	**120**	65	100	100	135	135	170	170	220	220	280
120	**140**	80	120	120	160	160	200	200	260	260	330
140	**160**	90	130	130	180	180	230	230	300	300	380
160	**180**	100	140	140	200	200	260	260	340	340	430
180	**200**	110	160	160	220	220	290	290	370	370	470
200	**225**	120	180	180	250	250	320	320	410	410	520
225	**250**	140	200	200	270	270	350	350	450	450	570
250	**280**	150	220	220	300	300	390	390	490	490	620
280	**315**	170	240	240	330	330	430	430	540	540	680
315	**355**	190	270	270	360	360	470	470	590	590	740
355	**400**	210	300	300	400	400	520	520	650	650	820
400	**450**	230	330	330	440	440	570	570	720	720	910
450	**500**	260	370	370	490	490	630	630	790	790	1000
500	**560**	290	410	410	540	540	680	680	870	870	1100
560	**630**	320	460	460	600	600	760	760	980	980	1230



Certificate HU09/4437

The management system of

FŁT Polska Sp. z o.o.

ul. Łucka 7/9, 00-842 Warszawa, Poland

has been assessed and certified as meeting the requirements of

ISO 9001:2008

For the following activities

Export, import and domestic sale of bearings and their parts, steel products, chemical and technical materials for production of bearings and their parts.

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organisation

This certificate is valid from 27 November 2012 until 26 November 2015 and remains valid subject to satisfactory surveillance audits.
Re certification audit due before 23 October 2015
Issue 2. Certified since 27 November 2003

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Page 1 of 1

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محرک چرخش

تأمین‌کننده تخصصی بلبرینگ و رولبرینگ

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