



Product Catalogue



ISO 9001 : 2000



The Quality Advantage

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SELECTION OF BEARING TYPE

Selection of bearing type according to the direction and magnitude of loads

The magnitude and direction of loads greatly influence the selection of bearings. Generally, for the same dimensions, the cylindrical roller bearing stands heavy loads than the deep groove balls bearing. The bearings with more rows of rolling elements, especially rollers have heavy load carrying capacity.

According to the load acting direction, the following situation are distinguished:

a) Radial load

Cylindrical roller bearings without ribs at one of the rings, with one row of rollers (type N or NU) or with two rows of rollers (type NN or NNU) and needle roller bearings are to be used.

b) Axial load

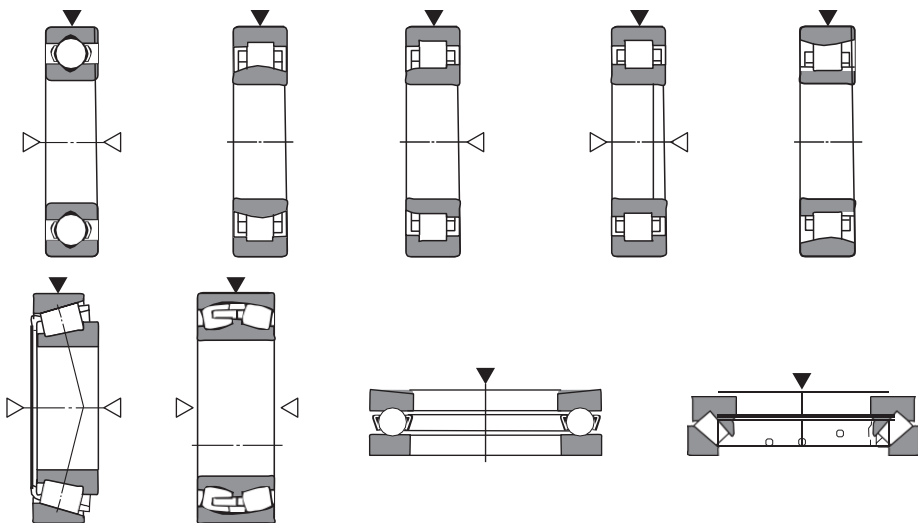
Thrust balls or roller bearings according to the load magnitude, are to be used. The simple effect thrust roller bearings can be loaded only in a single direction and the double effect thrust roller bearings can be loaded in both directions.

c) Combined load

The simultaneous action of radial and axial load means that on the roller bearing acts a combined load.

For light axial loads together with radial loads are used:

- Deep groove ball bearings, single row. (Combined load supported rises if the radial clearance is greater than normal);
- Cylindrical roller bearings of the NUP and NJ+HJ types and spherical roller bearings.
- NJ type cylindrical roller bearings can only accommodate axial loads acting in a single direction and for axial displacement of the shaft in both directions it is recommended to mount roller bearings of the same type.



BEARING TYPES

Bearing types and their characteristics



Suitable / Very good



Good



Normal / Possible



Limited



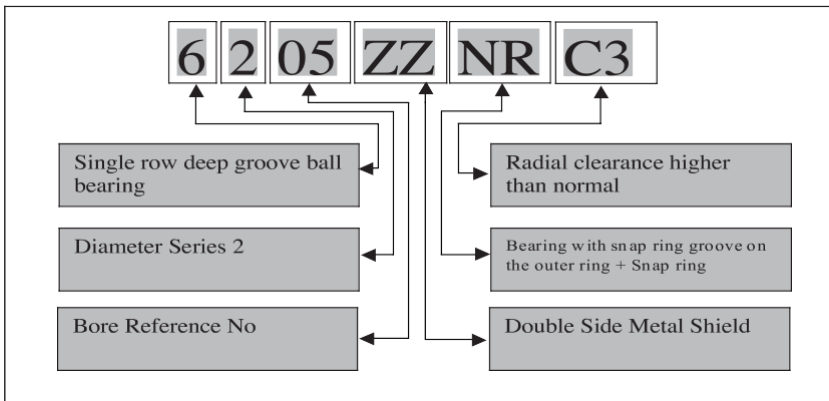
Not suitable / Not Applicable

Bearing Type	Characteristics														
	Radial loadability	Axial loadability in both directions	Length compensation within the bearing	Length compensation with sliding fit	Separable bearings	Compensation of misalignment	Increased precision	Suitability for high speeds	Quite running	Tapered bore	Seal at one or both sides	High rigidity	Low friction	Locating bearings	Floating bearings
Deep groove ball bearings	●	●	○	●			●	●	●	○	●	●	●	●	●
Angular contact ball bearings	●	●	○	●	○	○	●	●	●	○	○	● ^a	●	● ^a	● ^a
Angular contact ball bearings double row	●	●	○	● ^a	●	○	●	●	●	○	●	●	●	●	●
Self-aligning ball bearings	●	●	○	●	○	●	○	●	●	● ^d	●	●	●	●	●
Cylindrical roller bearings NU,N	●	○	●	○	●	●	●	●	●	●	○	●	● ^e	○	●
Cylindrical roller bearings NJ	●	●	●	○	●	●	●	● ^b	●	○	○	●	● ^b	●	●
Cylindrical roller bearings NUP	●	●	○	●	●	●	●	● ^b	●	○	○	●	● ^b	●	●
Tapered roller bearings	●	●	○	● ^a	●	●	●	● ^c	●	○	○	● ^a	●	● ^a	● ^a
Spherical roller bearings	●	●	○	●	○	●	○	●	●	● ^d	●	●	●	●	●
Thrust ball bearings	○	●	○	○	●	● ^f	●	●	●	○	○	●	●	●	○
Spherical roller thrust bearings	●	●	○	○	●	●	○	●	○	○	○	●	○	●	○

← Single bearings and bearings in tandem arrangement in single direction, a) for paired mounting, b) for low axial load, c) limited suitability for paired mounting

d) also with adapter or withdrawal sleeves, e) very good for narrow series, f) S-type bearings and thrust ball bearings with seating washer compensate for misalignment during mounting

BEARING DESIGNATION SYSTEM BALL BEARINGS



Bearing Series code

Bearing series code	Diameter Series	Bearing type	Bearing series code	Diameter Series	Bearing type
68	8	Single row ball Bearing	329	9	Taper Roller bearing
69	9				
160	0				
60	0				
62	2				
63	3				
64	4				
622	2				
623	3				
633	3				
42	2	Double row ball Bearing	239	9	Spherical roller bearing
43	3				
79	9	Single row angular contact ball bearing	240	0	
70	0				
72	2				
73	3				
74	4				
32	2	Double row angular contact ball bearing	511	1	Single Direction Thrust ball Bearing
33	3				
52	2				
53	3				
12	2	Self aligning ball bearing	292	2	Spherical thrust roller bearing
22	2				
13	3				
23	3				
NU 2	2	Single Row Cylindrical roller bearing			
NU 22	2				
NU 3	3				
NU 23	3				

PREFIXES AND SUFFIXES

Prefixes

EE	Miniature and small size ball bearing
F	Flanged outer ring (for ball bearing)
H	Adapter Metric Size
HC	Hi- Cap
HCLM	Hi- Cap Light medium inch series taper roller bearing
HCTR	Hi- Cap Single row taper roller bearing non standard direction
HM	Heavy medium Duty inch series taper roller bearing
JL	J series taper roller bearing
L	Light Duty inch series taper roller bearing
LM	Light medium Duty inch series taper roller bearing
M	Medium Duty inch series taper roller bearing
N	N type Cylindrical roller bearing
NJ	NJ type Cylindrical roller bearing
NU	NU type Cylindrical roller bearing
NUP	NUP type Cylindrical roller bearing(inner ring loose rib)
RLS	Inch Size Ball Bearing
RMS	Inch Size Ball Bearing
W	Wide width type bearing

Suffixes

B	40 Degree contact angle for angular contact ball bearing
BEP	40 Degree contact angle for angular contact ball bearing with reinforced polyamide cage
C	15 Degree contact angle for angular contact ball bearing
C2	Radial internal clearance less than normal
C3	Radial internal clearance more than normal
C4	Radial internal clearance more than C3
D	Steep contact angle (24°-32°), for metric series ball bearing
EMQV2	Electric Motor Quality bearing with Vibration standard V2
JR	Tapered roller bearings, whose cup width , contact angle and cup small inside diameter conforms to ISO standard with high load carrying capacity
K	Tapered bore , 1/12
K30	Tapered bore , 1/30
M	Machined Brass cage
N	Bearing with Snap ring groove
NR	Bearing with Snap ring groove and a locating snap ring
RS	Rubber seal on one side of the bearing
2RS	Rubber seal on both the side of the bearing
W33	With three oil holes and oil grooves on outer ring for spherical roller bearing
Z	Metal shield on one side of the bearing
ZN	Metal shield on one side of the bearing and Snap ring groove
ZNR	Metal shield on one side of the bearing and Snap ring groove with a snap ring
ZZ	Metal shield on both the side of the bearing

BEARING INTERNAL CLEARANCE

Radial Internal Clearance of Deep Groove Ball Bearing (Cylindrical bore)

Nominal bore Diameter		Clearance (microns)									
d, mm		C2		CN		C3		C4		C5	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
2,5	6	0	7	2	13	8	23	14	29	20	37
6	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	54
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	105	230

For measured clearance, the increase of internal clearance caused by the measurement of load to be corrected according to the below table

Nominal bore Diameter		Measurement load	Amount of Clearance correction in microns					
d, mm		N	C2		CN	C3	C4	C5
over	up to		min.	max.	max.	max.	max.	max.
2,5	18	24,5	3	4	4	4	4	4
18	50	49	4	5	5	6	6	6
50	280	147	6	8	8	9	9	9

Radial Internal Clearance of self aligning Ball Bearing (Cylindrical bore)

Nominal bore Diameter		Clearance (microns)									
d, mm		C2		CN		C3		C4		C5	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
2,5	6	1	8	5	15	10	20	15	25	21	33
6	10	2	9	6	17	12	25	19	33	27	42
10	14	2	10	6	19	13	26	21	35	30	48
14	18	3	12	8	21	15	28	23	37	32	50
18	24	4	14	10	23	17	30	25	39	34	52
24	30	5	16	11	24	19	35	29	46	40	58
30	40	6	18	13	29	23	40	34	53	46	66
40	50	6	19	14	31	25	44	37	57	50	71
50	65	7	21	16	36	30	50	45	69	62	88
65	80	8	24	18	40	35	60	54	83	76	108
80	100	9	27	22	48	42	70	64	96	89	124
100	120	10	31	25	56	50	83	75	114	105	145
120	140	10	38	30	68	60	100	90	135	125	175
140	160	15	44	35	80	70	120	110	161	150	210

Radial Internal Clearance of self aligning Ball Bearing (Tapered bore)

Nominal bore Diameter		Clearance (microns)									
d, mm		C2		CN		C3		C4		C5	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
18	24	7	17	13	26	20	33	28	42	37	55
24	30	9	20	15	28	23	39	33	50	44	62
30	40	12	24	19	35	29	46	40	59	52	72
40	50	14	27	22	39	33	52	45	65	58	79
50	65	18	32	27	47	41	61	56	80	73	99
65	80	23	39	35	57	50	75	69	98	91	123
80	100	29	47	42	68	62	90	84	116	109	144
100	120	35	56	50	81	75	108	100	139	130	170
120	140	40	68	60	98	90	130	120	165	155	205
140	160	45	74	65	110	100	150	140	191	180	240

BEARING INTERNAL CLEARANCE

Radial internal clearance of cylindrical roller bearings [cylindrical bore]

Nominal bore Diameter		Clearance (microns)									
d, mm		C2		CN		C3		C4		C5	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
0	10	0	20	20	45	35	60	50	75		
10	24	0	25	20	45	35	60	50	75	65	90
24	30	0	25	20	45	35	60	50	75	70	95
30	40	5	30	25	50	45	70	60	85	80	105
40	50	5	35	30	60	50	80	70	100	95	125
50	65	10	40	40	70	60	90	80	110	110	140
65	80	10	45	40	75	65	100	90	125	130	165
80	100	15	50	50	85	75	110	105	140	155	190
100	120	15	55	50	90	85	125	125	165	180	220
120	140	15	60	60	105	100	145	145	190	200	245
140	160	20	70	70	120	115	165	165	215	225	275
160	180	25	75	75	125	120	170	170	220	250	300
180	200	35	90	90	145	140	195	195	250	275	330

Radial internal clearance of spherical roller bearings [cylindrical bore]

Nominal bore Diameter		Clearance (microns)									
d, mm		C2		CN		C3		C4		C5	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
14	18	10	20	20	35	35	45	45	60	60	75
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

Radial internal clearance of spherical roller bearings [Tapered bore]

Nominal bore Diameter		Clearance (microns)									
d, mm		C2		CN		C3		C4		C5	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
18	24	15	25	25	35	35	45	45	60	60	75
24	30	20	30	30	40	40	55	55	75	75	95
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	200
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

RADIAL BEARING TOLERANCE (TAPERED ROLLER BEARINGS EXCLUDED)

Inner Ring (bore Diameter)

nominal bore diameter		Single plane mean bore diameter deviation								Single Bore Diameter deviation				Single Radial plain bore diameter variation V dp												Mean Bore diameter variation			
d		Δ_{dmp}								Δ_{ds}				Diameter series 7,8,9				Diameter series 0,1				Diameter series 2,3,4				V dmp			
mm		class 0		class 6		class 5		class 4		class 4		class 2		class 0	class 6	class 5	class 4	class 0	class 6	class 5	class 4	class 0	class 6	class 5	class 4	class 0	class 6	class 5	class 4
over	up to	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	max				max				max				max			
0.6	2.5	0	-8	0	-7	0	-5	0	-4	0	-4	0	-2.5	10	9	5	4	8	7	4	3	6	5	4	3	6	5	3	2
2.5	10	0	-8	0	-7	0	-5	0	-4	0	-4	0	-2.5	10	9	5	4	8	7	4	3	6	5	4	3	6	5	3	2
10	18	0	-8	0	-7	0	-5	0	-4	0	-4	0	-2.5	10	9	5	4	8	7	4	3	6	5	4	3	6	5	3	2
18	30	0	-10	0	-8	0	-6	0	-5	0	-5	0	-2.5	13	10	6	5	10	8	5	4	8	6	5	4	8	6	3	2.5
30	50	0	-12	0	-10	0	-8	0	-6	0	-6	0	-2.5	15	13	8	6	12	10	6	5	9	8	6	5	9	8	4	3
50	80	0	-15	0	-12	0	-9	0	-7	0	-7	0	-4	19	15	9	7	19	15	7	5	11	9	7	5	11	9	5	3.5
80	120	0	-20	0	-15	0	-10	0	-8	0	-8	0	-5	25	19	10	8	25	19	8	6	15	11	8	6	15	11	5	4
120	150	0	-25	0	-18	0	-13	0	-10	0	-10	0	-7	31	23	13	10	31	23	10	8	19	14	10	8	19	14	7	5
150	180	0	-25	0	-18	0	-13	0	-10	0	-10	0	-7	31	23	13	10	31	23	10	8	19	14	10	8	19	14	7	5
180	250	0	-30	0	-22	0	-15	0	-12	0	-12	0	-8	38	28	15	12	38	28	12	9	23	17	12	9	23	17	8	6
250	315	0	-35	0	-25	0	-18	0	-15	0	-15	0	-	44	31	18	15	44	31	14	11	26	19	14	11	26	19	9	8
315	400	0	-40	0	-30	0	-23	0	-18	0	-18	0	-	50	38	23	18	50	38	18	14	20	23	18	14	30	23	12	9

Outer Ring (bore Diameter)

nominal bore diameter		Single plane mean outside diameter deviation								Single outside Diameter deviation				Single Radial plain outside diameter variation V Dp												Mean outside diameter variation			
D		Δ_{Dmp}								Δ_{Ds}				Diameter series 7,8,9				Diameter series 0,1				Diameter series 2,3,4				V Dmp			
mm		class 0		class 6		class 5		class 4		class 4		class 2		class 0	class 6	class 5	class 4	class 0	class 6	class 5	class 4	class 0	class 6	class 5	class 4	class 0	class 6	class 5	class 4
over	up to	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	max				max				max				max			
2.5	6	0	-8	0	-7	0	-5	0	-4	0	-4	0	-2.5	10	9	5	4	8	7	4	3	6	5	4	3	6	5	3	2
6	18	0	-8	0	-7	0	-5	0	-4	0	-4	0	-2.5	10	9	5	4	8	7	4	3	6	5	4	3	6	5	3	2
18	30	0	-9	0	-8	0	-6	0	-5	0	-5	0	-4	12	10	6	5	9	8	5	4	7	6	5	4	7	6	3	2.5
30	50	0	-11	0	-9	0	-7	0	-6	0	-6	0	-4	14	11	7	6	11	9	5	5	8	7	5	5	8	7	4	3
50	80	0	-13	0	-11	0	-9	0	-7	0	-7	0	-4	16	14	9	7	13	11	7	5	10	8	7	5	10	8	5	3.5
80	120	0	-15	0	-13	0	-10	0	-8	0	-8	0	-5	19	16	10	8	19	16	8	6	11	10	8	6	11	10	5	4
120	150	0	-18	0	-15	0	-11	0	-9	0	-9	0	-5	23	19	11	9	23	19	8	7	14	11	8	7	14	11	6	5
150	180	0	-25	0	-18	0	-13	0	-10	0	-10	0	-7	31	23	13	10	31	23	10	8	19	14	10	8	19	14	7	5
180	250	0	-30	0	-20	0	-15	0	-11	0	-11	0	-8	38	25	15	11	38	25	11	8	23	15	11	8	23	15	8	6
250	315	0	-35	0	-25	0	-18	0	-13	0	-13	0	-8	44	31	18	13	44	31	14	10	26	19	14	10	26	19	9	7
315	400	0	-40	0	-28	0	-20	0	-15	0	-15	0	-10	50	35	20	15	50	35	15	11	30	21	15	11	30	21	10	8

TOLERANCE FOR METRIC SERIES TAPERED ROLLER BEARINGS

Cone

nominal outside diameter		Single plane mean outside diameter deviation										Single radial plain bore Diameter Variation				Mean bore Diameter Variation				radial run out of assembled bearing cone				face run out with bore		Single cone width deviation						
												V_{dp}				V_{dmp}				K_{ca}				S_d		S_{ia}	Δ^{bs}					
												class 0		class 6		class 5		class 4		class 0		class 6		class 5		class 4		class 0	class 4	class 4		upper
over	up to	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	max	max	max	max	max	max	max	max	max	max	max				
10	18	0	-12	0	-7	0	-7	0	-5	0	-5	12	7	5	4	9	5	5	4	15	7	5	3	7	3	3	0	-120	0	-120	0	-200
18	30	0	-12	0	-8	0	-8	0	-6	0	-6	12	8	6	5	9	6	5	4	18	8	5	3	8	4	4	0	120	0	120	0	200
30	50	0	-12	0	-10	0	-10	0	-8	0	-8	12	10	8	6	9	8	5	5	20	10	6	4	8	4	4	0	120	0	120	0	240
50	80	0	-15	0	-12	0	-12	0	-9	0	-9	15	12	9	7	11	9	6	5	25	10	7	4	8	5	4	0	150	0	150	0	300
80	120	0	-20	0	-15	0	-15	0	-10	0	-10	20	15	11	8	15	11	8	5	30	13	8	5	9	5	5	0	-200	0	-200	0	400
120	180	0	-25	0	-18	0	-18	0	-13	0	-13	25	18	14	10	19	14	9	7	35	18	11	6	10	6	7	0	-250	0	-250	0	500
180	250	0	-30	0	-22	0	-22	0	-15	0	-15	30	22	17	11	23	16	11	8	50	20	13	8	11	7	8	0	-300	0	-300	0	600

Cup

nominal outside diameter		Single plane mean outside diameter deviation										Single outside Diameter deviation		Single radial plain outside Diameter Variation				Mean outside Diameter Variation				radial run out of assembled bearing cup				face run out with bore		Single cup width deviation						
												Δ^{ds}		V_{Dp}				V_{Dmp}				K_{ca}				S_D		S_{ea}	Δ^c					
												class 0	class 6	class 5		class 4		class 4		class 0		class 6		class 5		class 4		class 0	class 4	class 4		class 4		class 6
over	up to	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	upper	lower	max	max	max	max	max	max	max	max	max	max			
10	18	0	-12	0	-8	0	-8	0	-6	0	-6	12	8	6	5	9	6	5	4	18	9	6	4	8	4	5	0	-100	0	-100	0	-100		
18	30	0	-14	0	-9	0	-9	0	-7	0	-7	14	9	7	5	11	7	5	5	20	10	7	5	8	4	5	0	-100	0	-100	0	-100		
30	50	0	-16	0	-11	0	-11	0	-9	0	-9	16	11	8	7	12	8	6	5	25	13	8	5	8	4	5	0	-100	0	-100	0	-100		
50	80	0	-18	0	-13	0	-13	0	-10	0	-10	18	13	10	8	14	10	7	5	35	18	10	6	9	5	6	0	-100	0	-100	0	-100		
80	120	0	-20	0	-15	0	-15	0	-11	0	-11	20	15	11	8	15	11	8	6	40	20	11	7	10	5	7	0	-100	0	-100	0	-100		
120	180	0	-25	0	-18	0	-18	0	-13	0	-13	25	18	14	10	19	14	9	7	45	23	13	8	10	5	8	0	-100	0	-100	0	-100		
180	250	0	-30	0	-20	0	-20	0	-15	0	-15	30	20	15	11	23	15	10	8	50	25	15	10	11	7	10	0	-100	0	-100	0	-100		

Confirms to the tolerance Δ B_s on d of the same bearing

BEARING MATERIALS

Race way and rolling element materials

While the contact surface of a bearing's raceway and rolling elements are subjected to repeated heavy stress they still must maintain precision and rotational accuracy. To accomplish this, the raceways and rolling elements must be made of a material, which has high hardness, resistance to fatigue, wear resistance and good dimensional stability.

In case of normal applications and operating conditions, a low alloy chromium steel proved to be particularly suitable for rolling bearings.

Through-hardening steels of same or similar compositions are predominantly used worldwide by most of the manufacturers of rolling bearings. And the most commonly used steel is SAE 52100 and the hardness maintained is 58~63 HRC

Chemical composition for bearings steels used in various countries

Country	STD.	Steel type	C	Si (%)	Mn	P	S	Cr	Ni	Mo
USA	AISI	SAE51100	0.95-1.10	0.20-0.35	0.25-0.45	<0.025	<0.025	0.90-1.15	<0.25	<0.08
		SAE52100	0.95-1.10	0.20-0.35	0.25-0.45	<0.025	<0.025	1.30-1.60	<0.25	<0.08
JAPAN	JIS	SUJ-2	0.95-1.10	0.15-0.35	<0.50	<0.025	<0.025	1.30-1.60	-	-
		SUJ-3	0.95-1.10	0.40-0.70	0.90-1.15	<0.025	<0.025	0.90-1.20	-	-
		SUJ-5	0.95-1.10	0.40-0.70	0.90-1.15	<0.025	<0.025	0.90-1.20	-	<0.06
GERMANY	DIN	105Cr5	1.00-1.10	0.15-0.35	0.25-0.40	<0.030	<0.025	0.90-1.15	-	-
		100Cr6	0.90-1.05	0.15-0.35	0.25-0.40	<0.025	<0.025	1.40-1.65	-	-
		100CrMn6	0.90-1.05	0.50-0.70	1.00-1.20	<0.025	<0.020	1.40-1.65	-	-
ROMANIA	RUL	Rul 1V	0.95-1.10	0.17-0.37	0.20-0.45	<0.027	<0.020	1.30-1.65	<0.30	<0.08
		Rul 2V	0.95-1.10	0.40-0.65	0.90-1.20	<0.027	<0.020	1.30-1.65	<0.30	<0.08
		Rul 3V	0.95-1.10	0.20-0.35	1.05-1.35	<0.027	<0.020	1.10-1.50	<0.30	0.45-0.60
CHINA	GB307.1	GCr15	0.95-1.05	0.15-0.35	0.20-0.40	<0.027	<0.020	1.30-1.65	<0.30	-

Chemical composition for bearings steels in accordance with ISO 683

Steel type	C	Si	Mn (%)	P	S	Cr	Ni	Mo	Cu
100Cr6	0.90-1.05	0.15-0.35	0.25-0.45	-	-	1.40-1.65	-	-	-
100CrMn6	0.90-1.05	0.50-0.70	1.00-1.20	<0.030	<0.025	1.40-1.65	<0.30	-	<0.30
100CrM06	0.90-1.05	0.20-0.40	0.60-0.80	-	-	1.65-1.95	-	0.20-0.35	-
100CrMnMo8	0.90-1.05	0.40-0.60	0.80-1.10	-	-	1.80-2.05	-	0.50-0.60	-

Standard material used in various countries for normal applications

Country	ISO	USA	Germany	Japan	China
Bearing steel	683	SAE52100	100Cr6	SUJ2	GCr15

Cage materials

Bearing cages have high importance in bearing. The main property of a cage is keeping the rolling element at equal distance, separate the neighboring rolling element from colliding with each other and to keep the friction and heat development at a minimum.

Type of cages used

- Pressed CRCA (cold rolled cold annealed) sheet strip are used in manufacturing of cages for small and normal application bearings
- Polyamide cages (Glass fiber reinforced polyamide 6.6) are used for small and medium size bearings, due its properties of low density, high elasticity, low wear at sliding movement and low inertia movement, this type of cage has a maximum operating temperature of +120°C
- Machine steel and brass cages are generally used for large-size bearings

LUBRICATION

The main purpose of a lubricant is to prevent direct metallic contact between various rolling and sliding element. This is achieved through a thin layer of film created by the lubricant supplied (grease or oil) on the contact surfaces

The following are the advantage of a lubricant

- Reduce in friction and wear
- Heat dissipation due to friction
- Increased bearing life
- Prevention against rust

To achieve the above effect , the best of the lubrication system is to be selected

Generally lubrication is classified in to

- Grease
- Oil
- Solid Lubricant (MoS₂)

The amount of grease to be applied on a single bearing is calculated as below for a best performance of a bearing

Quantity to be applied (m) = $D \times B \times 0.01$ (grams)

If the bearing is re-lubricated after operation the amount depends on the re-lubricating interval

Quantity to be applied (m) = $D \times B \times R$ (grams)

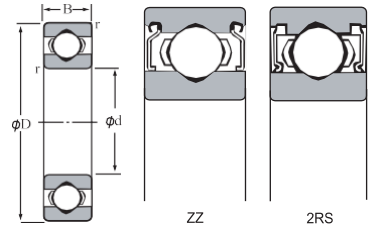
Were D= bearing out side dia 10 mm, B= bearing width in mm

R= to be taken as 0.002 for weekly re-lubrication, 0.003 for monthly re-lubrication and 0.003 for yearly re-lubrication

The most commonly used commercial grease with their brand names and properties are given below

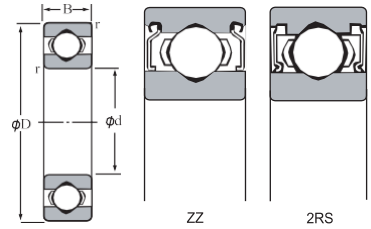
Brand	Designation	Dropping Temp °C	Penetration at 25°C	Working tem. °C	Remarks
Shell	Alvania R2	185	265~295	-35~120	General purpose
	Alvania R3	185	220~250	-35~135	
	Alvania RA	180	250~275	-25~100	
	Alvania EP1	180	310~340	-25~110	
	Alvania EP2	185	265~295	-25~110	
	Darina 2	250	265~295	-25~150	High Temp. service
	Darina EP2	250	265~295	-25~150	
	Dolium R2	250	265~295	-35~150	Corrosion resistant
Esso	Andok C	260	190~210	-30~120	General purpose
	Andok 260	190	204~260	-40~120	
	Beacon 325	190	255~280	-54~120	Low tem. service
Chevron	SRI-2	240	255~280	-30~120	Water resistant
Mobil	Mobilux 2	190	265~290	-10~110	General purpose
	Mobil 22	192	250~274	-40~120	
	Mobil 28	260	265~295	-55~175	Wide rang tem. service
	Mobil 48	260	240~270	-60~170	High tem. service
Kluber	Isoflex LDS 18	190	255~280	-50~110	Low Tem. service
	Isoflex NBU 15	250	255~280	-30~120	General purpose
Kyodo Yushi	Multemp SRL	185	225~245	-40~145	Low torque service
	Multemp PS2	190	250~275	-50~110	Low tem. service
	Multemp SC-A	260	255~280	0~160	High tem. service
	Multemp ET150	260	255~280	-10~160	
China Hangu	Hangu 2	198	265~295	-10~130	Low noise service.

Ball Bearings - Miniature



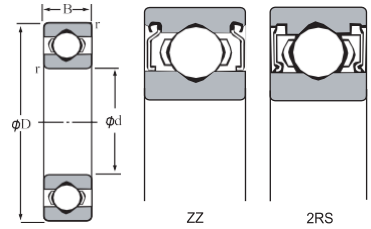
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT
	d	D	B	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	GRAMS
604	4	12	4	0.20	0.97	0.36	53000	63000	2.1
605	5	14	5	0.20	1.30	0.48	50000	60000	3.5
606	6	17	6	0.30	1.95	0.74	35000	43000	5.8
607	7	19	6	0.30	2.60	1.05	40000	47000	7.6
608	8	22	7	0.30	3.35	1.40	28000	35000	12.0
609	9	24	7	0.30	3.35	1.40	33000	40000	15.0
624	4	13	5	0.20	1.30	0.49	40000	38000	3.0
625	5	16	5	0.30	1.88	0.68	36000	43000	4.5
626	6	19	6	0.30	2.60	1.05	35000	43000	8.1
627	7	22	7	0.30	3.30	1.35	31000	37000	13.0
628	8	24	8	0.30	3.35	1.40	28000	35000	18.0
629	9	26	8	0.60	4.55	1.95	27000	33000	20.0
686	6	13	3.5	0.15	1.10	0.44	48000	57000	1.8
687	7	14	3.5	0.15	1.15	0.51	45000	54000	2.0
689	9	17	4	0.20	1.35	0.66	39000	46000	3.5
695	5	13	4	0.20	1.10	0.43	50000	60000	2.2
696	6	15	5	2.00	1.75	0.67	45000	54000	3.9
697	7	17	5	3.00	1.60	0.71	42800	50000	5.3
698	8	19	6	3.00	2.25	0.91	39000	46000	7.2
699	9	20	6	0.30	2.45	1.05	35000	42000	7.5

Ball Bearings - Miniature



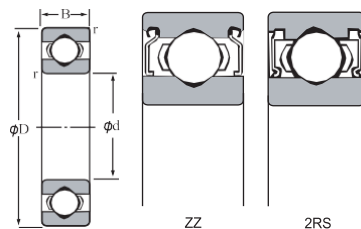
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT
	d	D	B	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	GRAMS
6800	10	19	5	0.3	1.83	0.93	34000	40000	0.005
6801	12	21	5	0.3	1.92	1.04	32000	38000	0.006
6802	15	24	5	0.3	2.08	1.26	28000	34000	0.007
6803	17	26	5	0.3	2.81	1.72	26000	30000	0.008
6804	20	32	7	0.3	4.00	2.47	22000	26000	0.018
6805	25	37	7	0.3	4.30	2.95	18000	22000	0.022
6806	30	42	7	0.3	4.70	3.65	15000	18000	0.026
6807	35	47	7	0.3	4.90	4.05	13000	16000	0.030
6808	40	52	7	0.3	4.95	4.20	12000	14000	0.033
6809	45	58	7	0.3	6.20	5.40	11000	13000	0.040
6810	50	65	7	0.3	6.60	6.10	9500	11000	0.052
6811	55	72	9	0.3	8.80	8.10	8500	10000	0.083
6812	60	78	10	0.3	11.50	10.60	8000	9500	0.104
6813	65	85	10	0.6	11.90	11.50	7500	8500	0.126
6814	70	90	10	0.6	12.10	11.90	6700	8000	0.134
6815	75	95	10	0.6	12.50	12.90	6300	7500	0.142
6816	80	100	10	0.6	12.70	13.30	6000	7100	0.150
6817	85	110	13	1	18.70	19.00	5600	6700	0.266
6818	90	115	13	1	19.00	19.70	5300	6300	0.279
6819	95	120	13	1	19.30	19.70	5000	6000	0.300
6820	100	125	13	1	19.60	21.20	4800	5600	0.309

Ball Bearings - Miniature



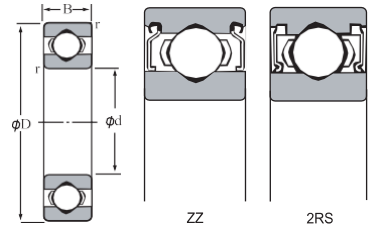
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT
	d	D	B	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	GRAMS
6900	10	22	6	0.3	2.70	1.25	32000	38000	0.010
6901	12	24	6	0.3	2.90	1.45	30000	36000	0.011
6902	15	28	7	0.3	4.30	2.25	26000	30000	0.017
6903	17	30	7	0.3	4.60	2.55	24000	28000	0.018
6904	20	37	9	0.3	6.35	3.70	19000	22000	0.036
6905	25	42	9	0.3	7.00	4.55	16000	19000	0.041
6906	30	47	9	0.3	7.25	5.00	14000	17000	0.045
6907	35	55	10	0.6	10.90	7.75	12000	15000	0.073
6908	40	62	12	0.6	13.70	9.95	11000	13000	0.112
6909	45	68	12	0.6	14.10	10.90	9500	12000	0.132
6910	50	72	12	0.6	14.50	11.70	9000	11000	0.133
6911	55	80	13	1	16.60	14.10	8000	9500	0.185
6912	60	85	13	1	20.20	17.30	7500	9000	0.192

Ball Bearings - Miniature



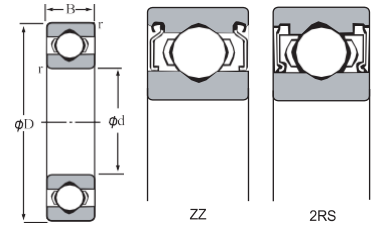
BEARING NUMBER		NOMINAL DIMENSIONS [mm]				LOAD RATING(kgf)		weight KGS
		d	D	B	r	Dynamic C	Stactic Co	
E3	EN3	3	16	5	0.15	168.0	29.0	0.005
E4	EN4	4	16	5	0.15	168.0	29.0	0.005
E5	EN5	5	16	5	0.15	168.0	29.0	0.005
E6	EN6	6	21	7	0.3	254.0	46.0	0.011
E7	EN7	7	22	7	0.3	254.0	46.0	0.013
E8	EN8	8	24	7	0.3	350.0	66.0	0.016
E9	EN9	9	28	8	0.3	465.0	90.0	0.020
E10	EN10	10	28	8	0.3	465.0	90.0	0.022
E11	EN11	11	32	7	0.3	450.0	86.0	0.025
E12	EN12	12	32	7	0.3	450.0	86.0	0.027
E13	EN13	13	30	7	0.3	450.0	86.0	0.029
E14	EN14	14	35	8	0.3	590.0	117.0	0.031
E15	EN15	15	35	8	0.3	590.0	117.0	0.034
E16	EN16	16	38	10	0.6	705.0	141.0	0.049
E17	EN17	17	40	10	0.6	750.0	153.0	0.055

Ball Bearings - Miniature Inch



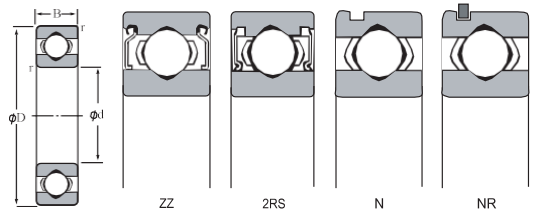
Bearing No.	NOMINAL DIMENSIONS [mm]				LOAD RATING(kgf)		weight
	d mm	D mm	B open mm	B ZZmm	Dynamic (Cr)	Static (Cor)	KGS
R2	3.1750	9.5250	3.9670	3.9670	630	218	0.015
R3	4.7620	12.7000	3.9670	4.9780	1300	485	0.022
R4	6.3500	15.8750	4.9780	4.9780	1480	615	0.048
R6	9.5250	22.2250	5.5580	7.1420	3350	1410	0.090
R8	12.7000	28.5750	6.3500	7.9380	5100	2220	0.014
R10	15.8750	34.9250	7.1440	8.7320	6000	2780	0.028
R12	19.0500	41.2750	7.9380	11.1130	9350	4450	0.042
R14	22.2250	47.6250	9.5250	12.7000	10100	4950	0.071
R16	25.4000	50.8000	9.5250	12.7000	10700	5450	0.085
R18	28.5750	53.9750	9.5250	12.7000	12400	6200	0.090
R20	31.7500	57.1500	9.5250	12.7000	13200	6850	0.095
R22	34.9250	63.5000	11.1120	14.2880	15900	8500	0.120
R24	38.1000	66.6750	11.1120	14.2880	16800	9250	0.150

Deep Groove Ball Bearings



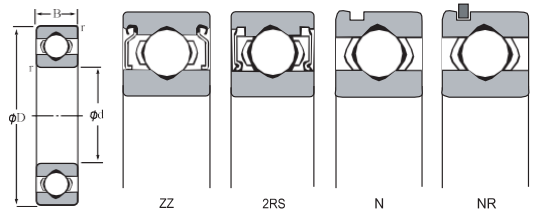
BEARING NUMBER	NOMINAL DIMENSIONS [MM]				LOAD RATING(kN)		LIMITING SPEED(RPM)		
	d	D	B	r	Dynamic	Stactic	Oil Lube	Grease Lube	GRAMS KG
					C	Co			
16002	15	30	8	0.3	4	2.05	28000	22000	0.025
16003	17	32	8	0.3	6	3.25	26000	20000	0.032
16004	20	42	8	0.3	7.95	4.5	20000	17000	0.050
16005	25	47	8	0.3	8.4	5.1	18000	15000	0.060
16006	30	55	9	3	11.2	7.35	12000	15000	0.085
16007	35	62	9	0.3	12.2	8.85	13000	10000	0.111
16008	40	68	9	0.3	13.3	9.8	12000	9500	0.125
16009	45	75	10	0.6	15.5	12.3	11000	9000	0.170
16010	50	80	10	0.6	16.3	13.1	10000	8500	0.180
16011	55	90	11	0.6	19.3	16.3	9000	7500	0.260
16012	60	95	11	0.6	20	17.6	8500	7000	0.280
16013	65	100	11	0.6	22.9	19.6	7500	6300	0.300
16014	70	110	13	0.6	27.9	25	7000	6000	0.433
16015	75	115	13	0.6	28.5	26.8	6700	5600	0.457
16016	80	125	14	0.6	31.9	29.7	6300	5300	0.597
16017	85	130	14	0.6	33.8	33.5	6000	5000	0.626
16018	90	140	16	1	41.9	40.4	5300	4500	0.848
16019	95	145	24	1	60.5	53.6	5000	4300	0.885
16020	100	150	16	1	45	44	5000	4300	0.910

Deep Groove Ball Bearings



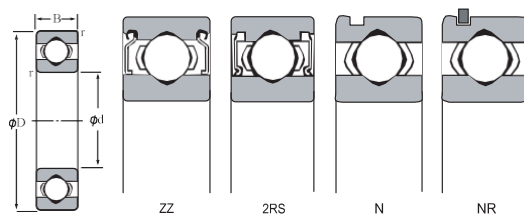
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	
6000	10	26	8	0.3	4.55	1.95	31000	36000	0.019
6001	12	28	8	0.3	5.10	2.40	27000	32000	0.022
6002	15	32	9	0.3	5.60	2.85	23000	27000	0.030
6003	17	35	10	0.3	6.00	3.25	21000	25000	0.039
6004	20	42	12	0.6	9.40	5.05	17000	21000	0.069
6005	25	47	12	0.6	10.10	5.85	15000	18000	0.080
6006	30	55	13	1.0	13.20	8.25	13000	15000	0.116
6007	35	62	14	1.0	15.90	10.30	11000	13000	0.155
6008	40	68	15	1.0	16.70	11.50	10000	12000	0.192
6009	45	75	16	1.0	21.00	15.10	9200	11000	0.245
6010	50	80	16	1.0	21.80	16.60	8400	9900	0.261
6011	55	90	18	1.1	28.30	21.20	7600	8900	0.385
6012	60	95	18	1.1	29.40	23.20	7100	8400	0.415
6013	65	100	18	1.1	30.50	25.20	6600	7800	0.435
6014	70	110	20	1.1	38.10	30.90	6100	7200	0.602
6015	75	115	20	1.1	39.60	33.50	5700	6800	0.638
6016	80	125	22	1.1	47.6	39.8	5300	6300	0.850
6017	85	130	22	1.1	49.5	43.1	5000	5900	0.890
6018	90	140	24	1.5	58.2	49.7	4700	5600	1.160
6019	95	145	24	1.5	60.4	53.9	4400	5200	1.210
6020	100	150	24	1.5	60.2	54.2	4300	5100	1.250

Deep Groove Ball Bearings



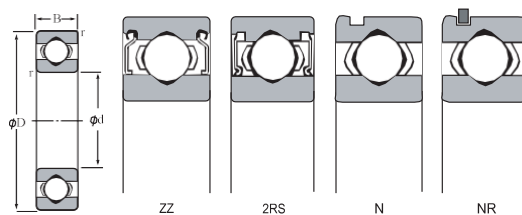
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	
6200	10	30	9	0.6	5.10	2.40	24000	29000	0.032
6201	12	32	10	0.6	6.80	3.05	22000	27000	0.037
6202	15	35	11	0.6	7.65	3.75	20000	24000	0.045
6203	17	40	12	0.6	9.55	4.80	17000	21000	0.065
6204	20	47	14	1.0	12.80	6.65	15000	17000	0.106
62/22	22	50	14	1.0	12.80	6.65	15000	17000	0.118
6205	25	52	15	1.0	14.00	7.85	13000	15000	0.128
62/28	28	58	16	1.0	17.90	9.75	12000	14000	0.173
6206	30	62	16	1.0	19.50	11.30	11000	13000	0.199
62/32	32	65	17	1.0	23.50	13.10	10000	12000	0.228
6207	35	72	17	1.1	25.70	15.40	9200	11000	0.288
6208	40	80	18	1.1	29.10	17.80	8300	10000	0.366
6209	45	85	19	1.1	32.70	20.30	7700	9200	0.407
6210	50	90	20	1.1	35.10	23.30	7100	8500	0.463
6211	55	100	21	1.5	43.40	29.40	6300	7600	0.607
6212	60	110	22	1.5	52.40	36.20	5700	6900	0.783
6213	65	120	23	1.5	57.20	40.10	5400	6400	0.990
6214	70	125	24	1.5	62.20	44.10	5100	6100	1.070
6215	75	130	25	1.5	67.40	48.30	4800	5800	1.180
6216	80	140	26	2.0	72.70	53	4500	5400	1.400
6217	85	150	28	2.0	84.00	61.9	4200	5000	1.790
6218	90	160	30	2.0	96.10	71.5	3900	4700	2.150
6219	95	170	32	2.1	109.00	81.9	3700	4400	2.620
6220	100	180	34	2.1	122.00	93.1	3500	4200	3.140
6221	105	190	36	2.1	133.00	105	3300	3900	3.700
6222	110	200	38	2.1	144.00	117	3100	3700	4.360

Deep Groove Ball Bearings



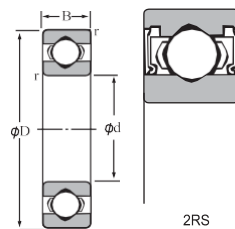
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	
6300	10	35	11	0.6	8.10	3.45	22000	27000	0.053
6301	12	37	12	1.0	9.70	4.20	20000	25000	0.060
6302	15	42	13	1.0	11.40	5.45	17000	20000	0.082
6303	17	47	14	1.0	13.60	6.65	15000	18000	0.115
6304	20	52	15	1.1	15.90	7.85	14000	17000	0.144
63/22	22	56	16	1.1	18.50	9.40	13000	15000	0.201
6305	25	62	17	1.1	20.60	11.30	11000	13000	0.232
63/28	28	68	18	1.1	23.50	13.10	10000	12000	0.328
6306	30	72	19	1.1	26.70	15.00	9600	12000	0.346
63/32	32	75	20	1.1	30.1	16.20	9300	11000	0.437
6307	35	80	21	1.5	33.40	19.30	8500	10000	0.457
6308	40	90	23	1.5	40.70	24.00	7700	9200	0.633
6309	45	100	25	1.5	48.90	29.50	6800	8100	0.833
6310	50	110	27	2.0	62.00	38.30	6100	7300	1.070
6311	55	120	29	2.0	71.60	45.00	5600	6700	1.370
6312	60	130	31	2.1	81.90	52.20	5200	6200	1.700
6313	65	140	33	2.1	92.70	59.90	4800	5800	2.080
6314	70	150	35	2.1	104.00	68.20	4500	5400	2.520
6315	75	160	37	2.1	113.00	77.20	4200	5000	3.020
6316	80	170	39	2.1	123.00	86.70	3900	4700	3.590
6317	85	180	41	3.0	133.00	96.80	3700	4400	4.230
6318	90	190	43	3.0	143.00	107.00	3500	4200	4.910
6319	95	200	45	3.0	153.00	119.00	3300	4000	5.670
6320	100	215	47	3.0	173.00	141.00	3000	3600	7.000
6321	105	225	49	3.0	184.00	153.00	2900	3500	8.050
6322	110	240	50	3.0	205.00	180	2700	3200	9.540

Deep Groove Ball Bearings



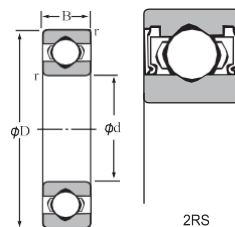
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	
6403	17	62	17	1.1	20.70	9.85	13000	15000	0.270
6404	20	72	19	1.1	31.00	15.20	11000	13000	0.400
6405	25	80	21	1.5	36.10	19.40	9100	11000	0.530
6406	30	90	23	1.5	43.40	23.90	8100	9700	0.735
6407	35	100	25	1.5	55.00	31.00	7200	8600	0.952
6408	40	110	27	2.0	63.70	36.60	6600	7900	1.230
6409	45	120	29	2.0	77.20	45.10	6000	7200	1.530
6410	50	130	31	2.1	83.00	49.50	5500	6600	1.880
6411	55	140	33	2.1	100.00	62.30	5000	6000	2.290
6412	60	150	35	2.1	110.00	70.80	4600	5500	2.770
6413	65	160	37	2.1	118.00	79.20	4300	5200	3.300
6414	70	180	42	3.0	144.00	104.00	3900	4600	4.830
6415	75	190	45	3.0	154.00	115.00	3600	4400	5.870

Deep Groove Ball Bearings



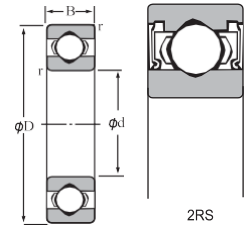
BEARING NUMBER	NOMINAL DIMENSIONS[mm]			LOAD RATING(kN)		LIMITING SPEED(RPM)		WEIGHT KG
	d	D	B	Dynamic C	Stactic Co	Grease Lube		
62200 2RS	10	30	14	5.1	2.4	17000	0.04	
62201 2RS	12	32	14	6.1	2.8	15000	0.05	
62202 2RS	15	35	14	7.8	3.6	13000	0.05	
62203 2RS	17	40	16	9.6	4.6	12000	0.08	
62204 2RS	20	47	18	12.8	6.7	10000	0.13	
62205 2RS	25	52	18	14.0	7.9	8500	0.15	
62206 2RS	30	62	20	19.5	11.3	7500	0.24	
62207 2RS	35	72	23	25.7	15.3	6300	0.37	
62208 2RS	40	80	23	29.1	17.8	5600	0.44	
62209 2RS	45	85	23	32.5	20.4	5000	0.48	
62210 2RS	50	90	23	35.0	23.2	4800	0.52	

Deep Groove Ball Bearings



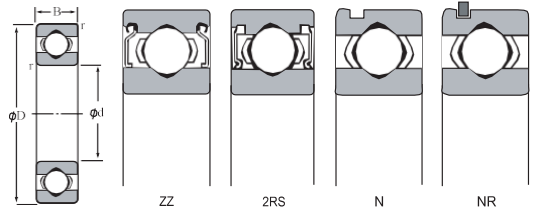
BEARING NUMBER	NOMINAL DIMENSIONS[mm]			LOAD RATING(kN)		LIMITING SPEED(RPM)	
	d	D	B	Dynamic C	Stactic Co	Grease Lube	WEIGHT KG
62300 2RS	10	35	17	8.2	3.5	15000	0.06
62301 2RS	12	37	17	9.7	4.2	14000	0.07
62302 2RS	15	42	17	11.4	5.5	12000	0.11
62303 2RS	17	47	19	13.5	6.6	11000	0.15
62304 2RS	20	52	21	15.9	7.9	9500	0.20
62305 2RS	25	62	24	21.2	10.9	7500	0.32
62306 2RS	30	72	27	26.7	15.0	6300	0.48
62307 2RS	35	80	31	33.5	19.1	6000	0.66
62308 2RS	40	90	33	40.5	24.0	5000	0.89
62309 2RS	45	100	36	53.0	32.0	4500	1.15
62310 2RS	50	110	40	62.0	38.5	4300	1.55

Deep Groove Ball Bearings



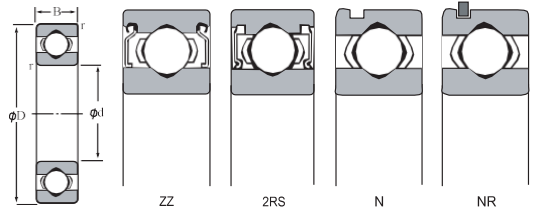
BEARING NUMBER	NOMINAL DIMENSIONS[mm]			LOAD RATING(kN)		LIMITING SPEED(RPM)	
	d	D	B	Dynamic	Stactic	Grease	WEIGHT
				C	Co	Lube	KG
63000 2RS	10	26	12	4.62	2.00	19000	0.025
63001 2RS	12	28	12	5.10	2.39	17000	0.029
63002 2RS	15	32	13	5.60	2.84	14000	0.039
63003 2RS	17	35	14	6.80	3.35	13000	0.052
63004 2RS	20	42	16	9.40	5.05	11000	0.086
63005 2RS	25	47	16	10.10	5.85	9500	0.100
63006 2RS	30	55	19	13.20	8.30	8000	0.160
63007 2RS	35	62	20	16.00	10.30	7000	0.210
63008 2RS	40	68	21	16.80	11.50	6300	0.260
63009 2RS	45	75	23	21.00	15.10	5600	0.340
63010 2RS	50	80	23	21.80	16.60	5000	0.370

Deep Groove Ball Bearings Inch



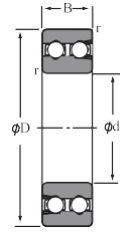
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	
RMS4	12.700	41.275	15.875	1.6	9.460	4.413	0.100
RMS 5	15.875	46.038	15.875	1.6	11.570	5.540	0.110
RMS 6	19.050	50.800	17.462	1.6	13.820	6.810	0.160
RMS 7	22.225	57.150	17.462	1.6	18.530	9.750	0.200
RMS 8	25.400	63.500	19.050	2.4	20.590	11.270	0.250
RMS 9	28.575	71.438	20.638	2.4	26.670	15.000	0.380
RMS 10	31.750	79.375	22.225	2.4	30.010	17.160	0.510
RMS 11	34.925	88.900	22.225	2.4	36.970	21.570	0.610
RMS 12	38.100	95.250	23.812	2.4	44.710	26.570	0.770
RMS 13	41.275	101.600	23.812	2.4	48.830	29.510	0.900
RMS 14	44.450	107.950	26.988	2.4	57.460	35.200	1.040
RMS 15	47.625	114.300	26.988	2.4	61.980	38.240	1.220
RMS 16	50.800	114.300	26.988	2.4	61.980	38.240	1.220
RMS 18	57.150	127.000	31.750	3.2	71.880	45.600	1.720
RMS 20	63.500	139.700	31.750	3.2	92.670	59.920	2.060

Deep Groove Ball Bearings Inch



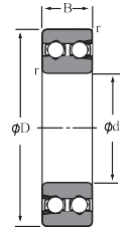
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	
RLS 4	12.700	33.338	9.525	0.8	6.790	3.040	0.030
RLS 5	15.875	39.688	11.112	0.8	9.560	4.550	0.060
RLS 6	19.050	47.625	14.288	1.6	12.837	6.170	0.110
RLS 7	22.225	50.800	14.288	1.6	12.964	6.170	0.130
RLS 8	25.400	57.150	15.875	1.6	13.229	6.880	0.170
RLS 9	28.575	63.500	15.875	1.6	19.470	10.100	0.210
RLS 10	31.750	69.850	17.462	1.6	19.480	13.030	0.280
RLS 11	34.925	76.200	17.462	2.0	25.680	18.030	0.370
RLS 12	38.100	82.550	19.050	2.4	29.110	15.640	0.470
RLS 13	41.275	88.900	19.050	2.4	32.650	20.300	0.525
RLS 14	44.450	95.250	20.638	2.4	35.100	23.240	0.665
RLS 15	47.625	101.600	20.638	2.4	39.120	26.470	0.743
RLS 16	50.800	101.600	20.638	2.4	39.120	26.470	0.700
RLS 18	57.150	114.300	22.225	2.4	52.460	36.180	0.970
RLS 20	63.500	127.000	23.812	2.4	63.050	44.030	1.250

Double row Deep Groove Ball Bearings



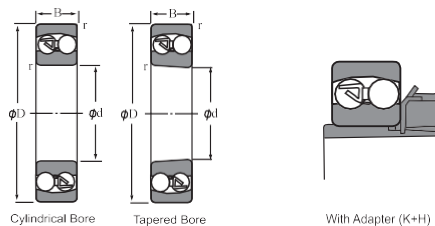
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	Oil Lube	Grease Lube	
4200	10	30	14	0.6	7.7	5.9	20000	15000	0.049
4201	12	32	14	0.6	7.75	6.15	18000	14000	0.053
4202	15	35	14	0.6	9.75	9	16000	12000	0.059
4203	17	40	16	0.6	11.7	10.4	14000	11000	0.090
4204	20	47	18	1	16.4	16	12000	9000	0.140
4205	25	52	18	1	16.3	16.9	9900	7500	0.160
4206	30	62	20	1	22	24.7	8500	6400	0.260
4207	35	72	23	1.1	26.4	30.7	7400	5600	0.46
4208	40	80	23	1.1	33.7	42.4	6300	4700	0.558
4209	45	85	23	1.1	31.9	43.9	6100	4600	0.605
4210	50	90	23	1.1	31.4	44.6	5600	4200	0.651
4211	55	100	25	1.5	37.2	54.1	5000	3800	0.882
4212	60	110	28	1.5	47.9	67.6	4700	3500	1.2
4213	65	120	31	1.5	54.7	78.5	4300	3200	1.59
4214	70	125	31	1.5	62.1	89.8	4100	3100	1.68
4215	75	130	31	1.5	61.6	90.7	3900	2900	1.77

Double row Deep Groove Ball Bearings



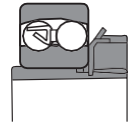
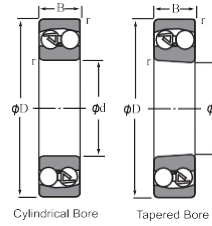
BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	Oil Lube	Grease Lube	
4302	15	42	17	1	13.1	11.7	14000	11000	0.123
4303	17	47	19	1	16.5	15	13000	9400	0.171
4304	20	52	21	1.1	19.5	17	11000	8300	0.227
4305	25	62	24	1.1	26.3	25.7	9000	6700	0.365
4306	30	72	27	1.1	35.5	35.9	7600	5700	0.542
4307	35	80	31	1.5	40.6	41.8	7000	5200	0.752
4308	40	90	33	1.5	46	48.8	6100	4600	1.01
4309	45	100	36	1.5	57.6	62.4	5500	4100	1.35
4310	50	110	40	2	70.4	77.7	5000	3700	1.8
4311	55	120	43	2	84.2	94.4	4600	3400	2.29
4312	60	130	46	2.1	99.2	113	4200	3100	2.87
4313	65	140	48	2.1	107	124	3900	2900	3.46
4314	70	150	51	2.1	115	136	3600	2700	4.21
4315	75	160	55	2.1	132	158	3400	2500	5.15

Self-Aligning Ball Bearings



BEARINGNUMBER			NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)			LIMITING SPEED(RPM)		Weight of
Cylindrical Bore	Tapered Bore	Tapered Bore	d	D	B	r	C	Co	Lube	Oil	bearing	
Bore	Bore	with adapter									KG	
1200	1200K	1200 K+H	10	30	9	0.6	5.50	1.20	23000	28000	0.034	
1201	1201K	1201 K+H	12	32	10	0.6	5.60	1.25	21000	26000	0.040	
1202	1202K	1202 K+H	15	35	11	0.6	7.45	1.75	18000	22000	0.049	
1203	1203K	1203 K+H	17	40	12	0.6	7.90	2.00	16000	20000	0.073	
1204	1204K	1204 K+H	20	47	14	1.0	9.90	2.60	14000	17000	0.120	
1205	1205K	1205 K+H	25	52	15	1.0	12.10	3.30	12000	14000	0.141	
1206	1206K	1206 K+H	30	62	16	1.0	15.60	4.65	9900	12000	0.220	
1207	1207K	1207 K+H	35	72	17	1.1	15.80	5.10	8500	10000	0.323	
1208	1208K	1208 K+H	40	80	18	1.1	19.20	6.50	7500	9200	0.417	
1209	1209K	1209 K+H	45	85	19	1.1	21.80	7.35	7000	8500	0.465	
1210	1210K	1210 K+H	50	90	20	1.1	22.70	8.10	6500	7900	0.525	
1211	1211K	1211 K+H	55	100	21	1.5	26.80	10.00	5800	7100	0.705	
1212	1212K	1212 K+H	60	110	22	1.5	30.20	11.50	5200	6400	0.900	
1213	1213K	1213 K+H	65	120	23	1.5	31.00	12.50	4800	5800	1.150	
1214	1214K	1214 K+H	70	125	24	1.5	34.60	13.80	4600	5700	1.260	
1215	1215K	1215 K+H	75	130	25	1.5	38.80	15.70	4300	5300	1.360	
1216	1216K	1216 K+H	80	140	26	2.0	39.80	17.00	4000	4900	1.670	
1217	1217K	1217 K+H	85	150	28	2.0	49.20	20.80	3800	4600	2.070	
1218	1218K	1218 K+H	90	160	30	2.0	56.80	23.40	3500	4300	2.520	
1219	1219K	1219 K+H	95	170	32	2.1	57.00	24.30	3300	4000	3.100	
1220	1220K	1220 K+H	100	180	34	2.1	69.00	29.70	3100	3800	3.700	

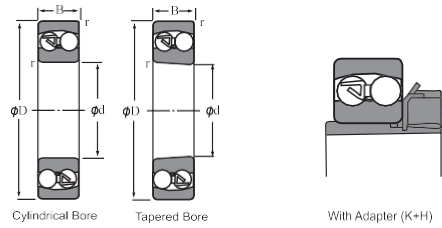
Self-Aligning Ball Bearings



With Adapter (K+H)

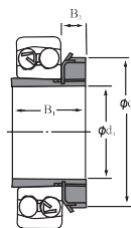
BEARINGNUMBER			NOMINAL DIMENSIONS[mm]					LOAD RATING(kN)			LIMITING SPEED(RPM)		Weight of
Cylindrical Bore	Tapered Bore	Tapered Bore							Dynamic	Stactic	Grease	Oil	bearing
Bore	Bore	with adapter	d	D	B	r	C	Co	Lube	Lube	KG		
1300	1300K	1300	K+H	10	35	11	0.6	7.25	1.60	20000	24000	0.058	
1301	1301K	1301	K+H	12	37	12	1.0	9.40	2.15	18000	22000	0.067	
1302	1302K	1302	K+H	15	42	13	1.0	9.55	2.30	16000	20000	0.094	
1303	1303K	1303	K+H	17	47	14	1.0	12.50	3.20	14000	17000	0.130	
1304	1304K	1304	K+H	20	52	15	1.1	12.40	3.30	13000	15000	0.163	
1305	1305K	1305	K+H	25	62	17	1.1	18.00	5.00	9900	12000	0.257	
1306	1306K	1306	K+H	30	72	19	1.1	21.30	6.30	8700	11000	0.387	
1307	1307K	1307	K+H	35	80	21	1.5	25.1	7.85	7600	9300	0.510	
1308	1308K	1308	K+H	40	90	23	1.5	29.5	9.7	6900	8400	0.715	
1309	1309K	1309	K+H	45	100	25	1.5	38.1	12.7	6100	7500	0.957	
1310	1310K	1310	K+H	50	110	27	2.0	43.40	14.10	5600	6800	1.210	
1311	1311K	1311	K+H	55	120	29	2.0	51.30	17.90	5000	6200	1.580	
1312	1312K	1312	K+H	60	130	31	2.1	57.20	20.80	4500	5500	1.960	
1313	1313K	1313	K+H	65	140	33	2.1	61.70	22.90	4300	5200	2.450	
1314	1314K	1314	K+H	70	150	35	2.1	74.00	27.70	4000	4900	2.990	
1315	1315K	1315	K+H	75	160	37	2.1	78.90	29.90	4000	4900	3.560	
1316	1316K	1316	K+H	80	170	39	2.1	88.10	33.10	3500	4300	4.180	
1317	1317K	1317	K+H	85	180	41	3.0	97.30	37.80	3300	4000	4.980	
1318	1318K	1318	K+H	90	190	43	3.0	116.00	44.40	3100	3800	5.800	
1319	1319K	1319	K+H	95	200	45	3.0	132.00	50.80	2900	3600	6.690	
1320	1320K	1320	K+H	100	215	47	3.0	143.00	57.30	2800	3400	8.300	

Self-Aligning Ball Bearings



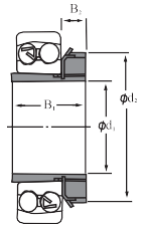
BEARINGNUMBER		NOMINALDIMENSIONS[mm]				LOADRATING(kN)		LIMITINGSPEED(RPM)		Weight
Cylindrical Bore	Tapered Bore	d	D	B	r	Dynamic	Stactic	Grease	Oil	KG
						C	Co	Lube	Lube	
2200	2200 K	10	30	14	0.6	7.40	1.60	23000	29000	0.047
2201	2201 K	12	32	14	0.6	7.65	1.75	21000	26000	0.053
2202	2202 K	15	35	14	0.6	7.70	1.85	18000	22000	0.060
2203	2203 K	17	40	16	0.6	9.80	2.40	16000	20000	0.088
2204	2204 K	20	47	18	1.0	12.60	3.30	14000	17000	0.140
2205	2205 K	25	52	18	1.0	12.60	3.50	12000	15000	0.163
2206	2206 K	30	62	20	1.0	15.60	4.65	10000	12000	0.260
2207	2207 K	35	72	23	1.1	21.60	6.60	8500	10000	0.403
2208	2208 K	40	80	23	1.1	22.40	7.40	7600	9300	0.505
2209	2209 K	45	85	23	1.1	23.30	8.15	7000	8500	0.545
2210	2210 K	50	90	23	1.1	23.30	8.50	6500	7900	0.590
2211	2211 K	55	100	25	1.5	26.80	10.00	5800	7100	0.810
2212	2212 K	60	110	28	1.5	34.10	12.60	5300	6500	1.090

Adapter Assemblies



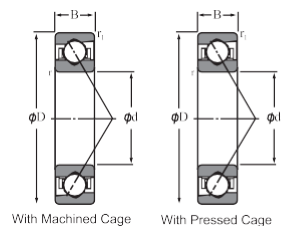
ADAPTER NUMBER	NOMINAL DIMENSIONS [mm]				BEARING BORE	BEARING	WEIGHT KG
	d_1	B_1	d_2	B_2			
H204	17	24	32	7	20	1204K	0.041
H205	20	26	38	8	25	1205K	0.070
H206	25	27	45	8	30	1206K	0.099
H207	30	29	52	9	35	1207K	0.125
H208	35	31	58	10	40	1208K	0.174
H209	40	33	65	11	45	1209K	0.227
H210	45	35	70	12	50	1210K	0.274
H211	50	37	75	12	55	1211K	0.308
H212	55	38	80	13	60	1212K	0.346
H213	60	40	85	14	65	1213K	0.401
H214	60	41	92	14	70	1214K	0.593
H215	65	43	98	15	75	1215K	0.707
H216	70	46	105	17	80	1216K	0.882
H217	75	50	110	18	85	1217K	1.020
H218	80	52	120	18	90	1218K	1.190
H219	85	55	125	19	95	1219K	1.370
H220	90	58	130	20	100	1220K	1.490

Adapter Assemblies



ADAPTER NUMBER	NOMINAL DIMENSIONS[mm]				BEARING BORE d	BEARING		WEIGHT KG
	d ₁	B ₁	d ₂	B ₂				
H304	17	28	32	7	20	2204K	1304K	0.045
H305	20	29	38	8	25	2205K	1305K	0.075
H306	25	31	45	8	30	2206K	1306K	0.109
H307	30	35	52	9	35	2207K	1307K	0.142
H308	35	36	58	10	40	2208K	1308K	0.189
H309	40	39	65	11	45	2209K	1309K	0.248
H310	45	42	70	12	50	2210K	1310K	0.303
H311	50	45	75	12	55	2211K	1311K	0.345
H312	55	47	80	13	60	2212K	1312K	0.394
H313	60	50	85	14	65	2213K	1313K	0.458
H314	60	52	92	14	70	2214K	1313K	0.723
H315	65	55	98	15	75	2215K	1315K	0.831
H316	70	59	105	17	80	2216K	1316K	1.030
H317	75	63	110	18	85	2217K	1317K	1.180
H318	80	65	120	18	90	2218K	1318K	1.370
H319	85	68	125	19	95	2219K	1319K	1.560
H320	90	71	130	20	100	2220K	1320K	1.690

Single Row Angular Contact Ball Bearings



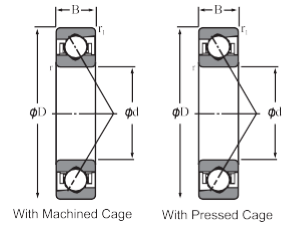
BEARING NUMBER	NOMINAL DIMENSIONS[mm]					LOAD RATING(kN)				LIMITING SPEED(RPM)		Weight KG
						With Machined Cage		With Pressed Cage		Grease	Oil	
	d	D	B	r	r ₁	C	C ₀	C	C ₀	Lube	Lube	
7200B	10	30	9	0.6	0.3	4.30	2.00	4.95	2.50	22000	29000	0.031
7201B	12	32	10	0.6	0.3	6.95	3.40	7.40	3.75	20000	27000	0.038
7202B	15	35	11	0.6	0.3	7.45	3.95	7.45	3.95	18000	24000	0.048
7203B	17	40	12	0.6	0.3	9.35	5.05	9.35	5.05	16000	21000	0.070
7204B	20	47	14	1.0	0.6	13.30	7.70	14.10	8.40	13000	17000	0.112
7205B	25	52	15	1.0	0.6	14.00	8.70	14.70	9.40	12000	15000	0.135
7206B	30	62	16	1.0	0.6	19.40	12.50	20.50	13.60	9600	13000	0.208
7207B	35	72	17	1.1	0.6	25.60	17.00	27.00	18.50	8300	11000	0.295
7208B	40	80	18	1.1	0.6	30.6	21.3	32.1	23.0	7500	10000	0.382
7209B	45	85	19	1.1	0.6	34.3	24.3	36.1	26.1	7000	9400	0.430
7210B	50	90	20	1.1	0.6	35.7	26.7	37.4	28.6	6400	8500	0.485
7211B	55	100	21	1.5	1.0	44.1	33.8	46.2	36.2	5700	7600	0.635
7212B	60	110	22	1.5	1.0	53.4	41.6	55.9	44.6	5100	6900	0.820
7213B	65	120	23	1.5	1.0	60.9	49.3	63.6	52.6	4800	6400	1.020
7214B	70	125	24	1.5	1.0	63.2	50.6	69.1	57.8	4600	6100	1.120
7215B	75	130	25	1.5	1.0	71.7	59.3	74.9	63.3	4300	5800	1.230

Rotational speed limits shown applicable for machined cage bearings only.

Rotational speed limits of pressed cage bearings to be kept under 80% of this value.

This speed limit is in case of 15° contact angle is applicable for bearings higher than class 5, Suffix B indicates the contact angle is 40°, Suffix C indicates the contact angle is 30° and no suffix indicates the contact angle is 15°

Single Row Angular Contact Ball Bearings



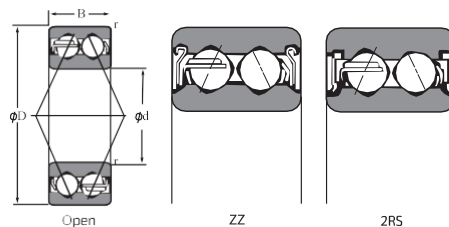
BEARING NUMBER	NOMINAL DIMENSIONS[mm]					LOAD RATING(kN)				LIMITING SPEED(RPM)		Weight KG
						With Machined Cage		With Pressed Cage		Grease	Oil	
	d	D	B	r	r ₁	C	Co	C	Co	Lube	Lube	
7300B	10	35	11	0.6	0.3	8.5	3.75	9.3	4.3	27000	33000	0.054
7301B	12	37	12	1	0.6	10.2	4.6	11.2	5.25	24000	31000	0.065
7302B	15	42	13	1	0.6	12.5	6.45	13.4	7.2	20000	25000	0.088
7303B	17	47	14	1	0.6	13.8	7.3	14.8	8.1	14000	18000	0.120
7304B	20	52	15	1.1	0.6	16.2	8.7	17.3	9.65	13000	17000	0.150
7305B	25	62	17	1.1	0.6	22.9	13.3	24.4	14.6	10000	14000	0.243
7306B	30	72	19	1.1	0.6	27.6	17.4	29.3	19	8700	12000	0.362
7307B	35	80	21	1.5	1	32.5	20.2	36.6	24.3	7700	10000	0.475
7308B	40	90	23	1.5	1	39.7	25.2	44.8	30.3	6900	9200	0.657
7309B	45	100	25	1.5	1	50.6	34.1	53.6	37.2	6200	8200	0.875
7310B	50	110	27	2	1	64.4	44.3	68.2	48.3	5500	7300	1.140
7311B	55	120	29	2	1	74.3	52	78.7	56.7	5000	6700	1.450
7312B	60	130	31	2.1	1.1	84.9	60.3	90	65.8	4600	6200	1.810
7313B	65	140	33	2.1	1.1	96.1	69.3	102	75.6	4300	5800	2.220
7314B	70	150	35	2.1	1.1	108	78.9	114	86	4000	5400	2.700
7315B	75	160	37	2.1	1.1	118	89.2	125	97.3	3800	5000	3.150

Rotational speed limits shown applicable for machined cage bearings only.

Rotational speed limits of pressed cage bearings to be kept under 80% of this value.

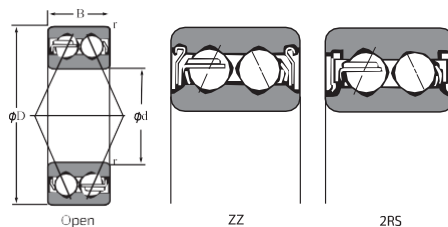
This speed limit is in case of 15° contact angle is applicable for bearings higher than class 5, Suffix B indicates the contact angle is 40°, Suffix C indicates the contact angle is 30° and no suffix indicates the contact angle is 15°

Double Row Angular Contact Ball Bearings



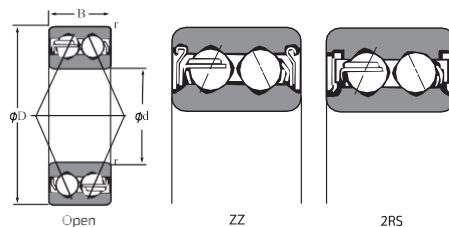
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	B	r	Dynamic	Stactic	Grease	Oil	
					C	Co	Lube	Lube	
3200	10	30	14.3	0.6	7.35	5.35	15000	20000	0.052
3201	12	32	15.9	0.6	9.70	7.15	14000	18000	0.063
3202	15	35	15.9	0.6	9.70	7.45	12000	16000	0.072
3203	17	40	17.5	0.6	13.80	10.80	11000	14000	0.100
3204	20	47	20.6	1.0	17.20	15.00	9000	12000	0.170
3205	25	52	20.6	1.0	18.90	18.20	7800	10000	0.190
3206	30	62	23.8	1.0	27.30	27.00	6500	8700	0.320
3207	35	72	27	1.1	36.80	37.50	5600	7500	0.480
3208	40	80	30.2	1.1	42.00	43.90	5000	6700	0.650
3209	45	85	30.2	1.1	45.40	51.40	4600	6100	0.710
3210	50	90	30.2	1.1	45.10	52.10	4300	5700	0.760
3211	55	100	33.3	1.5	50.90	60.20	3900	5100	1.050
3212	60	110	36.5	1.5	64.00	76.80	3500	4700	1.400
3213	65	120	38.1	1.5	76.40	97.40	3200	4300	1.750
3214	70	125	39.7	1.5	77.90	96.40	3100	4100	1.920
3215	75	130	41.3	1.5	92.40	120.00	2900	3900	2.100
3216	80	140	44.4	2.0	97.50	121.00	2700	3600	2.640
3217	85	150	49.2	2.0	114.00	143.00	2500	3400	3.390
3218	90	160	52.4	2.0	132.00	167.00	2400	3100	4.140

Double Row Angular Contact Ball Bearings



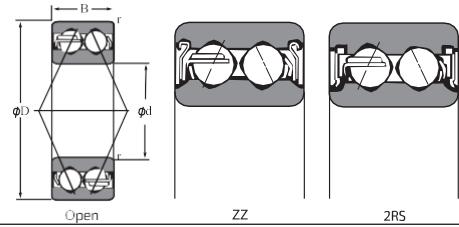
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	B	r	Dynamic	Stactic	Grease	Oil	
					C	Co	Lube	Lube	
3302	15	42	19.0	1.0	15.20	11.90	10000	14000	0.132
3303	17	47	22.2	1.0	21.70	17.10	9400	13000	0.192
3304	20	52	22.2	1.1	20.80	18.40	8200	11000	0.230
3305	25	62	25.4	1.1	28.90	26.50	6800	9100	0.369
3306	30	72	30.2	1.1	38.10	36.10	5800	7800	0.585
3307	35	80	34.9	1.5	48.60	46.80	5200	7000	0.816
3308	40	90	36.5	1.5	54.10	53.80	4600	6100	1.070
3309	45	100	39.7	1.5	66.10	67.30	4100	5500	1.420
3310	50	110	44.4	2.0	86.10	88.60	3800	5000	1.950
3311	55	120	49.2	2.0	101.00	106.00	3400	4500	2.530
3312	60	130	54.0	2.1	125.00	132.00	3100	4200	3.240
3313	65	140	58.7	2.1	142.00	153.00	2900	3900	4.080
3314	70	150	63.5	2.1	151.00	160.00	2700	3600	5.040
3315	75	160	68.3	2.1	169.00	189.00	2500	3300	6.160
3316	80	170	68.3	2.1	184.00	213.00	2400	3100	6.930
3317	85	180	73.0	3.0	188.00	219.00	2200	3000	8.300
3318	90	190	73.0	3.0	205.00	242.00	2100	2800	9.230

Double Row Angular Contact Ball Bearings



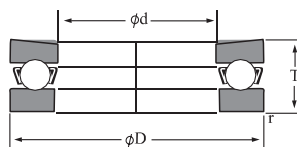
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)				LIMITING SPEED(RPM)			WEIGHT KG
					Open		Shielded / Sealed		Grease Lube	Oil Lube		
	d	D	B	r	Dynamic C	Stactic Co	Dynamic C	Stactic Co				
5203	17	40	17.5	0.6	13.20	8.15	12.70	8.35	11000	14000	0.091	
5204	20	47	20.6	1.0	19.70	12.60	16.00	10.80	8800	12000	0.120	
5205	25	52	20.6	1.0	21.40	14.80	18.90	13.80	7700	10000	0.190	
5206	30	62	23.8	1.0	29.70	21.30	25.40	18.30	6400	8600	0.290	
5207	35	72	27	1.1	39.20	29.00	31.70	24.60	5500	7300	0.430	
5208	40	80	30.2	1.1	44.40	33.60	36.50	29.10	5000	6700	0.570	
5209	45	85	30.2	1.1	49.90	38.40	41.70	33.90	4600	6100	0.620	
5210	50	90	30.2	1.1	53.30	43.60	44.10	37.90	4300	5600	0.670	
5211	55	100	33.3	1.5	65.90	55.20	52.90	44.70	3800	5100	0.960	
5212	60	110	36.5	1.5	74.40	60.80	62.60	55.90	3500	4700	1.360	
5213	65	120	38.1	1.5	86.90	75.30	69.20	63.10	3200	4300	1.660	
5214	70	125	39.7	1.5	94.50	82.60	76.30	70.30	3100	4100	1.810	

Double Row Angular Contact Ball Bearings



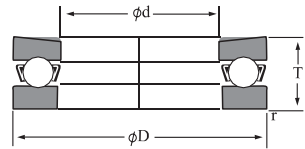
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)				LIMITING SPEED(RPM)		WEIGHT KG
					Open		Shielded / Sealed		Grease Lube	Oil Lube	
d	D	B	r	Dynamic C	Stactic Co	Dynamic C	Stactic Co				
5304	20	52	22.2	1.1	24.70	15.00	19.80	12.80	8300	11000	0.230
5305	25	62	25.4	1.1	32.70	20.80	27.50	18.50	6900	9200	0.340
5306	30	72	30.2	1.1	41.00	28.50	34.30	25.20	5800	7700	0.510
5307	35	80	34.9	1.5	51.20	36.20	46.10	32.80	5100	6800	0.790
5308	40	90	36.5	1.5	62.70	45.40	51.40	37.80	4600	6100	1.050
5309	45	100	39.7	1.5	75.10	55.70	68.90	51.40	4100	5500	1.420
5310	50	110	44.4	2.0	88.50	67.00	81.80	62.20	3600	4800	1.930
5311	55	120	49.2	2.0	110.00	85.10	95.70	74.30	3300	4500	2.300
5312	60	130	54	2.1	126.00	98.70	110.00	87.10	3100	4100	3.160
5313	65	140	58.7	2.1	142.00	113.00	142.00	113.00	2900	3900	3.910
5314	70	150	63.5	2.1	160.00	129.00	160.00	129.00	2700	3600	4.890
5315	75	160	68.3	2.1	174.00	147.00	174.00	147.00	2500	3300	5.970

Single Direction Thrust Ball Bearings



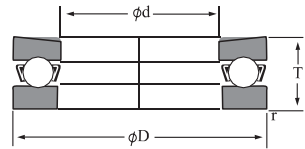
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	
51100	10	24	9	0.3	10.00	14.00	6500	10000	0.020
51101	12	26	9	0.3	10.30	15.40	6500	10000	0.022
51102	15	28	9	0.3	10.50	16.80	6100	9400	0.024
51103	17	30	9	0.3	10.80	18.20	6100	9400	0.028
51104	20	35	10	0.3	14.20	24.70	5100	7900	0.040
51105	25	42	11	0.6	19.50	37.20	4400	6800	0.059
51106	30	47	11	0.6	20.40	42.20	4300	6600	0.068
51107	35	52	12	0.6	20.40	44.70	3900	6000	0.090
51108	40	60	13	0.6	26.90	62.80	3400	5300	0.120
51109	45	65	14	0.6	27.80	69.10	3200	5000	0.150
51110	50	70	14	0.6	28.80	75.4	3100	4800	0.160
51111	55	78	16	0.6	34.80	93.10	2800	4300	0.240
51112	60	85	17	1.0	41.40	113.00	2600	4000	0.290
51113	65	90	18	1.0	41.70	117.00	2400	3700	0.340
51114	70	95	18	1.0	43.00	125.00	2300	3600	0.360
51115	75	100	19	1.0	43.20	127.00	2200	3400	0.420
51116	80	105	19	1.0	44.60	141.00	2100	3300	0.430
51117	85	110	19	1.0	45.90	150.00	2100	3200	0.460
51118	90	120	22	1.0	59.70	190.00	1900	2900	0.680
51120	100	135	25	1	85	268	1600	2500	0.990

Single Direction Thrust Ball Bearings



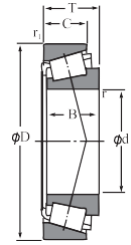
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		
	d	D	T	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	Weight KG
51200	10	26	11	0.6	12.70	17.10	5700	8800	0.030
51201	12	28	11	0.6	13.20	19.00	5400	8300	0.034
51202	15	32	12	0.6	16.60	24.80	4900	7500	0.046
51203	17	35	12	0.6	17.20	27.30	4900	7500	0.053
51204	20	40	14	0.6	22.30	37.70	3900	6000	0.082
51205	25	47	15	0.6	27.80	50.40	3600	5500	0.120
51206	30	52	16	0.6	29.30	58.20	3400	5200	0.150
51207	35	62	18	1.0	39.20	78.20	2900	4500	0.220
51208	40	68	19	1.0	46.90	98.30	2700	4200	0.270
51209	45	73	20	1.0	47.70	105.00	2600	4000	0.320
51210	50	78	22	1.0	48.50	111.00	2300	3600	0.390
51211	55	90	25	1.0	69.40	159.00	2100	3200	0.610
51212	60	95	26	1.0	73.60	179.00	1900	3000	0.690
51213	65	100	27	1.0	74.80	189.00	1900	2900	0.770
51214	70	105	27	1.0	73.60	189.00	1800	2800	0.810
51215	75	110	27	1.0	77.40	209.00	1800	2700	0.860
51216	80	115	28	1.0	78.50	218.00	1700	2600	0.950
51217	85	125	31	1.0	92.30	251.00	1500	2300	1.290
51218	90	135	35	1.1	117.00	326.00	1400	2100	1.770
51220	100	150	38	1.1	147	410	1200	1900	2.360

Single Direction Thrust Ball Bearings



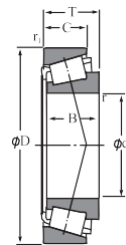
BEARING NUMBER	NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	r	Dynamic C	Stactic Co	Grease Lube	Oil Lube	
51305	25	52	18	1	35.7	61.4	3100	4800	0.18
51306	30	60	21	1	42.8	78.7	2700	4200	0.27
51307	35	68	24	1	55.5	105	2400	3700	0.39
51308	40	78	26	1	69.3	135	2100	3300	0.55
51309	45	85	28	1	80	163	1900	3000	0.69
51310	50	95	31	1.1	91.6	186	1800	2700	1
51311	55	105	35	1.1	119	246	1600	2400	1.34
51312	60	110	35	1.1	124	267	1500	2300	1.43
51313	65	115	36	1.1	128	287	1400	2200	1.57
51314	70	125	40	1.1	148	339	1300	2000	2.06
51315	75	135	44	1.5	171	396	1200	1900	2.68
51316	80	140	44	1.5	176	424	1200	1800	2.82
51317	85	150	49	1.5	206	489	1100	1700	3.66
51318	90	155	50	1.5	213	524	1000	1600	3.88
51320	100	170	55	1.5	236	596	940	1450	5.11

Taper Roller Bearings Metric



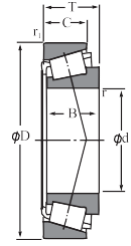
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(KN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Lube	Lube	
30202	15	35	11.75	11	10	0.6	0.6	14.9	13.4	12000	16000	0.053
30203	17	40	13.25	12	11	1	1	20.8	20.7	10000	14000	0.081
30204	20	47	15.25	14	12	1	1	27.0	27.2	8700	12000	0.127
30205	25	52	16.25	15	13	1	1	31.5	33.7	7800	10000	0.156
30206	30	62	17.25	16	14	1	1	41.5	44.8	6500	8700	0.236
30207	35	72	18.25	17	15	1.5	1.5	55.1	60.9	5600	7400	0.344
30208	40	80	19.75	18	16	1.5	1.5	62.9	69.2	5000	6700	0.434
30209	45	85	20.75	19	16	1.5	1.5	67.2	77.4	4600	6100	0.502
30210	50	90	21.75	20	17	1.5	1.5	76.5	91.7	4300	5700	0.566
30211	55	100	22.75	21	18	2	1.5	94.6	113.0	3900	5200	0.732
30212	60	110	23.75	22	19	2	1.5	106.0	127.0	3500	4700	0.945
30213	65	120	24.75	23	20	2	1.5	128.0	156.0	3200	4300	1.180
30214	70	125	26.25	24	21	2	1.5	138.0	173.0	3100	4100	1.320
30215	75	130	27.25	25	22	2	1.5	142.0	181.0	2900	3900	1.420
30216	80	140	28.25	26	22	2.5	2	161.0	202.0	2700	3600	1.720
30217	85	150	30.5	28	24	2.5	2	182.0	231.0	2500	3400	2.170
30218	90	160	32.5	30	26	2.5	2	204.0	261.0	2400	3200	2.650
30219	95	170	34.5	32	27	3	2.5	231.0	299.0	2200	3000	3.200
30220	100	180	37	34	29	3	2.5	258.0	338.0	2100	2800	3.830
30221	105	190	39	36	30	3	2.5	288.0	380.0	2000	2600	4.490
30222	110	200	41	38	32	3	2.5	324.0	434.0	1900	2500	5.330

Taper Roller Bearings Metric



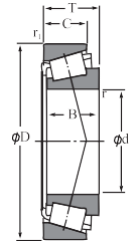
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(KN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Lube	Oil	
30302	15	42	14.25	13	11	1	1	21.9	19.2	10000	14000	0.098
30303	17	47	15.25	14	12	1	1	27.4	24.5	9200	12000	0.133
30304	20	52	16.25	16	13	1.5	1.5	36.2	35.1	8300	11000	0.179
30305	25	62	18.25	17	15	1.5	1.5	48.2	46.9	6800	9000	0.273
30306	30	72	20.75	19	16	1.5	1.5	59.6	60.1	5800	7700	0.411
30307	35	80	22.75	21	18	2	1.5	76.2	78.9	5200	6900	0.527
30308	40	90	25.25	23	20	2	1.5	90.6	101	4500	6100	0.757
30309	45	100	27.25	25	22	2	1.5	113	128	4100	5400	1.01
30310	50	110	29.25	27	23	2.5	2	137	152	3700	4900	1.32
30311	55	120	31.5	29	25	2.5	2	149	170	3300	4500	1.65
30312	60	130	33.5	31	26	3	2.5	173	201	3100	4100	2.08
30313	65	140	36	33	28	3	2.5	204	239	2800	3800	2.56
30314	70	150	38	35	30	3	2.5	230	273	2600	3500	3.08
30315	75	160	40	37	31	3	2.5	260	311	2500	3300	3.65
30316	80	170	42.5	39	33	3	2.5	294	355	2300	3100	4.46
30317	85	180	44.5	41	34	4	3	316	384	2200	2900	5.15
30318	90	190	46.5	43	36	4	3	345	420	2100	2700	6.04
30319	95	200	49.5	45	38	4	3	372	455	2000	2600	6.96
30320	100	215	51.5	47	39	4	3	422	521	1800	2400	8.49

Taper Roller Bearings Metric



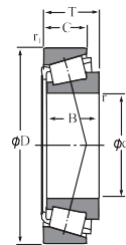
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Grease Lube	Oil Lube	
31305	25	62	18.25	17	13	1.5	1.5	40.7	46.0	5600	7500	0.297
31306	30	72	20.75	19	14	1.5	1.5	75.8	82.7	5300	7000	0.375
31307	35	80	22.75	21	15	2.0	1.5	58.1	64.0	4500	6000	0.525
31308	40	90	25.25	23	17	2.0	1.5	74.6	60.8	4000	5300	0.710
31309	45	100	27.25	25	18	2.0	1.5	88.9	97.1	3400	4500	0.955
31310	50	110	29.25	27	19	2.5	2.0	102.0	112.0	3200	4300	1.240
31311	55	120	31.50	29	21	2.5	2.0	118.0	133.0	2800	3800	1.540
31312	60	130	33.50	31	22	3.0	2.5	140.0	158.0	2600	3600	1.950
31313	65	140	36.00	33	23	3.0	2.5	164.0	189.0	2200	3200	2.410
31314	70	150	38.00	35	25	3.0	2.5	185.0	215.0	2000	3000	2.900
31315	75	160	40.00	37	26	3.0	2.5	213.0	251.0	1900	2800	3.450
31316	80	170	42.50	39	27	3.0	2.5	222.0	275.0	1900	2800	3.900
31317	85	180	44.50	41	28	4.0	3.0	245.0	298.0	1800	2600	4.900
31318	90	190	46.50	43	30	4.0	3.0	270.0	330.0	1700	2400	5.700
31319	95	200	49.50	45	32	4.0	3.0	300.0	365.0	1700	2400	6.700
31320	100	215	56.50	51	35	4.0	3.0	373.0	459.0	1500	2200	8.720

Taper Roller Bearings Metric



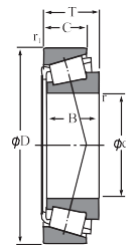
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Lube	Oil	
32004	20	42	15	15	12	0.6	0.6	27.3	31.5	9700	13000	0.102
32005	25	47	15	15	11.5	0.6	0.6	30.2	37.7	8300	11000	0.118
32006	30	55	17	17	13	1	1	38.2	48	7000	9400	0.177
32007	35	62	18	18	14	1	1	45.5	59.4	6200	8200	0.231
32008	40	68	19	19	14.5	1	1	53.5	71.4	5600	7400	0.282
32009	45	75	20	20	15.5	1	1	62.8	86.5	5000	6600	0.354
32010	50	80	20	20	15.5	1	1	65.7	94.5	4600	6100	0.389
32011	55	90	23	23	17.5	1.5	1.5	84.6	121	4100	5500	0.569
32012	60	95	23	23	17.5	1.5	1.5	86.1	127	3900	5200	0.621
32013	65	100	23	23	17.5	1.5	1.5	90	137	3600	4800	0.664
32014	70	110	25	25	19	1.5	1.5	108	163	3300	4400	0.884
32015	75	115	25	25	19	1.5	1.5	110	169	3100	4200	0.930
32016	80	125	29	29	22	1.5	1.5	147	225	2900	3900	1.320
32017	85	130	29	29	22	1.5	1.5	150	234	2800	3700	1.380
32018	90	140	32	32	24	2	1.5	178	276	2600	3500	1.800
32019	95	145	32	32	24	2	1.5	182	287	2500	3300	1.880
32020	100	150	32	32	24	2	1.5	185	298	2400	3200	1.950
32021	105	160	35	35	26	2.5	2	215	344	2200	3000	2.450
32022	110	170	38	38	29	2.5	2	248	395	2100	2800	3.120

Taper Roller Bearings Metric



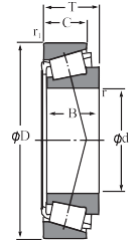
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(KN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Grease Lube	Oil Lube	
32203	17	40	17.25	16	14	1	1	27.4	27.5	10000	14000	0.104
32204	20	47	19.25	18	15	1	1	33.1	34.7	8900	12000	0.159
32205	25	52	19.25	18	16	1	1	39.8	44.8	7900	11000	0.188
32206	30	62	21.25	20	17	1	1	50.7	57.9	6500	8700	0.292
32207	35	72	24.25	23	19	1.5	1.5	69.6	82.4	5600	7500	0.453
32208	40	80	24.75	23	19	1.5	1.5	77.7	90.8	5000	6600	0.554
32209	45	85	24.75	23	19	1.5	1.5	84.2	104	4600	6100	0.597
32210	50	90	24.75	23	19	1.5	1.5	85	105	4300	5700	0.643
32211	55	100	26.75	25	21	2	1.5	107	133	3900	5200	0.863
32212	60	110	29.75	28	24	2	1.5	132	167	3500	4700	1.190
32213	65	120	32.75	31	27	2	1.5	157	203	3200	4300	1.580
32214	70	125	33.25	31	27	2	1.5	169	225	3100	4100	1.710
32215	75	130	33.25	31	27	2	1.5	174	234	2900	3900	1.770
32216	80	140	35.25	33	28	2.5	2	203	271	2700	3600	2.170
32217	85	150	38.5	36	30	2.5	2	232	315	2500	3400	2.800
32218	90	160	42.5	40	34	2.5	2	263	362	2400	3200	3.470
32219	95	170	45.5	43	37	3	2.5	311	439	2200	3000	4.340
32220	100	180	49	46	39	3	2.5	347	495	2100	2800	5.210
32221	105	190	53	50	43	3	2.5	392	567	2000	2700	6.370
32222	120	200	56	53	46	3	2.5	438	640	1900	2500	7.450
32224	140	215	61.5	58	50	3	2.5	470	691	1700	2300	9.040

Taper Roller Bearings Metric



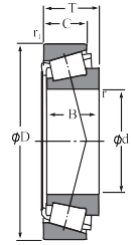
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Lube	Oil	
32303	17	47	20.25	19	16	1	1	31.9	29.9	9400	13000	0.170
32304	20	52	22.25	21	18	1.5	1.5	45.1	46.7	8400	11000	0.224
32305	25	62	25.25	24	20	1.5	1.5	61.2	64.1	6900	9100	0.386
32306	30	72	28.75	27	23	1.5	1.5	82.2	91.6	5900	7900	0.588
32307	35	80	32.75	31	25	2	1.5	101.0	114.0	5300	7000	0.776
32308	40	90	35.25	33	27	2	1.5	116.0	139.0	4600	6200	1.060
32309	45	100	38.25	36	30	2	1.5	146.0	180.0	4100	5500	1.430
32310	50	110	42.25	40	33	2.5	2	176.0	220.0	3700	5000	1.890
32311	55	120	45.5	43	35	2.5	2	200.0	250.0	3400	4500	2.380
32312	60	130	48.5	46	37	3	2.5	244.0	315.0	3100	4200	2.990
32313	65	140	51	48	39	3	2.5	276.0	357.0	2900	3900	3.640
32314	70	150	54	51	42	3	2.5	317.0	414.0	2700	3600	4.500
32315	75	160	58	55	45	3	2.5	363.0	481.0	2500	3300	5.410
32316	80	170	61.5	58	48	3	2.5	383.0	503.0	2300	3100	6.310
32317	85	180	63.5	60	49	4	3	439.0	587.0	2200	3000	7.420
32318	90	190	67.5	64	53	4	3	461.0	614.0	2100	2800	8.610
32319	95	200	71.5	67	55	4	3	517.0	695.0	2000	2600	10.100
32320	100	215	77.5	73	60	4	3	579.0	783.0	1800	2400	13.000

Taper Roller Bearings Metric



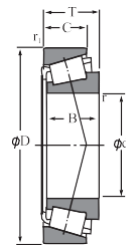
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Lube	Oil	
33005	25	47	17	17	14	0.6	0.6	33.5	42.3	8300	11000	0.131
33006	30	55	20	20	16	1	1	43.2	55.2	7000	9400	0.203
33007	35	62	21	21	17	1.0	1.0	51.3	68.0	6200	8200	0.263
33008	40	68	22	22	18	1.0	1.0	60.4	84.6	5500	7400	0.326
33009	45	75	24	24	19	1.0	1.0	69.6	101.0	5000	6700	0.416
33010	50	80	24	24	19	1.0	1.0	73.0	110.0	4600	6100	0.451
33011	55	90	27	27	21	1.5	1.5	96.5	149.0	4100	5400	0.672
33012	60	95	27	27	21	1.5	1.5	101.0	162.0	3900	5200	0.719
33013	65	100	27	27	21	1.5	1.5	103.0	169.0	3600	4800	0.762
33014	70	110	31	31	25.5	1.5	1.5	134.0	208.0	3300	4400	1.090
33015	75	115	31	31	25.5	1.5	1.5	141.0	225.0	3200	4200	1.160
33016	80	125	36	36	29.5	1.5	1.5	173.0	228.0	2900	3900	1.630
33017	85	130	36	36	29.5	1.5	1.5	177.0	300.0	2800	3700	1.720
33018	90	140	39	39	32.5	2.0	1.5	221.0	367.0	2600	3400	2.220
33019	95	145	39	39	32.5	2.0	1.5	226.0	382.0	2500	3300	2.310
33020	100	150	39	39	32.5	2.0	1.5	231.0	397.0	2400	3200	2.400
33021	105	160	43	43	34	2.5	2	267	461	2200	3000	3.08
33022	110	170	47	47	37	2.5	2	287	502	2100	2800	3.81

Taper Roller Bearings Metric



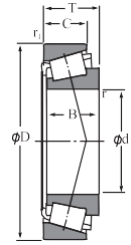
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Grease Lube	Oil Lube	
33108	40	75	26	26	20.5	1.5	1.5	82.2	108	5200	6900	0.508
33109	45	80	26	26	20.5	1.5	1.5	87.5	120	4800	6400	0.563
33110	50	85	26	26	20	1.5	1.5	89.4	127	4400	5900	0.594
33111	55	95	30	30	23	1.5	1.5	116	161	4000	5300	0.868
33112	60	100	30	30	23	1.5	1.5	118	170	3700	5000	0.923
33113	65	110	34	34	26.5	1.5	1.5	152	223	3400	4600	1.33
33114	70	120	37	37	29	2	1.5	181	266	3100	4200	1.71
33115	75	125	37	37	29	2	1.5	186	280	3000	4000	1.84
33116	80	130	37	37	29	2	1.5	191	294	2800	3800	1.93
33117	85	140	41	41	32	2.5	2	224	346	2600	3500	2.43
33118	90	150	45	45	35	2.5	2	258	413	2500	3300	3.13
33119	95	160	49	49	38	2.5	2	304	473	2300	3100	3.89
33120	100	165	52	52	40	2.5	2	325	523	2200	3000	4.29

Taper Roller Bearings Metric



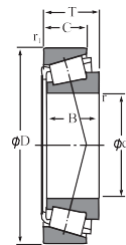
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
	d	D	T	B	C	r min	r ₁ min	C	Co	Lube	Oil	
33205	25	52	22	22	18	1.0	1.0	48.9	58.5	7900	10000	0.225
33206	30	62	25	25	19.5	1.0	1.0	66.4	79.4	6500	8700	0.359
33207	35	72	28	28	22	1.5	1.5	87.6	107.0	5700	7500	0.551
33208	40	80	32	32	25	1.5	1.5	108.0	139.0	5000	6700	0.758
33209	45	85	32	32	25	1.5	1.5	112.0	149.0	4600	6200	0.818
33210	50	90	32	32	24.5	1.5	1.5	119.0	167.0	4300	5700	0.887
33211	55	100	35	35	27	2.0	1.5	142.0	189.0	3900	5200	1.180
33212	60	110	38	38	29	2.0	1.5	174.0	239.0	3600	4700	1.570
33213	65	120	41	41	32	2.0	1.5	200.0	277.0	3200	4300	2.020
33214	70	125	41	41	32	2.0	1.5	206.0	294.0	3100	4100	2.160
33215	75	130	41	41	31	2.0	1.5	212.0	310.0	2900	3900	2.260
33216	80	140	46	46	35	2.5	2.0	250.0	371.0	2700	3600	2.990
33217	85	150	49	49	37	2.5	2.0	294.0	439.0	2500	3400	3.630
33218	90	160	55	55	42	2.5	2.0	343.0	527.0	2400	3200	4.760
33219	95	170	58	58	44	3.0	2.5	374.0	852.0	2200	2900	5.660
33220	100	180	63	63	48	3.0	2.5	431.0	680.0	2100	2800	6.920

Taper Roller Bearings Inch



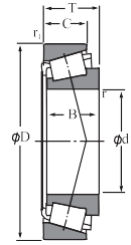
BEARING NUMBER	NOMINAL DIMENSIONS[mm]					r min r, min		LOAD RATING(kN)		LIMITING SPEED(RPM)		
	d	D	T	B	C	C	Co	Dynamic	Stactic	Grease	Oil	Weight KG
11590/20	15.875	42.862	14.288	14.288	9.525	1.6	1.6	17.8	17.7	10000	14000	0.100
LM11749/10	17.462	39.878	13.843	14.605	10.668	1.2	1.2	25.4	26	11000	14000	0.086
09067/195	19.050	49.225	18.034	19.050	14.228	0.6	0.6	38.5	39	8500	11000	0.179
LM11949/10	19.050	45.237	15.494	16.637	12.065	1.2	1.2	29.4	30.1	9400	13000	0.125
M12649/10	21.430	50.005	17.526	18.288	13.970	1.2	1.2	39.1	40.7	8500	11000	0.177
LM12749/11	21.987	45.974	15.494	16.637	12.065	1.2	1.2	30.1	34.6	8900	12000	0.121
LM12749/10	21.986	45.237	15.494	16.637	12.065	1.3	1.3	27.5	31	8000	11000	0.169
1280/20	22.225	57.150	22.225	22.225	17.462	0.8	1.6	52.6	55.7	7600	10000	0.294
M84548/10	25.400	57.150	19.431	19.431	14.732	1.5	1.5	38	49	7500	10000	0.237
L44649/10	26.988	50.292	14.224	14.732	10.668	3.6	1.2	31.2	37	7800	10000	0.122
320/28X	28.000	52.000	16.000	16.000	12.000	1	1	35.2	44	7500	10000	0.150
02474/20	28.575	68.262	22.225	22.225	17.462	0.8	1.6	51	61.1	6000	8000	0.402
1988/22	28.575	57.150	19.845	19.355	15.875	3.6	1.6	48.8	57.1	7000	9300	0.227
L45449/10	29.000	50.292	14.224	14.732	10.668	3.6	1.2	28.9	37.2	7600	10000	0.115
M86649/10	30.162	64.292	21.432	21.432	16.670	1.6	1.6	55.2	70.7	6400	8500	0.340
15123/245	31.750	62.000	18.161	19.050	14.288	1	1.2	44.6	50.7	6400	8600	0.238
LM67048/10	31.750	59.131	15.875	16.764	11.811	1	1.2	35.8	43.1	6600	8800	0.182
320/32X	32.000	58.000	17.000	17.000	13.000	1	1	39.2	50.6	6700	8900	0.196

Taper Roller Bearings Inch



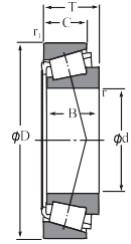
BEARING NUMBER	NOMINAL DIMENSIONS[mm]						LOAD RATING(kN) LIMITING SPEED(RPM)					
	d	D	T	B	C	r min	r ₁ min	Dynamic C	Stactic Co	Grease Lube	Oil Lube	Weight KG
M88048/10	33.338	68.262	22.225	22.225	17.462	0.8	1.6	56.1	71.1	6000	7900	0.375
25877/21	34.925	73.025	23.812	24.608	19.050	1.6	0.8	72.2	87.3	5600	7400	0.475
HM88649/10	34.925	72.233	25.400	25.400	19.842	2.4	2.4	66.9	87.4	5700	7600	0.486
LM48548/10	34.925	65.088	18.034	18.288	13.970	2.4	1.2	48	58.5	6000	8000	0.250
L68149/10	34.980	59.131	15.875	16.764	11.938	2.1	1.2	35.7	48.5	6400	8500	0.168
L68149/11	34.980	59.975	15.875	16.764	11.938	2	1.2	35.7	48.5	6400	8500	0.175
2788/20	38.100	76.200	23.774	25.654	19.050	2	1.5	80.4	102.0	5100	6800	0.499
418/414	38.100	88.501	26.988	29.083	22.225	3.6	1.6	98.2	112	4900	6500	0.848
LM29748/10	38.100	65.088	18.034	18.288	13.970	2.3	1.2	42.9	56.5	5800	7800	0.233
LM29749/10	38.100	65.088	18.034	18.288	13.970	2.3	1.2	40	57	5000	7000	0.237
LM29749/11	38.100	65.088	19.812	18.288	15.748	2.4	1.2	42.9	56.5	5800	7800	0.251
LM300849/11	41.000	68.000	17.500	18.000	13.500	3.6	1.5	46.5	60	4500	6000	0.241
11162R/300	41.275	76.200	18.009	17.384	14.288	1.6	1.6	51.6	63.3	5200	6900	0.348
18590/20	41.275	73.025	16.667	17.462	12.700	3.6	1.6	45.9	55.8	5200	6900	0.283
HM803146/10	41.275	88.900	30.162	29.370	23.020	3.6	3.2	99.6	125	4600	6100	0.892
LM501349/10	41.275	73.431	19.558	19.812	14.732	3.6	0.8	57.8	73	5200	7000	0.334
3579/3525	42.862	87.312	30.162	30.886	23.812	3.6	3	94	117	4500	5900	0.805
25580/20	44.450	82.931	23.812	25.400	19.050	3.6	1.6	83.8	111.0	4500	6000	0.560

Taper Roller Bearings Inch



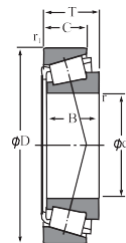
BEARING NUMBER	NOMINAL DIMENSIONS[mm]						LOAD RATING(kN) LIMITING SPEED(RPM)					
	d	D	T	B	C	r ₁ min	r ₁ min	C	Co	Grease Lube	Oil Lube	Weight KG
3782/20	44.450	93.264	30.162	30.302	23.812	3.5	3.3	102	134	4000	5300	0.961
535/532	44.450	111.125	38.100	36.957	33.338	3.5	3.3	138	172	3800	5100	1.830
HM803149/10	44.450	88.900	30.162	29.370	23.020	3.6	3.2	99.6	125	4600	6100	0.843
HM903249/10	44.450	95.250	30.958	28.575	22.225	3.6	0.8	99.7	120.0	3700	5100	0.997
17887/31	45.230	79.985	19.842	20.638	15.080	2	1.3	55.1	70.8	4800	6300	0.402
LM102949/10	45.242	73.431	19.558	19.812	15.748	3.6	0.8	55.6	78.1	5100	6700	0.309
LM603049/11	45.242	77.788	19.842	19.842	15.080	3.6	0.8	57.1	73.5	4900	6500	0.363
359S/354A	46.038	85.000	20.638	21.692	17.462	2.4	1.2	71.8	81.7	4600	6200	0.483
25590/20	46.618	82.931	23.812	25.400	19.050	3.5	0.8	53.9	69.5	4500	6000	0.554
369A/362A	47.625	88.900	20.638	22.225	16.513	3.6	1.2	74.3	87.3	4400	5800	0.537
804846/10	47.625	95.250	30.162	29.370	23.020	3.6	3.2	104	140	3300	4400	0.968
84548/10	47.625	95.250	30.162	29.370	23.020	3.6	3.6	104	140	3300	4400	0.968
JLM104948/10	50.000	82.000	21.976	21.501	17.000	3	0.5	71.7	97.9	4500	6000	0.431
28580R/21	50.800	92.075	24.608	25.400	19.845	3.6	0.8	84.8	119	4200	5600	0.700
368A/362A	50.800	88.900	20.638	22.225	16.513	3.6	1.2	74.3	87.3	4400	5800	0.495
3780/20	50.800	93.264	30.162	30.302	23.812	3.6	3.2	103	137	4200	5500	0.835
JLM104949/11	50.800	82.550	21.590	22.225	16.510	3.6	1.2	61.2	84.3	4500	6000	0.148
28584R/21	52.388	92.075	24.608	25.400	19.845	3.6	0.8	84.8	119	4200	5600	0.682

Taper Roller Bearings Inch



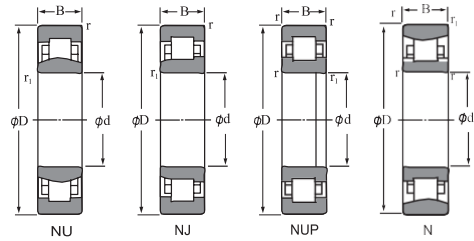
BEARING NUMBER	NOMINAL DIMENSIONS[mm]						LOAD RATING(kN) LIMITING SPEED(RPM)					
	d	D	T	B	C	r min	r ₁ min	C	Co	Grease Lube	Oil Lube	Weight KG
539/532	53.975	111.125	38.10	36.957	33.338	3.5	3.3	138	172	3800	5100	1.460
72212/72487	53.975	123.825	36.512	32.791	25.791	2.2	2	154	188	2900	3900	2.030
387/382	57.150	98.425	21.000	21.946	17.826	2.4	0.8	80.4	101	3900	5200	0.651
387A/382A	57.150	96.838	21.000	21.946	15.875	3.6	0.8	80.4	101	3900	5200	0.603
462/453X	57.150	104.775	30.162	29.317	24.605	2.4	3.2	109	144	3700	4900	1.057
469/453X	57.150	104.775	30.162	29.317	24.605	3.6	3.2	109	144	3700	4900	1.054
3982/20	63.500	107.95	25.4	25.4	19.05	1.5	3.3	119	174	3200	4300	1.22
565/562	63.500	130.048	36.512	36.170	28.575	3.5	0.8	146	216	3000	4000	2.24
HM212047/11	63.500	122.238	38.100	38.354	29.718	7	3.3	159	146	3400	4300	1.930
6379/6320	65.088	135.755	53.975	56.007	44.450	3.6	3.2	266	357	3000	4000	3.710
212049/10	66.675	122.238	38.100	38.354	29.718	3.6	1.6	191	249	3200	4300	1.856
395A/394A	66.675	110.000	22.000	21.996	18.824	0.8	1.2	86.4	116	3400	4500	0.783
3984/20	66.675	112.712	30.162	30.048	23.812	3.6	3.3	119	174	3200	4300	1.180
HM212049/10	66.675	122.238	38.100	38.354	29.718	3.6	1.6	191	249	3200	4300	1.856
HM212049/11	66.675	112.72	30.162	30.162	23.812	3.5	3.3	159	146	3400	4200	1.856
33275/462	69.850	117.475	30.162	30.162	23.812	3.6	3.2	118	179	3200	4200	1.266
47487R/20	69.850	120.000	32.545	32.545	26.195	3.6	3.2	150	218	3100	4200	1.486
482/472	69.850	120.000	29.794	29.007	24.237	3.6	2	118	161	3200	4200	1.278

Taper Roller Bearings Inch



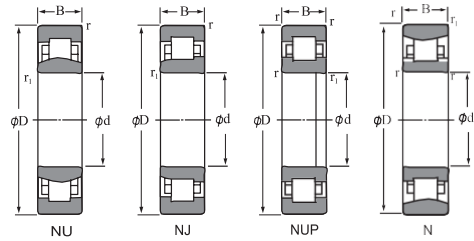
BEARING NUMBER	NOMINAL DIMENSIONS[mm]							LOAD RATING(kN)		LIMITING SPEED(RPM)		
	d	D	T	B	C	r min	r ₁ min	C	Co	Grease Lube	Oil Lube	Weight KG
566/563	69.850	127.000	36.512	36.170	28.575	3.6	3.2	156	226	3000	4000	1.888
29685/20	73.025	112.712	25.400	25.400	19.050	3.6	3.2	97	155	3200	4300	0.872
47679R/20	76.200	133.350	33.338	33.338	26.195	6.4	3.2	154	245	2700	3700	1.867
575/572	76.200	139.992	36.513	36.098	28.575	3.6	3.2	175	262	2700	3600	2.419
27687/20	82.550	125.412	25.400	25.400	19.845	3.6	1.6	101	162	2900	3800	1.054
580/572	82.550	139.992	36.513	36.098	28.575	3.5	3.2	175	262	2700	3600	2.189
749/742	85.026	150.089	44.450	46.672	36.512	3.6	3.2	264	368	2500	3400	3.180
497/492	85.725	133.350	30.162	29.769	22.225	3.6	3.2	133	198	2700	3600	1.407
593/592	88.900	152.400	39.688	36.322	33.338	3.5	3.3	180	279	2300	3100	3.14
759/752	88.900	161.925	47.625	48.260	38.100	3.6	3.2	273	391	2400	3200	4.09
HM218248/10	89.974	146.975	40.000	40.000	32.500	7.1	3.6	206	310	2500	3300	2.444
598A/592A	92.075	152.400	39.688	36.322	30.162	6.4	3.3	211	315	1900	2800	2.58
594A/592A	95.250	147.638	37.668	36.322	30.162	5.2	0.8	183	287	2400	3300	2.47
683/672	95.250	168.275	41.275	41.275	30.162	3.5	3.2	224	349	2200	3000	3.680
37425/625	107.950	158.750	23.020	21.438	15.875	3.6	3.2	104	169	2200	3000	1.377
64450/700	114.300	177.800	41.275	41.275	30.162	3.6	3.2	234	380	2000	2700	3.550

Cylindrical Roller Bearings



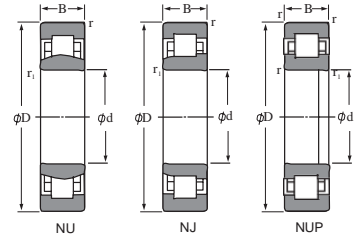
BEARING NUMBER			NOMINAL DIMENSIONS[mm]						LOAD RATING(kN) LIMITINGSPEED(RPM)				
NU	NJ	NUP	N	d	D	B	r min	r1 min	C	Co	Lube	Lube	KG
Dynamic Stactic Grease Oil Weight													
NU 204	NJ 204	NUP 204	N 204	20	47	14	1.0	0.6	15.4	12.7	15000	18000	0.108
NU 205	NJ 205	NUP 205	N 205	25	52	15	1.0	0.6	17.7	15.7	13000	16000	0.132
NU 206	NJ 206	NUP 206	N 206	30	62	16	1.0	0.6	23.5	21.5	11000	13000	0.200
NU 207	NJ 207	NUP 207	N 207	35	72	17	1.1	0.6	33.6	31.5	9500	11000	0.293
NU 208	NJ 208	NUP 208	N 208	40	80	18	1.1	1.1	43.8	42.9	8300	10000	0.366
NU 209	NJ 209	NUP 209	N 209	45	85	19	1.1	1.1	46.1	46.9	7700	9200	0.427
NU 210	NJ 210	NUP 210	N 210	50	90	20	1.1	1.1	48.2	51	7100	8500	0.479
NU 211	NJ 211	NUP 211	N 211	55	100	21	1.5	1.1	58	62.3	6400	7700	0.640
NU 212	NJ 212	NUP 212	N 212	60	110	22	1.5	1.5	71.9	79.9	5800	7000	0.823
NU 213	NJ 213	NUP 213	N 213	65	120	23	1.5	1.5	83.8	94.4	5400	6400	1.050
NU 214	NJ 214	NUP 214	N 214	70	125	24	1.5	1.5	83.3	95.2	5100	6100	1.150
NU 215	NJ 215	NUP 215	N 215	75	130	25	1.5	1.5	101	118	4800	5800	1.240
NU 216	NJ 216	NUP 216	N 216	80	140	26	2.0	2.0	106	122	4500	5400	1.510
NU 217	NJ 217	NUP 217	N 217	85	150	28	2.0	2.0	121	140	4200	5000	1.900
NU 218	NJ 218	NUP 218	N 218	90	160	30	2.0	2.0	152	178	3900	4700	2.280
NU 219	NJ 219	NUP 219	N 219	95	170	32	2.1	2.1	165	195	3700	4400	2.800
NU 220	NJ 220	NUP 220	N 220	100	180	34	2.1	2.1	183	217	3500	4200	3.380

Cylindrical Roller Bearings



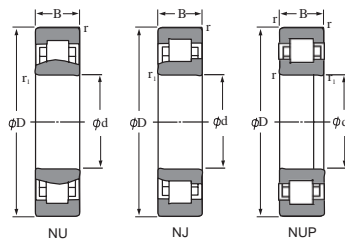
BEARING NUMBER			NOMINAL DIMENSIONS[mm]							LOAD RATING(kN) LIMITINGSPEED(RPM)			
NU	NJ	NUP	N	d	D	B	r min	r1 min	C	Co	Lube	Lube	KG
Dynamic Stactic Grease Oil Weight													
NU 304	NJ 304	NUP 304	N 304	20	52	15	1.1	0.6	23.1	19.2	12000	16000	0.147
NU 305	NJ 305	NUP 305	N 305	25	62	17	1.1	1.1	29.3	25.2	10000	14000	0.241
NU 306	NJ 306	NUP 306	N 306	30	72	19	1.1	1.1	38.6	35.2	8700	12000	0.358
NU 307	NJ 307	NUP 307	N 307	35	80	21	1.5	1.1	49.6	46.9	7900	10000	0.477
NU 308	NJ 308	NUP 308	N 308	40	90	23	1.5	1.5	58.6	56.9	6900	9100	0.657
NU 309	NJ 309	NUP 309	N 309	45	100	25	1.5	1.5	78.8	77.5	6200	8300	0.870
NU 310	NJ 310	NUP 310	N 310	50	110	27	2.0	2.0	92.2	93.4	5600	7500	1.150
NU 311	NJ 311	NUP 311	N 311	55	120	29	2.0	2.0	111	111	5100	6800	1.440
NU 312	NJ 312	NUP 312	N 312	60	130	31	2.1	2.1	124	126	4700	6300	1.830
NU 313	NJ 313	NUP 313	N 313	65	140	33	2.1	2.1	137	139	4300	5800	2.240
NU 314	NJ 314	NUP 314	N 314	70	150	35	2.1	2.1	162	168	4000	5400	2.730
NU 315	NJ 315	NUP 315	N 315	75	160	37	2.1	2.1	194	205	3800	5000	3.240
NU 316	NJ 316	NUP 316	N 316	80	170	39	2.1	2.1	194	207	3500	4700	3.920
NU 317	NJ 317	NUP 317	N 317	85	180	41	3.0	3.0	225	247	3300	4500	4.520
NU 318	NJ 318	NUP 318	N 318	90	190	43	3.0	3.0	243	265	3100	4200	5.380
NU 319	NJ 319	NUP 319	N 319	95	200	45	3.0	3.0	277	311	3000	4000	6.200
NU 320	NJ 320	NUP 320	N 320	100	215	47	3.0	3.0	323	337	2800	3700	7.700

Cylindrical Roller Bearings



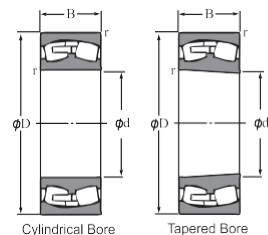
BEARING NUMBER			NOMINAL DIMENSIONS[mm]					LOAD RATING(kN) LIMITING SPEED(RPM)				
NU	NJ	NUP	d	D	B	r min	r1 min	Dynamic		Stactic Grease Oil		Weight KG
								C	Co	Lube	Lube	
NU 2204	NJ 2204	NUP 2204	20	47	18	1	0.6	20.7	18.4	13000	18000	0.146
NU 2205	NJ 2205	NUP 2205	25	52	18	1	0.6	23.7	22.8	12000	16000	0.163
NU 2206	NJ 2206	NUP 2206	30	62	20	1	0.6	32.9	33.1	9800	13000	0.262
NU 2207	NJ 2207	NUP 2207	35	72	23	1.1	0.6	49	51.2	8500	11000	0.402
NU 2208	NJ 2208	NUP 2208	40	80	23	1.1	1.1	58.3	62	7500	10000	0.49
NU 2209	NJ 2209	NUP 2209	45	85	23	1.1	1.1	61.4	67.8	6900	9200	0.536
NU 2210	NJ 2210	NUP 2210	50	90	23	1.1	1.1	64.2	73.6	6400	8500	0.58
NU 2211	NJ 2211	NUP 2211	55	100	25	1.5	1.1	75.3	87.2	5800	7700	0.78
NU 2212	NJ 2212	NUP 2212	60	110	28	1.5	1.5	101	123	5200	7000	1.07
NU 2213	NJ 2213	NUP 2213	65	120	31	1.5	1.5	120	149	4800	6400	1.43
NU 2214	NJ 2214	NUP 2214	70	125	31	1.5	1.5	119	151	4600	6100	1.52
NU 2215	NJ 2215	NUP 2215	75	130	31	1.5	1.5	135	172	4300	5800	1.57
NU 2216	NJ 2216	NUP 2216	80	140	33	2	2	148	186	4000	5400	1.96
NU 2217	NJ 2217	NUP 2217	85	150	36	2	2	169	218	3800	5000	2.5
NU 2218	NJ 2218	NUP 2218	90	160	40	2	2	207	265	3500	4700	3.1
NU 2219	NJ 2219	NUP 2219	95	170	43	2.1	2.1	230	298	3300	4400	3.85
NU 2220	NJ 2220	NUP 2220	100	180	46	2.1	2.1	259	338	3100	4200	4.67

Cylindrical Roller Bearings



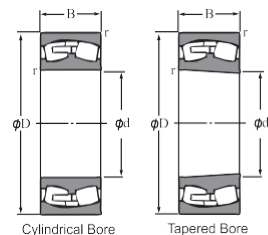
BEARING NUMBER			NOMINAL DIMENSIONS[mm]					LOAD RATING(kN) LIMITING SPEED(RPM)				
NU	NJ	NUP	d	D	B	r min	r1 min	C	Co	Lube	Lube	KG
NU 2304	NJ 2304	NUP 2304	20	52	21	1.1	0.6	32.9	30.2	11000	16000	0.212
NU 2305	NJ 2305	NUP 2305	25	62	24	1.1	1.1	42.7	40.9	9100	14000	0.34
NU 2306	NJ 2306	NUP 2306	30	72	27	1.1	1.1	51.4	50.8	7700	12000	0.5
NU 2307	NJ 2307	NUP 2307	35	80	31	1.5	1.1	64.4	65.7	7000	10000	0.696
NU 2308	NJ 2308	NUP 2308	40	90	33	1.5	1.5	82.2	88	6100	9100	0.956
NU 2309	NJ 2309	NUP 2309	45	100	36	1.5	1.5	106	113	5500	8300	1.25
NU 2310	NJ 2310	NUP 2310	50	110	40	2	2	128	142	5000	7500	1.69
NU 2311	NJ 2311	NUP 2311	55	120	43	2	2	148	162	4500	6800	2.1
NU 2312	NJ 2312	NUP 2312	60	130	46	2.1	2.1	168	188	4200	6300	2.69
NU 2313	NJ 2313	NUP 2313	65	140	48	2.1	2.1	190	212	3900	5800	3.25
NU 2314	NJ 2314	NUP 2314	70	150	51	2.1	2.1	224	262	3600	5400	3.97
NU 2315	NJ 2315	NUP 2315	75	160	55	2.1	2.1	275	327	3400	5000	4.84
NU 2316	NJ 2316	NUP 2316	80	170	58	2.1	2.1	275	332	3100	4700	5.83
NU 2317	NJ 2317	NUP 2317	85	180	60	3	3	315	382	3000	4500	6.62
NU 2318	NJ 2318	NUP 2318	90	190	64	3	3	329	395	2800	4200	7.9
NU 2319	NJ 2319	NUP 2319	95	200	67	3	3	394	496	2600	4000	9.39
NU 2320	NJ 2320	NUP 2320	100	215	73	3	3	464	548	2500	3700	11.9

Spherical Roller Bearings



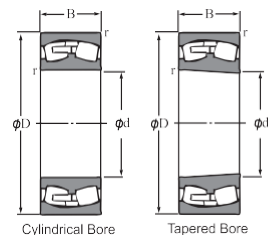
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight	
Cylindrical bore	Tapered bore	d	D	B	r min	Dynamic	Stactic	Grease	Oil	Kg	Adapter sleeve
						C	Co	Lube	Lube		
21306	21306 K	30	72	19	1.1	51.5	49.4	5800	7800	0.420	H 306
21307	21307 K	35	80	21	1.5	63.1	61.3	5000	6700	0.560	H 307
21308	21308 K	40	90	23	1.5	82.8	82.2	4500	6100	0.780	H 308
21309	21309 K	45	100	25	1.5	102	103	4000	5400	1.040	H 309
21310	21310 K	50	110	27	2	121	124	3700	4900	1.330	H 310
21311	21311 K	55	120	29	2	158	191	3300	4500	1.560	H 311
21312	21312 K	60	130	31	2.1	173	204	3100	4100	1.930	H 312
21313	21313 K	65	140	33	2.1	198	239	2800	3800	2.410	H 313
21314	21314 K	70	150	35	2.1	231	286	2700	3500	2.950	H 314
21315	21315 K	75	160	37	2.1	250	312	2500	3300	3.510	H 315
21316	21316 K	80	170	39	2.1	256	316	2300	3100	4.120	H 316
21317	21317 K	85	180	41	3	304	387	2200	2900	4.910	H 317
21318	21318 K	90	190	43	3	347	443	2100	2800	5.710	H 318
21319	21319 K	95	200	45	3	373	480	1900	2600	7.050	H 319
21320	21320 K	100	215	47	3	414	528	1800	2400	8.670	H 320

Spherical Roller Bearings



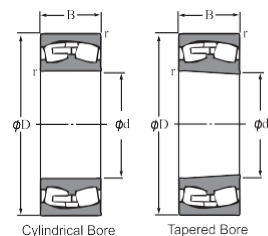
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)				LIMITING SPEED(RPM)		Weight	
Cylindrical bore	Tapered bore	d	D	B	r min	Dynamic		Stactic		Grease	Oil	Kg	Adapter sleeve
						C	Co	Lube	Lube				
22205	22205 K	25	52	18	1	35.8	34.7	7700	10000	0.175	H 305		
22206	22206 K	30	62	20	1	49.4	48.7	6500	8700	0.280	H 306		
22207	22207 K	35	72	23	1.1	68.7	70.3	5500	7400	0.450	H 307		
22208	22208 K	40	80	23	1.1	77.5	81.5	5000	6700	0.550	H 308		
22209	22209 K	45	85	23	1.1	82.3	85.9	4600	6200	0.590	H 309		
22210	22210 K	50	90	23	1.1	87.4	93.9	4300	5700	0.640	H 310		
22211	22211 K	55	100	25	1.5	109	118	3800	5100	0.870	H 311		
22212	22212 K	60	110	28	1.5	130	144	3500	4700	1.200	H 312		
22213	22213 K	65	120	31	1.5	149	190	3200	4200	1.550	H 313		
22214	22214 K	70	125	31	1.5	161	208	3000	4000	1.640	H 314		
22215	22215 K	75	130	31	1.5	167	221	2900	3800	1.720	H 315		
22216	22216 K	80	140	33	2	201	249	2700	3500	2.120	H 316		
22217	22217 K	85	150	36	2	224	285	2500	3300	2.680	H 317		
22218	22218 K	90	160	40	2	246	330	2300	3100	3.480	H 318		
22219	22219 K	95	170	43	2.1	296	386	2200	2900	4.210	H 319		
22220	22220 K	100	180	46	2.1	335	453	2100	2800	5.060	H 320		
22222	22222 K	110	200	53	2.1	411	553	1900	2500	7.250	H 322		
22224	22224 K	120	215	58	2.1	492	673	1700	2300	9.100	H 3124		
22226	22226 K	130	230	64	3	569	789	1600	2100	11.400	H 3126		
22228	22228 K	140	250	68	3	658	928	1400	1900	14.700	H 3128		
22230	22230 K	150	270	73	3	720	1020	1300	1800	18.100	H 3130		
22232	22232 K	160	290	80	3	885	1270	1200	1600	22.900	H 3132		
22234	22234 K	170	310	86	4	952	1390	1100	1500	28.400	H 3134		
22236	22236 K	180	320	86	4	978	1450	1100	1400	29.800	H 3136		
22238	22238 K	190	340	92	4	1110	1730	1000	1300	36.600	H 3138		
22240	22240 K	200	360	98	4	1230	1930	930	1200	44.000	H 3140		

Spherical Roller Bearings



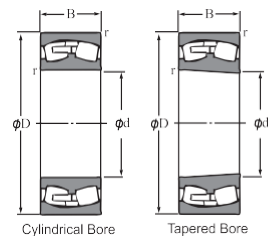
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)				LIMITING SPEED(RPM)		Weight	
Cylindrical bore	Tapered bore	d	D	B	r min	Dynamic		Stactic		Grease	Oil	Kg	Adapter sleeve
						C	Co	Lube	Lube				
22307	22307 K	35	80	31	1.5	105	107	5100	6700	0.733	H 2307		
22308	22308 K	40	90	33	1.5	125	134	4600	6100	1.020	H 2308		
22309	22309 K	45	100	36	1.5	150	156	4100	5500	1.380	H 2309		
22310	22310 K	50	110	40	2	184	203	3700	4900	1.790	H 2310		
22311	22311 K	55	120	43	2	205	241	3300	4400	2.280	H 2311		
22312	22312 K	60	130	46	2.1	239	279	3100	4100	2.850	H 2312		
22313	22313 K	65	140	48	2.1	262	309	2800	3800	3.400	H 2313		
22314	22314 K	70	150	51	2.1	311	364	2600	3500	4.110	H 2314		
22315	22315 K	75	160	55	2.1	342	412	2500	3300	5.120	H 2315		
22316	22316 K	80	170	58	2.1	392	480	2300	3100	6.100	H 2316		
22317	22317 K	85	180	60	3	397	481	2200	2900	6.990	H 2317		
22318	22318 K	90	190	64	3	458	556	2100	2800	8.300	H 2318		
22319	22319 K	95	200	67	3	504	623	1900	2600	9.720	H 2319		
22320	22320 K	100	215	73	3	579	713	1800	2400	12.200	H 2320		
22322	22322 K	110	240	80	3	713	884	1600	2200	17.700	H 2322		
22324	22324 K	120	260	86	3	812	1050	1500	2000	22.400	H 2324		
22326	22326 K	130	280	93	4	948	1200	1400	1800	28.000	H 2326		
22328	22328 K	140	300	102	4	1100	1410	1300	1700	35.500	H 2328		
22330	22330 K	150	320	108	4	1230	1600	1200	1500	42.700	H 2330		
22332	22332 K	160	340	114	4	1380	1790	1100	1400	51.000	H 2332		
22334	22334 K	170	360	120	4	1460	1920	1000	1300	60.800	H 2334		
22336	22336 K	180	380	126	4	1740	2360	920	1200	69.900	H 2336		
22338	22338 K	190	400	132	5	1900	2610	880	1200	82.400	H 2338		
22340	22340 K	200	420	138	5	2010	2750	830	1100	93.500	H 2340		
22344	22344 K	220	460	145	5	2380	3380	720	960	122.000	H 2344		
22348	22348 K	240	500	155	5	2610	4020	650	870	154.000	H 2348		
22352	22352 K	260	540	165	6	2830	4380	590	780	192.000	H 2352		
22356	22356 K	280	580	175	6	3150	4910	530	710	225.000	H 2356		

Spherical Roller Bearings



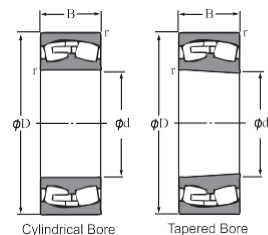
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight	
Cylindrical bore	Tapered bore	d	D	B	r min	C	Co	Lube	Lube	Kg	Adapter sleeve
23022	23022 K	110	170	45	2	286	478	2100	2800	3.870	H 3022
23024	23024 K	120	180	46	2	299	517	1900	2600	4.220	H 3024
23026	23026 K	130	200	52	2	377	654	1700	2300	5.990	H 3026
23028	23028 K	140	210	53	2	428	737	1600	2200	6.670	H 3028
23030	23030 K	150	225	56	2.1	467	812	1500	2000	8.010	H 3030
23032	23032 K	160	240	60	2.1	539	944	1400	1900	9.900	H 3032
23034	23034 K	170	260	67	2.1	609	1110	1300	1700	13.000	H 3034
23036	23036 K	180	280	74	2.1	710	1290	1200	1600	17.100	H 3036
23038	23038 K	190	290	75	2.1	736	1370	1100	1500	18.200	H 3038
23040	23040 K	200	310	82	2.1	890	1670	1000	1400	23.400	H 3040
23044	23044 K	220	340	90	3	984	1890	940	1300	30.600	H 3044
23048	23048 K	240	360	92	3	1100	2170	860	1100	33.800	H 3048
23052	23052 K	260	400	104	4	1330	2570	760	1000	49.300	H 3052
23056	23056 K	280	420	106	4	1430	2860	710	950	52.900	H 3056
23060	23060 K	300	460	118	4	1 750	3480	630	840	73.700	H 3060
23064	23064 K	320	480	121	4	1830	3740	590	790	78.800	H 3064
23068	23068 K	340	520	133	5	2130	4330	530	710	105.000	H 3068

Spherical Roller Bearings



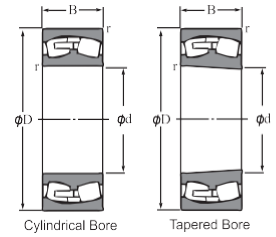
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight	
Cylindrical bore	Tapered bore	d	D	B	r min	C	Co	Lube	Lube	Kg	Adapter sleeve
23120	23120 K	100	165	52	2	297	493	2200	3000	4.440	H 3120
23122	23122 K	110	180	56	2	346	591	2000	2700	5.580	H 3122
23124	23124 K	120	200	62	2	447	760	1800	2400	8.090	H 3124
23126	23126 K	130	210	64	2	506	826	1700	2200	8.820	H 3126
23128	23128 K	140	225	68	2.1	561	934	1500	2100	10.500	H 3128
23130	23130 K	150	250	80	2.1	689	1230	1400	1900	15.900	H 3130
23132	23132 K	160	270	86	2.1	796	1380	1300	1700	19.900	H 3132
23134	23134 K	170	280	88	2.1	888	1490	1200	1600	21.700	H 3134
23136	23136 K	180	300	96	3	1000	1800	1100	1500	27.500	H 3136
23138	23138 K	190	320	104	3	1090	2000	1000	1400	34.400	H 3138
23140	23140 K	200	340	112	3	1240	2250	980	1300	42.400	H 3140
23144	23144 K	220	370	120	4	1440	2700	880	1200	53.200	H 3144
23148	23148 K	240	400	128	4	1630	3080	790	1100	65.600	H 3148
23152	23152 K	260	440	144	4	2100	3860	710	940	90.800	H 3152
23156	23156 K	280	460	146	5	2140	4280	660	880	96.900	H 3156
23160	23160 K	300	500	160	5	2490	4850	590	790	128.000	H 3160

Spherical Roller Bearings



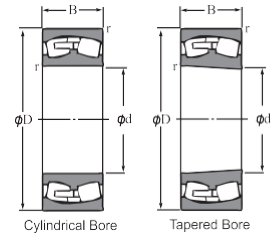
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight	
Cylindrical bore	Tapered bore	d	D	B	r min	Dynamic	Stactic	Grease	Oil	Kg	Adapter sleeve
						C	Co	Lube	Lube		
23218	23218 K	90	160	52.4	2	317	459	2200	3000	4.700	H 2318
23220	23220 K	100	180	60.3	2.1	415	599	2100	2800	6.680	H 2320
23222	23222 K	110	200	69.8	2.1	525	786	1900	2500	9.570	H 2322
23224	23224 K	120	215	76	2.1	583	894	1700	2300	11.800	H 2324
23226	23226 K	130	230	80	3	668	1030	1600	2100	14.000	H 2326
23228	23228 K	140	250	88	3	787	1230	1500	1900	18.400	H 2328
23230	23230 K	150	270	96	3	924	1470	1300	1800	23.800	H 2330
23232	23232 K	160	290	104	3	1030	1650	1200	1600	30.100	H 2332
23234	23234 K	170	310	110	4	1150	1870	1100	1500	36.500	H 2334
23236	23236 K	180	320	112	4	1190	1980	1100	1400	38.600	H 2336
23238	23238 K	190	340	120	4	1410	2210	1000	1300	46.000	H 2338
23240	23240 K	200	360	128	4	1550	2610	940	1300	56.400	H 2340
23244	23244 K	220	400	144	4	1880	3200	830	1100	79.200	H 2344
23248	23248 K	240	440	160	4	2340	3990	730	970	107.000	H 2348
23252	23252 K	260	480	174	5	2750	4640	640	860	140.000	H 2352
23256	23256 K	280	500	176	5	2690	4910	610	820	149.000	H 2356
23260	23260 K	300	540	192	5	3430	5910	540	720	192.000	H 2360

Spherical Roller Bearings



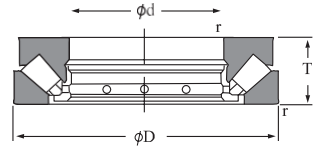
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
Cylindrical bore	Tapered bore	d	D	B	r min	Dynamic	Stactic	Grease	Oil	Kg
						C	Co	Lube	Lube	
24020	24020 K	100	150	50	1.5	251	448	1600	2100	3.035
24024	24024 K	120	180	60	2	391	695	1500	2000	5.050
24026	24026 K	130	200	69	2	486	878	1400	1800	7.550
24028	24028 K	140	210	69	2	503	922	1300	1700	8.010
24030	24030 K	150	225	75	2.1	587	1100	1200	1500	10.100
24032	24032 K	160	240	80	2.1	670	1260	1100	1400	12.200
24034	24034 K	170	260	90	2.1	816	1565	1000	1300	16.700
24036	24036 K	180	280	100	2.1	955	1870	950	1200	22.100
24038	24038 K	190	290	100	2.1	1004	1960	900	1200	23.000
24040	24040 K	200	310	109	2.1	1150	2280	850	1100	29.300
24044	24044 K	220	340	118	3	1370	2760	750	1000	38.100
24048	24048 K	240	360	118	3	1440	2930	700	950	40.800
24052	24052 K	260	400	140	4	1840	3850	630	850	62.400
24056	24056 K	280	420	140	4	1960	4100	600	800	65.800
24060	24060 K	300	460	160	4	2430	5160	530	700	94.100
24064	24064 K	320	480	160	4	2480	5100	560	700	106.000
24068	24068 K	340	520	180	5	2460	5700	530	670	143.000

Spherical Roller Bearings



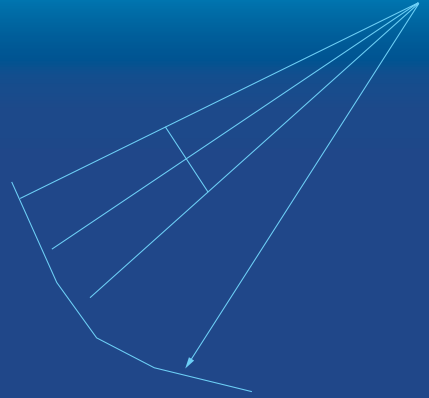
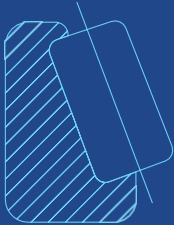
BEARING NUMBER		NOMINAL DIMENSIONS[mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
Cylindrical bore	Tapered bore	d	D	B	r min	Dynamic	Stactic	Grease	Oil	Kg
						C	Co	Lube	Lube	
24122	24122 K	100	180	69	2	472	798	1600	2000	6.630
24124	24124 K	120	200	80	2	592	1028	1400	1800	9.650
24126	24126 K	130	210	80	2	603	1061	1300	1700	10.300
24128	24128 K	140	225	85	2.1	690	1236	1200	1600	12.500
24130	24130 K	150	250	100	2.1	910	1650	1100	1400	19.000
24132	24132 K	160	270	109	2.1	1070	1930	1000	1300	24.400
24134	24134 K	170	280	109	2.1	1100	1980	1000	1300	25.500
24136	24136 K	180	300	118	3	1240	2280	900	1200	32.000
24138	24138 K	190	320	128	3	1450	2660	850	1100	40.200
24140	24140 K	200	340	140	3	1620	3030	800	1000	49.900
24144	24144 K	220	370	150	4	1900	3580	700	950	62.300
24148	24148 K	240	400	160	4	2160	4090	670	850	76.900
24152	24152 K	260	440	180	4	2730	5330	600	800	107.600
24156	24156 K	280	460	180	5	2810	5480	560	750	113.200
24160	24160 K	300	500	200	5	3213	6011	430	560	159.000

Spherical Thrust Roller Bearings



BEARING NUMBER	NOMINAL DIMENSIONS [mm]				LOAD RATING (kN)		LIMITING SPEED (RPM)		WEIGHT KG
	d	D	B	r	Dynamic C	Stactic Co	Oil Lube		
29317	85	150	39	1.5	287	927	2600	2.82	
29318	90	155	39	1.5	299	966	2500	3.06	
29320	100	170	42	1.5	355	1160	2300	3.81	
29322	110	190	48	2	457	1530	2000	5.56	
29324	120	210	54	2.1	553	1880	1800	7.63	
29326	130	225	58	2.1	643	2220	1700	9.43	
29328	140	240	60	2.1	707	2490	1600	11.10	
29330	150	250	60	2.1	711	2500	1550	11.60	
29332	160	270	67	3	862	3070	1400	15.40	
29334	170	280	67	3	880	3170	1350	16.20	
29336	180	300	73	3	1030	3730	1250	20.70	
29338	190	320	78	4	1170	4230	1150	25.10	
29340	200	340	85	4	1360	5040	1050	31.20	
29344	220	360	85	4	1380	5240	1000	33.30	
29348	240	380	85	4	1410	5500	950	35.50	
29352	260	420	95	5	1810	6950	850	49.10	
29356	280	440	95	5.0	1840	7150	800	53.20	

Notes :



BHARDWAJ ENGINEERING COMPANY
Plot No 1702 , GIDC - 2 , Sabalpur , Junagadh - 362002.