NIS™

NIS™

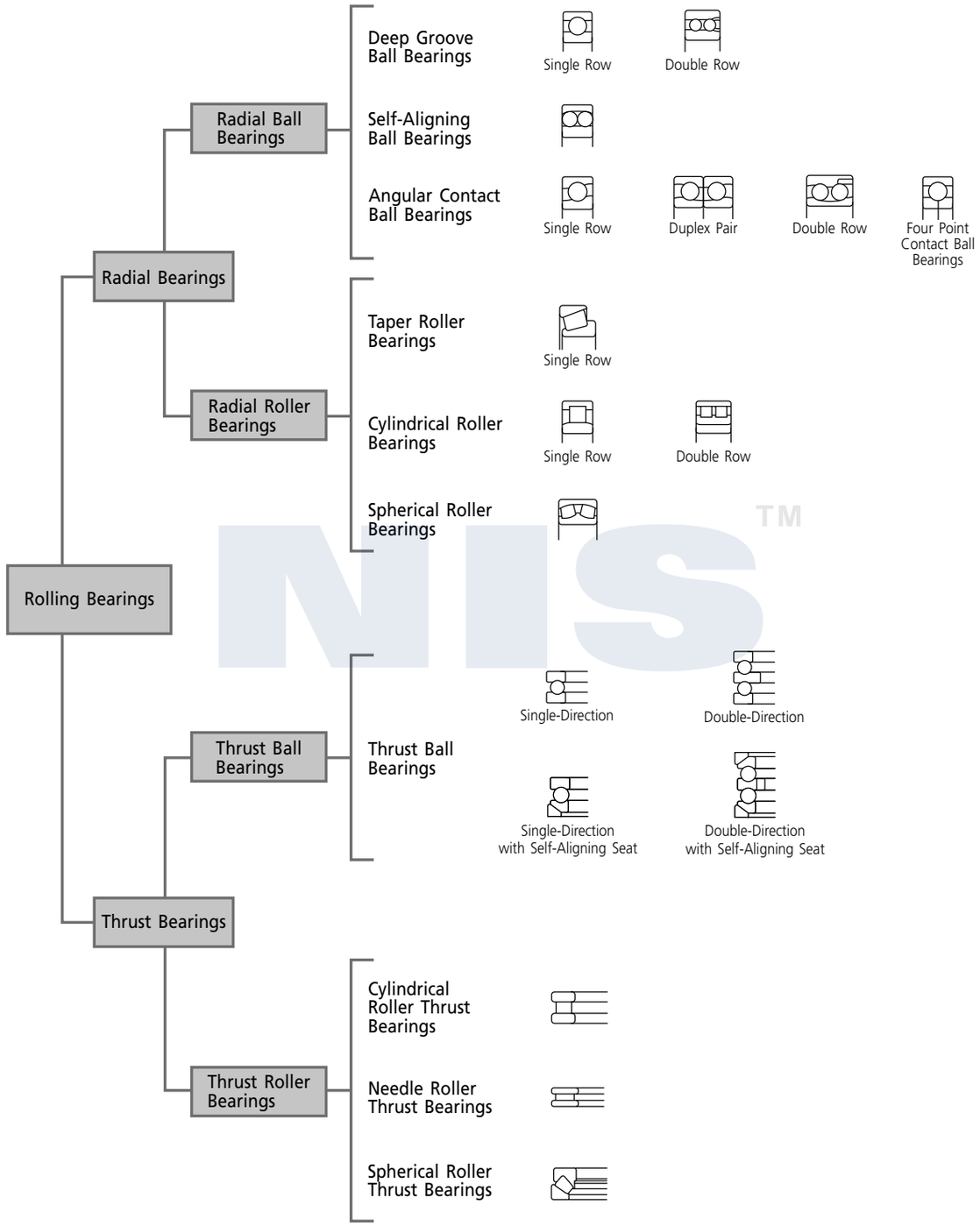
GENERAL CATALOGUE - BEARINGS

GENERAL CATALOGUE

BEARINGS

NIS™

Quantity	Unit	Conversion			
Length	inch foot yard mile	1 mm 1 m 1 m 1 km	0,03937 in 3,281 ft 1,094 yd 0,6214 mile	1 in 1 ft 1 yd 1 mile	25,40 mm 0,3048 m 0,9144 m 1,609 km
Area	square inch square foot	1 mm^2 1 m^2	0,00155 sq.in 10,76 sq.ft	1 sq.in 1 sq.ft	645,16 mm^2 0,0929 m^2
Volume	cubic inch cubic foot imperial gallon U.S. gallon	1 cm^3 1 m^3 1 l 1 l	0,061 cub.in 35 cub.ft 0,22 gallon 0,2642 U.S. gallon	1 cub.in 1 cub.ft 1 gallon 1 U.S. gallon	16,387 cm^3 0,02832 m^3 4,5461 l 3,7854 l
Velocity, Speed	foot per second mile per hour	1 m/s 1 km/h	3,28 ft/s 0,6214 mile/h (mph)	1 ft/s 1 mile/h (mph)	0,30480 m/s 1,609 km/h
Mass	ounce pound short ton long ton	1 g 1 kg 1 tonne 1 tonne	0,03527 oz 2,205 lb 1,1023 short ton 0,9842 long ton	1 oz 1 lb 1 short ton 1 long ton	28,350 g 0,45359 kg 0,90719 tonne 1,0161 tonne
Density	pound per cubic inch	1 g/cm^3	0,0361 lb/cub.in	1 lb/cub.in	27,680 g/cm^3
Force	pound-force	1 N	0,225 lbf	1 lbf	4,4482 N
Pressure, Stress	pounds per square inch	1 MPa	145 psi	1 psi	6,8948 x 10^3 Pa
Moment	inch pound-force	1 Nm	8,85 in.lbf	1 in.lbf	0,113 Nm
Power	foot-pound per second horsepower	1 W 1 kW	0,7376 ft lbf/s 1,36 HP	1 ft lbf/s 1 HP	1,3558 W 0,736 kW
Temperature	degree	Celcius	$t_C = 0{,}555\ (t_F - 32)$	Fahrenheit	$t_F = 1{,}8\ t_C + 32$



Suitability ● Very Good ◔ Good ◐ Possible ◴ Limited Not Suitable ← One Way ↔ Double Way	Radial Load	Axial Load	Compound Load	Shield & Seal	Self Aligning	Rings Separable	High Speed	High Rigidity	Low Running Precision	Low Friction	Low Running Noise	Tapered Bore
Deep Groove Ball Bearing	◐	◐↔	◐	◔	○	○	●	◐	●	●	●	○
Self-Aligning Ball Bearing	◐	◴	◴	◔	●	○	◔	◴	◔	◔	◔	◔
Angular Contact Ball Bearing	◐	◐←	◔	○	○	○	◔	◐	●	◔	◔	○
Four-Point Ball Bearing	◴	◐↔	◐	○	○	◔	◔	◐	◐	◐	◐	○
Cylindrical Roller Bearing	◔	○	○	○	○	◔	●	◔	◔	◔	◔	○
Needle Roller Bearing	◔	○	○	◔	○	◔	◐	◔	◐	◴	◐	○
Spherical Roller Bearing	●	◐↔	●	◔	◔	○	◐	◔	◐	◐	◐	◔
Taper Roller Bearing	◔	◔←	●	○	○	◔	◐	◔	◔	◐	◐	○
Thrust Cylindrical Bearing	○	◐↔	○	○	○	◔	◐	◐	◐	◐	◴	○
Thrust Cylindrical Roller Bearing	○	◔←	○	○	○	◔	◴	◔	◔	◴	◴	○
Thrust Needle Roller Bearing	○	◔←	○	○	○	◔	◴	◔	◔	◴	◴	○
Thrust Spherical Roller Bearing		●←	◐	○	○	◔	◐	◔	◐	◐	◴	○
Self-Aligning Roller Bearing	●	◐↔	◔	○	●	○	◐	◴	◐	◐	◔	○

Bearing Material

Material	Chinese Standard	Equivalent		
		AISI/SAE/ASTM	DIN	JIS
High Carbon Chromium Steel	GCr15	SAE52100	100Cr6	SUJ2
Stainless Steel	9Cr18	AISI440C	X102CrMo17	SUS440C
*Cold Rolled Low Carbon	ST14	ASTM366	1623	3141

Chemical Composition

Material	Chemical Composition (Symbol)						
	C	Si	Mn	P	S	Cr	Mo
High Carbon Chromium Steel	0.95-1.05	0.15-0.35	≤0.45	≤0.025	≤0.025	1.40-1.65	≤0.08
Stainless Steel	0.95-1.20	≤1.00	≤1.00	≤0.04	≤0.03	16.00-18.00	≤0.75
*Cold Rolled Low Carbon	≤0.08	≤0.02	≤0.4	≤0.02	≤0.03	≤0.06	–

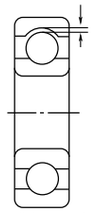
* Cold Rolled Low Carbon is used in drawn cup outer ring of one way clutch bearings.

Internal Radial Clearance

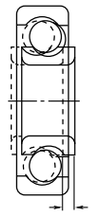
Internal clearance is the distance between outer ring, inner ring and rolling element. It is an important factor that has significant influence on noise, vibration, heat and fatigue life of a bearing. As such, it is critical to select the proper clearance considering the bearing fit, load, speed and operating temperature.

When measuring the internal radial clearance, the bearing is subject to a standard load in order to ensure full contact between all bearing components. Under such a load, the measured clearance is larger than the actual; this is due to elastic deformation. The difference is compensated by the factors given in the table below.

Bearing Internal Clearance



Radial Internal Clearance



Axial Internal Clearance

Internal Radial Clearance of Miniature Bearings

Unit μm

Clearance Mark	MC1		MC2		MC3		MC4		MC5		MC6	
	max	min	max	min	max	min	max	min	max	min	max	min
Clearance	0	5	3	8	5	10	8	13	13	20	20	28

Note: 1. Standard clearance is MC3.
2. For measuring clearance, offset by compensation factor listed below.

Unit μm

Clearance Mark	MC1	MC2	MC3	MC4	MC5	MC6
Compensation Factor	1	1	1	1	2	2

Measuring load is as follows.
Miniature bearing 2.5N (0.25kgf)
Small bearings 4.4N (0.45kgf)

Internal Radial Clearance of Ball Bearings

Unit μm

Nominal Bore Diameter d (mm)		Clearance									
		C2		CN(CO)		C3		C4		C5	
OVER	INCL.	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
10 (Only)		0	7	2	13	8	23	14	29	20	37
10	18	0	9	3	18	11	25	18	33	25	45
18	24	0	10	5	20	13	28	20	36	28	48
24	30	1	11	5	20	13	28	23	41	30	53
30	40	1	11	6	20	15	33	28	46	40	64
40	50	1	11	6	23	18	36	30	51	45	73

Note: 1. For measuring clearance, offset by compensation factor listed below.

Unit μm

Bore Diameter of Nominal Bearing d (mm)		Measuring Load		Compensation Factor				
OVER	INCL.	(N)	(kgf)	C2	CN(CO)	C3	C4	C5
10 (Included)	18	24.5	(2.6)	3~4	4	4	4	4
18	50	49	(5)	4~5	5	6	6	6

Bearing accuracy consists of dimensional accuracy and running accuracy. The normal accuracy grade is P0, a higher grade is P6 and P2 is the highest grade. Application requirements decide which grade accuracy should be applied.

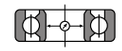
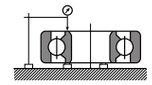
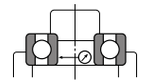
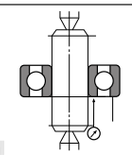
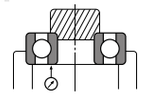
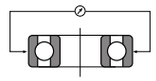
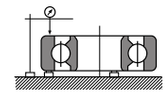
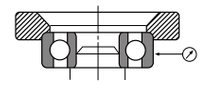
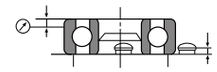
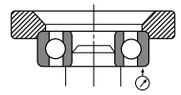
Accuracy Grade Standard Conversion Table

GB	Equivalents			
	ISO	ABMA	DIN	JIS
P0	Normal Class	ABEC 1	P0	JIS0
P6	Class 6	ABEC 3	P6	JIS6
P5	Class 5	ABEC 5	P5	JIS5
P4	Class 4	ABEC 7	P4	JIS4
P2	Class 2	ABEC 9	P2	JIS2

Notes:
1. P0(GB) is normal grade, P6 higher grade and P2 the highest accuracy grade.
2. GB : Chinese National Standards
3. ISO : International Standardization Organization
4. ABMA : The American Bearing Manufacturers Association
5. DIN : Deutsch Industrie Norm
6. JIS : Japanese Industrial Standards

Guide for Selection of Bearing Accuracy

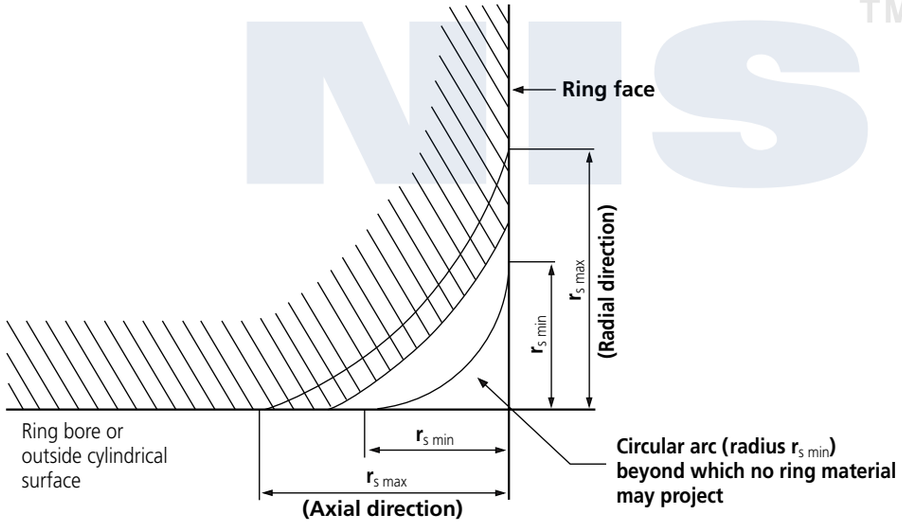
Application	ISO
Computer printers, copy machine-feed rollers, micro motors, stepping motors, fan motors, VCR pinch rollers	Normal Class 6
High precision motors, hard disk drive motors, dental spindles, servo motors, encoders, VCR drum spindles, VCR capstan motors, polygonal mirror scanner motors	Class 5 Class 4
High frequency spindles, gyro rotors, gyro gimbals	Class 4

Symbol	Definition	Inspection
d	Nominal bore diameter	
Δ_{dmp}	Mean bore diameter deviation in a single plane	
Δ_{ds}	Deviation of a single bore diameter	
V_{dp}	Bore diameter variation in a single radial plane	
V_{dmp}	Mean bore diameter variation	
Δ_{Bs}	Deviation of a single inner ring width	
V_{Bs}	Variation of inner ring width	
K_{ia}	Radial runout of assembled bearing inner ring	
S_d	Face runout with bore	
S_{ia}	Face runout with raceway of assembled bearing inner ring	
D	Nominal outside diameter	
Δ_{Dmp}	Mean outside diameter deviation in a single plane	
Δ_{Ds}	Deviation of a single outside diameter	
V_{Dp}	Outside diameter variation in a single radial plane	
V_{Dmp}	Mean outside diameter variation	
Δ_{Cs}	Deviation of a single outer ring width	
V_{Cs}	Variation of outer ring width	
Δ_{Dis}	Flange outside diameter deviation	
Δ_{Cis}	Flange width deviation	
K_{ea}	Radial runout of assembled bearing outer ring	
S_D	Variation of outside surface generatrix with inclination of outer ring benchmark face	
S_{ea}	Assembled bearing outer ring face runout with raceway	

Limit Tolerance Values (Metric) of Chamfer Dimensions of Radial Bearings

$r_{s\,min}$	d (mm)		$r_{s\,max}$		$r_{a\,max}$ (1)
	Over	Incl.	Radial	Axial	
0.05	–	–	0.1	0.2	0.05
0.08	–	–	0.16	0.3	0.08
0.1	–	–	0.2	0.4	0.1
0.15	–	–	0.3	0.6	0.15
0.2	–	–	0.5	0.8	0.2
0.3	–	40	0.6	1	0.3
	40	–	0.8	1	
0.6	–	40	1	2	0.6
	40	–	1.3	2	
1	–	50	1.5	3	1
	50	–	1.9	3	
1.1	–	120	2	3.5	1
	120	–	2.5	4	

Unit mm



$r_{s\,min}$ = smallest permissible single chamfer dimension (minimum limit)
$r_{s\,max}$ = largest permissible single chamfer dimension (maximum limit)
$r_{a\,max}$ = largest permissible single shaft and housing fillet radius

Note : The exact shape of the chamfer surface is not specified, but its contour in an axial plane shall not be allowed to project beyond the imaginary circular arc, of radius $r_{s\,min}$, tangential to the ring face and bore or outside cylindrical surface of the ring (see figure).

Normal Tolerances for Radial Bearings (Except Taper Roller Bearings)

Inner Ring

d		Δ_{dmp} 1)		V_{dmp}	K_{ia}
over	incl.	high	low	max	max
mm		µm		µm	µm
2,5	10	0	– 8	6	10
10	18	0	– 8	6	10
18	30	0	– 10	8	13
30	50	0	– 12	9	15
50	80	0	– 15	11	20
80	120	0	– 20	15	25
120	180	0	– 25	19	30
180	250	0	– 30	23	40
250	315	0	– 35	26	50
315	400	0	– 40	30	60
400	500	0	– 45	34	65
500	630	0	– 50	38	70
630	800	0	– 75	–	80
800	1000	0	– 100	–	90
1000	1250	0	– 125	–	100
1250	1600	0	– 160	–	120
1600	2000	0	– 200	–	140

1) Tolerances for tapered bores (taper 1:12 and 1:30) are given on pages on 84 and 85

Outer Ring

D		Δ_{Dmp} 1)		V_{Dmp}	K_{ea}
over	incl.	high	low	max	max
mm		µm		µm	µm
6	18	0	– 8	6	15
18	30	0	– 9	7	15
30	50	0	– 11	8	20
50	80	0	– 13	10	25
80	120	0	– 15	11	35
120	150	0	– 18	14	40
150	180	0	– 25	19	45
180	250	0	– 30	23	50
250	315	0	– 35	26	60
315	400	0	– 40	30	70
400	500	0	– 45	34	80
500	630	0	– 50	38	100
630	800	0	– 75	55	120
800	1000	0	– 100	75	140
1000	1250	0	– 125	–	160
1250	1600	0	– 160	–	190
1600	2000	0	– 200	–	220
2000	2500	0	– 250	–	250

1) Applies only to bearings of Diameter Series 2, 3 and 4

Normal Tolerances for Radial Bearings (Except Taper Roller Bearings)

Tolerances for Tapered Bore, Taper 1:12

Tolerances Classes Normal, P6						
d		Δ_{dmp}		V_{dp} [1]	Δ_{d1mp}	$-\Delta_{dmp}$
over	incl.	high	low	max	high	low
mm		µm		µm	µm	
18	30	+ 21	0	13	+ 21	0
30	50	+ 25	0	15	+ 25	0
50	80	+ 30	0	19	+ 30	0
80	120	+ 35	0	25	+ 35	0
120	180	+ 40	0	31	+ 40	0
180	250	+ 46	0	38	+ 46	0
250	315	+ 52	0	44	+ 52	0
315	400	+ 57	0	50	+ 57	0
400	500	+ 63	0	56	+ 63	0
500	630	+ 70	0	–	+ 70	0
630	800	+ 80	0	–	+ 80	0
800	1000	+ 90	0	–	+ 90	0
1000	1250	+ 105	0	–	+ 105	0
1250	1600	+ 125	0	–	+ 125	0
1600	2000	+ 150	0	–	+ 150	0

[1] Applies in any single radial plane of the bore

Tolerances for Tapered Bore, Taper 1:30

Tolerances Classes Normal						
d		Δ_{dmp}		V_{dp} [1]	Δ_{d1mp}	$-\Delta_{dmp}$
over	incl.	high	low	max	high	low
mm		µm		µm	µm	
80	120	+ 20	0	25	+ 40	0
120	180	+ 25	0	31	+ 50	0
180	250	+ 30	0	38	+ 55	0
250	315	+ 35	0	44	+ 60	0
315	400	+ 40	0	50	+ 65	0
400	500	+ 45	0	56	+ 75	0
500	630	+ 50	0	63	+ 85	0
630	800	+ 75	0	–	+ 100	0
800	1000	+ 100	0	–	+ 100	0
1000	1250	+ 125	0	–	+ 115	0
1250	1600	+ 160	0	–	+ 125	0
1600	2000	+ 200	0	–	+ 150	0

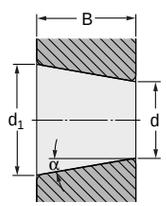
[1] Applies in any single radial plane of the bore

Tapered Bores

Half angle of taper α:

$\alpha = 2° 23' 9{,}4''$ (taper 1:12)

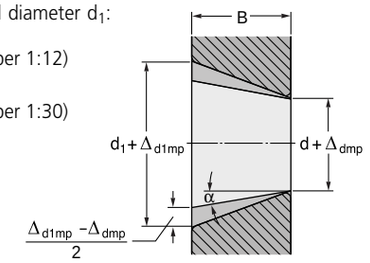
$\alpha = 0° 57' 17{,}4''$ (taper 1:30)



Largest theoretical diameter d_1:

$d_1 = d + \frac{1}{12} B$ (taper 1:12)

$d_1 = d + \frac{1}{30} B$ (taper 1:30)



Normal Tolerances for Taper Roller Bearings (Metric Sizes)

Inner Ring and Bearing Width

d		Δ_{dmp}		V_{dmp}	K_{ia}
over	incl.	high	low	max	max
mm		µm		µm	µm
10	18	0	– 12	9	15
18	30	0	– 12	9	18
30	50	0	– 12	9	20
50	80	0	– 15	11	25
80	120	0	– 20	15	30
120	180	0	– 25	19	35
180	250	0	– 30	23	50
250	315	0	– 35	26	60
315	400	0	– 40	30	70
400	500	0	– 45	34	70
500	630	0	– 50	38	85
630	800	0	– 75	56	100
800	1000	0	– 100	75	120
1000	1250	0	– 125	–	120
1250	1600	0	– 160	–	120
1600	2000	0	– 200	–	120

Outer Ring

D		Δ_{Dmp}		V_{Dmp}	K_{ea}
over	incl.	high	low	max	max
mm		µm		µm	µm
18	30	0	– 12	9	18
30	50	0	– 14	11	20
50	80	0	– 16	12	25
80	120	0	– 18	14	35
120	150	0	– 20	15	40
150	180	0	– 25	19	45
180	250	0	– 30	23	50
250	315	0	– 35	26	60
315	400	0	– 40	30	70
400	500	0	– 45	34	80
500	630	0	– 50	38	100
630	800	0	– 75	55	120
800	1000	0	– 100	75	120
1000	1250	0	– 125	94	120
1250	1600	0	– 160	120	120
1600	2000	0	– 200	–	120
2000	2500	0	– 250	–	120

Inner Ring

d		Δ_{ds}	
		Tolerances class	
		Normal	
over	incl.	high	low
mm		µm	
–	76,2	+ 13	0
76,2	101,6	+ 25	0
101,6	266,7	+ 25	0
266,7	304,8	+ 25	0
304,8	609,6	+ 51	0
609,6	914,4	+ 76	0
914,4	1219,2	+ 102	0
1219,2	–	+ 127	0

Outer Ring

D		Δ_{Ds}		K_{ia}, K_{ea}, S_{ia}, S_{ea}		
		Tolerances class		Tolerances class		
		Normal		Normal	CL3	CL0
over	incl.	high	low	max	max	max
mm		µm			µm	
–	266,7	+ 25	0	51	8	4
266,7	304,8	+ 25	0	51	8	4
304,8	609,6	+ 51	0	51	18	9
609,6	914,4	+ 76	0	76	51	26
914,4	1219,2	+ 102	0	76	76	38
1219,2	–	+ 127	0	76	76	–

Bearing Life

When bearing rotate, the inner, outer ring and rolling elements are constantly loaded. This produces material fatigue and eventually bearing failure. The total number of revolutions before a failure occurs is called the basic rating life.

Life of individual bearings varies considerably, even if they are of the same size, same material, same heat treatment and are under the same operating condition.

Statistically, the total number of revolutions reached or exceeded by 90% of a sufficiently large group of apparently identical bearings before the first evidence of material fatigue occurs is called the basic rating life.

Basic Dynamic Load Rating

The basic dynamic load rating of a bearing with rotating inner ring and stationary outer ring is that load of constant magnitude and size which a sufficiently large group of apparently identical bearings can endure for a basic rating life of one million revolutions.

Radial bearings take central load. Values given for C in the dimension tables of this catalogue are for standard high chromium steel. 80% to 85% of the chromium steel values should be used for stainless steel.

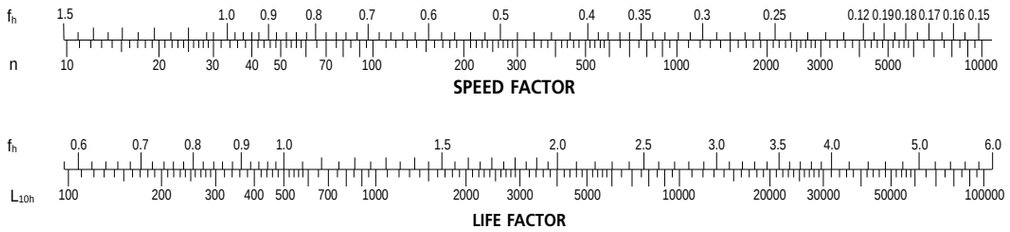
Life Formula

The equation for the basic rating life for dynamically loaded ball bearings is as follow:

$$L_{10} = \left(\frac{C_r}{P}\right)^3 \text{ (x } 10^6 \text{ Revolutions)} \qquad L_{10h} = \frac{16666}{n} \bullet \left(\frac{C_r}{P}\right)^3 \text{ (Hours)}$$

whereby : L_{10} = Basic Rating Life
C_r = Basic Dynamic Load Rating (kgf)
n = R.P.M. (Revolutions Per Minute)
f_n = Speed Factor
L_{10h} = Basic Rating Life in Operating Hours
P = Equivalent Load (kgf)
f_h = Life Factor

$$L_{10h} = 500 \bullet f_n^3 \quad , \quad f_h = f_n \bullet \frac{C_r}{P} \quad , \quad f_n = \left(\frac{33.3}{n}\right)^{1/3}$$



Examples of Rating Life L_{10h} Values Used:

Operating Conditions	Basic Rating Life L_{10h}
Infrequent operation.	500
Short or intermittent operation. Failure has little effect on function.	4,000 ~ 8,000
Intermittent operation. Failure has significant effect on function.	8,000 ~ 12,000
8 hours of non-continuous operation.	12,000 ~ 20,000
8 hours of continuous operation.	20,000 ~ 30,000
24 hours continuous operation.	40,000 ~ 60,000
24 hours of guaranteed trouble-free operation.	100,000 ~ 200,000

Adjusted Life Formula

The above life formula is for general use. In cases where a reliability of over 90% is required and where influences apart from load and speed or operating frequency should be taken into account for the rating life, ISO 281, 1990 gives an extended life formula:

$$L_{na} = a_1 \times a_2 \times a_3 \times \left(\frac{C_r}{P}\right)^3 \quad (\times 10^6 \text{ Revolutions})$$

whereby : L_{na} = Adjusted rating life in millions of revolutions with a reliability of (100-n) % (n = the reliability rate)
C_r = Basic Dynamic Load Rating (kgf)
P = Equivalent Dynamic Load (kgf)
a_1 = Factor for a reliability other than 90%
a_2 = Factor for non-conventional materials
a_3 = Factor for non-conventional operating conditions, in particular lubrication

(1) Reliability Factor a_1

When a reliability of over 90% is required, the corresponding factor should be selected from the following table.

Reliability Factor a_1

Reliability (%)	90	91	92	93	94	95	96	97	98	99	(99.6)	(99.9)
a_1	1.00	0.92	0.84	0.77	0.64	0.62	0.53	0.44	0.33	0.21	(0.10)	(0.037)

(2) Material Factor a_2

Improvement in manufacturing techniques for raw material and for heat treatment of components have led to an extended fatigue life for bearings.

Our standard bearing material is a superior quality of vacuum degassed steel leading to an extended life for bearings.

The basic load ratings given in this catalogue have been established by taking this longer life into consideration. This gives an increase in the operating life in hours of a factor of 2.2 and a factor of 1.3 for the load carrying capacity. The material factor a_2 = 1.

(3) Operating Conditions Factor a_3

This is an adjustment factor to meet non-conventional operating conditions for lubrication, temperature and load.
Under good lubrication conditions with a permanent oil film between rolling elements and rings, the factor a_2 = 1.
In unfavourable conditions ($dm \bullet n \leqq 10{,}000$), a factor $a_3 < 1$ must be selected. d_m = mean bearing diameter (D+d)/2
n = operating speed

At temperatures above 120°C, greater dimensional changes occur and the material hardness deteriorates which affects the bearing life.

The operating factor ft for temperature can be taken from the following table:

Operating Temperature and Life Compensation Factor f_t

Bearing Temperature (°C)	120	150	175	200	225	250	275	300
Temperature Factor (f_t)	1.00	0.90	0.85	0.75	0.65	0.60	0.52	0.45

Heat stabilized bearings, where the dimensions are stable above 120°C, are available on request.

Basic Static Load Rating "C_{or}"

The Basic Static Load Rating applies to bearings where rotating motion does not occurs only infrequently.

The Basic Load Ratings and Calculation methods in this catalogue are based on methods described in ISO Excessive static load causes brinelling at the contact point between the rolling element and raceway.

As a standard of permissible static load, the basic load rating C_{or} for radial bearings is specified as follows:

Maximum contact pressure at the contact point between rolling element and bearing ring to be 4200 MPa (428.6 kgf/mm^2) and total permanent deformation of the bearing of appr. 1/10000th of the rolling element's diameter.

Basic Static Load Rating for stainless steel is 75 - 80% of that for standard bearing steel.

Equivalent Dynamic Bearing Load "P"

Load conditions on bearing are usually a combination of radial and axial loads. In order to establish the equivalent radial load with definite force and direction and direction we use the following formula:

Radial Load Factor and Axial Load Factor

$\frac{C_{or}}{F_a}$	e	$\frac{F_a}{F_r} \leqq e$		$\frac{F_a}{F_r} > e$	
		X	Y	X	Y
5	0.35	1	0	0.56	1.26
10	0.29	1	0	0.56	1.49
15	0.27	1	0	0.56	1.64
20	0.25	1	0	0.56	1.76
25	0.24	1	0	0.56	1.85
30	0.23	1	0	0.56	1.92
50	0.20	1	0	0.56	2.13
70	0.19	1	0	0.56	2.28

$P = XF_r + YF_a$ (kgf)
X = Radial Load Factor
Y = Axial Load Factor
F_r = Radial Load (kgf)
F_a = Axial Load (kgf)

Equivalent Static Radial Load "P_0"

For ball bearings subject to both radial and axial load, the static radial load with definite force and direction is called the Equivalent Static Radial Load.

The higher value from the two formulae shown below should be used.

$$P_0 = 0.6 \times F_r + 0.5 \times F_a, \quad P_0 = F_r$$

Safety Modulus

Permissible equivalent static load depends on basic static load rating.
But using limit of bearing change by using condition. Accordingly we use safety modulus which is experimental value.

$$f_s = \frac{C_{or}}{P_0}$$

f_s : Safety Modulus
C_{or} : Basic Static Load Rating (N)
P_0 : Equivalent Static Radial Load (N)

Using Condition	f_s
Normal Operation	1.0
Shock Load	1.5
Silent and High Accurate Rotation	2.0

The Importance of Correct Fitting

A bearing can only perform to its full capacity when it is correctly fitted on the shaft and in the housing. Insufficient interference on fitting surface could cause bearing rings to creep in a circumferential direction. Once this happens, considerable wear occurs on the fitting surface and both shaft and housing are damaged. Furthermore, abrasive particles may enter the bearing causing vibration, excessive heat and damage to raceways. It is therefore necessary to provide bearing rings under rotating load with an adequate interference fit to prevent creep. When using thin-type bearings under low load, the bearings should be fastened by a nut. Statically loaded bearings generally do not need to be fitted with an interference fit. Only when subject to a high degree of vibration do both inner and outer rings require fitting with an interference fit.

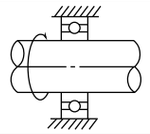
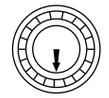
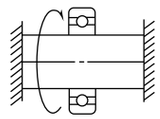
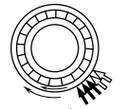
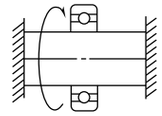
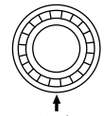
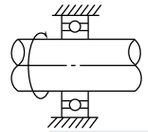
Fitting of Bearing and Shaft

Condition (Steel Shaft)		Shaft Bore Diameter	Shaft Tolerance Class	
			Thin-Type	Others
Inner Ring Rotating Load or Indeterminate Load Direction	Light Load ≦ 0.06C_r or Fluctuating Load	10≦d≦18	h5	js5
		18≦d≦30	h5	js5
		30≦d≦50	h5	js5
	Standard Load = 0.06 ~ 0.12C_r	10≦d≦18	js5	j5
		18≦d≦30	js5	k5
		30≦d≦50	js5	k5
Outer Ring Rotating Load	Necessary for Inner Ring turning Easily Around Shaft	All Bore Diameters	g5	g6
	Unnecessary for Inner Ring Turning Easily Around Shaft	All Bore Diameters	h5	h6

Fitting of Bearing and Housing

Condition (One-Piece Housing)		Axial Directional Movement of Outer Ring	Tolerance Class of Housing Seats	
			Thin-Type	Others
Inner Ring Rotating Load	Varying Loads	Easy to Move	H6	H7
	Light or Standard Load	Easy to Move	H7	H8
	High Temperature of Lnner Ring and Shaft	Easy to Move	G6	G7
	Light or Standard Load	As a Rule, Impossible to Move	K5	K6
	Precise Rotation	Possible to Move	JS6	J6
	Quiet Operation	Easy to Move	H6	H6
Indeterminate Load Direction	Light or Standard Load	In General, Possible to Move	JS6	J7
	Standard or Heavy Load	As a Rule, Impossible to Move	K5	K7
	Large Shock Load	Impossible to Move	M5	M7
	Light or Fluctuating Load	Impossible to Move	M5	M7
Outer Ring Rotating Load	Standard or Heavy Load	Impossible to Move	N5	N7
	Thin-Type Housing Seats Heavy Load or Large Shock Load	Impossible to Move	P6	P7

Characteristics of Load and Fitting

ROTATING RING	LOAD	LOAD CONDITION	FITTING
Inner Ring 	 Static	Inner Ring Rotating Load Outer Ring Static Load	Interference Fit for Inner Ring Clearance Fit for Outer Ring
Outer Ring 	 Rotating		
Outer Ring 	 Static	Outer Ring Rotating Load Inner Ring Static Load	Clearance Fit for Inner Ring Interference Fit for Outer Ring
Inner Ring 	 Rotating		
In the Case of Fluctuating Load Direction or Unbalanced Load	Rotating or Static	Indeterminate Load Direction	Interference Fit for Inner and Outer Ring

Tolerance of Shaft (Unit : μm)

Diameter (mm) Over	Incl.	Average Bore Diameter Tolerance of Bearing (Class 0) Δ_{dmp}	d6	e6	f6	g5	g6	h5	h6	h7	h8	h9	h10	js6	js6	j6	j6	j7	k6	k6	k7	m5	m6	n6	p6	r6	r7
3	6	0 −8	−30 −38	−20 −28	−10 −18	−4 −9	−4 −12	0 −5	0 −8	0 −12	0 −18	0 −30	0 −48	±2.5	±4	+3 −2	+6 −2	+8 −4	+6 +1	+9 +1	+13 +1	+9 +4	+12 +4	+16 +8	+20 +12	+23 +15	+27 +15
6	10	0 −8	−40 −49	−25 −34	−13 −22	−5 −11	−5 −14	0 −6	0 −9	0 −15	0 −22	0 −36	0 −58	±3	±4.5	+4 −2	+7 −2	+10 −6	+7 +1	+10 +1	+16 +1	+12 +6	+15 +6	+19 +10	+24 +15	+28 +19	+34 +19
10	18	0 −8	−50 −61	−32 −43	−16 −27	−6 −14	−6 −17	0 −8	0 −11	0 −18	0 −27	0 −43	0 −70	±4	±5.5	+5 −3	+8 −3	+12 −6	+9 +1	+12 +1	+19 +1	+15 +7	+18 +7	+23 +12	+29 +18	+34 +23	+41 +23
18	30	0 −10	−65 −78	−40 −53	−20 −33	−7 −16	−7 −20	0 −9	0 −13	0 −21	0 −33	0 −52	0 −84	±4.5	±6.5	+5 −4	+9 −4	+13 −8	+11 +2	+15 +2	+23 +2	+17 +8	+21 +8	+28 +15	+35 +22	+41 +28	+49 +28
30	50	0 −12	−80 −96	−50 −66	−25 −41	−9 −20	−9 −25	0 −11	0 −16	0 −25	0 −39	0 −62	0 −100	±5.5	±8	+6 −5	+11 −5	+15 −10	+13 +2	+18 +2	+27 +2	+20 +9	+25 +9	+33 +17	+42 +26	+50 +34	+59 +34

Tolerance of Housing (Unit : μm)

Diameter (mm) Over	Incl.	Average Bore Diameter Tolerance of Bearing (Class 0) Δ_{dmp}	E6	F6	F7	G6	G7	H6	H7	H8	J6	J7	JS6	JS7	K5	K6	K7	M5	M6	M7	N5	N6	N7	P6	P7
10	18	0 −8	+43 +32	+27 +16	+34 +16	+17 +6	+24 +6	+11 0	+18 0	+27 0	+6 −5	+10 −8	±5.5	±9	+2 −6	+2 −9	+6 −12	−4 −12	−4 −15	0 −18	−9 −17	−9 −20	−5 −23	−15 −26	−11 −29
18	30	0 −9	+53 +40	+33 +20	+41 +20	+20 +7	+28 +7	+13 0	+21 0	+33 0	+8 −5	+12 −9	±6.5	±10	+1 −8	+2 −11	+6 −15	−5 −14	−4 −17	0 −21	−12 −21	−11 −24	−7 −28	−18 −31	−14 −35
30	50	0 −11	+66 +50	+41 +25	+50 +25	+25 +9	+34 +9	+16 0	+25 0	+39 0	+10 −6	+14 −11	±8	±1.2	+2 −9	+3 −13	+7 −18	−5 −16	−4 −20	0 −25	−13 −24	−12 −28	−8 −33	−21 −37	−17 −42
50	80	0 −13	+79 +60	+49 +30	+60 +30	+29 +10	+40 +10	+19 0	+30 0	+46 0	+13 −6	+18 −12	±9.5	±1.5	+3 −10	+4 −15	+9 −21	−6 −19	−5 −24	0 −30	−15 −28	−14 −33	−9 −39	−26 −45	−21 −51

Lubrication is important as it affects the life of bearings significantly. Well lubricated bearings have the following benefits;

i. Reduce Friction & Abrasion
ii. Dissipation of Frictional Heat
iii. Protection from Corrosion & Contaminants
iv. Reduction of Noise

Commonly Used Greases

Mfg	Brand	Thickener	Base oil	Drop point °C	Consistency	Operating temperature range °C	Application
Exxon	Beacon 325	Lithium	Diester	193	290	-60 ~ +120	low temp
	Andok B	Nathium	Mineral	260	280	-40 ~ +120	general purpose
	Andok C	Nathium	Mineral	≥260	205	-20 ~ +120	general purpose
	Andok 260	Nathium	Mineral	200	250	-30 ~ +150	general purpose
Kyodo Yushi	Multemp PS2	Lithium	Diester	189	280	-50 ~ +110	low temp
	Multemp SRL	Lithium	Ester	191	245	-40 ~ +150	low noise
	Multemp SRH	Lithium	Ester	250	201	-40 ~ +150	low temp
	Multemp SB-M	Diurea	Synthetic oil	220	260	-40 ~ +200	high speed/temp
	ET-K	Diurea	Synthetic oil/ester	260	300	-40 ~ +200	high temp/ speed alternator
Kluber	Asonic GLY 32	Lithium	Synthenic	190	265-295	-50 ~ +140	low temp
	Asonic GHY 72	Polyhamstoff	Ester Mineral	250	250-280	-40 ~ +180	high temp/low noise
	Isoflex Super LDS 18	Lithium	Diester	190	280	-60 ~ +130	low temp
	Isoflex LDS 18 Special A	Lithium	Diester	190	280	-60 ~ +130	low temp
	Isoflex Topas NB52	Barium	Synthetic hydrocarbon	204	280	-60 ~ +170	low/high temp
	Barrierta L55/2	PTFE	Fluorinated		280	-35 ~ +260	low/high temp
	Barrierta TK44N2	Na-Kompies	Silicone			-60 ~ +230	low/high temp
	Isoflex NCA 15	Special Ca	Ester Mineral	180	265-295	-40 ~ +130	high speed
	Asonic HQ72 -102	Urea	Ester	240	250-280	-40 ~ +180	low/high temp & low noise
Dow Coming	Molykote 33M	Lithium	Silicone	210	260	-70 ~ +180	low/high temp
	Molykote 44M	Lithium	Silicone	204	260	-40 ~ +200	high temp
	Molykote 55M	Lithium	Silicone			-55 ~ +165	low temp
	Molykote BR2 plus	Lithium	Mineral		280	-30 ~ +150	high speed
	Molykote FS1292	PTFE	Phlorosilicon	≥232	310	-40 ~ +200	high speed
	Molykote FS3451	PTFE	Phlorosilicon	≥260	285	-40 ~ +230	chemical solvent resistant
Shell	Alvania No.2	Lithium	Mineral	182	272	-25 ~ +120	general purpose
	Alvania No.3	Lithium	Mineral	183	233	-20 ~ +135	general purpose
	Alvania RA	Lithium	Mineral	183	252	-25 ~ +120	general purpose
	Alvania EP2	Lithium	Mineral	185	276	-10 ~ +100	general purpose
	Dolium R		Mineral	238	281	-20 ~ +140	general purpose
	Aero Shell NO.5	Microgel	Mineral	≥260	282	-10 ~ +130	general purpose
	Aero Shell NO.7	Microgel	Mineral	≥260	288	-70 ~ +150	low temp
	Aero Shell RLQ2	Lithium	Mineral	195	266	-50 ~ +150	low noise/ high speed
Mobil Oil	Mobilux2	Lithium	Mineral	190	280	-20 ~ +120	general purpose
	Mobil 22	Lithium	Dester Mineral	192	274	-50 ~ +140	low temp
	Mobil 28	Bentonite	Synthetic hydrocarbon	≥ 260	280	-60 ~ +180	low/high temp
	Mobilitemp SHC 22	Glue earth	Synthetic oil	250	265-295	-50 ~ +180	high speed/temp
	Mobilitemp SHC 100	Glue earth	Synthetic oil	250	265-295	-40 ~ +200	high speed/temp
Du Pont	Krytox 240AC	PTFE	Fluorinated		282	-35 ~ +280	high temp
Caltex	Chevron SRI-2	Urea	Mineral		293	-30 ~ +175	high temp
Hangu	Hangu#2	-	Mineral	-	-	-20 ~ +120	general purpose

Problems		Causes	Solutions
Noise	High pitched metallic noise	Poor lubrication Clearance too small Poor fitting Excessive load	Improve lubrication Correct clearance Investigate mounting method and seating Examine shaft and housing tolerances for closing effect
	Low pitched metallic noise	Brinelled raceway surface	Avoid shock loads
	Regular noise	Rust and damage Flaking of raceway surface	Check and replace seals and relubricate Improve lubrication and check fitting, clearance and fixing method
	Irregular noise	Ingress of foreign matter Excessive clearance Damage and Flaking of railing element	Check and replace seals and relubricate Correct clearance Reduce loads and /or clearance
	Variable noise	Variable clearance due to temperature changes Damage to raceways	Check fits taking housing material and temperature into consideration Improve lubrication and check fitting, clearance and fixing method
Corrosion	Rust inside bearing	Poor storage Condensation	Careful storage and handling
	Rust on fitting surface	Fretting Fluctuating load	Increase interference fit Us oil as lubricant
	Corrosion	Ingress of acid, alkali or gas Chemical reaction with lubricant	Check sealing Use correct lubricant

NIS™

1.00

Deep Groove Ball Bearings

Prefix & Suffix

SS	62	05	ZZ

Prefix

"Blank": Chrome steel
SS: Stainless steel

Basic type series

67 : Ultra extra light
68 : Ultra light
69 : Extra light
60 : Light
62 : Standard
63 : Medium
64 : Heavy

Bore size (mm)

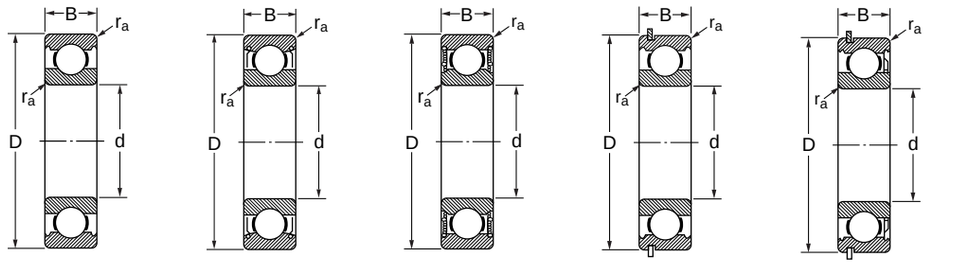
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03< 2 digit < 100: multiply by 5

Suffix

Z : Shield at 1 side of the bearing
ZZ : Shields at both sides of the bearing
RS : Seal at 1 side of the bearing
2RS : Seals at both sides of the bearing
N : Snap ring groove at outside of outer ring
NR : Snap ring groove with snap ring at outside of outer ring
ZNR : Shield at 1 side of the bearing with snap ring groove and snap ring on outer ring

Single Row Deep Groove Ball Bearings - Metric

NIS™



OPEN
With recessed outer ring shoulders

SHIELDS - ZZ

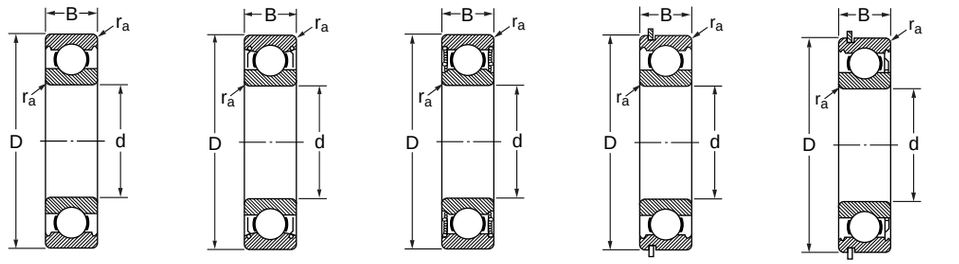
SEALS - 2RS

Snap ring groove and snap ring in outer ring - NR

One Z shield, snap ring groove and snap ring - ZNR

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
10	15	3	0.540	0.200	30,600	36,720	0.2	0.002	6700	ZZ	2RS	-	-
10	19	5	1.260	0.680	23,400	30,600	0.3	0.005	6800	ZZ	2RS	N	NR
10	22	6	2.970	1.260	22,500	28,800	0.3	0.011	6900	ZZ	2RS	N	NR
10	26	8	4.130	1.790	18,000	25,200	0.3	0.019	6000	ZZ	2RS	N	NR
10	26	12	4.160	1.770	17,100	-	0.3	0.025	63000	-	2RS	-	-
10	28	8	4.130	1.790	16,200	23,400	0.3	0.022	16100	ZZ	-	-	-
10	30	9	4.590	2.150	17,100	23,400	0.6	0.032	6200	ZZ	2RS	N	NR
10	30	14	4.570	2.130	15,300	-	0.6	0.040	62200	-	2RS	-	-
10	35	11	6.890	3.140	16,200	21,600	0.6	0.053	6300	ZZ	2RS	N	NR
10	35	17	7.260	3.060	13,500	-	0.6	0.060	62300	-	2RS	-	-
12	18	4	0.580	0.250	28,800	34,560	0.2	0.002	6701	ZZ	2RS	-	-
12	21	5	1.260	0.810	19,800	27,000	0.3	0.007	6801	ZZ	2RS	N	NR
12	24	6	3.050	1.340	18,000	25,200	0.3	0.013	6901	ZZ	2RS	N	NR
12	28	7	4.580	2.150	17,100	23,400	0.3	0.019	16001	ZZ	-	-	-
12	28	8	4.590	2.150	17,100	23,400	0.3	0.022	6001	ZZ	2RS	N	NR
12	28	12	4.570	2.130	15,300	-	0.3	0.029	63001	-	2RS	-	-
12	32	10	6.140	2.750	16,200	21,600	0.6	0.035	6201	ZZ	2RS	N	NR
12	32	14	6.210	2.790	13,500	-	0.6	0.045	62201	-	2RS	-	-
12	37	12	8.750	4.580	15,300	19,800	1.0	0.057	6301	ZZ	2RS	N	NR
12	37	17	8.780	3.740	12,600	-	1.0	0.070	62301	-	2RS	-	-
15	21	4	0.590	0.270	24,300	29,160	0.2	0.004	6702	ZZ	2RS	-	-
15	24	5	1.730	1.070	18,000	25,200	0.3	0.008	6802	ZZ	2RS	N	NR
15	28	7	3.600	1.820	17,100	23,400	0.3	0.018	6902	ZZ	2RS	N	NR
15	32	8	5.040	2.300	16,200	21,600	0.3	0.025	16002	ZZ	-	-	-
15	32	9	5.030	2.570	16,200	21,600	0.3	0.031	6002	ZZ	2RS	N	NR
15	32	13	5.040	2.570	12,600	-	0.3	0.039	63002	-	2RS	-	-
15	35	11	6.890	3.350	15,300	19,800	0.6	0.045	6202	ZZ	2RS	N	NR
15	35	14	7.020	3.380	11,700	-	0.6	0.054	62202	-	2RS	-	-
15	42	13	10.350	4.880	14,400	18,000	1.0	0.080	6302	ZZ	2RS	N	NR
15	42	17	10.260	4.860	10,800	-	1.0	0.110	62302	-	2RS	-	-
17	23	4	0.630	0.320	21,600	25,920	0.2	0.002	6703	ZZ	2RS	-	-
17	26	5	1.970	1.160	17,100	23,400	0.3	0.008	6803	ZZ	2RS	N	NR

NIS™ Single Row Deep Groove Ball Bearings - Metric



OPEN
With recessed outer ring shoulders

SHIELDS - ZZ

SEALS - 2RS

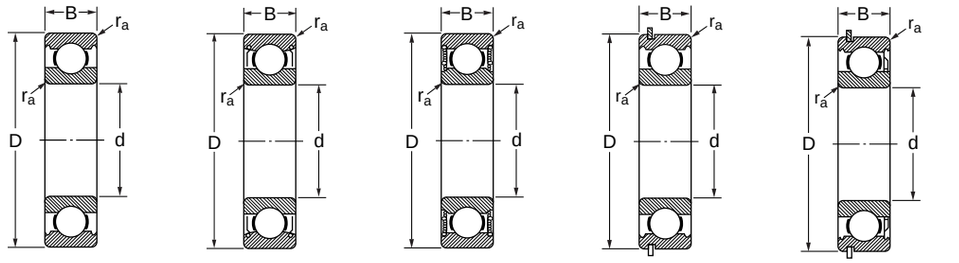
Snap ring groove and snap ring in outer ring - NR

One Z shield, snap ring groove and snap ring - ZNR

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
17	30	7	3.870	2.090	16,200	21,600	0.3	0.020	6903	ZZ	2RS	N	NR
17	35	8	6.140	3.050	15,300	19,800	0.3	0.027	16003	ZZ	-	-	-
17	35	10	5.400	2.930	15,300	19,800	0.3	0.040	6003	ZZ	2RS	N	NR
17	35	14	5.450	2.930	11,700	-	0.3	0.052	63003	-	2RS	-	-
17	40	12	8.630	4.310	14,400	18,000	0.6	0.064	6203	ZZ	2RS	N	NR
17	40	16	8.610	4.280	10,800	-	0.6	0.083	62203	-	2RS	-	-
17	47	14	12.150	5.930	13,500	17,100	1.0	0.109	6303	ZZ	2RS	N	NR
17	47	19	12.150	5.900	9,900	-	1.0	0.150	62303	-	2RS	-	-
17	62	17	20.250	9.720	9,900	13,500	1.0	0.268	6403	ZZ	2RS	N	NR
20	27	4	0.650	0.360	18,900	22,680	0.2	0.006	6704	ZZ	2RS	-	-
20	32	7	3.110	2.030	15,300	19,800	0.3	0.200	6804	ZZ	2RS	N	NR
20	37	9	5.900	3.240	15,300	19,800	0.3	0.040	6904	ZZ	2RS	N	NR
20	42	8	7.110	4.010	13,500	17,100	0.3	0.050	16004	ZZ	-	-	-
20	42	12	8.450	4.520	13,500	17,100	0.6	0.068	6004	ZZ	2RS	N	NR
20	42	16	8.430	4.500	9,900	-	0.6	0.086	63004	-	2RS	-	-
20	47	14	11.520	5.990	12,600	16,200	1.0	0.103	6204	ZZ	2RS	N	NR
20	47	18	11.430	5.900	9,000	-	1.0	0.130	62204	-	2RS	-	-
20	52	15	14.220	7.100	11,700	15,300	1.0	0.142	6304	ZZ	2RS	N	NR
20	52	21	14.310	7.020	8,550	-	1.0	0.200	62304	-	2RS	-	-
20	72	19	27.900	13.680	8,550	11,700	1.0	0.400	6404	ZZ	2RS	N	NR
22	44	12	8.460	4.550	15,300	18,000	0.6	0.074	60/22	ZZ	2RS	N	NR
22	50	14	11.610	6.120	12,600	14,400	1.0	0.119	62/22	ZZ	2RS	N	NR
22	56	16	16.560	8.330	11,700	14,400	1.0	0.179	63/22	ZZ	2RS	N	NR
25	32	4	0.690	0.430	15,120	18,000	0.2	0.007	6705	ZZ	2RS	-	-
25	37	7	3.330	2.390	13,500	17,100	0.3	0.022	6805	ZZ	2RS	N	NR
25	42	9	6.630	4.100	12,600	16,200	0.3	0.050	6905	ZZ	2RS	N	NR
25	47	8	7.580	4.640	11,700	15,300	0.3	0.060	16005	-	-	-	-
25	47	12	9.000	5.270	11,700	15,300	0.6	0.078	6005	ZZ	2RS	N	NR
25	47	16	10.080	5.900	8,550	-	0.6	0.100	63005	-	2RS	-	-
25	52	15	12.600	7.100	10,800	14,400	1.0	0.127	6205	ZZ	2RS	N	NR
25	52	18	12.600	7.020	7,650	-	1.0	0.150	62205	-	2RS	-	-
25	62	17	19.980	10.350	9,000	12,600	1.0	0.219	6305	ZZ	2RS	N	NR

Single Row Deep Groove Ball Bearings - Metric

NIS™



OPEN
With recessed outer ring shoulders

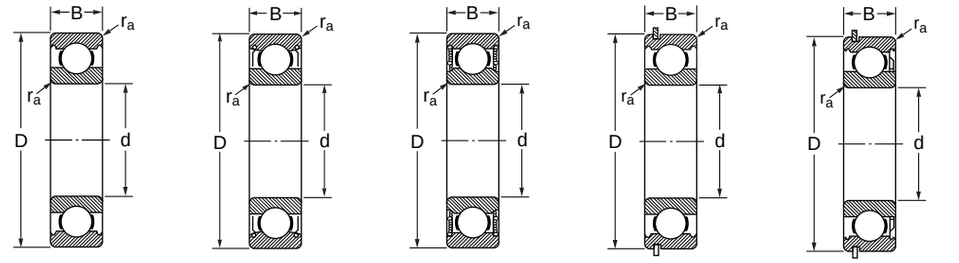
SHIELDS - ZZ

SEALS - 2RS

Snap ring groove and snap ring in outer ring - NR

One Z shield, snap ring groove and snap ring - ZNR

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
25	62	24	20.250	10.440	6,750	-	1.0	0.320	62305	-	2RS	-	-
25	80	21	34.380	17.280	7,650	9,900	1.5	0.529	6405	ZZ	2RS	N	NR
28	52	12	11.250	6.660	12,600	14,400	0.6	0.096	60/28	ZZ	2RS	N	NR
28	58	16	14.940	8.550	10,800	12,600	1.0	0.175	62/28	ZZ	2RS	N	NR
28	68	18	24.030	12.600	9,000	11,700	1.0	0.287	63/28	ZZ	2RS	N	NR
30	42	7	3.600	2.840	10,800	14,400	0.3	0.026	6806	ZZ	2RS	N	NR
30	47	9	6.800	4.580	10,800	14,400	0.3	0.060	6906	ZZ	2RS	N	NR
30	55	9	10.080	5.630	9,000	12,600	0.3	0.085	16006	-	-	-	-
30	55	13	11.880	7.470	9,000	12,600	1.0	0.110	6006	ZZ	2RS	N	NR
30	55	19	11.970	7.470	7,200	-	1.0	0.160	63006	-	2RS	-	-
30	62	16	17.550	10.350	8,550	11,700	1.0	0.200	6206	ZZ	2RS	N	NR
30	62	20	17.550	10.080	6,750	-	1.0	0.240	62206	-	2RS	-	-
30	72	19	24.300	13.680	8,100	10,800	1.0	0.349	6306	ZZ	2RS	N	NR
30	72	27	25.290	14.400	5,670	-	1.0	0.480	62306	-	2RS	-	-
30	90	23	42.750	22.050	7,200	9,000	1.5	0.710	6406	ZZ	2RS	N	NR
32	58	13	13.590	8.240	10,800	12,600	1.0	0.122	60/32	ZZ	2RS	N	NR
32	65	17	18.630	10.440	9,000	10,800	1.0	0.225	62/32	ZZ	2RS	N	NR
32	75	20	26.910	15.300	8,100	9,900	1.0	0.389	63/32	ZZ	2RS	N	NR
35	47	7	3.710	3.110	9,000	12,600	0.3	0.030	6807	ZZ	2RS	N	NR
35	55	10	8.600	6.170	8,550	11,700	0.6	0.086	6907	ZZ	2RS	N	NR
35	62	9	10.350	7.920	8,100	10,800	0.3	0.100	16007	-	-	-	-
35	62	14	14.580	9.450	8,100	10,800	1.0	0.148	6007	ZZ	2RS	N	NR
35	62	20	14.310	9.180	6,300	-	1.0	0.210	63007	-	2RS	-	-
35	72	17	22.950	13.680	7,650	9,900	1.0	0.288	6207	ZZ	2RS	N	NR
35	72	23	22.950	13.770	5,670	-	1.0	0.370	62207	-	2RS	-	-
35	80	21	29.880	17.280	7,200	9,000	1.5	0.455	6307	ZZ	2RS	N	NR
35	80	31	29.880	17.100	5,400	-	1.5	0.660	62307	-	2RS	-	-
35	100	25	51.120	26.550	6,030	7,650	1.5	0.926	6407	ZZ	2RS	N	NR
40	52	7	3.960	2.930	8,550	11,700	0.3	0.034	6808	ZZ	2RS	N	NR
40	62	12	10.800	8.090	8,100	10,800	0.6	0.110	6908	ZZ	2RS	N	NR
40	68	9	11.250	9.180	7,650	9,900	0.3	0.130	16008	-	-	-	-
40	68	15	15.300	10.620	7,650	9,900	1.0	0.185	6008	ZZ	2RS	N	NR



OPEN
With recessed outer ring shoulders

SHIELDS - ZZ

SEALS - 2RS

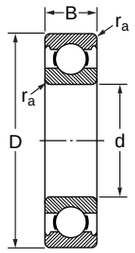
Snap ring groove and snap ring in outer ring - NR

One Z shield, snap ring groove and snap ring - ZNR

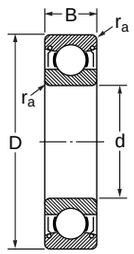
Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
40	68	21	15.120	10.440	5,670	-	1.0	0.260	63008	-	2RS	-	-
40	80	18	26.550	16.200	7,200	9,000	1.0	0.368	6208	ZZ	2RS	N	NR
40	80	23	27.630	17.100	5,040	-	1.0	0.440	62208	-	2RS	-	-
40	90	23	36.720	21.600	6,300	8,100	1.5	0.639	6308	ZZ	2RS	N	NR
40	90	33	36.900	21.600	4,500	-	1.5	0.890	62308	-	2RS	-	-
40	110	27	58.950	33.750	5,670	7,200	2.0	1.221	6408	ZZ	2RS	N	NR
45	58	7	4.190	3.890	7,650	9,900	0.3	0.040	6809	ZZ	2RS	N	NR
45	68	12	11.520	8.750	7,650	9,900	0.6	0.140	6909	ZZ	2RS	N	NR
45	75	10	11.610	9.180	7,200	9,000	0.6	0.170	16009	-	-	-	-
45	75	16	18.900	13.320	7,200	9,000	1.0	0.230	6009	ZZ	2RS	N	NR
45	75	23	18.720	13.140	5,040	-	1.0	0.340	63009	-	2RS	-	-
45	85	19	28.350	18.450	6,300	8,100	1.0	0.416	6209	ZZ	2RS	N	NR
45	85	23	29.880	19.440	4,500	-	1.0	0.480	62209	-	2RS	-	-
45	100	25	47.520	28.620	5,670	7,200	1.5	0.837	6309	ZZ	2RS	N	NR
45	100	36	47.430	28.350	4,050	-	1.5	1.150	62309	-	2RS	-	-
45	120	29	69.750	40.950	5,040	6,300	2.0	1.520	6409	ZZ	2RS	N	NR
50	65	7	4.590	4.220	7,200	9,000	0.3	0.057	6810	ZZ	2RS	N	NR
50	72	12	11.520	10.080	7,200	9,000	0.6	0.140	6910	ZZ	2RS	N	NR
50	80	10	14.580	11.880	6,300	8,100	0.6	0.180	16010	-	-	-	-
50	80	16	19.800	14.580	6,300	8,100	1.0	0.258	6010	ZZ	2RS	N	NR
50	80	23	19.440	14.400	4,500	-	1.0	0.370	63010	-	2RS	-	-
50	90	20	31.500	20.880	6,030	7,650	1.0	0.463	6210	ZZ	2RS	N	NR
50	90	23	31.590	20.880	4,320	-	1.0	0.520	62210	-	2RS	-	-
50	110	27	55.620	34.200	5,400	6,750	2.0	1.082	6310	ZZ	2RS	N	NR
50	110	40	55.620	34.200	3,870	-	2.0	1.550	62310	-	2RS	-	-
50	130	31	82.980	49.680	4,770	6,030	2.1	1.855	6410	ZZ	2RS	N	NR
55	72	9	6.050	5.850	6,750	8,550	0.3	0.083	6811	ZZ	2RS	N	NR
55	80	13	11.700	12.150	6,300	8,100	1.0	0.190	6911	ZZ	2RS	N	NR
55	90	11	14.580	15.480	5,670	7,200	0.6	0.260	16011	-	-	-	-
55	90	18	27.180	19.620	5,670	7,200	1.0	0.382	6011	ZZ	2RS	N	NR
55	100	21	38.880	26.280	5,400	6,750	1.5	0.603	6211	ZZ	2RS	N	NR
55	100	25	39.240	26.100	3,870	-	1.5	0.700	62211	-	2RS	-	-

Single Row Deep Groove Ball Bearings - Metric

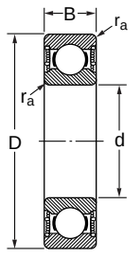
NIS™



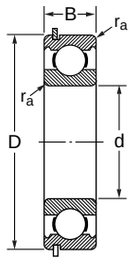
OPEN
With recessed outer ring shoulders



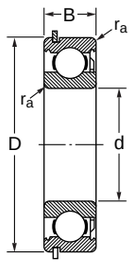
SHIELDS - ZZ



SEALS - 2RS

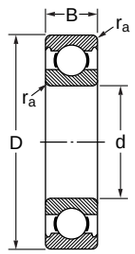


Snap ring groove and snap ring in outer ring - NR

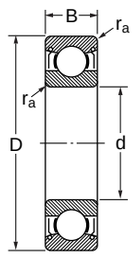


One Z shield, snap ring groove and snap ring - ZNR

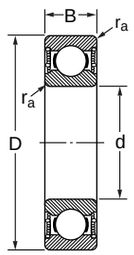
Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
40	68	21	15.120	10.440	5,670	-	1.0	0.260	63008	-	2RS	-	-
55	120	29	64.350	40.320	4,770	6,030	2.0	1.350	6311	ZZ	2RS	N	NR
55	120	43	64.350	40.500	3,420	-	2.0	1.950	62311	-	2RS	-	-
55	140	33	90.000	56.250	4,320	5,400	2.1	2.316	6411	ZZ	2RS	N	NR
60	78	10	8.240	7.880	6,030	7,650	0.3	0.110	6812	ZZ	2RS	N	NR
60	85	13	12.600	12.780	5,670	7,200	1.0	0.200	6912	ZZ	2RS	N	NR
60	95	11	14.850	13.500	5,400	6,750	0.6	0.280	16012	-	-	-	-
60	95	18	28.350	21.780	5,400	6,750	1.0	0.420	6012	ZZ	2RS	N	NR
60	110	22	43.020	29.520	5,040	6,750	1.5	0.789	6212	ZZ	2RS	N	NR
60	110	28	47.430	32.400	3,600	-	1.5	0.970	62212	-	2RS	-	-
60	130	31	73.620	46.620	4,500	5,670	2.1	1.710	6312	ZZ	2RS	N	NR
60	130	46	73.710	46.800	3,060	-	2.0	2.500	62312	-	2RS	-	-
60	150	35	97.200	63.000	4,050	5,040	2.1	2.750	6412	ZZ	2RS	N	NR
65	85	10	9.000	8.390	5,670	7,200	0.6	0.130	6813	ZZ	2RS	N	NR
65	90	13	13.050	15.750	5,400	6,750	1.0	0.220	6913	ZZ	2RS	N	NR
65	100	11	15.750	14.400	5,040	6,300	0.6	0.300	16013	-	-	-	-
65	100	18	28.800	22.320	5,040	6,300	1.0	0.440	6013	ZZ	2RS	N	NR
65	120	23	51.480	36.000	4,500	5,670	1.5	0.990	6213	ZZ	2RS	N	NR
65	120	31	50.310	36.450	3,240	-	1.5	1.250	62213	-	2RS	-	-
65	140	33	84.420	54.450	4,050	5,040	2.1	2.100	6313	ZZ	2RS	N	NR
65	140	48	83.070	54.000	2,880	-	2.0	3.000	62313	-	2RS	-	-
65	160	37	106.200	70.650	3,870	4,770	2.1	3.342	6413	ZZ	2RS	N	NR
70	90	10	9.450	9.720	5,400	6,750	0.6	0.140	6814	ZZ	2RS	N	NR
70	100	16	14.850	15.480	5,040	6,300	1.0	0.350	6914	ZZ	2RS	N	NR
70	110	13	18.180	16.920	4,770	6,030	0.6	0.430	16014	-	-	-	-
70	110	20	34.650	27.450	4,770	6,030	1.0	0.600	6014	ZZ	2RS	N	NR
70	125	24	54.720	40.500	4,320	5,400	1.5	1.050	6214	ZZ	2RS	N	NR
70	125	31	54.450	40.500	3,060	-	1.5	1.300	62214	-	2RS	-	-
70	150	35	94.500	61.200	3,870	4,770	2.1	2.500	6314	ZZ	2RS	N	NR
70	150	51	93.600	61.200	2,700	-	2.0	3.550	62314	-	2RS	-	-
70	180	42	126.000	89.550	3,420	4,320	2.5	4.850	6414	ZZ	2RS	N	NR
75	95	10	9.450	9.900	5,040	6,300	0.6	0.150	6815	ZZ	2RS	N	NR



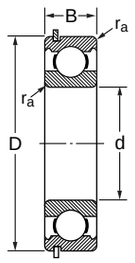
OPEN
With recessed outer ring shoulders



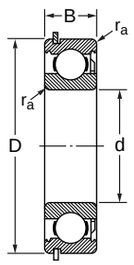
SHIELDS - ZZ



SEALS - 2RS



Snap ring groove and snap ring in outer ring - NR



One Z shield, snap ring groove and snap ring - ZNR

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
75	105	16	16.200	15.750	4,770	6,030	1.0	0.380	6915	ZZ	2RS	N	NR
75	115	13	22.500	21.420	4,500	5,670	0.6	0.460	16015	-	-	-	-
75	115	20	36.180	29.880	4,500	5,670	1.0	0.640	6015	ZZ	2RS	N	NR
75	130	25	59.400	44.550	4,050	5,040	1.5	1.200	6215	ZZ	2RS	N	NR
75	160	37	100.800	69.120	3,600	4,500	2.1	3.050	6315	ZZ	2RS	N	NR
75	190	45	139.500	103.500	3,240	4,050	2.5	6.800	6415	ZZ	2RS	N	NR
80	100	10	9.900	10.620	4,770	6,030	0.6	0.160	6816	ZZ	2RS	N	NR
80	110	16	16.920	22.680	4,500	5,670	1.0	0.440	6916	ZZ	2RS	N	NR
80	125	14	22.680	20.412	4,320	5,400	0.6	0.600	16016	-	-	-	-
80	125	22	42.750	35.820	4,320	5,400	1.0	0.821	6016	ZZ	2RS	N	NR
80	140	26	64.350	48.780	3,870	4,770	2.0	1.448	6216	ZZ	2RS	N	NR
80	170	39	109.800	77.850	3,420	4,320	2.1	3.620	6316	ZZ	2RS	N	NR
80	200	48	145.800	112.500	3,060	3,870	2.5	8.000	6416	ZZ	2RS	N	NR
85	100	13	19.620	19.350	4,320	5,400	1.0	0.270	6817	ZZ	2RS	N	NR
85	120	18	25.380	24.120	4,320	5,400	1.0	0.550	6917	ZZ	2RS	N	NR
85	130	14	23.220	23.580	4,050	5,040	0.6	0.630	16017	-	-	-	-
85	130	22	45.720	38.520	4,050	5,040	1.0	0.890	6017	ZZ	2RS	N	NR
85	150	28	74.880	57.150	3,600	4,500	2.0	1.803	6217	ZZ	2RS	N	NR
85	180	41	118.800	86.850	3,240	4,050	2.5	4.284	6317	ZZ	2RS	N	NR
85	210	52	157.500	124.200	2,880	3,600	3.0	9.500	6417	ZZ	2RS	-	-
90	115	13	18.900	17.100	4,050	5,040	1.0	0.280	6818	ZZ	2RS	N	NR
90	125	18	29.520	28.350	4,050	5,040	1.0	0.650	6918	ZZ	2RS	N	NR
90	140	16	30.150	30.150	3,870	4,770	1.0	0.850	16018	-	-	-	-
90	140	24	52.200	44.820	3,870	4,770	1.5	1.190	6018	ZZ	2RS	N	NR
90	160	30	86.220	64.350	3,420	4,320	2.0	2.170	6218	ZZ	2RS	N	NR
90	190	43	130.500	97.200	3,060	3,870	2.5	4.970	6318	ZZ	2RS	N	NR
90	225	54	172.800	142.200	2,520	3,240	3.0	11.500	6418	ZZ	2RS	-	-
95	120	13	14.580	16.020	3,870	4,770	1.0	0.300	6819	ZZ	2RS	N	NR
95	130	18	34.200	29.250	3,870	4,770	1.0	0.610	6919	ZZ	2RS	N	NR
95	145	16	33.300	33.120	3,600	4,500	1.0	0.890	16019	-	-	-	-
95	145	24	52.020	45.000	3,600	4,500	1.5	1.230	6019	ZZ	2RS	N	NR
95	170	32	99.000	74.520	3,240	4,050	2.1	2.620	6219	ZZ	2RS	N	NR

Single Row Deep Groove Ball Bearings - Metric

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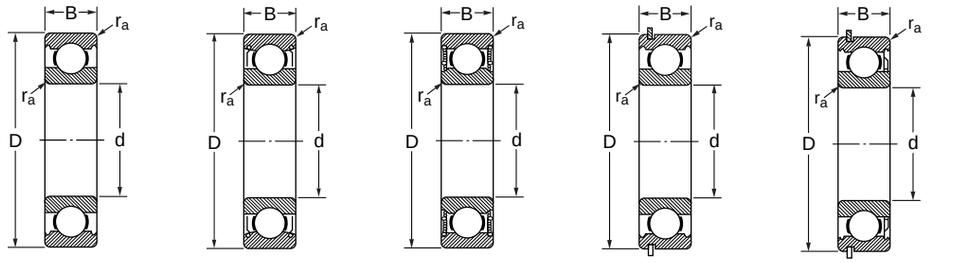

OPEN
With recessed outer ring shoulders

SHIELDS - ZZ

SEALS - 2RS

Snap ring groove and snap ring in outer ring - NR

One Z shield, snap ring groove and snap ring - ZNR

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
95	200	45	139.500	109.800	2,880	3,600	2.5	5.740	6319	ZZ	2RS	N	NR
100	125	13	15.300	18.720	3,600	4,500	1.0	0.310	6820	ZZ	2RS	N	NR
100	140	20	37.080	31.320	3,600	4,500	1.0	0.830	6920	ZZ	2RS	N	NR
100	150	16	34.380	34.650	3,420	4,320	1.0	0.940	16020	-	-	-	-
100	150	24	58.050	50.580	3,420	4,320	1.5	1.180	6020	ZZ	2RS	N	NR
100	180	34	109.800	83.520	3,060	3,870	2.1	3.190	6220	ZZ	2RS	N	NR
100	215	47	154.800	126.000	2,520	3,240	2.5	7.070	6320	ZZ	2RS	-	-
100	250	58	199.800	175.500	2,160	2,880	3.0	15.900	6420	ZZ	2RS	-	-
105	130	13	15.750	18.180	3,420	4,320	1.0	0.340	6821	ZZ	2RS	N	NR
105	145	20	37.980	36.720	3,420	4,320	1.0	0.856	6921	ZZ	2RS	N	NR
105	160	18	39.150	39.780	3,240	4,050	1.0	1.200	16021	-	-	-	-
105	160	26	64.620	56.880	3,240	4,050	2.0	1.520	6021	ZZ	2RS	N	NR
105	190	36	119.700	94.500	2,880	3,600	2.1	3.780	6221	ZZ	2RS	N	NR
105	225	49	163.800	139.500	2,340	3,060	2.5	8.050	6321	ZZ	2RS	-	-
110	140	16	20.250	22.050	3,240	4,050	1.0	0.510	6822	ZZ	2RS	N	NR
110	150	20	39.150	40.050	3,240	4,050	1.0	0.893	6922	ZZ	2RS	N	NR
110	170	19	47.700	48.600	3,060	3,870	1.0	1.510	16022	-	-	-	-
110	170	28	73.620	65.520	3,060	3,870	2.0	1.890	6022	ZZ	2RS	N	NR
110	200	38	129.600	105.300	2,700	3,420	2.1	4.420	6222	ZZ	2RS	N	NR
110	240	50	184.500	160.200	2,160	2,880	2.5	9.530	6322	ZZ	-	-	-
120	150	16	21.600	25.200	3,060	3,870	1.0	0.600	6824	ZZ	2RS	N	NR
120	165	22	47.700	48.420	2,880	3,600	1.0	1.210	6924	ZZ	2RS	N	NR
120	180	19	48.780	51.300	2,700	3,420	1.0	1.600	16024	-	-	-	-
120	180	28	78.750	71.280	2,700	3,420	2.0	1.990	6024	ZZ	2RS	N	NR
120	215	40	139.500	117.900	2,340	3,060	2.1	5.300	6224	ZZ	2RS	-	-
120	260	55	205.200	187.200	1,980	2,700	2.5	12.200	6324	ZZ	-	-	-
130	165	18	30.540	34.830	2,916	3,483	1.0	0.850	6826	ZZ	2RS	N	NR
130	180	24	58.680	60.480	2,700	3,420	1.5	1.800	6926	ZZ	2RS	N	NR
130	200	22	55.620	60.300	2,520	3,240	1.0	2.350	16026	-	-	-	-
130	200	33	94.500	87.120	2,520	3,240	2.0	3.200	6026	ZZ	2RS	N	NR
130	230	40	148.500	133.200	2,160	2,880	2.5	5.900	6226	ZZ	2RS	-	-
130	280	58	226.800	217.800	1,710	2,340	3.0	15.200	6326	ZZ	-	-	-

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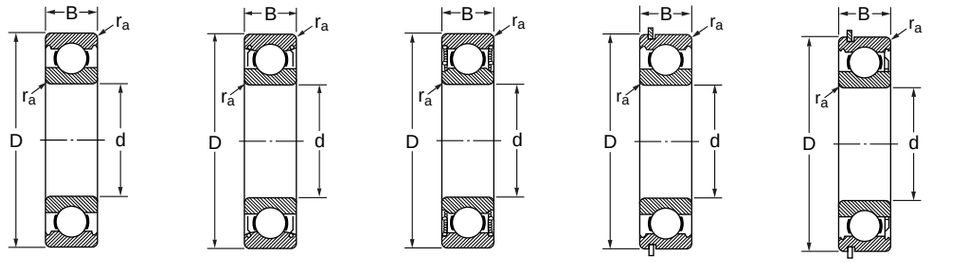
Single Row Deep Groove Ball Bearings - Metric



OPEN
With recessed outer ring shoulders

SHIELDS - ZZ

SEALS - 2RS

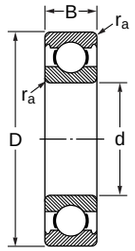
Snap ring groove and snap ring in outer ring - NR

One Z shield, snap ring groove and snap ring - ZNR

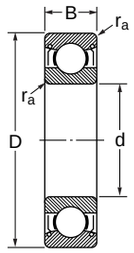
Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
140	175	18	31.590	37.670	2,754	3,240	1.0	0.920	6828	ZZ	2RS	N	NR
140	190	24	59.850	58.050	2,520	3,240	1.5	1.680	6928	ZZ	2RS	N	NR
140	210	22	56.700	62.820	2,160	2,880	1.0	2.840	16028	-	-	-	-
140	210	33	103.500	97.200	2,160	2,880	2.0	3.420	6028	ZZ	2RS	N	NR
140	250	42	160.200	148.500	1,800	2,520	2.5	7.680	6228	ZZ	2RS	-	-
140	300	62	247.500	244.800	1,620	2,160	3.0	18.330	6328	ZZ	-	-	-
150	190	20	39.530	49.410	2,430	2,916	1.0	1.280	6830	ZZ	2RS	N	NR
150	210	28	71.610	75.330	2,268	2,754	2.0	3.050	6930	ZZ	2RS	-	-
150	225	24	66.780	74.250	1,980	2,700	1.0	3.580	16030	-	-	-	-
150	225	35	118.800	112.500	1,980	2,700	2.1	4.560	6030	ZZ	2RS	-	-
150	270	45	181.800	178.200	1,710	2,340	2.5	9.779	6230	ZZ	-	-	-
150	320	65	259.200	265.500	1,530	1,980	3.0	21.870	6330	ZZ	-	-	-
160	200	20	38.520	53.280	2,160	2,880	1.0	1.250	6832	ZZ	2RS	N	NR
160	220	28	74.770	79.380	2,106	2,592	2.0	2.750	6932	ZZ	2RS	-	-
160	240	25	79.650	89.820	1,800	2,520	1.5	4.200	16032	-	-	-	-
160	240	38	130.500	124.200	1,800	2,520	2.1	5.150	6032	ZZ	2RS	-	-
160	290	48	193.500	196.200	1,620	2,160	2.5	13.500	6232	ZZ	-	-	-
160	340	68	280.800	306.000	1,440	1,800	3.0	26.430	6332	ZZ	-	-	-
170	215	22	45.000	55.080	1,980	2,700	1.0	1.810	6834	ZZ	2RS	-	-
170	230	28	79.650	90.000	1,800	2,520	2.0	3.400	6934	ZZ	-	-	-
170	260	28	90.000	100.800	1,710	2,340	1.5	5.770	16034	-	-	-	-
170	260	42	153.000	153.000	1,710	2,340	2.1	6.500	6034	ZZ	2RS	-	-
170	310	52	220.500	234.000	1,530	1,980	3.0	15.241	6234	ZZ	-	-	-
170	360	72	301.500	340.200	1,350	1,710	3.0	35.200	6334	-	-	-	-
180	225	22	52.200	64.980	1,800	2,520	1.0	2.000	6836	ZZ	2RS	-	-
180	250	33	115.200	124.200	1,710	2,340	2.0	4.800	6936	ZZ	-	-	-
180	280	31	106.200	118.800	1,620	2,160	2.0	7.600	16036	-	-	-	-
180	280	46	169.200	178.200	1,620	2,160	2.1	8.510	6036	ZZ	2RS	-	-
180	320	52	204.300	216.900	1,440	1,800	3.0	15.518	6236	ZZ	-	-	-
180	380	75	284.400	328.500	1,296	1,620	3.0	42.500	6336	-	-	-	-
190	240	24	56.250	70.380	1,710	2,340	1.5	2.550	6838	ZZ	2RS	-	-
190	260	33	101.700	114.300	1,620	2,160	2.0	5.250	6938	ZZ	-	-	-

Single Row Deep Groove Ball Bearings - Metric

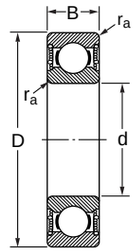
NIS™



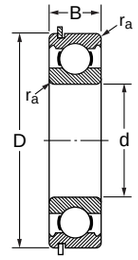
OPEN
With recessed outer ring shoulders



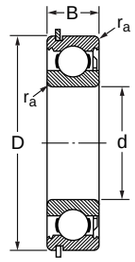
SHIELDS - ZZ



SEALS - 2RS



Snap ring groove and snap ring in outer ring - NR



One Z shield, snap ring groove and snap ring - ZNR

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
190	290	31	108.000	126.000	1,530	1,980	2.0	7.890	16038	-	-	-	-
190	290	46	169.200	180.000	1,530	1,980	2.1	9.400	6038	ZZ	-	-	-
190	340	55	256.500	289.800	1,350	1,710	3.0	22.300	6238	ZZ	-	-	-
190	400	78	300.600	348.300	1,260	1,539	4.0	49.000	6338	-	-	-	-
200	250	24	57.150	72.900	1,620	2,160	1.5	2.700	6840	ZZ	2RS	-	-
200	280	38	119.700	139.500	1,530	1,980	2.1	7.400	6940	ZZ	-	-	-
200	310	34	127.800	145.800	1,620	1,800	2.0	10.100	16040	-	-	-	-
200	310	51	184.500	202.500	1,440	1,800	2.1	11.640	6040	ZZ	-	-	-
200	360	58	259.200	298.800	1,260	1,620	3.0	26.700	6240	ZZ	-	-	-
200	420	80	342.000	400.500	1,170	1,440	4.0	55.300	6340	-	-	-	-
220	270	24	66.150	79.200	1,530	1,980	1.5	3.000	6844	ZZ	-	-	-
220	300	38	121.500	145.800	1,440	1,800	2.1	7.600	6944	ZZ	-	-	-
220	340	37	154.800	180.000	1,260	1,620	2.1	11.500	16044	-	-	-	-
220	340	56	226.800	241.200	1,260	1,620	2.5	18.000	6044	ZZ	-	-	-
220	400	65	319.500	328.500	1,080	1,440	3.0	36.500	6244	-	-	-	-
220	460	88	369.000	468.000	1,080	1,350	4.0	73.900	6344	-	-	-	-
240	300	28	75.150	97.200	1,350	1,710	2.0	4.500	6848	-	-	-	-
240	320	38	127.800	160.200	1,260	1,620	2.1	8.200	6948	ZZ	-	-	-
240	360	37	154.800	189.000	1,080	1,440	2.1	13.900	16048	-	-	-	-
240	360	56	243.000	262.800	1,080	1,440	2.5	20.000	6048	-	-	-	-
240	440	72	322.200	420.300	900	1,260	3.0	50.500	6248	-	-	-	-
240	500	95	423.000	562.500	990	1,170	4.0	94.400	6348	-	-	-	-
260	320	28	85.500	115.200	1,170	1,530	2.0	4.850	6852	-	-	-	-
260	360	46	189.000	241.200	1,080	1,440	2.1	13.700	6952	-	-	-	-
260	400	44	211.500	279.000	990	1,350	2.5	22.500	16052	-	-	-	-
260	400	65	262.800	334.800	990	1,350	3.0	28.800	6052	-	-	-	-
260	480	80	360.000	486.000	990	1,170	4.0	67.000	6252	-	-	-	-
260	540	102	454.500	639.000	900	1,080	5.0	118.000	6352	-	-	-	-
280	350	33	121.500	160.200	990	1,350	2.0	7.400	6856	-	-	-	-
280	380	46	189.000	241.200	900	1,260	2.1	15.000	6956	-	-	-	-
280	420	65	274.500	367.200	855	1,170	3.0	31.200	6056	-	-	-	-
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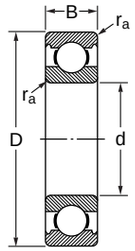
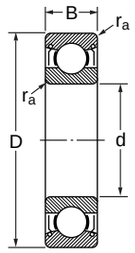
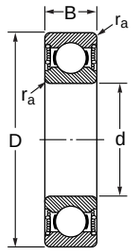


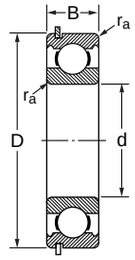
OPEN
With recessed outer ring shoulders



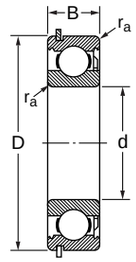
SHIELDS - ZZ



SEALS - 2RS



Snap ring groove and snap ring in outer ring - NR



One Z shield, snap ring groove and snap ring - ZNR

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation				
			Dynamic	Static	Grease	Oil			Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring
d	D	B	C	C_0			r_a max			ZZ	2RS	N	NR
mm	mm	mm	kN	kN	r/min	r/min	mm	kg					
300	380	38	145.800	199.800	900	1,260	2.1	10.300	6860	-	-	-	-
300	420	56	243.000	333.000	855	1,170	2.5	23.900	6960	-	-	-	-
300	460	74	289.980	405.000	972	1,215	3.0	44.000	6060	-	-	-	-
300	540	85	418.500	603.000	855	1,080	4.0	87.800	6260	-	-	-	-
320	400	38	151.200	211.500	855	1,170	2.1	10.800	6864	-	-	-	-
320	440	56	247.500	352.800	810	1,080	2.5	25.300	6964	-	-	-	-
320	480	74	310.500	459.000	765	990	3.0	46.500	6064	-	-	-	-
340	420	38	144.180	222.750	972	1,215	2.0	11.500	6868	-	-	-	-
340	460	56	262.800	376.200	765	990	2.5	26.600	6968	-	-	-	-
340	520	82	342.630	518.400	810	1,053	4.0	62.000	6068	-	-	-	-
360	440	38	147.420	230.850	891	1,134	2.0	12.000	6872	-	-	-	-
360	540	82	360.000	559.800	675	855	4.0	65.300	6072	-	-	-	-
380	480	46	211.500	313.200	720	900	2.1	20.000	6876	-	-	-	-
400	500	46	200.070	328.050	810	1,053	2.0	20.500	6880	-	-	-	-
400	600	90	460.800	781.200	567	720	4.0	88.400	6080	-	-	-	-
420	520	46	203.400	344.250	770	972	2.0	21.500	6884	-	-	-	-
440	540	46	206.550	356.400	729	891	2.0	22.500	6888	-	-	-	-
460	580	56	289.800	484.200	540	675	2.5	35.000	6892	-	-	-	-

Prefix & Suffix

BL	3	05	ZNR

Prefix

BL : maximum type larger amount of steel balls than normal deep groove ball bearings

Basic type series

2 : Standard
3 : Medium

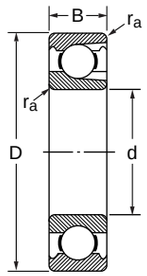
Bore size (mm)

00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

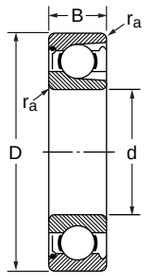
Suffix

Z : Shield at 1 side of the bearing
ZZ : Shields at both sides of the bearing
RS : Seal at 1 side of the bearing
2RS : Seals at both sides of the bearing
N : Snap ring groove at outside of outer ring
NR : Snap ring groove with snap ring at outside of outer ring
ZNR : Shield at 1 side of the bearing with snap ring groove and snap ring on outer ring

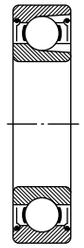
Single Row Deep Groove Ball Bearings with Filling Slot



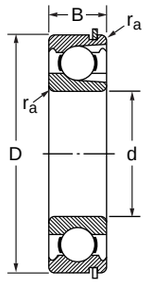
OPEN
With recessed outer ring shoulders



SHIELD - Z



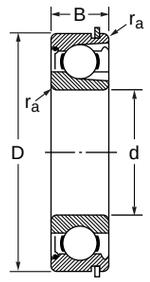
SHIELD - ZZ



Snap ring groove and snap ring

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass
			Dynamic	Static	Grease	Oil		
d	D	B	C	C_0			r_a max	
mm	mm	mm	kN	kN	r/min	r/min	mm	kg
25	62	17	22.990	15.485	7,600	11,400	1.0	0.246
30	62	16	19.855	15.485	7,125	10,450	1.0	0.210
30	72	19	28.215	20.520	6,365	9,025	1.0	0.364
35	72	17	26.125	20.900	6,365	9,025	1.0	0.307
35	80	21	35.055	27.075	5,700	8,075	1.5	0.480
40	80	18	31.920	25.650	5,700	8,075	1.0	0.390
40	90	23	43.415	34.200	5,035	7,125	1.5	0.685
45	85	19	33.440	28.500	5,035	7,125	1.0	0.449
45	100	25	52.250	41.800	4,750	6,650	1.5	0.883
50	90	20	37.145	32.775	4,750	6,650	1.0	0.504
50	110	27	61.180	49.400	4,275	5,985	2.0	1.160
55	100	21	45.980	41.800	4,275	5,985	1.5	0.667
55	120	29	75.240	63.650	3,800	5,320	2.0	1.490
60	110	22	55.385	51.300	4,085	5,700	1.5	0.856
60	130	31	86.735	74.100	3,610	5,035	2.0	1.880
65	120	23	59.565	57.000	3,610	5,035	1.5	1.090
65	140	33	96.900	85.500	3,230	4,560	2.0	2.360
70	125	24	65.835	62.225	3,420	4,750	1.5	1.190
70	150	35	108.300	96.900	3,040	4,275	2.0	2.870
75	130	25	68.495	68.400	3,230	4,560	1.5	1.250
75	160	37	118.750	110.200	2,850	4,085	2.0	3.250
80	140	26	79.990	80.750	3,040	4,275	2.0	1.550
80	170	39	131.100	122.550	2,660	3,800	2.0	3.950
85	150	28	85.215	88.350	2,850	4,085	2.0	1.950
85	180	41	139.650	138.700	2,470	3,610	2.5	4.600
90	160	30	106.400	108.300	2,660	3,800	2.0	2.350
90	190	43	149.150	152.000	2,090	3,230	2.5	5.400
95	170	32	114.950	115.900	2,470	3,610	2.0	2.700
100	180	34	127.300	133.000	2,090	3,230	2.0	3.450

Single Row Deep Groove Ball Bearings with Filling Slot



One Z shield, snap ring groove and snap ring

Designation					
Open	One Shield	Two Shield	With Snap Ring	One Shield With Snap Ring	Snap Ring
BL305	Z	ZZ	NR	ZNR	SP 62
BL206	Z	ZZ	NR	ZNR	SP 62
BL306	Z	ZZ	NR	ZNR	SP 72
BL207	Z	ZZ	NR	ZNR	SP 72
BL307	Z	ZZ	NR	ZNR	SP 80
BL208	Z	ZZ	NR	ZNR	SP 80
BL308	Z	ZZ	NR	ZNR	SP 90
BL209	Z	ZZ	NR	ZNR	SP 85
BL309	Z	ZZ	NR	ZNR	SP 100
BL210	Z	ZZ	NR	ZNR	SP 90
BL310	Z	ZZ	NR	ZNR	SP 110
BL211	Z	ZZ	NR	ZNR	SP 100
BL311	Z	ZZ	NR	ZNR	SP 120
BL212	Z	ZZ	NR	ZNR	SP 110
BL312	Z	ZZ	NR	ZNR	SP 130
BL213	Z	ZZ	NR	ZNR	SP 120
BL313	Z	ZZ	NR	ZNR	SP 140
BL214	Z	ZZ	NR	ZNR	SP 125
BL314	Z	ZZ	NR	ZNR	SP 150
BL215	Z	ZZ	NR	ZNR	SP 130
BL315	Z	ZZ	-	-	-
BL216	Z	ZZ	NR	ZNR	SP 140
BL316	Z	ZZ	-	-	-
BL217	Z	ZZ	NR	ZNR	SP 150
BL317	Z	ZZ	-	-	-
BL218	Z	ZZ	NR	ZNR	SP 160
BL318	Z	ZZ	-	-	-
BL219	Z	ZZ	-	-	-
BL220	Z	ZZ	-	-	-

Prefix & Suffix

1	32	MF

Suffix

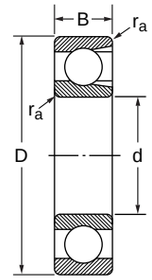
M : Bearings with filling slots
F : Shield at 1 side of the bearing
FF : Shields at both sides of the bearing
MF : Bearings with filling slots and 1 side shield

Basic type series

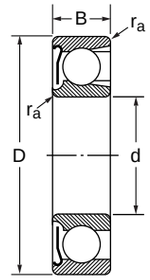
1 : Light

Bore size (mm)

03 < 2 digit < 100: multiply by 5



OPEN - M



MF One Shield

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
50	90	11	17.77	18.62	5,320	6,460	1.0	0.277	110 M
65	115	14	30.31	34.68	4,180	5,130	1.0	0.446	113 M
85	145	18	55.39	64.60	3,230	3,990	1.5	0.938	117 M
100	160	28	91.96	102.60	2,850	3,515	2.0	1.339	120 M
100	160	28	91.96	102.60	2,850	3,515	2.0	1.339	120 MF
120	190	32	116.85	138.70	2,375	2,945	2.0	2.232	124 M
120	190	32	116.85	138.70	2,375	2,945	2.0	2.232	124 MF
130	205	34	131.10	157.70	2,185	2,660	2.0	3.393	126 M
130	205	34	131.10	157.70	2,185	2,660	2.0	3.393	126 MF
140	220	36	149.15	180.50	1,995	2,470	2.0	3.616	128 M
140	220	36	149.15	180.50	1,995	2,470	2.0	3.616	128 MF
160	250	40	180.50	242.25	1,805	2,185	2.0	5.446	132 M
160	250	40	180.50	242.25	1,805	2,185	2.0	5.446	132 MF

Prefix & Suffix

SS	62	05	ZZ

Prefix

"Blank": Chrome steel
SS : Stainless steel
F : Flanged design

Basic type series

67 : Ultra extra light
68 : Ultra light
69 : Extra light
60 : Light
62 : Standard
63 : Medium
64 : Heavy

Bore size (mm)

00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100: multiply by 5

Suffix

Z : Shield at 1 side of the bearing
ZZ : Shields at both sides of the bearing
RS : Seal at 1 side of the bearing
2RS : Seals at both sides of the bearing
N : Snap ring groove at outside of outer ring
NR : Snap ring groove with snap ring at outside of outer ring
ZNR : Shield at 1 side of the bearing with snap ring groove and snap ring on outer ring

Stainless Steel Single Row Deep Groove Ball Bearings

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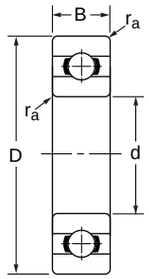

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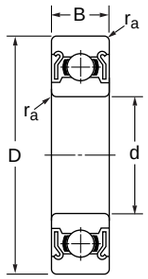
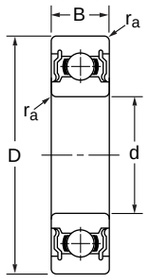
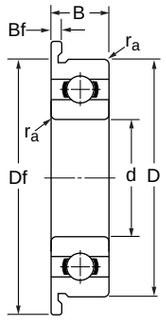


SHIELDS - ZZ



SEALS - 2RS

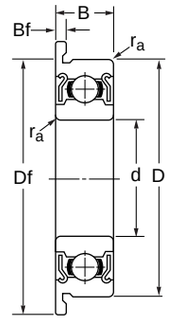


Flange

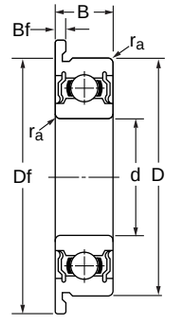
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	
					Dynamic	Static	Grease	Oil		Shield	Flange Shield
d	D	Df	B	Bf	C	C_0			r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm		
10	15	16.5	3	0.8	0.855	0.435	15,000	17,000	0.15	1.4	1.6
10	15	16.5	4	0.8	0.855	0.435	15,000	17,000	0.15	1.9	2.1
10	19	21.0	5	1	1.716	0.840	37,000	43,000	0.30	5.6	6.1
10	19	21.0	7	1.5	1.716	0.840	37,000	43,000	0.30	7.4	8.1
10	22	25.0	6	1.5	2.695	1.273	34,000	41,000	0.30	10.0	11.3
10	26	-	8	-	3.860	1.570	31,000	36,000	0.30	19.0	-
10	30	-	9	-	4.340	1.920	24,000	29,000	0.60	32.0	-
10	35	-	11	-	6.870	2.750	22,000	27,000	0.60	53.0	-
12	18	19.5	4	0.8	0.926	0.530	13,000	15,000	0.20	3.1	3.4
12	21	23.0	5	1.1	1.915	1.041	33,000	39,000	0.30	6.5	7.1
12	21	23.0	7	1.5	1.915	1.041	33,000	39,000	0.30	8.5	9.3
12	24	26.5	6	1.5	2.886	1.466	31,000	36,000	0.30	12.0	13.2
12	28	-	8	-	4.340	1.910	27,000	32,000	0.30	22.0	-
12	32	-	10	-	5.770	2.450	22,000	27,000	0.60	37.0	-
12	37	-	12	-	8.240	3.360	20,000	25,000	1.00	60.0	-
15	21	22.5	4	0.8	0.937	0.582	11,000	13,000	0.20	3.6	3.9
15	24	26.0	5	1.1	2.073	1.253	28,000	33,000	0.30	7.6	8.3
15	24	26.0	7	1.5	2.073	1.253	28,000	33,000	0.30	10.0	10.9
15	28	30.5	7	1.5	4.321	2.259	26,000	30,000	0.30	19.0	19.9
15	32	-	9	-	4.750	2.270	23,000	27,000	0.30	30.0	-
15	35	-	11	-	6.490	3.000	20,000	24,000	0.60	45.0	-
15	42	-	13	-	9.710	4.370	17,000	20,000	1.00	82.0	-
17	23	24.5	4	0.8	1.000	0.658	9,500	11,000	0.20	4.0	4.4
17	26	28.0	5	1.1	2.233	1.456	26,000	30,000	0.30	8.2	8.9
17	26	28.0	7	1.5	2.233	1.456	26,000	30,000	0.30	11.0	12.0
17	30	32.5	7	1.5	4.588	2.565	23,000	28,000	0.30	20.0	21.4
17	35	-	10	-	5.090	2.630	21,000	25,000	0.30	39.0	-
17	40	-	12	-	8.130	3.850	17,000	21,000	0.60	65.0	-
17	47	-	14	-	11.550	5.330	15,000	18,000	1.00	115.0	-
20	27	28.5	4	0.8	1.402	0.729	8,500	10,000	0.20	5.9	6.3
20	32	35.0	7	1.5	4.015	2.462	21,000	25,000	0.30	18.0	19.8
20	32	35.0	10	2.0	4.015	2.462	21,000	25,000	0.30	24.0	26.5

NIS™

1.04



Flange with Shields - ZZ



Flange with Seals - 2RS

Designation				
Open	Flange Open	Shields	Flange Shields	Seals
6700	F 6700	-	-	-
-	-	ZZ	F 6700 ZZ	2RS
6800	F 6800	ZZ	F 6800 ZZ	2RS
63800	F 63800	ZZ	F 63800 ZZ	2RS
6900	F 6900	ZZ	F 6900 ZZ	2RS
6000	-	ZZ	-	2RS
6200	-	ZZ	-	2RS
6300	-	ZZ	-	2RS
6701	F 6701	ZZ	F 6701 ZZ	2RS
6801	F 6801	ZZ	F 6801 ZZ	2RS
63801	F 63801	ZZ	F 63801 ZZ	2RS
6901	F 6901	ZZ	F 6901 ZZ	2RS
6001	-	ZZ	-	2RS
6201	-	ZZ	-	2RS
6301	-	ZZ	-	2RS
6702	F 6702	ZZ	F 6702 ZZ	2RS
6802	F 6802	ZZ	F 6802 ZZ	2RS
63802	F 63802	ZZ	F 63802 ZZ	2RS
6902	F 6902	ZZ	F 6902 ZZ	2RS
6002	-	ZZ	-	2RS
6202	-	ZZ	-	2RS
6302	-	ZZ	-	2RS
6703	F 6703	ZZ	F 6703 ZZ	2RS
6803	F 6803	ZZ	F 6803 ZZ	2RS
63803	F 63803	ZZ	F 63803 ZZ	2RS
6903	F 6903	ZZ	F 6903 ZZ	2RS
6003	-	ZZ	-	2RS
6203	-	ZZ	-	2RS
6303	-	ZZ	-	2RS
6704	F 6704	ZZ	F 6704 ZZ	2RS
6804	F 6804	ZZ	F 6804 ZZ	2RS
63804	F 63804	ZZ	F 63804 ZZ	2RS

Stainless Steel Single Row Deep Groove Ball Bearings

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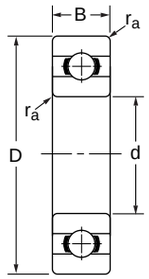

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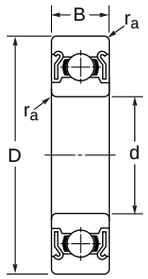
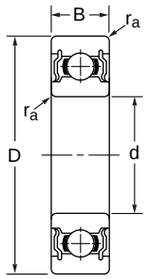
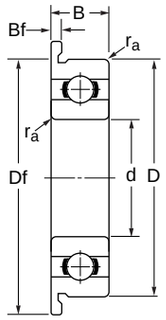


SHIELDS - ZZ

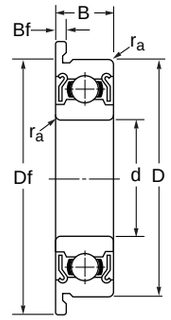


SEALS - 2RS

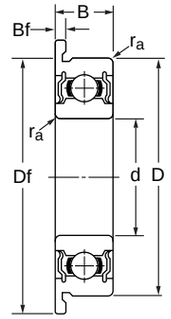


Flange

Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	
					Dynamic	Static	Grease	Oil		Shield	Flange Shield
d	D	Df	B	Bf	C	C_0			r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm		
20	37	40.0	9	2.0	6.381	3.682	19,000	23,000	0.30	40.0	42.8
20	42	-	12	-	7.960	4.050	17,000	21,000	0.60	69.0	-
20	47	-	14	-	10.910	5.360	15,000	17,000	1.00	106.0	-
20	52	-	15	-	13.490	6.310	14,000	17,000	1.10	144.0	-
25	32	34.0	4	1.0	1.091	0.838	7,000	8,000	0.20	7.1	7.9
25	37	40.0	7	1.5	4.303	2.932	18,000	21,000	0.30	24.0	26.1
25	37	40.0	10	2.0	4.303	2.932	18,000	21,000	0.30	32.0	34.1
25	42	45.0	9	2.0	7.001	4.540	16,000	19,000	0.30	47.0	50.2
25	47	-	12	-	8.550	4.690	15,000	18,000	0.60	80.0	-
25	52	-	15	-	11.900	7.390	13,000	15,000	1.00	128.0	-
25	62	-	17	-	17.490	9.060	11,000	13,000	1.10	232.0	-
30	37	39.0	4	1.0	1.143	0.947	5,500	7,000	0.20	8.3	9.2
30	42	45.0	7	1.5	4.538	3.402	15,000	18,000	0.30	27.0	29.4
30	42	45.0	10	2.0	4.538	3.402	15,000	18,000	0.30	36.0	39.2
30	47	50.0	9	2.0	7.242	5.003	14,000	17,000	0.30	53.0	56.6
30	55	-	13	-	11.240	6.610	13,000	15,000	1.00	116.0	-
30	62	-	16	-	16.530	9.080	11,000	13,000	1.00	199.0	-
30	72	-	19	-	22.630	12.080	9,600	12,000	1.10	346.0	-
35	44	-	5	-	1.866	1.635	4,900	6,000	0.30	15.0	-
35	47	50.0	7	1.5	4.729	3.821	13,000	16,000	0.30	32.0	34.7
35	55	58.0	10	2.5	10.900	7.818	12,000	14,000	0.60	87.0	92.2
35	62	-	14	-	13.560	8.250	11,000	13,000	1.00	155.0	-
35	72	-	17	-	21.810	12.360	9,200	11,000	1.10	288.0	-
35	80	-	21	-	28.290	15.270	8,500	10,000	1.50	457.0	-
40	50	-	6	-	2.516	2.233	4,300	5,000	0.30	23	-
40	52	55.0	7	1.5	4.923	4.178	12,000	14,000	0.30	35.0	38.0
40	62	65.0	12	2.5	13.678	9.968	11,000	13,000	0.60	131.0	137.0
40	68	-	15	-	14.250	9.220	10,000	12,000	1.00	192.0	-
40	80	-	18	-	24.730	14.330	8,300	10,000	1.10	366.0	-
45	55	-	6	-	2.580	2.397	3,900	4,600	0.30	25.0	-
45	58	61.0	7	1.5	6.187	5.381	11,000	13,000	0.30	42.0	45.3
45	68	71.0	12	2.5	14.100	10.830	9,700	11,000	0.60	147.0	153.0



Flange with Shields - ZZ

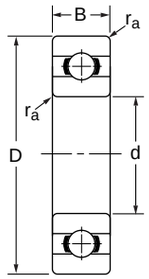


Flange with Seals - 2RS

Designation				
Open	Flange Open	Shields	Flange Shields	Seals
6904	F 6904	ZZ	F 6904 ZZ	2RS
6004	-	ZZ	-	2RS
6204	-	ZZ	-	2RS
6304	-	ZZ	-	2RS
6705	F 6705	-	-	2RS
6805	F 6805	ZZ	F 6805 ZZ	2RS
63805	F 63805	ZZ	F 63805 ZZ	2RS
6905	F 6905	ZZ	F 6905 ZZ	2RS
6005	-	ZZ	-	2RS
6205	-	ZZ	-	2RS
6305	-	ZZ	-	2RS
6706	F 6706	-	-	-
6806	F 6806	ZZ	F 6806Z	2RS
63806	F 63806	ZZ	F 63806 ZZ	2RS
6906	F 6906	ZZ	F 6906 ZZ	2RS
6006	-	ZZ	-	2RS
6206	-	ZZ	-	2RS
6306	-	ZZ	-	2RS
6707	-	-	-	2RS
6807	F 6807	ZZ	F 6807 ZZ	2RS
6907	F 6907	ZZ	F 6907 ZZ	2RS
6007	-	ZZ	-	2RS
6207	-	ZZ	-	2RS
6307	-	ZZ	-	2RS
6708	-	-	-	2RS
6808	F 6808	ZZ	F 6808 ZZ	2RS
6908	F 6908	ZZ	F 6908 ZZ	2RS
6008	-	ZZ	-	2RS
6208	-	ZZ	-	2RS
6709	-	-	-	2RS
6809	F 6809	ZZ	F 6809 ZZ	2RS
6909	F 6909	ZZ	F 6909 ZZ	2RS

Stainless Steel Single Row Deep Groove Ball Bearings

NIS™



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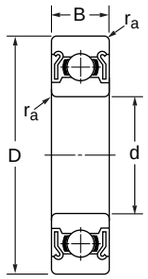
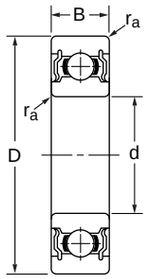
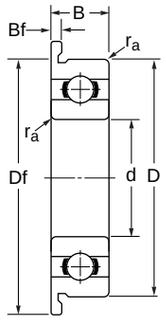


SHIELDS - ZZ



SEALS - 2RS



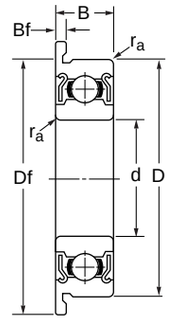
Flange

Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	
					Dynamic	Static	Grease	Oil		Shield	Flange Shield
d	D	Df	B	Bf	C	C_0			r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm		
45	75	-	16	-	15.150	9.660	9,200	11,000	1.00	245.0	-
45	85	-	19	-	27.790	16.300	7,700	9,200	1.10	407.0	-
50	62	-	6	-	2.670	2.640	3,500	4,100	0.30	64.0	-
50	65	68.0	7	1.5	6.610	6.090	9,600	11,000	0.30	52.0	-
50	72	75.0	12	2.5	14.540	11.710	9,000	11,000	0.60	133.0	-
50	80	-	16	-	18.510	13.260	8,400	9,900	1.00	261.0	-
50	90	-	20	-	29.800	18.610	7,100	8,500	1.10	463.0	-
55	72	-	9	-	8.800	8.100	8,700	10,000	0.30	83.0	-
55	80	-	13	-	16.600	14.100	8,100	9,600	1.00	190.0	-
60	78	-	10	-	11.500	10.600	8,000	9,400	0.30	110.0	-
60	85	-	13	-	20.200	17.300	7,500	8,900	1.00	200.0	-
65	85	-	10	-	11.900	11.500	7,300	8,600	0.60	130.0	-
65	90	-	13	-	17.400	16.100	7,100	8,400	1.00	220.0	-
70	90	-	10	-	12.100	11.900	6,800	8,100	0.60	140.0	-
70	100	-	16	-	23.700	21.200	6,400	7,600	1.00	350.0	-
75	95	-	10	-	12.500	12.900	12,500	12,900	0.60	145.0	-
75	105	-	16	-	24.400	22.600	6,100	7,200	1.00	370.0	-
80	100	-	10	-	127.000	13.300	12,700	13,300	0.60	150.0	-
80	110	-	16	-	25.000	24.000	5,700	6,800	1.00	400.0	-
85	110	-	13	-	18.700	19.000	5,600	6,600	1.00	270.0	-
85	120	-	18	-	31.900	29.600	5,300	6,300	1.10	550.0	-
90	115	-	13	-	19.000	19.700	5,300	6,300	1.00	280.0	-
90	125	-	18	-	32.800	31.600	5,100	6,000	1.10	590.0	-

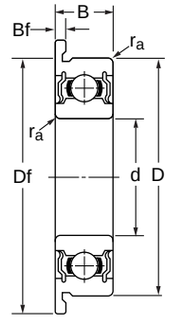
NIS™

Stainless Steel Single Row Deep Groove Ball Bearings

1.04



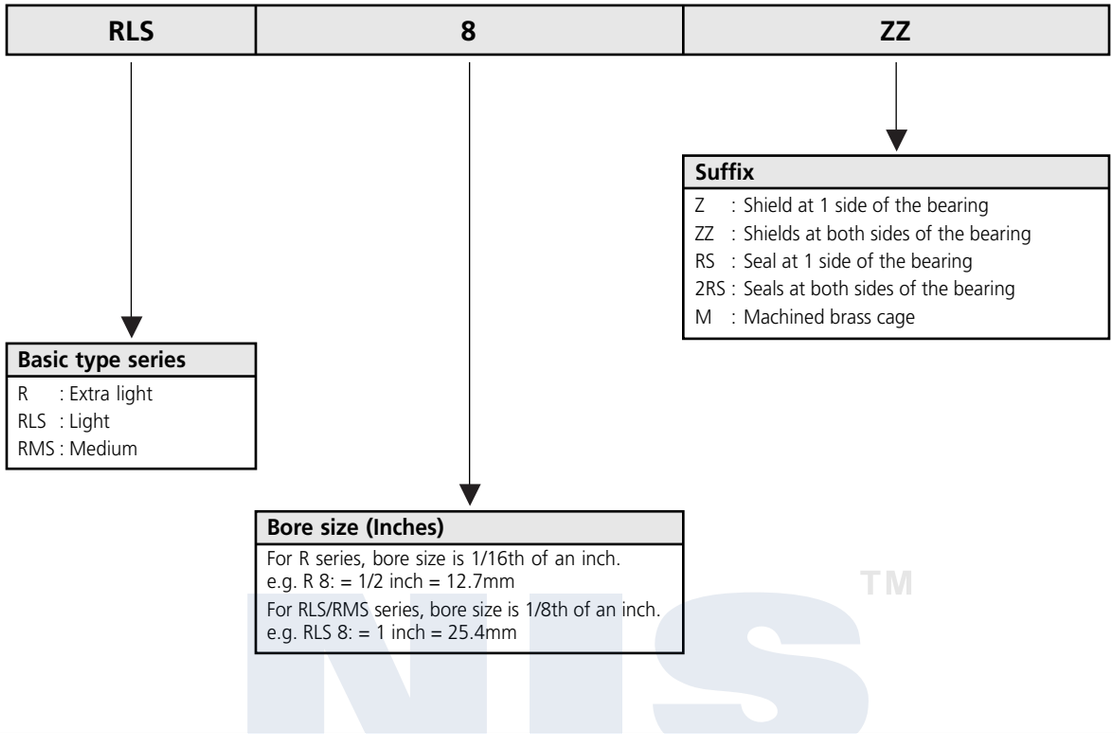
Flange with Shields - ZZ

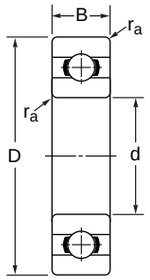


Flange with Seals - 2RS

Designation				
Open	Flange Open	Shields	Flange Shields	Seals
6009	-	ZZ	-	2RS
6209	-	ZZ	-	2RS
6710	-	-	-	2RS
6810	F 6810	ZZ	F 6810 ZZ	2RS
6910	F 6910	ZZ	F 6910 ZZ	2RS
6010	-	ZZ	-	2RS
6210	-	ZZ	-	2RS
6811	-	ZZ	-	2RS
6911	-	ZZ	-	2RS
6812	-	ZZ	-	2RS
6912	-	ZZ	-	2RS
6813	-	ZZ	-	2RS
6913	-	ZZ	-	2RS
6814	-	ZZ	-	2RS
6914	-	ZZ	-	2RS
6815	-	ZZ	-	2RS
6915	-	ZZ	-	2RS
6816	-	ZZ	-	2RS
6916	-	ZZ	-	2RS
6817	-	ZZ	-	2RS
6917	-	ZZ	-	2RS
6818	-	ZZ	-	2RS
6918	-	ZZ	-	2RS

Prefix & Suffix





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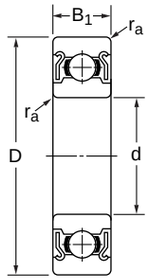
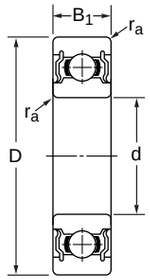


SHIELDS - ZZ

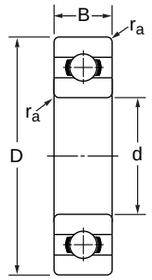


SEALS - 2RS

Basic Dimensions								Basic Load Ratings		Limiting Speed	
d inch	d mm	D inch	D mm	B inch	B mm	B1 inch	B1 mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min
0.1250	3.175	0.3750	9.525	0.1562	3.967	0.1562	3.967	0.63	0.22	56,000	67,000
0.1250	3.175	0.5000	12.700	0.1719	4.366	0.1719	4.366	0.64	0.23	53,000	63,000
0.1562	3.967	0.3125	7.938	0.1094	2.779	0.1250	3.175	0.36	0.15	53,000	63,000
0.1875	4.762	0.3125	7.938	0.1094	2.779	0.1250	3.175	0.36	0.15	53,000	63,000
0.1875	4.762	0.3750	9.525	0.1250	3.175	0.1250	3.175	0.71	0.27	50,000	60,000
0.1875	4.762	0.5000	12.700	0.1562	3.967	0.1960	4.978	1.30	0.49	43,000	53,000
0.1875	4.762	0.6250	15.875	0.1960	4.978	0.1960	4.978	1.48	0.62	38,000	45,000
0.2500	6.350	0.3750	9.525	0.1250	3.175	0.1250	3.175	0.37	0.17	48,000	56,000
0.2500	6.350	0.5000	12.700	0.1250	3.175	0.1875	4.762	1.08	0.44	40,000	50,000
0.2500	6.350	0.6250	15.875	0.1960	4.978	0.1960	4.978	1.48	0.62	38,000	45,000
0.2500	6.350	0.7500	19.050	0.2188	5.558	0.2812	7.142	2.34	0.90	36,000	43,000
0.3125	7.938	0.5000	12.700	0.1562	3.967	0.1562	3.967	0.54	0.28	40,000	48,000
0.3750	9.525	0.8750	22.225	0.2188	5.558	0.2512	7.142	3.33	1.41	32,000	38,000
0.5000	12.700	1.1250	28.575	0.2500	6.350	0.3125	7.938	5.11	2.41	27,000	32,000
0.5000	12.700	1.3125	33.337	0.3750	9.925	-	-	4.64	1.99	15,000	19,500
0.5000	12.700	1.6250	41.275	0.6250	15.875	-	-	8.55	4.20	13,500	16,500
0.6250	15.875	1.3750	34.925	0.2812	7.142	0.4380	8.733	6.00	3.27	21,000	25,000
0.6250	15.875	1.5625	39.688	0.4375	11.112	-	-	7.17	3.38	12,750	15,000
0.6250	15.875	1.8125	46.038	0.6250	15.875	-	-	10.35	5.03	12,000	14,250
0.7500	19.050	1.6250	41.275	0.3125	7.938	0.4375	11.113	9.38	5.06	17,000	21,000
0.7500	19.050	1.8750	47.625	0.5625	14.288	-	-	9.53	4.65	11,250	13,500
0.7500	19.050	2.0000	50.800	0.6875	17.462	-	-	11.93	5.85	10,500	12,750
0.8750	22.225	2.0000	50.800	0.5625	14.288	-	-	11.33	5.63	10,500	12,750
0.8750	22.225	2.2500	57.150	0.6875	17.462	-	-	13.95	6.86	9,000	11,250
1.0000	25.400	2.2500	57.150	0.6250	15.875	-	-	1.34	6.60	8,250	10,500
1.0000	25.400	2.5000	63.500	0.7500	19.050	-	-	15.90	7.95	7,500	9,750
1.1250	28.575	2.5000	63.500	0.6250	15.875	-	-	14.63	7.50	7,500	9,750
1.1250	28.575	2.8125	71.438	0.8125	20.638	-	-	20.25	10.28	7,125	9,000
1.2500	31.750	2.7500	69.850	0.6875	17.462	-	-	16.88	8.85	7,125	9,000
1.2500	31.750	3.1250	79.375	0.8750	22.225	-	-	24.90	13.20	6,750	8,250
1.3750	34.925	3.0000	76.200	0.6875	17.462	-	-	19.13	10.28	6,750	8,250
1.3750	34.925	3.5000	88.900	0.8750	22.225	-	-	30.23	16.20	6,000	7,125

Chamfer Dimension		Mass		Designation			
r_a max	r_a max			Reference Number	Open	Shields	Seals
0.0118	0.30	1.04	1.37	R 2	R 2*	ZZ*	2RS
0.0118	0.30	3.30	3.30	R 2A	R 2A	R 2AZZ	-
0.0039	0.10	0.51	0.61	RI 5532	R 155*	R 155ZZS	-
0.0039	0.10	0.40	0.45	RI 5632	R 156*	R 156ZZS	-
0.0039	0.10	0.81	0.85	RI 6632	R 166*	R 166ZZ	-
0.0118	0.30	2.21	2.95	R 3	R 3*	ZZ*	2RS
0.0118	0.30	4.75	5.08	R 3A	R 3A	R 3AZZ	2RS
0.0039	0.10	0.57	0.60	RI 614	R 168*	R 168ZZS*	-
0.0059	0.15	1.60	2.32	RI 814	R 188*	R 188ZZ*	2RS
0.0118	0.30	4.46	4.54	R 4	R 4*	ZZ*	2RS
0.0157	0.40	7.48	10.00	R 4A	R 4A	AZZ	2RS
0.0059	0.15	1.39	1.57	RI 8516	R 1810*	R 1810ZZS	-
0.0157	0.40	9.02	11.70	RI 1438	R 6	ZZ	2RS
0.0157	0.40	11.60	24.10	RI 1812	R 8	ZZ	2RS
0.0310	0.80	40.00	-	LJ 1/2	RLS 4	ZZ	2RS
0.0620	1.60	100.00	-	MJ 1/2	RMS 4	ZZ	2RS
0.0315	0.80	23.50	38.10	EE 5	R 10	ZZ	2RS
0.0310	0.80	60.00	-	LJ 5/8	RLS 5	ZZ	2RS
0.0620	1.60	120.00	-	MJ 5/8	RMS 5	ZZ	2RS
0.0315	0.80	53.10	69.30	EE 6	R 12	ZZ	2RS
0.0620	1.60	120.00	-	LJ 3/4	RLS 6	ZZ	2RS
0.0620	1.60	160.00	-	MJ 3/4	RMS 6	ZZ	2RS
0.0620	1.60	120.00	-	LJ 78	RLS 7	ZZ	2RS
0.0620	1.60	210.00	-	MJ 7/8	RMS 7	ZZ	2RS
0.0620	1.60	170.00	-	LJ 1	RLS 8	ZZ	2RS
0.0940	2.40	270.00	-	MJ 1	RMS 8	ZZ	2RS
0.0620	1.60	220.00	-	LJ 1.1/8	RLS 9	ZZ	2RS
0.0940	2.40	370.00	-	MJ 1.1/8	RMS 9	ZZ	2RS
0.0620	1.60	290.00	-	LJ 1.1/4	RLS 10	ZZ	2RS
0.0940	2.40	490.00	-	MJ 1.1/4	RM S10	ZZ	2RS
0.0620	1.60	350.00	-	LJ 1.3/8	RLS 11	ZZ	2RS
0.0940	2.40	630.00	-	MJ 1.3/8	RMS 11	ZZ	2RS

***** Available with inner ring width extended by 0.015" each side.



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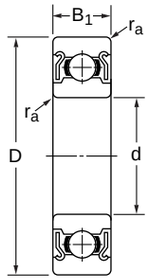
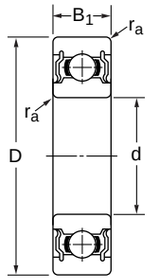


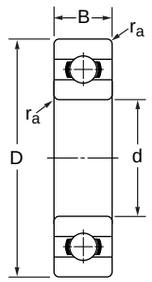
SHIELDS - ZZ



SEALS - 2RS

Basic Dimensions								Basic Load Ratings		Limiting Speed	
d inch	d mm	D inch	D mm	B inch	B mm	B1 inch	B1 mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min
1.5000	38.100	3.2500	82.550	0.7500	19.050	-	-	21.83	11.70	6,375	7,500
1.5000	38.100	3.7500	95.250	0.9375	23.812	-	-	33.15	18.38	5,625	6,750
1.6250	41.275	3.5000	88.900	0.7500	19.050	-	-	24.38	13.20	5,625	6,750
1.6250	41.275	4.0000	101.600	0.9375	23.812	-	-	39.53	22.50	5,025	6,000
1.7500	44.450	3.7500	95.250	0.8125	20.638	-	-	26.33	14.70	5,250	6,375
1.7500	44.450	4.2500	107.950	1.0625	26.988	-	-	42.90	24.38	4,725	5,625
1.8750	47.625	4.0000	101.600	0.8125	20.638	-	-	32.70	18.75	4,725	5,625
1.8750	47.625	4.5000	114.300	1.0625	26.988	-	-	49.73	29.25	4,500	5,250
2.0000	50.800	4.0000	101.600	0.8125	20.638	-	-	32.70	18.75	4,725	5,625
2.0000	50.800	4.5000	114.300	1.0625	26.988	-	-	49.73	29.25	4,500	5,250
2.2500	57.150	4.5000	114.300	0.8750	22.225	-	-	39.53	23.25	4,500	5,250
2.2500	57.150	5.0000	127.000	1.2500	31.750	-	-	57.08	33.75	3,975	4,725
2.5000	63.500	5.0000	127.000	0.9375	23.812	-	-	46.80	28.13	3,750	4,500
2.5000	63.500	5.5000	139.700	1.2500	31.750	-	-	69.23	42.00	3,600	4,200
2.7500	69.850	5.2500	133.350	0.9375	23.812	-	-	49.73	31.13	3,600	4,200
2.7500	69.850	6.2500	158.750	1.3750	34.925	-	-	78.00	47.25	3,225	3,750
3.0000	76.200	5.7500	146.050	1.0625	26.988	-	-	54.60	33.00	3,375	3,975
3.0000	76.200	7.0000	177.800	1.5625	39.688	-	-	93.00	60.00	2,850	3,375
3.2500	82.550	6.0000	152.400	1.0625	26.988	-	-	62.40	39.75	3,000	3,600
3.2500	82.550	7.5000	190.500	1.5625	39.688	-	-	99.75	67.50	2,550	3,000
3.5000	88.900	6.5000	165.100	1.1250	28.575	-	-	71.70	45.75	2,850	3,375
3.5000	88.900	8.1250	206.375	1.7500	44.450	-	-	114.75	81.00	2,400	2,850
3.7500	95.250	6.7500	171.450	1.1250	28.575	-	-	75.75	50.25	2,700	3,225
3.7500	95.250	8.2500	209.550	1.7500	44.450	-	-	114.75	81.00	2,400	2,850
4.0000	101.600	7.2500	184.150	1.2500	31.750	-	-	81.00	53.25	2,550	3,000
4.0000	101.600	8.5000	215.900	1.7500	44.450	-	-	122.25	90.00	2,250	2,700
4.2500	107.950	7.5000	133.350	1.2500	31.750	-	-	93.00	61.13	2,400	2,850
4.2500	107.950	8.7500	222.250	1.7500	44.450	-	-	130.50	99.00	2,100	2,550
4.5000	114.300	8.0000	203.200	1.3125	33.338	-	-	97.50	64.88	2,250	2,700
4.5000	114.300	9.3750	238.125	2.0000	50.800	-	-	139.50	107.25	1,950	2,400
4.7500	120.650	8.2500	209.550	1.3125	33.338	-	-	103.50	71.25	2,100	2,550
4.7500	120.650	10.0000	254.000	2.0000	50.800	-	-	146.25	114.75	1,800	2,250

Chamfer Dimension		Mass		Designation			
r_a max	r_a max			Reference Number	Open	Shields	Seals
0.0940	2.40	440.00	-	LJ 1.1/2	RLS 12	ZZ	2RS
0.0940	2.40	790.00	-	MJ 1.1/2	RMS 12	ZZ	2RS
0.0940	2.40	510.00	-	LJ 1.5/8	RLS 13	ZZ	2RS
0.0940	2.40	910.00	-	MJ 1.5/8	RMS 13	ZZ	2RS
0.0940	2.40	660.00	-	LJ 1.3/4	RLS 14	ZZ	2RS
0.0940	2.40	1,130.00	-	MJ 1.3/4	RMS 14	ZZ	2RS
0.0940	2.40	740.00	-	LJ 1.7/8	RLS 15	ZZ	2RS
0.0940	2.40	1,240.00	-	MJ 1.7/8	RMS 15	ZZ	2RS
0.0940	2.40	700.00	-	LJ 2	RLS 16	ZZ	2RS
0.0940	2.40	1,190.00	-	MJ 2	RMS 16	ZZ	2RS
0.0940	2.40	960.00	-	LJ 2.1/4	RLS 18	-	-
0.1250	3.20	1,700.00	-	MJ 2.1/4	RMS 18	-	-
0.0940	2.40	1,260.00	-	LJ 2.1/2	RLS 20	-	-
0.1250	3.20	2,050.00	-	MJ 2.1/2	RMS 20	-	-
0.0940	2.40	1,370.00	-	LJ 2.3/4	RLS 22	-	-
0.1250	3.20	2,970.00	-	MJ 2.3/4	RMS 22	-	-
0.0940	2.40	1,850.00	-	LJ 3	RLS 24	-	-
0.1560	4.00	4,410.00	-	MJ 3	RMS 24	-	-
0.0940	2.40	1,930.00	-	LJ 3.1/4	RLS 26	-	-
0.1560	4.00	5,000.00	-	MJ 3.1/4	RMS 26	-	-
0.1250	3.20	2,380.00	-	LJ 3.1/2	RLS 28	-	-
0.1560	4.00	6,500.00	-	MJ 3.1/2	RMS 28	-	-
0.1250	3.20	2,510.00	-	LJ 3.3/4	RLS 30	-	-
0.1560	4.00	6,500.00	-	MJ 3.3/4	RMS 30	-	-
0.1250	3.20	3,250.00	-	LJ 4	RLS 32	-	-
0.1560	4.00	8,100.00	-	MJ 4	RMS 32	-	-
0.1250	3.20	3,920.00	-	LJ 4.1/4	RLS 34	-	-
0.1875	4.80	8,500.00	-	MJ 4.1/4	RMS 34	-	-
0.1250	3.20	4,760.00	-	LJ 4.1/2	RLS 36	-	-
0.1875	4.80	11,700.00	-	MJ 4.1/2	RMS 36	-	-
0.1250	3.20	5,000.00	-	LJ 4.3/4	RLS 38	-	-
0.1875	4.80	12,700.00	-	MJ 4.3/4	RMS 38	-	-



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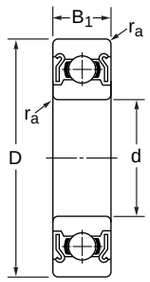
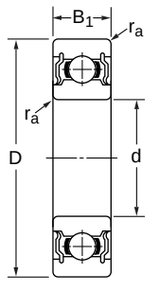


SHIELDS - ZZ



SEALS - 2RS

Basic Dimensions								Basic Load Ratings		Limiting Speed	
d		D		B		B1		Dynamic C	Static C_0	Grease	Oil
inch	mm	inch	mm	inch	mm	inch	mm	kN	kN	r/min	r/min
5.0000	127.000	9.0000	228.600	1.3750	34.925	-	-	111.00	81.00	1,950	2,400
5.0000	127.000	10.0000	254.000	2.0000	50.800	-	-	146.25	114.75	1,800	2,250
5.5000	139.700	9.5000	241.300	1.3750	34.925	-	-	117.00	87.00	1,800	2,250
5.5000	139.700	11.0000	279.400	2.0000	50.800	-	-	159.00	129.75	1,500	1,950
6.0000	152.400	10.5000	266.700	1.5625	39.688	-	-	129.00	100.50	1,500	1,950
6.5000	165.000	11.0000	279.400	1.5625	39.688	-	-	129.00	100.50	1,500	1,950
7.0000	177.800	12.0000	304.800	1.7500	44.450	-	-	149.25	122.25	1,425	1,800
7.5000	190.500	12.5000	317.500	1.7500	44.450	-	-	159.00	135.00	1,350	1,650
8.0000	203.200	13.0000	330.200	1.7500	44.450	-	-	165.75	144.75	1,275	1,500
9.0000	228.600	14.5000	368.300	2.0000	50.800	-	-	175.50	159.00	1,125	1,350
10.0000	254.000	15.7500	400.500	2.0000	50.800	-	-	191.25	187.50	1,050	1,275
11.5000	292.000	18.0000	457.200	2.3750	60.325	-	-	239.25	255.00	825	1,050

Chamfer Dimension		Mass		Designation			
				Reference Number	Open	Shields	Seals
r_a max	r_a max						
0.1250	3.20	6,500.00	-	LJ 5	RLS 40	-	-
0.1875	4.80	12,100.00	-	MJ 5	RMS 40	-	-
0.1250	3.20	6,900.00	-	LJ 5.1/2	RLS 44	-	-
0.1875	4.80	-	-	MJ 5.1/2	RMS 44M	-	-
0.1560	4.00	9,800.00	-	LJ 6	RLS 48	-	-
0.1560	4.00	10,400.00	-	LJ 6.1/2	RLS 52	-	-
0.1560	4.00	14,100.00	-	LJ 7	RLS 56M	-	-
0.1560	4.00	15,000.00	-	LJ 7.1/2	RLS 60M	-	-
0.1560	4.00	15,800.00	-	LJ 8	RLS 64M	-	-
0.1875	4.80	-	-	LJ 9	RLS 72M	-	-
0.1875	4.80	-	-	LJ 10	RLS 80M	-	-
0.1875	4.80	-	-	LJ 11.1/2	RLS 92M	-	-

Single Row Deep Groove Ball Bearings - Inch Sizes 1600 Series

Prefix & Suffix

1614	2RS

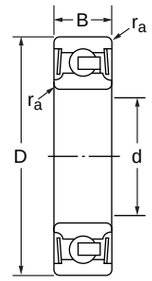
Suffix

ZZ : Shields at both sides of the bearing
2RS : Seals at both sides of the bearing

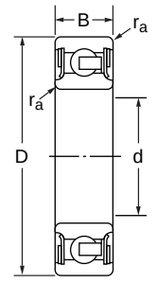
Basic type series

16 series: Standard

Single Row Deep Groove Ball Bearings - Inch Sizes 1600 Series



SHIELDS - ZZ



SEALS - 2RS

Basic Dimensions						Chamfer Dimension		Designation
d inch	mm	D inch	mm	B inch	mm	r_a inch	r_a mm	
0.188	4.763	0.688	17.463	*0.250	6.350	0.012	0.305	1601
0.250	6.350	0.688	17.463	*0.250	6.350	0.012	0.305	1602
0.313	7.938	0.875	22.225	**0.281	7.144	0.012	0.305	1603
0.375	9.525	0.875	22.225	**0.281	7.144	0.015	0.381	1604
0.313	7.938	0.906	23.019	0.313	7.938	0.012	0.305	1605
0.375	9.525	0.906	23.019	0.313	7.938	0.015	0.381	1606
0.438	11.113	0.906	23.019	0.313	7.938	0.015	0.381	1607
0.375	9.525	1.125	28.575	0.375	9.525	0.025	0.635	1614
0.438	11.113	1.125	28.575	0.375	9.525	0.025	0.635	1615
0.500	12.700	1.125	28.575	0.375	9.525	0.025	0.635	1616
0.438	11.113	1.375	34.925	0.438	11.113	0.025	0.635	1620
0.500	12.700	1.375	34.925	0.438	11.113	0.025	0.635	1621
0.563	14.288	1.375	34.925	0.438	11.113	0.025	0.635	1622
0.625	15.875	1.375	34.925	0.438	11.113	0.025	0.635	1623
0.625	15.875	1.625	41.275	0.500	12.700	0.025	0.635	1628
0.750	19.050	1.625	41.275	0.500	12.700	0.025	0.635	1630
0.625	15.875	1.750	44.450	0.500	12.700	0.025	0.635	1633
0.750	19.050	1.750	44.450	0.500	12.700	0.025	0.635	1635
0.750	19.050	2.000	50.800	0.563	14.288	0.035	0.889	1638
0.875	22.225	2.000	50.800	0.563	14.288	0.035	0.889	1640
1.000	25.400	2.000	50.800	0.563	14.288	0.035	0.889	1641
1.125	28.575	2.500	63.500	0.625	15.875	0.035	0.889	1652
1.250	31.750	2.500	63.500	0.625	15.875	0.035	0.889	1654
1.250	31.750	2.563	65.100	0.688	17.463	0.035	0.889	1657
1.313	33.350	2.563	65.100	0.688	17.463	0.035	0.889	1658

* Width Dimension B for 2RS Types = 0.3125"
** Width Dimension B for 2RS Types = 0.34375"

Prefix & Suffix

SS	62	05	ZZ

Prefix

"Blank": Chrome steel
SS : Stainless steel
F : Flanged design

Basic type series

67 : Ultra extra light
68 : Ultra light
69 : Extra light
60 : Light
62 : Standard
63 : Medium

Bore size (mm)

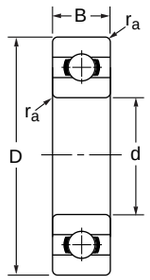
1 : 1mm
2 : 2mm
3 : 3mm
4 : 4mm
5 : 5mm
6 : 6mm
7 : 7mm
8 : 8mm
9 : 9mm

Suffix

Z : Shield at 1 side of the bearing
ZZ : Z shields at both sides of the bearing
RS : Seal at 1 side of the bearing
2RS : Seals at both sides of the bearing
N : Snap ring groove at outside of outer ring
NR : Snap ring groove with snap ring at outside of outer ring
ZNR : Shield at 1 side of the bearing with snap ring groove and snap ring on outer ring

Single Row Deep Groove Ball Bearings - Miniature

NIS™



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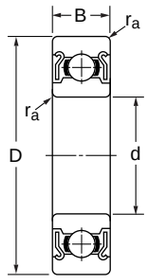
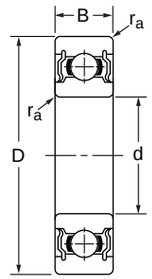
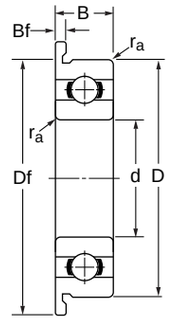


SHIELDS - ZZ

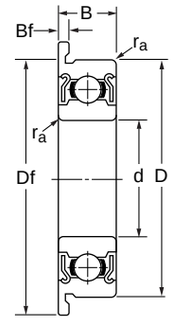


SEALS - 2RS

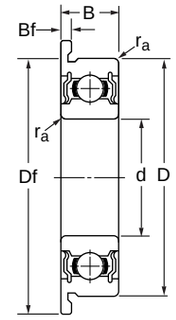
Basic Dimensions							Basic Load Ratings		Limiting Speed		Chamfer Dimension
d mm	D mm	Df mm	B mm	Bf mm	B1 mm	Bf1 mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max
1.0	3	3.8	1	0.3	-	-	96.00	26.00	130.0	150.0	0.05
1.0	3	-	1.5	-	-	-	96.00	26.00	130.0	150.0	0.05
1.0	4	5.0	1.6	0.5	-	-	141.00	37.00	100.0	120.0	0.10
1.2	4	4.8	1.8	0.4	2.5	-	112.00	33.00	110.0	130.0	0.10
1.5	4	5.0	1.2	0.4	2.0	0.6	112.00	33.00	100.0	120.0	0.05
1.5	5	6.5	2	0.6	2.6	0.8	169.00	50.00	85.0	100.0	0.15
1.5	6	7.5	2.5	0.6	3.0	0.8	330.00	99.00	75.0	90.0	0.15
2.0	4	-	1.2	-	2.0	-	124.00	40.00	91.0	104.0	0.05
2.0	5	6.1	1.5	0.5	2.3	0.6	169.00	50.00	85.0	100.0	0.08
2.0	5	6.2	2.0	0.6	2.5	0.6	169.00	50.00	85.0	100.0	0.10
2.0	6	7.5	2.3	0.6	3.0	0.8	330.00	99.00	75.0	90.0	0.15
2.0	6	7.2	2.5	0.6	2.5	-	330.00	99.00	75.0	90.0	0.15
2.0	7	8.2	2.5	0.6	3.0	0.6	386.00	129.00	63.0	75.0	0.15
2.0	7	8.5	2.8	0.7	3.5	0.9	386.00	129.00	60.0	71.0	0.15
2.5	6	7.1	1.8	0.5	2.6	0.8	209.00	74.00	71.0	80.0	0.08
2.5	7	8.5	2.5	0.7	3.5	0.9	386.00	129.00	63.0	75.0	0.15
2.5	8	9.2	2.5	0.6	-	-	558.00	180.00	60.0	67.0	0.20
2.5	8	9.5	2.8	0.7	4.0	0.9	552.00	177.00	60.0	71.0	0.15
3.0	6	7.2	2.0	0.6	2.5	0.6	209.00	74.00	71.0	80.0	0.10
3.0	7	8.1	2.0	0.5	3.0	0.8	311.00	112.00	63.0	75.0	0.10
3.0	8	9.2	2.5	0.6	3.0	-	395.00	141.00	60.0	67.0	0.15
3.0	8	9.5	3.0	0.7	4.0	0.9	558.00	180.00	60.0	67.0	0.15
3.0	9	10.2	2.5	0.6	4.0	0.8	571.00	189.00	56.0	67.0	0.20
3.0	9	10.5	3.0	0.7	5.0	1.0	571.00	189.00	56.0	67.0	0.15
3.0	10	11.5	4.0	1.0	4.0	1.0	631.00	219.00	50.0	60.0	0.15
3.0	13	-	5.0	-	5.0	-	1301.00	488.00	40.0	48.0	0.20
4.0	7	8.2	2.0	0.6	-	-	311.00	115.00	60.0	67.0	0.10
4.0	7	8.2	-	-	2.5	0.6	255.00	108.00	60.0	67.0	0.10
4.0	8	9.2	2.0	0.6	3.0	0.6	395.00	141.00	56.0	67.0	0.15
4.0	8	9.2	2.0	0.6	3.0	0.6	395.00	141.00	56.0	67.0	0.10
4.0	9	10.3	2.5	0.6	4.0	1.0	641.00	227.00	53.0	63.0	0.10
4.0	10	11.2	3.0	0.6	4.0	0.8	711.00	272.00	48.0	56.0	0.20



Flange



Flange with Shields - ZZ

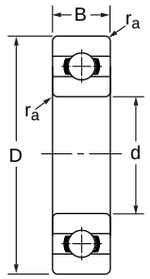


Flange with Seals - 2RS

Mass				Designation					
g	g	g	g	Reference Number	Open	Flange Open	Shields	Flange Shields	Seals
0.03	0.04	-	-	L 310	681	F 681	-	-	-
0.05	-	-	-	L 310W51	MR 31	-	-	-	-
0.11	0.14	-	-	R 410	691	F 691	-	-	-
0.10	0.12	0.14	-	R 412	MR 41X	MF 41X	MR 41XZZ	-	-
0.10	0.12	0.14	0.17	L 415	681X	F 681X	681XZZ	F 681XZZ	-
0.20	0.26	0.25	0.33	R 515	691X	F 691X	691XZZ	F 691XZZ	-
0.31	0.38	0.40	0.50	R 615	601X	F 601X	601XZZ	F 601XZZ	-
0.05	-	0.07	-	672	672	-	672ZZ	-	-
0.15	0.19	0.20	0.24	L 520	682	F 682	682ZZ	F 682ZZ	-
0.14	0.19	0.20	0.25	L 520W02	MR 52	MF 52	MR 52ZZ	MF 52ZZ	-
0.28	0.35	0.35	0.45	R 620	692	F 692	692ZZ	F 692ZZ	-
0.28	0.34	0.33	-	R 620W52	MR 62	MF 62	MR 62ZZ	-	-
0.43	0.50	0.53	0.60	R 720Y52	MR 72	MF 72	MR 72ZZ	MF 72ZZ	-
0.50	0.60	0.60	0.73	R 720	602	F 602	602ZZ	F 602ZZ	-
0.20	0.24	0.35	0.42	L 625	682X	F 682X	682XZZ	F 682XZZ	-
0.40	0.50	0.55	0.68	R 725	692X	F 692X	692XZZ	F 692XZZ	-
0.52	0.60	-	-	R 825Y52	MR 82X	MF 82X	-	-	-
0.61	0.72	0.85	0.99	R 825	602X	F 602X	602XZZ	F 602X	-
0.20	0.26	0.28	0.34	L 630	MR 63	MF 63	MR 63ZZ	MF 63ZZ	-
0.32	0.37	0.45	0.53	L 730	683	F 683	683ZZ	F 683ZZ	-
0.51	0.59	0.67	-	R 830Y52	MR 83	MF 83	MR 83ZZ	-	-
0.60	0.71	0.80	0.94	R 830	693	F 693	693ZZ	F 693ZZ	2RS
0.75	0.83	1.15	1.30	R 930Y52	MR 93	MF 93	MR 93ZZ	MF 93ZZ	-
0.84	0.96	1.13	1.61	R 930	603	F 603	603ZZ	F 603ZZ	-
1.45	1.65	1.65	1.85	R 1030	623	F 623	623ZZ	F 623ZZ	2RS
3.27	-	3.43	-	633	633	-	633ZZ	-	2RS
0.23	0.30	-	-	L 740	MR 74	MF 74	-	-	-
-	-	0.33	0.40	L 740	-	-	MR 74ZZ	MF 74ZZ	-
0.39	0.47	0.56	0.64	L 840	MR 84	MF 84	-	-	-
0.39	0.47	0.56	0.64	L 840	-	-	MR 84ZZ	MF 84ZZ	-
0.65	0.74	1.00	1.15	L 940	684	F 684	684ZZ	F 684ZZ	2RS
0.96	1.04	1.33	1.50	L 1040	MR 104	MF 104	-	-	2RS

Single Row Deep Groove Ball Bearings - Miniature

NIS™



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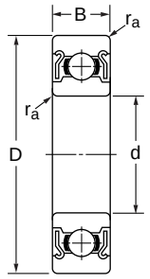
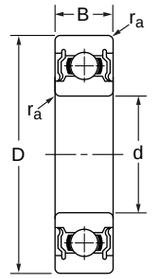
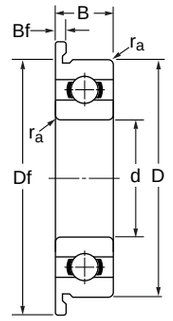


SHIELDS - ZZ

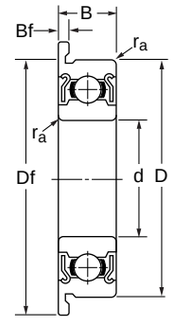


SEALS - 2RS

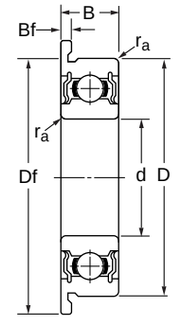
Basic Dimensions							Basic Load Ratings		Limiting Speed		Chamfer Dimension
d mm	D mm	Df mm	B mm	Bf mm	B1 mm	Bf1 mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max
4.0	10	11.2	3.0	0.6	4.0	0.8	711.00	272.00	48.0	56.0	0.15
4.0	11	12.5	4.0	1.0	4.0	1.0	957.00	350.00	48.0	56.0	0.15
4.0	12	13.5	4.0	1.0	4.0	1.0	957.00	350.00	48.0	56.0	0.20
4.0	13	15.0	5.0	1.0	5.0	1.0	1301.00	488.00	40.0	48.0	0.20
4.0	16	18.0	5.0	1.0	5.0	1.0	1340.00	523.00	36.0	43.0	0.30
5.0	8	9.2	2.0	0.6	-	-	308.00	120.00	53.0	63.0	0.10
5.0	8	9.2	-	-	2.5	0.6	218.00	90.00	53.0	63.0	0.10
5.0	9	10.2	2.5	0.6	3.0	0.6	431.00	169.00	50.0	60.0	0.15
5.0	10	11.2	3.0	0.6	4.0	0.8	431.00	169.00	50.0	60.0	0.15
5.0	11	12.6	-	-	4.0	0.8	716.00	282.00	45.0	53.0	0.15
5.0	11	12.5	3.0	0.8	5.0	1.0	716.00	282.00	45.0	53.0	0.15
5.0	13	15.0	4.0	1.0	4.0	1.0	1077.00	432.00	43.0	50.0	0.20
5.0	14	16.0	5.0	1.0	5.0	1.0	1329.00	507.00	40.0	50.0	0.20
5.0	16	18.0	5.0	1.0	5.0	1.0	1729.00	675.00	36.0	43.0	0.30
5.0	19	22.0	6.0	1.5	6.0	1.5	2336.00	896.00	32.0	40.0	0.30
6.0	10	11.2	2.5	0.6	3.0	6.0	496.00	218.00	45.0	53.0	0.15
6.0	10	11.2	2.5	0.6	3.0	6.0	496.00	218.00	45.0	53.0	0.10
6.0	12	13.2	3.0	0.6	4.0	0.8	716.00	295.00	43.0	50.0	0.20
6.0	12	13.2	3.0	0.6	4.0	0.8	716.00	295.00	43.0	50.0	0.15
6.0	13	15.0	3.5	1.0	5.0	1.1	1082.00	442.00	40.0	50.0	0.15
6.0	15	17.0	5.0	1.2	5.0	1.2	1340.00	523.00	40.0	45.0	0.20
6.0	16	-	5.0	-	5.0	-	1340.00	523.00	40.0	45.0	0.20
6.0	17	19.0	6.0	1.2	6.0	1.2	2263.00	846.00	38.0	45.0	0.30
6.0	19	22.0	6.0	1.5	6.0	1.5	2336.00	896.00	32.0	40.0	0.30
6.0	22	-	7.0	-	7.0	-	3333.00	1423.00	30.0	36.0	0.30
7.0	11	12.2	2.5	0.6	3.0	0.6	455.00	202.00	43.0	50.0	0.15
7.0	11	12.2	2.5	0.6	3.0	0.6	455.00	202.00	43.0	50.0	0.10
7.0	13	14.2	3.0	0.6	4.0	0.8	541.00	276.00	40.0	48.0	0.20
7.0	13	14.2	3.0	0.6	4.0	0.8	541.00	276.00	40.0	48.0	0.15
7.0	14	16.0	3.5	1.0	5.0	1.1	1173.00	513.00	40.0	50.0	0.15
7.0	17	19.0	5.0	1.2	5.0	1.2	1605.00	719.00	36.0	43.0	0.30
7.0	19	22.0	6.0	1.5	6.0	1.5	2336.00	896.00	36.0	43.0	0.30



Flange



Flange with Shields - ZZ

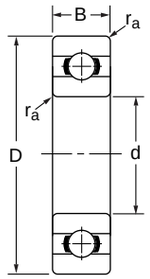


Flange with Seals - 2RS

Mass				Designation					
g	g	g	g	Reference Number	Open	Flange Open	Shields	Flange Shields	Seals
0.96	1.04	1.33	1.50	L 1040	-	-	MR 104ZZ	MF 104ZZ	2RS
1.69	1.91	1.75	1.97	R 1140	694	F 694	694ZZ	F 694ZZ	2RS
2.19	2.42	2.34	2.57	R 1240	604	F 604	604ZZ	F 604ZZ	2RS
3.10	3.44	3.20	3.54	R 1340	624	F 624	624ZZ	F 624ZZ	2RS
5.24	5.66	5.44	5.86	R 1640	634	F 634	634ZZ	F 634ZZ	2RS
0.25	0.33	-	-	L 850	MR 85	MF 85	-	-	-
-	-	0.34	0.42	L 850	-	-	MR 85ZZ	MF 85ZZ	-
0.54	0.62	0.58	0.66	L 950	MR 95	MF 95	MR 95ZZ	MF 95ZZ	-
0.91	1.00	1.26	1.38	L 1050	MR 105	MF 105	MR 105ZZ	MF 105ZZ	2RS
-	-	0.62	0.81	L 1150Y04	-	-	MR 115ZZ	MF 115ZZ	2RS
1.16	1.33	1.93	2.15	L 1150	685	F 685	685ZZ	F 685ZZ	2RS
2.39	2.73	2.31	2.65	R 1350	695	F 695	695ZZ	F 695ZZ	2RS
3.46	3.83	3.75	4.12	R 1450	605	F 605	605ZZ	F 605ZZ	2RS
4.95	5.37	5.10	5.52	R 1650	625	F 625	625ZZ	F 625ZZ	2RS
8.50	9.26	8.89	9.65	R 1950	635	F 635	635ZZ	F 635ZZ	2RS
0.55	0.64	0.70	0.79	L 1060	MR 106	MF 106	-	-	-
0.55	0.64	0.70	0.79	L 1060	-	-	MR 106ZZ	MF 106ZZ	-
1.25	1.44	1.66	1.86	L 1260	MR 126	MF 126	-	-	2RS
1.25	1.44	1.66	1.86	L 1260	-	-	MR 126ZZ	MF 126ZZ	2RS
1.87	2.21	2.68	3.06	L 1360	686	F 686	686ZZ	F 686ZZ	2RS
3.85	4.24	3.65	4.04	R 1560	696	F 696	696ZZ	F 696ZZ	2RS
-	-	4.59	-	696A	-	-	696AZZ	-	2RS
5.94	6.47	6.89	7.42	R 1760	606	F 606	606ZZ	F 606ZZ	2RS
8.12	9.25	8.65	9.78	R 1960	626	F 626	626ZZ	F 626ZZ	2RS
13.90	-	14.50	-	636	636	-	636ZZ	-	2RS
0.59	0.69	0.71	0.81	L 1170	MR 117	MF 117	-	-	-
0.59	0.69	0.71	0.81	L 1170	-	-	MR 117ZZ	MF 117ZZ	-
1.52	1.64	2.01	2.17	L 1370	MR 137	MF 137	-	-	-
1.52	1.64	2.01	2.17	L 1370	-	-	MR 137ZZ	MF 137ZZ	-
2.03	2.40	2.95	3.35	L 1470	687	F 687	687ZZ	F 687ZZ	2RS
5.26	5.79	5.01	5.54	697	697	F 697	697ZZ	F 697ZZ	2RS
7.80	8.93	8.24	9.37	R 1970	607	F 607	607ZZ	F 607ZZ	2RS

Single Row Deep Groove Ball Bearings - Miniature

NIS™



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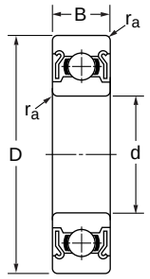
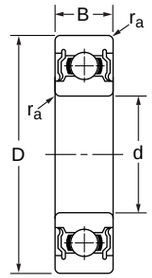


SHIELDS - ZZ

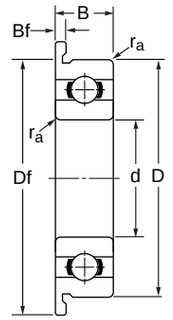


SEALS - 2RS

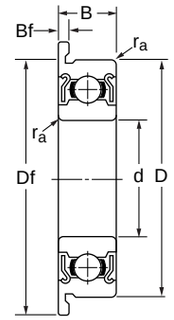
Basic Dimensions							Basic Load Ratings		Limiting Speed		Chamfer Dimension
d mm	D mm	Df mm	B mm	Bf mm	B1 mm	Bf1 mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max
7.0	22	25.0	7.0	1.5	7.0	1.5	3287.00	1379.00	30.0	36.0	0.30
7.0	26	-	9.0	-	9.0	-	4563.00	1983.00	28.0	34.0	0.30
8.0	12	13.2	2.5	0.6	3.5	0.8	543.00	274.00	40.0	48.0	0.15
8.0	12	13.2	2.5	0.6	3.5	0.8	543.00	274.00	40.0	48.0	0.10
8.0	14	15.6	3.5	0.8	4.0	0.8	817.00	386.00	38.0	45.0	0.20
8.0	14	15.6	3.5	0.8	4.0	0.8	817.00	386.00	38.0	45.0	0.15
8.0	16	18.0	4.0	1.0	5.0	1.1	1252.00	592.00	36.0	43.0	0.20
8.0	19	22.0	6.0	1.5	6.0	1.5	2237.00	917.00	36.0	43.0	0.30
8.0	22	25.0	7.0	1.5	7.0	1.5	3293.00	1379.00	34.0	40.0	0.30
8.0	24	-	8	-	8.0	-	3333.00	1432.00	28.0	34.0	0.30
8.0	28	-	9	-	9.0	-	4563.00	1983.00	28.0	34.0	0.30
9.0	14	15.5	3	0.8	4.5	0.8	919.00	468.00	36.0	42.0	0.10
9.0	17	19.0	4	1.0	5.0	1.1	1327.00	668.00	36.0	43.0	0.20
9.0	20	23.0	6	1.5	6.0	1.5	2467.00	1081.00	34.0	40.0	0.30
9.0	24	27.0	7	1.5	7.0	1.5	3356.00	1444.00	32.0	38.0	0.30
9.0	26	-	8	-	8.0	-	4563.00	1983.00	28.0	34.0	0.60
9.0	30	-	10	-	10.0	-	4659.00	2080.00	24.0	30.0	0.60

NIS™

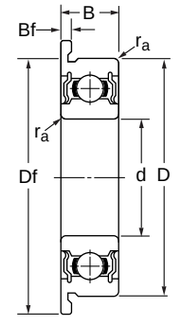
Single Row Deep Groove Ball Bearings - Miniature



Flange



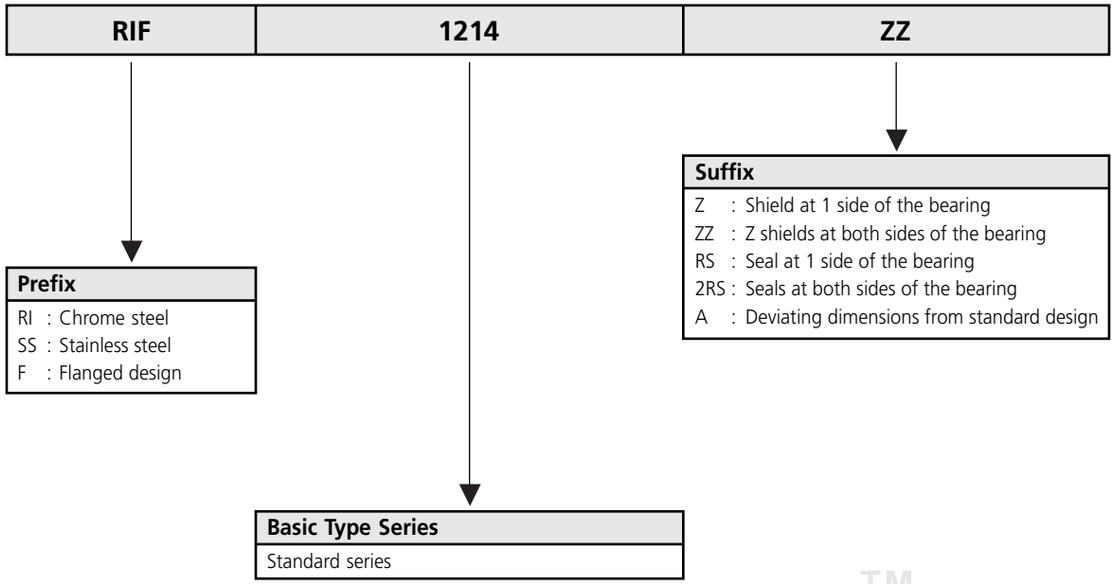
Flange with Shields - ZZ



Flange with Seals - 2RS

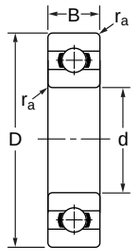
Mass				Designation					
g	g	g	g	Reference Number	Open	Flange Open	Shields	Flange Shields	Seals
12.70	14.00	13.10	14.40	R 2270	627	F 627	627ZZ	F 627ZZ	2RS
24.20	-	25.80	-	637	637	-	637ZZ	-	2RS
0.70	0.81	0.99	1.14	L 1280	MR 128	MF 128	-	-	-
0.70	0.81	0.99	1.14	L 1280	-	-	MR 128ZZ	MF 128ZZ	-
1.90	2.13	2.19	2.42	L 1480	MR 148	MF 148	-	-	2RS
1.90	2.13	2.19	2.42	L 1480	-	-	MR 148ZZ	MF 148ZZ	2RS
3.11	3.53	4.05	4.51	L 1680	688	F 688	688ZZ	F 688ZZ	2RS
7.12	8.50	7.57	8.70	R 1980	698	F 698	698ZZ	F 698ZZ	2RS
11.80	13.10	12.90	14.20	R 2280	608	F 608	608ZZ	F 608ZZ	2RS
17.10	-	18.50	-	628	628	-	628ZZ	-	2RS
28.10	-	30.30	-	638	638	-	638ZZ	-	2RS
1.35	1.57	1.98	2.20	679	679	F 679	679ZZ	F 679ZZ	-
3.41	3.85	4.38	4.87	L 1790	689	F 689	689ZZ	F 689ZZ	2RS
8.38	9.57	8.54	9.73	L 2090	699	F 699	699ZZ	F 699ZZ	2RS
14.70	16.10	16.00	17.40	609	609	F 609	609ZZ	F 609ZZ	2RS
19.00	-	21.80	-	R 2690	629	-	629ZZ	-	2RS
36.20	-	37.10	-	639	639	-	639ZZ	-	2RS

Prefix & Suffix



Single Row Deep Groove Ball Bearings, Miniature - Inch Sizes

NIS™



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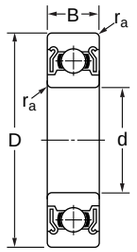
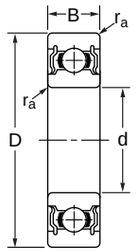


SHIELDS - ZZ



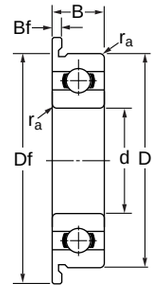
SEALS - 2RS

Basic Dimensions															Basic Load Ratings	
d		D		Df		B		Bf		B1		Bf1			Dynamic C	Static C_0
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		kN	kN
0.0400	1.016	0.1250	3.175	0.1710	4.343	0.0469	1.191	0.0130	0.330	-	-	-	-		106.00	28.00
0.0469	1.191	0.1562	3.967	0.2030	5.156	0.0625	1.588	0.0130	0.330	0.0937	2.380	0.0310	0.787		112.00	33.00
0.0550	1.397	0.1875	4.762	0.2340	5.944	0.0781	1.984	0.0230	0.584	0.1094	2.779	0.0310	0.787		232.00	67.00
0.0781	1.984	0.2500	6.350	0.2960	7.518	0.0937	2.380	0.0230	0.584	0.1406	3.571	0.0310	0.787		284.00	96.00
0.0937	2.380	0.1875	4.762	0.2340	5.944	0.0625	1.588	0.0180	0.457	-	-	-	-		189.00	60.00
0.0937	2.380	0.1875	4.762	0.2340	5.944	-	-	-	-	0.0937	2.380	0.0310	0.787		144.00	53.00
0.0937	2.380	0.3125	7.938	0.3590	9.119	0.1094	2.779	0.0230	0.584	0.1406	3.571	0.0310	0.787		552.00	176.00
0.1250	3.175	0.2500	6.350	0.2960	7.518	0.0937	2.380	0.0230	0.584	0.1094	2.779	0.0310	0.787		311.00	110.00
0.1250	3.175	0.2500	6.350	0.2960	7.518	0.0937	2.380	0.0230	0.584	0.1094	2.779	0.0310	0.787		284.00	96.00
0.1250	3.175	0.3125	7.938	0.3590	9.119	0.1094	2.779	0.0230	0.584	0.1406	3.571	0.0310	0.787		558.00	180.00
0.1250	3.175	0.3750	9.525	0.4220	10.719	0.1094	2.779	0.0230	0.584	0.1406	3.571	0.0310	0.787		640.00	227.00
0.1250	3.175	0.3750	9.525	0.4400	11.176	0.1562	3.967	0.0300	0.762	0.1562	3.967	0.0300	0.762		631.00	219.00
0.1250	3.175	0.5000	12.700	-	-	0.1719	4.366	-	-	0.1719	4.366	-	-		640.00	227.00
0.1562	3.967	0.3125	7.938	0.3590	9.119	0.1094	2.779	0.0230	0.584	0.1250	3.175	0.0360	0.914		359.00	150.00
0.1875	4.762	0.3125	7.938	0.3590	9.119	0.1094	2.779	0.0230	0.584	0.1250	3.175	0.0360	0.914		359.00	150.00
0.1875	4.762	0.3750	9.525	0.4220	10.719	0.1250	3.175	0.0230	0.584	0.1250	3.175	0.0310	0.787		709.00	272.00
0.1875	4.762	0.5000	12.700	0.5650	14.351	0.1960	4.978	0.0420	1.067	-	-	-	-		1301.00	488.00
0.1875	4.762	0.5000	12.700	0.5650	14.351	0.1562	3.967	-	-	0.1960	4.978	0.0420	1.067		1301.00	488.00
0.1875	4.762	0.6250	15.875	-	-	0.1960	4.978	-	-	0.1960	4.978	-	-		1480.00	621.00
0.2500	6.350	0.3750	9.525	0.4220	10.719	0.1250	3.175	0.0230	0.584	0.1250	3.175	0.0360	0.914		373.00	172.00
0.2500	6.350	0.5000	12.700	0.5470	13.894	0.1250	3.175	0.0230	0.584	0.1875	4.762	0.0450	1.143		1082.00	442.00
0.2500	6.350	0.6250	15.875	0.6900	17.526	0.1960	4.978	0.0420	1.067	0.1960	4.978	0.0633	1.607		1480.00	621.00
0.2500	6.350	0.7500	19.050	-	-	0.2188	5.558	-	-	0.2812	7.142	-	-		2336.00	896.00
0.3125	7.938	0.5000	12.700	0.5470	13.894	0.1562	3.967	0.0310	0.787	0.1562	3.967	0.0310	0.787		542.00	276.00
0.3750	9.525	0.8750	22.225	0.9690	24.613	0.2188	5.558	0.0620	1.575	0.2512	7.142	0.0620	1.575		3332.00	1411.00

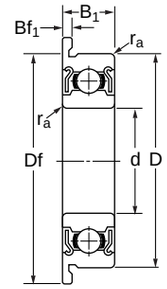
NIS™

Single Row Deep Groove Ball Bearings, Miniature - Inch Sizes

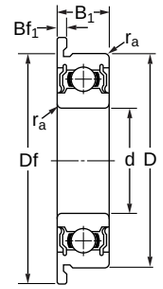
1.08



Flange



Flange with Shields - ZZ



Flange with Seals - 2RS

Limiting Speed		Chamfer Dimension		Mass				Designation					
Grease	Oil			Open	Flange Open	Shield	Flange Shield	Reference Number	Open	Flange Open	Shields	Flange Shields	Seals
r/min	r/min	r_a max	r_a max	g	g	g	g						
130.0	150.0	0.0039	0.10	0.05	0.07	-	-	RI 2	R 09	-	FR 09	-	-
110.0	130.0	0.0039	0.10	0.10	0.12	0.15	0.20	RI 2.1/2	R 0*	FR 0*	R 0ZZ*	FR 0ZZ*	-
90.0	110.0	0.0039	0.10	0.15	0.19	0.19	0.25	RI 3	R 1*	FR 1*	R 1ZZ*	FR 1ZZ*	-
67.0	80.0	0.0039	0.10	0.40	0.46	0.53	0.6	RI 4	R 1-4*	FR 1-4*	R 1-4ZZ*	FR 1-4ZZ*	-
80.0	95.0	0.0039	0.10	0.10	0.13	-	-	RI 3332	R 133	FR 133	-	-	-
80.0	95.0	0.0039	0.10	-	-	0.15	0.21	RI 3332	-	-	R 133ZZ*	FR 133ZZ*	-
60.0	71.0	0.0059	0.15	0.60	0.67	1.15	1.25	RI 5	R 1-5*	FR 1-5*	R 1-5ZZ*	FR 1-5ZZ*	-
67.0	80.0	0.0039	0.10	0.27	0.33	0.32	0.4	RI 418	R 144J*	FR 144J*	R 144JZZ*	FR 144JZZ*	-
67.0	80.0	0.0039	0.10	0.27	0.33	0.40	0.48	RI 418	R 144*	FR 144*	R 144ZZ*	FR 144ZZ*	-
60.0	67.0	0.0039	0.10	0.50	0.57	0.74	0.84	RI 518	R 2-5*	FR 2-5*	R 2-5ZZ*	FR 2-5ZZ*	-
53.0	63.0	0.0059	0.15	0.96	1.05	1.23	1.35	RI 618	R 2-6*	FR 2-6*	R 2-6ZZ*	FR 2-6ZZ*	-
56.0	67.0	0.0118	0.30	1.04	1.02	1.37	1.53	R 2	R 2*	FR 2*	R 2ZZ*	FR 2ZZ*	-
53.0	63.0	0.0118	0.30	3.03	-	3.30	-	R 2A	R 2A	-	R 2AZZ	-	-
53.0	63.0	0.0039	0.10	0.51	0.58	0.61	0.72	RI 5532	R 155*	FR 155*	R 155ZZ*	FR 155ZZ*	-
53.0	63.0	0.0039	0.10	0.40	0.47	0.45	0.56	RI 5632	R 156*	FR 156*	R 156ZZ*	FR 156ZZ*	-
50.0	60.0	0.0039	0.10	0.81	0.90	0.85	0.97	RI 6632	R 166*	FR 166*	R 166ZZ*	FR 166ZZ*	-
43.0	53.0	0.0118	0.30	-	2.50	-	-	R 3	-	FR 3*	-	-	-
43.0	53.0	0.0118	0.30	2.21	-	2.95	3.24	R 3	R 3*	-	R 3ZZ*	-	2RS
38.0	45.0	0.0118	0.30	4.75	-	5.08	-	R 3A	R 3A	-	R 3AZZ	-	2RS
48.0	56.0	0.0039	0.10	0.57	0.66	0.60	0.73	RI 614	R 168*	FR 168*	R 168ZZ*	FR 168ZZ*	-
40.0	50.0	0.0059	0.15	1.60	1.71	2.32	2.54	RI 814	R 188*	FR 188*	R 188ZZ*	FR 188ZZ*	2RS
38.0	45.0	0.0118	0.30	4.46	4.82	4.54	4.90	R 4	R 4*	FR 4*	R 4ZZ*	FR 4ZZ*	2RS
36.0	43.0	0.0157	0.40	7.48	-	10.00	-	RI 1214	R 4A	-	R 4AZZ	-	2RS
40.0	48.0	0.0059	0.15	1.39	1.54	1.57	1.72	RI 8516	R 1810*	FR 1810	R 1810ZZ	FR 1810ZZ*	-
32.0	38.0	0.0157	0.40	9.02	9.71	11.70	12.40	RI 1438	R 6	FR 6*	R 6ZZ	FR 6ZZ*	2RS

***** Available with inner ring width extended by 0.015" each side.

Prefix & Suffix

42	05	ATN

Basic type series

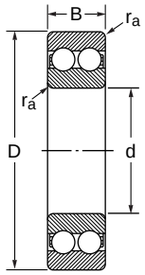
42 : Standard
43 : Medium

Bore size (Inches)

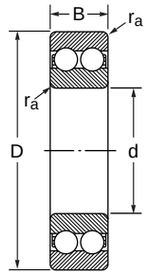
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100: multiply by 5

Suffix

A : Deviating from standard design, without filling slot
TN : Injection moulded cage of polyamide



Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
			Dynamic	Static	Grease	Oil			
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	mm	r_a max kg	
10	30	14	8.769	4.940	17,100	20,900	0.6	0.049	4200 ATN
12	32	14	10.070	5.890	16,150	19,000	0.6	0.053	4201 ATN
12	37	14	12.350	7.410	14,250	17,100	1.0	0.092	4301 ATN
15	35	14	11.305	7.125	13,300	16,150	0.6	0.059	4202 ATN
15	42	17	14.060	9.025	11,400	14,250	1.0	0.120	4302 ATN
17	40	16	14.060	9.025	11,400	14,250	0.6	0.090	4203 ATN
17	47	19	18.525	12.540	9,500	12,350	1.0	0.160	4303 ATN
20	47	18	16.910	11.875	9,500	12,350	1.0	0.140	4204 ATN
20	52	21	22.230	15.200	9,025	11,400	1.0	0.210	4304 ATN
25	52	18	18.050	13.870	8,550	10,450	1.0	0.160	4205 ATN
25	62	24	30.305	21.280	8,075	9,500	1.0	0.340	4305 ATN
30	62	20	24.700	19.760	7,600	9,025	1.0	0.260	4206 ATN
30	72	27	38.950	28.500	6,650	8,075	1.0	0.500	4306 ATN
35	72	23	33.345	27.075	6,365	7,600	1.0	0.400	4207 ATN
35	80	31	48.165	36.100	5,985	7,125	1.5	0.690	4307 ATN
40	80	23	35.245	30.875	5,700	6,650	1.0	0.500	4208 ATN
40	90	33	53.105	42.750	5,320	6,365	1.5	0.950	4308 ATN
45	85	23	37.050	34.200	5,320	6,365	1.0	0.540	4209 ATN
45	100	36	65.455	53.200	4,750	5,700	1.5	1.250	4309 ATN
50	90	23	38.950	38.000	4,750	5,700	1.0	0.580	4210 ATN
50	110	40	77.805	66.025	4,275	5,035	2.0	1.700	4310 ATN



Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
			Dynamic	Static	Grease	Oil			
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	mm	r_a max kg	
55	100	25	42.655	41.800	4,560	5,320	1.5	0.800	4211 ATN
55	120	43	92.625	78.850	4,085	4,750	2.0	2.150	4311 ATN
60	110	28	54.340	52.250	4,275	5,035	1.5	1.100	4212 ATN
60	130	46	106.400	93.100	3,610	4,275	2.0	2.650	4312 ATN
65	120	31	64.220	63.650	3,800	4,560	1.5	1.450	4213 ATN
65	140	48	114.950	100.700	3,420	4,085	2.0	3.250	4313 ATN
70	125	31	66.690	69.825	3,420	4,085	1.5	1.500	4214 ATN
70	150	51	131.100	118.750	3,040	3,610	2.0	3.950	4314 ATN
75	130	31	69.160	76.000	3,230	3,800	1.5	1.600	4215 ATN
75	160	55	148.200	135.850	2,850	3,420	2.0	4.800	4315 ATN
80	140	33	76.570	85.500	3,040	3,610	2.0	2.000	4216 ATN
85	150	36	88.920	96.900	2,850	3,420	2.0	2.550	4217 ATN
90	160	40	106.400	115.900	2,660	3,230	2.0	3.200	4218 ATN
100	180	46	133.000	148.200	2,280	2,850	2.0	4.700	4220 ATN

NIS™

2.00

Self Aligning Ball Bearings

Prefix & Suffix

12	09	K

Basic type series

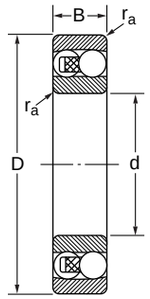
12 or 22 : Standard
13 or 23 : Medium
14 : Heavy

Bore size (mm)

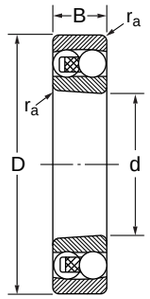
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

Suffix

K : Tapered bore, taper 1:12 on inner diameter
K30 : Tapered bore, taper 1:30 on inner diameter
2RS : Seals at both sides of the bearing

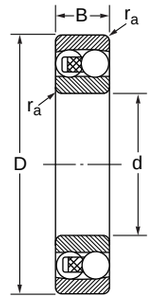


Cylindrical bore

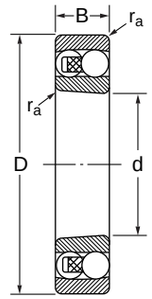


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation			
			Dynamic	Static	Grease	Oil			Seal			
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	r_a max mm	kg		2RS	K	2RSK
5	19	6	2.385	0.456	30,400	36,100	0.3	0.009	135	-	-	-
6	19	6	2.385	0.456	30,400	36,100	0.3	0.009	126	-	-	-
7	22	7	2.518	0.532	28,500	34,200	0.3	0.014	127	-	-	-
8	22	7	2.518	0.532	28,500	34,200	0.3	0.014	108	-	-	-
9	26	8	3.705	0.774	24,700	30,400	0.6	0.022	129	-	-	-
10	30	9	5.254	1.121	22,800	28,500	0.6	0.034	1200	-	-	-
10	30	14	7.657	1.644	20,900	26,600	0.6	0.042	2200	2RS	-	-
12	32	10	5.928	1.359	20,900	26,600	0.6	0.040	1201	2RS	-	-
12	32	14	8.094	1.805	19,000	24,700	0.6	0.048	2201	-	-	-
12	37	12	8.892	2.052	17,100	20,900	1.0	0.067	1301	-	-	-
12	37	17	11.115	2.565	16,150	19,000	1.0	0.082	2301	-	-	-
15	35	11	7.040	1.672	18,050	22,800	0.6	0.049	1202	-	-	-
15	35	14	8.275	1.938	17,100	20,900	0.6	0.055	2202	2RS	-	-
15	42	13	10.260	2.470	16,150	19,000	1.0	0.094	1302	-	-	-
15	42	17	11.305	2.755	14,250	17,100	1.0	0.110	2302	2RS	-	-
17	40	12	8.398	2.090	17,100	20,900	0.6	0.073	1203	-	-	-
17	40	16	10.070	2.423	16,150	19,000	0.6	0.085	2203	2RS	-	-
17	47	14	12.065	3.230	13,300	16,150	1.0	0.130	1303	-	-	-
17	47	19	13.870	3.373	12,350	15,200	1.0	0.160	2303	2RS	-	-
20	47	14	12.065	3.230	14,250	17,100	1.0	0.120	1204	-	K	-
20	47	18	15.960	3.943	13,300	16,150	1.0	0.140	2204	2RS	-	-
20	52	15	13.585	3.800	11,400	14,250	1.0	0.165	1304	-	K	-
20	52	21	17.290	4.513	10,450	13,300	1.0	0.193	2304	2RS	-	-
25	52	15	13.585	3.800	12,350	15,200	1.0	0.140	1205	-	K	-
25	52	18	15.960	4.180	10,450	13,300	1.0	0.160	2205	2RS	K	2RSK
25	62	17	18.050	5.130	9,025	11,400	1.0	0.260	1305	-	K	-
25	62	24	22.990	6.223	9,025	11,400	1.0	0.319	2305	2RS	K	2RSK
30	62	16	14.820	4.418	9,500	12,350	1.0	0.220	1206	-	K	-
30	62	20	22.610	6.365	9,025	11,400	1.0	0.249	2206	2RS	K	2RSK
30	72	19	21.375	6.460	8,550	10,450	1.0	0.390	1306	-	K	-
30	72	27	29.640	8.360	8,075	9,500	1.0	0.480	2306	2RS	K	2RSK
30	90	28	56.240	16.150	6,365	7,600	1.5	1.000	1406	-	-	-

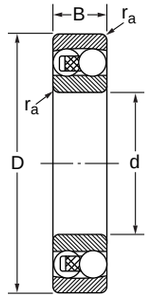


Cylindrical bore

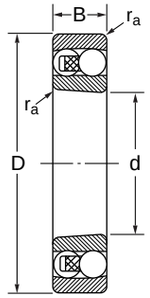


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation			
			Dynamic	Static	Grease	Oil			Seal			
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	r_a max mm	kg		2RS	K	2RSK
35	72	17	18.050	5.700	8,550	10,450	1.0	0.320	1207	-	K	-
35	72	23	29.165	8.360	8,075	9,500	1.0	0.378	2207	2RS	K	2RSK
35	80	21	25.175	8.075	7,125	8,550	1.5	0.510	1307	-	K	-
35	80	31	37.715	10.640	6,650	8,075	1.5	0.642	2307	2RS	K	2RSK
35	100	30	59.280	17.100	5,985	7,125	1.5	1.300	1407	-	-	-
40	80	18	18.905	6.603	8,075	9,500	1.0	0.420	1208	-	K	-
40	80	23	30.305	9.500	7,125	8,550	1.0	0.477	2208	2RS	K	2RSK
40	90	23	32.110	10.640	6,365	7,600	1.5	0.720	1308	-	K	-
40	90	33	51.300	15.200	5,985	7,125	1.5	0.889	2308	2RS	K	2RSK
40	110	33	72.295	22.420	5,035	5,985	2.0	1.700	1408	-	-	-
45	85	19	21.755	7.410	7,125	8,550	1.0	0.470	1209	-	K	-
45	85	23	30.875	10.070	6,650	8,075	1.0	0.522	2209	2RS	K	2RSK
45	100	25	37.050	12.730	5,985	7,125	1.5	0.960	1309	-	K	-
45	100	36	60.515	18.335	5,320	6,365	1.5	1.200	2309	2RS	K	2RSK
45	120	35	83.980	26.125	4,750	5,700	2.0	2.150	1409	-	-	-
50	90	20	25.175	8.693	6,650	8,075	1.0	0.530	1201	-	K	-
50	90	23	32.110	10.640	5,985	7,125	1.0	0.564	2210	2RS	K	2RSK
50	110	27	41.420	13.300	5,320	6,365	2.0	1.250	1310	-	K	-
50	110	40	60.515	19.000	5,035	5,985	2.0	1.580	2310	2RS	K	2RSK
50	130	37	95.950	30.400	4,560	5,320	2.0	2.650	1410	-	-	-
55	100	21	26.220	10.070	5,985	7,125	1.5	0.710	1211	-	K	-
55	100	25	37.050	12.730	5,700	6,650	1.5	0.746	2211	2RS	K	2RSK
55	120	29	48.165	17.100	4,750	5,700	2.0	1.600	1311	-	K	-
55	120	43	72.295	22.800	4,560	5,320	2.0	2.030	2311	-	K	-
55	140	40	105.450	34.675	4,085	4,750	2.0	3.250	1411	-	-	-
60	110	22	29.640	11.590	5,320	6,365	1.5	0.900	1212	-	K	-
60	110	28	46.360	16.150	5,035	5,985	1.5	1.030	2212	2RS	K	2RSK
60	130	31	55.575	20.900	4,275	5,035	2.0	2.030	1312	-	K	-
60	130	46	82.745	27.075	4,275	5,035	2.0	2.600	2312	-	K	-
60	150	42	118.750	39.425	3,610	4,275	2.0	3.950	1412	-	-	-
65	120	23	33.345	13.300	5,035	5,985	1.5	1.150	1213	-	K	-
65	120	31	54.340	19.000	4,750	5,700	1.5	1.400	2213	2RS	K	2RSK

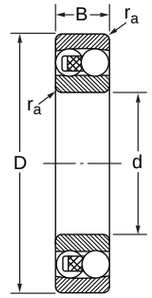


Cylindrical bore

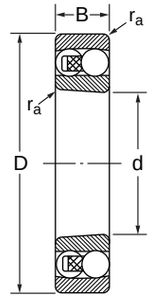


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation			
			Dynamic	Static	Grease	Oil			Seal			
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	r_a max mm	kg		2RS	K	2RSK
65	140	33	61.750	24.225	4,085	4,750	2.0	2.540	1313	-	K	-
65	140	48	90.820	30.875	3,800	4,560	2.0	3.200	2313	-	K	-
70	125	24	32.775	13.015	4,750	5,700	1.5	1.300	1214	-	-	-
70	125	31	41.990	16.150	4,560	5,320	1.5	1.520	2214	2RS	-	-
70	150	35	70.395	26.125	3,800	4,560	2.0	3.190	1314	-	-	-
70	150	51	105.450	35.625	3,610	4,275	2.0	3.900	2314	-	-	-
75	130	25	37.050	14.820	4,560	5,320	1.5	1.410	1215	-	K	-
75	130	31	41.990	17.100	4,275	5,035	1.5	1.600	2215	-	K	-
75	160	37	75.335	28.500	3,610	4,275	2.0	3.650	1315	-	K	-
75	160	55	117.800	40.850	3,230	3,800	2.0	4.770	2315	-	K	-
80	140	26	37.715	16.150	4,275	5,035	2.0	1.730	1216	-	K	-
80	140	33	61.750	24.225	3,800	4,560	2.0	1.970	2216	-	K	-
80	170	39	83.980	31.825	3,420	4,085	2.0	4.310	1316	-	K	-
80	170	58	128.250	46.550	3,040	3,610	2.0	5.540	2316	-	K	-
85	150	28	46.360	19.760	3,800	4,560	2.0	2.090	1217	-	K	-
85	150	36	55.575	22.420	3,610	4,275	2.0	2.480	2217	-	K	-
85	180	41	92.625	36.100	3,230	3,800	2.5	5.130	1317	-	K	-
85	180	60	133.000	48.450	2,850	3,420	2.5	6.560	2317	-	K	-
90	160	30	54.340	22.420	3,610	4,275	2.0	2.550	1218	-	K	-
90	160	40	66.690	27.075	3,420	4,085	2.0	3.130	2218	-	K	-
90	190	43	111.150	41.800	3,040	3,610	2.5	5.940	1318	-	K	-
90	190	64	145.350	54.150	2,660	3,230	2.5	7.760	2318	-	K	-
95	170	32	60.515	25.650	3,420	4,085	2.0	3.210	1219	-	K	-
95	170	43	79.040	32.775	3,230	3,800	2.0	3.870	2219	-	K	-
95	200	45	126.350	48.450	2,850	3,420	2.5	6.840	1319	-	K	-
95	200	67	156.750	60.800	2,470	3,040	2.5	9.010	2319	-	K	-
100	180	34	65.455	28.500	3,230	3,800	2.0	3.820	1220	-	K	-
100	180	46	92.625	3.848	3,040	3,610	2.0	4.530	2220	-	K	-
100	215	47	135.850	54.150	2,660	3,230	2.5	8.460	1320	-	K	-
100	215	73	180.500	76.000	2,280	2,850	2.5	11.600	2320	-	K	-
105	190	36	70.395	30.875	3,040	3,610	2.0	4.520	1221	-	K	-
105	190	50	102.600	42.750	2,850	3,420	2.0	5.640	2221	-	K	-



Cylindrical bore



Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation			
			Dynamic	Static	Grease	Oil			Seal			
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	r_a max mm	kg		2RS	K	2RSK
110	200	38	83.980	37.050	2,850	3,420	2.0	5.330	1222	-	K	-
110	200	53	117.800	49.400	2,660	3,230	2.0	6.640	2222	-	K	-
110	240	50	154.850	68.400	2,280	2,850	2.5	12.000	1322	-	K	-
110	240	80	205.200	90.250	2,090	2,660	2.5	17.400	2322	-	K	-
120	215	42	113.050	50.350	2,660	3,230	2.0	6.750	1224	-	K	-
130	230	46	120.650	55.575	2,470	3,040	2.5	8.300	1226	-	-	-

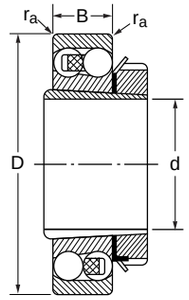
Prefix & Suffix

15	09	E

Suffix
"Blank": Metric series (mm)
E : Imperial series (inches)

Basic type series
15 : Standard

Bore size (mm)
2 digit < 13 : multiply by 5 - 5
2 digit > = 13 : multiply by 5 - 10



Basic Dimensions			Mass	Designation		
d mm	D mm	B mm	kg	Unit	Bearing Number	Sleeve
20	52	15	0.208	1505	1205 K	H 205
25	62	16	0.315	1506	1206 K	H 206
30	72	17	0.445	1507	1207 K	H 207
35	80	18	0.585	1508	1208 K	H 208
40	85	19	0.686	1509	1209 K	H 209
45	90	20	0.789	1510	1210 K	H 210
50	100	21	1.000	1511	1211 K	H 211
55	110	22	1.530	1512	1212 K	H 212
60	120	23	1.550	1513	1213 K	H 213
65	130	25	2.110	1515	1215 K	H 215
70	140	26	2.520	1516	1216 K	H 216

Self Aligning Ball Bearings with Adapter Sleeve - Inch Shaft

Prefix & Suffix

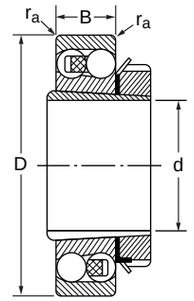
15	09	E

Suffix
"Blank": Metric series (mm)
E : Imperial series (inches)

Basic type series
15 : Standard

Bore size (mm)
2 digit < 13 : multiply by 5 - 5
2 digit > = 13 : multiply by 5 - 10

Self Aligning Ball Bearings with Adapter Sleeve - Inch Shaft



Basic Dimensions				Mass	Designation		
d		D	B		Unit	Bearing Number	Sleeve
inch	mm	mm	mm	kg			
0.75	19.05	52	15	0.208	1505 E	1205 K	HE 205
1	25.4	62	16	0.315	1506 E	1206 K	HE 206
1.25	31.75	80	18	0.585	1508 E	1208 K	HE 208
1.5	38.1	85	19	0.686	1509 E	1209 K	HE 209
1.75	44.45	90	20	0.789	1510 E	1210 K	HE 210
2	50.8	100	21	1.000	1511 E	1211 K	HE 211
2.25	57.15	120	23	1.550	1513 E	1213 K	HE 213
2.5	63.5	130	25	2.110	1515 E	1215 K	HE 215
2.75	69.85	140	26	2.520	1516 E	1216 K	HE 216

NIS™

Angular Contact Ball Bearings

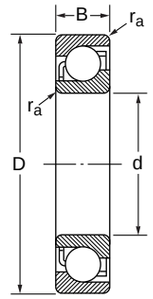
Prefix & Suffix

72	08	B

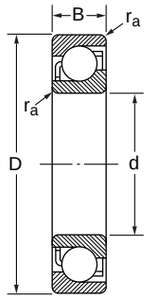
Basic type series
72 : Standard
73 : Medium

Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

Suffix
A : 30 degree contact angle
AC : 25 degree contact angle
B : 40 degree contact angle
C : 15 degree contact angle
TN : Injection moulded cage of polyamide
M : Machined brass cage



Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
10	30	9	6.669	3.183	18,050	26,600	0.6	0.030	7200 B
12	32	10	7.230	3.610	17,100	24,700	0.6	0.038	7201 B
12	37	12	10.070	4.750	16,150	22,800	1.0	0.062	7301 B
15	35	11	8.398	4.560	16,150	22,800	0.6	0.046	7202 B
15	42	13	12.350	6.365	14,250	19,000	1.0	0.086	7302 B
17	40	12	10.545	5.795	14,250	19,000	0.6	0.068	7203 B
17	47	14	15.105	7.885	12,350	17,100	1.0	0.118	7303 B
20	47	14	13.300	7.885	11,400	16,150	1.0	0.109	7204 B
20	52	15	18.050	9.880	10,450	15,200	1.0	0.150	7304 B
25	52	15	14.820	9.690	9,500	14,250	1.0	0.133	7205 B
25	62	17	24.700	14.820	8,550	12,350	1.0	0.241	7305 B
30	62	16	22.610	14.820	8,075	11,400	1.0	0.202	7206 B
30	72	19	32.775	20.140	7,600	10,450	1.0	0.354	7306 B
35	72	17	29.165	19.760	7,600	10,450	1.0	0.294	7207 B
35	80	21	37.050	23.275	7,125	9,500	1.5	0.474	7307 B
40	80	18	34.580	24.700	6,650	9,025	1.0	0.383	7208 B
40	90	23	46.930	31.825	6,365	8,550	1.5	0.648	7308 B
45	85	19	35.815	26.600	6,365	8,550	1.0	0.421	7209 B
45	100	25	57.475	39.425	5,700	7,600	1.5	0.869	7309 B
50	90	20	37.050	28.975	5,700	7,600	1.0	0.477	7210 B
50	110	27	70.395	48.450	5,035	6,650	2.0	1.120	7310 B
55	100	21	46.360	36.100	5,320	7,125	1.5	0.627	7211 B
55	120	29	80.940	57.000	4,560	5,985	2.0	1.450	7311 B
60	110	22	54.340	43.225	4,750	6,365	1.5	0.815	7212 B
60	130	31	90.820	66.025	4,275	5,700	2.0	1.780	7312 B
65	120	23	62.985	51.300	4,275	5,700	1.5	1.050	7213 B
65	140	33	102.600	76.000	4,085	5,320	2.0	2.170	7313 B
70	125	24	67.925	57.000	4,085	5,320	1.5	1.140	7214 B
70	150	35	113.050	85.500	3,610	4,750	2.0	2.650	7314 B
75	130	25	69.160	60.800	4,085	5,320	1.5	1.220	7215 B
75	160	37	126.350	100.700	3,420	4,560	2.0	3.190	7315 B
80	140	26	79.040	69.825	3,610	4,750	2.0	1.490	7216 B



Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
			Dynamic	Static	Grease	Oil			
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	r_a max mm	kg	
80	170	39	135.850	112.100	3,230	4,275	2.0	3.790	7316 B
85	150	28	90.820	78.850	3,420	4,560	2.0	1.870	7217 B
85	180	41	145.350	125.400	3,040	4,085	2.5	4.420	7317 B
90	160	30	102.600	91.675	3,230	4,275	2.0	2.290	7218 B
90	190	43	156.750	138.700	2,850	3,800	2.5	5.170	7318 B
95	170	32	117.800	102.600	3,040	4,085	2.0	2.740	7219 B
95	200	45	169.100	154.850	2,660	3,610	2.5	5.980	7319 B
100	180	34	128.250	115.900	2,850	3,800	2.0	3.280	7220 B
100	215	47	192.850	180.500	2,470	3,420	2.5	7.430	7320 B
105	190	36	140.600	130.150	2,660	3,610	2.0	3.920	7221 B
105	225	49	201.400	197.600	2,280	3,230	2.5	9.430	7321 B
110	200	38	154.850	145.350	2,470	3,420	2.0	4.580	7222 B
110	240	50	213.750	212.800	2,090	3,040	2.5	11.200	7322 B
120	215	40	156.750	154.850	2,090	3,040	2.0	6.260	7224 B
120	260	55	226.100	237.500	1,805	2,660	2.5	14.400	7324 B
130	230	40	176.700	183.350	1,805	2,660	2.5	7.100	7226 B
130	280	58	238.450	256.500	1,710	2,470	3.0	17.600	7326 B
140	250	42	172.900	186.200	1,710	2,470	2.5	8.940	7228 B

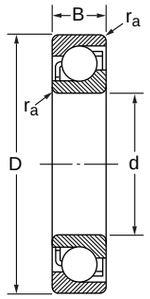
Prefix & Suffix

MJT | **5** | **M**

Basic type series
LJT : Standard
MJT : Medium

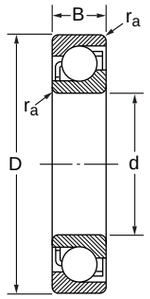
Bore size (inch)
The number represents the bore size in inches:
1/2 = 1/2"
1 = 1"
5 = 5"
etc.

Suffix
M : Machined brass cage



Basic Dimensions						Basic Load Ratings		Limiting Speed	
d		D		B		Dynamic C	Static C_0	Grease	Oil
inch	mm	inch	mm	inch	mm	kN	kN	r/min	r/min
0.3750	9.525	1.5000	38.100	0.5625	14.288	10.450	4.845	10,300	20,500
0.5000	12.700	1.3125	33.338	0.3750	9.525	7.790	3.553	10,600	21,000
0.5000	12.700	1.6250	41.275	0.6250	15.875	11.780	5.605	9,300	18,500
0.6250	15.875	1.5625	39.688	0.4375	11.113	11.590	5.605	9,100	18,000
0.6250	15.875	1.8125	46.038	0.6250	15.875	15.105	7.600	8,300	16,500
0.7500	19.050	1.8750	47.625	0.5625	14.288	15.105	7.600	7,800	15,500
0.7500	19.050	2.0000	50.800	0.6875	17.463	17.955	8.930	7,500	15,000
0.8750	22.225	2.0000	50.800	0.5625	14.288	16.055	8.265	7,200	14,400
0.8750	22.225	2.2500	57.150	0.6875	17.463	20.995	10.925	6,700	13,400
1.0000	25.400	2.2500	57.150	0.6250	15.875	24.035	12.825	6,500	12,900
1.0000	25.400	2.5000	63.500	0.7500	19.050	25.650	13.965	6,100	12,100
1.1250	28.575	2.5000	63.500	0.6250	15.875	24.035	12.920	5,900	11,700
1.1250	28.575	2.8125	71.438	0.8125	20.638	34.960	19.475	5,400	10,900
1.2500	31.750	2.7500	69.850	0.6875	17.463	25.840	13.965	5,400	10,700
1.2500	31.750	3.1250	79.375	0.8750	22.225	41.515	23.940	4,900	9,800
1.3750	34.925	3.0000	76.200	0.6875	17.463	35.150	20.235	4,900	9,800
1.3750	34.925	3.5000	88.900	0.8750	22.225	47.975	27.455	4,400	8,900
1.5000	38.100	3.2500	82.550	0.7500	19.050	39.520	22.990	4,500	9,100
1.5000	38.100	3.7500	95.250	0.9375	23.813	52.250	30.400	4,100	8,300
1.6250	41.275	3.5000	88.900	0.7500	19.050	41.515	24.700	4,200	8,400
1.6250	41.275	4.0000	101.600	0.9375	23.813	62.225	36.765	3,900	7,700
1.7500	44.450	3.7500	95.250	0.8125	20.638	48.925	29.070	3,900	7,900
1.7500	44.450	4.2500	107.950	1.0625	26.988	67.450	40.185	3,600	7,200
1.8750	47.625	4.0000	101.600	0.8125	20.638	53.675	33.535	3,600	7,200
1.8750	47.625	4.5000	114.300	1.0625	26.988	78.375	47.500	3,300	6,700
2.0000	50.800	4.0000	101.600	0.8125	20.638	53.675	33.535	3,600	7,200
2.0000	50.800	4.5000	114.300	1.0625	26.988	78.375	47.500	3,300	6,700
2.2500	57.150	4.5000	114.300	0.8750	22.225	62.225	38.665	3,200	6,400
2.2500	57.150	5.0000	127.000	1.2500	31.750	95.950	59.375	3,000	5,900
2.5000	63.500	5.0000	127.000	0.9375	23.813	76.950	50.350	2,900	5,700
2.5000	63.500	5.5000	139.700	1.2500	31.750	108.300	70.300	2,700	5,400
2.7500	69.850	5.2500	133.350	0.9375	23.813	80.275	53.675	2,700	5,400

Chamfer Dimension	Mass	Designation	Interchange
r_a max			
mm	kg		
0.8	0.091	MJT 3/8	-
0.8	0.045	LJT 1/2	-
0.8	0.113	MJT 1/2	-
0.8	0.059	LJT 5/8	ALS 5
0.8	0.141	MJT 5/8	-
1.6	0.127	LJT 3/4	ALS 6
1.6	0.186	MJT 3/4	AMS 6
1.6	0.145	LJT 7/8	ALS 7
1.6	0.236	MJT 7/8	AMS 7
1.6	0.204	LJT 1	ALS 8
2.4	0.313	MJT 1	AMS 8
1.6	0.249	LJT 1 1/8	ALS 9
2.4	0.422	MJT 1 1/8	AMS 9
1.6	0.336	LJT 1 1/4	ALS 10
2.4	0.553	MJT 1 1/4	AMS 10
1.6	0.408	LJT 1 3/8	ALS 11
2.4	0.726	MJT 1 3/8	AMS 11
2.4	0.499	LJT 1 1/2	ALS 12
2.4	0.885	MJT 1 1/2	AMS 12
2.4	0.594	LJT 1 5/8	ALS 13
2.4	1.010	MJT 1 5/8	AMS 13
2.4	0.726	LJT 1 3/4	ALS 14
2.4	1.290	MJT 1 3/4	AMS 14
2.4	0.835	LJT 1 7/8	ALS 15
2.4	1.460	MJT 1 7/8	AMS 15
2.4	0.807	LJT 2	ALS 16
2.4	1.410	MJT 2	AMS 16
2.4	1.090	LJT 2 1/4	ALS 18
3.2	2.000	MJT 2 1/4	AMS 18
2.4	1.430	LJT 2 1/2	ALS 20
3.2	2.440	MJT 2 1/2	AMS 20
2.4	1.540	LJT 2 3/4	ALS 22



Basic Dimensions						Basic Load Ratings		Limiting Speed	
d		D		B		Dynamic C	Static C_0	Grease	Oil
inch	mm	inch	mm	inch	mm	kN	kN	r/min	r/min
2.7500	69.850	6.2500	158.750	1.3750	34.925	137.750	91.675	2,400	4,700
3.0000	76.200	5.7500	146.050	1.0625	26.988	89.775	62.225	2,400	4,900
3.0000	76.200	7.0000	177.800	1.5625	39.688	162.450	115.900	2,100	4,200
3.2500	82.550	6.0000	152.400	1.0625	26.988	100.700	68.875	2,300	4,600
3.2500	82.550	7.5000	190.500	1.5625	39.688	171.000	125.400	1,900	3,800
3.3750	85.725	7.5000	190.500	1.5625	39.688	171.000	125.400	1,900	3,800
3.5000	88.900	6.5000	165.100	1.1250	28.575	108.300	77.425	2,100	4,200
3.5000	88.900	8.1250	206.375	1.7500	44.450	188.100	143.450	1,800	3,500
3.7500	95.250	6.7500	171.450	1.1250	28.575	115.900	84.075	2,000	4,000
3.7500	95.250	8.2500	209.550	1.7500	44.450	197.600	154.850	1,700	3,400
4.0000	101.600	7.2500	184.150	1.2500	31.750	133.000	97.850	1,800	3,700
4.0000	101.600	8.5000	215.900	1.7500	44.450	207.100	165.300	1,600	3,200
4.2500	107.950	7.5000	190.500	1.2500	31.750	141.550	104.500	1,700	3,500
4.2500	107.950	8.7500	222.250	1.7500	44.450	207.100	165.300	1,500	3,100
4.5000	114.300	8.0000	203.200	1.3125	33.338	154.850	117.800	1,600	3,200
4.5000	114.300	9.3750	238.125	2.0000	50.800	221.350	182.400	1,400	2,900
4.7500	120.650	8.2500	209.550	1.3125	33.338	159.600	124.450	1,500	3,100
4.7500	120.650	10.0000	254.000	2.0000	50.800	257.450	224.200	1,300	2,600
5.0000	127.000	9.0000	228.600	1.3750	34.925	178.600	141.550	1,400	2,800
5.0000	127.000	10.0000	254.000	2.0000	50.800	257.450	224.200	1,300	2,600
5.5000	139.700	9.5000	241.300	1.3750	34.925	194.750	159.600	1,300	2,600
5.5000	139.700	11.0000	279.400	2.0000	50.800	283.100	258.400	1,200	2,300
6.0000	152.400	10.5000	266.700	1.5625	39.688	216.600	188.100	1,200	2,300
6.0000	152.400	12.0000	304.800	2.2500	57.150	315.400	302.100	1,000	2,100
6.5000	165.100	11.0000	279.400	1.5625	39.688	221.350	196.650	1,100	2,200
6.5000	165.100	13.0000	330.200	2.5000	63.500	348.650	347.700	950	1,900

Chamfer Dimension	Mass	Designation	Interchange
r_a max			
mm	kg		
3.2	3.550	MJT 2 3/4	AMS 22
2.4	2.110	LJT 3	ALS 24
4.0	5.170	MJT 3	AMS 24
3.2	2.240	LJT 3 1/4	ALS 26
4.0	5.940	MJT 3 1/4	AMS 26
4.0	5.810	MJT 3 3/8	-
3.2	2.780	LJT 3 1/2	ALS 28
4.0	7.800	MJT 3 1/2	AMS 28
3.2	2.910	LJT 3 3/4	ALS 30
4.0	7.760	MJT 3 3/4	AMS 30
3.2	3.580	LJT 4E	ALS 32
4.0	8.120	MJT 4E	AMS 32
3.2	3.780	LJT 4 1/4	ALS 34
5.0	8.570	MJT 4 1/4	-
3.2	4.760	LJT 4 1/2	ALS 36
5.0	11.400	MJT 4 1/2	AMS 36
3.2	4.850	LJT 4 3/4	-
-	13.100	MJT 4 3/4	-
3.2	6.350	LJT 5E	ALS 40
-	12.800	MJT 5E	-
3.2	6.800	LJT 5 1/2	ALS 44
-	15.700	MJT 5 1/2	-
3.2	9.890	LJT 6E	ALS 48
-	20.900	MJT 6E	-
3.2	10.700	LJT 6 1/2	-
-	28.100	MJT 6 1/2	-

Prefix & Suffix

32	08	ATN

Basic type series

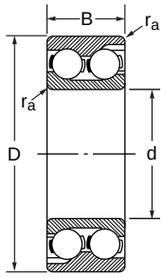
32 or 52 : Standard
33 or 53 : Medium

Bore size (mm)

00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multipy by 5

Suffix

A : No filling slots
N : Snap ring groove at outside of outer ring
NR : Snap ring groove with snap ring at outside of outer ring
TN : Injection moulded cage of polyamide
ZZ : Shields at both sides of the bearing
2RS : Seal at both sides of the bearing



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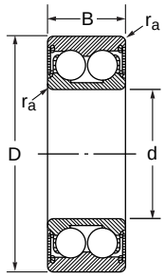
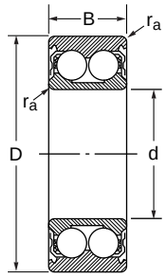
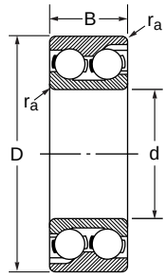


SEALS 2RS



SHIELDS - ZZ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation		
			Dynamic	Static	Grease	Oil			Open	Shields	Seals
d	D	B	C	C_0			r_a max			ZZ	2RS
mm	mm	mm	kN	kN	r/min	r/min	mm	kg			
10	30	14	7.040	4.085	15,200	20,900	0.6	0.051	3200 ATN	ZZ	2RS
12	32	15.9	9.595	5.320	14,250	19,000	0.6	0.058	3201 ATN	ZZ	2RS
15	35	15.9	10.640	6.460	11,400	16,150	0.6	0.066	3202 ATN	ZZ	2RS
15	42	19	14.345	8.693	9,500	14,250	1.0	0.130	3302 ATN	ZZ	2RS
17	40	17.5	13.300	8.218	9,500	14,250	0.6	0.100	3203 ATN	ZZ	2RS
17	47	22.2	20.140	11.875	9,025	13,300	1.0	0.180	3303 ATN	ZZ	2RS
20	47	20.6	17.670	11.400	8,550	12,350	1.0	0.160	3204 ATN	ZZ	2RS
20	52	22.2	20.995	13.585	8,075	11,400	1.0	0.220	3304 ATN	ZZ	2RS
25	52	20.6	19.285	13.300	7,600	10,450	1.0	0.180	3205 ATN	ZZ	2RS
25	62	25.4	29.640	19.760	7,125	9,500	1.0	0.350	3305 ATN	ZZ	2RS
30	62	23.8	26.695	19.000	6,650	9,025	1.0	0.290	3206 ATN	ZZ	2RS
30	72	30.2	43.415	40.375	5,985	8,075	1.0	0.530	3306 ATN	ZZ	2RS
35	72	27	35.245	26.125	5,700	7,600	1.0	0.440	3207 ATN	ZZ	2RS
35	80	34.9	51.205	48.450	5,320	7,125	1.5	0.730	3307 ATN	ZZ	2RS
40	80	30.2	42.655	31.825	5,320	7,125	1.0	0.580	3208 ATN	ZZ	2RS
40	90	36.5	56.240	40.850	4,750	6,365	1.5	0.950	3308 ATN	ZZ	2RS
45	85	30.2	45.125	36.100	4,750	6,365	1.0	0.630	3209 ATN	ZZ	2RS
45	100	39.7	68.495	69.825	4,275	5,700	1.5	1.400	3309 ATN	ZZ	2RS
50	90	30.2	45.125	37.050	4,560	5,985	1.0	0.660	3210 ATN	ZZ	2RS
50	110	44.4	83.600	91.675	3,800	5,035	2.0	1.950	3310 ATN	-	-
55	100	33.3	54.340	63.650	4,085	5,320	1.5	1.050	3211 ATN	-	-
55	120	49.2	90.440	102.600	3,610	4,750	2.0	2.550	3311 ATN	-	-
60	110	36.5	68.495	80.750	3,610	4,750	1.5	1.400	3212 ATN	-	-
60	130	54	106.400	120.650	3,230	4,275	2.0	3.250	3312 ATN	-	-
65	120	38.1	74.195	90.250	3,420	4,560	1.5	1.750	3213 ATN	-	-
65	140	58.7	121.600	142.500	3,040	4,085	2.0	4.100	3313 ATN	-	-
70	125	39.7	72.675	93.100	3,040	4,085	1.5	1.900	3214 ATN	-	-
70	150	63.5	139.650	164.350	2,660	3,610	2.0	5.050	3314 ATN	-	-
75	130	41.3	79.990	104.500	3,040	4,085	1.5	2.100	3215 ATN	-	-
75	160	68.3	149.150	176.700	2,470	3,420	2.0	6.150	3315 ATN	-	-
80	140	44.4	95.950	127.300	2,660	3,610	2.0	2.650	3216 ATN	-	-
80	170	68.3	167.200	201.400	2,280	3,230	2.0	6.950	3316 ATN	-	-



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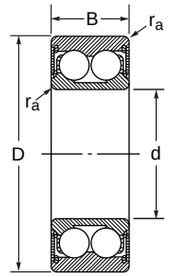
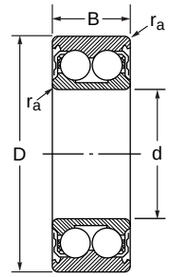


SEALS 2RS



SHIELDS - ZZ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation		
			Dynamic	Static	Grease	Oil			Open	Shields	Seals
d	D	B	C	C_0			r_a max			ZZ	2RS
mm	mm	mm	kN	kN	r/min	r/min	mm	kg			
85	150	49.2	104.500	138.700	2,470	3,420	2.0	3.400	3217 ATN	-	-
85	180	73	184.300	228.000	2,090	3,040	2.5	8.300	3317 ATN	-	-
90	160	52.4	121.600	164.350	2,280	3,230	2.0	4.150	3218 ATN	-	-
90	190	73	209.000	270.750	1,900	2,850	2.5	9.250	3318 ATN	-	-
95	170	55.6	139.650	193.800	2,090	3,040	2.0	5.000	3219 ATN	-	-
95	200	77.8	226.100	299.250	1,805	2,660	2.5	11.000	3319 ATN	-	-
100	180	60.3	149.150	209.000	1,900	2,850	2.0	6.100	3220 ATN	-	-
100	215	82.6	242.250	337.250	1,710	2,470	2.5	13.500	3320 ATN	-	-
110	200	69.8	180.500	256.50	1,805	2,660	2.0	8.800	3222 ATN	-	-
110	240	92.1	277.400	403.75	1,615	2,280	2.5	19.000	3322 ATN	-	-

Prefix & Suffix

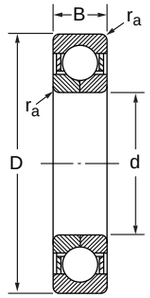
QJ	3	08	M

Prefix
QJ : 4-point angular contact

Basic type series
2 : Standard
3 : Medium

Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100: multiply by 5

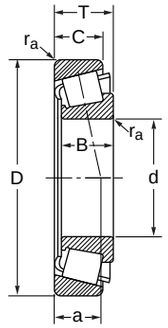
Suffix
M : Machined brass cage



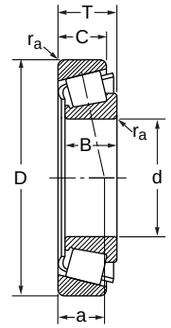
Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
17	40	12	15.105	10.070	13,300	18,050	0.6	0.082	QJ 203
17	47	14	22.230	14.250	11,400	16,150	1.0	0.140	QJ 303
20	52	15	28.120	19.000	9,500	14,250	1.0	0.180	QJ 304
25	52	15	23.845	19.000	9,025	13,300	1.0	0.160	QJ 205
30	62	16	33.345	27.075	8,075	11,400	1.0	0.240	QJ 206
30	72	19	46.930	37.050	7,125	9,500	1.0	0.420	QJ 306
35	72	17	43.890	37.050	7,125	9,500	1.0	0.350	QJ 207
35	80	21	56.240	44.175	6,650	9,025	1.5	0.570	QJ 307
40	80	18	50.065	42.750	6,365	8,550	1.0	0.450	QJ 208
40	90	23	67.925	55.575	5,985	8,075	1.5	0.780	QJ 308
45	85	19	55.575	48.450	5,985	8,075	1.0	0.520	QJ 209
45	100	25	88.920	72.675	5,320	7,125	1.5	1.050	QJ 309
50	90	20	58.710	53.200	5,320	7,125	1.0	0.590	QJ 210
50	110	27	105.450	86.925	4,750	6,365	2.0	1.350	QJ 310
55	100	21	75.335	72.675	5,035	6,650	1.5	0.770	QJ 211
55	120	29	120.650	102.600	4,275	5,700	2.0	1.750	QJ 311
60	110	22	87.685	82.175	4,560	5,985	1.5	0.990	QJ 212
60	130	31	138.700	118.750	4,085	5,320	2.0	2.150	QJ 312
65	120	23	98.800	98.800	4,085	5,320	1.5	1.200	QJ 213
65	140	33	156.750	138.700	3,800	5,035	2.0	2.700	QJ 313
70	125	24	108.300	108.300	4,085	5,320	1.5	1.300	QJ 214
70	150	35	176.700	157.700	3,420	4,560	2.0	3.150	QJ 314
75	130	25	111.150	115.900	3,800	5,035	1.5	1.450	QJ 215
80	140	26	131.100	138.700	3,420	4,560	2.0	1.850	QJ 216
85	150	28	140.600	152.000	3,230	4,275	2.0	2.250	QJ 217

NIS™

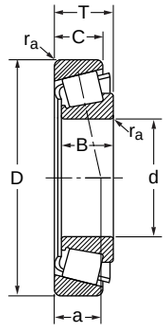
Taper Roller Bearings



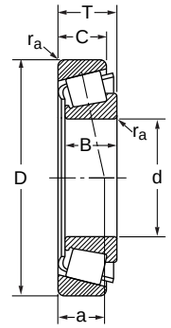
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
15	35	11.75	11	10	14.060	12.540	10,450	14,250	0.6	0.6	0.053	30202
15	42	14.25	13	11	22.420	20.045	9,025	12,350	1.0	1.0	0.098	30302
17	40	13.25	12	11	19.095	18.905	9,025	12,350	1.0	1.0	0.079	30203
17	40	17.25	16	14	21.565	22.135	9,025	12,350	1.0	1.0	0.103	32203
17	47	15.25	14	12	27.740	25.365	8,075	11,400	1.0	1.0	0.134	30303
20	42	15	15	12	23.370	26.030	8,550	11,400	0.6	0.6	0.097	32004 X
20	47	15.25	14	12	26.505	27.075	7,600	10,450	1.0	1.0	0.127	30204
20	47	19.25	18	15	28.025	28.975	8,075	10,450	1.0	1.0	0.161	32204 X
20	52	16.25	15	13	33.250	31.825	7,125	9,500	1.0	1.0	0.172	30304
20	52	22.25	21	18	43.225	45.125	7,600	10,450	1.0	1.0	0.241	32304
22	44	15	15	11.5	24.320	27.930	8,075	10,450	0.6	0.6	0.103	320/22 X
22	50	15.25	14	12	28.500	30.400	7,125	9,500	1.0	1.0	0.139	302/22
22	50	19.25	18	15	34.675	38.475	7,125	10,450	1.0	1.0	0.180	322/22
22	56	17.25	16	14	31.350	29.925	6,745	9,025	1.0	1.0	0.203	303/22
25	47	15	15	11.5	26.030	31.350	7,600	10,450	0.6	0.6	0.116	32005 X
25	47	17	17	14	29.450	36.100	7,600	10,450	0.6	0.6	0.131	33005
25	52	16.25	15	13	30.400	33.250	6,745	9,500	1.0	1.0	0.157	30205
25	52	19.25	18	15	36.575	41.325	7,125	9,500	1.0	1.0	0.189	32205
25	52	22	22	18	45.125	53.675	7,125	9,500	1.0	1.0	0.221	33205
25	62	18.25	17	13	29.925	29.450	5,700	7,600	1.5	1.5	0.265	30305 D
25	62	18.25	17	15	45.125	43.700	5,985	8,075	1.5	1.5	0.270	30305
25	62	25.25	24	20	59.375	62.700	5,985	8,075	1.5	1.5	0.376	32305
28	52	16	16	12	30.400	37.050	6,745	9,025	1.0	1.0	0.146	320/28 X
28	58	17.25	16	14	37.525	39.425	5,985	8,550	1.0	1.0	0.203	302/28
28	58	20.25	19	16	45.125	51.300	5,985	8,550	1.0	1.0	0.243	322/28
28	68	19.75	18	15	52.250	52.725	5,700	7,600	1.5	1.5	0.341	303/28
30	55	17	17	13	34.200	42.275	6,365	8,550	1.0	1.0	0.172	32006 X
30	55	20	20	16	39.900	51.300	6,365	8,550	1.0	1.0	0.208	33006
30	62	17.25	16	14	40.850	45.125	5,700	7,600	1.0	1.0	0.238	30206
30	62	21.25	20	17	49.400	57.000	5,700	8,075	1.0	1.0	0.297	32206
30	62	25	25	19.5	63.175	75.525	5,700	7,600	1.0	1.0	0.355	33206
30	72	20.75	19	14	39.425	39.900	4,750	6,745	1.0	1.0	0.378	30306 D



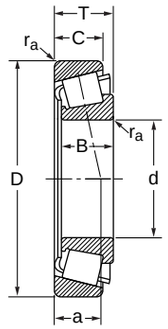
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
30	72	20.75	19	16	56.525	57.000	5,035	7,125	1.5	1.5	0.403	30306
30	72	28.75	27	23	76.000	84.075	5,320	7,125	1.5	1.5	0.570	32306
32	58	17	17	13	35.625	44.650	5,985	8,075	1.0	1.0	0.191	320/32 X
32	65	18.25	17	15	46.075	51.300	5,320	7,600	1.0	1.0	0.277	302/32
32	65	22.25	21	18	53.200	61.750	5,700	7,600	1.0	1.0	0.336	322/32
32	75	21.75	20	17	61.750	66.025	5,035	6,745	1.5	1.5	0.435	303/32
35	55	14	14	11.5	26.030	37.050	5,985	8,075	0.6	0.6	0.123	32907
35	62	18	18	14	41.325	52.725	5,320	7,600	1.0	1.0	0.230	32007 X
35	62	21	21	17	46.550	61.750	5,320	7,600	1.0	1.0	0.267	33007
35	72	18.25	17	15	51.300	56.525	5,035	6,745	1.5	1.5	0.340	30207
35	72	24.25	23	19	66.975	79.325	5,035	6,745	1.5	1.5	0.456	32207
35	72	28	28	22	82.175	102.600	5,035	6,745	1.5	1.5	0.540	33207
35	80	22.75	21	15	58.900	64.600	4,085	5,700	2.0	1.5	0.520	30307 D
35	80	22.75	21	18	72.200	75.050	4,560	6,365	2.0	1.5	0.538	30307
35	80	32.75	31	25	94.050	105.450	4,750	6,365	2.0	1.5	0.765	32307
40	62	15	15	12	32.300	44.650	5,320	7,125	0.6	0.6	0.161	32908
40	68	19	19	14.5	49.875	67.450	5,035	6,745	1.0	1.0	0.280	32008 X
40	68	22	22	18	56.050	77.425	5,035	6,745	1.0	1.0	0.322	33008
40	80	19.75	18	16	60.325	66.500	4,560	5,985	1.5	1.5	0.438	30208
40	80	24.75	23	19	73.150	85.975	4,560	5,985	1.5	1.5	0.549	32208
40	80	32	32	25	101.650	130.150	4,560	5,985	1.5	1.5	0.744	33208
40	90	25.25	23	17	76.000	85.025	3,610	5,035	2.0	1.5	0.728	30308 D
40	90	25.25	23	20	85.975	95.950	4,085	5,320	2.0	1.5	0.758	30308
40	90	35.25	33	27	114.000	137.750	4,085	5,700	2.0	1.5	1.050	32308
45	68	15	15	12	32.775	47.975	4,750	6,365	0.6	0.6	0.187	32909
45	75	20	20	15.5	57.000	78.850	4,275	5,985	1.0	1.0	0.354	32009 X
45	75	24	24	19	63.650	89.775	4,560	5,985	1.0	1.0	0.414	33009
45	80	26	26	20.5	79.800	107.350	4,275	5,700	1.5	1.5	0.552	33109
45	85	20.75	19	16	65.075	75.525	4,085	5,700	1.5	1.5	0.488	30209
45	85	24.75	23	19	78.850	96.900	4,085	5,700	1.5	1.5	0.602	32209
45	85	32	32	25	105.450	139.650	4,085	5,700	1.5	1.5	0.817	33209
45	100	27.25	25	18	90.725	103.550	3,230	4,560	2.0	1.5	0.956	30309 D



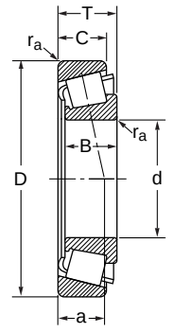
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
45	100	27.25	25	22	106.400	120.650	3,610	5,035	2.0	1.5	1.010	30309
45	100	38.25	36	30	136.800	168.150	3,610	5,035	2.0	1.5	1.420	32309
50	72	15	15	12	34.200	51.300	4,275	5,985	0.6	0.6	0.193	32910
50	80	20	20	15.5	57.950	82.650	4,085	5,700	1.0	1.0	0.380	32010 X
50	80	24	24	19	66.975	98.800	4,085	5,700	1.0	1.0	0.452	33010
50	85	26	26	20	84.550	119.700	4,085	5,320	1.5	1.5	0.597	33110
50	90	21.75	20	17	72.200	86.925	3,800	5,035	1.5	1.5	0.558	30210
50	90	24.75	23	19	83.125	103.550	3,800	5,035	1.5	1.5	0.644	32210
50	90	32	32	24.5	112.100	156.750	3,800	5,035	1.5	1.5	0.867	33210
50	110	29.25	27	19	108.300	125.400	3,040	4,085	2.0	2.0	1.260	30310 D
50	110	29.25	27	23	123.500	140.600	3,230	4,560	2.0	2.0	1.280	30310
50	110	42.25	40	33	167.200	209.000	3,420	4,560	2.0	2.0	1.880	32310
55	80	17	17	14	43.225	70.775	4,085	5,320	1.0	1.0	0.282	32911
55	90	23	23	17.5	77.425	111.150	3,610	5,035	1.5	1.5	0.568	32011 X
55	90	27	27	21	86.925	131.100	3,610	5,035	1.5	1.5	0.657	33011
55	95	30	30	23	106.400	150.100	3,610	4,750	1.5	1.5	0.877	33111
55	100	22.75	21	18	89.775	107.350	3,420	4,750	2.0	1.5	0.736	30211
55	100	26.75	25	21	104.500	130.150	3,420	4,750	2.0	1.5	0.860	32211
55	100	35	35	27	133.950	183.350	3,420	4,750	2.0	1.5	1.180	33211
55	120	31.5	29	21	124.450	145.350	2,660	3,800	2.0	2.0	1.580	30311 D
55	120	31.5	29	25	142.500	162.450	3,040	4,085	2.0	2.0	1.630	30311
55	120	45.5	43	35	193.800	245.100	3,040	4,085	2.0	2.0	2.390	32311
60	85	17	17	14	46.550	80.275	3,610	5,035	1.0	1.0	0.306	32912
60	95	23	23	17.5	81.225	120.650	3,420	4,750	1.5	1.5	0.608	32012 X
60	95	27	27	21	91.200	142.500	3,420	4,750	1.5	1.5	0.713	33012
60	100	30	30	23	109.250	157.700	3,230	4,560	1.5	1.5	0.910	33112
60	110	23.75	22	19	98.800	116.850	3,230	4,275	2.0	1.5	0.930	30212
60	110	29.75	28	24	124.450	158.650	3,230	4,275	2.0	1.5	1.180	32212
60	110	38	38	29	157.700	219.450	3,230	4,275	2.0	1.5	1.560	33212
60	130	33.5	31	22	143.450	168.150	2,470	3,610	2.5	2.0	1.980	30312 D
60	130	33.5	31	26	165.300	190.950	2,850	3,800	2.5	2.0	2.030	30312
60	130	48.5	46	37	221.350	280.250	2,850	3,800	2.5	2.0	2.960	32312



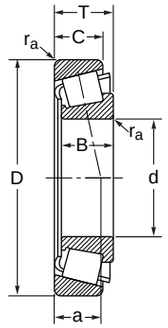
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
65	90	17	17	14	46.550	82.175	3,420	4,750	1.0	1.0	0.323	32913
65	100	23	23	17.5	82.175	125.400	3,230	4,275	1.5	1.5	0.646	32013 X
65	100	27	27	21	92.625	148.200	3,230	4,275	1.5	1.5	0.760	33013
65	110	34	34	26.5	140.600	207.100	3,040	4,085	1.5	1.5	1.320	33113
65	120	24.75	23	20	115.900	143.450	2,850	3,800	2.0	1.5	1.180	30213
65	120	32.75	31	27	149.150	191.900	2,850	3,800	2.0	1.5	1.550	32213
65	120	41	41	32	191.900	267.900	2,850	3,800	2.0	1.5	2.040	33213
65	140	36	33	23	164.350	194.750	2,280	3,230	2.5	2.0	2.430	30313 D
65	140	36	33	28	190.000	221.350	2,470	3,420	2.5	2.0	2.510	30313
65	140	51	48	39	253.650	323.000	2,660	3,610	2.5	2.0	3.600	32313
70	100	20	20	16	66.500	107.350	3,040	4,275	1.0	1.0	0.494	32914
70	110	25	25	19	98.800	150.100	3,040	4,085	1.5	1.5	0.869	32014 X
70	110	31	31	25.5	120.650	193.800	2,850	4,085	1.5	1.5	1.110	33014
70	120	37	37	29	168.150	248.900	2,850	3,800	2.0	1.5	1.710	33114
70	125	26.25	24	21	125.400	154.850	2,660	3,800	2.0	1.5	1.300	30214
70	125	33.25	31	27	149.150	194.750	2,660	3,800	2.0	1.5	1.660	32214
70	125	41	41	32	198.550	284.050	2,660	3,800	2.0	1.5	2.150	33214
70	150	38	35	25	182.400	217.550	2,090	3,040	2.5	2.0	2.940	30314 D
70	150	38	35	30	215.650	254.600	2,280	3,230	2.5	2.0	3.030	30314
70	150	54	51	42	285.000	370.500	2,470	3,230	2.5	2.0	4.350	32314
75	105	20	20	16	68.875	114.000	3,040	4,085	1.0	1.0	0.530	32915
75	115	25	25	19	103.550	162.450	2,850	3,800	1.5	1.5	0.925	32015 X
75	115	31	31	25.5	126.350	209.000	2,850	3,800	1.5	1.5	1.180	33015
75	125	37	37	29	172.900	261.250	2,660	3,610	2.0	2.0	1.800	33115
75	130	27.25	25	22	135.850	172.900	2,660	3,610	2.0	1.5	1.430	30215
75	130	33.25	31	27	156.750	208.050	2,660	3,610	2.0	1.5	1.720	32215
75	130	41	41	31	204.250	299.250	2,660	3,610	2.0	1.5	2.250	33215
75	160	40	37	26	200.450	238.450	2,090	2,850	2.5	2.0	3.470	30315 D
75	160	40	37	31	240.350	285.000	2,280	3,040	2.5	2.0	3.630	30315
75	160	58	55	45	323.000	422.750	2,280	3,040	2.5	2.0	5.310	32315
80	110	20	20	16	71.250	121.600	2,850	3,800	1.0	1.0	0.560	32916
80	125	29	29	22	133.000	210.900	2,660	3,420	1.5	1.5	1.320	32016 X



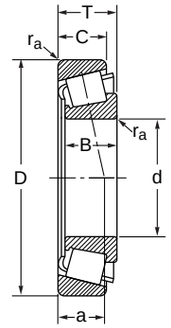
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
80	130	37	37	29	176.700	274.550	2,470	3,420	2.0	1.5	1.880	33116
80	140	28.25	26	22	149.150	185.250	2,470	3,230	2.0	2.0	1.690	30216
80	140	35.25	33	28	182.400	241.300	2,470	3,230	2.0	2.0	2.130	32216
80	140	46	46	35	243.200	365.750	2,470	3,230	2.0	2.0	2.930	33216
80	170	42.5	39	27	223.250	268.850	1,900	2,660	2.5	2.0	4.070	30316 D
80	170	42.5	39	33	262.200	313.500	2,090	2,850	2.5	2.0	4.270	30316
80	170	61.5	58	48	365.750	479.750	2,090	2,850	2.5	2.0	6.350	32316
85	120	23	23	18	88.825	149.150	2,660	3,610	1.5	1.5	0.800	32917
85	130	29	29	22	135.850	219.450	2,470	3,420	1.5	1.5	1.380	32017 X
85	140	41	41	32	218.500	346.750	2,280	3,230	2.0	2.0	2.510	33117
85	150	30.5	28	24	174.800	221.350	2,280	3,040	2.0	2.0	2.120	30217
85	150	38.5	36	30	199.500	263.150	2,280	3,040	2.0	2.0	2.640	32217
85	150	49	49	37	266.950	394.250	2,280	3,040	2.0	2.0	3.570	33217
85	180	44.5	41	28	247.950	299.250	1,805	2,470	3.0	2.5	4.880	31317
85	180	44.5	41	28	247.950	299.250	1,805	2,470	3.0	2.5	4.880	30317 D
85	180	44.5	41	34	294.500	356.250	1,900	2,660	3.0	2.5	5.080	30317
85	180	63.5	60	49	389.500	508.250	1,900	2,660	3.0	2.5	7.310	32317
90	125	23	23	18	92.150	158.650	2,470	3,420	1.5	1.5	0.841	32918
90	140	32	32	24	161.500	259.350	2,280	3,040	2.0	1.5	1.780	32018 X
90	150	45	45	35	246.050	384.750	2,280	3,040	2.0	2.0	3.140	33118
90	160	32.5	30	26	190.950	243.200	2,090	2,850	2.0	2.0	2.600	30218
90	160	42.5	40	34	243.200	332.500	2,090	2,850	2.0	2.0	3.410	32218
90	190	46.5	43	30	237.500	277.400	1,710	2,280	3.0	2.5	5.400	30318 D
90	190	46.5	43	30	250.800	299.250	1,710	2,280	3.0	2.5	5.520	31318
90	190	46.5	43	36	289.750	342.000	1,805	2,470	3.0	2.5	5.670	30318
90	190	67.5	64	53	427.500	560.500	1,900	2,470	3.0	2.5	8.600	32318
95	130	23	23	18	93.100	163.400	2,280	3,230	1.5	1.5	0.877	32919
95	145	32	32	24	164.350	268.850	2,280	3,040	2.0	1.5	1.880	32019 X
95	170	34.5	32	27	211.850	271.700	2,090	2,660	2.5	2.0	3.130	30219
95	170	45.5	43	37	274.550	380.000	2,090	2,660	2.5	2.0	4.220	32219
95	200	49.5	45	32	294.500	356.250	1,615	2,280	3.0	2.5	6.640	30319 D
95	200	49.5	45	38	318.250	380.000	1,805	2,470	3.0	2.5	6.550	30319



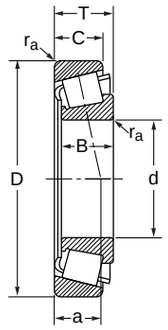
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
95	200	71.5	67	55	437.000	570.000	1,805	2,470	3.0	2.5	9.650	32319
100	140	25	25	20	111.150	194.750	2,090	3,040	1.5	1.5	1.180	32920
100	150	32	32	24	167.200	279.300	2,090	2,850	2.0	1.5	1.950	32020 X
100	180	37	34	29	242.250	313.500	1,900	2,470	2.5	2.0	3.780	30220
100	180	49	46	39	308.750	427.500	1,900	2,470	2.5	2.0	5.050	32220
100	215	51.5	47	39	346.750	413.250	1,615	2,280	3.0	2.5	7.940	30320
100	215	77.5	73	60	536.750	717.250	1,615	2,280	3.0	2.5	12.700	32320
105	145	25	25	20	113.050	201.400	2,090	2,850	1.5	1.5	1.230	32921
105	160	35	35	26	193.800	323.000	1,900	2,660	2.0	2.0	2.480	32021 X
105	190	39	36	30	266.000	346.750	1,805	2,470	2.5	2.0	4.520	30221
105	190	53	50	43	342.000	484.500	1,805	2,470	2.5	2.0	6.260	32221
105	225	53.5	49	41	375.250	446.500	1,520	2,090	3.0	2.5	9.110	30321
105	225	81.5	77	63	555.750	741.000	1,615	2,090	3.0	2.5	14.200	32321
110	150	25	25	20	116.850	212.800	2,090	2,660	1.5	1.5	1.290	32922
110	170	38	38	29	224.200	370.500	1,900	2,470	2.0	2.0	3.090	32022 X
110	200	41	38	32	299.250	399.000	1,710	2,280	2.5	2.0	5.280	30222
110	200	56	53	46	380.000	536.750	1,710	2,280	2.5	2.0	7.350	32222
110	240	54.5	50	42	460.750	565.250	1,425	1,900	3.0	2.5	11.000	30322
110	240	84.5	80	65	641.250	864.500	1,425	1,900	3.0	2.5	17.100	32322
120	165	29	29	23	149.150	268.850	1,805	2,470	1.5	1.5	1.800	32924
120	180	38	38	29	229.900	384.750	1,710	2,280	2.0	2.0	3.270	32024 X
120	215	43.5	40	34	318.250	427.500	1,520	2,090	2.5	2.0	6.280	30224
120	215	61.5	58	50	418.000	603.250	1,520	2,090	2.5	2.0	9.000	32224
120	260	59.5	55	46	508.250	622.250	1,330	1,805	3.0	2.5	13.900	30324
120	260	90.5	86	69	731.500	1007.000	1,330	1,805	3.0	2.5	21.800	32324
130	180	32	30	26	158.650	266.950	1,710	2,280	2.0	1.5	2.250	32926
130	200	45	45	34	304.000	508.250	1,520	2,090	2.0	2.0	5.060	32026 X
130	230	43.75	40	34	313.500	413.250	1,425	1,900	3.0	2.5	6.830	30226
130	230	67.75	64	54	503.500	750.500	1,425	1,900	3.0	2.5	11.300	32226
130	280	63.75	58	49	517.750	641.250	1,235	1,710	4.0	3.0	16.600	30326
130	280	98.75	93	78	788.500	1092.500	1,235	1,710	4.0	3.0	26.600	32326
140	190	32	30	26	164.350	285.000	1,615	2,090	2.0	1.5	2.390	32928



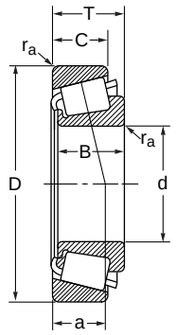
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
140	210	45	45	34	308.750	527.250	1,520	2,090	2.0	2.0	5.320	32028 X
140	250	45.75	42	36	370.500	489.250	1,330	1,805	3.0	2.5	8.740	30228
140	250	71.75	68	58	579.500	869.250	1,330	1,805	3.0	2.5	14.300	32228
140	300	67.75	62	53	570.000	703.000	1,140	1,520	4.0	3.0	21.100	30328
140	300	107.75	102	85	935.750	1368.000	1,140	1,520	4.0	3.0	33.900	32328
150	210	38	36	31	234.650	418.000	1,425	1,900	2.0	2.0	4.050	32930
150	225	48	48	36	356.250	617.500	1,330	1,900	2.5	2.0	6.600	32030 X
150	270	49	45	38	413.250	541.500	1,235	1,615	3.0	2.5	11.200	30230
150	270	77	73	60	565.250	855.000	1,235	1,615	3.0	2.5	17.800	32230
150	320	72	65	55	655.500	817.000	1,045	1,425	4.0	3.0	25.000	30330
150	320	114	108	90	1064.000	1615.000	1,045	1,425	4.0	3.0	41.400	32330
160	220	38	36	31	237.500	432.250	1,330	1,805	2.0	2.0	4.320	32932
160	240	51	51	38	403.750	712.500	1,235	1,710	2.5	2.0	7.930	32032 X
160	290	52	48	40	446.500	579.500	1,140	1,520	3.0	2.5	13.700	30232
160	290	84	80	67	688.750	1064.000	1,140	1,520	3.0	2.5	22.700	32232
160	340	75	68	58	726.750	912.000	950	1,330	4.0	3.0	29.200	30332
160	340	121	114	95	1149.500	1681.500	950	1,330	4.0	3.0	48.300	32332
170	230	38	36	31	245.100	460.750	1,235	1,710	2.0	2.0	4.300	32934
170	260	57	57	43	479.750	845.500	1,140	1,615	2.5	2.0	10.600	32034 X
170	310	57	52	43	498.750	655.500	1,045	1,425	4.0	3.0	16.100	30234
170	310	91	86	71	793.250	1254.000	1,045	1,425	4.0	3.0	27.600	32234
170	360	80	72	62	802.750	1026.000	903	1,235	4.0	3.0	33.500	30334
170	360	127	120	100	1301.500	1947.500	950	1,235	4.0	3.0	57.000	32334
180	250	45	42	36	294.500	541.500	1,140	1,615	2.0	2.0	6.220	32936
180	280	64	64	48	608.000	1073.500	1,140	1,520	2.5	2.0	14.300	32036 X
180	320	57	52	43	494.000	660.250	1,045	1,330	4.0	3.0	16.600	30236
180	320	91	86	71	831.250	1311.000	950	1,330	4.0	3.0	28.500	32236
180	380	83	75	64	888.250	1168.500	855	1,235	4.0	3.0	39.300	30336
180	380	134	126	106	1444.000	2175.500	903	1,235	4.0	3.0	66.800	32336
190	260	45	42	36	318.250	612.750	1,140	1,520	2.0	2.0	6.590	32938
190	290	64	64	48	617.500	1111.500	1,045	1,425	2.5	2.0	14.900	32038 X
190	340	60	55	46	551.000	750.500	950	1,235	4.0	3.0	20.100	30238



Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil	Cone r_a max	Cup r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
190	340	97	92	75	931.000	1472.500	950	1,235	4.0	3.0	34.100	32238
190	400	86	78	65	959.500	1273.000	808	1,140	5.0	4.0	46.000	30338
190	400	140	132	109	1577.000	2451.000	808	1,140	5.0	4.0	78.900	32338
200	280	51	48	41	389.500	741.000	1,045	1,425	2.5	2.0	9.260	32940
200	310	70	70	53	722.000	1301.500	950	1,330	2.5	2.0	18.900	32040 X
200	360	64	58	48	612.750	845.500	855	1,235	4.0	3.0	23.800	30240
200	360	104	98	82	1035.500	1662.500	903	1,235	4.0	3.0	42.000	32240
200	420	89	80	67	978.500	1320.500	808	1,140	5.0	4.0	52.300	30340
200	420	146	138	115	1729.000	2726.500	760	1,045	5.0	4.0	90.950	32340
220	300	51	48	41	403.750	812.250	950	1,330	2.5	2.0	10.100	32944
220	340	76	76	57	840.750	1529.500	903	1,235	3.0	2.5	24.400	32044 X
220	400	72	65	54	769.500	1092.500	808	1,045	4.0	3.0	33.600	30244
220	400	114	108	90	1273.000	2099.500	808	1,045	4.0	3.0	57.400	32244
220	460	97	88	73	1358.500	1890.500	713	950	5.0	4.0	72.400	30344
220	460	154	145	122	1919.000	3040.000	713	950	5.0	4.0	114.000	32344
240	320	51	48	41	413.250	859.750	903	1,235	2.5	2.0	10.700	32948
240	360	76	76	57	874.000	1643.500	808	1,140	3.0	2.5	26.200	32048 X
240	440	79	72	60	940.500	1330.000	713	950	4.0	3.0	45.200	30248
240	440	127	120	100	1548.500	2593.500	713	950	4.0	3.0	78.000	32248
240	500	105	95	80	1577.000	2223.000	637	903	5.0	4.0	92.600	30348
240	500	165	155	132	2394.000	3895.000	637	855	5.0	4.0	145.000	32348
260	360	63.5	60	52	598.500	1197.000	808	1,045	2.5	2.0	18.100	32952
260	400	87	87	65	1102.000	2052.000	760	1,045	4.0	3.0	38.500	32052 X
260	480	89	80	67	1130.500	1615.000	637	855	5.0	4.0	60.700	30252
260	480	137	130	106	1805.000	3135.000	637	903	5.0	4.0	103.000	32252
280	380	63.5	60	52	603.250	1235.000	713	950	2.5	2.0	19.100	32956
280	420	87	87	65	1121.000	2128.000	675	950	4.0	3.0	40.600	32056 X
280	500	89	80	67	1178.000	1805.000	599	808	5.0	4.0	66.300	30256
280	500	137	130	106	1852.500	3277.500	599	808	5.0	4.0	109.000	32256
300	420	76	72	62	850.250	1729.000	675	903	3.0	2.5	30.500	32960
300	460	100	100	74	1368.000	2565.000	637	855	4.0	3.0	56.600	32060 X
300	540	96	85	71	1368.000	1995.000	570	760	5.0	4.0	80.600	30260

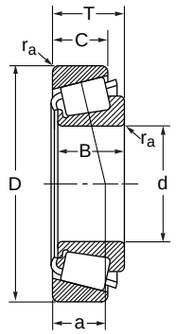


Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
					Dynamic	Static	Grease	Oil	Cone r_a	Cup r_a		
d	D	T	B	C	C	C_0			max	max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	-
300	540	149	140	115	2109.000	3515.000	570	760	5.0	4.0	132.000	32260
320	440	76	72	63	855.000	1786.000	637	855	3.0	2.5	32.000	32964
320	480	100	100	74	1434.500	2764.500	599	808	4.0	3.0	60.000	32064 X
320	580	104	92	75	1558.000	2299.000	504	713	5.0	4.0	99.300	30264
340	460	76	72	63	864.500	1843.000	599	808	3.0	2.5	33.600	32968
360	480	76	72	62	897.750	1995.000	570	760	3.0	2.5	35.800	32972
380	520	87	82	71	1149.500	2422.500	532	713	4.0	3.0	49.500	32976
400	540	87	82	71	1187.500	2565.000	504	675	4.0	3.0	52.700	32980



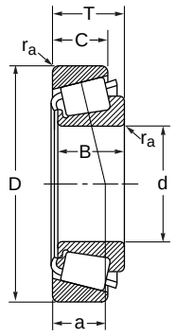
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_0		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
12.000	31.991	10.008	10.785	7.938	9.785	8.455	11,700	16,200
12.700	34.988	10.998	10.988	8.730	11.115	10.355	10,800	14,400
15.000	34.988	10.998	10.988	8.730	11.115	10.355	10,800	14,400
15.875	34.988	10.998	10.998	8.712	13.110	12.730	9,900	13,500
15.875	39.992	12.014	11.153	9.525	14.155	14.915	8,550	11,700
15.875	41.275	14.288	14.681	11.112	20.235	18.905	9,000	11,700
15.875	42.862	14.288	14.288	9.525	16.435	16.340	7,650	10,800
15.875	42.862	16.670	16.670	13.495	25.555	24.985	8,550	11,700
15.875	44.450	15.494	14.381	11.430	22.610	22.705	7,650	9,900
15.875	49.225	19.845	21.539	14.288	35.625	35.150	7,650	9,900
16.000	47.000	21.000	21.000	16.000	33.250	34.675	8,100	10,800
16.993	39.992	12.014	11.153	9.525	14.155	14.915	8,550	11,700
17.455	36.525	11.112	11.112	7.938	11.020	10.450	9,000	12,600
17.462	39.878	13.843	14.605	10.668	21.375	21.375	9,000	11,700
17.462	47.000	14.381	14.381	11.112	22.610	22.705	7,650	9,900
19.050	39.992	12.014	11.153	9.525	14.155	14.915	8,550	11,700
19.050	45.237	15.494	16.637	12.065	27.075	27.455	8,100	10,800
19.050	47.000	14.381	14.381	11.112	22.610	22.705	7,650	9,900
19.050	49.225	18.034	19.050	14.288	35.625	35.150	7,650	9,900
19.050	49.225	19.845	21.539	14.288	35.625	35.150	7,650	9,900
19.050	49.225	21.209	19.050	17.462	35.625	35.150	7,650	9,900
19.050	49.225	23.020	21.539	17.462	35.625	35.150	7,650	9,900
19.050	53.975	22.225	21.839	15.875	38.475	37.525	6,750	9,000
19.990	47.000	14.381	14.381	11.112	22.610	22.705	7,650	9,900
20.000	51.994	15.011	14.260	12.700	24.700	26.505	6,750	9,000
20.625	49.225	23.020	21.539	17.462	35.625	35.150	7,650	9,900
20.638	49.225	19.845	19.845	15.875	34.200	35.150	7,200	9,900
21.430	50.005	17.526	18.288	13.970	36.575	38.000	7,200	9,900
22.000	45.237	15.494	16.637	12.065	27.740	31.825	7,650	9,900
22.000	45.975	15.494	16.637	12.065	27.740	31.825	7,650	9,900
22.225	50.005	13.495	14.260	9.525	24.700	26.505	6,750	9,000
22.225	50.005	17.526	18.288	13.970	36.575	38.000	7,200	9,900

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
0.8	1.3	0.040	A 2047	A 2126
1.3	1.3	0.055	A 4050	A 4138
0.8	1.3	0.051	A 4059	A 4138
1.3	1.3	0.049	L21549	L21511
1.3	1.3	0.075	A 6062	A 6157
1.3	2.0	0.096	03062	03162
1.5	1.5	0.101	11590	11520
1.5	1.5	0.123	17580	17520
1.5	1.5	0.120	05062	05175
0.8	1.3	0.204	09062	09195
1.0	2.0	0.197	HM 81649	HM 81610
0.8	1.3	0.073	A 6067	A 6157
1.5	1.5	0.050	A 50669	A 5144
1.3	1.3	0.083	LM 11749	LM 11710
0.8	1.3	0.129	05068	05185
1.0	1.3	0.068	A 6075	A 6157
1.3	1.3	0.125	LM 11949	LM 11910
1.3	1.3	0.124	05075	05185
1.3	1.3	0.180	09067	09195
1.3	1.3	0.189	09078	09195
1.3	1.5	0.200	09067	09196
1.5	3.5	0.206	09074	09194
1.5	2.3	0.253	21075	21212
1.5	1.3	0.120	05079	05185
1.5	1.3	0.166	07079	07204
1.5	1.5	0.200	09081	09196
1.5	1.5	0.181	12580	12520
1.3	1.3	0.174	M 12649	M 12610
1.3	1.3	0.116	LM 12749	LM 12710
1.3	1.3	0.121	LM 12749	LM 12711
1.3	1.0	0.132	07087	07196
1.3	1.3	0.170	M 12648	M 12610



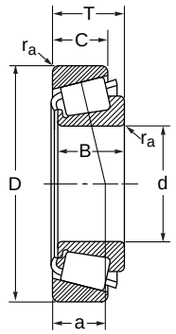
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
22.225	52.388	19.368	20.168	14.288	38.475	40.850	6,750	9,000
22.225	53.975	19.368	20.168	14.288	38.475	40.850	6,750	9,000
22.225	56.896	19.368	19.837	15.875	36.100	38.475	6,390	8,550
22.225	57.150	22.225	22.225	17.462	45.600	47.500	6,390	8,550
22.606	47.000	15.500	15.500	12.000	24.985	28.500	7,200	9,900
23.812	50.292	14.224	14.732	10.668	26.220	30.400	6,390	9,000
23.812	56.896	19.368	19.837	15.875	36.100	38.475	6,390	8,550
24.000	55.000	25.000	25.000	21.000	47.025	52.250	6,390	8,550
24.981	51.994	15.011	14.260	12.700	24.700	26.505	6,750	9,000
24.981	52.001	15.011	14.260	12.700	24.700	26.505	6,750	9,000
24.981	62.000	16.002	16.566	14.288	35.150	37.525	5,670	7,650
25.000	50.005	13.495	14.260	9.525	24.700	26.505	6,750	9,000
25.000	51.994	15.011	14.260	12.700	24.700	26.505	6,750	9,000
25.400	50.005	13.495	14.260	9.525	24.700	26.505	6,750	9,000
25.400	50.005	13.495	14.260	9.525	24.700	26.505	6,750	9,000
25.400	50.292	14.224	14.732	10.668	26.220	30.400	6,390	9,000
25.400	57.150	17.462	17.462	13.495	37.525	43.225	6,030	8,100
25.400	57.150	19.431	19.431	14.732	40.375	46.550	6,030	8,100
25.400	59.530	23.368	23.114	18.288	47.500	55.100	5,670	8,100
25.400	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
25.400	63.500	20.638	20.638	15.875	43.700	50.350	5,400	7,200
25.400	64.292	21.433	21.433	16.670	48.450	61.275	5,040	7,200
25.400	65.088	22.225	21.463	15.875	42.750	45.125	5,040	7,200
25.400	68.262	22.225	22.225	17.462	52.250	60.800	5,040	6,750
25.400	72.233	25.400	25.400	19.842	60.325	79.325	4,500	6,390
25.400	72.626	24.608	24.257	17.462	57.000	55.100	5,040	6,750
26.988	50.292	14.224	14.732	10.668	26.220	30.400	6,390	9,000
26.988	57.150	19.845	19.355	15.875	38.000	42.275	6,030	8,100
26.988	60.325	19.842	17.462	15.875	37.525	43.225	6,030	8,100
26.988	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
28.575	57.150	19.845	19.355	15.875	38.000	42.275	6,030	8,100
28.575	59.131	15.875	16.764	11.811	32.775	39.425	5,670	7,650

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
1.5	1.5	0.204	1380	1328
1.5	1.5	0.219	1380	1329
1.3	1.3	0.254	1755	1729
0.8	1.5	0.289	1280	1220
1.5	1.0	0.132	LM 72849	LM 72810
1.5	1.3	0.136	L 44640	L 44610
0.8	1.3	0.245	1779	1729
2.0	2.0	0.288	JHM 33449	JHM 33410
1.5	1.3	0.146	07098	07204
1.5	2.0	0.146	07098	07205
1.5	1.5	0.256	17098	17244
1.5	1.0	0.120	07097	07196
1.5	1.3	0.146	07097	07204
3.3	1.0	0.117	07100 SA	07196
1.0	1.0	0.119	07100	07196
1.3	1.3	0.129	L 44643	L 44610
1.3	1.5	0.221	15578	15520
1.5	1.5	0.245	M 84548	M 84510
0.8	1.5	0.324	M 84249	M 84210
0.8	1.3	0.303	15101	15245
3.5	1.5	0.333	15100	15250 X
1.5	1.5	0.374	M 86643	M 86610
1.5	1.5	0.356	23100	23256
0.8	1.5	0.432	02473	02420
0.8	2.3	0.586	HM 88630	HM 88610
2.3	1.5	0.497	41100	41286
3.5	1.3	0.120	L 44649	L 44610
3.3	1.5	0.229	1997 X	1922
3.5	1.5	0.264	15580	15523
0.8	1.3	0.292	15106	15245
3.5	1.5	0.218	1988	1922
3.5	1.3	0.209	LM 67043	LM 67010



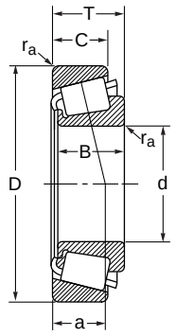
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
28.575	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
28.575	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
28.575	64.292	21.433	21.433	16.670	48.450	61.275	5,040	7,200
28.575	68.262	22.225	22.225	17.462	52.250	60.800	5,040	6,750
28.575	72.626	24.608	24.257	17.462	57.000	55.100	5,040	6,750
28.575	72.626	24.608	24.257	17.462	57.000	55.100	5,040	6,750
28.575	73.025	22.225	22.225	17.462	51.775	61.275	4,770	6,390
28.575	73.025	22.225	22.225	17.462	51.775	61.275	4,770	6,390
29.000	50.292	14.224	14.732	10.668	25.460	32.300	6,390	8,550
29.367	66.421	23.812	25.433	19.050	61.750	69.350	5,400	7,200
30.000	62.000	16.002	16.566	14.288	35.150	37.525	5,670	7,650
30.000	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
30.000	63.500	20.638	20.638	15.875	43.700	50.350	5,400	7,200
30.000	72.000	19.000	18.923	15.875	49.400	53.200	5,040	6,750
30.112	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
30.162	58.738	14.684	15.080	10.716	27.360	31.825	5,400	7,200
30.162	64.292	21.433	21.433	16.670	48.450	61.275	5,040	7,200
30.162	68.262	22.225	22.225	17.462	52.725	66.975	4,770	6,750
30.162	69.850	23.812	25.357	19.050	67.450	79.800	5,040	6,750
30.162	69.850	23.812	25.357	19.050	67.450	79.800	5,040	6,750
30.162	76.200	24.608	24.074	16.670	64.125	66.025	4,500	6,030
30.213	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
30.213	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
30.213	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
30.955	64.292	21.433	21.433	16.670	48.450	61.275	5,040	7,200
31.750	58.738	14.684	15.080	10.716	27.360	31.825	5,400	7,200
31.750	59.131	15.875	16.764	11.811	32.775	39.425	5,670	7,650
31.750	62.000	18.161	19.050	14.288	43.700	50.350	5,400	7,200
31.750	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
31.750	62.000	19.050	20.638	14.288	43.700	50.350	5,400	7,200
31.750	63.500	20.638	20.638	15.875	43.700	50.350	5,400	7,200
31.750	68.262	22.225	22.225	17.462	52.250	60.800	5,040	6,750
31.750	68.262	22.225	22.225	17.462	52.725	66.975	4,770	6,750

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.5	1.3	0.280	15112	15245
0.8	1.3	0.281	15113	15245
1.5	1.5	0.351	M 86647	M 86610
0.8	1.5	0.409	02474	02420
4.8	1.5	0.469	41125	41286
1.5	1.5	0.472	41126	41286
0.8	3.3	0.481	02872	02820
3.5	1.3	0.115	L 45449	L 45410
3.5	1.3	0.407	2690	2631
1.5	1.5	0.227	17118	17244
1.3	1.3	0.270	15117	15245
1.3	1.3	0.302	15117	15250
1.5	1.5	0.388	26118	26283
0.8	1.3	0.270	15116	15245
3.5	1.0	0.177	08118	08231
1.5	1.5	0.339	M 86649	M 86610
2.3	1.5	0.409	M 88043	M 88010
2.3	1.3	0.466	2558	2523
0.8	1.3	0.467	2559	2523
1.5	3.3	0.529	43118	43300
3.5	1.3	0.267	15118	15245
0.8	1.3	0.269	15120	15245
1.5	1.3	0.269	15119	15245
1.5	1.5	0.333	M 86648 A	M 86610
1.0	1.0	0.170	08125	08231
3.5	1.3	0.189	LM 67048	LM 67010
3.5	1.3	0.246	15123	15245
0.8	1.3	0.257	15126	15245
3.5	1.3	0.255	15125	15245
0.8	1.3	0.289	15126	15250
3.5	1.5	0.381	02475	02420
1.5	1.5	0.396	M 88046	M 88010



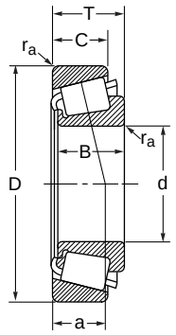
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_0		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
31.750	69.012	19.845	19.583	15.875	44.650	53.200	5,040	6,750
31.750	69.012	26.982	26.721	15.875	44.650	53.200	5,040	6,750
31.750	69.850	23.812	25.357	19.050	67.450	79.800	5,040	6,750
31.750	69.850	23.812	25.357	19.050	67.450	79.800	5,040	6,750
31.750	72.626	30.162	29.997	23.812	75.525	85.500	4,770	6,750
31.750	73.025	29.370	27.783	23.020	70.300	95.000	4,500	6,390
31.750	80.000	21.000	22.403	17.826	65.075	71.725	4,050	5,670
32.000	72.233	25.400	25.400	19.842	60.325	79.325	4,500	6,390
33.338	66.675	20.638	20.638	15.875	43.700	50.825	5,040	6,750
33.338	68.262	22.225	22.225	17.462	52.725	66.975	4,770	6,750
33.338	69.012	19.845	19.583	15.875	44.650	53.200	5,040	6,750
33.338	69.012	19.845	19.583	15.875	44.650	53.200	5,040	6,750
33.338	69.850	23.812	25.357	19.050	67.450	79.800	5,040	6,750
33.338	72.000	19.000	18.923	15.875	49.400	53.200	5,040	6,750
33.338	72.626	30.162	29.997	23.812	75.525	85.500	4,770	6,750
33.338	73.025	29.370	27.783	23.020	70.300	95.000	4,500	6,390
33.338	76.200	29.370	28.575	23.020	74.575	100.700	4,320	6,030
33.338	76.200	29.370	28.575	23.020	74.575	100.700	4,320	6,030
33.338	79.375	25.400	24.074	17.462	64.125	66.025	4,500	6,030
34.925	65.088	18.034	18.288	13.970	45.125	54.625	5,040	6,750
34.925	65.088	20.320	18.288	16.256	45.125	54.625	5,040	6,750
34.925	66.675	20.638	20.638	16.670	50.350	59.375	5,040	6,750
34.925	69.012	19.845	19.583	15.875	44.650	53.200	5,040	6,750
34.925	69.012	19.845	19.583	15.875	44.650	53.200	5,040	6,750
34.925	72.233	25.400	25.400	19.842	60.325	79.325	4,500	6,390
34.925	73.025	22.225	22.225	17.462	51.775	61.275	4,770	6,390
34.925	73.025	22.225	23.812	17.462	60.325	73.150	4,770	6,390
34.925	73.025	23.812	24.608	19.050	67.450	81.700	4,770	6,390
34.925	73.025	23.812	24.608	19.050	67.450	81.700	4,770	6,390
34.925	76.200	29.370	28.575	23.020	74.575	100.700	4,320	6,030
34.925	76.200	29.370	28.575	23.020	74.575	100.700	4,320	6,030
34.925	76.200	29.370	28.575	23.020	74.575	100.700	4,320	6,030

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.5	1.3	0.354	14125 A	14276
4.3	3.3	0.421	14123 A	14274
0.8	1.3	0.451	2580	2523
3.5	1.3	0.449	2582	2523
0.8	3.3	0.593	3188	3120
1.3	3.3	0.621	HM 88542	HM 88510
0.8	1.3	0.565	346	332
3.3	2.3	0.525	HM 88638	HM 88610
3.5	1.5	0.317	1680	1620
0.8	1.5	0.382	M 88048	M 88010
3.5	3.3	0.339	14130	14274
0.8	1.3	0.344	14131	14276
3.5	1.3	0.432	2585	2523
3.5	1.5	0.363	26131	26283
0.8	3.3	0.573	3197	3120
0.8	3.3	0.604	HM 88547	HM 88510
3.8	0.8	0.680	HM 89444	HM 89411
0.8	3.3	0.678	HM 89443	HM 89410
3.5	1.5	0.568	43131	43312
3.5	1.3	0.259	LM 48548	LM 48510
3.5	1.3	0.280	LM 48548	LM 48511
3.5	2.3	0.306	M 38549	M 38510
3.5	1.3	0.329	14138 A	14276
1.5	1.3	0.331	14137 A	14276
2.3	2.3	0.495	HM 88649	HM 88610
0.8	3.3	0.426	02878	02820
3.5	3.3	0.441	2877	2820
1.5	0.8	0.473	25877	25821
3.5	2.3	0.469	25878	25820
0.8	0.8	0.664	HM 89446 A	HM 89411
3.5	0.8	0.661	HM 89446	HM 89411
3.5	3.3	0.657	HM 89446	HM 89410



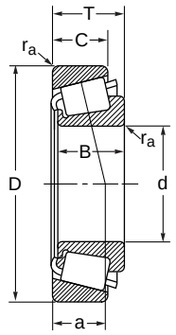
Basic Dimensions					Basic Load Ratings		Limiting Speed	
d	D	T	B	C	Dynamic C	Static C_O	Grease	Oil
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
34.925	76.200	29.370	28.575	23.812	76.475	91.675	4,500	6,030
34.925	79.375	29.370	29.771	23.812	83.600	100.700	4,320	6,030
34.976	68.262	15.875	16.520	11.908	42.750	50.825	4,770	6,390
34.976	72.085	22.385	19.583	18.415	44.650	53.200	5,040	6,750
34.976	80.000	21.006	20.940	15.875	53.675	61.275	4,500	6,030
35.000	59.131	15.875	16.764	11.938	33.250	44.650	5,400	7,200
35.000	59.975	15.875	16.764	11.938	33.250	44.650	5,400	7,200
35.000	62.000	16.700	17.000	13.600	36.100	47.500	5,040	7,200
35.000	62.000	16.700	17.000	13.600	36.100	47.500	5,040	7,200
35.000	65.987	20.638	20.638	16.670	50.350	59.375	5,040	6,750
35.000	73.025	26.988	26.975	22.225	71.725	84.075	4,770	6,750
35.717	72.233	25.400	25.400	19.842	60.325	79.325	4,500	6,390
36.487	73.025	23.812	24.608	19.050	67.450	81.700	4,770	6,390
36.512	76.200	29.370	28.575	23.020	74.575	100.700	4,320	6,030
36.512	79.375	29.370	29.771	23.812	83.600	100.700	4,320	6,030
36.512	88.501	25.400	23.698	17.462	69.350	76.950	3,600	5,040
36.512	93.662	31.750	31.750	26.195	104.500	134.900	3,600	5,040
38.000	63.000	17.000	17.000	13.500	36.575	49.400	5,040	6,750
38.100	63.500	12.700	11.908	9.525	22.895	28.975	4,770	6,390
38.100	65.088	18.034	18.288	13.970	40.375	52.250	4,770	6,750
38.100	65.088	18.034	18.288	13.970	40.375	52.250	4,770	6,750
38.100	65.088	19.812	18.288	15.748	40.375	52.250	4,770	6,750
38.100	68.262	15.875	16.520	11.908	42.750	50.825	4,770	6,390
38.100	69.012	19.050	19.050	15.083	46.550	57.950	4,770	6,390
38.100	69.012	19.050	19.050	15.083	46.550	57.950	4,770	6,390
38.100	72.238	20.638	20.638	15.875	46.075	56.525	4,770	6,390
38.100	73.025	23.812	25.654	19.050	69.825	86.450	4,500	6,030
38.100	76.200	23.812	25.654	19.050	69.825	86.450	4,500	6,030
38.100	76.200	23.812	25.654	19.050	69.825	86.450	4,500	6,030
38.100	79.375	29.370	29.771	23.812	83.600	100.700	4,320	6,030
38.100	80.035	24.608	23.698	18.512	65.550	80.275	4,050	5,670
38.100	82.550	29.370	28.575	23.020	82.650	111.150	4,050	5,400

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
1.5	3.3	0.639	31594	31520
3.5	3.3	0.707	3478	3420
1.5	1.5	0.269	19138	19268
1.3	2.3	0.408	14139	14283
1.5	1.5	0.507	28138	28315
3.5	1.3	0.173	L 68149	L 68110
3.5	1.3	0.181	L 68149	L 68111
3.5	1.0	0.211	LM 78349	LM 78310
3.5	1.5	0.211	LM 78349	LM 78310 A
3.5	2.3	0.296	M 38547	M 38511
3.5	0.8	0.521	23691	23621
3.5	2.3	0.486	HM 88648	HM 88610
1.5	0.8	0.458	25880	25821
3.5	3.3	0.637	HM 89449	HM 89410
0.8	3.3	0.688	3479	3420
2.3	1.5	0.747	44143	44348
1.5	3.3	1.170	46143	46368
3.5	1.3	0.203	JL 69349	JL 69310
1.5	0.8	0.155	13889	13830
2.3	1.3	0.239	LM 29749	LM 29710
3.5	1.3	0.237	LM 29748	LM 29710
2.3	1.3	0.254	LM 29749	LM 29711
1.5	1.5	0.246	19150	19268
2.0	2.3	0.297	13687	13621
3.5	0.8	0.296	13685	13620
3.5	1.3	0.358	16150	16284
3.5	0.8	0.447	2788	2735 X
3.5	3.3	0.499	2788	2720
3.5	0.8	0.503	2788	2729
3.5	3.3	0.663	3490	3420
0.8	1.5	0.571	27880	27820
0.8	3.3	0.765	HM 801346	HM 801310



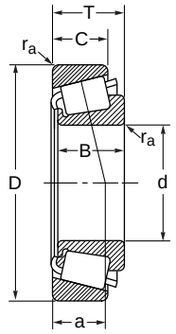
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
38.100	88.501	25.400	23.698	17.462	69.350	76.950	3,600	5,040
38.100	88.501	26.988	29.083	22.225	91.675	103.550	4,050	5,400
38.100	95.250	30.958	28.301	20.638	83.125	92.150	3,240	4,770
39.688	73.025	25.654	22.098	21.336	59.375	76.000	4,500	6,030
39.688	76.200	23.812	25.654	19.050	69.825	86.450	4,500	6,030
39.688	80.167	29.370	30.391	23.812	87.875	102.600	4,320	5,670
40.000	80.000	21.000	22.403	17.826	65.075	71.725	4,050	5,670
40.000	80.000	21.000	22.403	17.826	65.075	71.725	4,050	5,670
40.000	88.501	25.400	23.698	17.462	69.350	76.950	3,600	5,040
41.000	68.000	17.500	18.000	13.500	41.325	55.100	4,770	6,390
41.275	73.025	16.667	17.462	12.700	42.275	51.300	4,320	6,030
41.275	73.431	19.558	19.812	14.732	51.775	63.650	4,320	6,030
41.275	73.431	21.430	19.812	16.604	51.775	63.650	4,320	6,030
41.275	76.200	18.009	17.384	14.288	40.375	48.450	4,050	5,670
41.275	76.200	22.225	23.020	17.462	62.700	77.900	4,320	6,030
41.275	76.200	25.400	23.020	20.638	62.700	77.900	4,320	6,030
41.275	79.375	23.812	25.400	19.050	73.150	93.575	4,320	5,670
41.275	80.000	21.000	22.403	17.826	65.075	71.725	4,050	5,670
41.275	80.000	21.000	22.403	17.826	65.075	71.725	4,050	5,670
41.275	80.167	25.400	25.400	20.638	73.150	93.575	4,320	5,670
41.275	82.550	26.543	25.654	20.193	74.575	96.900	3,870	5,400
41.275	85.725	30.162	30.162	23.812	86.450	109.250	3,870	5,400
41.275	87.312	30.162	30.886	23.812	91.200	114.000	3,870	5,400
41.275	88.501	25.400	23.698	17.462	69.350	76.950	3,600	5,040
41.275	88.900	30.162	29.370	23.020	91.675	122.550	3,600	5,040
41.275	88.900	30.162	29.370	23.020	91.675	122.550	3,600	5,040
41.275	90.488	39.688	40.386	33.338	132.050	171.000	3,870	5,040
41.275	93.662	31.750	31.750	26.195	104.500	134.900	3,600	5,040
41.275	95.250	30.162	29.370	23.020	100.700	135.850	3,420	4,770
41.275	98.425	30.958	28.301	20.638	83.125	92.150	3,240	4,770
42.862	76.992	17.462	17.145	11.908	41.800	51.300	4,050	5,400
42.862	82.550	19.842	19.837	15.080	55.575	65.550	4,050	5,670

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
2.3	1.5	0.729	44150	44348
3.5	1.5	0.829	418	414
1.5	0.8	1.030	53150	53375
0.8	2.3	0.435	M 201047	M 201011
3.5	3.3	0.479	2789	2720
0.8	3.3	0.659	3386	3320
3.5	1.3	0.484	344	332
0.8	1.3	0.485	344 A	332
2.3	1.5	0.708	44157	44348
3.5	1.5	0.242	LM 300849	LM 300811
3.5	1.5	0.285	18590	18520
3.5	0.8	0.334	LM 501349	LM 501310
3.5	0.8	0.355	LM 501349	LM 501314
1.5	1.5	0.341	11162	11300
3.5	0.8	0.429	24780	24720
3.5	2.3	0.468	24780	24721
3.5	0.8	0.535	26882	26822
0.8	1.3	0.471	336	332
3.5	1.3	0.469	342	332
3.5	3.3	0.568	26882	26820
3.5	3.3	0.636	M 802048	M 802011
3.5	3.3	0.791	3877	3820
0.8	3.3	0.836	3576	3525
2.3	1.5	0.692	44162	44348
3.5	3.3	0.901	HM 803146	HM 803110
0.8	3.3	0.904	HM 803145	HM 803110
3.5	3.3	1.248	4388	4335
0.8	3.3	1.100	46162	46368
3.5	3.3	1.080	HM 804840	HM 804810
1.5	0.8	1.060	53162	53387
1.5	1.5	0.326	12168	12303
2.3	1.5	0.459	22168	22325



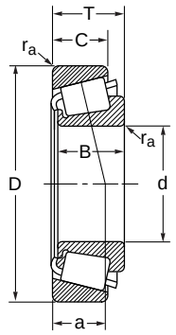
Basic Dimensions					Basic Load Ratings		Limiting Speed	
d	D	T	B	C	Dynamic C	Static C_0	Grease	Oil
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
42.862	82.931	23.812	25.400	19.050	72.675	94.050	4,050	5,400
42.862	82.931	26.988	25.400	22.225	72.675	94.050	4,050	5,400
42.875	76.200	25.400	25.400	20.638	73.150	93.575	4,320	5,670
42.875	80.000	21.000	22.403	17.826	65.075	71.725	4,050	5,670
42.875	82.931	26.988	25.400	22.225	72.675	94.050	4,050	5,400
42.875	83.058	23.812	25.400	19.050	72.675	94.050	4,050	5,400
43.000	74.988	19.368	19.837	14.288	49.875	64.600	4,320	5,670
44.450	80.962	19.050	17.462	14.288	42.750	54.150	3,870	5,400
44.450	82.931	23.812	25.400	19.050	72.675	94.050	4,050	5,400
44.450	83.058	23.812	25.400	19.050	72.675	94.050	4,050	5,400
44.450	87.312	30.162	30.886	23.812	91.200	114.000	3,870	5,400
44.450	88.900	30.162	29.370	23.020	91.675	122.550	3,600	5,040
44.450	93.264	30.162	30.302	23.812	97.850	129.200	3,420	4,770
44.450	93.662	31.750	31.750	25.400	114.000	139.650	3,600	5,040
44.450	93.662	31.750	31.750	25.400	114.000	139.650	3,600	5,040
44.450	93.662	31.750	31.750	26.195	104.500	134.900	3,600	5,040
44.450	95.250	27.783	29.901	22.225	100.700	119.700	3,870	5,040
44.450	95.250	30.162	29.370	23.020	100.700	135.850	3,420	4,770
44.450	95.250	30.958	28.301	20.638	83.125	92.150	3,240	4,770
44.450	95.250	30.958	28.301	20.638	83.125	92.150	3,240	4,770
44.450	95.250	30.958	28.301	20.638	83.125	92.150	3,240	4,770
44.450	95.250	30.958	28.301	22.225	95.000	115.900	3,240	4,500
44.450	95.250	30.958	28.575	22.225	95.000	115.900	3,240	4,500
44.450	98.425	30.958	28.301	20.638	83.125	92.150	3,240	4,770
44.450	103.188	43.658	44.475	36.512	169.100	226.100	3,420	4,500
44.450	104.775	36.512	36.512	28.575	132.050	182.400	3,060	4,320
44.450	107.950	27.783	29.317	22.225	110.200	141.550	3,060	4,320
44.450	111.125	30.162	26.909	20.638	87.875	104.500	2,880	3,870
44.450	114.300	44.450	44.450	34.925	163.400	194.750	3,240	4,320
44.983	82.931	23.812	25.400	19.050	72.675	94.050	4,050	5,400
45.000	93.264	20.638	22.225	15.082	73.150	88.350	3,420	4,770
45.230	79.985	19.842	20.638	15.080	58.900	74.575	4,050	5,400

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
2.3	0.8	0.586	25578	25520
2.3	2.3	0.631	25578	25523
3.5	1.5	0.473	26884	26823
3.5	1.3	0.451	342 S	332
3.5	2.3	0.629	25577	25523
3.5	3.3	0.582	25577	25521
1.5	1.3	0.346	16986	16929
0.3	1.5	0.396	13175	13318
3.5	0.8	0.562	25580	25520
3.5	3.3	0.560	25580	25521
3.5	3.3	0.781	3578	3525
3.5	3.3	0.850	HM 803149	HM 803110
3.5	3.2	0.970	3782	3720
0.8	3.3	1.019	49176	49368
3.5	3.3	1.016	49175	49368
3.5	3.3	1.040	46176	46368
3.5	2.3	0.939	438	432
3.5	3.3	1.031	HM 804843	HM 804810
3.5	0.8	0.937	53177	53375
1.3	0.8	0.939	53176	53375
2.0	0.8	0.939	53178	53375
1.3	0.8	1.040	HM 903247	HM 903210
3.5	0.8	1.024	HM 903249	HM 903210
3.5	0.8	1.010	53177	53387
1.3	3.3	1.867	5356	5335
3.5	3.3	1.642	HM 807040	HM 807010
3.5	0.8	1.350	460	453 A
3.5	3.3	1.381	55175	55437
3.5	3.3	2.284	65385	65320
1.5	0.8	0.557	25584	25520
0.8	1.3	0.666	376	374
2.0	1.3	0.410	17887	17831



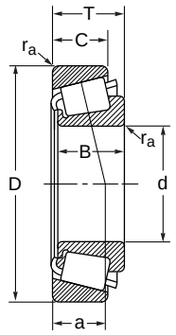
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_0		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
45.242	73.431	19.558	19.812	15.748	50.825	71.250	4,320	5,670
45.242	77.788	19.842	19.842	15.080	53.200	67.450	4,050	5,670
45.242	77.788	21.430	19.842	16.667	53.200	67.450	4,050	5,670
45.618	82.931	23.812	25.400	19.050	72.675	94.050	4,050	5,400
45.618	82.931	26.988	25.400	22.225	72.675	94.050	4,050	5,400
46.000	75.000	18.000	18.000	14.000	48.450	67.925	4,050	5,670
46.038	79.375	17.462	17.462	13.495	43.700	54.150	4,050	5,400
46.038	80.962	19.050	17.462	14.288	42.750	54.150	3,870	5,400
46.038	85.000	20.638	21.692	17.462	67.925	77.425	3,870	5,400
46.038	85.000	25.400	25.608	20.638	75.525	99.750	3,870	5,400
46.038	95.250	27.783	29.901	22.225	100.700	119.700	3,870	5,040
47.625	88.900	20.638	22.225	16.513	69.350	80.750	3,600	5,040
47.625	88.900	25.400	25.400	19.050	81.700	101.650	3,600	5,040
47.625	95.250	30.162	29.370	23.020	100.700	135.850	3,420	4,770
47.625	101.600	34.925	36.068	26.988	130.150	160.550	3,420	4,500
47.625	111.125	30.162	26.909	20.638	87.875	104.500	2,880	3,870
47.625	112.712	30.162	26.909	20.638	87.875	104.500	2,880	3,870
47.625	117.475	33.338	31.750	23.812	130.150	148.200	2,880	3,870
47.625	123.825	36.512	32.791	25.400	135.850	152.000	2,700	3,600
48.412	95.250	30.162	29.370	23.020	100.700	135.850	3,420	4,770
48.412	95.250	30.162	29.370	23.020	100.700	135.850	3,420	4,770
49.212	104.775	36.512	36.512	28.575	132.050	182.400	3,060	4,320
49.212	114.300	44.450	44.450	36.068	186.200	230.850	3,060	4,320
50.000	82.000	21.500	21.500	17.000	67.450	91.200	3,870	5,040
50.000	82.550	21.590	22.225	16.510	67.450	91.200	3,870	5,040
50.000	88.900	20.638	22.225	16.513	69.350	80.750	3,600	5,040
50.000	90.000	28.000	28.000	23.000	98.800	129.200	3,600	5,040
50.000	105.000	37.000	36.000	29.000	132.050	182.400	3,060	4,320
50.800	80.962	18.258	18.258	14.288	50.350	76.950	3,870	5,040
50.800	82.550	23.622	22.225	18.542	67.450	91.200	3,870	5,040
50.800	82.931	21.590	22.225	16.510	67.450	91.200	3,870	5,040
50.800	85.000	17.462	17.462	13.495	46.075	59.850	3,870	5,040

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.5	0.8	0.315	LM 102949	LM 102910
3.5	0.8	0.368	LM 603049	LM 603011
3.5	0.8	0.386	LM 603049	LM 603012
3.5	0.8	0.546	25590	25520
3.5	2.3	0.591	25590	25523
2.3	1.5	0.305	LM 503349	LM 503310
2.8	1.5	0.337	18690	18620
0.8	1.5	0.380	13181	13318
2.3	1.3	0.505	359 S	354 A
3.5	1.3	0.920	2984	2924
3.5	0.8	0.917	436	432 A
3.5	1.3	0.547	369 A	362 A
3.5	3.3	0.673	M 804049	M 804010
3.5	3.3	0.980	HM 804846	HM 804810
3.5	3.3	1.310	528	522
3.5	3.3	1.331	55187	55437
3.5	3.3	1.370	55187	55443
3.5	3.3	1.742	66187	66462
3.5	3.3	2.080	72187	72487
3.5	3.3	0.964	HM 804849	HM 804810
2.3	3.3	0.968	HM 804848	HM 804810
3.5	0.8	1.538	HM 807044	HM 807011
3.5	3.3	2.267	HH 506348	HH 506310
3.0	0.5	0.435	JLM 104948	JLM 104910
0.5	1.3	0.449	LM 104947 A	LM 104911
2.3	1.3	0.517	366	362 A
3.0	2.5	0.753	JM 205149	JM 205110
3.0	2.5	1.533	JHM 807045	JHM 807012
1.5	1.5	0.358	L 305649	L 305610
3.5	0.8	0.459	LM 104949	LM 104911 A
3.5	1.3	0.441	LM 104949	LM 104912
3.5	1.5	0.375	18790	18720



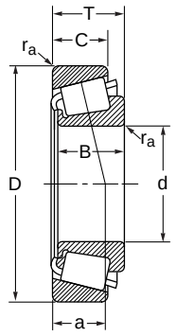
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
50.800	85.725	19.050	18.263	12.700	40.375	51.300	3,600	4,770
50.800	88.900	20.638	22.225	16.513	69.350	80.750	3,600	5,040
50.800	88.900	20.638	22.225	16.513	69.350	80.750	3,600	5,040
50.800	92.075	24.608	25.400	19.845	80.275	111.150	3,600	4,770
50.800	93.264	30.162	30.302	23.812	97.850	129.200	3,420	4,770
50.800	93.264	30.162	30.302	23.812	97.850	129.200	3,420	4,770
50.800	95.250	27.783	28.575	22.225	104.500	136.800	3,420	4,770
50.800	101.600	31.750	31.750	25.400	112.100	142.500	3,240	4,500
50.800	101.600	34.925	36.068	26.988	130.150	160.550	3,420	4,500
50.800	101.600	34.925	36.068	26.988	130.150	160.550	3,420	4,500
50.800	104.775	36.512	36.512	28.575	132.050	182.400	3,060	4,320
50.800	104.775	36.512	36.512	28.575	132.050	182.400	3,060	4,320
50.800	108.966	34.925	36.512	26.988	137.750	171.950	3,240	4,320
50.800	111.125	30.162	26.909	20.638	107.350	144.400	2,700	3,870
50.800	111.125	30.162	26.909	20.638	87.875	104.500	2,880	3,870
50.800	123.825	36.512	32.791	25.400	153.900	189.050	2,520	3,600
50.800	123.825	36.512	32.791	25.400	135.850	152.000	2,700	3,600
50.800	127.000	44.450	44.450	34.925	189.050	245.100	2,700	3,600
50.800	127.000	50.800	52.388	41.275	224.200	285.000	2,880	3,870
52.388	92.075	24.608	25.400	19.845	80.275	111.150	3,600	4,770
52.388	100.000	25.000	22.225	21.824	73.150	88.350	3,420	4,770
52.388	111.125	30.162	26.909	20.638	87.875	104.500	2,880	3,870
53.975	104.775	39.688	40.157	33.338	142.500	199.500	3,240	4,320
53.975	107.950	36.512	36.957	28.575	136.800	172.900	3,240	4,320
53.975	122.238	33.338	31.750	23.812	128.250	148.200	2,700	3,600
53.975	123.825	36.512	32.791	25.400	135.850	152.000	2,700	3,600
53.975	123.825	36.512	32.791	25.400	153.900	189.050	2,520	3,600
53.975	123.825	38.100	36.678	30.162	152.950	209.950	2,700	3,600
53.975	127.000	44.450	44.450	34.925	189.050	245.100	2,700	3,600
53.975	127.000	50.800	52.388	41.275	224.200	285.000	2,880	3,870
53.975	130.175	36.512	33.338	23.812	126.350	146.300	2,340	3,240
55.000	90.000	23.000	23.000	18.500	75.050	105.450	3,420	4,770

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max			
mm	mm	Cone + Cup kg	cone	cup
1.5	1.5	0.404	18200	18337
3.5	1.3	0.504	368 A	362 A
1.5	1.3	0.507	368	362 A
3.5	0.8	0.707	28580	28521
0.8	0.8	0.865	3775	3730
3.5	0.8	0.861	3780	3730
3.5	2.3	0.868	33889	33821
3.5	3.3	1.133	49585	49520
0.8	3.3	1.238	529	522
3.5	3.3	1.235	529 X	522
3.5	0.8	1.500	HM 807046	HM 807011
3.5	3.3	1.495	HM 807046	HM 807010
3.5	3.3	1.537	59200	59429
3.5	3.3	1.359	55200 C	55437
3.5	3.3	1.281	55200	55437
3.5	3.3	2.120	72200 C	72487
3.5	3.3	2.010	72200	72487
3.5	3.3	2.890	65200	65500
3.5	3.3	3.300	6279	6220
3.5	0.8	0.682	28584	28521
2.3	2.0	0.827	377	372
3.5	3.3	1.251	55206	55437
3.5	3.3	1.555	4595	4535
3.5	3.3	1.450	539	532 X
3.5	3.3	1.758	66584	66520
3.5	3.3	1.950	72212	72487
3.5	3.3	2.060	72212 C	72487
3.5	3.3	2.254	557 S	552 A
3.5	3.3	2.790	65212	65500
3.5	3.3	3.190	6280	6220
3.5	3.3	2.175	HM 911242	HM 911210
1.5	0.5	0.564	JLM 506849	JLM 506810



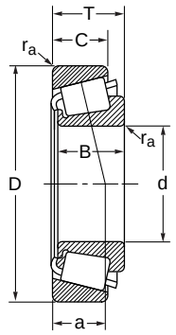
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
50.800	85.725	19.050	18.263	12.700	40.375	51.300	3,600	4,770
55.000	95.000	29.000	29.000	23.500	105.450	144.400	3,420	4,500
55.000	96.838	21.000	21.946	15.875	76.475	95.000	3,240	4,500
55.000	110.000	39.000	39.000	32.000	168.150	213.750	3,060	4,050
55.000	115.000	41.021	41.275	31.496	163.400	203.300	2,880	4,050
55.562	97.630	24.608	24.608	19.446	84.550	122.550	3,240	4,500
55.562	122.238	43.658	43.764	36.512	188.100	277.400	2,700	3,600
55.562	123.825	36.512	32.791	25.400	135.850	152.000	2,700	3,600
55.562	123.825	36.512	32.791	25.400	153.900	189.050	2,520	3,600
57.150	96.838	21.000	21.946	15.875	76.475	95.000	3,240	4,500
57.150	96.838	21.000	21.946	15.875	76.475	95.000	3,240	4,500
57.150	96.838	25.400	21.946	20.275	76.475	95.000	3,240	4,500
57.150	98.425	21.000	21.946	17.826	76.475	95.000	3,240	4,500
57.150	104.775	30.162	29.317	24.605	110.200	141.550	3,060	4,320
57.150	104.775	30.162	29.317	24.605	110.200	141.550	3,060	4,320
57.150	104.775	30.162	30.958	23.812	123.500	161.500	3,060	4,320
57.150	104.775	30.162	30.958	23.812	123.500	161.500	3,060	4,320
57.150	122.238	33.338	31.750	23.812	128.250	148.200	2,700	3,600
57.150	123.825	36.512	32.791	25.400	153.900	189.050	2,520	3,600
57.150	123.825	38.100	36.678	30.162	152.950	209.950	2,700	3,600
57.150	140.030	36.512	33.236	23.520	144.400	173.850	2,340	3,240
57.150	144.983	36.000	33.236	23.007	144.400	173.850	2,340	3,240
57.150	149.225	53.975	54.229	44.450	272.650	389.500	2,340	3,060
57.531	96.838	21.000	21.946	15.875	76.475	95.000	3,240	4,500
58.738	112.712	33.338	30.048	26.988	114.000	164.350	2,880	3,870
60.000	95.000	24.000	24.000	19.000	82.175	118.750	3,240	4,500
60.000	104.775	21.433	22.000	15.875	79.325	101.650	3,060	4,050
60.000	110.000	22.000	21.996	18.824	81.225	107.350	2,880	3,870
60.000	122.238	33.338	31.750	23.812	128.250	148.200	2,700	3,600
60.325	100.000	25.400	25.400	19.845	86.450	128.250	3,060	4,320
60.325	101.600	25.400	25.400	19.845	86.450	128.250	3,060	4,320
60.325	122.238	38.100	36.678	30.162	152.950	209.950	2,700	3,600

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
1.5	1.5	0.404	18200	18337
1.5	2.5	0.850	JM 207049	JM 207010
2.3	0.8	0.634	385	382 A
3.0	2.5	1.697	JH 307749	JH 307710
3.0	3.0	1.897	622 X	614 X
3.5	0.8	0.769	28680	28622
1.3	3.3	2.575	5566	5535
3.5	3.3	1.910	72218	72487
3.5	3.3	2.020	72218 C	72487
3.5	0.8	0.599	387 A	382 A
2.3	0.8	0.602	387	382 A
3.5	2.3	0.669	387 A	382 S
3.5	0.8	0.646	387 A	382
3.5	3.3	1.068	469	453 X
2.3	3.3	1.070	462	453 X
0.8	3.3	1.099	45289	45220
0.8	0.8	1.110	45289	45221
3.5	3.3	1.698	66587	66520
3.5	3.3	1.980	72225 C	72487
3.5	3.3	2.174	555 S	552 A
3.5	2.3	2.596	78225	78551
3.5	3.5	2.760	78225	78571
3.5	3.3	5.120	6455	6420
3.5	0.8	0.595	388 A	382 A
3.5	3.3	1.440	3981	3926
5.0	2.5	0.630	JLM 508748	JLM 508710
2.3	2.0	0.745	39236	39412
0.8	1.3	0.905	397	394 A
3.5	3.3	1.628	66585	66520
3.5	3.3	0.770	28985	28921
3.5	3.3	0.810	28985	28920
2.3	3.3	2.022	558	553 X



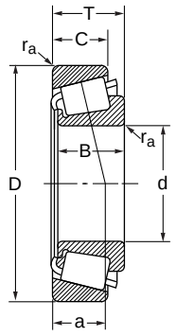
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_0		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
60.325	122.238	38.100	38.354	29.718	178.600	232.750	2,700	3,600
60.325	122.238	43.658	43.764	36.512	188.100	277.400	2,700	3,600
60.325	127.000	44.450	44.450	34.925	189.050	245.100	2,700	3,600
60.325	130.175	41.275	41.275	31.750	185.250	249.850	2,520	3,420
60.325	135.755	53.975	56.007	44.450	250.800	337.250	2,520	3,420
61.912	136.525	46.038	46.038	36.512	221.350	351.500	2,340	3,060
61.912	146.050	41.275	39.688	25.400	183.350	213.750	2,160	3,060
61.912	152.400	47.625	46.038	31.750	225.150	253.650	2,160	3,060
63.500	94.458	19.050	19.050	15.083	56.050	95.000	3,240	4,320
63.500	104.775	21.433	22.000	15.875	79.325	101.650	3,060	4,050
63.500	107.950	25.400	25.400	19.050	85.500	131.100	2,880	3,870
63.500	110.000	22.000	21.996	18.824	81.225	107.350	2,880	3,870
63.500	110.000	22.000	21.996	18.824	81.225	107.350	2,880	3,870
63.500	112.712	30.162	30.048	23.812	114.000	164.350	2,880	3,870
63.500	112.712	30.162	30.162	23.812	134.900	191.900	2,880	3,870
63.500	112.712	33.338	30.048	26.988	114.000	164.350	2,880	3,870
63.500	122.238	38.100	38.354	29.718	178.600	232.750	2,700	3,600
63.500	122.238	38.100	38.354	29.718	178.600	232.750	2,700	3,600
63.500	122.238	38.100	38.354	29.718	178.600	232.750	2,700	3,600
63.500	122.238	43.658	43.764	36.512	188.100	277.400	2,700	3,600
63.500	123.825	38.100	36.678	30.162	152.950	209.950	2,700	3,600
63.500	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
63.500	130.175	41.275	41.275	31.750	185.250	249.850	2,520	3,420
63.500	136.525	36.512	33.236	23.520	144.400	173.850	2,340	3,240
63.500	136.525	41.275	41.275	31.750	185.250	249.850	2,520	3,420
63.500	140.030	36.512	33.236	23.520	144.400	173.850	2,340	3,240
64.963	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
65.000	105.000	24.000	23.000	18.500	88.350	119.700	3,060	4,050
65.000	110.000	28.000	28.000	22.500	114.000	164.350	2,880	3,870
65.000	120.000	29.002	29.007	23.444	116.850	160.550	2,700	3,600
65.000	120.000	39.000	38.500	32.000	175.750	236.550	2,700	3,600
65.088	135.755	53.975	56.007	44.450	250.800	337.250	2,520	3,420

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
8.0	1.5	2.034	HM 212044	HM 212010
0.8	3.3	2.425	5582	5535
3.5	3.3	2.590	65237	65500
3.5	3.3	2.582	637	633
3.5	3.3	3.840	6376	6320
3.5	3.3	3.471	H 715334	H 715311
3.5	3.3	3.098	H 913842	H 913810
3.5	3.3	3.980	9180	9121
1.5	1.5	0.460	L 610549	L 610510
2.0	2.0	0.687	39250	39412
1.5	3.3	0.942	29586	29520
3.5	1.3	0.843	395	394 A
1.5	1.3	0.846	390 A	394 A
3.5	3.2	1.243	3982	3920
3.5	3.3	1.258	39585	39520
3.5	3.3	1.330	3982	3926
7.0	3.3	1.938	HM 212047	HM 212011
7.0	1.5	1.944	HM 212047	HM 212010
3.5	1.5	1.954	HM 212046	HM 212010
3.5	3.3	2.315	5584	5535
3.5	3.3	1.994	559	522 A
3.5	3.3	2.115	565	563
3.5	3.3	2.482	639	633
2.3	3.3	2.292	78250	78537
3.5	3.3	2.810	639	632
2.3	2.3	2.436	78250	78551
3.5	3.3	2.065	569	563
3.0	1.0	0.763	JLM 710949	JLM 710910
3.0	2.5	1.062	JM 511946	JM 511910
2.3	3.3	1.408	478	472 A
3.0	2.5	1.875	JH 211749	JH 211710
3.5	3.3	3.640	6379	6320



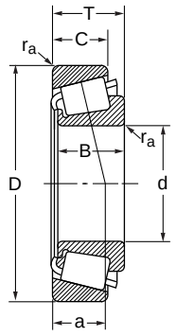
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
65.088	136.525	460.380	46.038	36.512	221.350	351.500	2,340	3,060
66.675	110.000	22.000	21.996	18.824	81.225	107.350	2,880	3,870
66.675	110.000	22.000	21.996	18.824	81.225	107.350	2,880	3,870
66.675	112.712	30.162	30.048	23.812	114.000	164.350	2,880	3,870
66.675	112.712	30.162	30.048	23.812	114.000	164.350	2,880	3,870
66.675	112.712	30.162	30.162	23.812	134.900	191.900	2,880	3,870
66.675	112.712	30.162	30.162	23.812	134.900	191.900	2,880	3,870
66.675	117.475	30.162	30.162	23.812	113.050	170.050	2,700	3,600
66.675	122.238	38.100	36.678	30.162	152.950	209.950	2,700	3,600
66.675	122.238	38.100	38.354	29.718	178.600	232.750	2,700	3,600
66.675	122.238	38.100	38.354	29.718	178.600	232.750	2,700	3,600
66.675	123.825	38.100	36.678	30.162	152.950	209.950	2,700	3,600
66.675	136.525	46.038	46.038	36.512	221.350	351.500	2,340	3,060
68.262	110.000	22.000	21.996	18.824	81.225	107.350	2,880	3,870
68.262	120.000	29.795	29.007	24.237	116.850	160.550	2,700	3,600
68.262	122.238	38.100	36.678	30.162	152.950	209.950	2,700	3,600
68.262	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
68.262	136.525	41.275	41.275	31.750	217.550	282.150	2,340	3,240
68.262	136.525	46.038	46.038	36.512	221.350	351.500	2,340	3,060
68.262	152.400	47.625	46.038	31.750	225.150	253.650	2,160	3,060
69.850	112.712	22.225	21.996	15.875	80.750	107.350	2,700	3,600
69.850	112.712	25.400	25.400	19.050	91.200	144.400	2,520	3,600
69.850	117.475	30.162	30.162	23.812	113.050	170.050	2,700	3,600
69.850	120.000	32.545	32.545	26.195	144.400	213.750	2,700	3,600
69.850	120.650	25.400	25.400	19.050	91.200	144.400	2,520	3,600
69.850	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
69.850	130.175	41.275	41.275	31.750	185.250	249.850	2,520	3,420
69.850	146.050	41.275	39.688	25.400	183.350	213.750	2,160	3,060
69.850	146.050	41.275	41.275	31.750	196.650	281.200	2,160	2,880
69.850	149.225	53.975	54.229	44.450	272.650	389.500	2,340	3,060
69.850	150.089	44.450	46.672	36.512	251.750	351.500	2,160	2,880
70.000	110.000	26.000	25.000	20.500	93.575	144.400	2,700	3,600

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.5	3.3	3.361	H 715340	H 715311
0.8	1.3	0.791	395 A	394 A
3.5	1.3	0.787	395 S	394 A
3.5	3.2	1.166	3984	3920
5.5	3.2	1.160	3994	3920
3.5	0.8	1.187	39590	39521
3.5	3.3	1.181	39590	39520
3.5	3.3	1.353	33262	33462
3.5	3.3	1.832	560	553 X
3.5	1.5	1.854	HM 212049	HM 212010
3.5	3.3	1.848	HM 212049	HM 212011
3.5	3.3	1.904	560	552 A
3.5	3.3	3.301	H 715341	H 715311
2.3	1.3	0.760	399 A	394 A
3.5	2.0	1.355	480	472
3.5	3.3	1.782	560 S	553 X
3.5	3.3	1.975	570	563
3.5	3.3	2.746	H 414245	H 414210
3.5	3.3	3.241	H 715343	H 715311
3.5	3.3	3.740	9185	9121
1.5	0.8	0.800	LM 613449	LM 613410
1.5	3.3	0.968	29675	29620
3.5	3.3	1.272	33275	33462
3.5	3.3	1.497	47487	47420
1.5	3.3	1.184	29675	29630
3.5	0.8	1.928	566	563 X
3.5	3.3	2.272	643	633
3.5	3.3	2.848	H 913849	H 913810
3.5	3.3	3.241	655	653
5.0	3.3	4.580	6454	6420
3.5	3.3	3.890	745 A	742
1.0	2.5	0.908	JLM 813049	JLM 813010



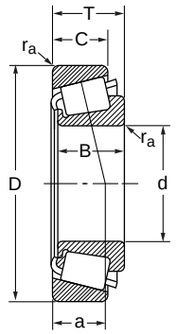
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
70.000	115.000	29.000	29.000	23.000	119.700	168.150	2,700	3,600
70.000	120.000	29.795	29.007	24.237	116.850	160.550	2,700	3,600
71.438	117.475	30.162	30.162	23.812	113.050	170.050	2,700	3,600
71.438	120.000	32.545	32.545	26.195	144.400	213.750	2,700	3,600
71.438	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
71.438	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
71.438	130.175	41.275	41.275	31.750	185.250	249.850	2,520	3,420
71.438	136.525	41.275	41.275	31.750	185.250	249.850	2,520	3,420
71.438	136.525	41.275	41.275	31.750	217.550	282.150	2,340	3,240
71.438	136.525	46.038	46.038	36.512	221.350	351.500	2,340	3,060
73.025	112.712	25.400	25.400	19.050	91.200	144.400	2,520	3,600
73.025	117.475	30.162	30.162	23.812	113.050	170.050	2,700	3,600
73.025	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
73.025	146.050	41.275	41.275	31.750	196.650	281.200	2,160	2,880
73.025	149.225	53.975	54.229	44.450	272.650	389.500	2,340	3,060
73.817	127.000	36.512	36.170	28.575	157.700	222.300	2,520	3,420
74.612	150.000	41.275	41.275	31.750	196.650	281.200	2,160	2,880
75.000	115.000	25.000	25.000	19.000	95.950	142.500	2,700	3,600
75.000	120.000	31.000	29.500	25.000	122.550	188.100	2,520	3,420
75.000	145.000	51.000	51.000	42.000	272.650	389.500	2,340	3,060
76.200	121.442	24.608	23.012	17.462	84.550	117.800	2,520	3,420
76.200	127.000	30.162	31.000	22.225	127.300	185.250	2,520	3,420
76.200	127.000	30.162	31.001	22.225	127.300	185.250	2,520	3,420
76.200	133.350	33.338	33.338	26.195	146.300	225.150	2,340	3,240
76.200	135.732	44.450	46.101	34.925	205.200	323.000	2,340	3,240
76.200	136.525	30.162	29.769	22.225	123.500	182.400	2,340	3,060
76.200	136.525	30.162	29.769	22.225	123.500	182.400	2,340	3,060
76.200	139.992	36.512	36.098	28.575	166.250	247.000	2,340	3,060
76.200	149.225	53.975	54.229	44.45	272.650	389.500	2,340	3,060
76.200	152.400	39.688	36.322	30.162	173.850	270.750	1,980	2,880
76.200	152.400	41.275	41.275	31.750	196.650	281.200	2,160	2,880
76.200	161.925	49.212	46.038	31.750	235.600	275.500	1,980	2,700

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.0	2.5	1.162	JM 612949	JM 612910
2.0	2.0	1.315	484	472
3.5	3.3	1.231	33281	33462
3.5	3.3	1.460	47490	47420
6.4	3.3	1.865	567 S	563
3.5	3.3	1.885	567 A	563
6.4	3.3	2.202	645	633
3.5	3.3	2.540	644	632
3.5	3.3	2.626	H 414249	H 414210
3.5	3.3	3.111	H 715345	H 715311
3.5	3.3	0.893	29685	29620
3.5	3.3	1.188	33287	33462
3.5	3.3	1.825	567	563
3.5	3.3	3.131	657	653
3.5	3.3	4.430	6460	6420
0.8	3.3	1.805	568	563
3.5	3.0	3.302	658	653 X
3.0	2.5	0.910	JLM 714149	JLM 714110
3.0	2.5	1.299	JM 714249	JM 714210
3.0	2.5	3.830	JH 415647	JH 415610
2.0	2.0	0.966	34300	34478
3.5	3.3	1.468	42687	42620
6.4	3.3	1.448	42688	42620
0.8	3.3	1.967	47680	47620
3.5	3.3	2.747	5760	5735
3.5	3.3	1.820	495 A	493
6.4	3.3	1.810	495 AX	493
3.5	3.3	2.398	575	572
3.5	3.3	4.270	6461	6420
3.5	3.2	3.260	590 A	592 A
3.5	3.3	3.370	659	652
3.5	3.3	4.220	9285	9220



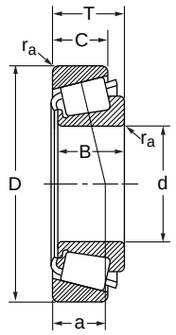
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
76.200	161.925	53.975	55.100	42.862	308.750	456.000	1,980	2,700
76.200	161.925	53.975	55.100	42.862	308.750	456.000	1,980	2,700
76.200	161.925	53.975	55.100	42.862	308.750	456.000	1,980	2,700
76.200	168.275	53.975	56.363	41.275	327.750	446.500	1,980	2,700
76.200	168.275	53.975	56.363	41.275	327.750	446.500	1,980	2,700
76.200	171.450	49.212	46.038	31.750	244.150	294.500	1,800	2,520
76.200	177.800	55.562	50.800	34.925	244.150	294.500	1,800	2,520
77.788	121.442	24.608	23.012	17.462	84.550	117.800	2,520	3,420
77.788	127.000	30.162	31.000	22.225	127.300	185.250	2,520	3,420
77.788	135.733	44.450	46.101	34.925	205.200	323.000	2,340	3,240
79.375	146.050	41.275	41.275	31.750	196.650	281.200	2,160	2,880
79.375	150.089	44.450	46.672	36.512	251.750	351.500	2,160	2,880
80.000	130.000	35.000	34.000	28.500	157.700	238.450	2,340	3,240
80.962	136.525	30.162	29.769	22.225	123.500	182.400	2,340	3,060
80.962	139.700	36.512	36.098	28.575	166.250	247.000	2,340	3,060
80.962	139.992	36.512	36.098	28.575	166.250	247.000	2,340	3,060
82.550	125.412	25.400	25.400	19.845	96.900	155.800	2,340	3,240
82.550	133.350	30.162	29.769	22.225	123.500	182.400	2,340	3,060
82.550	133.350	33.338	33.338	26.195	146.300	225.150	2,340	3,240
82.550	133.350	33.338	33.338	26.195	146.300	225.150	2,340	3,240
82.550	133.350	33.338	33.338	26.195	146.300	225.150	2,340	3,240
82.550	133.350	39.688	39.688	32.545	170.050	294.500	2,340	3,240
82.550	136.525	30.162	29.769	22.225	123.500	182.400	2,340	3,060
82.550	139.700	36.512	36.098	28.575	166.250	247.000	2,340	3,060
82.550	139.992	36.512	36.098	28.575	166.250	247.000	2,340	3,060
82.550	139.992	36.512	36.098	28.575	166.250	247.000	2,340	3,060
82.550	146.050	41.275	41.275	31.750	196.650	281.200	2,160	2,880
82.550	150.000	44.455	46.672	35.000	251.750	351.500	2,160	2,880
82.550	150.089	44.450	46.672	36.512	251.750	351.500	2,160	2,880
82.550	152.400	41.275	41.275	31.750	196.650	281.200	2,160	2,880
82.550	161.925	47.625	48.260	38.100	260.300	370.500	1,980	2,700
82.550	161.925	53.975	55.100	42.862	308.750	456.000	1,980	2,700

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.5	3.3	5.410	6576	6535
6.4	3.3	5.400	6575	6535
6.4	0.8	5.410	6575	6536
6.4	3.3	5.850	843	832
0.8	3.3	5.870	837	832
3.5	3.3	4.980	9380	9321
3.5	3.3	5.950	9378	9320
3.5	2.0	0.928	34306	34478
3.5	3.3	1.414	42690	42620
3.5	3.3	2.677	5795	5735
3.5	3.3	2.881	661	653
3.5	3.3	3.490	750	742
3.0	2.5	1.763	JM 515649	JM 515610
3.5	3.3	1.680	496	493
3.5	3.3	2.214	581	572 X
3.5	3.3	2.228	581	572
3.5	1.5	1.095	27687	27620
3.5	3.3	1.514	495	492 A
3.5	3.3	1.757	47686	47620
0.8	3.3	1.757	47685	47620
6.8	3.3	1.737	47687	47620
6.8	3.3	2.117	HM 516448	HM 516410
3.5	3.3	1.630	495	493
3.5	3.3	2.164	580	572 X
3.5	3.3	2.178	580	572
6.8	3.3	2.158	582	572
3.5	3.3	2.741	663	653
3.5	3.3	3.300	749 A	743
3.5	3.3	3.330	749 A	742
3.5	3.3	3.110	663	652
3.5	3.3	4.400	757	752
3.5	3.3	5.070	6559	6535



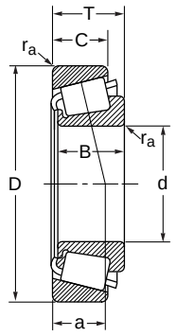
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_0		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
82.550	168.275	47.625	48.260	38.100	260.300	370.500	1,980	2,700
82.550	168.275	53.975	56.363	41.275	327.750	446.500	1,980	2,700
83.345	125.412	25.400	25.400	19.845	96.900	155.800	2,340	3,240
83.345	125.412	25.400	25.400	19.845	96.900	155.800	2,340	3,240
84.138	136.525	30.162	29.769	22.225	123.500	182.400	2,340	3,060
84.138	146.050	41.275	41.275	31.750	196.650	281.200	2,160	2,880
84.138	171.450	49.212	46.038	31.750	244.150	294.500	1,800	2,520
85.000	130.000	30.000	29.000	24.000	131.100	210.900	2,340	3,240
85.000	130.000	30.000	29.000	24.000	131.100	210.900	2,340	3,240
85.000	140.000	39.000	38.000	31.500	191.900	289.750	2,160	3,060
85.000	150.000	46.000	46.000	38.000	261.250	370.500	2,160	2,880
85.026	150.089	44.450	46.672	36.512	251.750	351.500	2,160	2,880
85.026	150.089	44.450	46.672	36.512	251.750	351.500	2,160	2,880
85.725	133.350	30.162	29.769	22.225	123.500	182.400	2,340	3,060
85.725	136.525	30.162	29.769	22.225	123.500	182.400	2,340	3,060
85.725	142.138	42.862	42.862	34.133	209.950	342.000	2,160	3,060
85.725	146.050	41.275	41.275	31.750	196.650	281.200	2,160	2,880
85.725	146.050	41.275	41.275	31.750	196.650	281.200	2,160	2,880
85.725	152.400	39.688	36.322	30.162	173.850	270.750	1,980	2,880
85.725	161.925	47.625	48.260	38.100	260.300	370.500	1,980	2,700
85.725	168.275	41.275	41.275	30.162	211.850	327.750	1,800	2,520
87.312	190.500	57.150	57.531	46.038	370.500	494.000	1,710	2,340
88.900	149.225	31.750	28.971	24.608	133.000	207.100	1,980	2,700
88.900	152.400	39.688	36.322	30.162	173.850	270.750	1,980	2,880
88.900	152.400	39.688	39.688	30.162	240.350	346.750	1,980	2,880
88.900	161.925	47.625	48.260	38.100	260.300	370.500	1,980	2,700
88.900	161.925	47.625	48.260	38.100	260.300	370.500	1,980	2,700
88.900	161.925	53.975	55.100	42.862	308.750	456.000	1,980	2,700
88.900	168.275	47.625	48.260	38.100	260.300	370.500	1,980	2,700
88.900	168.275	53.975	56.363	41.275	327.750	446.500	1,980	2,700
88.900	190.500	57.150	57.531	44.450	337.250	475.000	1,710	2,340
88.900	190.500	57.150	57.531	46.038	370.500	494.000	1,710	2,340

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.5	3.3	4.890	757	753
3.5	3.3	5.500	842	832
3.5	1.5	1.075	27690	27620
0.8	1.5	1.080	27689	27620
3.5	3.3	1.590	498	493
3.5	3.3	2.681	664	653
3.5	3.3	4.620	9385	9321
6.0	2.5	1.392	JM 716648	JM 716610
3.0	2.5	1.404	JM 716649	JM 716610
3.0	2.5	2.318	JHM 516849	JHM 516810
3.0	2.5	3.380	JH 217249	JH 217210
3.5	3.3	3.210	749	742
5.0	3.3	3.210	749 S	742
3.5	3.3	1.421	497	492 A
3.5	3.3	1.537	497	493
4.8	3.3	2.681	HM 617049	HM 617010
6.4	3.3	2.601	665 A	653
3.5	3.3	2.611	665	653
3.5	3.2	2.910	596	592 A
3.5	3.3	4.240	758	752
3.5	3.3	4.150	677	672
8.0	3.3	7.750	HH 221432	HH 221410
3.0	3.3	2.101	42350	42587
3.5	3.2	2.790	593	592 A
6.4	3.3	2.886	HM 518445	HM 518410
3.5	3.3	4.080	759	752
7.0	3.3	4.060	766	752
3.5	3.3	4.700	6580	6535
3.5	3.3	4.570	759	753
3.5	3.3	5.130	850	832
8.0	3.3	7.540	855	854
8.0	3.3	7.650	HH 221434	HH 221410



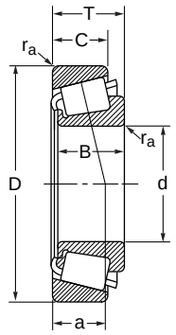
Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
90.000	145.000	35.000	34.000	27.000	180.500	270.750	2,160	2,880
90.000	147.000	40.000	40.000	32.500	217.550	327.750	2,160	2,880
90.000	155.000	44.000	44.000	35.500	260.300	375.250	1,980	2,700
90.488	161.925	47.625	48.260	38.100	260.300	370.500	1,980	2,700
92.075	146.050	33.338	34.925	26.195	160.550	266.000	2,160	2,880
92.075	148.430	28.575	28.971	21.433	133.000	207.100	1,980	2,700
92.075	152.400	39.688	36.322	30.162	173.850	270.750	1,980	2,880
92.075	152.400	39.688	36.322	30.162	173.850	270.750	1,980	2,880
92.075	168.275	41.275	41.275	30.162	211.850	327.750	1,800	2,520
92.075	190.500	57.150	57.531	44.450	337.250	475.000	1,710	2,340
93.662	148.430	28.575	28.971	21.433	133.000	207.100	1,980	2,700
93.662	149.225	31.750	28.971	24.608	133.000	207.100	1,980	2,700
93.662	152.400	39.688	36.322	30.162	173.850	270.750	1,980	2,880
95.000	150.000	35.000	34.000	27.000	173.850	270.750	1,980	2,880
95.250	146.050	33.338	34.925	26.195	160.550	266.000	2,160	2,880
95.250	148.430	28.575	28.971	21.433	133.000	207.100	1,980	2,700
95.250	149.225	31.750	28.971	24.608	133.000	207.100	1,980	2,700
95.250	152.400	39.688	36.322	30.162	173.850	270.750	1,980	2,880
95.250	152.400	39.688	36.322	33.338	173.850	270.750	1,980	2,880
95.250	168.275	41.275	41.275	30.162	211.850	327.750	1,800	2,520
95.250	171.450	47.625	48.260	38.100	267.900	394.250	1,800	2,520
95.250	180.975	47.625	48.006	38.100	245.100	356.250	1,800	2,340
95.250	190.500	57.150	57.531	44.450	337.250	475.000	1,710	2,340
95.250	190.500	57.150	57.531	46.038	370.500	494.000	1,710	2,340
96.838	148.430	28.575	28.971	21.433	133.000	207.100	1,980	2,700
96.838	149.225	31.750	28.971	24.606	133.000	207.100	1,980	2,700
98.425	161.925	36.512	36.116	26.195	181.450	294.500	1,800	2,520
98.425	168.275	41.275	41.275	30.162	211.850	327.750	1,800	2,520
98.425	180.975	47.625	48.006	38.100	245.100	356.250	1,800	2,340
98.425	190.500	57.150	57.531	44.450	337.250	475.000	1,710	2,340
98.425	190.500	57.150	57.531	46.038	370.500	494.000	1,710	2,340
99.982	190.500	57.150	57.531	46.038	370.500	494.000	1,710	2,340

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.0	2.5	2.150	JM 718149	JM 718110
7.0	3.5	2.566	HM 218248	HM 218210
3.0	2.5	3.330	JHM 318448	JHM 318410
3.5	3.3	3.990	760	752
3.5	3.3	2.124	47890	47820
3.5	3.0	1.843	42362	42584
3.5	3.2	2.660	598	592 A
6.4	3.2	2.650	598 A	592 A
3.5	3.3	3.860	681	672
8.0	3.3	7.330	857	854
3.0	3.0	1.793	42368	42584
3.0	3.3	1.951	42368	42587
3.5	3.2	2.600	597	592 A
3.0	2.5	2.225	JM 719149	JM 719113
3.5	3.3	1.994	47896	47820
3.0	3.0	1.733	42375	42584
3.5	3.3	1.891	42376	42587
3.5	3.2	2.530	594	592 A
3.5	3.3	2.590	594	592
3.5	3.3	3.710	683	672
3.5	3.3	4.580	77375	77675
3.5	3.3	5.240	776	772
8.0	3.3	7.120	864	854
8.0	3.3	7.240	HH 221440	HH 221410
3.5	3.0	1.683	42381	42584
3.5	3.3	1.841	42381	42587
3.5	3.3	2.832	52387	52637
3.5	3.3	3.560	685	672
3.5	3.3	5.050	779	772
3.5	3.3	6.930	866	854
3.5	3.3	7.050	HH 221442	HH 221410
6.4	3.3	6.920	HH 221447	HH 221410



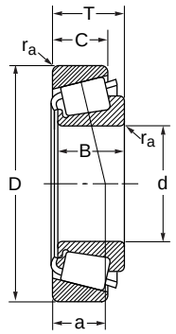
Basic Dimensions					Basic Load Ratings		Limiting Speed	
d	D	T	B	C	Dynamic C	Static C_O	Grease	Oil
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
100.000	150.000	32.000	30.000	26.000	138.700	223.250	1,980	2,700
100.000	155.000	36.000	35.000	28.000	181.450	308.750	1,800	2,520
100.000	160.000	41.000	40.000	32.000	227.050	361.000	1,800	2,520
100.012	157.162	36.512	36.116	26.195	181.450	294.500	1,800	2,520
101.600	157.162	36.512	36.116	26.195	181.450	294.500	1,800	2,520
101.600	161.925	36.512	36.116	26.195	181.450	294.500	1,800	2,520
101.600	168.275	41.275	41.275	30.162	211.850	327.750	1,800	2,520
101.600	180.975	47.625	48.006	38.100	245.100	356.250	1,800	2,340
101.600	190.500	57.150	57.531	44.450	337.250	475.000	1,710	2,340
101.600	190.500	57.150	57.531	46.038	370.500	494.000	1,710	2,340
101.600	212.725	66.675	66.675	53.975	541.500	769.500	1,530	1,980
104.775	180.975	47.625	48.006	38.100	245.100	356.250	1,800	2,340
104.775	180.975	47.625	48.006	38.100	245.100	356.250	1,800	2,340
104.775	190.500	47.625	49.212	34.925	281.200	441.750	1,620	2,160
106.362	165.100	36.512	36.512	26.988	185.250	304.000	1,800	2,340
107.950	158.750	23.020	21.438	15.875	96.900	156.750	1,800	2,520
107.950	159.987	34.925	34.925	26.988	155.800	299.250	1,800	2,520
107.950	161.925	34.925	34.925	26.988	155.800	266.000	1,800	2,520
107.950	165.100	36.512	36.512	26.988	185.250	304.000	1,800	2,340
107.950	190.500	47.625	49.212	34.925	281.200	441.750	1,620	2,160
107.950	212.725	66.675	66.675	53.975	541.500	769.500	1,530	1,980
109.987	159.987	34.925	34.925	26.988	155.800	299.250	1,800	2,520
109.987	159.987	34.925	34.925	26.988	155.800	299.250	1,800	2,520
109.992	177.800	41.275	41.275	30.162	220.400	356.250	1,620	2,340
110.000	165.000	35.000	35.000	26.500	185.250	304.000	1,800	2,340
110.000	180.000	47.000	46.000	38.000	294.500	465.500	1,710	2,340
111.125	190.500	47.625	49.212	34.925	281.200	441.750	1,620	2,160
114.300	152.400	21.433	21.433	16.670	85.025	169.100	1,800	2,520
114.300	177.800	41.275	41.275	30.162	220.400	356.250	1,620	2,340
114.300	180.000	34.925	31.750	25.400	165.300	241.300	1,620	2,160
114.300	190.500	47.625	49.212	34.925	281.200	441.750	1,620	2,160
114.300	212.725	66.675	66.675	53.975	451.250	665.000	1,530	2,160

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
2.3	2.3	1.886	JLM 820048	JLM 820012
3.0	2.5	2.452	JM 720249	JM 720210
3.0	2.5	3.064	JHM 720249	JHM 720210
3.5	3.3	2.512	52393	52618
3.5	3.3	2.452	52400	52618
3.5	3.3	2.692	52400	52637
3.5	3.3	3.390	687	672
3.5	3.3	4.870	780	772
8.0	3.3	6.680	861	854
8.0	3.3	6.790	HH 221449	HH 221410
7.0	3.3	11.200	HH 224335	HH 224310
7.0	3.3	4.650	787	772
3.5	3.3	4.670	782	772
3.5	3.3	5.710	71412	71750
3.5	3.3	2.731	56418	56650
3.5	3.3	1.374	37425	37625
3.5	3.3	2.434	LM 522546	LM 522510
3.5	3.3	2.420	48190	48120
3.5	3.3	2.661	56425	56650
3.5	3.3	5.500	71425	71750
8.0	3.3	10.640	HH 224340	HH 224310
3.5	3.3	2.334	LM 522549	LM 522510
8.0	3.3	2.314	LM 522548	LM 522510
3.5	3.3	3.750	64433	64700
3.0	2.5	2.482	JM 822049	JM 822010
3.0	2.5	4.630	JHM 522649	JHM 522610
3.5	3.3	5.290	71437	71750
1.5	1.5	1.069	L 623149	L 623110
3.5	3.3	3.500	64450	64700
3.5	0.8	2.950	68450	68709
3.5	3.3	5.080	71450	71750
7.0	3.3	10.120	938	932



Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
114.300	212.725	66.675	66.675	53.975	541.500	769.500	1,530	1,980
115.087	190.500	47.625	49.212	34.925	281.200	441.750	1,620	2,160
117.475	180.975	34.925	31.750	25.400	165.300	241.300	1,620	2,160
120.000	170.000	25.400	25.400	19.050	123.500	208.050	1,710	2,340
120.000	174.625	35.720	36.512	27.783	201.400	365.750	1,710	2,340
120.650	182.562	39.688	38.100	33.338	216.600	422.750	1,620	2,160
120.650	206.375	47.625	47.625	34.925	304.000	503.500	1,440	1,980
120.650	182.562	39.688	38.100	33.338	216.600	422.750	1,620	2,160
120.650	206.375	47.625	47.625	34.925	304.000	503.500	1,440	1,980
123.825	182.562	39.688	38.100	33.338	216.600	422.750	1,620	2,160
125.000	175.000	25.400	25.400	18.288	127.300	220.400	1,620	2,160
127.000	165.895	18.258	17.462	13.495	80.275	141.550	1,710	2,340
127.000	182.562	39.688	38.100	33.338	216.600	422.750	1,620	2,160
127.000	196.850	46.038	46.038	38.100	299.250	532.000	1,530	1,980
127.000	215.900	47.625	47.625	34.925	272.650	470.250	1,350	1,800
128.588	206.375	47.625	47.625	34.925	304.000	503.500	1,440	1,980
130.000	206.375	47.625	47.625	34.925	304.000	503.500	1,440	1,980
130.175	203.200	46.038	46.038	38.100	299.250	532.000	1,530	1,980
130.175	206.375	47.625	47.625	34.925	304.000	503.500	1,440	1,980
133.350	177.008	25.400	26.195	20.638	117.800	245.100	1,620	2,160
133.350	190.500	39.688	39.688	33.338	228.000	460.750	1,530	1,980
133.350	196.850	46.038	46.038	38.100	299.250	532.000	1,530	1,980
133.350	215.900	47.625	47.625	34.925	272.650	470.250	1,350	1,800
136.525	190.500	39.688	39.688	33.338	228.000	460.750	1,530	1,980
136.525	217.488	47.625	47.625	34.925	272.650	470.250	1,350	1,800
139.700	187.325	28.575	29.370	23.020	145.350	289.750	1,530	1,980
139.700	215.900	47.625	47.625	34.925	272.650	470.250	1,350	1,800
139.700	254.000	66.675	66.675	47.625	489.250	788.500	1,170	1,620
142.875	200.025	41.275	39.688	34.130	215.650	437.000	1,440	1,980
146.050	193.675	28.575	28.575	23.020	161.500	337.250	1,440	1,980
146.050	236.538	57.150	56.642	44.450	432.250	684.000	1,260	1,710
146.050	254.000	66.675	66.675	47.625	489.250	788.500	1,170	1,620
149.225	254.000	66.675	66.675	47.625	489.250	788.500	1,170	1,620
152.400	254.000	66.675	66.675	47.625	489.250	788.500	1,170	1,620

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
7.0	3.3	10.070	HH 224346	HH 224310
3.5	3.3	5.020	71453	71750
3.5	3.3	2.780	68462	68712
3.3	3.3	1.671	JL 724348	JL 724314
3.5	1.5	2.766	M 224748	M 224710
3.5	3.3	3.700	48282	48220
3.3	3.3	6.340	795	792
3.5	3.3	3.510	48286	48220
3.3	3.3	1.763	JL 725346	JL 725316
1.5	1.5	0.935	LL 225749	LL 225710
3.5	3.3	3.330	48290	48220
3.5	3.3	5.200	67388	67322
3.5	3.3	6.910	74500	74850
3.3	3.3	5.760	799	792
3.5	3.3	5.660	797	792
3.5	3.3	5.570	67389	67320
3.5	3.3	5.640	799 A	792
1.5	1.5	1.730	L 327249	L 327210
3.5	3.3	3.740	48385	48320
3.5	3.3	4.730	67390	67322
3.5	3.3	6.430	74525	74850
3.5	3.3	3.530	48393	48320
3.5	3.3	6.320	74537	74856
1.5	1.5	2.260	LM 328448	LM 328410
3.5	3.3	5.920	74550	74850
7.0	3.3	13.820	99550	99100
3.5	3.3	3.820	48685	48620
1.5	1.5	2.365	36690	36620
3.5	3.3	9.000	HM 231140	HM 231110
7.0	3.3	13.070	99575	99100
7.0	3.3	12.690	99587	99100
7.0	3.3	12.290	99600	99100



Basic Dimensions					Basic Load Ratings		Limiting Speed	
					Dynamic	Static	Grease	Oil
d	D	T	B	C	C	C_O		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min
158.750	225.425	41.275	39.688	33.338	228.000	513.000	1,260	1,710
165.100	247.650	47.625	47.625	38.100	327.750	669.750	1,170	1,530
170.000	230.000	39.000	38.000	31.000	264.100	494.000	1,170	1,620
170.000	240.000	46.000	44.500	37.000	361.000	684.000	1,170	1,620
174.625	247.650	47.625	47.625	38.100	327.750	669.750	1,170	1,530
177.800	227.012	30.162	30.162	23.020	171.950	394.250	1,170	1,620
177.800	247.650	47.625	47.625	38.100	327.750	669.750	1,170	1,530
177.800	260.350	53.975	53.975	41.275	432.250	793.250	1,080	1,530
190.000	260.000	46.000	44.000	36.500	351.500	693.500	990	1,440
190.500	266.700	47.625	46.833	38.100	327.750	684.000	990	1,350
200.000	300.000	65.000	62.000	51.000	584.250	1073.500	900	1,260
203.200	282.575	46.038	46.038	36.512	346.750	760.000	900	1,260
206.375	282.575	46.038	46.038	36.512	346.750	760.000	900	1,260

Chamfer Dimension		Mass	Designation	
Cone r_a max	Cup r_a max	Cone + Cup		
mm	mm	kg	cone	cup
3.5	3.3	5.350	46780	46720
3.5	3.3	8.160	67780	67720
3.0	2.5	4.400	JHM 534149	JHM 534110
3.0	2.5	6.440	JM 734449	JM 734410
3.5	3.3	7.210	67787	67720
1.5	1.5	3.007	36990	36990
3.5	3.3	6.890	67790	67720
3.5	3.3	9.350	M 236849	M 236810
3.0	2.5	6.930	JM 738249	JM 738210
3.5	3.3	8.040	67885	67820
3.5	2.5	15.490	JHM 840449	JHM 840410
3.5	3.3	8.850	67983	67920
3.5	3.3	8.480	67985	67920

NIS™

Cylindrical Roller Bearings

Prefix & Suffix

QJ	3	08	M

Prefix

NU : No flange on inner ring, inner ring is removable from both directions
N : No flange on outer ring, outer ring is removable from both directions
NJ : Only one flange on inner ring, inner ring is removable from one direction
NUP : One flange on one side of inner ring and another non-integral flange on the other side of inner ring, inner ring cannot be removed
NF : Only 1 flange on the outer ring, outer ring is removable from one direction

Basic type series

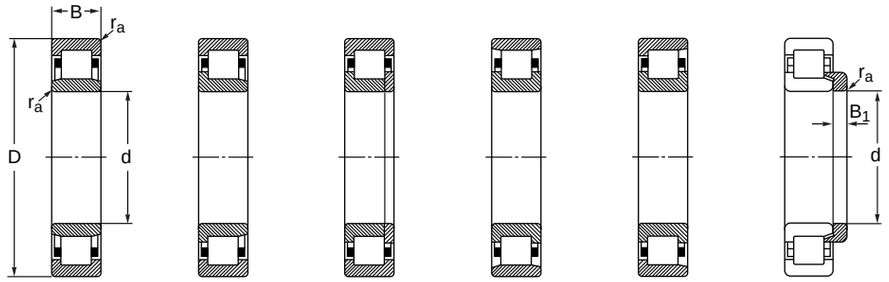
10 : Light
2 or 22 : Standard
3 or 23 : Medium
4 : Heavy

Bore size (mm)

00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

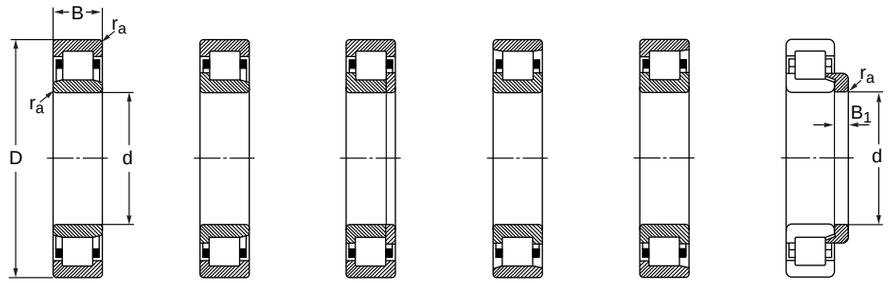
Suffix

"Blank" : Steel cage
M : Machined brass cage



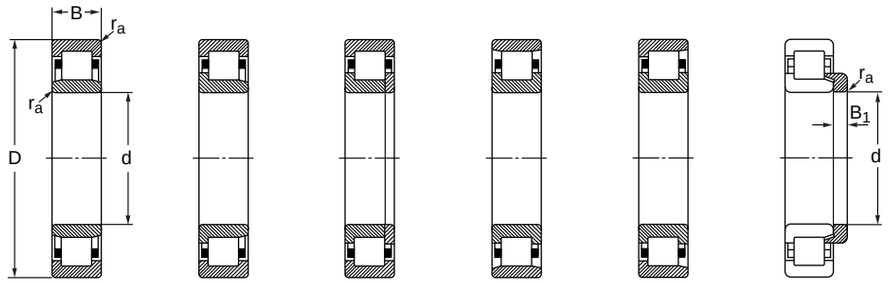
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	mm	r_a max kg		
15	35	11	11.875	9.690	17,100	20,900	0.6	0.047	NU 202	HJ 202
15	35	11	11.875	9.690	17,100	20,900	0.6	0.049	NJ 202	HJ 202
15	42	13	18.430	14.535	15,200	18,050	1.0	0.086	NU 302	HJ 302
15	42	13	18.430	14.535	15,200	18,050	1.0	0.088	NJ 302	HJ 302
17	40	12	16.340	13.585	15,200	18,050	0.6	0.068	NU 203	HJ 203
17	40	12	16.340	13.585	15,200	18,050	0.6	0.070	NJ 203	HJ 203
17	40	12	16.340	13.585	15,200	18,050	0.6	0.073	NUP 203	-
17	40	12	16.340	13.585	15,200	18,050	0.6	0.066	N 203	-
17	40	16	22.610	20.520	15,200	18,050	0.6	0.092	NU 2203	HJ 2203
17	40	16	22.610	20.520	15,200	18,050	0.6	0.095	NJ 2203	HJ 2203
17	40	16	22.610	20.520	15,200	18,050	0.6	0.097	NUP 2203	-
17	47	14	23.370	19.380	13,300	16,150	1.0	0.120	NU 303	HJ 303
17	47	14	23.370	19.380	13,300	16,150	1.0	0.120	NJ 303	HJ 303
17	47	14	23.370	19.380	13,300	16,150	1.0	0.130	NUP 303	-
17	47	14	23.370	19.380	13,300	16,150	1.0	0.120	N 303	-
20	47	14	23.845	20.900	12,350	15,200	1.0	0.110	NU 204	HJ 204
20	47	14	23.845	20.900	12,350	15,200	1.0	0.110	NJ 204	HJ 204
20	47	14	23.845	20.900	12,350	15,200	1.0	0.120	NUP 204	-
20	47	14	23.845	20.900	12,350	15,200	1.0	0.110	N 204	-
20	47	18	28.215	26.125	12,350	15,200	1.0	0.140	NU 2204	HJ 2204
20	47	18	28.215	26.125	12,350	15,200	1.0	0.140	NJ 2204	HJ 2204
20	52	15	29.260	24.700	11,400	14,250	1.0	0.150	NU 304	HJ 304
20	52	15	29.260	24.700	11,400	14,250	1.0	0.150	NJ 304	HJ 304
20	52	15	29.260	24.700	11,400	14,250	1.0	0.160	NUP 304	-
20	52	15	29.260	24.700	11,400	14,250	1.0	0.150	N 304	-
20	52	21	39.235	36.100	10,450	13,300	1.0	0.210	NU 2304	HJ 2304
20	52	21	39.235	36.100	10,450	13,300	1.0	0.220	NJ 2304	HJ 2304
20	52	21	39.235	36.100	10,450	13,300	1.0	0.220	NUP 2304	-
25	47	12	13.490	12.540	14,250	17,100	0.6	0.084	NU 1005	-
25	52	15	27.170	25.650	10,450	13,300	1.0	0.130	NU 205	HJ 205
25	52	15	27.170	25.650	10,450	13,300	1.0	0.140	NJ 205	HJ 205
25	52	15	27.170	25.650	10,450	13,300	1.0	0.140	NUP 205	-



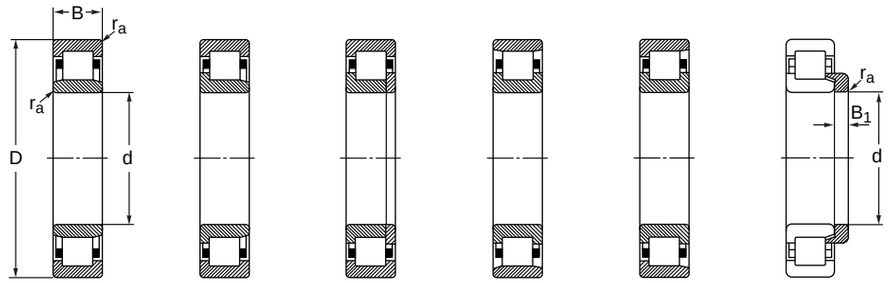
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Grease	Oil		r_a max	Bearings	Angle Ring
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
25	52	15	27.170	25.650	10,450	13,300	1.0	0.130	N 205	-
25	52	18	32.395	32.300	10,450	13,300	1.0	0.160	NU 2205	HJ 2205
25	52	18	32.395	32.300	10,450	13,300	1.0	0.170	NJ 2205	HJ 2205
25	52	18	32.395	32.300	10,450	13,300	1.0	0.170	NUP 2205	-
25	62	17	38.190	34.675	9,025	11,400	1.0	0.240	NU 305	HJ 305
25	62	17	38.190	34.675	9,025	11,400	1.0	0.250	NJ 305	HJ 305
25	62	17	38.190	34.675	9,025	11,400	1.0	0.250	NUP 305	-
25	62	17	38.190	34.675	9,025	11,400	1.0	0.240	N 305	-
25	62	24	53.295	52.250	8,550	10,450	1.0	0.350	NU 2305	HJ 2305
25	62	24	53.295	52.250	8,550	10,450	1.0	0.360	NJ 2305	HJ 2305
25	62	24	53.295	52.250	8,550	10,450	1.0	0.380	NUP 2305	-
30	55	13	17.005	16.435	11,400	14,250	1.0	0.120	NU 1006	-
30	62	16	36.100	34.675	9,025	11,400	1.0	0.200	NU 206	HJ 206
30	62	16	36.100	34.675	9,025	11,400	1.0	0.210	NJ 206	HJ 206
30	62	16	36.100	34.675	9,025	11,400	1.0	0.220	NUP 206	-
30	62	16	36.100	34.675	9,025	11,400	1.0	0.200	N 206	-
30	62	20	45.980	46.550	9,025	11,400	1.0	0.260	NU 2206	HJ 2206
30	62	20	45.980	46.550	9,025	11,400	1.0	0.270	NJ 2206	HJ 2206
30	62	20	45.980	46.550	9,025	11,400	1.0	0.270	NUP 2206	-
30	62	20	45.980	46.550	9,025	11,400	1.0	0.260	N 2206	-
30	72	19	48.640	45.600	8,550	10,450	1.0	0.360	NU 306	HJ 306
30	72	19	48.640	45.600	8,550	10,450	1.0	0.370	NJ 306	HJ 306
30	72	19	48.640	45.600	8,550	10,450	1.0	0.380	NUP 306	-
30	72	19	48.640	45.600	8,550	10,450	1.0	0.360	N 306	-
30	72	27	70.015	71.250	7,600	9,025	1.0	0.530	NU 2306	HJ 2306
30	72	27	70.015	71.250	7,600	9,025	1.0	0.540	NJ 2306	HJ 2306
30	72	27	70.015	71.250	7,600	9,025	1.0	0.550	NUP 2306	-
30	90	23	57.475	50.350	7,125	8,550	1.5	0.750	NU 406	HJ 406
30	90	23	57.475	50.350	7,125	8,550	1.5	0.770	NJ 406	HJ 406
35	62	14	34.010	36.100	9,500	12,350	1.0	0.160	NU 1007	-
35	72	17	45.980	45.600	8,075	9,500	1.0	0.300	NU 207	HJ 207
35	72	17	45.980	45.600	8,075	9,500	1.0	0.310	NJ 207	HJ 207



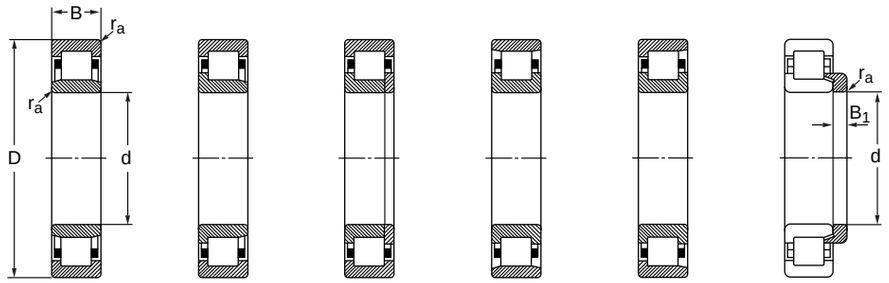
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Grease	Oil		r_a max	Bearings	Angle Ring
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
35	72	17	45.980	45.600	8,075	9,500	1.0	0.310	NUP 207	-
35	72	17	45.980	45.600	8,075	9,500	1.0	0.300	N 207	-
35	72	23	56.430	59.850	8,075	9,500	1.0	0.400	NU 2207	HJ 2207
35	72	23	56.430	59.850	8,075	9,500	1.0	0.410	NJ 2207	HJ 2207
35	72	23	56.430	59.850	8,075	9,500	1.0	0.420	NUP 2207	-
35	72	23	56.430	59.850	8,075	9,500	1.0	0.400	N 2207	-
35	80	21	61.180	59.850	7,600	9,025	1.5	0.480	NU 307	HJ 307
35	80	21	61.180	59.850	7,600	9,025	1.5	0.490	NJ 307	HJ 307
35	80	21	61.180	59.850	7,600	9,025	1.5	0.510	NUP 307	-
35	80	21	61.180	59.850	7,600	9,025	1.5	0.480	N 307	-
35	80	31	86.735	93.100	6,650	8,075	1.5	0.720	NU 2307	HJ 2307
35	80	31	86.735	93.100	6,650	8,075	1.5	0.730	NJ 2307	HJ 2307
35	80	31	86.735	93.100	6,650	8,075	1.5	0.750	NUP 2307	-
35	100	25	72.675	66.025	6,365	7,600	1.5	1.000	NU 407	HJ 407
35	100	25	72.675	66.025	6,365	7,600	1.5	1.050	NJ 407	HJ 407
35	100	25	72.675	66.025	6,365	7,600	1.5	1.050	NUP 407	-
40	68	15	23.845	24.700	9,025	11,400	1.0	0.220	NU 1008	-
40	80	18	51.205	50.350	7,125	8,550	1.0	0.370	NU 208	HJ 208
40	80	18	51.205	50.350	7,125	8,550	1.0	0.380	NJ 208	HJ 208
40	80	18	51.205	50.350	7,125	8,550	1.0	0.400	NUP 208	-
40	80	18	51.205	50.350	7,125	8,550	1.0	0.370	N 208	-
40	80	23	66.880	71.250	7,125	8,550	1.0	0.490	NU 2208	HJ 2208
40	80	23	66.880	71.250	7,125	8,550	1.0	0.500	NJ 2208	HJ 2208
40	80	23	66.880	71.250	7,125	8,550	1.0	0.510	NUP 2208	-
40	80	23	66.880	71.250	7,125	8,550	1.0	0.490	N 2208	-
40	90	23	76.855	74.100	6,365	7,600	1.5	0.650	NU 308	HJ 308
40	90	23	76.855	74.100	6,365	7,600	1.5	0.670	NJ 308	HJ 308
40	90	23	76.855	74.100	6,365	7,600	1.5	0.680	NUP 308	-
40	90	23	76.855	74.100	6,365	7,600	1.5	0.640	N 308	-
40	90	33	106.400	114.000	5,985	7,125	1.5	0.940	NU 2308	HJ 2308
40	90	33	106.400	114.000	5,985	7,125	1.5	0.960	NJ 2308	HJ 2308
40	90	33	106.400	114.000	5,985	7,125	1.5	0.980	NUP 2308	-



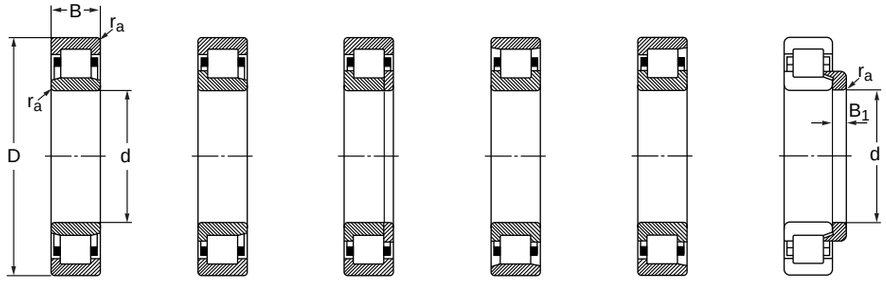
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Grease	Oil		r_a max	Bearings	Angle Ring
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
40	110	27	91.960	85.500	5,700	6,650	2.0	1.300	NU 408	HJ 408
40	110	27	91.960	85.500	5,700	6,650	2.0	1.300	NJ 408	HJ 408
40	110	27	91.960	85.500	5,700	6,650	2.0	1.350	NUP 408	-
45	75	16	42.370	49.400	8,550	10,450	1.0	0.260	NU 1009	-
45	85	19	57.475	60.800	6,365	7,600	1.0	0.430	NU 209	HJ 209
45	85	19	57.475	60.800	6,365	7,600	1.0	0.440	NJ 209	HJ 209
45	85	19	57.475	60.800	6,365	7,600	1.0	0.450	NUP 209	-
45	85	19	57.475	60.800	6,365	7,600	1.0	0.430	N 209	-
45	85	23	70.015	77.425	6,365	7,600	1.0	0.520	NU 2209	HJ 2209
45	85	23	70.015	77.425	6,365	7,600	1.0	0.540	NJ 2209	HJ 2209
45	85	23	70.015	77.425	6,365	7,600	1.0	0.550	NUP 2209	-
45	85	23	70.015	77.425	6,365	7,600	1.0	0.520	N 2209	-
45	100	25	94.050	95.000	5,985	7,125	1.5	0.900	NU 309	HJ 309
45	100	25	94.050	95.000	5,985	7,125	1.5	0.920	NJ 309	HJ 309
45	100	25	94.050	95.000	5,985	7,125	1.5	0.950	NUP 309	-
45	100	25	94.050	95.000	5,985	7,125	1.5	0.880	N 309	-
45	100	36	131.100	145.350	5,320	6,365	1.5	1.300	NU 2309	HJ 2309
45	100	36	131.100	145.350	5,320	6,365	1.5	1.300	NJ 2309	HJ 2309
45	100	36	131.100	145.350	5,320	6,365	1.5	1.350	NUP 2309	-
45	120	29	100.700	96.900	5,320	6,365	2.0	1.650	NU 409	HJ 409
45	120	29	100.700	96.900	5,320	6,365	2.0	1.650	NJ 409	HJ 409
45	120	29	100.700	96.900	5,320	6,365	2.0	1.700	NUP 409	-
50	80	16	29.260	32.775	8,075	9,500	1.0	0.310	NU 1010	-
50	90	20	61.180	66.025	5,985	7,125	1.0	0.480	NU 210	HJ 210
50	90	20	61.180	66.025	5,985	7,125	1.0	0.490	NJ 210	HJ 210
50	90	20	61.180	66.025	5,985	7,125	1.0	0.510	NUP 210	-
50	90	20	61.180	66.025	5,985	7,125	1.0	0.480	N 210	-
50	90	23	74.195	83.600	5,985	7,125	1.0	0.560	NU 2210	HJ 210
50	90	23	74.195	83.600	5,985	7,125	1.0	0.580	NJ 2210	HJ 210
50	90	23	74.195	83.600	5,985	7,125	1.0	0.590	NUP 2210	-
50	110	27	104.500	106.400	4,750	5,700	2.0	1.150	NU 310	HJ 310
50	110	27	104.500	106.400	4,750	5,700	2.0	1.150	NJ 310	HJ 310



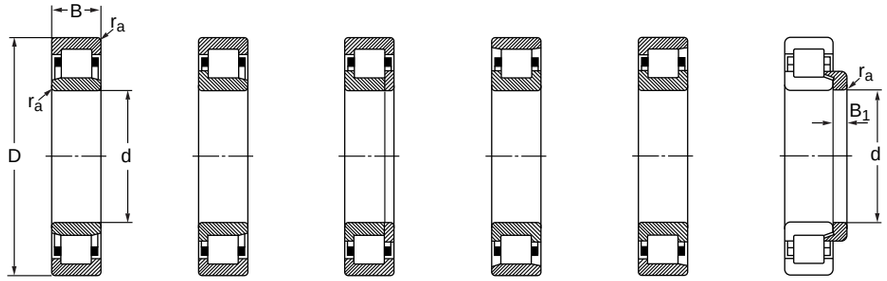
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Grease	Oil		r_a max	Bearings	Angle Ring
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
50	110	27	104.500	106.400	4,750	5,700	2.0	1.200	NUP 310	-
50	110	27	104.500	106.400	4,750	5,700	2.0	1.150	N 310	-
50	110	40	152.950	176.700	4,750	5,700	2.0	1.700	NU 2310	HJ 2310
50	110	40	152.950	176.700	4,750	5,700	2.0	1.750	NJ 2310	HJ 2310
50	110	40	152.950	176.700	4,750	5,700	2.0	1.800	NUP 2310	-
50	130	31	123.500	120.650	4,750	5,700	2.0	2.000	NU 410	HJ 410
50	130	31	123.500	120.650	4,750	5,700	2.0	2.050	NJ 410	HJ 410
55	90	18	54.340	66.025	6,650	8,075	1.0	0.400	NU 1011	-
55	100	21	79.990	90.250	5,700	6,650	1.5	0.660	NU 211	HJ 211
55	100	21	79.990	90.250	5,700	6,650	1.5	0.670	NJ 211	HJ 211
55	100	21	79.990	90.250	5,700	6,650	1.5	0.690	NUP 211	-
55	100	21	79.990	90.250	5,700	6,650	1.5	0.660	N 211	-
55	100	25	94.050	112.100	5,700	6,650	1.5	0.790	NU 2211	HJ 2211
55	100	25	94.050	112.100	5,700	6,650	1.5	0.810	NJ 2211	HJ 2211
55	100	25	94.050	112.100	5,700	6,650	1.5	0.820	NUP 2211	-
55	100	25	94.050	112.100	5,700	6,650	1.5	0.790	N 2211	-
55	120	29	131.100	135.850	4,560	5,320	2.0	1.450	NU 311	HJ 311
55	120	29	131.100	135.850	4,560	5,320	2.0	1.500	NJ 311	HJ 311
55	120	29	131.100	135.850	4,560	5,320	2.0	1.550	NUP 311	-
55	120	29	131.100	135.850	4,560	5,320	2.0	1.450	N 311	-
55	120	43	190.950	220.400	4,560	5,320	2.0	2.200	NU 2311	HJ 2311
55	120	43	190.950	220.400	4,560	5,320	2.0	2.250	NJ 2311	HJ 2311
55	120	43	190.950	220.400	4,560	5,320	2.0	2.300	NUP 2311	-
55	140	33	134.900	133.000	4,560	5,320	2.0	2.500	NU 411	HJ 411
55	140	33	134.900	133.000	4,560	5,320	2.0	2.550	NJ 411	HJ 411
55	140	33	134.900	133.000	4,560	5,320	2.0	2.600	NUP 411	-
60	95	18	35.530	41.800	6,365	7,600	1.0	0.480	NU 1012	-
60	110	22	88.825	96.900	5,035	5,985	1.5	0.810	NU 212	HJ 212
60	110	22	88.825	96.900	5,035	5,985	1.5	0.830	NJ 212	HJ 212
60	110	22	88.825	96.900	5,035	5,985	1.5	0.860	NUP 212	-
60	110	22	88.825	96.900	5,035	5,985	1.5	0.810	N 212	-
60	110	28	121.600	145.350	5,035	5,985	1.5	1.100	NU 2212	HJ 212



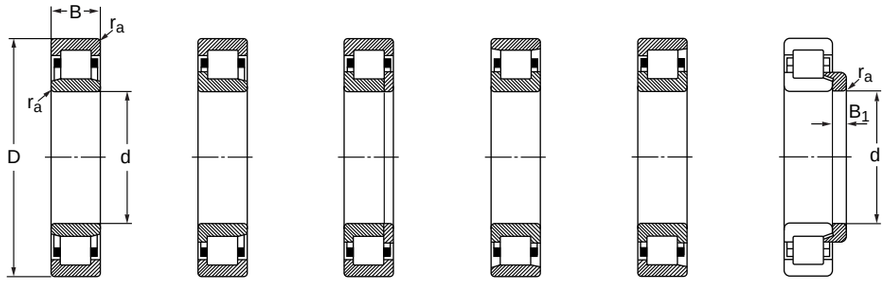
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d	D	B	C	C_0				r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
60	110	28	121.600	145.350	5,035	5,985	1.5	1.100	NJ 2212	HJ 212
60	110	28	121.600	145.350	5,035	5,985	1.5	1.150	NUP 2212	-
60	110	28	121.600	145.350	5,035	5,985	1.5	1.100	N 2212	-
60	130	31	143.450	152.000	4,085	4,750	2.0	1.800	NU 312	HJ 312
60	130	31	143.450	152.000	4,085	4,750	2.0	1.900	NJ 312	HJ 312
60	130	31	143.450	152.000	4,085	4,750	2.0	1.950	NUP 312	-
60	130	31	143.450	152.000	4,085	4,750	2.0	1.800	N 312	-
60	130	46	212.800	251.750	4,085	4,750	2.0	2.750	NU 2312	HJ 2312
60	130	46	212.800	251.750	4,085	4,750	2.0	2.800	NJ 2312	HJ 2312
60	130	46	212.800	251.750	4,085	4,750	2.0	2.850	NUP 2312	-
60	150	35	159.600	164.350	4,085	4,750	2.0	3.000	NU 412	HJ 412
60	150	35	159.600	164.350	4,085	4,750	2.0	3.100	NJ 412	HJ 412
60	150	35	159.600	164.350	4,085	4,750	2.0	3.150	NUP 412	-
65	100	18	36.100	44.175	5,985	7,125	1.0	0.510	NU 1013	-
65	120	23	100.700	112.100	4,560	5,320	1.5	1.050	NU 213	HJ 213
65	120	23	100.700	112.100	4,560	5,320	1.5	1.050	NJ 213	HJ 213
65	120	23	100.700	112.100	4,560	5,320	1.5	1.100	NUP 213	-
65	120	23	100.700	112.100	4,560	5,320	1.5	1.050	N 213	-
65	120	31	139.650	171.000	4,560	5,320	1.5	1.400	NU 2213	HJ 2213
65	120	31	139.650	171.000	4,560	5,320	1.5	1.450	NJ 2213	HJ 2213
65	120	31	139.650	171.000	4,560	5,320	1.5	1.500	NUP 2213	-
65	140	33	173.850	186.200	3,800	4,560	2.0	2.250	NU 313	HJ 313
65	140	33	173.850	186.200	3,800	4,560	2.0	2.300	NJ 313	HJ 313
65	140	33	173.850	186.200	3,800	4,560	2.0	2.350	NUP 313	-
65	140	33	173.850	186.200	3,800	4,560	2.0	2.250	N 313	-
65	140	48	238.450	275.500	3,800	4,560	2.0	3.300	NU 2313	HJ 2313
65	140	48	238.450	275.500	3,800	4,560	2.0	3.350	NJ 2313	HJ 2313
65	140	48	238.450	275.500	3,800	4,560	2.0	3.450	NUP 2313	-
65	160	37	173.850	180.500	3,800	4,560	2.0	3.600	NU 413	HJ 413
65	160	37	173.850	180.500	3,800	4,560	2.0	3.650	NJ 413	HJ 413
70	110	20	53.295	63.840	5,700	6,650	1.0	0.700	NU 1014	-
70	125	24	113.050	130.150	4,275	5,035	1.5	1.150	NU 214	HJ 214



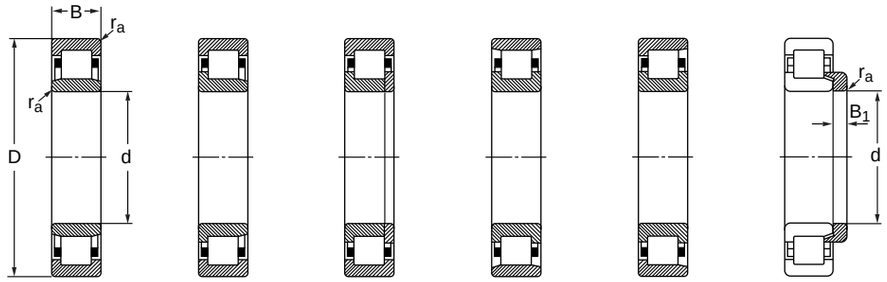
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d	D	B	C	C_0				r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
70	125	24	113.050	130.150	4,275	5,035	1.5	1.150	NJ 214	HJ 214
70	125	24	113.050	130.150	4,275	5,035	1.5	1.200	NUP 214	-
70	125	24	113.050	130.150	4,275	5,035	1.5	1.150	N 214	-
70	125	31	146.300	183.350	4,275	5,035	1.5	1.500	NU 2214	HJ 2214
70	125	31	146.300	183.350	4,275	5,035	1.5	1.550	NJ 2214	HJ 2214
70	125	31	146.300	183.350	4,275	5,035	1.5	1.550	NUP 2214	-
70	150	35	194.750	216.600	3,420	4,085	2.0	2.750	NU 314	HJ 314
70	150	35	194.750	216.600	3,420	4,085	2.0	2.800	NJ 314	HJ 314
70	150	35	194.750	216.600	3,420	4,085	2.0	2.850	NUP 314	-
70	150	35	194.750	216.600	3,420	4,085	2.0	2.750	N 314	-
70	150	51	261.250	308.750	3,420	4,085	2.0	4.000	NU 2314	HJ 2314
70	150	51	261.250	308.750	3,420	4,085	2.0	4.050	NJ 2314	HJ 2314
70	150	51	261.250	308.750	3,420	4,085	2.0	4.150	NUP 2314	-
70	180	42	217.550	228.000	3,420	4,085	2.5	5.250	NU 414	HJ 414
70	180	42	217.550	228.000	3,420	4,085	2.5	5.350	NJ 414	HJ 414
75	115	20	55.385	67.450	5,320	6,365	1.0	0.740	NU 1015	-
75	130	25	123.500	148.200	4,275	5,035	1.5	1.250	NU 215	HJ 215
75	130	25	123.500	148.200	4,275	5,035	1.5	1.300	NJ 215	HJ 215
75	130	25	123.500	148.200	4,275	5,035	1.5	1.300	NUP 215	-
75	130	25	123.500	148.200	4,275	5,035	1.5	1.250	N 215	-
75	130	31	152.950	197.600	4,275	5,035	1.5	1.600	NU 2215	HJ 2215
75	130	31	152.950	197.600	4,275	5,035	1.5	1.600	NJ 2215	HJ 2215
75	130	31	152.950	197.600	4,275	5,035	1.5	1.650	NUP 2215	-
75	160	37	229.900	251.750	3,230	3,800	2.0	3.300	NU 315	HJ 315
75	160	37	229.900	251.750	3,230	3,800	2.0	3.350	NJ 315	HJ 315
75	160	37	229.900	251.750	3,230	3,800	2.0	3.450	NUP 315	-
75	160	37	229.900	251.750	3,230	3,800	2.0	3.300	N 315	-
75	160	55	313.500	380.000	3,230	3,800	2.0	4.900	NU 2315	HJ 2315
75	160	55	313.500	380.000	3,230	3,800	2.0	5.000	NJ 2315	HJ 2315
75	160	55	313.500	380.000	3,230	3,800	2.0	5.100	NUP 2315	-
75	190	45	250.800	266.000	3,230	3,800	2.5	6.250	NU 415	HJ 415
75	190	45	250.800	266.000	3,230	3,800	2.5	6.400	NJ 415	HJ 415



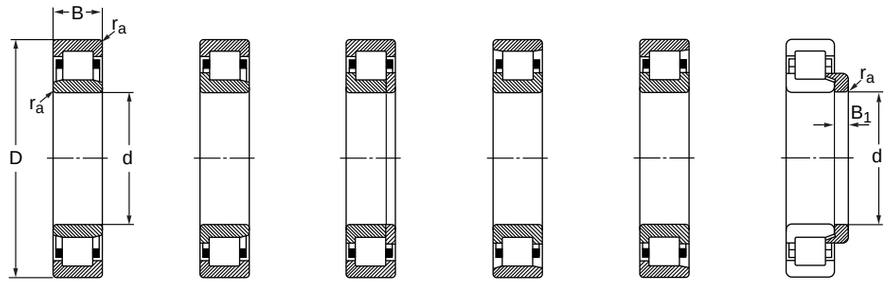
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d	D	B	C	C_0				r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
80	125	22	62.700	77.425	5,035	5,985	1.0	0.990	NU 1016	-
80	140	26	131.100	157.700	3,800	4,560	2.0	1.500	NU 216	HJ 216
80	140	26	131.100	157.700	3,800	4,560	2.0	1.550	NJ 216	HJ 216
80	140	26	131.100	157.700	3,800	4,560	2.0	1.600	NUP 216	-
80	140	26	131.100	157.700	3,800	4,560	2.0	1.500	N 216	-
80	140	33	177.650	232.750	3,800	4,560	2.0	2.000	NU 2216	HJ 216
80	140	33	177.650	232.750	3,800	4,560	2.0	2.050	NJ 2216	HJ 216
80	140	33	177.650	232.750	3,800	4,560	2.0	2.050	NUP 2216	-
80	170	39	247.000	275.500	3,040	3,610	2.0	3.950	NU 316	HJ 316
80	170	39	247.000	275.500	3,040	3,610	2.0	4.000	NJ 316	HJ 316
80	170	39	247.000	275.500	3,040	3,610	2.0	4.100	NUP 316	-
80	170	39	247.000	275.500	3,040	3,610	2.0	3.900	N 316	-
80	170	58	340.100	418.000	3,040	3,610	2.0	5.850	NU 2316	HJ 2316
80	170	58	340.100	418.000	3,040	3,610	2.0	5.950	NJ 2316	HJ 2316
80	170	58	340.100	418.000	3,040	3,610	2.0	6.100	NUP 2316	-
80	200	48	287.850	304.000	3,040	3,610	2.5	7.300	NU 416	HJ 416
80	200	48	287.850	304.000	3,040	3,610	2.5	7.450	NJ 416	HJ 416
85	130	22	64.790	82.175	4,750	5,700	1.0	1.050	NU 1017	-
85	150	28	156.750	190.000	3,610	4,275	2.0	1.900	NU 217	HJ 217
85	150	28	156.750	190.000	3,610	4,275	2.0	1.950	NJ 217	HJ 217
85	150	28	156.750	190.000	3,610	4,275	2.0	2.000	NUP 217	-
85	150	28	156.750	190.000	3,610	4,275	2.0	1.900	N 217	-
85	150	36	205.200	266.000	3,610	4,275	2.0	2.450	NU 2217	HJ 217
85	150	36	205.200	266.000	3,610	4,275	2.0	2.550	NJ 2217	HJ 217
85	150	36	205.200	266.000	3,610	4,275	2.0	2.550	NUP 2217	-
85	180	41	282.150	318.250	2,850	3,420	2.5	4.700	NU 317	HJ 317
85	180	41	282.150	318.250	2,850	3,420	2.5	4.800	NJ 317	HJ 317
85	180	41	282.150	318.250	2,850	3,420	2.5	4.900	NUP 317	-
85	180	41	282.150	318.250	2,850	3,420	2.5	4.700	N 317	-
85	180	60	376.200	465.500	2,850	3,420	2.5	6.850	NU 2317	HJ 2317
85	180	60	376.200	465.500	2,850	3,420	2.5	7.000	NJ 2317	HJ 2317
85	180	60	376.200	465.500	2,850	3,420	2.5	7.150	NUP 2317	-



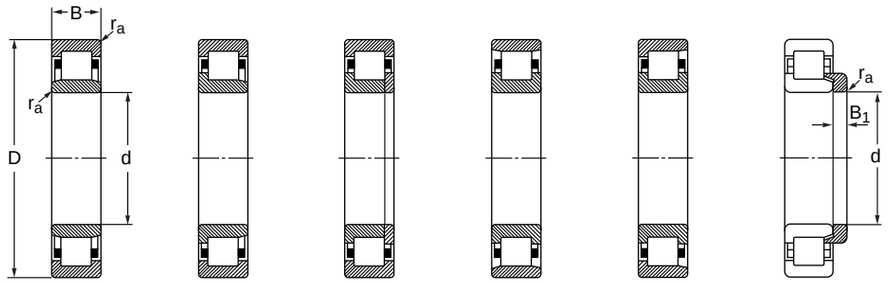
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d	D	B	C	C_0				r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
85	210	52	303.050	318.250	2,850	3,420	3.0	8.700	NU 417	HJ 417
85	210	52	303.050	318.250	2,850	3,420	3.0	8.900	NJ 417	HJ 417
90	140	24	76.855	98.800	4,560	5,320	1.5	1.350	NU 1018	-
90	160	30	173.850	209.000	3,420	4,085	2.0	2.350	NU 218	HJ 218
90	160	30	173.850	209.000	3,420	4,085	2.0	2.400	NJ 218	HJ 218
90	160	30	173.850	209.000	3,420	4,085	2.0	2.450	NUP 218	-
90	160	30	173.850	209.000	3,420	4,085	2.0	2.350	N 218	-
90	160	40	229.900	299.250	3,420	4,085	2.0	3.150	NU 2218	HJ 2218
90	160	40	229.900	299.250	3,420	4,085	2.0	3.200	NJ 2218	HJ 2218
90	160	40	229.900	299.250	3,420	4,085	2.0	3.300	NUP 2218	-
90	190	43	303.050	342.000	2,660	3,230	2.5	5.450	NU 318	HJ 318
90	190	43	303.050	342.000	2,660	3,230	2.5	5.550	NJ 318	HJ 318
90	190	43	303.050	342.000	2,660	3,230	2.5	5.650	NUP 318	-
90	190	43	303.050	342.000	2,660	3,230	2.5	5.400	N 318	-
90	190	64	418.000	513.000	2,660	3,230	2.5	8.000	NU 2318	HJ 2318
90	190	64	418.000	513.000	2,660	3,230	2.5	8.150	NJ 2318	HJ 2318
90	190	64	418.000	513.000	2,660	3,230	2.5	8.300	NUP 2318	-
90	225	54	361.000	394.250	2,660	3,230	3.0	10.500	NU 418	HJ 418
90	225	54	361.000	394.250	2,660	3,230	3.0	10.500	NJ 418	HJ 418
95	145	24	79.990	104.500	4,275	5,035	1.5	1.400	NU 1019	-
95	170	32	209.000	251.750	3,230	3,800	2.0	2.850	NU 219	HJ 219
95	170	32	209.000	251.750	3,230	3,800	2.0	2.900	NJ 219	HJ 219
95	170	32	209.000	251.750	3,230	3,800	2.0	3.000	NUP 219	-
95	170	32	209.000	251.750	3,230	3,800	2.0	2.850	N 219	-
95	170	43	271.700	356.250	3,230	3,800	2.0	3.850	NU 2219	HJ 2219
95	170	43	271.700	356.250	3,230	3,800	2.0	3.950	NJ 2219	HJ 2219
95	170	43	271.700	356.250	3,230	3,800	2.0	4.000	NUP 2219	-
95	170	43	271.700	356.250	3,230	3,800	2.0	3.850	N 2219	-
95	200	45	323.950	370.500	2,470	3,040	2.5	6.250	NU 319	HJ 319
95	200	45	323.950	370.500	2,470	3,040	2.5	6.450	NJ 319	HJ 319
95	200	45	323.950	370.500	2,470	3,040	2.5	6.250	N 319	-
95	200	67	444.600	555.750	2,470	3,040	2.5	9.350	NU 2319	HJ 2319



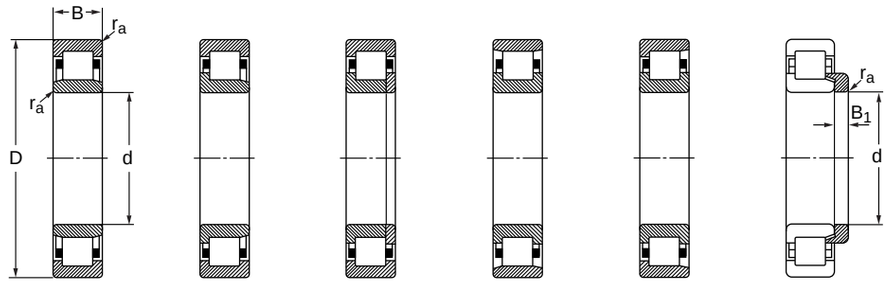
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	mm	r_a max kg		
95	200	67	444.600	555.750	2,470	3,040	2.5	9.550	NJ 2319	HJ 2319
95	200	67	444.600	555.750	2,470	3,040	2.5	9.750	NUP 2319	-
95	240	55	392.350	432.250	2,470	3,040	3.0	13.500	NU 419	HJ 419
95	240	55	392.350	432.250	2,470	3,040	3.0	13.500	NJ 419	HJ 419
100	150	24	81.510	108.300	4,085	4,750	1.5	1.450	NU 1020	-
100	180	34	238.450	289.750	3,040	3,610	2.0	3.450	NU 220	HJ 220
100	180	34	238.450	289.750	3,040	3,610	2.0	3.500	NJ 220	HJ 220
100	180	34	238.450	289.750	3,040	3,610	2.0	3.600	NUP 220	-
100	180	34	238.450	289.750	3,040	3,610	2.0	3.450	N 220	-
100	180	46	319.200	427.500	3,040	3,610	2.0	4.750	NU 2220	HJ 2220
100	180	46	319.200	427.500	3,040	3,610	2.0	4.800	NJ 2220	HJ 2220
100	180	46	319.200	427.500	3,040	3,610	2.0	4.900	NUP 2220	-
100	215	47	371.450	418.000	2,280	2,850	2.5	7.600	NU 320	HJ 320
100	215	47	371.450	418.000	2,280	2,850	2.5	7.800	NJ 320	HJ 320
100	215	47	371.450	418.000	2,280	2,850	2.5	7.950	NUP 320	-
100	215	47	371.450	418.000	2,280	2,850	2.5	7.550	N 320	-
100	215	73	553.850	698.250	2,280	2,850	2.5	12.000	NU 2320	HJ 2320
100	215	73	553.850	698.250	2,280	2,850	2.5	12.000	NJ 2320	HJ 2320
100	215	73	553.850	698.250	2,280	2,850	2.5	12.500	NUP 2320	-
100	250	58	407.550	451.250	2,280	2,850	3.0	14.000	NU 420	HJ 420
100	250	58	407.550	451.250	2,280	2,850	3.0	14.000	NJ 420	HJ 420
105	160	26	95.950	130.150	3,800	4,560	2.0	1.850	NU 1021	-
105	190	36	250.800	299.250	2,850	3,420	2.0	4.000	NU 221	HJ 221
105	190	36	250.800	299.250	2,850	3,420	2.0	4.100	NJ 221	HJ 221
105	190	36	250.800	299.250	2,850	3,420	2.0	4.200	NUP 221	-
105	190	36	250.800	299.250	2,850	3,420	2.0	3.950	N 221	-
105	225	49	418.000	475.000	2,090	2,660	2.5	8.800	NU 321	HJ 321
105	225	49	418.000	475.000	2,090	2,660	2.5	8.950	NJ 321	HJ 321
105	225	49	418.000	475.000	2,090	2,660	2.5	8.650	N 321	-
105	260	60	475.950	541.500	2,090	2,660	3.0	19.000	NU 421	HJ 421
110	170	28	121.600	157.700	3,610	4,275	2.0	2.300	NU 1022	-
110	200	38	277.400	346.750	2,660	3,230	2.0	4.800	NU 222	HJ 222



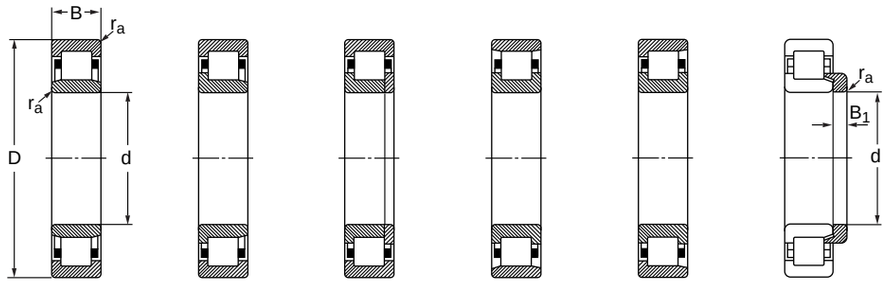
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d mm	D mm	B mm	C kN	C_0 kN	r/min	r/min	mm	r_a max kg		
110	200	38	277.400	346.750	2,660	3,230	2.0	4.900	NJ 222	HJ 222
110	200	38	277.400	346.750	2,660	3,230	2.0	5.000	NUP 222	-
110	200	38	277.400	346.750	2,660	3,230	2.0	4.800	N 222	-
110	200	53	361.000	494.000	2,660	3,230	2.0	6.700	NU 2222	HJ 2222
110	200	53	361.000	494.000	2,660	3,230	2.0	6.850	NJ 2222	HJ 2222
110	200	53	361.000	494.000	2,660	3,230	2.0	7.000	NUP 2222	-
110	240	50	444.600	513.000	1,900	2,470	2.5	10.500	NU 322	HJ 322
110	240	50	444.600	513.000	1,900	2,470	2.5	10.500	NJ 322	HJ 322
110	240	50	444.600	513.000	1,900	2,470	2.5	11.000	NUP 322	-
110	240	50	444.600	513.000	1,900	2,470	2.5	10.500	N 322	-
110	240	80	647.900	855.000	1,900	2,470	2.5	17.000	NU 2322	HJ 2322
110	240	80	647.900	855.000	1,900	2,470	2.5	17.000	NJ 2322	HJ 2322
110	240	80	647.900	855.000	1,900	2,470	2.5	17.500	NUP 2322	-
110	280	65	496.850	555.750	1,900	2,470	3.0	20.000	NU 422	HJ 422
110	280	65	496.850	555.750	1,900	2,470	3.0	20.000	NJ 422	HJ 422
120	180	28	127.300	173.850	3,230	3,800	2.0	2.450	NU 1024	-
120	215	40	323.950	408.500	2,280	2,850	2.0	5.750	NU 224	HJ 224
120	215	40	323.950	408.500	2,280	2,850	2.0	5.850	NJ 224	HJ 224
120	215	40	323.950	408.500	2,280	2,850	2.0	6.000	NUP 224	-
120	215	40	323.950	408.500	2,280	2,850	2.0	5.700	N 224	-
120	215	58	434.150	598.500	2,280	2,850	2.0	8.300	NU 2224	HJ 2224
120	215	58	434.150	598.500	2,280	2,850	2.0	8.500	NJ 2224	HJ 2224
120	215	58	434.150	598.500	2,280	2,850	2.0	8.650	NUP 2224	-
120	260	55	512.050	589.000	1,805	2,280	2.5	13.500	NU 324	HJ 324
120	260	55	512.050	589.000	1,805	2,280	2.5	13.500	NJ 324	HJ 324
120	260	55	512.050	589.000	1,805	2,280	2.5	14.000	NUP 324	-
120	260	55	512.050	589.000	1,805	2,280	2.5	13.000	N 324	-
120	260	86	752.400	988.000	1,805	2,280	2.5	24.000	NU 2324	HJ 2324
120	260	86	752.400	988.000	1,805	2,280	2.5	24.500	NJ 2324	HJ 232 4
120	260	86	752.400	988.000	1,805	2,280	2.5	25.000	NUP 2324	-
120	310	72	611.800	698.250	1,805	2,280	4.0	28.000	NU 424	HJ 424
120	310	72	611.800	698.250	1,805	2,280	4.0	28.500	NJ 424	HJ 424



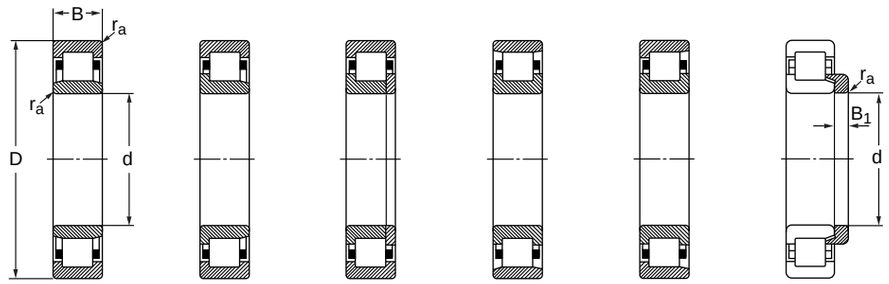
NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Grease	Oil		r_a max	Bearings	Angle Ring
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
130	200	33	156.750	212.800	3,040	3,610	2.0	3.750	NU 1026	-
130	230	40	340.100	432.250	2,090	2,660	2.5	6.450	NU 226	HJ 226
130	230	40	340.100	432.250	2,090	2,660	2.5	6.600	NJ 226	HJ 226
130	230	40	340.100	432.250	2,090	2,660	2.5	6.700	NUP 226	-
130	230	40	340.100	432.250	2,090	2,660	2.5	6.450	N 226	-
130	230	64	501.600	698.250	2,090	2,660	2.5	10.500	NU 2226	HJ 2226
130	230	64	501.600	698.250	2,090	2,660	2.5	10.500	NJ 2226	HJ 2226
130	230	64	501.600	698.250	2,090	2,660	2.5	11.000	NUP 2226	-
130	280	58	595.650	712.500	1,710	2,090	3.0	18.500	NU 326	HJ 326
130	280	58	595.650	712.500	1,710	2,090	3.0	19.000	NJ 326	HJ 326
130	280	58	595.650	712.500	1,710	2,090	3.0	19.500	NUP 326	-
130	280	58	595.650	712.500	1,710	2,090	3.0	18.500	N 326	-
130	280	93	888.250	1187.500	1,710	2,090	3.0	30.000	NU 2326	HJ 2326
130	280	93	888.250	1187.500	1,710	2,090	3.0	30.500	NJ 2326	HJ 2326
130	280	93	888.250	1187.500	1,710	2,090	3.0	31.000	NUP 2326	-
140	210	33	163.400	232.750	2,850	3,420	2.0	4.000	NU 1028	-
140	250	42	371.450	484.500	1,900	2,470	2.5	8.300	NU 228	HJ 228
140	250	42	371.450	484.500	1,900	2,470	2.5	8.500	NJ 228	HJ 228
140	250	42	371.450	484.500	1,900	2,470	2.5	8.650	NUP 228	-
140	250	42	292.600	380.000	2,280	2,850	2.5	8.300	N 228	-
140	250	68	543.400	788.500	1,900	2,470	2.5	13.500	NU 2228	HJ 2228
140	250	68	543.400	788.500	1,900	2,470	2.5	13.500	NJ 2228	HJ 2228
140	250	68	543.400	788.500	1,900	2,470	2.5	14.000	NUP 2228	-
140	300	62	647.900	788.500	1,710	2,090	3.0	22.500	NU 328	HJ 328
140	300	62	647.900	788.500	1,710	2,090	3.0	23.000	NJ 328	HJ 328
140	300	62	647.900	788.500	1,710	2,090	3.0	23.500	NUP 328	-
140	300	62	564.300	674.500	1,805	2,280	3.0	20.000	N 328	-
140	300	102	997.500	1358.500	1,710	2,090	3.0	37.000	NU 2328	HJ 2328
140	300	102	997.500	1358.500	1,710	2,090	3.0	37.500	NJ 2328	HJ 2328
150	225	35	184.300	261.250	2,470	3,040	2.0	4.850	NU 1030	-
150	270	45	423.700	570.000	1,805	2,280	2.5	10.500	NU 230	HJ 230
150	270	45	423.700	570.000	1,805	2,280	2.5	10.500	NJ 230	HJ 230



NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Grease	Oil		r_a max	Bearings	Angle Ring
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
150	270	45	423.700	570.000	1,805	2,280	2.5	10.500	NUP 230	-
150	270	45	340.100	441.750	1,900	2,470	2.5	10.500	N 230	-
150	270	73	595.650	883.500	1,805	2,280	2.5	19.000	NU 2230	HJ 2230
150	270	73	595.650	883.500	1,805	2,280	2.5	19.500	NJ 2230	HJ 2230
150	320	65	741.950	916.750	1,615	1,900	3.0	27.500	NU 330	HJ 330
150	320	65	741.950	916.750	1,615	1,900	3.0	28.000	NJ 330	HJ 330
150	320	65	741.950	916.750	1,615	1,900	3.0	28.500	N 330	-
150	320	108	1130.500	1548.500	1,615	1,900	3.0	45.000	NU 2330	HJ 2330
150	320	108	1130.500	1548.500	1,615	1,900	3.0	46.000	NJ 2330	HJ 2330
150	320	108	1130.500	1548.500	1,615	1,900	3.0	46.500	NUP 2330	-
160	240	38	217.550	308.750	2,280	2,850	2.0	5.950	NU 1032	-
160	290	48	475.950	646.000	1,710	2,090	2.5	15.000	NU 232	HJ 232
160	290	48	475.950	646.000	1,710	2,090	2.5	15.000	NJ 232	HJ 232
160	290	48	475.950	646.000	1,710	2,090	2.5	15.500	NUP 232	-
160	290	48	475.950	646.000	1,710	2,090	2.5	15.000	N 232	-
160	290	80	768.550	1140.000	1,710	2,090	2.5	24.000	NU 2232	HJ 2232
160	290	80	768.550	1140.000	1,710	2,090	2.5	24.500	NJ 2232	HJ 2232
160	340	68	836.000	1026.000	1,425	1,710	3.0	32.500	NU 332	-
160	340	68	836.000	1026.000	1,425	1,710	3.0	33.000	NJ 232	-
160	340	114	1254.000	1767.000	1,425	1,710	3.0	53.000	NU 2332	HJ 2332
160	340	114	1254.000	1767.000	1,425	1,710	3.0	54.000	NJ 2332	HJ 2332
170	260	42	261.250	380.000	2,090	2,660	2.0	7.900	NU 1034	-
170	310	52	585.200	774.250	1,710	2,090	3.0	19.000	NU 234	HJ 234
170	310	52	585.200	774.250	1,710	2,090	3.0	19.500	NJ 234	HJ 234
170	310	52	585.200	774.250	1,710	2,090	3.0	20.000	NUP 234	-
170	310	86	919.600	1358.500	1,710	2,090	3.0	30.000	NU 2234	-
170	360	72	768.550	988.000	1,520	1,805	3.0	38.500	NU 334	HJ 334
170	360	72	904.400	1121.000	1,330	1,615	3.0	38.500	N 334	-
170	360	120	1168.500	1710.000	1,330	1,615	3.0	63.000	NU 2334	-
180	280	46	319.200	451.250	1,900	2,470	2.0	10.500	NU 1036	-
180	320	52	595.650	807.500	1,615	1,900	3.0	19.500	NU 236	HJ 236
180	320	52	595.650	807.500	1,615	1,900	3.0	20.000	NJ 236	HJ 236



NU NJ NUP N NF Angle Ring - HJ

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Bearings	Angle Ring
d mm	D mm	B mm	C kN	C_O kN	r/min	r/min	mm	r_a max kg		
180	320	52	595.650	807.500	1,615	1,900	3.0	21.000	NUP 236	-
180	320	86	959.500	1425.000	1,615	1,900	3.0	31.500	NU 2236	HJ 2236
180	320	86	959.500	1425.000	1,615	1,900	3.0	31.500	NJ 2236	HJ 2236
180	380	75	867.350	1121.000	1,425	1,710	3.0	42.500	NU 336	HJ 336
180	380	126	1330.000	1938.000	1,235	1,520	3.0	73.000	NU 2336	HJ 2336
190	290	46	329.650	475.000	1,900	2,470	2.0	10.000	NU 1038	HJ 1038
190	340	55	658.350	916.750	1,520	1,805	3.0	23.500	NU 238	HJ 238
190	340	55	658.350	916.750	1,520	1,805	3.0	24.500	NJ 238	HJ 238
190	340	55	658.350	916.750	1,520	1,805	3.0	25.500	NUP 238	-
190	340	92	1045.000	1577.000	1,520	1,805	3.0	39.000	NU 2238	HJ 2238
190	400	78	1083.000	1425.000	1,140	1,425	4.0	50.000	NU 338	HJ 338
190	400	132	1738.500	2422.500	1,140	1,425	4.0	82.500	NU 2338	-
200	310	51	361.000	541.500	1,805	2,280	2.0	14.000	NU 1040	HJ 1040
200	360	58	726.750	1007.000	1,425	1,710	3.0	28.500	NU 240	HJ 240
200	360	58	726.750	1007.000	1,425	1,710	3.0	29.000	NJ 240	HJ 240
200	360	58	726.750	1007.000	1,425	1,710	3.0	27.500	NUP 240	-
200	360	98	1168.500	1805.000	1,425	1,710	3.0	46.000	NU 2240	HJ 2240
200	420	80	940.500	1254.000	1,235	1,520	4.0	56.000	NU 340	HJ 340
200	420	138	1947.500	2707.500	1,140	1,425	4.0	96.000	NU 2340	-
220	340	56	470.250	698.250	1,710	2,090	2.5	18.500	NU 1044	HJ 1044
220	400	65	726.750	1026.000	1,425	1,710	3.0	38.500	NU 244	HJ 244
220	400	65	726.750	1026.000	1,425	1,710	3.0	39.000	NJ 244	HJ 244
220	400	65	726.750	1026.000	1,425	1,710	3.0	39.500	NUP 244	-
220	400	108	1491.500	2166.000	1,235	1,520	3.0	62.500	NU 2244	HJ 2244
220	460	88	1149.500	1548.500	1,140	1,425	4.0	72.500	NU 344	HJ 344
220	460	145	2213.500	3087.500	950	1,235	4.0	120.000	NU 2344	HJ 2344
240	360	56	496.850	760.000	1,615	1,900	2.5	20.000	NU 1048	HJ1048
240	440	72	904.400	1301.500	1,235	1,520	3.0	51.000	NU 248	HJ 248
240	440	72	904.400	1301.500	1,235	1,520	3.0	52.500	NJ 248	HJ 248
240	440	72	904.400	1301.500	1,235	1,520	3.0	53.500	NUP 248	-
240	440	120	1377.500	2242.000	1,140	1,425	3.0	84.000	NU 2248	HJ 2248
240	500	95	1377.500	1900.000	950	1,235	4.0	94.500	NU 348	HJ 348
240	500	155	2014.000	3087.500	903	1,140	4.0	155.000	NU 2348	HJ 2348

Prefix & Suffix

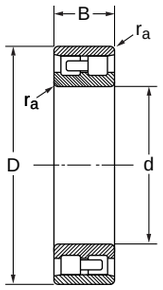
NN	30	24	K

Prefix
- NNU : No flange on outer ring, outer ring is removable from both directions
- NN : No flange on outer ring, outer ring is removable from one direction

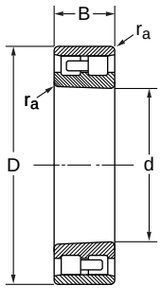
Basic type series
- 30 : Standard (NN)
- 49 : Standard (NNU)

Bore size (mm)
- 00 : 10mm
- 01 : 12mm
- 02 : 15mm
- 03 : 17mm
- 03 < 2 digit < 100 : multiply by 5

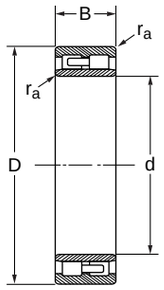
Suffix
- K : Tapered bore, taper 1:12 on inner diameter
- M : Machined brass cage
- W33 : Lubrication groove and 3 holes in outer ring



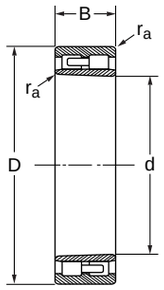
NN
Cylindrical Bore



NN
Tappered Bore

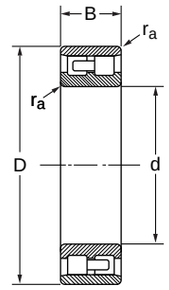


NNU
Cylindrical Bore

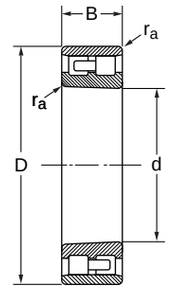


NNU
Tappered Bore

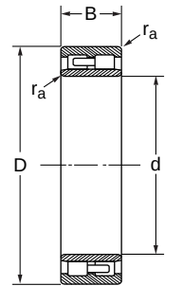
Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Cylindrical Bore	Tapered Bore
d	D	B	C	C_0				r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
25	47	16	24.510	28.500	13,300	16,150	0.6	0.127	NN 3005	NN 3005 K
30	55	19	29.450	36.100	11,400	13,300	1.0	0.198	NN 3006	NN 3006 K
35	62	20	37.525	47.500	9,500	11,400	1.0	0.258	NN 3007	NN 3007 K
40	68	21	41.325	52.725	8,550	10,450	1.0	0.309	NN 3008	NN 3008 K
45	75	23	49.400	65.075	8,075	9,500	1.0	0.407	NN 3009	NN 3009 K
50	80	23	50.350	68.875	7,125	8,550	1.0	0.436	NN 3010	NN 3010 K
55	90	26	66.025	91.675	6,365	7,600	1.0	0.650	NN 3011	NN 3011 K
60	95	26	69.825	100.700	5,985	7,125	1.0	0.697	NN 3012	NN 3012 K
65	100	26	73.150	110.200	5,700	6,745	1.0	0.746	NN 3013	NN 3013 K
70	110	30	92.625	140.600	5,320	6,365	1.0	1.070	NN 3014	NN 3014 K
75	115	30	91.675	141.550	5,035	5,985	1.0	1.120	NN 3015	NN 3015 K
80	125	34	113.050	176.700	4,560	5,700	1.0	1.550	NN 3016	NN 3016 K
85	130	34	118.750	190.950	4,275	5,320	1.0	1.630	NN 3017	NN 3017 K
90	140	37	135.850	216.600	4,085	4,750	1.5	2.090	NN 3018	NN 3018 K
95	145	37	142.500	233.700	3,800	4,750	1.5	2.190	NN 3019	NN 3019 K
100	140	40	147.250	280.250	3,800	4,750	1.0	1.900	NNU 4920	NNU 4920 K
100	150	37	149.150	251.750	3,800	4,560	1.5	2.280	NN 3020	NN 3020 K
105	145	40	152.950	299.250	3,610	4,560	1.0	1.990	NNU 4921	NNU 4921 K
105	160	41	188.100	304.000	3,610	4,275	2.0	2.880	NN 3021	NN 3021 K
110	150	40	158.650	318.250	3,420	4,275	1.0	2.070	NNU 4922	NNU 4922 K
110	170	45	217.550	356.250	3,230	4,085	2.0	3.710	NN 3022	NN 3022 K
120	165	45	173.850	342.000	3,040	3,800	1.0	2.850	NNU 4924	NNU 4924 K
120	180	46	227.050	384.750	3,040	3,610	2.0	4.040	NN 3024	NN 3024 K
130	180	50	260.300	517.750	2,850	3,610	1.5	3.850	NNU 4926	NNU 4926 K
130	200	52	269.800	451.250	2,850	3,420	2.0	5.880	NN 3026	NN 3026 K
140	190	50	268.850	555.750	2,660	3,420	1.5	4.090	NNU 4928	NNU 4928 K
140	210	53	283.100	489.250	2,660	3,230	2.0	6.340	NN 3028	NN 3028 K
150	210	60	332.500	679.250	2,470	3,040	2.0	6.390	NNU 4930	NNU 4930 K
150	225	56	318.250	555.750	2,470	2,850	2.0	7.770	NN 3030	NN 3030 K
160	220	60	346.750	722.000	2,280	2,850	2.0	6.760	NNU 4932	NNU 4932 K
160	240	60	356.250	627.000	2,280	2,660	2.0	9.410	NN 3032	NN 3032 K
170	230	60	356.250	764.750	2,280	2,660	2.0	7.120	NNU 4934	NNU 4934 K



NN
Cylindrical Bore



NN
Tappered Bore



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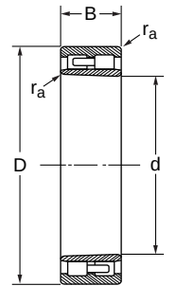
Cylindrical Bore



NNU
Tappered Bore

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Grease	Oil			Cylindrical Bore	Tapered Bore
d	D	B	C	C_0				r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg		
170	260	67	427.500	764.750	2,090	2,470	2.0	12.800	NN 3034	NN 3034 K
180	250	69	456.000	969.000	2,090	2,470	2.0	10.400	NNU 4936	NNU 4936 K
180	280	74	536.750	945.250	1,900	2,280	2.0	16.800	NN 3036	NN 3036 K
190	260	69	460.750	1007.000	1,900	2,470	2.0	10.900	NNU 4938	NNU 4938 K
190	290	75	565.250	1026.000	1,900	2,280	2.0	17.800	NN 3038	NN 3038 K
200	280	80	541.500	1159.000	1,805	2,280	2.0	15.300	NNU 4940	NNU 4940 K
200	310	82	622.250	1111.500	1,710	2,090	2.0	22.700	NN 3040	NN 3040 K
220	300	80	570.000	1263.500	1,615	2,090	2.0	16.600	NNU 4944	NNU 4944 K
220	340	90	774.250	1406.000	1,615	1,900	2.5	29.600	NN 3044	NN 3044 K
240	320	80	593.750	1377.500	1,520	1,900	2.0	18.000	NNU 4948	NNU 4948 K
240	360	92	812.250	1520.000	1,425	1,710	2.5	32.700	NN 3048	NN 3048 K
260	360	100	888.250	1995.000	1,330	1,710	2.0	31.100	NNU 4952	NNU 4952 K
260	400	104	978.500	1824.000	1,330	1,615	3.0	47.700	NN 3052	NN 3052 K
280	380	100	912.000	2118.500	1,235	1,615	2.0	33.000	NNU 4956	NNU 4956 K
280	420	106	1026.000	1976.000	1,235	1,425	3.0	51.100	NN 3056	NN 3056 K
300	420	118	1168.500	2726.500	1,140	1,425	2.5	51.800	NNU 4960	NNU 4960 K
300	460	118	1225.500	2337.000	1,140	1,330	3.0	70.700	NN 3060	NN 3060 K
320	440	118	1197.000	2897.500	1,045	1,330	2.5	54.900	NNU 4964	NNU 4964 K
320	480	121	1282.500	2536.500	1,045	1,235	3.0	76.600	NN 3064	NN 3064 K
340	520	133	1586.500	3135.000	950	1,140	4.0	102.000	NN 3068	NN 3068 K
360	540	134	1615.000	3277.500	903	1,140	4.0	107.000	NN 3072	NN 3072 K

Prefix & Suffix

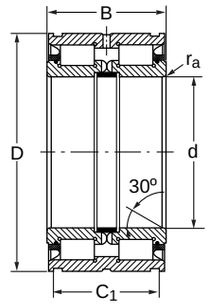
SL04	50	08	PP2NR

Prefix
SL04 : Double row full complement

Basic type series
50 : Standard

Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

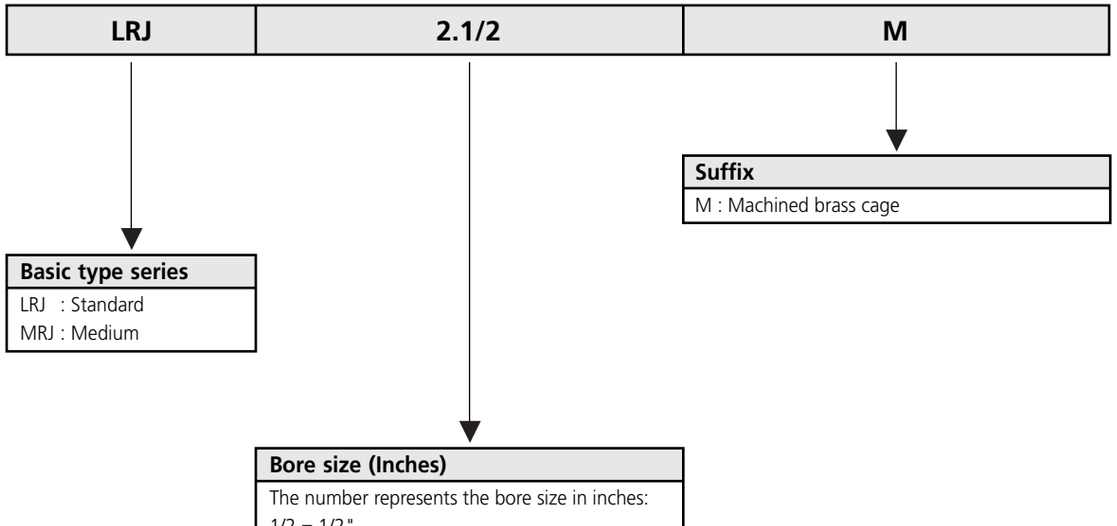
Suffix
PP : Seals at both sides of the bearing
N : Snap ring groove at outside of outer ring
NR : Snap ring groove with snap ring at outside of outer ring
2NR : 2 Snap rings at outer ring

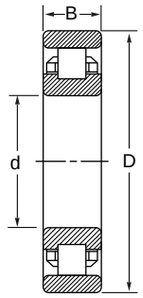


SL04 50..PP

Basic Dimensions				Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation		
				Dynamic	Static	Grease			Bearings	Snap Ring	Reaining Ring
d mm	D mm	B mm	C_1 +0.2	C kN	C_{0r} kN	r/min	r_a max mm	kg			
20	42	30	24.7	40.500	49.000	4,000	0.3	0.200	SL04 5004 PP	WRE 42	42 X 1.75
25	47	30	24.7	44.500	58.000	3,600	0.3	0.240	SL04 5005 PP	WRE 47	47 X 1.75
30	55	34	28.2	50.000	67.000	3,000	0.3	0.370	SL04 5006 PP	WRE 55	55 X 2
35	62	36	30.2	63.000	88.000	2,600	0.3	0.480	SL04 5007 PP	WRE 62	62 X 2
40	68	38	32.2	76.000	103.000	2,400	0.6	0.560	SL04 5008 PP	WRE 68	68 X 2.5
45	75	40	34.2	92.000	130.000	2,200	0.6	0.700	SL04 5009 PP	WRE 75	75 X 2.5
50	80	40	34.2	97.000	142.000	2,000	0.6	0.760	SL04 5010 PP	WRE 80	80 X 2.5
55	90	46	40.2	115.000	175.000	1,800	0.6	1.180	SL04 5011 PP	WRE 90	90 X 3
60	95	46	40.2	120.000	189.000	1,700	0.6	1.260	SL04 5012 PP	WRE 95	95 X 3
65	100	46	40.2	125.000	203.000	1,600	0.6	1.330	SL04 5013 PP	WRE 100	100 X 3
70	110	54	48.2	168.000	265.000	1,400	0.6	1.870	SL04 5014 PP	WRE 110	110 X 4
75	115	54	48.2	194.000	300.000	1,400	0.6	1.960	SL04 5015 PP	WRE 115	115 X 4
80	125	60	54.2	203.000	325.000	1,300	0.6	2.710	SL04 5016 PP	WRE 125	125 X 4
85	130	60	54.2	211.000	350.000	1,200	0.6	2.830	SL04 5017 PP	WRE 130	130 X 4
90	140	67	59.2	305.000	510.000	1,100	0.6	3.710	SL04 5018 PP	WRE 140	140 X 4
95	145	67	59.2	315.000	530.000	1,100	0.6	3.880	SL04 5019 PP	WRE 145	145 X 4
100	150	67	59.2	330.000	550.000	1,000	0.6	3.950	SL04 5020 PP	WRE 150	150 X 4
110	170	80	70.2	395.000	680.000	900	0.6	6.570	SL04 5022 PP	WRE 170	170 X 4
120	180	80	71.2	410.000	740.000	900	0.6	7.040	SL04 5024 PP	WRE 180	180 X 4
130	200	95	83.2	540.000	960.000	800	0.6	10.500	SL04 5026 PP	WRE 200	200 X 4
140	210	95	83.2	610.000	1100.000	750	0.6	11.100	SL04 5028 PP	WRE 210	210 X 5

Prefix & Suffix

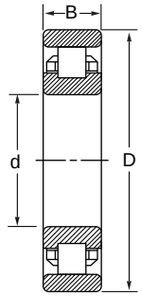




LRJ, MRJ

Basic Dimensions						Basic Load Ratings		Limiting Speed	
d		D		B		Dynamic C	Static C_0	Grease	Oil
inch	mm	inch	mm	inch	mm	kN	kN	r/min	r/min
0.5000	12.7000	1.3125	33.3375	0.3750	9.5250	9.358	6.603	12,065	19,950
0.5000	12.7000	1.6250	41.2750	0.6250	15.8750	16.245	12.160	10,260	17,100
0.6250	15.8750	1.5625	39.6875	0.4375	11.1125	11.875	9.453	17,100	17,100
0.6250	15.8750	1.8125	46.0375	0.6250	15.8750	17.860	14.060	9,215	15,200
0.7500	19.0500	1.8750	47.6250	0.5625	14.2875	21.660	18.430	14,725	19,475
0.7500	19.0500	2.0000	50.8000	0.6875	17.4625	27.265	23.085	14,250	19,000
0.8750	22.2250	2.0000	50.8000	0.5625	14.2875	23.370	19.760	13,680	18,525
0.8750	22.2250	2.2500	57.1500	0.6875	17.4625	23.845	20.045	12,255	16,625
1.0000	25.4000	2.2500	57.1500	0.6250	15.8750	29.545	26.505	12,255	16,625
1.0000	25.4000	2.5000	63.5000	0.7500	19.0500	33.250	29.070	11,590	15,675
1.1250	28.5750	2.5000	63.5000	0.6250	15.8750	31.445	29.735	11,020	14,725
1.1250	28.5750	2.8125	71.4375	0.8125	20.6375	43.225	39.805	9,975	13,395
1.2500	31.7500	2.7500	69.8500	0.6875	17.4625	39.995	36.005	10,070	13,585
1.2500	31.7500	3.1250	79.3750	0.8750	22.2250	55.100	49.875	8,930	12,065
1.3750	34.9250	3.0000	76.2000	0.6875	17.4625	39.995	36.385	9,595	13,015
1.3750	34.9250	3.5000	88.9000	0.8750	22.2250	62.700	54.625	8,455	11,400
1.5000	38.1000	3.2500	82.5500	0.7500	19.0500	51.300	46.360	8,550	11,495
1.5000	38.1000	3.7500	95.2500	0.9375	23.8125	68.875	65.075	7,885	10,640
1.6250	41.2750	3.5000	88.9000	0.7500	19.0500	54.625	51.300	7,980	10,735
1.6250	41.2750	4.0000	101.6000	0.9375	23.8125	81.225	78.850	4,275	7,125
1.7500	44.4500	3.7500	95.2500	0.8125	20.6375	64.600	59.850	7,410	9,975
1.7500	44.4500	4.2500	107.9500	1.0625	26.9875	93.575	88.350	6,840	9,215
1.8750	47.6250	4.0000	101.6000	0.8125	20.6375	68.400	75.050	6,745	9,120
1.8750	47.6250	4.5000	114.3000	1.0625	26.9875	93.575	89.775	6,460	8,740
2.0000	50.8000	4.0000	101.6000	0.8125	20.6375	68.400	75.050	6,745	9,120
2.0000	50.8000	4.5000	114.3000	1.0625	26.9875	93.575	89.775	6,460	8,740
2.2500	57.1500	4.5000	114.3000	0.8750	22.2250	83.125	85.025	6,080	8,170
2.2500	57.1500	5.0000	127.0000	1.2500	31.7500	129.200	131.100	5,510	7,410
2.5000	63.5000	5.0000	127.0000	0.9375	23.8125	96.900	108.300	5,225	7,125
2.5000	63.5000	5.5000	139.7000	1.2500	31.7500	155.800	158.650	4,940	6,745
2.7500	69.8500	5.2500	133.3500	0.9375	23.8125	101.650	115.900	5,035	6,840
2.7500	69.8500	6.2500	158.7500	1.3750	34.9250	194.750	205.200	2,660	4,465

Chamfer Dimension	Mass	Designation	Interchange
r_a max			
mm	kg		
1.6	0.038	LRJ 1/2	-
1.6	0.107	MRJ 1/2	-
1.6	0.066	LRJ 5/8	-
1.6	0.121	MRJ 5/8	CRM 5
1.6	0.121	LRJ 3/4	CRL 6
1.6	0.172	MRJ 3/4	CRM 6
1.6	0.130	LRJ 7/8	CRL 7
2.4	0.191	MRJ 7/8	CRM 7
1.6	0.186	LRJ 1	CRL 8
2.4	0.288	MRJ 1	CRM 8
1.6	0.235	LRJ 1.1/8	CRL 9
2.4	0.393	MRJ 1.1/8	CRM 9
1.6	0.298	LRJ 1.1/4	CRL 10
2.4	0.511	MRJ 1.1/4	CRM 10
1.6	0.366	LRJ 1.3/8	CRL 11
2.4	0.659	MRJ 1.3/8	CRM 11
2.4	0.443	LRJ 1.1/2	CRL 12
2.4	0.841	MRJ 1.1/2	CRM 12
2.4	0.530	LRJ 1.5/8	CRL 13
2.4	0.971	MRJ 1.5/8	CRM 13
2.4	0.637	LRJ 1.3/4	CRL 14
2.4	1.190	MRJ 1.3/4	CRM 14
2.4	0.798	LRJ 1.7/8	CRL 15
2.4	1.330	MRJ 1.7/8	CRM 15
2.4	0.758	LRJ 2	CRL 16
2.4	1.280	MRJ 2	CRM 16
2.4	1.010	LRJ 2.1/4	CRL 18
3.2	1.800	MRJ 2.1/4	CRM 18
2.4	1.360	LRJ 2.1/2	CRL 20
3.2	2.170	MRJ 2.1/2	CRM 20
2.4	1.480	LRJ 2.3/4	CRL 22
3.2	3.420	MRJ 2.3/4	CRM 22



LRJ, MRJ

Basic Dimensions						Basic Load Ratings		Limiting Speed	
						Dynamic	Static	Grease	Oil
d		D		B		C	C_0		
inch	mm	inch	mm	inch	mm	kN	kN	r/min	r/min
3.0000	76.2000	5.7500	146.0500	1.0625	26.9875	132.050	139.650	4,655	6,270
3.0000	76.2000	7.0000	177.8000	1.5625	39.6875	222.300	235.600	3,990	5,415
3.2500	82.5500	6.0000	152.4000	1.0625	26.9875	143.450	163.400	2,565	4,370
3.2500	82.5500	7.5000	190.5000	1.5625	39.6875	249.850	270.750	2,185	3,705
3.5000	88.9000	6.5000	165.1000	1.1250	28.5750	159.600	179.550	3,990	5,415
3.5000	88.9000	8.1250	206.3750	1.7500	44.4500	262.200	295.450	1,995	3,325
3.7500	95.2500	6.7500	171.4500	1.1250	28.5750	182.400	218.500	2,280	3,705
3.7500	95.2500	8.2500	209.5500	1.7500	44.4500	262.200	295.450	1,995	3,325
4.0000	101.6000	7.2500	184.1500	1.2500	31.7500	164.350	208.050	1,995	3,420
4.0000	101.6000	8.5000	215.9000	1.7500	44.4500	286.900	341.050	1,805	2,945
4.2500	107.9500	7.5000	190.5000	1.2500	31.7500	210.900	256.500	1,995	3,325
4.2500	107.9500	8.7500	222.2500	1.7500	44.4500	286.900	341.050	1,805	2,945
4.5000	114.3000	8.0000	203.2000	1.3125	33.3375	217.550	273.600	1,805	3,040
4.5000	114.3000	9.3750	238.1250	2.0000	50.8000	396.150	454.100	1,615	2,755
4.7500	120.6500	8.2500	209.5500	1.3125	33.3375	250.800	314.450	1,805	2,945
4.7500	120.6500	10.0000	254.0000	2.0000	50.8000	454.100	539.600	1,425	2,470
5.0000	127.0000	9.0000	228.6000	1.3750	34.9250	266.950	350.550	1,615	2,660
5.0000	127.0000	10.0000	254.0000	2.0000	50.8000	454.100	539.600	1,425	2,470
5.5000	139.7000	9.5000	241.3000	1.3750	34.9250	273.600	369.550	1,520	2,470
5.5000	139.7000	11.0000	279.4000	2.0000	50.8000	517.750	634.600	2,185	2,945
6.0000	152.4000	10.5000	266.7000	1.5625	39.6875	308.750	427.500	1,235	2,090
6.0000	152.4000	12.0000	304.8000	2.2500	57.1500	608.000	755.250	950	1,900
6.5000	165.1000	11.0000	279.4000	1.5625	39.6875	350.550	483.550	1,045	2,090
6.5000	165.1000	13.0000	330.2000	2.5000	63.5000	711.550	893.000	1,805	2,375
7.0000	177.8000	12.0000	304.8000	1.7500	44.4500	453.150	612.750	903	1,805
7.0000	177.8000	13.5000	342.9000	2.5000	63.5000	709.650	902.500	855	1,710

Chamfer Dimension	Mass	Designation	Interchange
r_a max			
mm	kg		
2.4	1.910	LRJ 3	CRL 24
4.0	4.740	MRJ 3	CRM 24
2.6	2.140	LRJ 3.1/4	CRL 26
4.0	5.670	MRJ 3.1/4	CRM 26
3.2	2.560	LRJ 3.1/2	CRL 28
4.0	7.480	MRJ 3.1/2	CRM 28
3.2	2.800	LRJ 3.3/4	CRL 30
4.0	7.530	MRJ 3.75	CRM 30
3.2	3.600	LRJ 4	CRL 32
4.0	7.800	MRJ 4	CRM 32
3.2	3.770	LRJ 4.1/4	CRL 34
4.8	8.160	MRJ 4.1/4	CRM 34
3.2	4.670	LRJ 4.1/2	CRL 36
4.8	10.800	MRJ 4.1/2	CRM 36
3.2	4.810	LRJ 4.3/4	CRL 38
4.8	12.300	MRJ 4.3/4	CRM 38
3.2	6.490	LRJ 5	CRL 40
4.8	11.700	MRJ 5	CRM 40
3.2	6.710	LRJ 5.1/2	CRL 44
4.8	15.100	MRJ 5.1/2	CRM 44
4.8	9.620	LRJ 6	CRL 48
4.8	19.600	MRJ 6	CRM 48
4.8	9.980	LRJ 6.1/2	CRL 52
4.8	26.600	MRJ 6.1/2	CRM 52
4.0	14.100	LRJ 7	CRL 56
4.8	27.500	MRJ 7	CRM 56

NIS™

6.00

Spherical Roller Bearings

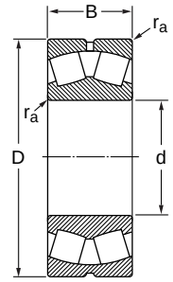
Prefix & Suffix

223	18	KMBW33

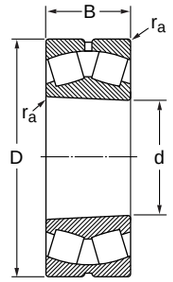
Basic type series
The first 3 digit represents the different dimension series

Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

Suffix
CC : Press Steel cage
MB : Brass cage
K : Tapered bore, taper 1:12 on inner diameter
K30 : Tapered bore, taper 1:30 on inner diameter
W33 : Lubrication groove and 3 holes in outer ring

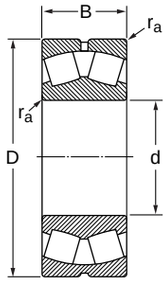


Cylindrical bore

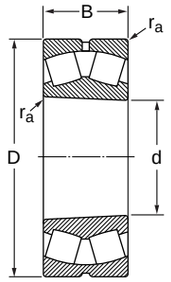


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d mm	D mm	B mm	Dynamic C kN	Static C_0 kN	Oil r/min	r_a max mm	kg	Bearings with Cylindrical Bore	Tapered Bore
25	52	18	46.550	41.800	16,150	1.0	0.260	22205 MBW33	22205 KMBW33
25	62	17	39.330	39.425	11,400	1.0	0.280	21305 MBW33	21305 KMBW33
30	62	20	60.800	57.000	13,300	1.0	0.290	22206 MBW33	22206 KMBW33
30	72	19	52.440	57.950	9,500	1.0	0.410	21306 MBW33	21306 KMBW33
35	72	23	82.175	80.750	11,400	1.0	0.450	22207 MBW33	22207 KMBW33
35	80	21	62.320	68.400	9,025	1.5	0.550	21307 MBW33	21307 KMBW33
40	80	23	91.675	85.500	10,450	1.0	0.530	22208 MBW33	22208 KMBW33
40	90	23	98.800	102.600	9,025	1.5	0.750	21308 MBW33	21308 KMBW33
40	90	33	142.500	133.000	7,600	1.5	1.050	22308 MBW33	22308 KMBW33
45	85	23	96.900	93.100	9,500	1.0	0.580	22209 MBW33	22209 KMBW33
45	100	25	118.750	120.650	8,075	1.5	0.990	21309 MBW33	21309 KMBW33
45	100	36	173.850	173.850	6,650	1.5	1.400	22309 MBW33	22309 KMBW33
50	90	23	98.800	102.600	9,025	1.0	0.630	22210 MBW33	22210 KMBW33
50	110	27	148.200	157.700	7,125	2.0	1.350	21310 MBW33	21310 KMBW33
50	110	40	209.000	212.800	5,985	2.0	1.900	22310 MBW33	22310 KMBW33
55	100	25	118.750	120.650	8,075	1.5	0.840	22211 MBW33	22211 KMBW33
55	120	29	148.200	157.700	7,125	2.0	1.700	21311 MBW33	21311 KMBW33
55	120	43	256.500	266.000	5,320	2.0	2.450	22311 MBW33	22311 KMBW33
60	110	28	148.200	157.700	7,125	1.5	1.150	22212 MBW33	22212 KMBW33
60	130	31	201.400	228.000	5,985	2.0	2.100	21312 MBW33	21312 KMBW33
60	130	46	294.500	318.250	5,035	2.0	3.100	22312 MBW33	22312 KMBW33
65	120	31	183.350	205.200	6,650	1.5	1.550	22213 MBW33	22213 MBW33
65	140	33	224.200	256.500	5,700	2.0	2.550	21313 MBW33	21313 MBW33
65	140	48	323.000	342.000	4,750	2.0	3.750	22313 MBW33	22313 MBW33
70	125	31	197.600	216.600	6,365	1.5	1.550	22214 MBW33	22214 MBW33
70	150	35	270.750	308.750	5,320	2.0	3.100	21314 MBW33	21314 MBW33
70	150	51	380.000	408.500	4,275	2.0	4.550	22314 MBW33	22314 MBW33
75	130	31	201.400	228.000	5,985	1.5	1.700	22215 MBW33	22215 KMBW33
75	160	37	270.750	308.750	5,320	2.0	3.750	21315 MBW33	21315 KMBW33
75	160	55	418.000	451.250	4,085	2.0	5.550	22315 MBW33	22315 KMBW33
80	140	33	224.200	256.500	5,700	2.0	2.100	22216 MBW33	22216 KMBW33
80	170	39	308.750	356.250	5,035	2.0	4.450	21316 MBW33	21316 KMBW33

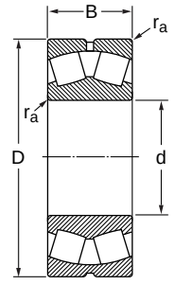


Cylindrical bore

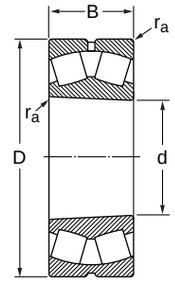


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Oil	r_a max		Bearings with Cylindrical Bore	Tapered Bore
mm	mm	mm	kN	kN	r/min	mm	kg		
80	170	58	465.500	513.000	3,800	2.0	6.600	22316 MBW33	22316 KMBW33
85	150	36	270.750	308.750	5,320	2.0	2.650	22217 MBW33	22217 KMBW33
85	180	41	308.750	356.250	5,035	2.5	5.200	21317 MBW33	21317 KMBW33
85	180	60	522.500	589.000	3,610	2.5	7.650	22317 MBW33	22317 KMBW33
90	160	40	308.750	356.250	5,035	2.0	3.400	22218 MBW33	22218 KMBW33
90	160	52.4	337.250	418.000	3,610	2.0	4.650	23218 MBW33	23218 KMBW33
90	190	43	361.000	427.500	4,560	2.5	6.100	21318 MBW33	21318 KMBW33
90	190	64	579.500	660.250	3,420	2.5	9.050	22318 MBW33	22318 KMBW33
95	170	43	361.000	427.500	4,560	2.0	4.150	22219 MBW33	22219 KMBW33
95	200	45	403.750	465.500	4,275	2.5	7.050	21319 MBW33	21319 KMBW33
95	200	67	636.500	726.750	3,230	2.5	10.500	22319 MBW33	22319 KMBW33
100	150	50	270.750	394.250	3,800	1.5	3.150	24020 MBW33	24020 K30MBW33
100	165	52	346.750	465.500	3,800	2.0	4.550	23120 MBW33	23120 KMBW33
100	165	65	432.250	608.000	3,040	2.0	5.650	24120 MBW33	24120 K30MBW33
100	180	46	403.750	465.500	4,275	2.0	4.900	22220 MBW33	22220 KMBW33
100	180	60.3	451.250	570.000	3,230	2.0	6.850	23220 MBW33	23220 KMBW33
100	215	47	403.750	465.500	4,275	2.5	8.600	21320 MBW33	21320 KMBW33
100	215	73	774.250	902.500	2,850	2.5	13.500	22320 MBW33	22320 KMBW33
110	170	45	294.500	418.000	4,085	2.0	3.800	23022 MBW33	23022 KMBW33
110	170	60	394.250	589.000	3,420	2.0	5.000	24022 MBW33	24022 K30MBW33
110	180	56	408.500	555.750	3,420	2.0	5.750	23122 MBW33	23122 KMBW33
110	180	69	494.000	712.500	2,850	2.0	7.100	24122 MBW33	24122 K30MBW33
110	200	53	532.000	608.000	3,800	2.0	7.000	22222 MBW33	22222 KMBW33
110	200	69.8	570.000	726.750	3,040	2.0	9.850	23222 MBW33	23222 KMBW33
110	240	80	902.500	1,064.000	2,660	2.5	18.400	22322 MBW33	22322 KMBW33
120	180	46	337.250	484.500	3,800	2.0	4.200	23024 MBW33	23024 KMBW33
120	180	60	408.500	636.500	3,230	2.0	5.450	24024 MBW33	24024 K30MBW33
120	200	62	484.500	660.250	3,230	2.0	8.000	23124 MBW33	23124 KMBW33
120	200	80	622.250	902.500	2,470	2.0	10.300	24124 MBW33	24124 K30MBW33
120	215	58	598.500	726.750	3,610	2.0	8.700	22224 MBW33	22224 KMBW33
120	215	76	660.250	883.500	2,660	2.0	12.000	23224 MBW33	23224 KMBW33
120	260	86	916.750	1,064.000	2,470	2.5	23.000	22324 MBW33	22324 KMBW33

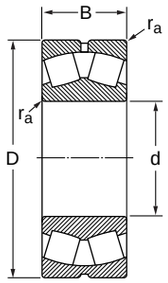


Cylindrical bore

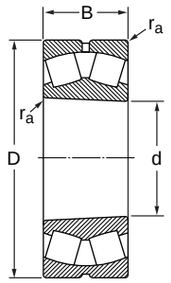


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Oil	r_a max		Bearings with Cylindrical Bore	Tapered Bore
mm	mm	mm	kN	kN	r/min	mm	kg		
130	200	52	408.500	579.500	3,420	2.0	6.000	23026 MBW33	23026 KMBW33
130	200	69	513.000	774.250	2,850	2.0	8.050	24026 MBW33	24026 K30MBW33
130	210	64	532.000	741.000	3,040	2.0	8.800	23126 MBW33	23126 KMBW33
130	210	80	646.000	950.000	2,280	2.0	11.000	24126 MBW33	24126 K30MBW33
130	230	64	698.250	883.500	3,420	2.5	11.000	22226 MBW33	22226 KMBW33
130	230	80	741.000	1,007.000	2,470	2.5	14.500	23226 MBW33	23226 KMBW33
130	280	93	1,064.000	1,254.000	2,280	3.0	29.000	22326 MBW33	22326 KMBW33
140	210	53	441.750	646.000	3,230	2.0	6.550	23028 MBW33	23028 KMBW33
140	210	69	541.500	855.000	2,660	2.0	8.550	24028 MBW33	24028 K30MBW33
140	225	68	598.500	855.000	2,660	2.0	10.500	23128 MBW33	23128 KMBW33
140	225	85	726.750	1,102.000	2,280	2.0	13.500	24128 MBW33	24128 K30MBW33
140	250	68	674.500	855.000	3,040	2.5	14.000	22228 MBW33	22228 KMBW33
140	250	88	869.250	1,187.500	2,280	2.5	19.000	23228 MBW33	23228 KMBW33
140	300	102	1,225.500	1,482.000	2,090	3.0	36.500	22328 MBW33	22328 KMBW33
150	225	56	484.500	712.500	3,040	2.0	7.950	23030 MBW33	23030 KMBW33
150	225	75	622.250	988.000	2,470	2.0	10.500	24030 MBW33	24030 K30MBW33
150	250	80	788.500	1,140.000	2,470	2.0	16.000	23130 MBW33	23130 KMBW33
150	250	100	969.000	1,453.500	2,090	2.0	20.000	24130 MBW33	24130 K30MBW33
150	270	73	807.500	1,026.000	2,850	2.5	18.000	22230 MBW33	22230 KMBW33
150	270	96	1,026.000	1,387.000	2,090	2.5	24.500	23230 MBW33	23230 KMBW33
150	320	108	1,387.000	1,672.000	1,900	3.0	43.500	22330 MBW33	22330 KMBW33
160	240	60	555.750	836.000	2,850	2.0	9.700	23032 MBW33	23032 KMBW33
160	240	80	712.500	1,140.000	2,280	2.0	13.000	24032 MBW33	24032 K30MBW33
160	270	86	931.000	1,301.500	2,280	2.0	20.500	23132 MBW33	23132 KMBW33
160	270	109	1,121.000	1,672.000	1,805	2.0	25.000	24132 MBW33	24132 K30MBW33
160	290	80	950.000	1,225.500	2,660	2.5	22.500	22232 MBW33	22232 KMBW33
160	290	104	1,159.000	1,577.000	2,090	2.5	31.000	23232 MBW33	23232 KMBW33
160	340	114	1,520.000	1,862.000	1,805	3.0	52.000	22332 MBW33	22332 KMBW33
170	260	67	674.500	1,007.000	2,660	2.0	13.000	23034 MBW33	23034 KMBW33
170	260	90	883.500	1,387.000	2,280	2.0	17.500	24034 MBW33	24034 K30MBW33
170	280	88	988.000	1,425.000	2,280	2.0	22.000	23134 MBW33	23134 KMBW33
170	280	109	1,159.000	1,767.000	1,805	2.0	27.500	24134 MBW33	24134 K30MBW33

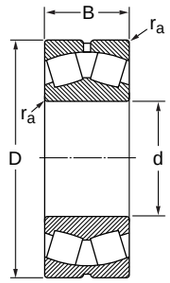


Cylindrical bore

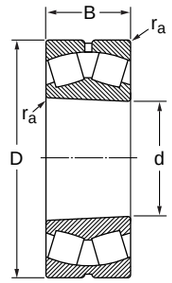


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Oil	r_a max		Bearings with Cylindrical Bore	Tapered Bore
mm	mm	mm	kN	kN	r/min	mm	kg		
170	310	86	1,064.000	1,387.000	2,470	3.0	28.500	22234 MBW33	22234 KMBW33
170	310	110	1,330.000	1,833.500	1,900	3.0	37.500	23234 MBW33	23234 KMBW33
170	360	120	1,672.000	2,052.000	1,710	3.0	61.000	22334 MBW33	22334 KMBW33
180	250	52	409.450	788.500	2,660	2.0	7.900	23936 MBW33	23936 KMBW33
180	280	74	788.500	1,187.500	2,470	2.0	17.000	23036 MBW33	23036 KMBW33
180	280	100	1,026.000	1,643.500	2,090	2.0	23.000	24036 MBW33	24036 K30MBW33
180	300	96	1,140.000	1,672.000	2,090	2.5	28.000	23136 MBW33	23136 KMBW33
180	300	118	1,330.000	2,052.000	1,615	2.5	34.500	24136 MBW33	24136 K30MBW33
180	320	86	1,121.000	1,482.000	2,470	3.0	29.500	22236 MBW33	22236 KMBW33
180	320	112	1,425.000	2,014.000	1,805	3.0	39.500	23236 MBW33	23236 KMBW33
180	380	126	1,900.000	2,327.500	1,615	3.0	71.500	22336 MBW33	22336 KMBW33
190	260	52	393.300	760.000	2,470	2.0	8.300	23938 MBW33	23938 KMBW33
190	290	75	821.750	1,273.000	2,280	2.0	18.000	23038 MBW33	23038 KMBW33
190	290	100	1,064.000	1,710.000	1,900	2.0	24.500	24038 MBW33	24038 K30MBW33
190	320	104	1,301.500	1,976.000	1,900	2.5	35.000	23138 MBW33	23138 KMBW33
190	320	128	1,520.000	2,375.000	1,520	2.5	43.000	24138 MBW33	24138 K30MBW33
190	340	92	1,206.500	1,615.000	2,280	3.0	36.500	22238 MBW33	22238 KMBW33
190	340	120	1,577.000	2,280.000	1,710	3.0	48.000	23238 MBW33	23238 KMBW33
190	400	132	2,014.000	2,517.500	1,520	4.0	82.500	22338 MBW33	22338 KMBW33
200	280	60	518.700	988.000	2,280	2.0	11.500	23940 MBW33	23940 KMBW33
200	310	82	950.000	1,453.500	2,090	2.0	23.300	23040 MBW33	23040 KMBW33
200	310	109	1,225.500	2,014.000	1,805	2.0	31.000	24040 MBW33	24040 K30MBW33
200	340	112	1,520.000	2,242.000	1,805	2.5	43.000	23140 MBW33	23140 KMBW33
200	340	140	1,710.000	2,660.000	1,425	2.5	53.500	24140 MBW33	24140 K30MBW33
200	360	98	1,387.000	1,833.500	2,090	3.0	43.500	22240 MBW33	22240 KMBW33
200	360	128	1,767.000	2,565.000	1,615	3.0	58.000	23240 MBW33	23240 KMBW33
200	420	138	2,204.000	2,755.000	1,425	4.0	95.000	22340 MBW33	22340 KMBW33
220	300	60	518.700	1,026.000	2,090	2.0	12.500	23944 MBW33	23944 KMBW33
220	340	90	1,159.000	1,767.000	1,900	2.5	30.500	23044 MBW33	23044 KMBW33
220	340	118	1,482.000	2,470.000	1,615	2.5	40.000	24044 MBW33	24044 K30MBW33
220	370	120	1,710.000	2,612.500	1,615	3.0	53.500	23144 MBW33	23144 KMBW33
220	370	150	2,014.000	3,182.500	1,330	3.0	67.000	24144 MBW33	24144 K30MBW33

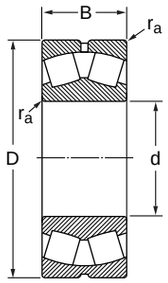


Cylindrical bore

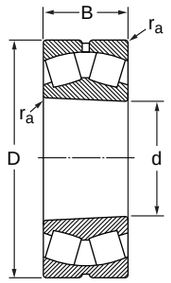


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Oil	r_a max		Bearings with Cylindrical Bore	Tapered Bore
mm	mm	mm	kN	kN	r/min	mm	kg		
220	400	108	1,672.000	2,242.000	1,900	3.0	60.500	22244 MBW33	22244 KMBW33
220	400	144	2,242.000	3,277.500	1,425	3.0	81.500	23244 MBW33	23244 KMBW33
220	460	145	2,565.000	3,277.500	1,330	4.0	120.000	22344 MBW33	22344 KMBW33
240	320	60	535.800	1,102.000	1,900	2.0	13.500	23948 MBW33	23948 KMBW33
240	360	92	1,225.500	1,976.000	1,805	2.5	33.500	23048 MBW33	23048 KMBW33
240	360	118	1,520.000	2,565.000	1,520	2.5	43.000	24048 MBW33	24048 K30MBW33
240	400	128	1,976.000	3,040.000	1,520	3.0	66.500	23148 MBW33	23148 KMBW33
240	400	160	2,280.000	3,705.000	1,235	3.0	83.000	24148 MBW33	24148 K30MBW33
240	440	120	2,090.000	2,850.000	1,710	3.0	83.000	22248 MBW33	22248 KMBW33
240	440	160	2,755.000	4,085.000	1,235	3.0	110.000	23248 MBW33	23248 KMBW33
240	500	155	2,945.000	3,800.000	1,235	4.0	115.000	22348 MBW33	22348 KMBW33
260	360	75	836.000	1,710.000	1,805	2.0	23.500	23952 MBW33	23952 KMBW33
260	400	104	1,520.000	2,422.500	1,615	3.0	48.500	23052 MBW33	23052 KMBW33
260	400	140	1,938.000	3,277.500	1,330	3.0	65.500	24052 MBW33	24052 K30MBW33
260	440	144	2,422.500	3,705.000	1,330	3.0	90.500	23152 MBW33	23152 KMBW33
260	440	180	2,850.000	4,560.000	1,140	3.0	110.000	24152 MBW33	24152 K30MBW33
260	480	130	2,517.500	3,372.500	1,520	4.0	110.000	22252 MBW33	22252 KMBW33
260	480	174	3,087.500	4,512.500	1,140	4.0	140.000	23252 MBW33	23252 KMBW33
260	540	165	3,372.500	4,322.500	1,045	5.0	190.000	22352 MBW33	22352 KMBW33
280	380	75	802.750	1,672.000	1,615	2.0	25.000	23956 MBW33	23956 KMBW33
280	420	106	1,643.500	2,707.500	1,520	3.0	52.500	23056 MBW33	23056 KMBW33
280	420	140	2,052.000	3,610.000	1,330	3.0	69.500	24056 MBW33	24056 K30MBW33
280	460	146	2,517.500	4,037.500	1,235	4.0	97.000	23156 MBW33	23156 KMBW33
280	460	180	2,945.000	4,845.000	1,045	4.0	120.000	24156 MBW33	24156 K30MBW33
280	500	130	2,565.000	3,562.500	1,425	4.0	115.000	22256 MBW33	22256 KMBW33
280	500	176	3,087.500	4,655.000	1,045	4.0	150.000	23256 MBW33	23256 KMBW33
280	580	175	3,800.000	4,940.000	1,045	5.0	235.000	22356 MBW33	22356 KMBW33
300	380	60	623.200	1,520.000	1,615	2.0	16.500	23860 MBW33	23860 KMBW33
300	420	90	1,140.000	2,375.000	1,520	2.5	39.500	23960 MBW33	23960 KMBW33
300	460	118	2,014.000	3,277.500	1,425	3.0	71.500	23060 MBW33	23060 KMBW33
300	460	160	2,565.000	4,512.500	1,140	3.0	97.000	24060 MBW33	24060 K30MBW33
300	500	160	3,040.000	4,845.000	1,140	4.0	125.000	23160 MBW33	23160 KMBW33

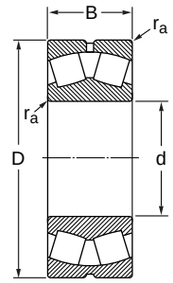


Cylindrical bore

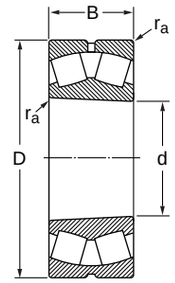


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Oil	r_a max		Bearings with Cylindrical Bore	Tapered Bore
mm	mm	mm	kN	kN	r/min	mm	kg		
300	500	200	3,562.500	5,985.000	95	4.0	160.000	24160 MBW33	24160 K30MBW33
300	540	140	2,992.500	4,037.500	1,330	4.0	145.000	22260 MBW33	22260 KMBW33
300	540	192	3,705.000	5,557.500	95	4.0	190.000	23260 MBW33	23260 KMBW33
320	440	90	1,358.500	2,565.000	1,425	2.5	42.000	23964 MBW33	23964 KMBW33
320	480	121	2,128.000	3,610.000	1,330	3.0	78.000	23064 MBW33	23064 KMBW33
320	480	160	2,707.500	4,845.000	1,140	3.0	100.000	24064 MBW33	24064 K30MBW33
320	540	176	3,562.500	5,700.000	1,045	4.0	165.000	23164 MBW33	23164 KMBW33
320	540	218	4,037.500	6,745.000	85	4.0	210.000	24164 MBW33	24164 K30MBW33
320	580	150	3,420.000	4,655.000	1,235	4.0	175.000	22264 MBW33	22264 KMBW33
320	580	208	4,180.000	6,365.000	903	4.0	240.000	23264 MBW33	23264 KMBW33
340	460	90	1,387.000	2,660.000	1,330	2.5	45.500	23968 MBW33	23968 KMBW33
340	520	133	2,565.000	4,322.500	1,235	4.0	105.000	23068 MBW33	23068 KMBW33
340	520	180	3,277.500	5,890.000	1,045	4.0	140.000	24068 MBW33	24068 K30MBW33
340	580	190	4,037.500	6,460.000	950	4.0	210.000	23168 MBW33	23168 KMBW33
340	580	243	5,035.000	8,217.500	808	4.0	280.000	24168 MBW33	24168 K30MBW33
340	620	224	4,845.000	7,410.000	760	5.0	295.000	23268 CAW33	23268 CAKW33
360	480	90	1,330.000	2,612.500	1,235	2.5	46.000	23972 MBW33	23972 KMBW33
360	540	134	2,612.500	4,560.000	1,140	4.0	110.000	23072 MBW33	23072 KMBW33
360	540	180	3,372.500	6,222.500	950	4.0	145.000	24072 MBW33	24072 K30MBW33
360	600	192	4,085.000	6,602.500	950	4.0	220.000	23172 MBW33	23172 KMBW33
360	600	243	5,320.000	8,835.000	760	4.0	280.000	24172 MBW33	24172 K30MBW33
360	650	170	4,085.000	5,890.000	808	5.0	255.000	22272 CAW33	22272 CAKW33
360	650	232	5,130.000	7,885.000	713	5.0	335.000	23272 CAW33	23272 CAKW33
380	520	106	1,862.000	3,610.000	1,140	3.0	69.000	23976 MBW33	23976 KMBW33
380	560	135	2,755.000	4,750.000	1,140	4.0	115.000	23076 MBW33	23076 KMBW33
380	560	180	3,420.000	6,460.000	903	4.0	150.000	24076 MBW33	24076 K30MBW33
380	620	194	4,180.000	6,745.000	950	4.0	230.000	23176 CAW33	23176 CAKW33
380	620	243	5,415.000	9,310.000	808	4.0	300.000	24176 CAW33	24176 CAK30W33
380	680	240	5,557.500	8,692.500	713	5.0	375.000	23276 CAW33	23276 CAKW33
400	540	106	1,900.000	3,705.000	1,140	3.0	71.000	23980 MBW33	23980 KMBW33
400	600	148	3,087.500	5,415.000	1,045	4.0	150.000	23080 MBW33	23080 KMBW33
400	600	200	4,085.000	7,600.000	855	4.0	205.000	24080 MBW33	24080 K30MBW33

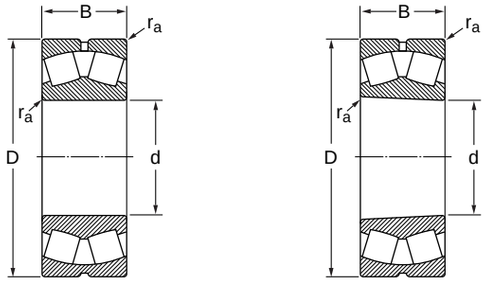


Cylindrical bore



Tapered bore

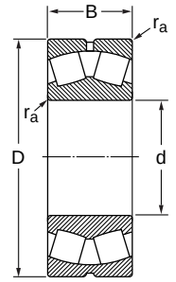
Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d	D	B	Dynamic C	Static C_0	Oil	r_a max		Bearings with Cylindrical Bore	Tapered Bore
mm	mm	mm	kN	kN	r/min	mm	kg		
400	650	200	4,417.500	7,267.500	903	5.0	265.000	23180 CAW33	23180 CAKW33
400	650	250	5,890.000	10,070.000	760	5.0	340.000	24180 CAW33	24180 CAK30W33
400	720	256	6,222.500	9,880.000	637	5.0	450.000	23280 CAW33	23280 CAKW33
400	820	243	7,125.000	9,880.000	713	6.0	650.000	22380 CAW33	22380 CAKW33
420	560	106	1,938.000	3,942.500	1,045	3.0	74.500	23984 MBW33	23984 KMBW33
420	620	150	3,230.000	5,700.000	1,045	4.0	155.000	23084 CAW33	23084 CAKW33
420	620	200	4,180.000	7,885.000	855	4.0	210.000	24084 CAW33	24084 CAK30W33
420	700	224	5,320.000	8,835.000	855	5.0	350.000	23184 CAW33	23184 CAKW33
420	700	280	6,982.500	11,970.000	665	5.0	445.000	24184 CAW33	24184 CAK30W33
420	760	272	6,982.500	11,020.000	599	6.0	535.000	23284 CAW33	23284 CAKW33
440	600	118	2,327.500	4,655.000	950	3.0	99.500	23988 MBW33	23988 KMBW33
440	650	157	3,467.500	6,222.500	950	5.0	180.000	23088 CAW33	23088 CAKW33
440	650	212	4,560.000	8,692.500	808	5.0	245.000	24088 CAW33	24088 CAK30W33
440	720	226	5,700.000	9,500.000	808	5.0	360.000	23188 CAW33	23188 CAKW33
440	720	280	7,125.000	12,540.000	665	5.0	460.000	24188 CAW33	24188 CAK30W33
440	790	280	7,410.000	11,875.000	570	6.0	590.000	23288 CAW33	23288 CAKW33
460	580	118	1,700.500	4,655.000	1,045	2.5	75.500	24892 CAW33	24892 CAK30W33
460	620	118	2,375.000	4,750.000	950	3.0	105.000	23992 CAW33	23992 CAKW33
460	680	163	3,705.000	6,602.500	903	5.0	205.000	23092 CAW33	23092 CAKW33
460	680	218	4,940.000	9,500.000	760	5.0	275.000	24092 CAW33	24092 CAK30W33
460	760	240	6,080.000	10,260.000	760	6.0	440.000	23192 CAW33	23192 CAKW33
460	760	300	7,885.000	13,870.000	637	6.0	560.000	24192 CAW33	24192 CAK30W33
460	830	296	8,075.000	13,015.000	532	6.0	695.000	23292 CAW33	23292 CAKW33
480	600	90	1,368.000	3,562.500	1,045	2.5	61.000	23896 CAW33	23896 CAKW33
480	650	128	2,755.000	5,415.000	950	4.0	125.000	23996 CAW33	23996 CAKW33
480	700	165	3,705.000	6,460.000	903	5.0	215.000	23096 CAW33	23096 CAKW33
480	700	218	5,035.000	9,880.000	713	5.0	285.000	24096 CAW33	24096 CAK30W33
480	790	248	6,602.500	11,400.000	713	6.0	485.000	23196 CAW33	23196 CAKW33
480	790	308	8,550.000	14,820.000	599	6.0	605.000	24196 CAW33	24196 CAK30W33
480	870	310	8,835.000	14,250.000	504	6.0	800.000	23296 CAW33	23296 CAKW33
500	620	90	1,406.000	3,800.000	950	2.5	62.000	238/500 CAW33	238/500 CAKW33
500	670	128	2,755.000	5,700.000	903	4.0	130.000	239/500 CAW33	239/500 CAKW33



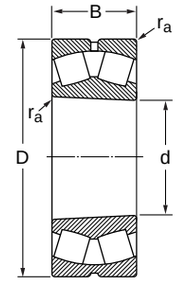
Cylindrical bore

Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Oil			Bearings with Cylindrical Bore	Tapered Bore
d	D	B	C	C_0		r_a max			
mm	mm	mm	kN	kN	r/min	mm	kg		
500	720	167	3,942.500	7,410.000	855	5.0	225.000	230/500 CAW33	230/500 CAKW33
500	720	218	5,225.000	10,450.000	665	5.0	295.000	240/500 CAW33	240/500 CAK30W33
500	830	264	7,267.500	12,255.000	665	6.0	580.000	231/500 CAW33	231/500 CAKW33
500	830	325	9,310.000	16,150.000	570	6.0	700.000	241/500 CAW33	241/500 CAK30W33
500	920	336	10,070.000	16,435.000	475	6.0	985.000	232/500 CAW33	232/500 CAKW33
530	650	118	1,748.000	5,035.000	903	2.5	86.000	248/530 CAW33	248/530 CAK30W33
530	710	136	3,040.000	6,365.000	855	4.0	155.000	239/530 CAW33	239/530 CAKW33
530	780	185	4,845.000	8,835.000	760	5.0	310.000	230/530 CAW33	230/530 CAKW33
530	780	250	6,365.000	12,540.000	637	5.0	410.000	240/530 CAW33	240/530 CAK30W33
530	870	272	7,742.500	13,300.000	637	6.0	645.000	231/530 CAW33	231/530 CAKW33
530	870	335	10,070.000	18,050.000	532	6.0	830.000	241/530 CAW33	241/530 CAK30W33
530	980	355	10,545.000	19,380.000	456	8.0	1200.000	232/530 CAW33	232/530 CAKW33
560	750	140	3,277.500	6,840.000	808	4.0	175.000	239/560 CAW33	239/560 CAKW33
560	820	195	5,320.000	9,690.000	713	5.0	355.000	230/560 CAW33	230/560 CAKW33
560	820	258	6,982.500	13,870.000	599	5.0	465.000	240/560 CAW33	240/560 CAK30W33
560	920	280	8,692.500	15,200.000	599	6.0	740.000	231/560 CAW33	231/560 CAKW33
560	920	355	11,400.000	20,520.000	475	6.0	985.000	241/560 CAW33	241/560 CAK30W33
560	1030	365	10,925.000	20,900.000	409	8.0	1350.000	232/560 CAW33	232/560 CAKW33
600	800	150	3,705.000	7,885.000	713	4.0	220.000	239/600 CAW33	239/600 CAKW33
600	870	200	5,700.000	10,830.000	665	5.0	405.000	230/600 CAW33	230/600 CAKW33
600	870	272	7,742.500	16,150.000	532	5.0	520.000	240/600 CAW33	240/600 CAK30W33
600	980	300	9,690.000	17,100.000	532	6.0	895.000	231/600 CAW33	231/600 CAKW33
600	980	375	10,925.000	22,420.000	456	6.0	1200.000	241/600 CAW33	241/600 CAK30W33
600	1090	388	12,445.000	24,225.000	380	8.0	1600.000	232/600 CAW33	232/600 CAKW33
630	780	112	2,080.500	5,795.000	713	3.0	120.000	238/630 CAW33	238/630 CAKW33
630	850	165	4,417.500	9,310.000	665	5.0	280.000	239/630 CAW33	239/630 CAKW33
630	920	212	6,365.000	11,875.000	637	6.0	485.000	230/630 CAW33	230/630 CAKW33
630	920	290	8,360.000	17,100.000	504	6.0	645.000	240/630 CAW33	240/630 CAK30W33
630	1030	315	9,975.000	19,760.000	504	6.0	1050.000	231/630 CAW33	231/630 CAKW33
630	1030	400	12,065.000	25,650.000	428	6.0	1400.000	241/630 CAW33	241/630 CAK30W33
670	820	112	2,137.500	6,080.000	665	3.0	130.000	238/670 CAW33	238/670 CAKW33
670	820	150	2,954.500	9,025.000	665	3.0	172.000	248/670 CAW33	248/670 CAK30W33

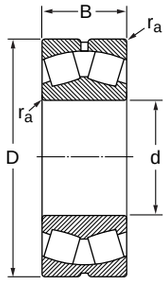


Cylindrical bore

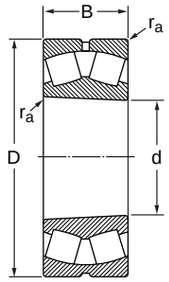


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Oil			Bearings with Cylindrical Bore	Tapered Bore
d	D	B	C	C_0		r_a max			
mm	mm	mm	kN	kN	r/min	mm	kg		
670	900	170	4,750.000	10,260.000	637	5.0	315.000	239/670 CAW33	239/670 CAKW33
670	980	230	7,267.500	13,870.000	570	6.0	600.000	230/670 CAW33	230/670 CAKW33
670	980	308	9,500.000	19,380.000	475	6.0	790.000	240/670 CAW33	240/670 CAK30W33
670	1090	336	10,355.000	21,280.000	475	6.0	1250.000	231/670 CAW33	231/670 CAKW33
670	1090	412	13,110.000	27,550.000	380	6.0	1600.000	241/670 CAW33	241/670 CAK30W33
670	1220	438	14,630.000	28,975.000	342	10.0	2270.000	232/670 CAW33	232/670 CAKW33
710	870	118	2,451.000	7,125.000	637	3.0	153.000	238/710 CAW33	238/710 CAKW33
710	950	180	5,320.000	11,400.000	570	5.0	365.000	239/710 CAW33	239/710 CAKW33
710	950	243	6,460.000	14,820.000	475	5.0	495.000	249/710 CAW33	249/710 CAK30W33
710	1030	236	7,885.000	15,485.000	532	6.0	670.000	230/710 CAW33	230/710 CAKW33
710	1030	315	9,880.000	20,900.000	428	6.0	895.000	240/710 CAW33	240/710 CAK30W33
710	1150	345	11,590.000	24,700.000	428	8.0	1450.000	231/710 CAW33	231/710 CAKW33
710	1150	438	14,440.000	30,875.000	361	8.0	1900.000	241/710 CAW33	241/710 CAK30W33
710	1280	450	16,720.000	32,775.000	304	10.0	2610.000	232/710 CAW33	232/710 CAKW33
750	920	128	2,783.500	8,075.000	570	4.0	180.000	238/750 CAW33	238/750 CAKW33
750	1000	185	5,700.000	12,540.000	532	5.0	420.000	239/750 CAW33	239/750 CAKW33
750	1000	250	7,267.500	17,100.000	456	5.0	560.000	249/750 CAW33	249/750 CAK30W33
750	1090	250	9,167.500	17,670.000	504	6.0	795.000	230/750 CAW33	230/750 CAKW33
750	1090	335	10,830.000	22,800.000	409	6.0	1065.000	240/750 CAW33	240/750 CAK30W33
750	1220	365	13,110.000	27,550.000	409	8.0	1700.000	231/750 CAW33	231/750 CAKW33
750	1220	475	16,435.000	35,625.000	342	8.0	2100.000	241/750 CAW33	241/750 CAK30W33
750	1360	475	17,765.000	34,675.000	285	12.0	3050.000	232/750 CAW33	232/750 CAKW33
800	980	180	3,933.000	12,255.000	532	4.0	300.000	248/800 CAW33	248/800 CAK30W33
800	1060	195	6,080.000	13,585.000	504	5.0	470.000	239/800 CAW33	239/800 CAKW33
800	1060	258	7,600.000	18,335.000	409	5.0	640.000	249/800 CAW33	249/800 CAK30W33
800	1150	258	9,500.000	19,000.000	456	6.0	895.000	230/800 CAW33	230/800 CAKW33
800	1150	345	11,875.000	26,125.000	380	6.0	1200.000	240/800 CAW33	240/800 CAK30W33
800	1280	375	14,060.000	29,925.000	380	8.0	1920.000	231/800 CAW33	231/800 CAKW33
800	1280	475	17,480.000	38,475.000	304	8.0	2300.000	241/800 CAW33	241/800 CAK30W33
850	1030	136	3,173.000	9,500.000	504	4.0	240.000	238/850 CAW33	238/850 CAKW33
850	1120	200	6,602.500	14,820.000	456	5.0	560.000	239/850 CAW33	239/850 CAKW33
850	1120	272	8,835.000	21,660.000	380	5.0	740.000	249/850 CAW33	249/850 CAK30W33

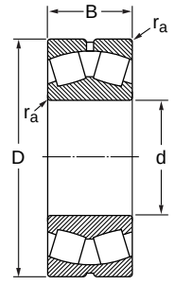


Cylindrical bore

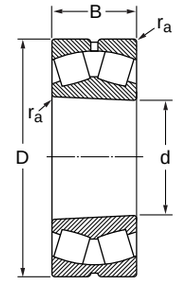


Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Oil			Bearings with Cylindrical Bore	Tapered Bore
d	D	B	C	C_0		r_a max			
mm	mm	mm	kN	kN	r/min	mm	kg		
850	1220	272	8,901.500	20,520.000	428	6.0	1050.000	230/850 CAW33	230/850 CAKW33
850	1220	365	12,065.000	29,925.000	342	6.0	1410.000	240/850 CAW33	240/850 CAK30W33
850	1360	400	15,295.000	32,775.000	342	10.0	2200.000	231/850 CAW33	231/850 CAKW33
850	1360	500	19,190.000	42,750.000	285	10.0	2710.000	241/850 CAW33	241/850 CAK30W33
900	1090	190	4,427.000	14,535.000	456	4.0	370.000	248/900 CAW33	248/900 CAK30W33
900	1180	206	7,125.000	16,150.000	428	5.0	605.000	239/900 CAW33	239/900 CAKW33
900	1280	280	9,595.000	22,040.000	380	6.0	1200.000	230/900 CAW33	230/900 CAKW33
900	1280	375	12,920.000	32,775.000	323	6.0	1570.000	240/900 CAW33	240/900 CAK30W33
900	1420	515	20,330.000	46,550.000	266	10.0	3350.000	241/900 CAW33	241/900 CAK30W33
950	1250	224	6,887.500	18,620.000	409	6.0	755.000	239/950 CAW33	239/950 CAKW33
950	1250	300	8,740.000	24,700.000	323	6.0	1015.000	249/950 CAW33	249/950 CAK30W33
950	1360	300	11,400.000	27,075.000	361	6.0	1450.000	230/950 CAW33	230/950 CAKW33
950	1360	412	14,060.000	37,050.000	285	6.0	1990.000	240/950 CAW33	240/950 CAK30W33
950	1500	545	22,705.000	52,250.000	247	10.0	3535.000	241/950 CAW33	241/950 CAK30W33
1000	1220	165	4,427.000	13,585.000	380	5.0	410.000	238/1000 CAW33	238/1000 CAKW33
1000	1320	315	9,880.000	27,550.000	304	6.0	1200.000	249/1000 CAW33	249/1000 CAK30W33
1000	1420	308	12,065.000	28,975.000	342	6.0	1600.000	230/1000 CAW33	230/1000 CAKW33
1000	1420	412	14,630.000	38,475.000	266	6.0	2140.000	240/1000 CAW33	240/1000 CAK30W33
1000	1580	462	20,330.000	45,600.000	266	10.0	3500.000	231/1000 CAW33	231/1000 CAKW33
1000	1580	580	25,365.000	58,900.000	228	10.0	4300.000	241/1000 CAW33	241/1000 CAK30W33



Cylindrical bore



Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
			Dynamic	Static	Oil			Bearings with Cylindrical Bore	Tapered Bore
d	D	B	C	C_0		r_a max			
mm	mm	mm	kN	kN	r/min	mm	kg		
1060	1280	165	4,531.500	14,250.000	361	5.0	435.000	238/1060 CAW33	238/1060 CAKW33
1060	1280	218	5,795.000	19,000.000	361	5.0	570.000	248/1060 CAW33	248/1060 CAK30W33
1060	1400	250	9,072.500	24,700.000	342	6.0	1100.000	239/1060 CAW33	239/1060 CAKW33
1060	1400	335	10,925.000	30,875.000	266	6.0	1400.000	249/1060 CAW33	249/1060 CAK30W33
1060	1500	325	13,110.000	32,300.000	304	8.0	2250.000	230/1060 CAW33	230/1060 CAKW33
1060	1500	438	16,435.000	43,225.000	247	8.0	2515.000	240/1060 CAW33	240/1060 CAK30W33
1120	1360	243	6,887.500	22,800.000	323	5.0	735.000	248/1120 CAW33	248/1120 CAK30W33
1120	1460	335	11,115.000	32,775.000	247	6.0	1500.000	249/1120 CAW33	249/1120 CAK30W33
1120	1580	462	17,765.000	47,500.000	228	8.0	2925.000	240/1120 CAW33	240/1120 CAK30W33
1180	1420	180	5,576.500	17,670.000	304	5.0	575.000	238/1180 CAW33	238/1180 CAKW33
1180	1420	243	7,324.500	25,650.000	304	5.0	770.000	248/1180 CAW33	248/1180 CAK30W33
1180	1540	272	10,545.000	29,450.000	285	6.0	1400.000	239/1180 CAW33	239/1180 CAKW33
1180	1540	355	12,920.000	38,475.000	228	6.0	1800.000	249/1180 CAW33	249/1180 CAK30W33
1250	1750	375	17,005.000	42,750.000	228	8.0	2840.000	230/1250 CAW33	230/1250 CAKW33
1320	1600	280	9,291.000	31,825.000	247	5.0	1160.000	248/1320 CAW33	248/1320 CAK30W33
1320	1720	400	15,295.000	46,550.000	190	6.0	2500.000	249/1320 CAW33	249/1320 CAK30W33
1500	1820	315	12,065.000	42,750.000	190	6.0	1710.000	248/1500 CAW33	248/1500 CAK30W33
1800	2180	375	16,720.000	59,850.000	124	6.0	2900.000	248/1800 CAW33	248/1800 CAK30W33

Prefix & Suffix

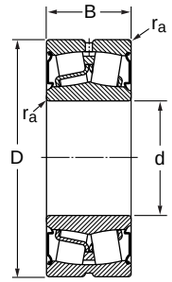
BS2	22	18	2CSK

Prefix
BS2 : Sealed Spherical

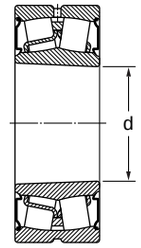
Basic type series
22 : Standard
23 : Medium

Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

Suffix
2CS : Sheet steel reinforced contact seal
K : Tapered bore, taper 1:12 on inner diameter



Cylindrical bore



Tapered bore

Basic Dimensions			Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d mm	D mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	r_a max mm	kg	Bearings with Cylindrical Bore	Tapered Bore
25	52	23	46.550	41.800	3,420	1.0	0.310	BS2-2205-2CS	-
30	62	25	60.800	57.000	2,660	1.0	0.340	BS2-2206-2CS	-
35	72	28	82.175	80.750	2,280	1.0	0.520	BS2-2207-2CS	-
40	80	28	91.675	85.500	2,090	1.0	0.570	BS2-2208-2CS	BS2-2208-2CSK
40	90	38	142.500	133.000	1,805	1.5	1.200	BS2-2308-2CS	-
45	85	28	96.900	93.100	1,900	1.0	0.660	BS2-2209-2CS	BS2-2209-2CSK
50	90	28	98.800	102.600	1,805	1.0	0.700	BS2-2210-2CS	BS2-2210-2CSK
55	100	31	118.750	120.650	1,615	1.5	1.000	BS2-2211-2CS	BS2-2211-2CSK
55	120	49	256.500	266.000	1,330	2.0	2.800	BS2-2311-2CS	-
60	110	34	148.200	157.700	1,520	1.5	1.300	BS2-2212-2CS	BS2-2212-2CSK
65	120	38	183.350	205.200	1,425	1.5	1.600	BS2-2213-2CS	BS2-2213-2CSK
70	125	38	197.600	216.600	1,330	1.5	1.800	BS2-2214-2CS	BS2-2214-2CSK
75	130	38	201.400	228.000	1,235	1.5	2.100	BS2-2215-2CS	BS2-2215-2CSK
75	160	64	418.000	451.250	903	2.0	6.500	BS2-2315-2CS	-
80	140	40	224.200	256.500	1,140	2.0	2.400	BS2-2216-2CS	BS2-2216-2CSK
85	150	44	270.750	308.750	1,045	2.0	3.000	BS2-2217-2CS	BS2-2217-2CSK
90	160	48	308.750	356.250	950	2.0	3.700	BS2-2218-2CS	BS2-2218-2CSK

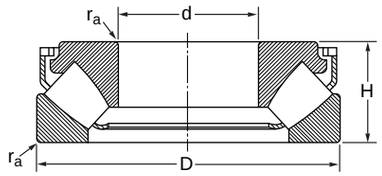
Prefix & Suffix

294	26	M

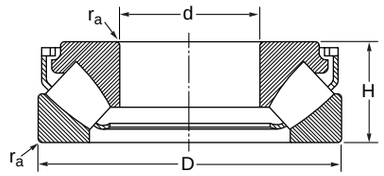
Basic type series
292 : Standard
293 : Medium
294 : Heavy

Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

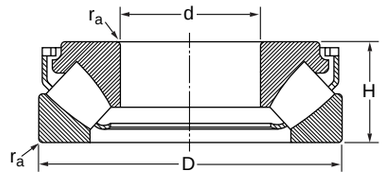
Suffix
M : Machined brass cage



Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
60	130	42	327.750	869.250	1,710	2,470	1.5	2.600	29412
65	140	45	377.150	1026.000	1,615	2,280	2.0	3.200	29413
70	150	48	426.550	1187.500	1,520	2,090	2.0	3.900	29414
75	160	51	492.100	1358.500	1,520	2,090	2.0	4.700	29415
80	170	54	546.250	1548.500	1,425	1,900	2.0	5.600	29416
85	150	39	317.300	1007.000	1,520	2,090	1.5	2.750	29317
85	180	58	601.350	1710.000	1,235	1,710	2.0	6.750	29417
90	155	39	327.750	1026.000	1,520	2,090	1.5	2.850	29318
90	190	60	666.900	1900.000	1,235	1,710	2.0	7.750	29418
100	170	42	387.600	1225.500	1,425	1,900	1.5	3.650	29320
100	210	67	819.850	2375.000	1,045	1,520	2.5	10.500	29420
110	190	48	508.250	1643.500	1,235	1,710	2.0	5.300	29322
110	230	73	959.500	2850.000	903	1,330	2.5	13.500	29422
120	210	54	623.200	2014.000	1,045	1,520	2.0	7.350	29324
120	250	78	1111.500	3277.500	855	1,235	3.0	17.500	29424
130	225	58	715.350	2375.000	950	1,425	2.0	9.000	29326
130	270	85	1311.000	3847.500	808	1,140	3.0	22.000	29426
140	240	60	802.750	2707.500	903	1,330	2.0	10.500	29328
140	280	85	1330.000	4085.000	808	1,140	3.0	23.000	29428
150	215	39	327.750	1301.500	-	1,710	1.5	4.550	29230
150	250	60	819.850	2707.500	903	1,330	2.0	11.000	29330
150	300	90	1529.500	4845.000	760	1,045	3.0	28.000	29430
160	225	39	339.150	1387.000	-	1,615	1.5	4.800	29232
160	270	67	959.500	3277.500	808	1,140	2.5	14.500	29332
160	320	95	1700.500	5320.000	713	950	4.0	33.500	29432
170	240	42	387.600	1577.000	-	1,520	1.5	5.950	29234
170	280	67	997.500	3372.500	808	1,140	2.5	15.000	29334
170	340	103	1919.000	6222.500	665	903	4.0	44.500	29434
180	250	42	399.000	1672.000	-	1,520	1.5	6.250	29236
180	300	73	1178.000	4085.000	760	1,045	2.5	19.500	29336
180	360	109	2137.500	6982.500	637	855	4.0	52.500	29436
190	270	48	492.100	2090.000	-	1,330	2.0	8.700	29238



Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d	D	B	Dynamic C	Static C_0	Grease	Oil	r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg	
190	320	78	1330.000	4512.500	713	950	3.0	23.500	29338
190	380	115	2356.000	7600.000	599	808	4.0	60.500	29438
200	280	48	508.250	2166.000	-	1,330	2.0	8.900	29240
200	340	85	1529.500	5225.000	665	903	3.0	29.500	29340
200	400	122	2622.000	8550.000	570	760	4.0	72.000	29440
220	300	48	518.700	2280.000	-	1,235	2.0	10.000	29244
220	360	85	1643.500	5985.000	665	903	3.0	33.500	29344
220	420	122	2736.000	9167.500	532	713	5.0	75.000	29444
240	340	60	759.050	3277.500	-	1,045	2.0	16.500	29248
240	380	85	1700.500	6222.500	637	855	3.0	35.500	29348
240	440	122	2840.500	9690.000	532	713	5.0	80.000	29448
260	360	60	776.150	3467.500	-	1,045	2.0	18.500	29252
260	420	95	2109.000	7885.000	570	760	4.0	49.000	29352
260	480	132	3334.500	12255.000	475	637	5.0	105.000	29452
280	380	60	819.850	3800.000	-	950	2.0	19.500	29256
280	440	95	2080.500	8217.500	570	760	4.0	53.000	29356
280	520	145	4094.500	14535.000	456	599	5.0	135.000	29456
300	420	73	1016.500	4560.000	-	855	2.5	30.500	29260
300	480	109	2536.500	10070.000	504	665	4.0	75.000	29360
300	540	145	4151.500	15770.000	428	570	5.0	140.000	29460
320	440	73	1054.500	4845.000	-	808	2.5	33.000	29264
320	500	109	2736.000	10640.000	475	637	4.0	78.000	29364
320	580	155	4702.500	18050.000	409	532	6.0	175.000	29464
340	460	73	1073.500	5130.000	-	808	2.5	33.500	29268
340	540	122	2574.500	10450.000	-	570	4.0	105.000	29368
340	620	170	5462.500	21280.000	361	475	6.0	220.000	29468
360	500	85	1387.000	6460.000	-	713	3.0	52.000	29272
360	560	122	2622.000	11020.000	-	570	4.0	110.000	29372
360	640	170	5082.500	20140.000	-	475	6.0	230.000	29472
380	520	85	1501.000	7267.500	-	665	3.0	53.000	29276
380	600	132	3173.000	13300.000	-	504	5.0	140.000	29376
380	670	175	5576.500	22800.000	-	456	6.0	260.000	29476



Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d	D	B	Dynamic C	Static C_0	Grease	Oil	r_a max		
mm	mm	mm	kN	kN	r/min	r/min	mm	kg	
400	540	85	1529.500	7600.000	-	665	3.0	55.500	29280
400	620	132	3277.500	13870.000	-	504	5.0	150.000	29380
400	710	185	6232.000	25175.000	-	428	6.0	310.000	29480
420	580	95	1890.500	9310.000	-	599	4.0	75.500	29284
420	650	140	3553.000	15200.000	-	475	5.0	170.000	29384
420	730	185	6393.500	26125.000	-	409	6.0	325.000	29484
440	600	95	1966.500	9880.000	-	599	4.0	78.000	29288
440	680	145	4265.500	18335.000	-	456	5.0	180.000	29388
440	780	206	7429.000	30400.000	-	361	8.0	410.000	29488

Thrust Bearings

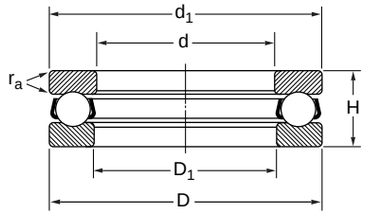
Prefix & Suffix

511	08	M

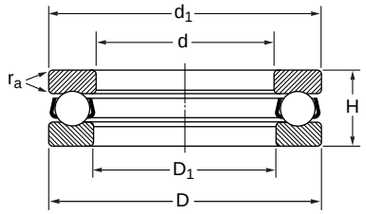
Basic type series
511 : Light
512 : Standard
513 : Medium
514 : Heavy

Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5

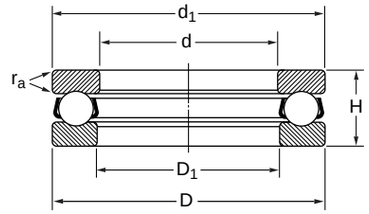
Suffix
M : Machined brass cage



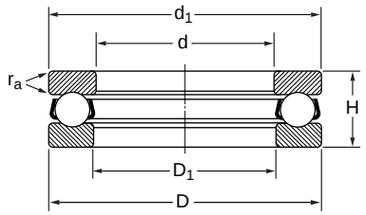
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D_1 mm	D mm	d_1 mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
10	11	24	24	9	9.453	13.300	6,650	9,025	0.3	0.020	51100
10	12	26	26	11	12.065	16.150	5,700	7,600	0.6	0.031	51200
12	13	26	26	9	9.880	14.535	6,365	8,550	0.3	0.022	51101
12	14	28	28	11	12.635	18.050	5,700	7,600	0.6	0.034	51201
15	16	28	28	9	8.892	13.300	5,985	8,075	0.3	0.023	51102
15	17	32	32	12	15.675	23.750	5,035	6,650	0.6	0.046	51202
17	18	30	30	9	9.263	14.535	5,985	8,075	0.3	0.025	51103
17	19	35	35	12	16.340	26.125	4,750	6,365	0.6	0.053	51203
20	21	35	35	10	12.065	19.760	5,320	7,125	0.3	0.038	51104
20	22	40	40	14	21.375	35.625	4,275	5,700	0.6	0.083	51204
25	26	42	42	11	15.105	27.550	4,560	5,985	0.6	0.056	51105
25	27	47	47	15	26.220	47.500	3,800	5,035	0.6	0.110	51205
25	27	52	52	18	32.775	52.250	3,230	4,275	1.0	0.170	51305
25	27	60	60	24	52.535	85.500	2,470	3,420	1.0	0.340	51405
30	32	47	47	11	15.960	31.825	4,275	5,700	0.6	0.063	51106
30	32	52	52	16	24.225	45.125	3,420	4,560	0.6	0.130	51206
30	32	60	60	21	35.815	62.225	2,660	3,610	1.0	0.260	51306
30	32	70	70	28	69.160	118.750	1,900	2,850	1.0	0.520	51406
35	37	52	52	12	16.530	35.625	4,085	5,320	0.6	0.080	51107
35	37	62	62	18	33.345	63.650	2,850	3,800	1.0	0.220	51207
35	37	68	68	24	46.930	83.600	2,280	3,230	1.0	0.380	51307
35	37	80	80	32	82.745	148.200	1,710	2,470	1.0	0.760	51407
40	42	60	60	13	22.230	47.500	3,610	4,750	0.6	0.120	51108
40	42	68	68	19	44.460	93.100	2,660	3,610	1.0	0.280	51208
40	42	78	78	26	58.710	106.400	1,900	2,850	1.0	0.530	51308
40	42	90	90	36	106.400	193.800	1,615	2,280	1.0	1.100	51408
45	47	65	65	14	22.990	54.150	3,230	4,275	0.6	0.140	51109
45	47	73	73	20	37.050	76.000	2,470	3,420	1.0	0.300	51209
45	47	85	85	28	72.295	133.000	1,805	2,660	1.0	0.660	51309
45	47	100	100	39	123.500	228.000	1,520	2,090	1.0	1.400	51409
50	52	70	70	14	24.225	59.850	3,040	4,085	0.6	0.160	51110
50	52	78	78	22	46.930	100.700	2,280	3,230	1.0	0.370	51210



Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D_1 mm	D mm	d_1 mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
50	52	95	95	31	83.980	164.350	1,710	2,470	1.0	0.940	51310
50	52	110	110	43	151.050	294.500	1,425	1,900	1.5	2.000	51410
55	57	78	78	16	29.165	74.100	2,660	3,610	0.6	0.230	51111
55	57	90	90	25	58.710	127.300	1,805	2,660	1.0	0.590	51211
55	57	105	105	35	98.800	197.600	1,520	2,090	1.0	1.300	51311
55	57	120	120	48	169.100	342.000	1,235	1,710	1.5	2.550	51411
60	62	85	85	17	34.580	88.350	2,470	3,420	1.0	0.200	51112
60	62	95	95	26	59.280	133.000	1,805	2,660	1.0	0.650	51212
60	62	110	110	35	95.950	197.600	1,520	2,090	1.0	1.350	51312
60	62	130	130	51	189.050	380.000	1,045	1,520	1.5	3.100	51412 M
65	67	90	90	18	3.515	93.100	2,280	3,230	1.0	0.330	51113
65	67	100	100	27	6.052	142.500	1,710	2,470	1.0	0.780	51213
65	67	115	115	36	100.700	209.000	1,425	1,900	1.0	1.500	51313
65	68	140	140	56	205.200	427.500	950	1,425	2.0	4.000	51413 M
70	72	95	95	18	35.815	98.800	2,280	3,230	1.0	0.350	51114
70	72	105	105	27	61.750	152.000	1,710	2,470	1.0	0.790	51214
70	72	125	125	40	128.250	285.000	1,330	1,805	1.0	2.000	51314
70	73	150	150	60	222.300	475.000	903	1,330	2.0	5.000	51414 M
75	77	100	100	19	41.990	130.150	2,090	3,040	1.0	0.400	51115
75	77	110	110	27	64.220	161.500	1,615	2,280	1.0	0.830	51215
75	77	135	135	44	154.850	342.000	1,140	1,615	1.5	2.600	51315
75	78	160	160	65	238.450	532.000	855	1,235	2.0	6.750	51415 M
80	82	105	105	19	42.655	133.000	1,900	2,850	1.0	0.420	51116
80	82	115	115	28	72.295	180.500	1,615	2,280	1.0	0.910	51216
80	82	140	140	44	151.050	342.000	1,140	1,615	1.5	2.700	51316
80	83	170	170	68	256.500	589.000	808	1,140	2.0	7.950	51416 M
85	87	110	110	19	43.890	142.500	1,900	2,850	1.0	0.440	51117
85	88	125	125	31	92.625	237.500	1,520	2,090	1.0	1.200	51217
85	88	150	150	49	180.500	403.750	1,045	1,520	1.5	3.550	51317
85	88	180	177	72	271.700	646.000	808	1,140	2.0	9.450	51417 M
90	92	120	120	22	56.240	180.500	1,710	2,470	1.0	0.670	51118
90	93	135	135	35	113.050	285.000	1,425	1,900	1.0	1.700	51218



Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D_1 mm	D mm	d_1 mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
90	93	155	155	50	185.250	441.750	950	1,425	1.5	3.800	51318
90	93	190	187	77	291.650	712.500	760	1,045	2.0	11.000	51418 M
100	102	135	135	25	80.940	256.500	162	2,280	1.0	0.970	51120
100	103	150	150	38	117.800	304.000	1,235	1,710	1.0	2.200	51220
100	103	170	170	55	217.550	532.000	903	1,330	1.5	4.950	51320
100	103	210	205	85	352.450	916.750	665	903	2.5	15.000	51420 M
110	112	145	145	25	82.745	275.500	1,520	2,090	1.0	1.050	51122
110	113	160	160	38	123.500	342.000	1,140	1,615	1.0	2.400	51222
110	113	190	187	63	262.200	684.000	808	1,140	2.0	7.850	51322 M
110	113	230	225	95	389.500	1083.000	599	808	2.5	20.000	51422 M
120	122	155	155	25	83.980	294.500	1,520	2,090	1.0	1.150	51124
120	123	170	170	39	133.000	38.000	1,045	1,520	1.0	2.650	51224
120	123	210	210	70	308.750	869.250	760	1,045	2.0	11.000	51324 M
120	123	250	245	102	401.850	1159.000	570	760	3.0	25.500	51424 M
130	132	170	170	30	105.450	370.500	1,330	1,805	1.0	1.850	51126
130	133	190	187	45	176.700	513.000	903	1,330	1.5	4.000	51226
130	134	225	220	75	340.100	1007.000	713	950	2.0	13.000	51326 M
130	134	270	265	110	494.000	1520.000	532	713	3.0	32.000	51426 M
140	142	180	178	31	105.450	380.000	1,235	1,710	1.0	2.050	51128
140	143	200	197	46	180.500	541.500	903	1,330	1.5	4.350	51228
140	144	240	235	80	377.150	1159.000	665	903	2.0	15.500	51328 M
140	144	280	275	112	494.000	1520.000	504	665	3.0	34.500	51428 M
150	152	190	188	31	105.450	380.000	1,140	1,615	1.0	2.200	51130 M
150	153	215	212	50	226.100	698.250	855	1,235	1.5	6.100	51230 M
150	154	250	245	80	389.500	1225.500	637	855	2.0	16.500	51330 M
150	154	300	295	120	531.050	1710.000	475	637	3.0	42.500	51430 M
160	162	200	198	31	106.400	403.750	1,140	1,615	1.0	2.350	51132 M
160	163	225	222	51	229.900	741.000	808	1,140	1.5	6.550	51232 M
160	164	270	265	87	426.550	1425.000	599	808	2.5	21.000	51332 M
170	172	215	213	34	126.350	475.000	1,045	1,520	1.0	3.300	51134 M
170	173	240	237	55	271.700	883.500	760	1,045	1.5	8.150	51234 M
170	174	280	275	87	444.600	1520.000	570	760	2.5	22.000	51334 M



Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	Designation
d mm	D_1 mm	D mm	d_1 mm	B mm	Dynamic C kN	Static C_0 kN	Grease r/min	Oil r/min	r_a max mm	kg	
180	183	225	222	34	128.250	503.500	950	1,425	1.0	3.500	51136 M
180	183	250	245	56	281.200	950.000	760	1,045	1.5	8.600	51236 M
180	184	300	295	95	494.000	1738.500	532	713	2.5	28.500	51336 M
190	193	240	237	37	163.400	622.250	903	1,330	1.0	4.050	51138 M
190	194	270	265	62	315.400	1102.000	713	950	2.0	12.000	51238 M
200	203	250	247	37	159.600	622.250	903	1,330	1.0	4.250	51140 M
200	204	280	275	62	321.100	1159.000	713	950	2.0	12.000	51240 M
200	205	340	335	110	592.800	2280.000	456	599	3.0	44.500	51340 M
220	223	270	267	37	169.100	698.250	855	1,235	1.0	4.600	51144 M
220	224	300	295	63	333.450	1254.000	665	903	2.0	13.000	51244 M
240	243	300	297	45	222.300	916.750	760	1,045	1.5	7.550	51148 M
240	244	340	335	78	438.900	1767.000	570	760	2.0	23.000	51248 M
260	263	320	317	45	226.100	969.000	760	1,045	1.5	8.100	51152 M
260	264	360	355	79	451.250	1900.000	532	713	2.0	25.000	51252 M
280	283	350	347	53	303.050	1273.000	665	903	1.5	12.000	51156 M
280	284	380	375	80	469.300	2052.000	532	713	2.0	26.500	51256 M
300	304	380	376	62	345.800	1520.000	599	808	2.0	17.500	51160 M
300	304	420	415	95	574.750	2612.500	456	599	2.5	42.000	51260 M
320	324	400	396	63	352.450	1615.000	570	760	2.0	19.000	51164 M
320	325	440	435	95	543.400	2565.000	428	570	2.5	45.500	51264 M
340	344	420	416	64	358.150	1710.000	570	760	2.0	20.500	51168 M
340	345	460	455	96	574.750	2755.000	428	570	2.5	48.500	51268 M
360	364	440	436	65	370.500	1805.000	532	713	2.0	22.000	51172 M
360	365	500	495	110	703.950	3610.000	380	504	3.0	70.000	51272 M
380	384	460	456	65	377.150	1900.000	532	713	2.0	23.000	51176 M
380	385	520	515	112	691.600	3610.000	361	475	3.0	73.000	51276 M
400	404	480	476	65	382.850	2014.000	504	665	2.0	24.000	51180 M
420	424	500	496	65	389.500	2090.000	504	665	2.0	25.500	51184 M
440	444	540	536	80	500.650	2850.000	428	570	2.0	42.000	51188 M
460	464	560	556	80	500.650	2850.000	428	570	2.0	43.500	51192 M
480	484	580	576	80	513.000	3087.500	409	532	2.0	45.500	51196 M

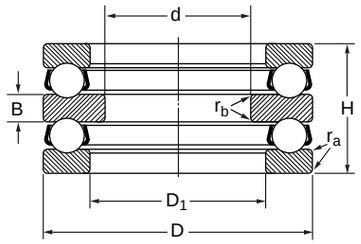
Prefix & Suffix

522 | **08** | **M**

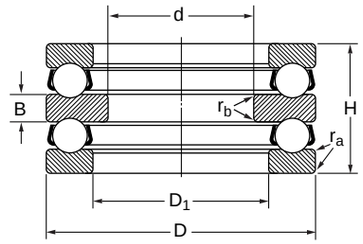
Suffix
M : Machined brass cage

Basic type series
522 : Standard
523 : Medium
524 : Heavy

Bore size (mm)
Refer to the data for bore dimension

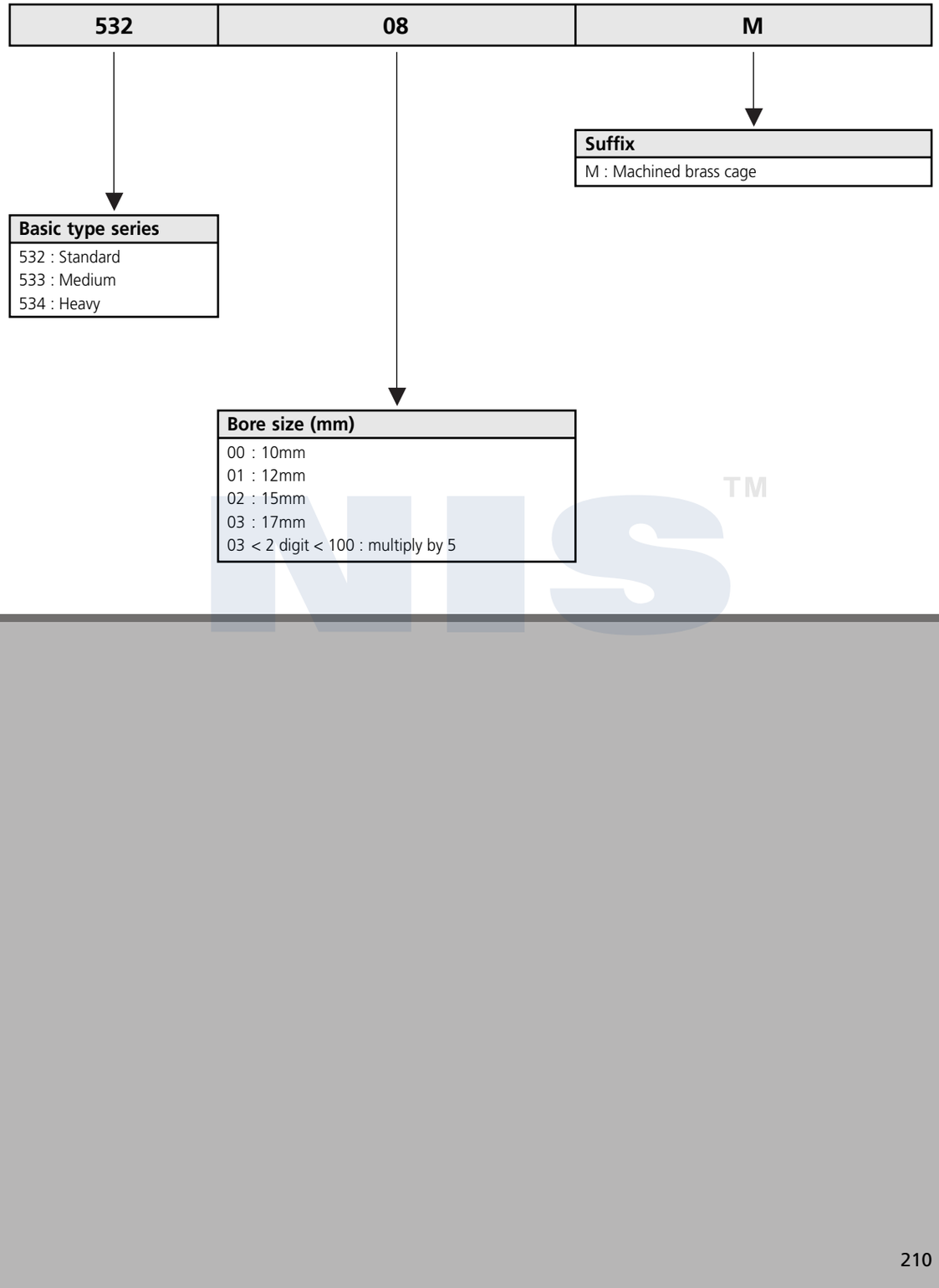


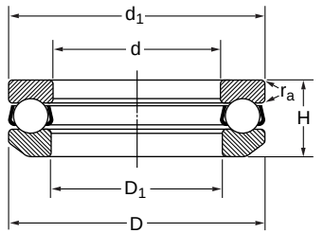
Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D_1	D	H	B	Dynamic C	Static C_0	Grease	Oil	r_a max	r_b max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
10	17	32	22	5	15.675	23.750	5,035	6,650	0.6	0.3	0.081	52202
15	22	40	26	6	21.375	35.625	4,275	5,700	0.6	0.3	0.150	52204
20	27	47	28	7	26.220	47.500	3,800	5,035	0.6	0.3	0.220	52205
20	27	52	34	8	32.775	52.250	3,230	4,275	1.0	0.3	0.330	52305
20	32	70	52	12	69.160	118.750	1,900	2,850	1.0	0.6	1.000	52406
25	32	52	29	7	24.225	45.125	3,420	4,560	0.6	0.3	0.250	52206
25	32	60	38	9	35.815	62.225	2,660	3,610	1.0	0.3	0.470	52306
25	37	80	59	14	82.745	148.200	1,710	2,470	1.0	0.6	1.450	52407
30	37	62	34	8	33.345	63.650	2,850	3,800	1.0	0.3	0.410	52207
30	42	68	36	9	44.460	93.100	2,660	3,610	1.0	0.6	0.550	52208
30	37	68	44	10	46.930	83.600	2,280	3,230	1.0	0.3	0.680	52307
30	42	78	49	12	58.710	106.400	1,900	2,850	1.0	0.6	1.050	52308
30	42	90	65	15	106.400	193.800	1,615	2,280	1.0	0.6	2.050	52408
35	47	73	37	9	37.050	76.000	2,470	3,420	1.0	0.6	0.600	52209
35	47	85	52	12	72.295	133.000	1,805	2,660	1.0	0.6	1.250	52309
35	47	100	72	17	123.500	228.000	1,520	2,090	1.0	0.6	2.700	52409
40	52	78	39	9	46.930	100.700	2,280	3,230	1.0	0.6	0.710	52210
40	52	95	58	14	83.980	164.350	1,710	2,470	1.0	0.6	1.750	52310
45	57	90	45	10	58.710	127.300	1,805	2,660	1.0	0.6	1.100	52211
45	57	105	64	15	98.800	197.600	1,520	2,090	1.0	0.6	2.400	52311
45	57	120	87	20	169.100	342.000	1,235	1,710	1.5	0.6	4.700	52411
50	62	95	46	10	59.280	133.000	1,805	2,660	1.0	0.6	1.200	52212
50	62	110	64	15	95.950	197.600	1,520	2,090	1.0	0.8	2.550	52312
50	62	130	93	21	189.050	380.000	1,045	1,520	1.5	0.6	6.350	52412 M
55	67	100	47	10	60.515	142.500	1,710	2,470	1.0	0.6	1.350	52213
55	67	115	65	15	100.700	209.000	1,425	1,900	1.0	0.6	2.750	52313
55	72	125	72	16	128.250	285.000	1,330	1,805	1.0	1.0	3.650	52314
60	77	110	47	10	64.220	161.500	1,615	2,280	1.0	1.0	1.550	52215
60	77	135	79	18	154.850	342.000	1,140	1,615	1.5	1.0	4.800	52315
65	82	115	48	10	72.295	180.500	1,615	2,280	1.0	1.0	1.700	52216
65	82	140	79	18	151.050	342.000	1,140	1,615	1.5	1.0	4.940	52316
70	88	125	55	12	92.625	237.500	1,520	2,090	1.0	1.0	2.400	52217

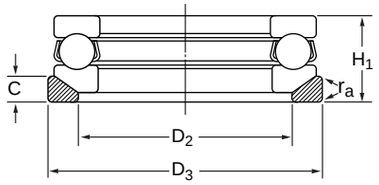


Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	Designation
d	D_1	D	H	B	Dynamic C	Static C_0	Grease	Oil	r_a max	r_b max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	
75	93	135	62	14	113.050	285.000	1,425	1,900	1.0	1.0	3.200	52218
85	103	150	67	15	117.800	304.000	1,235	1,710	1.0	1.0	4.200	52220
85	103	170	97	21	217.550	532.000	903	1,330	1.5	1.0	8.950	52320
95	113	160	67	15	123.500	342.000	1,140	1,615	1.0	1.0	4.650	52222
100	123	170	68	15	133.000	380.000	1,045	1,520	1.0	1.0	5.250	52224
100	123	210	123	27	308.750	869.250	760	1,045	2.0	1.0	19.500	52324
110	133	190	80	18	176.700	513.000	903	1,330	1.5	1.0	8.000	52226
120	143	200	81	18	180.500	541.500	903	1,330	1.5	1.0	8.650	52228
130	153	215	89	20	226.100	698.250	855	1,235	1.5	1.0	11.500	52230 M
130	154	250	140	31	389.500	1225.500	637	855	2.0	1.0	27.000	52330 M
140	163	225	90	20	229.900	741.000	808	1,140	1.5	1.0	12.000	52232 M
150	173	240	97	21	271.700	883.500	760	1,045	1.5	1.0	15.000	52234 M
150	183	250	98	21	281.200	950.000	760	1,045	1.5	2.0	16.000	52236 M

Prefix & Suffix

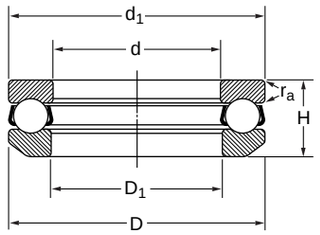


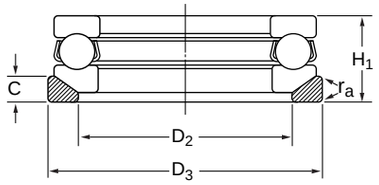




Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	
					Dynamic	Static	Grease	Oil		Bearing	Seating washer
d	D_1	D	d_1	H	C	C_0			r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	kg	kg
12	14	28	28	11.4	12.635	18.050	5,700	7,600	0.6	0.033	0.012
15	17	32	32	13.3	15.675	23.750	5,035	6,650	0.6	0.049	0.014
17	19	35	35	13.2	16.340	26.125	4,750	6,365	0.6	0.056	0.015
20	22	40	40	14.7	21.375	35.625	4,275	5,700	0.6	0.082	0.020
25	27	47	47	16.7	26.220	47.500	3,800	5,035	0.6	0.120	0.032
30	32	52	52	17.8	24.225	45.125	3,420	4,560	0.6	0.140	0.038
30	32	60	60	22.6	35.815	62.225	2,660	3,610	1.0	0.270	0.056
35	37	62	62	19.9	33.345	63.650	2,850	3,800	1.0	0.220	0.057
35	37	68	68	25.6	46.930	83.600	2,280	3,230	1.0	0.380	0.084
40	42	68	68	20.3	44.460	93.100	2,660	3,610	1.0	0.280	0.070
40	42	78	78	28.5	58.710	106.400	1,900	2,850	1.0	0.550	0.120
40	42	90	90	38.2	106.400	193.800	1,615	2,280	1.0	1.100	0.250
45	47	73	73	21.3	37.050	76.000	2,470	3,420	1.0	0.300	0.087
45	47	85	85	30.1	72.295	133.000	1,805	2,660	1.0	0.660	0.170
45	47	100	100	42.4	123.500	228.000	1,520	1,900	1.0	1.450	0.320
50	52	78	78	23.5	46.930	100.700	2,280	3,230	1.0	0.370	0.100
50	52	95	95	34.4	83.980	164.350	1,710	2,470	1.0	0.970	0.230
50	52	110	110	45.6	151.050	294.500	1,425	1,900	1.5	1.900	0.410
55	57	90	90	27.3	58.710	127.300	1,805	2,660	1.0	0.600	0.150
55	57	105	105	39.3	98.800	197.600	1,520	2,090	1.0	1.400	0.280
60	62	95	95	28	59.280	133.000	1,805	2,660	1.0	0.660	0.160
60	62	110	110	38.3	95.950	197.600	1,520	2,090	1.0	1.400	0.310
60	62	130	130	54	189.050	380.000	1,045	1,520	1.5	3.100	0.710
65	67	100	100	28.7	60.515	142.500	1,710	2,470	1.0	0.730	0.180
65	67	115	115	39.4	100.700	209.000	1,425	1,900	1.0	1.550	0.340
70	72	105	105	28.8	61.750	152.000	1,710	2,470	1.0	0.780	0.190
70	72	125	125	44.2	128.250	285.000	1,330	1,805	1.0	2.100	0.410
70	73	150	150	63.6	222.300	475.000	903	1,330	2.0	5.500	1.000
75	77	110	110	28.3	64.220	161.500	1,615	2,280	1.0	0.810	0.210
75	77	135	135	48.1	154.850	342.000	1,140	1,615	1.5	2.650	0.550
75	78	160	160	69	238.450	532.000	855	1,235	2.0	6.850	1.250
80	82	115	115	29.5	72.295	180.500	1,615	2,280	1.0	0.900	0.220

Designation		Secondary Dimensions			
Bearing	Seating washer	D_2	D_3	C	H_1
53201	U 201	20	30	3.5	13
53202	U 202	24	35	4	15
53203	U 203	26	38	4	15
53204	U 204	30	42	5	17
53205	U 205	36	50	5.5	19
53206	U 206	42	55	5.5	20
53306	U 306	45	62	7	25
53207	U 207	48	65	7	22
53307	U 307	52	72	7.5	28
53208	U 208	55	72	7	23
53308	U 308	60	82	8.5	31
53408	U 408	65	95	12	42
53209	U 209	60	78	7.5	24
53309	U 309	65	90	10	33
53409	U 409	72	105	12.5	46
53210	U 210	62	82	7.5	26
53310	U 310	72	100	11	37
53410	U 410	80	115	14	50
53211	U 211	72	95	9	30
53311	U 311	80	110	11.5	42
53212	U 212	78	100	9	31
53312	U 312	85	115	11.5	42
53412	U 412	95	135	16	58
53213	U 213	82	105	9	32
53313	U 313	90	120	12.5	43
53214	U 214	88	110	9	32
53314	U 314	98	130	13	48
53414	U 414	110	155	19.5	69
53215	U 215	92	115	9.5	32
53315	U 315	105	140	15	52
53415	U 415	115	165	21	75
53216	U 216	98	120	10	33





Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass	
					Dynamic	Static	Grease	Oil		Bearing	Seating washer
d	D_1	D	d_1	H	C	C_0			r_a max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	kg	kg
80	82	140	140	47.6	151.050	342.000	1,140	1,615	1.5	2.750	0.570
80	83	170	170	72.2	256.500	589.000	808	1,140	2.0	8.000	1.400
85	88	125	125	33.1	92.625	237.500	1,520	2,090	1.0	1.200	0.290
85	88	150	150	53.1	180.500	403.750	1,045	1,520	1.5	3.550	0.810
90	93	135	135	38.5	113.050	285.000	1,425	1,900	1.0	1.700	0.420
90	93	155	155	54.6	185.250	441.750	950	1,425	1.5	3.850	0.840
90	93	190	187	81.2	291.650	712.500	760	1,045	2.0	11.000	1.900
100	103	150	150	40.9	117.800	304.000	1,235	1,710	1.0	2.200	0.500
100	103	170	170	59.2	217.550	532.000	903	1,330	1.5	5.000	0.950
100	103	210	205	90	352.450	916.750	665	903	2.5	15.000	2.900
110	113	160	160	40.2	123.500	342.000	1,140	1,615	1.0	2.350	0.560
110	113	190	187	67.2	262.200	684.000	808	1,140	2.0	7.800	1.300
120	123	170	170	40.8	133.000	380.000	1,045	1,520	1.0	2.550	0.650
120	123	210	205	74.1	308.750	869.250	760	1,045	2.0	10.500	2.000
130	133	190	187	47.9	176.700	513.000	903	1,330	1.5	3.950	0.900
140	143	200	197	48.6	180.500	541.500	903	1,330	1.5	4.250	1.200

Designation		Secondary Dimensions			
Bearing	Seating washer	D_2	D_3	C	H_1
53316	U 316	110	145	15	52
53416	U 416	125	175	22	78
53217	U 217	105	130	11	37
53317	U 317	115	155	17.5	58
53218	U 218	110	140	13.5	42
53318	U 318	120	160	18	59
53418	U 418	140	195	25.5	88
53220	U 220	125	155	14	45
53320	U 320	135	175	18	64
53420	U 420	155	220	27	98
53222	U 222	135	165	14	45
53322	U 322	150	195	20.5	72
53224	U 224	145	175	15	46
53324	U 324	165	220	22	80
53226	U 226	160	195	17	53
53228	U 228	170	210	17	55

Prefix & Suffix

542	08	M

Basic type series

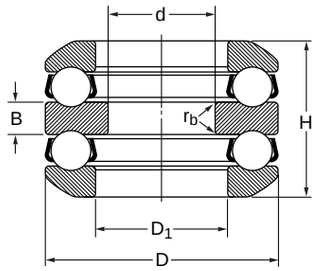
542 : Standard
543 : Medium
544 : Heavy

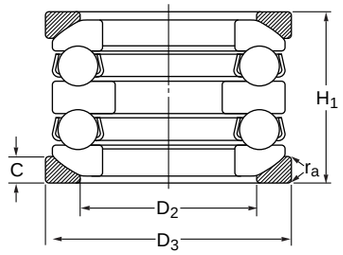
Bore size (mm)

Refer to the data for bore dimension

Suffix

M : Machined brass cage





Basic Dimensions					Basic Load Ratings		Limiting Speed		Chamfer Dimension		Mass	
					Dynamic	Static	Grease	Oil			Bearing	Seating washer
d	D_1	D	H	B	C	C_0			r_a max	r_b max		
mm	mm	mm	mm	mm	kN	kN	r/min	r/min	mm	mm	kg	kg
25	32	60	41.3	9	35.815	62.225	2,660	3,610	1.0	0.3	0.470	0.056
30	37	62	37.8	8	33.345	63.650	2,850	3,800	1.0	0.3	0.420	0.057
30	42	68	38.6	9	44.460	93.100	2,660	3,610	1.0	0.6	0.560	0.070
30	37	68	47.2	10	46.930	83.600	2,280	3,230	1.0	0.3	0.680	0.084
30	42	78	54.1	12	58.710	106.400	1,900	2,850	1.0	0.6	1.050	0.120
35	47	85	56.3	12	72.295	133.000	1,805	2,660	1.0	0.6	1.250	0.170
35	47	100	78.9	17	123.500	228.000	1,520	2,090	1.0	0.6	2.700	0.320
40	52	95	64.7	14	83.980	164.350	1,710	2,470	1.0	0.6	1.850	0.230
40	52	110	83.2	18	151.050	294.500	1,425	1,900	1.5	0.6	3.550	0.460
45	57	90	49.6	10	58.710	127.300	1,805	2,660	1.0	0.6	1.150	0.150
50	62	110	70.7	15	95.950	197.600	1,520	2,090	1.0	0.6	2.600	0.310
65	82	140	86.1	18	151.050	342.000	1,140	1,615	1.5	1.0	5.050	0.570
65	83	170	128.5	27	256.500	589.000	808	1,140	2.0	1.0	14.000	1.400
70	88	150	92.5	19	180.500	403.750	1,045	1,520	1.5	1.0	6.350	0.810
80	103	210	159.9	33	352.450	916.750	665	903	2.5	1.0	26.000	2.900

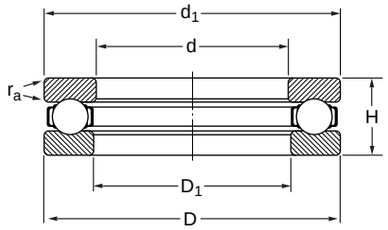
Designation		Secondary Dimensions			
Bearing	Seating washer	D_2	D_3	C	H_1
54306	U 306	45	62	7	46
54207	U 207	48	65	7	42
54208	U 208	55	72	7	44
54307	U 307	52	72	7.5	52
54308	U 308	60	82	8.5	59
54309	U 309	65	90	10	62
54409	U 409	72	105	12.5	86
54310	U 310	72	100	11	70
54410	U 410	80	115	14	92
54211	U 211	72	95	9	55
54312	U 312	85	115	11.5	78
54316	U 316	110	145	15	95
54416	U 416	125	175	22	140
54317	U 317	115	155	17.5	105
54420	U 420	155	220	27	176

Prefix & Suffix

O	18

Basic type series
O : Standard

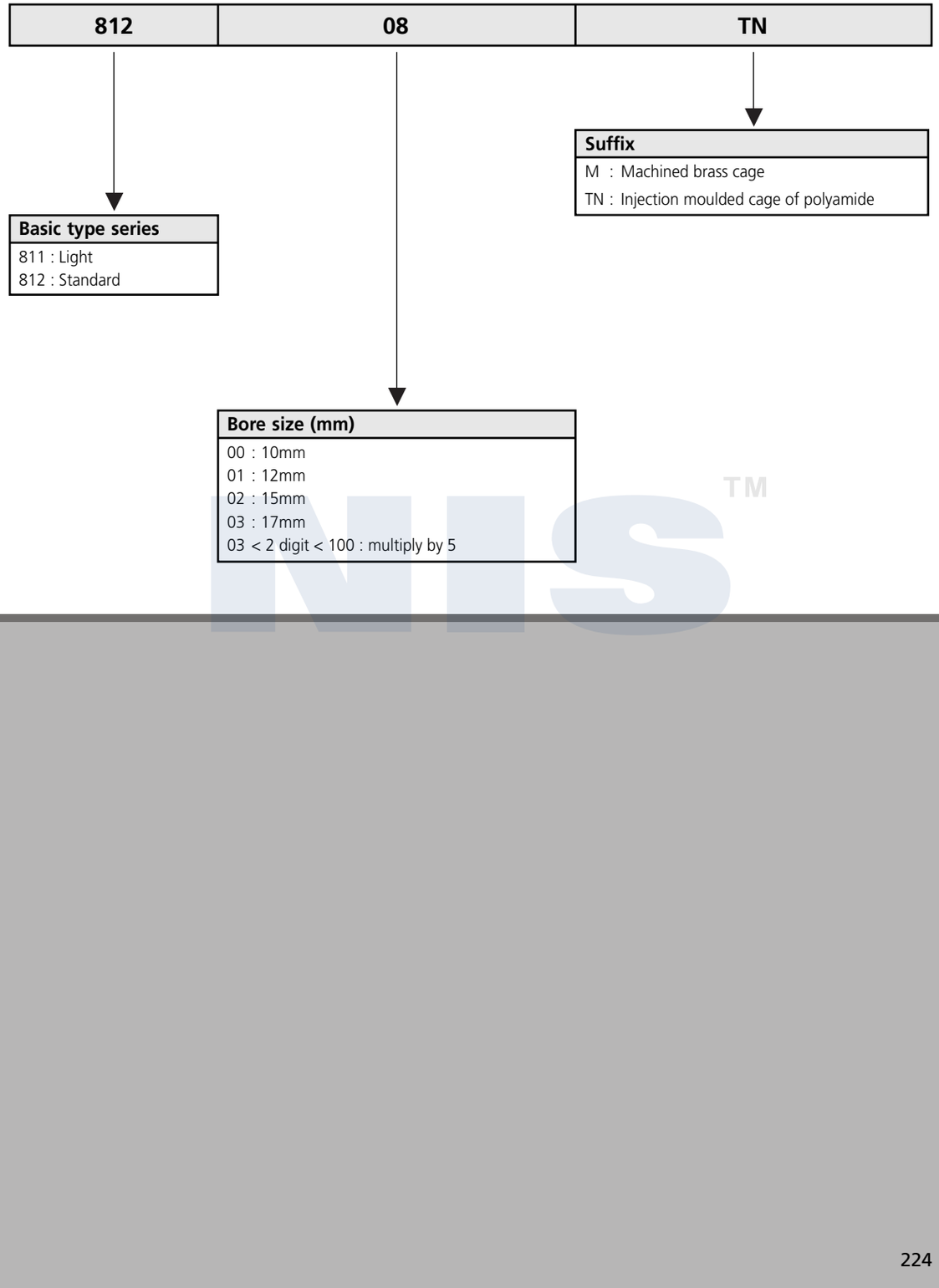
Bore size (inch)
Bore size is 1/8th of an inch. e.g. 18 = 18/8 = 2.1/4”

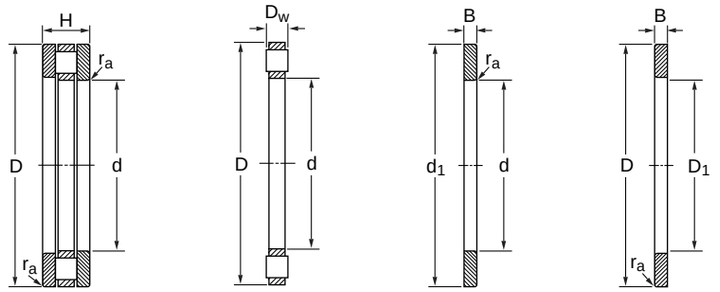


Basic Dimensions										Basic Load Ratings	
d		D_1		D		d_1		H		Dynamic C	Static C_0
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	kN	kN
0.625	15.875	0.641	16.281	1.406	35.712	1.375	34.925	0.625	15.875	15.200	23.750
0.750	19.050	0.766	19.456	1.531	38.887	1.500	38.100	0.625	15.875	16.435	28.500
0.875	22.225	0.891	22.631	1.656	42.062	1.625	41.275	0.625	15.875	16.720	30.875
1.000	25.400	1.016	25.806	1.781	45.237	1.750	44.450	0.625	15.875	17.385	33.725
1.125	28.575	1.141	28.981	1.906	48.412	1.875	47.625	0.625	15.875	18.335	38.000
1.250	31.750	1.266	32.156	2.094	53.181	2.063	52.400	0.719	18.256	21.280	44.175
1.375	34.925	1.391	35.322	2.219	56.356	2.188	55.563	0.719	18.256	21.660	46.550
1.500	38.100	1.516	38.497	2.344	59.531	2.313	58.738	0.719	18.256	22.800	53.200
1.625	41.275	1.641	41.672	2.469	62.706	2.438	61.913	0.719	18.256	20.140	50.350
1.750	44.450	1.766	44.847	2.688	68.263	2.656	67.469	0.750	19.050	23.750	58.900
1.875	47.625	1.891	48.022	2.813	71.438	2.781	70.644	0.750	19.050	26.600	67.450
2.000	50.800	2.031	51.594	2.969	75.406	2.938	74.613	0.750	19.050	27.550	71.250
2.250	57.150	2.281	57.944	3.344	84.931	3.313	84.138	0.875	22.225	38.475	98.800
2.375	60.325	2.406	61.119	3.594	91.281	3.563	90.488	1.000	25.400	44.175	115.900
2.500	63.500	2.531	64.294	3.719	94.456	3.688	93.663	1.000	25.400	45.125	120.650
2.750	69.850	2.781	70.644	4.031	102.394	4.000	101.600	1.000	25.400	55.575	152.000
2.875	73.025	2.906	73.819	4.156	105.569	4.125	104.775	1.000	25.400	57.000	157.700
3.000	76.200	3.063	77.788	4.375	111.125	4.313	109.538	1.125	28.575	57.000	157.700
3.500	88.900	3.563	90.488	5.063	128.588	5.000	127.000	1.250	31.750	77.425	224.200
4.000	101.600	4.063	103.188	5.813	147.638	5.750	146.050	1.375	34.925	95.000	285.000
4.500	114.300	4.563	115.888	6.563	166.688	6.500	165.100	1.750	44.450	133.000	394.250
5.000	127.000	5.063	128.588	7.313	185.738	7.250	184.150	2.000	50.800	157.700	484.500
5.500	139.700	5.563	141.288	8.063	204.788	8.000	203.200	2.188	55.563	190.000	570.000

Limiting Speed		Chamfer Dimension	Mass	Designation	Interchange
Grease	Oil	r_a max			
r/min	r/min	mm	kg		
4,275	5,700	0.3	0.085	O 5	LT 5/8
4,085	5,320	0.3	0.099	O 6	LT 3/4
3,800	5,035	0.3	0.106	O 7	LT 7/8
3,610	4,750	0.6	0.113	O 8	LT 1
3,610	4,750	0.6	0.122	O 9	LT 1.1/8
3,230	4,275	0.6	0.177	O 10	LT 1.1/4
3,040	4,085	0.6	0.181	O 11	LT 1.3/8
3,040	4,085	0.6	0.200	O 12	LT 1.1/2
2,850	3,800	0.6	0.213	O 13	LT 1.5/8
2,660	3,610	0.6	0.276	O 14	LT 1.3/4
2,660	3,610	0.6	0.291	O 15	LT 1.7/8
2,470	3,420	0.6	0.304	O 16	LT 2
2,090	3,040	1.0	0.454	O 18	LT 2.1/4
1,805	2,660	1.0	0.581	O 19	LT 2.3/8
1,805	2,660	1.0	0.640	O 20	LT 2.1/2
1,710	2,470	1.0	0.680	O 22	LT 2.3/4
1,710	2,470	1.0	0.708	O 23	LT 2.7/8
1,615	2,280	1.0	0.948	O 24	LT 3
1,520	2,090	1.0	1.390	O 28	LT 3.1/2
1,330	1,805	1.0	2.000	O 32	LT 4
950	1,425	1.0	3.130	O 36	LT 4.1/2
903	1,330	1.0	4.470	O 40	LT 5
808	1,140	1.0	5.990	O 44	LT 5.1/2

Prefix & Suffix

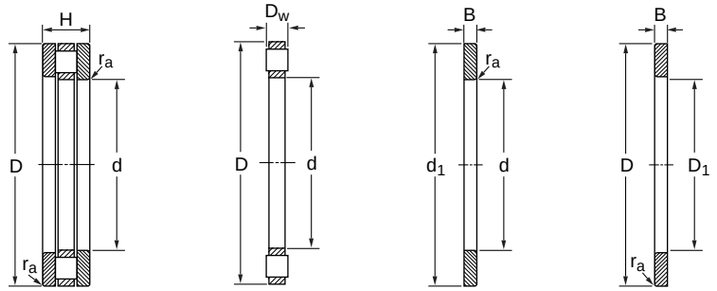




Complete Bearing | Cylindrical roller and cage thrust assembly | Shaft washer | Housing washer

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass
d	D	B	Dynamic C	Static C_0	Grease	Oil	r_a max	
mm	mm	mm	kN	kN	r/min	r/min	mm	kg
15	28	9	10.640	25.650	3,040	4,085	0.3	0.024
20	35	10	17.670	45.600	2,660	3,610	0.3	0.037
25	42	11	23.750	66.025	2,090	3,040	0.6	0.053
30	47	11	25.650	74.100	1,900	2,850	0.6	0.057
30	52	16	47.500	127.300	1,615	2,280	0.6	0.120
35	52	12	27.550	88.350	1,805	2,660	0.6	0.073
35	62	18	58.900	180.500	1,425	1,900	1.0	0.200
40	60	13	40.375	130.150	1,615	2,280	0.6	0.110
40	68	19	78.850	242.250	1,330	1,805	1.0	0.250
45	65	14	38.475	125.400	1,520	2,090	0.6	0.130
45	73	20	82.175	256.500	1,235	1,710	1.0	0.300
50	70	14	45.125	157.700	1,520	2,090	0.6	0.140
50	78	22	86.925	285.000	1,140	1,615	1.0	0.360
55	78	16	66.025	270.750	1,330	1,805	0.6	0.220
55	90	25	115.900	370.500	903	1,330	1.0	0.570
60	85	17	76.000	285.000	1,235	1,710	1.0	0.270
60	95	26	130.150	441.750	903	1,330	1.0	0.640
65	90	18	78.850	304.000	1,140	1,615	1.0	0.310
65	100	27	133.000	465.500	855	1,235	1.0	0.720
70	95	18	82.175	327.750	1,140	1,615	1.0	0.330
70	105	27	138.700	503.500	855	1,235	1.0	0.770
75	100	19	71.250	275.500	1,045	1,520	1.0	0.380
75	110	27	118.750	418.000	808	1,140	1.0	0.810
80	105	19	72.675	285.000	950	1,425	1.0	0.400
80	115	28	152.000	579.500	808	1,140	1.0	0.900
85	110	19	72.675	294.500	950	1,425	1.0	0.420
85	125	31	145.350	522.500	760	1,045	1.0	1.300
90	120	22	98.800	394.250	855	1,235	1.0	0.640
90	135	35	220.400	821.750	713	950	1.0	1.750
100	135	25	138.700	555.750	808	1,140	1.0	1.000
100	150	38	212.800	788.500	637	855	1.0	2.200
110	145	25	145.350	598.500	760	1,045	1.0	1.100

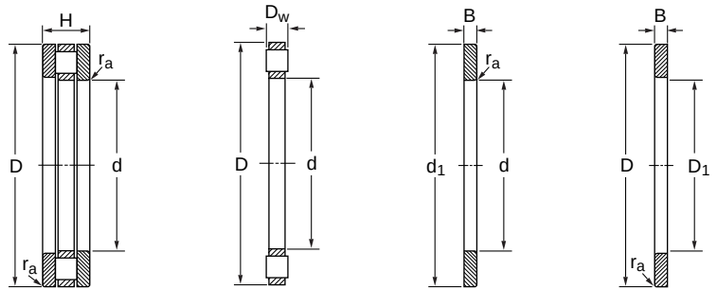
Designation				Secondary Dimensions			
Complete Bearing	Cylindrical roller and cage thrust assembly	Shaft washer	Housing washer	d_1	D_1	D_w	B
81102	K 81102	WS 81102	GS 81102	28	16	3.5	2.75
81104	K 81104	WS 81104	GS 81104	35	21	4.5	2.75
81105	K 81105	WS 81105	GS 81105	42	26	5	3
81106	K 81106	WS 81106	GS 81106	47	32	5	3
81206	K 81206	WS 81206	GS 81206	52	32	7.5	4.25
81107	K 81107	WS 81107	GS 81107	52	37	5	3.5
81207	K 81207	WS 81207	GS 81207	62	37	7.5	5.25
81108	K 81108	WS 81108	GS 81108	60	42	6	3.5
81208	K 81208	WS 81208	GS 81208	68	42	9	5
81109	K 81109	WS 81109	GS 81109	65	47	6	4
81209	K 81209	WS 81209	GS 81209	73	47	9	5.5
81110	K 81110	WS 81110	GS 81110	70	52	6	4
81210	K 81210	WS 81210	GS 81210	78	52	9	6.5
81111	K 81111	WS 81111	GS 81111	78	57	6	4
81211	K 81211	WS 81211	GS 81211	90	57	11	7
81112	K 81112	WS 81112	GS 81112	85	62	7.5	4.75
81212	K 81212	WS 81212	GS 81212	95	62	11	7.5
81113	K 81113	WS 81113	GS 81113	90	67	7.5	5.25
81213	K 81213	WS 81213	GS 81213	100	67	11	8
81114	K 81114	WS 81114	GS 81114	95	72	7.5	5.25
81214	K 81214	WS 81214	GS 81214	105	72	11	8
81115	K 81115	WS 81115	GS 81115	100	77	7.5	5.75
81215	K 81215	WS 81215	GS 81215	110	77	11	8
81116	K 81116	WS 81116	GS 81116	105	82	7.5	5.75
81216	K 81216	WS 81216	GS 81216	115	82	11	8.5
81117	K 81117	WS 81117	GS 81117	110	87	7.5	5.75
81217	K 81217	WS 81217	GS 81217	125	88	12	9.5
81118	K 81118	WS 81118	GS 81118	120	92	9	6.5
81218	K 81218	WS 81218	GS 81218	135	93	14	10.5
81120	K 81120	WS 81120	GS 81120	135	102	11	7
81220	K 81220	WS 81220	GS 81220	150	103	15	11.5
81122	K 81122	WS 81122	GS 81122	145	112	11	7



Complete Bearing | Cylindrical roller and cage thrust assembly | Shaft washer | Housing washer

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass
d	D	B	Dynamic C	Static C_0	Grease	Oil	r_a max	
mm	mm	mm	kN	kN	r/min	r/min	mm	kg
110	160	38	228.000	869.250	599	808	1.0	2.450
120	155	25	152.000	646.000	760	1,045	1.0	1.150
120	170	39	232.750	916.750	570	760	1.0	2.700
130	170	30	173.850	741.000	665	903	1.0	1.700
130	190	45	318.250	1187.500	504	665	1.5	4.200
140	180	31	183.350	807.500	637	855	1.0	1.950
140	200	46	342.000	1330.000	504	665	1.5	4.550
150	190	31	190.000	855.000	599	808	1.0	2.050
150	215	50	441.750	1805.000	456	599	1.5	5.900
160	200	31	193.800	916.750	599	808	1.0	2.200
160	225	51	456.000	1900.000	428	570	1.5	6.200
170	215	34	247.000	1121.000	570	760	1.0	2.950
170	240	55	513.000	2166.000	409	532	1.5	7.700
180	225	34	256.500	1206.500	532	713	1.0	3.050
180	250	56	522.500	2280.000	409	532	1.5	8.250
190	240	37	294.500	1387.000	504	665	1.0	3.850
190	270	62	660.250	2755.000	361	475	2.0	10.500
200	250	37	294.500	1425.000	504	665	1.0	4.000
200	280	62	684.000	2945.000	361	475	2.0	12.000
220	270	37	318.250	1615.000	475	637	1.0	4.500
220	300	63	712.500	3182.500	342	456	2.0	13.000
240	300	45	451.250	2327.500	409	532	1.5	7.250
240	340	78	1045.000	4655.000	285	380	2.0	22.000
260	320	45	465.500	2470.000	380	504	1.5	7.850
260	360	79	1083.000	5035.000	266	361	2.0	24.000
280	350	53	646.000	3372.500	342	456	1.5	10.500
280	380	80	1102.000	5225.000	247	342	2.0	26.000
300	380	62	807.500	4180.000	304	409	2.0	16.500
300	420	95	1453.500	6840.000	209	304	2.5	40.500
320	400	63	836.000	4417.500	285	380	2.0	18.000
320	440	95	1482.000	7125.000	190	285	2.5	42.500
340	420	64	855.000	4655.000	266	361	2.0	19.500

Designation				Secondary Dimensions			
Complete Bearing	Cylindrical roller and cage thrust assembly	Shaft washer	Housing washer	d_1	D_1	D_w	B
81222	K 81222	WS 81222	GS 81222	160	113	15	11.5
81124	K 81124	WS 81124	GS 81124	155	122	11	7
81224	K 81224	WS 81224	GS 81224	170	123	15	12
81126	K 81126	WS 81126	GS 81126	170	132	12	9
81226	K 81226	WS 81226	GS 81226	187	133	19	13
81128	K 81128	WS 81128	GS 81128	178	142	12	9.5
81228	K 81228	WS 81228	GS 81228	197	143	19	13.5
81130	K 81130	WS 81130	GS 81130	188	152	12	9.5
81230	K 81230	WS 81230	GS 81230	212	153	21	14.5
81132	K 81132	WS 81132	GS 81132	198	162	12	9.5
81232	K 81232	WS 81232	GS 81232	222	163	21	15
81134	K 81134	WS 81134	GS 81134	213	172	14	10
81234	K 81234	WS 81234	GS 81234	237	173	22	16.5
81136	K 81136	WS 81136	GS 81136	222	183	14	10
81236	K 81236	WS 81236	GS 81236	247	183	22	17
81138	K 81138	WS 81138	GS 81138	237	193	15	11
81238	K 81238	WS 81238	GS 81238	267	194	26	18
81140	K 81140	WS 81140	GS 81140	247	203	15	11
81240	K 81240	WS 81240	GS 81240	277	204	26	18
81144	K 81144	WS 81144	GS 81144	267	223	15	11
81244	K 81244	WS 81244	GS 81244	297	224	26	18.5
81148	K 81148	WS 81148	GS 81148	297	243	18	13.5
81248	K 81248	WS 81248	GS 81248	335	244	32	23
81152	K 81152	WS 81152	GS 81152	317	263	18	13.5
81252	K 81252	WS 81252	GS 81252	355	264	32	23.5
81156	K 81156	WS 81156	GS 81156	347	283	22	15.5
81256	K 81256	WS 81256	GS 81256	375	284	32	24
81160	K 81160	WS 81160	GS 81160	376	304	25	18.5
81260	K 81260	WS 81260	GS 81260	415	304	38	28.5
81164	K 81164	WS 81164	GS 81164	396	324	25	19
81264	K 81264	WS 81264	GS 81264	435	325	38	28.5
81168	K 81168	WS 81168	GS 81168	416	344	25	19.5

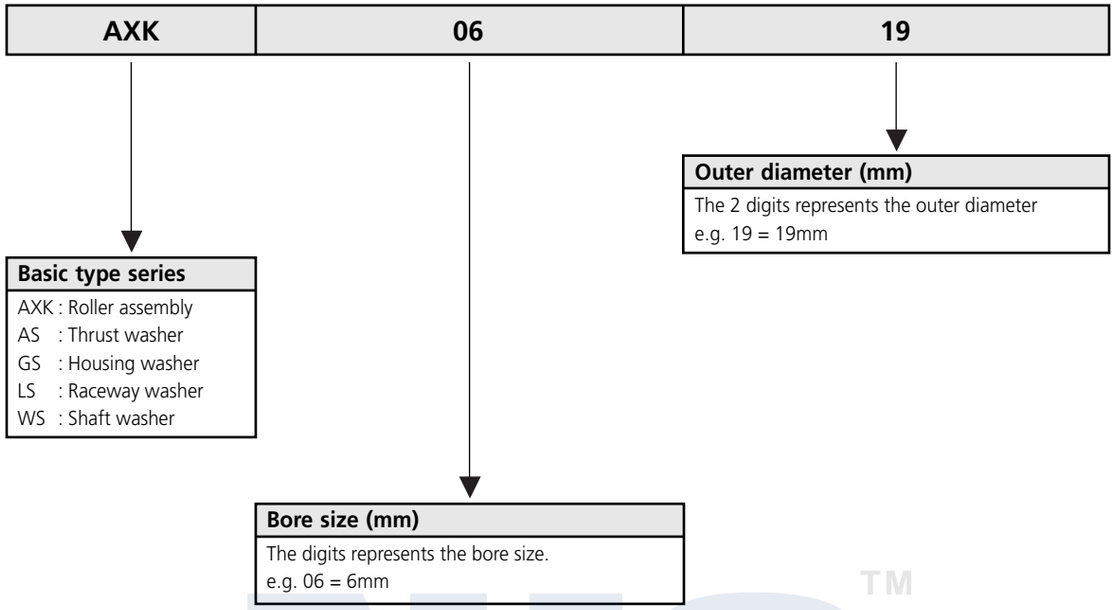


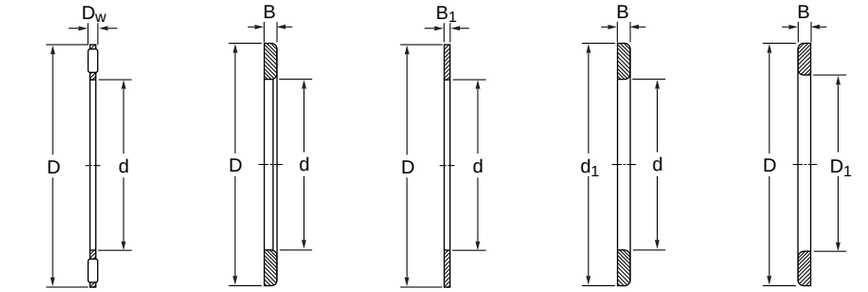
Complete Bearing | Cylindrical roller and cage thrust assembly | Shaft washer | Housing washer

Basic Dimensions			Basic Load Ratings		Limiting Speed		Chamfer Dimension	Mass
d	D	B	Dynamic C	Static C_0	Grease	Oil	r_a max	
mm	mm	mm	kN	kN	r/min	r/min	mm	kg
340	460	96	1548.500	7600.000	190	285	2.5	47.000
360	440	65	869.250	4750.000	266	361	2.0	19.500
360	500	110	2052.000	9880.000	171	247	3.0	65.500
380	460	65	883.500	5035.000	247	342	2.0	22.000
380	520	112	2090.000	10260.000	171	247	3.0	70.000
400	480	65	916.750	5320.000	247	342	2.0	23.000
400	540	112	2128.000	10640.000	162	228	3.0	73.000
420	500	65	931.000	5557.500	228	323	2.0	24.000
420	580	130	2707.500	13300.000	152	209	4.0	95.500
440	540	80	1358.500	760.000	190	285	2.0	39.500
440	600	130	2755.000	13870.000	152	209	4.0	110.000

Designation				Secondary Dimensions			
Complete Bearing	Cylindrical roller and cage thrust assembly	Shaft washer	Housing washer	d_1	D_1	D_w	B
81268	K 81268	WS 81268	GS 81268	455	345	38	29
81172	K 81172	WS 81172	GS 81172	436	364	25	20
81272	K 81272	WS 81272	GS 81272	495	365	45	32.5
81176	K 81176	WS 81176	GS 81176	456	384	25	20
81276	K 81276	WS 81276	GS 81276	515	385	45	33.5
81180	K 81180	WS 81180	GS 81180	476	404	25	20
81280	K 81280	WS 81280	GS 81280	535	405	45	33.5
81184	K 81184	WS 81184	GS 81184	495	424	25	20
81284	K 81284	WS 81284	GS 81284	575	425	52	39
81188	K 81188	WS 81188	GS 81188	535	444	32	24
81288	K 81288	WS 81288	GS 81288	595	445	52	39

Assembly



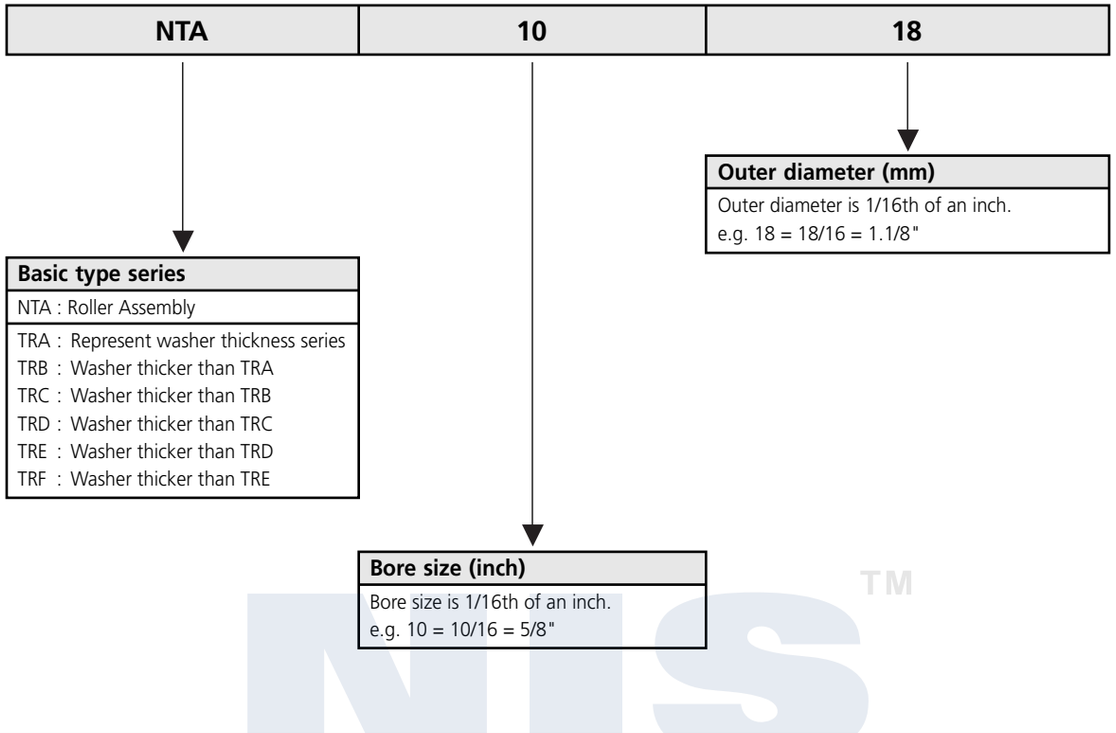


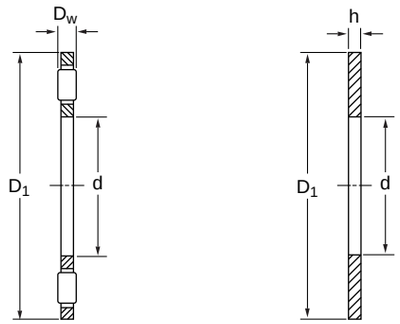
Needle roller and cage thrust assembly Series AXK | Raceway washer Series LS | Thrust washer Series AS | Shaft washer Series WS 811 | Housing washer Series GS 811

Basic Dimensions			Basic Load Ratings		Limiting Speed		Mass		
			Dynamic	Static	Grease	Oil	Needle roller and cage thrust assembly	Washers LS, WS, GS	Washers AS
d	D	B	C	C_0					
mm	mm	mm	kN	kN	r/min	r/min	g	g	g
5	15	2	4.275	9.025	4,750	6,365	0.800	-	1.000
6	19	2	5.985	15.200	4,275	5,700	1.000	4.000	2.000
8	21	2	6.840	19.000	4,085	5,320	2.000	4.000	2.000
10	24	2	8.075	24.700	3,420	4,560	3.000	7.000	3.000
12	26	2	8.693	28.500	3,230	4,275	3.000	8.000	3.000
15	28	2	9.880	35.625	3,040	4,085	4.000	9.000	3.000
17	30	2	10.450	38.475	3,040	4,085	4.000	9.000	4.000
20	35	2	11.400	45.125	2,660	3,610	5.000	13.000	5.000
25	42	2	12.730	57.000	2,090	3,040	7.000	19.000	7.000
30	47	2	14.250	68.400	1,900	2,850	8.000	22.000	8.000
35	52	2	15.770	78.850	1,805	2,660	10.000	29.000	9.000
40	60	3	23.750	108.300	1,615	2,280	16.000	40.000	12.000
45	65	3	25.650	120.650	1,520	2,090	18.000	50.000	13.000
50	70	3	27.075	135.850	1,520	2,090	20.000	55.000	14.000
55	78	3	32.775	176.700	1,330	1,805	28.000	88.000	18.000
60	85	3	35.625	220.400	1,235	1,710	33.000	97.000	22.000
65	90	3	37.050	242.250	1,140	1,615	35.000	115.000	24.000
70	95	4	46.550	242.250	1,140	1,615	60.000	125.000	25.000
75	100	4	47.500	251.750	1,045	1,520	61.000	140.000	27.000
80	105	4	48.450	266.000	950	1,425	63.000	150.000	28.000
85	110	4	49.400	275.500	950	1,425	67.000	160.000	29.000
90	120	4	62.225	384.750	855	1,235	86.000	235.000	39.000
100	135	4	72.675	532.000	808	1,140	105.000	350.000	50.000
110	145	4	77.425	589.000	760	1,045	120.000	385.000	55.000
120	155	4	82.175	646.000	760	1,045	130.000	415.000	59.000
130	170	5	106.400	788.500	665	903	205.000	665.000	65.000
140	180	5	110.200	855.000	637	855	220.000	750.000	80.000
150	190	5	114.000	902.500	599	808	230.000	800.000	84.000
160	200	5	118.750	950.000	599	808	245.000	840.000	90.000

Designation					Secondary Dimensions				
Needle roller and cage thrust assembly	Raceway washer	Thrust washer	Shaft washer	Housing washer	d_1	D	D_1	B	B_1
AXK 0515	-	AS 0515	-	-	-	15	-	-	1
AXK 0619	LS 0619	AS 0619	-	-	-	19	-	2.75	1
AXK 0821	LS 0821	AS 0821	-	-	-	21	-	2.75	1
AXK 1024	LS 1024	AS 1024	-	-	-	24	-	2.75	1
AXK 1226	LS 1226	AS 1226	-	-	-	26	-	2.75	1
AXK 1528	LS 1528	AS 1528	WS 81102	GS 81102	28	28	16	2.75	1
AXK 1730	LS 1730	AS 1730	WS 81103	GS 81103	30	30	18	2.75	1
AXK 2035	LS 2035	AS 2035	WS 81104	GS 81104	35	35	21	2.75	1
AXK 2542	LS 2542	AS 2542	WS 81105	GS 81105	42	42	26	3	1
AXK 3047	LS 3047	AS 3047	WS 81106	GS 81106	47	47	32	3	1
AXK 3552	LS 3552	AS 3552	WS 81107	GS 81107	52	52	37	3.5	1
AXK 4060	LS 4060	AS 4060	WS 81108	GS 81108	60	60	42	3.5	1
AXK 4565	LS 4565	AS 4565	WS 81109	GS 81109	65	65	47	4	1
AXK 5070	LS 5070	AS 5070	WS 81110	GS 81110	70	70	52	4	1
AXK 5578	LS 5578	AS 5578	WS 81111	GS 81111	78	78	57	5	1
AXK 6085	LS 6085	AS 6085	WS 81112	GS 81112	85	85	62	4.75	1
AXK 6590	LS 6590	AS 6590	WS 81113	GS 81113	90	90	67	5.25	1
AXK 7095	LS 7095	AS 7095	WS 81114	GS 81114	95	95	72	5.25	1
AXK 75100	LS 75100	AS 75100	WS 81115	GS 81115	100	100	77	5.75	1
AXK 80105	LS 80105	AS 80105	WS 81116	GS 81116	105	105	82	5.75	1
AXK 85110	LS 85110	AS 85110	WS 81117	GS 81117	110	110	87	5.75	1
AXK 90120	LS 90120	AS 90120	WS 81118	GS 81117	120	120	92	6.5	1
AXK 100135	LS 100135	AS 100135	WS 81120	GS 81120	135	135	102	7	1
AXK 110145	LS 110145	AS 110145	WS 81122	GS 81122	145	145	112	7	1
AXK 120155	LS 120155	AS 120155	WS 81124	GS 81124	155	155	122	7	1
AXK 130170	LS 130170	AS 130170	WS 81126	GS 81126	170	170	132	9	1
AXK 140180	LS 140180	AS 140180	WS 81128	GS 81128	178	180	142	9.5	1
AXK 150190	LS 150190	AS 150190	WS 81130	GS 81130	188	190	152	9.5	1
AXK 160200	LS 160200	AS 160200	WS 81132	GS 81132	198	200	162	9.5	1

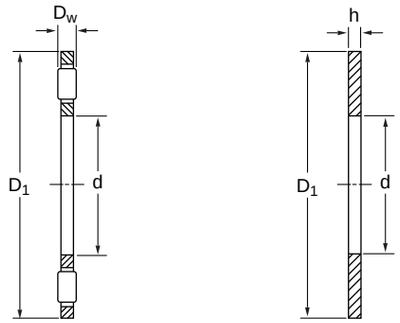
Assembly





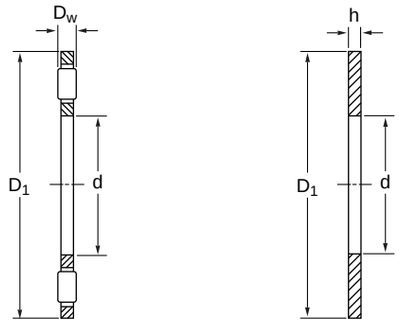
Basic Dimensions								Basic Load Ratings		Limiting Speed
								Dynamic	Static	Oil
d		D		D_w		h		C	C_0	
inch	mm	inch	mm	inch	mm	inch	mm	kN	kN	r/min
0.250	6.350	0.688	17.463	0.078	1.984	0.032	0.813	4.862	10.231	24,700
0.250	6.350	0.688	17.463	0.078	1.984	0.063	1.600			
0.250	6.350	0.688	17.463	0.078	1.984	0.095	2.413			
0.313	7.938	0.750	19.050	0.078	1.984	0.032	0.813	5.538	12.513	22,800
0.313	7.938	0.750	19.050	0.078	1.984	0.063	1.600			
0.375	9.525	0.813	20.638	0.078	1.984	0.032	0.813	5.749	13.613	20,900
0.375	9.525	0.813	20.638	0.078	1.984	0.063	1.600			
0.375	9.525	0.813	20.638	0.078	1.984	0.095	2.413			
0.500	12.700	0.938	23.813	0.078	1.984	0.032	0.813	6.806	18.178	18,050
0.500	12.700	0.938	23.813	0.078	1.984	0.063	1.600			
0.500	12.700	0.938	23.813	0.078	1.984	0.095	2.413			
0.563	14.288	1.000	25.400	0.078	1.984	0.032	0.813	7.314	20.461	17,100
0.563	14.288	1.000	25.400	0.078	1.984	0.063	1.600			
0.563	14.288	1.000	25.400	0.078	1.984	0.095	2.413			
0.625	15.875	1.125	28.575	0.078	1.984	0.032	0.813	9.301	28.874	14,250
0.625	15.875	1.125	28.575	0.078	1.984	0.063	1.600			
0.625	15.875	1.125	28.575	0.078	1.984	0.095	2.413			
0.625	15.875	1.125	28.575	0.078	1.984	0.123	3.124			
0.625	15.875	1.125	28.575	0.078	1.984	0.157	3.988			
0.750	19.050	1.250	31.750	0.078	1.984	0.032	0.813	10.357	34.666	13,300
0.750	19.050	1.250	31.750	0.078	1.984	0.063	1.600			
0.750	19.050	1.250	31.750	0.078	1.984	0.095	2.413			
0.750	19.050	1.250	31.750	0.078	1.984	0.126	3.200			
0.750	19.050	1.250	31.750	0.078	1.984	0.157	3.988			
0.875	22.225	1.437	36.500	0.078	1.984	0.032	0.813	12.767	47.348	1,140
0.875	22.225	1.437	36.500	0.078	1.984	0.063	1.600			
0.875	22.225	1.437	36.500	0.078	1.984	0.095	2.413			
0.875	22.225	1.437	36.500	0.078	1.984	0.126	3.200			
0.875	22.225	1.687	42.850	0.078	1.984	0.063	1.600	17.544	74.404	9,310
0.875	22.225	1.687	42.850	0.078	1.984	0.095	2.413			
0.875	22.225	1.687	42.850	0.078	1.984	0.126	3.200			
1.000	25.400	1.562	39.675	0.078	1.984	0.032	0.813	13.148	51.153	10,450

Mass		Designation	
Assembly	Thrust washer	Assembly	Thrust washer
g	g		
1.362	1.362	NTA-411	TRA-411
	2.270		TRB-411
	3.632		TRC-411
1.816	1.362	NTA-512	TRA-512
	2.724		TRB-512
1.816	1.362	NTA-613	TRA-613
	2.724		TRB-613
	4.086		TRC-613
2.270	1.816	NTA-815	TRA-815
	3.632		TRB-815
	5.448		TRC-815
2.724	2.270	NTA-916	TRA-916
	3.632		TRB-916
	5.902		TRC-916
3.178	2.724	NTA-1018	TRA-1018
	5.448		TRB-1018
	8.172		TRC-1018
	10.896		TRD-1018
	13.166		TRE-1018
4.086	3.178	NTA-1220	TRA-1220
	5.902		TRB-1220
	9.534		TRC-1220
	11.804		TRD-1220
	14.982		TRE-1220
4.994	4.086	NTA-1423	TRA-1423
	7.718		TRB-1423
	11.804		TRC-1423
	15.436		TRD-1423
7.718	13.166	NTC-1427	TRB-1427
	19.976		TRC-1427
	25.878		TRD-1427
5.902	4.540	NTA-1625	TRA-1625



Basic Dimensions								Basic Load Ratings		Limiting Speed
d		D		D_w		h		Dynamic C	Static C_0	Oil
inch	mm	inch	mm	inch	mm	inch	mm	kN	kN	r/min
1.000	25.400	1.562	39.675	0.078	1.984	0.063	1.600	13.148	51.153	10,450
1.000	25.400	1.562	39.675	0.078	1.984	0.126	3.200			
1.000	25.400	1.562	39.675	0.078	1.984	0.157	3.988			
1.125	28.575	1.750	44.450	0.078	1.984	0.032	0.813	15.853	67.640	9,120
1.125	28.575	1.750	44.450	0.078	1.984	0.063	1.600			
1.125	28.575	1.750	44.450	0.078	1.984	0.095	2.413			
1.125	28.575	1.750	44.450	0.078	1.984	0.126	3.200			
1.250	31.750	1.937	49.200	0.078	1.984	0.032	0.813	19.151	88.778	8,170
1.250	31.750	1.937	49.200	0.078	1.984	0.063	1.600			
1.250	31.750	1.937	49.200	0.078	1.984	0.095	2.413			
1.250	31.750	1.937	49.200	0.078	1.984	0.126	3.200			
1.250	31.750	1.937	49.200	0.078	1.984	0.188	4.775			
1.375	34.925	2.062	52.375	0.078	1.984	0.032	0.813	20.292	98.078	7,600
1.375	34.925	2.062	52.375	0.078	1.984	0.063	1.600			
1.375	34.925	2.062	52.375	0.078	1.984	0.095	2.413			
1.375	34.925	2.062	52.375	0.078	1.984	0.126	3.200			
1.375	34.925	2.062	52.375	0.078	1.984	0.157	3.988			
1.375	34.925	2.062	52.375	0.078	1.984	0.188	4.775			
1.500	38.100	2.187	55.550	0.078	1.984	0.032	0.813	22.068	112.029	7,220
1.500	38.100	2.187	55.550	0.078	1.984	0.063	1.600			
1.500	38.100	2.187	55.550	0.078	1.984	0.095	2.413			
1.500	38.100	2.187	55.550	0.078	1.984	0.126	3.200			
1.500	38.100	2.187	55.550	0.078	1.984	0.188	4.775			
1.750	44.450	2.500	63.500	0.078	1.984	0.032	0.813	24.054	130.630	6,460
1.750	44.450	2.500	63.500	0.078	1.984	0.063	1.600			
1.750	44.450	2.500	63.500	0.078	1.984	0.095	2.413			
1.750	44.450	2.500	63.500	0.078	1.984	0.126	3.200			
1.750	44.450	2.500	63.500	0.078	1.984	0.188	4.775			
2.000	50.800	2.750	69.850	0.078	1.984	0.032	0.813	22.829	125.980	5,795
2.000	50.800	2.750	69.850	0.078	1.984	0.063	1.600			
2.000	50.800	2.750	69.850	0.078	1.984	0.095	2.413			
2.000	50.800	2.750	69.850	0.078	1.984	0.126	3.200			

Mass		Designation	
Assembly	Thrust washer	Assembly	Thrust washer
g	g		
5.902	8.626	NTA-1625	TRB-1625
	17.252		TRD-1625
	21.338		TRE-1625
8.626	5.902	NTA-1828	TRA-1828
	10.896		TRB-1828
	16.798		TRC-1828
	21.792		TRD-1828
9.534	6.810	NTA-2031	TRA-2031
	13.620		TRB-2031
	19.976		TRC-2031
	26.332		TRD-2031
	40.860		TRF-2031
10.442	7.264	NTA-2233	TRA-2233
	14.982		TRB-2233
	18.160		TRC-2233
	29.510		TRD-2233
	36.774		TRE-2233
	44.038		TRF-2233
11.350	7.718	NTA-2435	TRA-2435
	15.436		TRB-2435
	22.700		TRC-2435
	30.418		TRD-2435
	45.400		TRF-2435
14.074	9.534	NTA-2840	TRA-2840
	19.976		TRB-2840
	28.602		TRC-2840
	38.136		TRD-2840
	57.204		TRF-2840
14.982	10.896	NTA-3244	TRA-3244
	21.792		TRB-3244
	32.688		TRC-3244
	43.584		TRD-3244



Basic Dimensions								Basic Load Ratings		Limiting Speed
								Dynamic	Static	Oil
d		D		D_w		h		C	C_0	
inch	mm	inch	mm	inch	mm	inch	mm	kN	kN	r/min
2.000	50.800	2.750	69.850	0.078	1.984	0.188	4.775	22.829	125.980	5,795
2.125	53.975	2.875	73.025	0.078	1.984	0.032	0.813	23.209	130.630	5,510
2.125	53.975	2.875	73.025	0.078	1.984	0.063	1.600			
2.125	53.975	2.875	73.025	0.078	1.984	0.095	2.413			
2.125	53.975	2.875	73.025	0.078	1.984	0.126	3.200			
2.250	57.150	3.000	76.200	0.078	1.984	0.032	0.813	23.547	135.280	5,320
2.250	57.150	3.000	76.200	0.078	1.984	0.063	1.600			
2.250	57.150	3.000	76.200	0.078	1.984	0.095	2.413			
2.250	57.150	3.000	76.200	0.078	1.984	0.126	3.200			
2.250	57.150	3.000	76.200	0.078	1.984	0.188	4.775			
2.250	57.150	3.125	79.375	0.125	3.175	-	-	35.807	168.255	5,035
2.500	63.500	3.250	82.550	0.078	1.984	0.032	0.813	24.266	144.581	4,845
2.500	63.500	3.250	82.550	0.078	1.984	0.063	1.600			
2.500	63.500	3.250	82.550	0.078	1.984	0.095	2.413			
2.500	63.500	3.250	82.550	0.078	1.984	0.126	3.200			
2.750	69.850	3.625	92.075	0.125	3.175	0.032	0.813	45.234	243.081	4,370
2.750	69.850	3.625	92.075	0.125	3.175	0.063	1.600			
2.750	69.850	3.625	92.075	0.125	3.175	0.095	2.413			
2.750	69.850	3.625	92.075	0.125	3.175	0.126	3.200			
2.750	69.850	3.625	92.075	0.125	3.175	0.188	4.775			
3.000	76.200	3.750	95.250	0.078	1.984	0.032	0.813	25.619	163.604	4,180
3.000	76.200	3.750	95.250	0.078	1.984	0.063	1.600			
3.000	76.200	3.750	95.250	0.078	1.984	0.126	3.200			
3.250	82.550	4.125	104.775	0.125	3.175	0.032	0.813	49.039	280.283	3,800
3.250	82.550	4.125	104.775	0.125	3.175	0.126	3.200			
3.750	95.250	4.625	117.475	0.125	3.175	0.032	0.813	53.267	327.209	3,325
3.750	95.250	4.625	117.475	0.125	3.175	0.063	1.600			
3.750	95.250	4.625	117.475	0.125	3.175	0.095	2.413			
3.750	95.250	4.625	117.475	0.125	3.175	0.126	3.200			
4.125	104.775	5.062	128.575	0.125	3.175	0.032	0.813	60.453	394.003	3,040
4.125	104.775	5.062	128.575	0.125	3.175	0.095	2.413			
4.125	104.775	5.062	128.575	0.125	3.175	0.126	3.200			
4.125	104.775	5.062	128.575	0.125	3.175	0.188	4.775			

Mass		Designation	
Assembly	Thrust washer	Assembly	Thrust washer
g	g		
14.982	65.830	NTA-3244	TRF-3244
16.344	11.804	NTA-3446	TRA-3446
	23.608		TRB-3446
	35.412		TRC-3446
	46.762		TRD-3446
17.252	11.804	NTA-3648	TRA-3648
	21.792		TRB-3648
	36.774		TRC-3648
	47.670		TRD-3648
	71.278		TRF-3648
29.056	-	NTA-3650	-
18.614	13.166	NTA-4052	TRA-4052
	26.786		TRB-4052
	40.860		TRC-4052
	54.026		TRD-4052
37.228	17.706	NTA-4458	TRA-4458
	34.958		TRB-4458
	51.302		TRC-4458
	69.008		TRD-4458
	103.966		TRF-4458
21.792	15.436	NTA-4860	TRA-4860
	31.780		TRB-4860
	61.290		TRD-4860
41.768	19.976	NTA-5266	TRA-5266
	79.904		TRD-5266
49.940	22.700	NTA-6074	TRA-6074
	45.854		TRB-6074
	69.008		TRC-6074
	91.708		TRD-6074
61.744	26.786	NTA-6681	TRA-6681
	80.812		TRC-6681
	108.960		TRD-6681
	160.716		TRF-6681

NIS™

Plain Spherical Bearings

Prefix & Suffix

GE	80	ES2RS

Basic type series

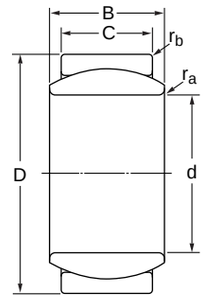
GE : Standard
GEH : Heavy

Bore size (mm)

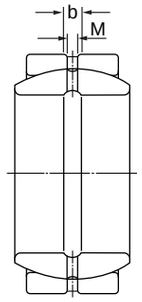
The digits represents the bore size.
e.g. 80 = 80mm

Suffix

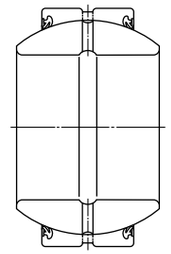
E : No oil groove and oil hole on both inner and outer ring
ES : 2 oil holes on both inner and outer ring
2RS : Seals at both sides of the bearing
XS/K : ES design with split outer ring, held together by 1 steel ring

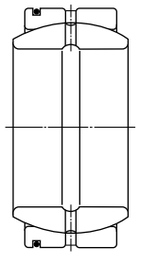


GE .. E

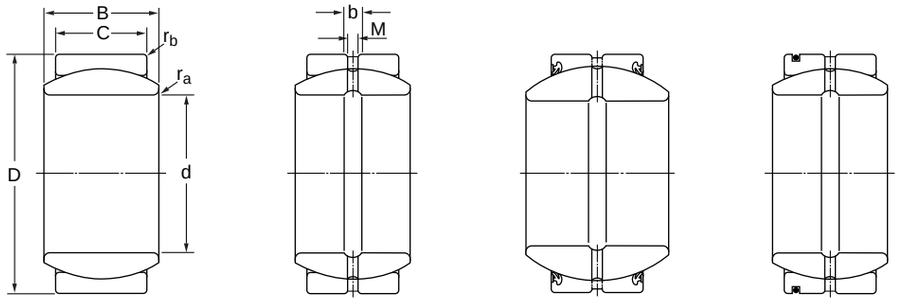


GE .. ES


GEH .. ES-2RS

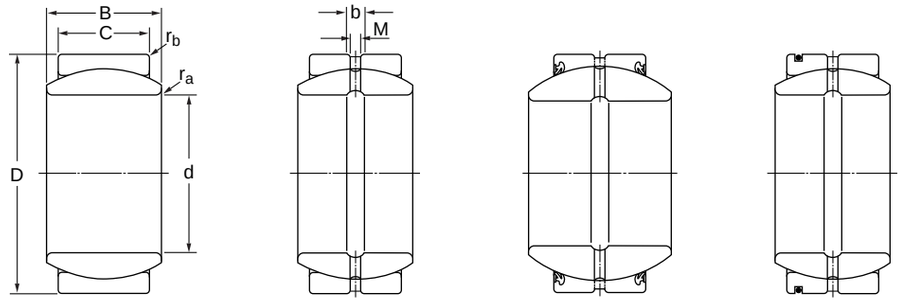

GE .. XS/K

Basic Dimensions						Basic Load Ratings		Chamfer Dimension		Mass	Designation
d mm	D mm	B mm	C mm	b mm	M mm	Dynamic C kN	Static C_0 kN	r_a max	r_b max	kg	
4	12	5	3	-	-	1.938	9.690	0.3	0.3	0.003	GE 4 E
5	14	6	4	-	-	3.230	16.150	0.3	0.3	0.004	GE 5 E
6	14	6	4	-	-	3.230	16.150	0.3	0.3	0.034	GE 6 E
8	16	8	5	-	-	5.225	26.125	0.3	0.3	0.008	GE 8 E
10	19	9	6	-	-	7.743	38.475	0.3	0.3	0.012	GE 10 E
12	22	10	7	-	-	10.260	51.300	0.3	0.3	0.017	GE 12 E
12	22	11	9	-	-	10.400	54.400	0.5	0.5	0.019	GE 12 XS/K
15	26	12	9	2.3	1.5	16.150	80.750	0.3	0.3	0.032	GE 15 ES
15	26	12	9	2.3	1.5	16.150	80.750	0.3	0.3	0.032	GE 15 ES2RS
15	26	13	11	2.3	1.5	16.000	81.600	0.5	0.5	0.028	GE 15 XS/K
17	30	14	10	2.3	1.5	20.140	100.700	0.3	0.3	0.050	GE 17 ES
17	30	14	10	2.3	1.5	20.140	100.700	0.3	0.3	0.050	GE 17 ES2RS
20	32	16	14	2.3	1.5	26.400	132.800	0.5	0.5	0.053	GE 20 XS/K
20	35	16	12	3.1	2	28.500	138.700	0.3	0.3	0.065	GE 20 ES
20	35	16	12	3.1	2	28.500	138.700	0.3	0.3	0.065	GE 20 ES2RS
20	42	25	16	3.1	2	45.600	228.000	0.3	0.6	0.160	GEH 20 ES2RS
22	37	19	16	3.1	2	34.400	173.600	0.5	0.5	0.085	GE 22 XS/K
25	42	20	16	3.1	2	45.600	228.000	0.6	0.6	0.120	GE 25 ES
25	42	20	16	3.1	2	45.600	228.000	0.6	0.6	0.120	GE 25 ES2RS
25	42	21	18	3.9	2.5	44.000	220.000	0.5	0.5	0.116	GE25 XS/K
25	47	28	18	3.1	2	58.900	294.500	0.6	0.6	0.200	GEH 25 ES2RS
30	47	22	18	3.1	2	58.900	294.500	0.6	0.6	0.160	GE 30 ES
30	47	22	18	3.1	2	58.900	294.500	0.6	0.6	0.160	GE 30 ES2RS
30	50	27	23	4.6	3	69.600	351.200	1.0	1.0	0.225	GE 30 XS/K
30	55	32	20	3.9	2.5	76.000	380.000	0.6	1.0	0.350	GEH 30 ES2RS
35	55	25	20	3.9	2.5	76.000	380.000	0.6	1.0	0.230	GE 35 ES
35	55	25	20	3.9	2.5	76.000	380.000	0.6	1.0	0.230	GE 35 ES2RS
35	55	30	26	4.6	3	88.000	441.600	1.0	1.0	0.302	GE 35 XS/K
35	62	35	22	3.9	2.5	95.000	475.000	0.6	1.0	0.470	GEH 35 ES2RS
40	62	28	22	3.9	2.5	95.000	475.000	0.6	1.0	0.320	GE 40 ES
40	62	28	22	3.9	2.5	95.000	475.000	0.6	1.0	0.320	GE 40 ES2RS
40	62	33	28	4.6	3	104.000	523.200	1.0	1.0	0.375	GE 40 XS/K



GE .. E | GE .. ES | GEH .. ES-2RS | GE .. XS/K

Basic Dimensions						Basic Load Ratings		Chamfer Dimension		Mass	Designation
d	D	B	C	b	M	Dynamic C	Static C_0	r_a max	r_b max		
mm	mm	mm	mm	mm	mm	kN	kN			kg	
40	68	40	25	4.6	3	120.650	608.000	0.6	1.0	0.610	GEH 40 ES2RS
45	68	32	25	4.6	3	120.650	608.000	0.6	1.0	0.460	GE 45 ES
45	68	32	25	4.6	3	120.650	608.000	0.6	1.0	0.460	GE 45 ES2RS
45	72	36	31	4.6	3	130.400	652.800	1.0	1.0	0.598	GE45 XS/K
45	75	43	28	4.6	3	148.200	741.000	0.6	1.0	0.800	GEH 45 ES2RS
50	75	35	28	4.6	3	148.200	741.000	0.6	1.0	0.560	GE 50 ES
50	75	35	28	4.6	3	148.200	741.000	0.6	1.0	0.560	GE 50 ES2RS
50	80	42	36	6.2	4	176.000	880.000	1.0	1.0	0.869	GE 50 XS/K
50	90	56	36	6.2	4	232.750	1159.000	0.6	1.0	1.600	GEH 50 ES2RS
55	90	47	40	6.2	4	275.200	1376.000	1.0	1.0	1.260	GE 55 XS/K
60	90	44	36	6.2	4	232.750	1159.000	1.0	1.0	1.100	GE 60 ES
60	90	44	36	6.2	4	232.750	1159.000	1.0	1.0	1.100	GE 60 ES2RS
60	100	53	45	7.7	4	275.200	1376.000	1.0	1.0	1.720	GE 60 XS/K
60	105	63	40	7.7	4	299.250	1482.000	1.0	1.0	2.400	GEH 60 ES2RS
65	105	55	47	7.7	4	300.000	1496.000	1.0	1.0	2.050	GE 65 XS/K
70	105	49	40	7.7	4	299.250	1482.000	1.0	1.0	1.550	GE 70 ES
70	105	49	40	7.7	4	299.250	1482.000	1.0	1.0	1.550	GE 70 ES2RS
70	110	58	50	7.7	4	340.000	1700.000	1.0	1.0	2.230	GE 70 XS/K
70	120	70	45	7.7	4	380.000	1900.000	1.0	1.0	3.400	GEH 70 ES2RS
75	120	64	55	9.5	5	408.000	2056.000	1.0	1.0	3.010	GE 75 XS/K
80	120	55	45	7.7	4	380.000	1900.000	1.0	1.0	2.300	GE 80 ES
80	120	55	45	7.7	4	380.000	1900.000	1.0	1.0	2.300	GE 80 ES2RS
80	130	70	60	11.3	5	488.000	2448.000	1.0	1.0	3.980	GE 80 XS/K
80	130	75	50	9.5	5	465.500	2327.500	1.0	1.0	4.100	GEH 80 ES2RS
85	135	74	63	11.5	5	535.200	2672.000	1.0	1.0	4.310	GE 85 XS/K
90	130	60	50	9.5	5	465.500	2327.500	1.0	1.0	2.750	GE 90 ES
90	130	60	50	9.5	5	465.500	2327.500	1.0	1.0	2.750	GE 90 ES2RS
90	140	76	65	11.5	5	574.400	2872.000	1.0	1.0	4.720	GE 90 XS/K
90	150	85	55	11.3	5	579.500	2897.500	1.0	1.0	6.300	GEH 90 ES2RS
95	150	82	70	11.5	5	666.400	3332.000	1.0	1.0	6.050	GE 95 XS/K
100	150	70	55	11.3	5	579.500	2897.500	1.0	1.0	4.400	GE 100 ES
100	150	70	55	11.3	5	579.500	2897.500	1.0	1.0	4.400	GE 100 ES2RS



GE .. E | GE .. ES | GEH .. ES-2RS | GE .. XS/K

Basic Dimensions						Basic Load Ratings		Chamfer Dimension		Mass	Designation
d	D	B	C	b	M	Dynamic C	Static C_0	r_a max	r_b max		
mm	mm	mm	mm	mm	mm	kN	kN			kg	
100	160	85	55	11.5	5	622.250	3087.500	1.0	1.0	6.800	GEH 100 ES2RS
100	160	88	75	13.5	6	764.800	3824.000	1.5	1.5	7.430	GE 100 XS/K
110	160	70	55	11.5	5	622.250	3087.500	1.0	1.0	4.800	GE 110 ES
110	160	70	55	11.5	5	622.250	3087.500	1.0	1.0	4.800	GE 110 ES2RS
110	170	93	80	13.5	6	864.000	4352.000	1.5	1.5	8.540	GE 110 XS/K
110	180	100	70	13.5	6	902.500	4512.500	1.0	1.0	11.000	GEH 110 ES2RS
115	180	98	85	13.5	6	952.000	4768.000	1.5	1.5	10.300	GE 115 XS/K
120	180	85	70	13.5	6	902.500	4512.500	1.0	1.0	8.250	GE 120 ES
120	180	85	70	13.5	6	902.500	4512.500	1.0	1.0	8.250	GE 120 ES2RS
120	190	105	90	13.5	6	1064.000	5352.000	1.5	1.5	12.400	GE120 XS/K
120	210	115	70	13.5	6	1026.000	5130.000	1.0	1.0	15.000	GEH 120 ES2RS
130	200	110	95	13.5	6	1192.000	5968.000	1.5	1.5	13.800	GE 130 XS/K
140	210	90	70	13.5	6	1026.000	5130.000	1.0	1.0	11.000	GE 140 ES
140	210	90	70	13.5	6	1026.000	5130.000	1.0	1.0	11.000	GE 140 ES2RS
150	220	120	105	13.5	6	1456.000	7312.000	1.5	1.5	17.100	GE 150 XS/K
160	230	105	80	13.5	6	1301.500	6460.000	1.0	1.0	14.000	GE 160 ES
160	230	105	80	13.5	6	1301.500	6460.000	1.0	1.0	14.000	GE 160 ES2RS
180	260	105	80	13.5	6	1453.500	7267.500	1.0	1.0	18.500	GE 180 ES
180	260	105	80	13.5	6	1453.500	7267.500	1.0	1.0	18.500	GE 180 ES2RS
200	290	130	100	15.5	7	2014.000	10070.000	1.0	1.0	28.000	GE 200 ES
200	290	130	100	15.5	7	2014.000	10070.000	1.0	1.0	28.000	GE 200 ES2RS
220	320	135	100	15.5	7	2204.000	11020.000	1.0	1.0	35.500	GE 220 ES2RS
240	340	140	100	15.5	7	2422.500	12065.000	1.0	1.0	40.000	GE 240 ES2RS
260	370	150	110	15.5	7	2897.500	14535.000	1.0	1.0	51.500	GE 260 ES2RS
280	400	155	120	15.5	7	3372.500	17100.000	1.0	1.0	65.000	GE 280 ES2RS
300	430	165	120	15.5	7	3610.000	18050.000	1.0	1.0	78.500	GE 300 ES2RS

Prefix & Suffix

GEGZ	280	ES2RS

Suffix

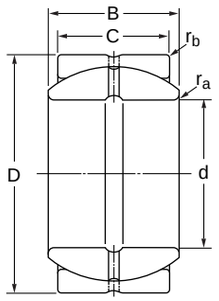
ES : 2 oil holes on both inner and outer ring
2RS : Seals at both sides of the bearing

Basic type series

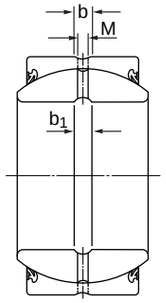
GEZ : Standard
GEHZ : Heavy

Bore size (inch)

First digit : Unit figure of inch
Last 2 digit : 1/16th of an inch
e.g. Bore size of 208 = 2 + 8/16 = 2.1/2"



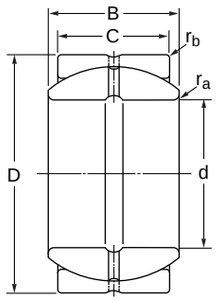
GEZ .. ES
GEGZ .. ES



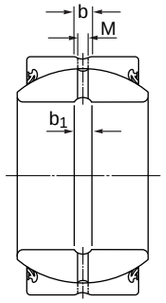
GEZ .. ES-2RS
GEGZ .. ES-2RS

Basic Dimensions								Basic Load Ratings		Chamfer Dimension			
d		D		B		C		Dynamic C	Static C_O	r_a max	r_a max	r_b max	r_b max
mm	inch	mm	inch	mm	inch	mm	inch	kN	kN				
12.700	0.5000	22.225	0.8750	11.100	0.4370	9.525	0.3750	13.300	39.425	0.15	0.006	0.60	0.024
15.875	0.6250	26.988	1.0625	13.894	0.5470	11.913	0.4690	20.520	62.225	0.15	0.006	1.00	0.039
19.050	0.7500	31.750	1.2500	16.662	0.6560	14.275	0.5620	29.925	88.350	0.30	0.012	1.00	0.039
22.225	0.8750	36.513	1.4375	19.431	0.7650	16.662	0.6560	40.375	120.650	0.30	0.012	1.00	0.039
25.400	1.0000	41.275	1.6250	22.225	0.8750	19.050	0.7500	53.200	157.700	0.30	0.012	1.00	0.039
31.750	1.2500	50.800	2.0000	27.762	1.0930	23.800	0.9370	82.175	247.000	0.60	0.024	1.00	0.039
31.750	1.2500	61.913	2.4375	35.306	1.3900	28.575	1.1250	100.000	300.000	0.60	0.024	1.00	0.039
34.925	1.3750	55.563	2.1875	30.150	1.1870	26.187	1.0310	98.800	294.500	0.60	0.024	1.00	0.039
38.100	1.5000	61.913	2.4375	33.325	1.3120	28.575	1.1250	118.750	356.250	0.60	0.024	1.00	0.039
38.100	1.5000	71.438	2.8125	40.132	1.5800	33.325	1.3120	136.000	408.000	0.60	0.024	1.00	0.039
44.450	1.7500	71.438	2.8125	38.887	1.5310	33.325	1.3120	161.500	484.500	0.60	0.024	1.00	0.039
44.450	1.7500	80.963	3.1875	46.228	1.8200	38.100	1.5000	179.200	536.000	0.60	0.024	1.00	0.039
50.800	2.0000	80.963	3.1875	44.450	1.7500	38.100	1.5000	212.800	636.500	0.60	0.024	1.00	0.039
50.800	2.0000	90.488	3.5625	52.578	2.0700	42.850	1.6870	224.000	680.000	0.60	0.024	1.00	0.039
57.150	2.2500	90.488	3.5625	50.130	1.9690	42.850	1.6870	266.000	807.500	0.60	0.024	1.00	0.039
57.150	2.2500	100.013	3.9375	58.877	2.3180	47.625	1.8750	284.000	848.000	0.60	0.024	1.00	0.039
63.500	2.5000	100.013	3.9375	55.550	2.1870	47.625	1.8750	327.750	988.000	0.60	0.024	1.00	0.039
63.500	2.5000	111.125	4.3750	64.643	2.5450	52.375	2.0620	332.000	1000.000	1.00	0.039	1.00	0.039
69.850	2.7500	111.125	4.3750	61.112	2.4060	52.375	2.0620	403.750	1206.500	0.60	0.024	1.00	0.039
69.850	2.7500	120.650	4.7500	70.866	2.7900	57.150	2.2500	400.000	1200.000	1.00	0.039	1.00	0.039
76.200	3.0000	120.650	4.7500	66.675	2.6250	57.150	2.2500	475.000	1425.000	0.60	0.024	1.00	0.039
76.200	3.0000	130.175	5.1250	76.759	3.0220	61.900	2.4370	468.000	1408.000	1.00	0.039	1.00	0.039
82.550	3.2500	130.175	5.1250	72.238	2.8440	61.900	2.4370	555.750	1672.000	0.60	0.024	1.00	0.039
82.550	3.2500	139.700	5.5000	82.931	3.2650	66.675	2.6250	544.000	1632.000	1.00	0.039	1.00	0.039

Mass	Designation		Secondary Dimensions					
			b		b_1		M	
kg			mm	inch	mm	inch	mm	inch
0.020	GEZ 008 ES	-	2.600	0.102	2.500	0.098	1.500	0.059
0.035	GEZ 010 ES	-	3.200	0.126	3.000	0.118	2.500	0.098
0.055	GEZ 012 ES	-	3.200	0.126	3.000	0.118	2.500	0.098
0.085	GEZ 014 ES	-	3.200	0.126	3.000	0.118	2.500	0.098
0.120	GEZ 100 ES	GEZ 100 ES2RS	3.200	0.126	3.000	0.118	2.500	0.098
0.230	GEZ 104 ES	GEZ 104 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
0.454	GEGZ 104 ES	GEGZ 104 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
0.350	GEZ 106 ES	GEZ 106 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
0.420	GEZ 108 ES	GEZ 108 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
0.726	GEGZ 108 ES	GEGZ 108 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
0.640	GEZ 112 ES	GEZ 112 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
1.140	GEGZ112 ES	GEGZ 112 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
0.930	GEZ 200 ES	GEZ 200 ES2RS	4.800	0.189	5.000	0.197	4.000	0.158
1.680	GEGZ 200 ES	GEGZ 200 ES2RS	5.700	0.224	5.000	0.197	4.000	0.158
1.300	GEZ 204 ES	GEZ 204 ES2RS	5.700	0.224	5.000	0.197	4.000	0.158
2.010	GEGZ 204 ES	GEGZ 204 ES2RS	9.000	0.354	8.000	0.315	6.500	0.256
1.850	GEZ 208 ES	GEZ 208 ES2RS	9.000	0.354	8.000	0.315	6.500	0.256
2.950	GEGZ 208 ES	GEGZ 208 ES2RS	9.000	0.354	8.000	0.315	6.500	0.256
2.400	GEZ 212 ES	GEZ 212 ES2RS	9.000	0.354	8.000	0.315	6.500	0.256
3.630	GEGZ 212 ES	GEGZ 212 ES2RS	9.000	0.354	8.000	0.315	6.500	0.256
3.100	GEZ 300 ES	GEZ 300 ES2RS	9.000	0.354	8.000	0.315	6.500	0.256
4.360	GEGZ 300 ES	GEGZ 300 ES2RS	9.300	0.366	8.000	0.315	6.500	0.256
3.800	GEZ 304 ES	GEZ 304 ES2RS	9.300	0.366	8.000	0.315	6.500	0.256
5.310	GEGZ 304 ES	GEGZ 304 ES2RS	10.500	0.413	8.000	0.315	6.500	0.256



GEZ .. ES
GEGZ .. ES



GEZ .. ES-2RS
GEGZ .. ES-2RS

Basic Dimensions								Basic Load Ratings		Chamfer Dimension			
d		D		B		C		Dynamic C	Static C_O	r_a max	r_a max	r_b max	r_b max
mm	inch	mm	inch	mm	inch	mm	inch	kN	kN				
88.900	3.5000	139.700	5.5000	77.775	3.0620	66.675	2.6250	646.000	1938.000	0.60	0.024	1.00	0.039
88.900	3.5000	149.225	5.8750	90.424	3.5600	71.425	2.8120	624.000	1888.000	1.00	0.039	1.00	0.039
95.250	3.7500	149.225	5.8750	83.337	3.2810	71.425	2.8120	741.000	2242.000	0.60	0.024	1.00	0.039
95.250	3.7500	158.750	6.2500	94.945	3.7380	76.200	3.0000	720.000	2120.000	1.00	0.039	1.00	0.039
101.600	4.0000	158.750	6.2500	88.900	3.5000	76.200	3.0000	855.000	2517.500	0.60	0.024	1.00	0.039
101.600	7.0000	177.800	7.0000	107.315	4.2250	85.725	3.3750	896.000	2720.000	1.00	0.039	1.00	0.039
114.300	4.5000	177.800	7.0000	100.000	3.9370	85.725	3.3750	1064.000	3230.000	1.00	0.039	1.00	0.039
114.300	4.5000	196.850	7.7500	119.126	4.6900	95.250	3.7500	1120.000	3320.000	1.00	0.039	1.00	0.039
120.650	4.7500	187.325	7.3750	105.562	4.1560	90.475	3.5620	1187.500	3562.500	1.00	0.039	1.00	0.039
127.000	5.0000	196.850	7.7500	111.125	4.3750	95.250	3.7500	1330.000	3942.500	1.00	0.039	1.00	0.039
139.700	5.5000	222.250	8.7500	125.730	4.9500	104.775	4.1250	1384.000	4160.000	1.00	0.039	1.00	0.039
152.400	6.0000	222.250	8.7500	120.650	4.7500	104.775	4.1250	1643.500	4940.000	1.00	0.039	1.00	0.039

Spherical Plain Bearing, Steel/Steel - Inch Sizes

Mass	Designation		Secondary Dimensions					
			b		b_1		M	
kg			mm	inch	mm	inch	mm	inch
4.800	GEZ 308 ES	GEZ 308 ES2RS	10.500	0.413	8.000	0.315	6.500	0.256
6.810	GEGZ 308 ES	GEGZ 308 ES2RS	10.500	0.413	10.000	0.394	8.000	0.315
5.800	GEZ 312 ES	GEZ 312 ES2RS	10.500	0.413	8.000	0.315	6.500	0.256
8.850	GEGZ 312 ES	GEGZ 312 ES2RS	10.500	0.413	10.000	0.394	8.000	0.315
7.000	GEZ 400 ES	GEZ 400 ES2RS	10.500	0.413	10.000	0.394	8.000	0.315
10.200	GEGZ 400 ES	GEZGZ 400 ES2RS	11.000	0.433	10.000	0.394	8.000	0.315
9.800	GEZ 408 ES	GEZ 408 ES2RS	11.000	0.433	10.000	0.394	8.000	0.315
13.600	GEGZ 408 ES	GEGZ 408 ES2RS	11.000	0.433	10.000	0.394	8.000	0.315
11.500	GEZ 412 ES	GEZ 412 ES2RS	11.000	0.433	10.000	0.394	8.000	0.315
13.500	GEZ 500 ES	GEZ 500 ES2RS	11.000	0.433	10.000	0.394	8.000	0.315
20.400	GEGZ 508 ES	GEGZ 508 ES2RS	15.000	0.591	11.000	0.433	8.000	0.315
17.500	GEZ 600 ES	GEZ 600 ES2RS	15.000	0.591	11.000	0.433	8.000	0.315

8.02

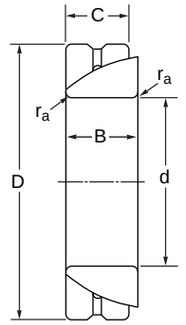
Prefix & Suffix

GAC	35	S

Basic type series
GAC: Standard

Bore size (mm)
The digits represents the bore size.
e.g. 35 = 35mm

Suffix
S : Oil grooves and oil hole in outer ring



Basic Dimensions				Basic Load Ratings		Chamfer Dimension		Mass	Designation
d mm	D mm	B mm	C mm	Dynamic C kN	Static C_0 kN	r_a max	r_b max	kg	
25	47	15	14	19.494	36.053	0.6	0.3	0.140	GAC 25 S
30	55	17	15	24.368	44.935	1.0	0.3	0.210	GAC 30 S
35	62	18	16	29.331	54.340	1.0	0.3	0.270	GAC 35 S
40	68	19	17	35.198	64.790	1.0	0.3	0.330	GAC 40 S
45	75	20	18	41.064	76.808	1.0	0.3	0.420	GAC 45 S
50	80	20	19	47.833	88.825	1.0	0.3	0.460	GAC 50 S
60	95	23	21	62.724	117.040	1.5	0.6	0.730	GAC 60 S
70	110	25	23	79.420	149.435	1.5	0.6	1.050	GAC 70 S
80	125	29	25.5	99.275	183.920	1.5	0.6	1.550	GAC 80 S
90	140	32	28	120.935	225.720	2.0	0.6	2.100	GAC 90 S
100	150	32	31	153.425	282.150	2.0	0.6	2.350	GAC 100 S
110	170	38	34	180.500	334.400	2.5	0.6	3.700	GAC 110 S
120	180	38	37	216.600	397.100	2.5	0.6	4.000	GAC 120 S

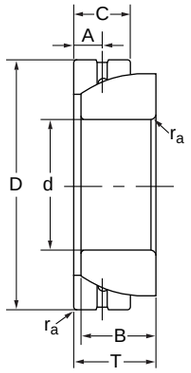
Prefix & Suffix

GACZ	208	S

Basic type series
GACZ : Standard

Bore size (inch)
First digit : Unit figure of inch
Last 2 digit : 1/16th of an inch
e.g. Bore size of 208 = 2 + 8/16 = 2.1/2"

Suffix
S : Oil grooves and oil hole in outer ring



Basic Dimensions											
d		D		T		B		C		A	
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
12.700	0.500	22.225	0.875	7.620	0.300	6.860	0.270	4.830	0.190	2.390	0.094
15.875	0.625	26.988	1.063	9.400	0.370	8.640	0.340	6.350	0.250	2.770	0.109
19.050	0.750	31.750	1.250	11.180	0.440	10.410	0.410	7.870	0.310	3.180	0.125
22.225	0.875	36.512	1.438	13.210	0.520	12.190	0.480	9.650	0.380	4.370	0.172
25.400	1.000	41.275	1.625	15.240	0.600	13.970	0.550	11.180	0.440	5.160	0.203
31.750	1.250	50.800	2.000	18.800	0.740	17.780	0.700	13.970	0.550	5.940	0.234
34.925	1.375	55.562	2.188	21.340	0.840	19.560	0.770	15.240	0.600	7.140	0.281
38.100	1.500	61.912	2.438	23.110	0.910	21.340	0.840	16.760	0.660	7.920	0.312
44.450	1.750	71.438	2.813	27.180	1.070	24.890	0.980	20.070	0.790	8.330	0.328
50.800	2.000	80.962	3.188	31.240	1.230	28.700	1.130	23.370	0.920	9.520	0.375
57.150	2.250	90.488	3.563	35.310	1.390	32.260	1.270	26.670	1.050	11.510	0.453
63.500	2.500	100.013	3.938	39.120	1.540	36.070	1.420	29.970	1.180	12.070	0.500
69.850	2.750	111.125	4.375	43.180	1.700	39.620	1.560	32.380	1.275	13.080	0.515
76.200	3.000	120.650	4.750	47.240	1.860	43.430	1.710	35.690	1.405	14.680	0.578
82.550	3.250	130.175	5.125	51.560	2.030	47.240	1.860	39.240	1.545	16.660	0.656
88.900	3.500	139.700	5.500	55.370	2.180	50.800	2.000	42.540	1.675	17.860	0.703
95.250	3.750	149.225	5.875	59.440	2.340	54.610	2.150	45.850	1.805	19.430	0.765
101.600	4.000	158.750	6.250	63.500	2.500	58.420	2.300	49.150	1.935	19.840	0.781
114.300	4.500	177.800	7.000	71.120	2.800	65.790	2.590	55.750	2.195	22.220	0.875
127.000	5.000	196.850	7.750	79.500	3.130	73.150	2.880	62.360	2.455	25.400	1.000
152.400	6.000	222.250	8.750	85.720	3.375	78.740	3.100	66.420	2.615	34.800	1.370

Angular Contact Spherical Plain Bearing,
Steel/Steel - Inch Sizes

Basic Load Ratings		Chamfer Dimension		Mass	Designation
Dynamic	Static	r_a max	r_a max		
kN	kN	mm	inch	kg	
5.700	17.100	0.51	0.02	0.013	GACZ 008 S
9.500	29.450	0.76	0.03	0.025	GACZ 010 S
15.200	44.650	1.00	0.04	0.038	GACZ 012 S
20.900	62.700	2.00	0.08	0.049	GACZ 014 S
27.550	82.650	2.00	0.08	0.085	GACZ 100 S
44.650	134.900	2.00	0.08	0.159	GACZ 104 S
50.350	151.050	2.54	0.10	0.213	GACZ 106 S
62.700	187.150	2.54	0.10	0.301	GACZ 108 S
86.450	259.350	2.54	0.10	0.458	GACZ 112 S
115.900	346.750	3.56	0.14	0.671	GACZ 200 S
147.250	442.700	3.56	0.14	0.948	GACZ 204 S
186.200	559.550	3.56	0.14	1.130	GACZ 208 S
219.450	659.300	4.60	0.18	1.750	GACZ 212 S
265.050	796.100	4.60	0.18	2.280	GACZ 300 S
315.400	945.250	4.60	0.18	2.890	GACZ 304 S
369.550	1108.650	4.60	0.18	3.570	GACZ 308 S
426.550	1280.600	4.60	0.18	4.350	GACZ 312 S
489.250	1467.750	4.60	0.18	5.260	GACZ 400 S
629.850	1890.500	4.60	0.18	7.760	GACZ 408 S
777.100	2332.250	4.60	0.18	11.070	GACZ 500 S
935.750	2807.250	4.60	0.18	17.370	GACZ 600 S

8.04

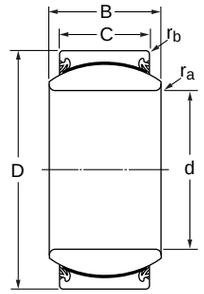
Prefix & Suffix

GE	180	S

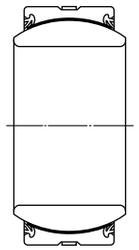
Basic type series
GE : Standard

Bore size (mm)
The digits represents the bore size.
e.g. 180 = 180mm

Suffix
T : Steel/PTFE fabric
TE : Fractured at one point
TA : Outer ring is split into 2 pieces held together by 1 or 2 steel band/s
2RS : Seals at both sides of the bearing



GE .. TE-2RS


GE .. TA-2RS

Basic Dimensions				Basic Load Ratings		Chamfer Dimension		Mass	Designation
d mm	D mm	B mm	C mm	Dynamic C kN	Static C_0 kN	r_a max	r_b max	kg	
25	42	20	16	64.600	130.150	0.6	0.6	0.120	GE 25 TE 2RS
30	47	22	18	83.600	167.200	0.6	0.6	0.160	GE 30 TE 2RS
35	55	25	20	106.400	212.800	0.6	1.0	0.230	GE 35 TE 2RS
40	62	28	22	133.000	266.000	0.6	1.0	0.320	GE 40 TE 2RS
45	68	32	25	171.000	342.000	0.6	1.0	0.460	GE 45 TE 2RS
50	75	35	28	209.000	418.000	0.6	1.0	0.560	GE 50 TE 2RS
60	90	44	36	327.750	660.250	1.0	1.0	1.100	GE 60 TE 2RS
70	105	49	40	418.000	836.000	1.0	1.0	1.550	GE 70 TE 2RS
80	120	55	45	541.500	1083.000	1.0	1.0	2.300	GE 80 TE 2RS
90	130	60	50	660.250	1301.500	1.0	1.0	2.750	GE 90 TE 2RS
100	150	70	55	821.750	1643.500	1.0	1.0	4.400	GE 100 TA 2RS
110	160	70	55	883.500	1767.000	1.0	1.0	4.800	GE 110 TA 2RS
120	180	85	70	1273.000	2565.000	1.0	1.0	8.250	GE 120 TA 2RS
140	210	90	70	1425.000	2850.000	1.0	1.0	11.000	GE 140 TA 2RS
160	230	105	80	1833.500	3610.000	1.0	1.0	14.000	GE 160 TA 2RS
180	260	105	80	2052.000	4085.000	1.0	1.0	18.500	GE 180 TA 2RS
200	290	130	100	2850.000	5700.000	1.0	1.0	28.000	GE 200 TA 2RS
220	320	135	100	3182.500	6222.500	1.0	1.0	35.500	GE 220 TA 2RS
240	340	140	100	3420.000	6840.000	1.0	1.0	40.000	GE 240 TA 2RS
260	370	150	110	4085.000	8217.500	1.0	1.0	51.500	GE 260 TA 2RS
280	400	155	120	4750.000	9500.000	1.0	1.0	65.000	GE 280 TA 2RS
300	430	165	120	5130.000	10260.000	1.0	1.0	78.500	GE 300 TA 2RS

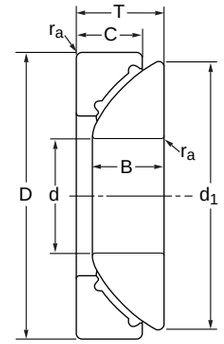
Prefix & Suffix

GX	80	F

Suffix
F : Steel/PTFE composite

Basic type series
GX : Standard

Bore size (mm)
The digits represents the bore size.
e.g. 80 = 80mm



Basic Dimensions						Basic Load Ratings		Chamfer Dimension	Mass	Designation
d mm	D mm	T mm	d_1 mm	B mm	C mm	Dynamic C kN	Static C_0 kN	r_a max	kg	
17	47	16	43.5	11.8	11.2	34.675	55.575	0.6	0.140	GX 17 F
20	55	20	50	14.5	13.8	44.175	69.825	1.0	0.250	GX 20 F
25	62	22.5	58.5	16.5	16.7	66.025	106.400	1.0	0.420	GX 25 F
30	75	26	70	19	19	90.250	145.350	1.0	0.610	GX 30 F
35	90	28	84	22	20.7	127.300	205.200	1.0	0.980	GX 35 F
40	105	32	97	27	21.5	164.350	261.250	1.0	1.500	GX 40 F
45	120	36.5	110	31	25.5	212.800	337.250	1.0	2.250	GX 45 F
50	130	42.5	120	33	30.5	261.250	418.000	1.0	3.150	GX 50 F
60	150	45	140	37	34	356.250	570.000	1.0	4.650	GX 60 F
70	160	50	153	42	36.5	451.250	712.500	1.0	5.400	GX 70 F
80	180	50	172	43.5	38	541.500	869.250	1.0	6.950	GX 80 F
100	210	59	198	51	46	698.250	1121.000	1.0	11.000	GX 100 F
120	230	64	220	53.5	50	836.000	1358.500	1.0	14.000	GX 120 F

Maintenance-Free Angular Contact Spherical Plain Bearings, Steel/PTFE Composite

Prefix & Suffix

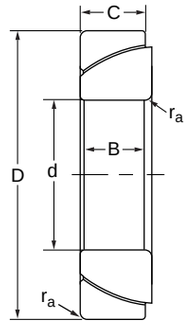
GAC	25	F

Suffix
F : Steel/PTFE composite

Basic type series
GAC : Standard

Bore size (mm)
The digits represents the bore size.
e.g. 25 = 25mm

Maintenance-Free Angular Contact Spherical Plain Bearings, Steel/PTFE Composite

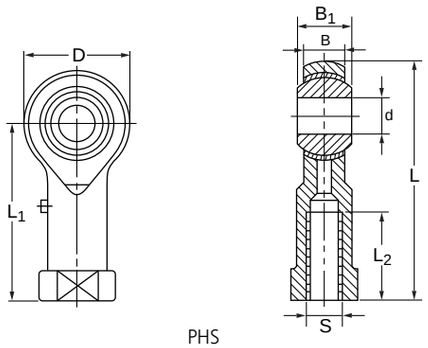


Basic Dimensions				Basic Load Ratings		Chamfer Dimension		Mass	Designation
d mm	D mm	B mm	C mm	Dynamic C kN	Static C_0 kN	r_a max	r_b max	kg	
25	47	15	14	20.520	32.775	0.6	0.3	0.140	GAC 25 F
30	55	17	15	25.650	40.850	1.0	0.3	0.210	GAC 30 F
35	62	18	16	30.875	49.400	1.0	0.3	0.270	GAC 35 F
40	68	19	17	37.050	58.900	1.0	0.3	0.330	GAC 40 F
45	75	20	18	43.225	69.825	1.0	0.3	0.420	GAC 45 F
50	80	20	19	50.350	80.750	1.0	0.3	0.460	GAC 50 F
60	95	23	21	66.025	106.400	1.5	0.6	0.730	GAC 60 F
70	110	25	23	83.600	135.850	1.5	0.6	1.050	GAC 70 F
80	125	29	25.5	104.500	167.200	1.5	0.6	1.550	GAC 80 F
90	140	32	28	127.300	205.200	2.0	0.6	2.100	GAC 90 F
100	150	32	31	161.500	256.500	2.0	0.6	2.350	GAC 100 F
110	170	38	34	190.000	304.000	2.5	0.6	3.700	GAC 110 F
120	180	38	37	228.000	361.000	2.5	0.6	4.000	GAC 120 F

8.07

Rod End / Track Rollers

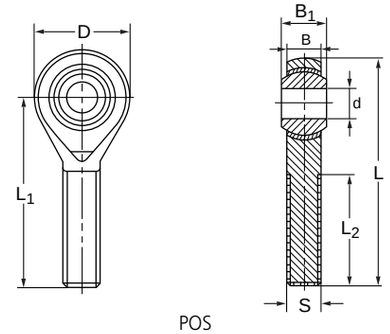
Rod End with Female Thread, Steel/Steel



PHS

Basic Dimensions								Basic Load Ratings		Mass	Designation	
d mm	D mm	B mm	B1 mm	L mm	L1 mm	L2 mm	Thread S mm	C kN	C_0 kN	g	Right hand thread	Left hand thread
5	16	6	8	35	27	14	M5 X 0.8	313.500	551.000	16.500	PHS 5	PHS 5 L
6	18	6.75	9	39	30	14	M6 X 1	408.500	674.500	25.000	PHS 6	PHS 6 L
8	22	9	12	47	36	17	M8 X 1.25	674.500	988.000	43.000	PHS 8	PHS 8 L
10	26	10.5	14	56	43	21	M10 X 1.5	950.000	1292.000	72.000	PHS 10	PHS 10 L
12	30	12	16	65	50	24	M12 X 1.75	1263.500	1643.500	107.000	PHS 12	PHS 12 L
14	34	13.5	19	74	57	27	M14 X 2	1624.500	2023.500	160.000	PHS 14	PHS 14 L
16	38	15	21	83	64	33	M16 X 2	2033.000	2460.500	210.000	PHS 16	PHS 16 L
18	42	16.5	23	92	71	36	M18 X 1.5	2489.000	2926.000	295.000	PHS 18	PHS 18 L
20	46	18	25	100	77	40	M20 X 1.5	2983.000	3439.000	380.000	PHS 20	PHS 20 L
22	50	20	28	109	84	43	M22 X 1.5	3619.500	4047.000	490.000	PHS 22	PHS 22 L
25	60	22	31	124	94	48	M24 X 2	4474.500	7039.500	750.000	PHS 25	PHS 25 L
28	66	25	35	136	103	53	M27 X 2	5652.500	8426.500	950.000	PHS 28	PHS 28 L
30	70	25	37	145	110	56	M30 X 2	6032.500	8930.000	1130.000	PHS 30	PHS 30 L

Rod End with Male Thread, Steel/Steel

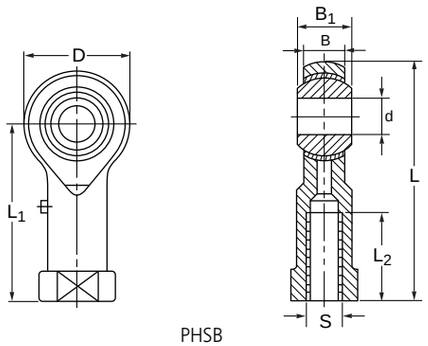


POS

Basic Dimensions								Basic Load Ratings		Mass	Designation	
d mm	D mm	B mm	B1 mm	L mm	L1 mm	L2 mm	Thread S mm	C kN	C_0 kN	g	Right hand thread	Left hand thread
5	16	6	8	41	33	20	M5 X 0.8	313.500	323.000	12.500	POS 5	POS 5 L
6	18	6.75	9	45	36	22	M6 X 1	408.500	456.000	19.000	POS 6	POS 6 L
8	22	9	12	53	42	25	M8 X 1.25	674.500	836.000	32.000	POS 8	POS 8 L
10	26	10.5	14	61	48	29	M10 X 1.5	950.000	1292.000	54.000	POS 10	POS 10 L
12	30	12	16	69	54	33	M12 X 1.75	1263.500	1643.500	85.000	POS 12	POS 12 L
14	34	13.5	19	77	60	36	M14 X 2	1624.500	2023.500	126.000	POS 14	POS 14 L
16	38	15	21	85	66	40	M16 X 2	2033.000	2460.500	185.000	POS 16	POS 16 L
18	42	16.5	23	93	72	44	M18 X 1.5	2489.000	2926.000	260.000	POS 18	POS 18 L
20	46	18	25	101	78	47	M20 X 1.5	2983.000	3439.000	340.000	POS 20	POS 20 L
22	50	20	28	109	84	51	M22 X 1.5	3619.500	4047.000	435.000	POS 22	POS 22 L
25	60	22	31	124	94	57	M24 X 2	4474.500	7039.500	650.000	POS 25	POS 25 L
28	66	25	35	136	103	62	M27 X 2	5652.500	8426.500	875.000	POS 28	POS 28 L
30	70	25	37	145	110	66	M30 X 2	6032.500	8930.000	1070.000	POS 30	POS 30 L

Rod End with Female Thread, Steel/Steel - Inch Sizes

NIS™

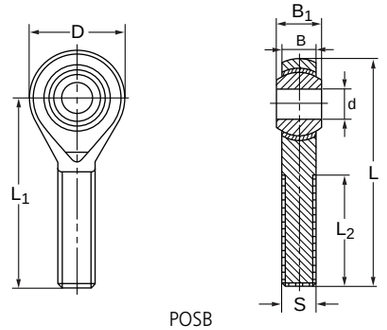


PHSB

Basic Dimensions								Basic Load Ratings		Mass	Designation	
d	D	B	B1	L	L1	L2	S	C kN	C_0 kN	kg	Right hand thread	Left hand thread
4.83	15.88	6.35	7.92	34.93	26.97	14.27	10-32	315.000	855.000	0.015	PHSB 3	PHSB 3 L
6.35	19.05	7.14	9.53	42.85	33.32	19.05	0.25-28	423.000	1242.000	0.025	PHSB 4	PHSB 4 L
7.94	22.23	8.74	11.1	46.02	34.93	19.05	0.3125-24	621.000	1548.000	0.036	PHSB 5	PHSB 5 L
9.53	25.4	10.31	12.7	53.98	41.28	23.8	0.375-24	846.000	2034.000	0.061	PHSB 6	PHSB 6 L
11.11	28.58	11.1	14.27	60.33	46.02	26.97	0.4375-20	1035.000	2457.000	0.081	PHSB 7	PHSB 7 L
12.7	33.32	12.7	15.88	70.64	53.98	30.15	0.5-20	1359.000	3420.000	0.133	PHSB 8	PHSB 8 L
15.88	38.1	14.27	19.05	82.55	63.5	38.1	0.625-18	1836.000	3690.000	0.190	PHSB 10	PHSB 10 L
19.05	44.45	17.45	22.23	95.25	73.03	44.45	0.75-16	2619.000	5184.000	0.285	PHSB 12	PHSB 12 L
25.4	69.85	25.4	34.93	139.7	104.78	53.98	1.25-12	5445.000	7965.000	1.000	PHSB 16	PHSB 16 L

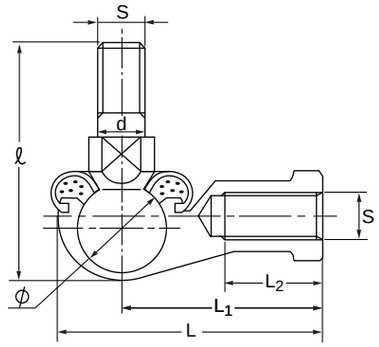
Rod End with Male Thread, Steel/Steel - Inch Sizes

NIS™



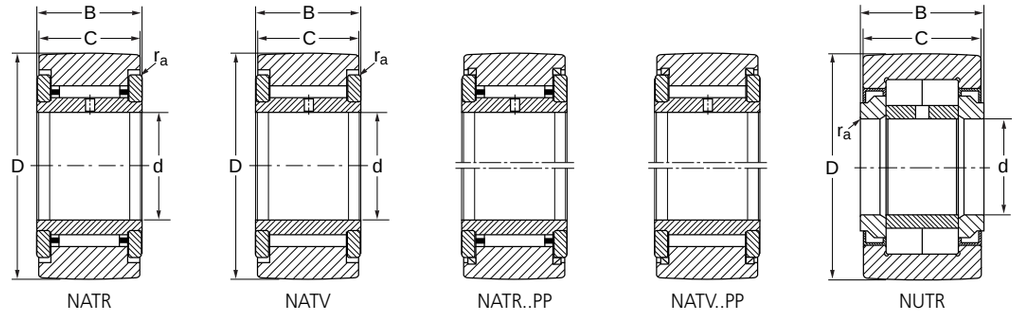
POSB

Basic Dimensions								Basic Load Ratings		Mass	Designation	
d	D	B	B1	L	L1	L2	S	C kN	C_0 kN	kg	Right hand thread	Left hand thread
4.83	15.88	6.35	7.92	39.7	31.75	19.05	10-32	315.000	459.000	0.013	POSB 3	POSB 3 L
6.35	19.05	7.14	9.53	49.2	39.67	25.4	0.25-28	423.000	837.000	0.022	POSB 4	POSB 4 L
7.94	22.23	8.74	11.1	58.72	47.63	31.75	0.3125-24	621.000	1341.000	0.037	POSB 5	POSB 5 L
9.53	25.4	10.31	12.7	61.93	49.23	31.75	0.375-24	846.000	2034.000	0.055	POSB 6	POSB 6 L
11.11	28.58	11.1	14.27	68.28	53.98	34.93	0.4375-20	1035.000	2457.000	0.078	POSB 7	POSB 7 L
12.7	33.32	12.7	15.88	78.59	61.93	38.1	0.5-20	1359.000	3420.000	0.120	POSB 8	POSB 8 L
15.88	38.1	14.27	19.05	85.73	66.68	41.28	0.625-18	1836.000	3690.000	0.184	POSB 10	POSB 10 L
19.05	44.45	17.45	22.23	95.25	73.03	44.45	0.75-16	2619.000	5184.000	0.293	POSB 12	POSB 12 L
25.4	69.85	25.4	34.93	139.7	104.78	53.98	1.25-12	5445.000	10350.000	1.100	POSB 16	POSB 16 L

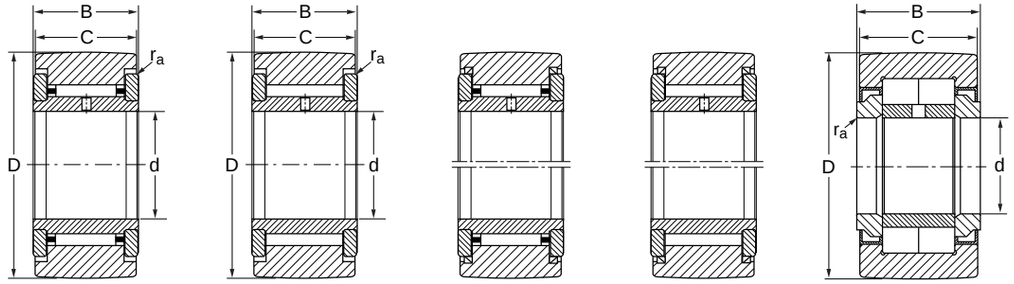


Basic Dimensions							Basic Load Ratings	Mass	Designation	
d mm	L mm	ℓ mm	ø mm	S mm	L1 mm	L2 mm	C_0 kN	g	Right hand thread	Left hand thread
5	35	29	11.112	M5 X 0.8	27	14	8.759	24.000	RBL 5D	RBL 5DL
6	40	35.5	12.700	M6 X 1	30	14	11.495	37.000	RBL 6D	RBL 6DL
8	48	42.5	15.875	M8 X 1.25	36	17	18.145	67.000	RBL 8D	RBL 8DL
10	57	50.5	19.050	M10 X 1.25	43	21	26.125	110.000	RBL 10D	RBL 10DL
10	57	56.5	19.050	M10 X 1.5	43	21	26.125	113.000	RBL 10BD	RBL 10BDL
12	66	57.5	22.225	M12 X 1.25	50	25	35.625	165.000	RBL 12D	RBL 12DL
12	66	64.5	22.225	M12 X 1.75	50	25	35.625	170.000	RBL 12BD	RBL 12BDL
14	75	73.5	25.400	M14 X 1.5	57	26	46.455	255.000	RBL 14D	RBL 14DL
14	75	79.5	25.400	M14 X 2	57	26	46.455	260.000	RBL 14BD	RBL 14BDL
16	84	79.5	25.400	M16 X 1.5	64	32	46.455	335.000	RBL 16D	RBL 16DL
16	84	85.5	25.4	M16 X 2	64	32	46.455	340.000	RBL 16BD	RBL 16BDL
18	93	90	28.575	M18 X 1.5	71	34	58.805	465.000	RBL 18D	RBL 18DL
20	99	90	28.575	M20 X 1.5	77	35	58.805	540.000	RBL 20D	RBL 20DL
22	109	95	31.75	M22 X 1.5	84	41	71.630	715.000	RBL 22D	RBL 22DL

Note:
Suffix B represents a thicker thread
Suffix D represents a rubber boot

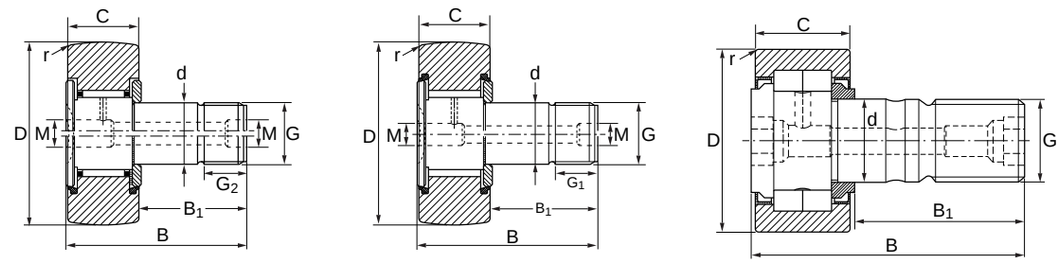


Basic Dimensions				Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d mm	D mm	C mm	B mm	Dynamic C kN	Static C_0 kN	r/min	r_a max	g		
5	16	11	12	2.993	3.135	13,300	0.15	14.000	NATR 5	NATR 5 PP
5	16	11	12	4.608	6.175	3,610	0.15	15.000	NATV 5	NATV 5 PP
6	19	11	12	3.325	3.705	10,450	0.15	20.000	NATR 6	NATR 6 PP
6	19	11	12	5.225	7.505	2,945	0.15	21.000	NATV 6	NATV 6 PP
8	24	14	15	5.225	6.080	7,125	0.30	41.000	NATR 8	NATR 8 PP
8	24	14	15	7.410	10.830	2,375	0.30	42.000	NATV 8	NATV 8 PP
10	30	14	15	6.460	7.980	5,225	0.60	64.000	NATR 10	NATR 10 PP
10	30	14	15	9.025	13.870	1,995	0.60	65.000	NATV 10	NATV 10 PP
12	32	14	15	6.555	8.360	4,275	0.60	71.000	NATR 12	NATR 12 PP
12	32	14	15	9.215	14.630	1,710	0.60	72.000	NATV 12	NTAV 12 PP
15	35	18	19	9.215	13.395	3,420	0.60	103.000	NATR 15	NATR 15 PP
15	35	18	19	12.160	21.850	1,520	0.60	105.000	NATV 15	NATV 15 PP
15	35	18	19	14.250	15.960	6,175	0.30	99.000	NUTR 15	-
15	42	18	19	17.195	20.805	6,175	0.30	158.000	NUTR 15 42	-
17	40	20	21	10.355	14.725	2,755	1.00	144.000	NATR 17	NATR 17 PP
17	40	20	21	14.060	25.175	1,330	1.00	152.000	NATV 17	NATR 17 PP
17	40	20	21	17.480	21.470	5,225	0.50	147.000	NUTR 17	-
17	47	20	21	20.235	26.600	5,225	0.50	220.000	NUTR 17 47	-
20	47	24	25	14.725	24.225	2,280	1.00	246.000	NATR 20	NATR 20 PP
20	47	24	25	19.570	39.900	1,235	1.00	254.000	NATV 20	NATV 20 PP
20	47	24	25	26.600	33.250	3,990	0.50	245.000	NUTR 20	-
20	52	24	25	29.925	38.950	3,990	0.50	321.000	NUTR 20 52	-
25	52	24	25	14.630	25.175	1,710	1.00	275.000	NATR 25	NATR 25 PP
25	52	24	25	19.475	41.800	950	1.00	285.000	NATV 25	NATV 25 PP
25	52	24	25	27.550	35.625	3,230	0.50	281.000	NUTR 25	-
25	62	24	25	33.725	47.500	3,230	0.50	450.000	NUTR 25 62	-
30	62	28	29	22.420	36.575	1,235	1.00	470.000	NATR 30	NATR 30 PP
30	62	28	29	28.975	58.900	808	1.00	481.000	NATV 30	NATV 30 PP
30	62	28	29	38.000	47.500	2,470	1.00	465.000	NUTR 30	-
30	72	28	29	45.125	60.800	2,470	0.50	697.000	NUTR 30 72	-
35	72	28	29	24.225	42.275	950	1.10	635.000	-	NATR 35 PP
35	72	28	29	31.350	69.350	713	1.10	647.000	-	NATV 35 PP



NATR | NATV | NATR..PP | NATV..PP | NUTR

Basic Dimensions				Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation	
d mm	D mm	C mm	B mm	Dynamic C kN	Static C_0 kN	r/min	r_a max	g		
35	72	28	29	42.275	57.000	1,995	0.60	630.000	NUTR 35	-
35	80	28	29	48.450	68.400	1,995	0.60	836.000	NUTR 35 80	-
40	80	30	32	31.350	56.050	808	1.10	805.000	-	NATR 40 PP
40	80	30	32	38.950	85.500	618	1.10	890.000	-	NATV 40 PP
40	80	30	32	52.250	71.250	1,520	0.60	816.000	NUTR 40	-
40	90	30	32	62.700	90.250	1,520	0.60	1129.000	NUTR 40 90	-
45	85	30	32	53.200	74.100	1,330	0.60	883.000	NUTR 45	-
45	100	30	32	67.450	101.650	1,330	0.60	1396.000	NUTR 45 100	-
50	90	30	32	30.400	56.050	618	1.10	960.000	-	NATR 50 PP
50	90	30	32	38.475	88.350	523	1.10	990.000	-	NATV 50 PP
50	90	30	32	54.150	76.950	1,235	0.60	950.000	NUTR 50	-
50	110	30	32	72.200	114.000	1,235	0.60	1690.000	NUTR 50 110	-

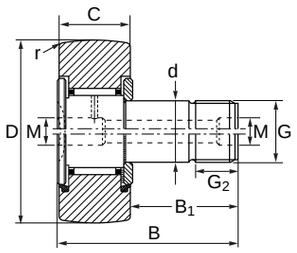


KR
KR..PP

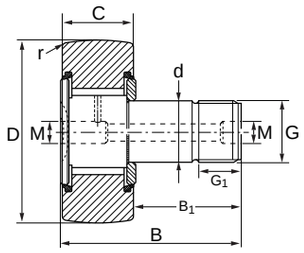
KRV..PP

NUKR

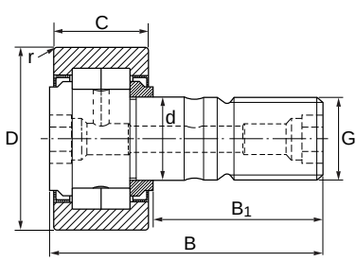
Basic Dimensions								Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation
D mm	d mm	C mm	B mm	B_1 mm	G mm	G_1 mm	M mm	Dynamic C kN	Static C_0 kN	r/min	r_3 max	g	
16	6	11	28	16	M6 X 1	8	4	2.993	3.135	13,300	0.15	18.000	KR 16
16	6	11	28	16	M6 X 1	8	4	2.993	3.135	13,300	0.15	18.000	KR 16 PP
16	6	11	28	16	M6 X 1	8	4	4.608	6.175	3,610	0.15	20.000	KRV 16 PP
19	8	11	32	20	M8 X 1.25	10	4	3.325	3.705	10,450	0.15	28.000	KR 19
19	8	11	32	20	M8 X 1.25	10	4	3.325	3.705	10,450	0.15	28.000	KR 19 PP
19	8	11	32	20	M8 X 1.25	10	4	5.225	7.505	2,945	0.15	32.000	KRV 19 PP
22	10	12	36	23	M10 X 1	12	4	4.228	4.940	7,600	0.30	48.000	KR 22
22	10	12	36	23	M10 X 1	12	4	4.228	4.940	7,600	0.30	48.000	KR 22 PP
22	10	12	36	23	M10 X 1	12	4	5.985	8.645	2,470	0.30	49.000	KRV22 PP
26	10	12	36	23	M10 X 1	12	4	4.845	5.890	7,600	0.30	58.000	KR 26
26	10	12	36	23	M10 X 1	12	4	4.845	5.890	7,600	0.30	58.000	KR 26 PP
26	10	12	36	23	M10 X 1	12	4	6.935	10.735	2,470	0.30	61.000	KRV 26 PP
30	12	14	40	25	M12 X 1.5	13	6	6.460	7.980	5,225	0.60	87.000	KR 30
30	12	14	40	25	M12 X 1.5	13	6	6.460	7.980	5,225	0.60	87.000	KR 30 PP
30	12	14	40	25	M12 X 1.5	13	6	9.025	13.870	1,995	0.60	95.000	KRV 30 PP
32	12	14	40	25	M12 X 1.5	13	6	6.745	8.550	5,225	0.60	98.000	KR 32
32	12	14	40	25	M12 X 1.5	13	6	6.745	8.550	5,225	0.60	98.000	KR 32 PP
32	12	14	40	25	M12 X 1.5	13	6	9.500	15.010	1,995	0.60	100.000	KRV 32 PP
35	16	18	52	32.5	M16 X 1.5	17	6	9.215	13.395	3,420	0.60	169.000	KR 35
35	16	18	52	32.5	M16 X 1.5	17	6	9.215	13.395	3,420	0.60	169.000	KR 35 PP
35	16	18	52	32.5	M16 X 1.5	17	6	12.160	21.850	1,520	0.60	171.000	KRV 35 PP
35	16	18	52	32.5	M16 X 1.5	17	6	14.250	15.960	6,175	0.60	164.000	NUKR 35
40	18	20	58	36.5	M18 X 1.5	19	6	10.355	14.725	2,755	1.00	247.000	KR 40
40	18	20	58	36.5	M18 X 1.5	19	6	10.355	14.725	2,755	1.00	247.000	KR 40 PP
40	18	20	58	36.5	M18 X 1.5	19	6	14.060	25.175	1,330	1.00	249.000	KRV 40 PP
40	18	20	58	36.5	M18 X 1.5	19	8	17.480	21.470	5,225	1.00	242.000	NUKR 40
47	20	24	66	40.5	M20 X 1.5	21	8	14.725	24.225	2,280	1.00	386.000	KR 47
47	20	24	66	40.5	M20 X 1.5	21	8	14.725	24.225	2,280	1.00	386.000	KR 47 PP
47	20	24	66	40.5	M20 X 1.5	21	10	26.600	33.250	3,990	1.00	380.000	NUKR 47
52	20	24	66	40.5	M20 X 1.5	21	8	15.960	27.550	2,280	1.00	461.000	KR 52
52	20	24	66	40.5	M20 X 1.5	21	8	15.960	27.550	2,280	1.00	481.000	KR 52 PP
52	20	24	66	40.5	M20 X 1.5	21	10	27.550	35.625	3,230	1.00	450.000	NUKR 52



KR
KR..PP

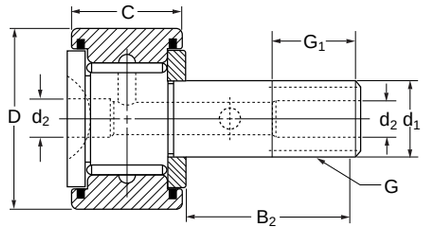


KRV..PP

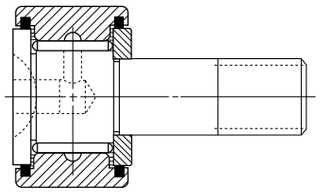


NUKR

Basic Dimensions								Basic Load Ratings		Limiting Speed	Chamfer Dimension	Mass	Designation
D mm	d mm	C mm	B mm	B_1 mm	G mm	G_1 mm	M mm	Dynamic C kN	Static C_0 kN	r/min	r_3 max	g	
62	24	28	80	49.5	M24 X 1.5	25	14	38.000	47.500	2,470	1.00	795.000	NUKR 62
62	24	29	80	49.5	M24 X 1.5	25	14	25.175	45.600	1,805	1.00	790.000	KR 62 PP
62	24	29	80	49.5	M24 X 1.5	25	14	32.300	72.200	1,045	1.00	802.000	KRV 62 PP
72	24	28	80	49.5	M24 X 1.5	25	14	42.275	57.000	1,995	1.10	1020.000	NUKR 72
72	24	29	80	49.5	M24 X 1.5	25	14	26.600	50.350	1,805	1.10	1040.000	KR 72 PP
72	24	29	80	49.5	M24 X 1.5	25	14	35.150	80.750	1,045	1.10	1045.000	KRV 72 PP
80	30	35	100	63	M30 X 1.5	32	14	37.525	73.150	1,235	1.10	1550.000	KR 80 PP
80	30	35	100	63	M30 X 1.5	32	14	47.025	114.000	808	1.10	1561.000	KRV 80 PP
80	30	35	100	63	M30 X 1.5	32	14	65.550	93.100	1,710	1.10	1600.000	NUKR 80
90	30	35	100	63	M30 X 1.5	32	14	39.425	78.850	1,235	1.10	1950.000	KR 90 PP
90	30	35	100	63	M30 X 1.5	32	14	50.350	123.500	808	1.10	1970.000	KRV 90 PP
90	30	35	100	63	M30 X 1.5	32	14	75.050	111.150	1,710	1.10	1960.000	NUKR 90



CF and CF..PP -12 to -64

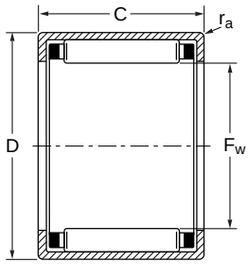


CF and CF..PP -8 to -10-1

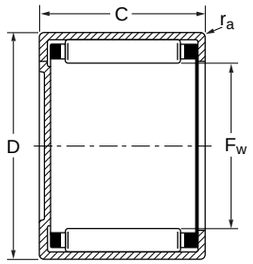
Basic Dimensions							Basic Load Ratings		Limiting Speed	Mass	Designation		Reference Number	
d_1	D	C	B_2	G_1	d_2	G UNF	Dynamic C kN	Static C_0 kN	r/min	g	Without seals	With seals and internal thrust washers	Without seals	With seals and internal thrust washers
0.1900	0.500	0.344	0.500	0.250	0.125	10-32	4.223	4.693	6,650	0.022	CF 8	CF 8 PP	CR 8	CRS 8
0.1900	0.500	0.375	0.625	0.250	0.125	10-32	4.735	5.411	6,650	0.023	CF 8-1	CF 8-1 PP	CR 8-1	CRS 8-1
0.2500	0.625	0.406	0.625	0.312	0.125	0.25-28	5.749	7.483	5,225	0.041	CF 10	CF 10 PP	CR 10	CRS 10
0.2500	0.625	0.438	0.750	0.312	0.125	0.25-28	6.257	8.328	5,225	0.045	CF 10-1	CF 10-1 PP	CR 10-1	CRS 10-1
0.3750	0.750	0.500	0.875	0.375	0.188	0.375-24	9.850	14.416	3,705	0.076	CF 12	CF 12 PP	CR 12	CRS 12
0.3750	0.875	0.500	0.875	0.375	0.188	0.375-24	9.850	14.416	3,705	0.097	CF 14	CF 14 PP	CR 14	CRS 14
0.4375	1.000	0.625	1.000	0.500	0.188	0.4375-20	12.598	21.180	2,850	0.161	CF 16	CF 16 PP	CR 16	CRS 16
0.4375	1.125	0.625	1.000	0.500	0.188	0.4375-20	12.598	21.180	2,850	0.197	CF 18	CF 18 PP	CR 18	CRS 18
0.5000	1.250	0.750	1.250	0.625	0.188	0.5-20	20.461	31.537	2,470	0.301	CF 20	CF 20 PP	CR 20	CRS 20
0.5000	1.375	0.750	1.250	0.625	0.188	0.5-20	20.461	31.537	2,470	0.354	CF 22	CF 22 PP	CR 22	CRS 22
0.6250	1.500	0.875	1.500	0.750	0.188	0.625-18	26.971	38.724	2,185	0.528	CF 24	CF 24 PP	CR 24	CRS 24
0.6250	1.625	0.875	1.500	0.750	0.188	0.625-18	26.971	38.724	2,185	0.605	CF 26	CF 26 PP	CR 26	CRS 26
0.7500	1.750	1.000	1.750	0.875	0.188	0.75-16	33.989	54.112	1,805	0.848	CF 28	CF 28 PP	CR 28	CRS 28
0.7500	1.875	1.000	1.750	0.875	0.188	0.75-16	33.989	54.112	1,805	0.947	CF 30	CF 30 PP	CR 30	CRS 30
0.8750	2.000	1.250	2.000	1.000	0.188	0.875-14	41.303	72.290	1,615	1.370	CF 32	CF 32 PP	CR 32	CRS 32
0.8750	2.250	1.250	2.000	1.000	0.188	0.875-14	41.303	72.290	1,615	1.670	CF 36	CF 36 PP	CR 36	CRS 36
1.0000	2.500	1.500	2.250	1.125	0.188	1-14*	55.803	112.452	1,330	2.500	CF 40	CF 40 PP	CR 40	CRS 40
1.0000	2.750	1.500	2.250	1.125	0.188	1-14*	55.803	112.452	1,330	2.930	CF 44	CF 44 PP	CR 44	CRS 44
1.2500	3.000	1.750	2.500	1.250	0.250	1.25-12	71.022	169.946	941	4.200	CF 48	CF 48 PP	CR 48	CRS 48
1.2500	3.250	1.750	2.500	1.250	0.250	1.25-12	71.022	169.946	941	4.810	CF 52	CF 52 PP	CR 52	CRS 52
1.3750	3.500	2.000	2.750	1.375	0.250	1.375-12	105.265	215.603	903	6.420	CF 56	CF 56 PP	CR 56	CRS 56
1.5000	4.000	2.250	3.500	1.500	0.250	1.5-12	131.475	305.226	741	9.460	CF 64	CF 64 PP	CR 64	CRS 64

*UNS thread instead of UNF thread

Needle Bearings

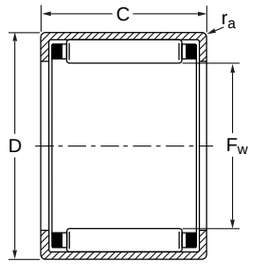


Open End - HK

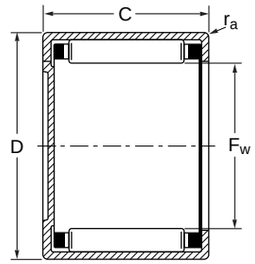


Closed End - BK

Basic Dimensions			Chamfer Dimension	Basic Load Ratings		Limiting Speed	Designation	Mass	Designation	Mass
F_w mm	D mm	C -0.3	r_a max	Dynamic C kN	Static C_0 kN	r/min	Open end	Open end g	Closed end	Closed end g
4	8	8	0.3	1.691	1.245	36900	HK 0408	2.0	BK 0408	2.1
5	9	9	0.4	2.280	1.891	34200	HK 0509	2.0	BK 0509	2.1
6	10	8	0.4	1.929	1.568	31500	HK 0608	2.1	-	-
6	10	9	0.4	2.708	2.470	31500	HK 0609	2.5	BK 0609	2.6
7	11	9	0.4	2.945	2.803	27900	HK 0709	2.6	BK 0709	2.9
8	12	8	0.4	2.613	2.470	25200	HK 0808	2.7	BK 0808	3.0
8	12	10	0.4	3.610	3.753	25200	HK 0810	3.0	BK 0810	3.4
9	13	8	0.4	3.373	3.563	22500	HK 0908	3.0	-	-
9	13	10	0.4	4.038	4.418	22500	HK 0910	4.0	BK 0910	4.3
9	13	12	0.4	5.035	5.985	22500	HK 0912	4.6	BK 0912	4.9
10	14	10	0.4	4.180	4.845	20700	HK 1010	4.1	BK 1010	4.3
10	14	12	0.4	5.225	6.460	20700	HK 1012	4.8	BK 1012	5.0
10	14	15	0.4	6.460	8.360	20700	HK 1015	6.0	BK 1015	6.2
12	16	10	0.4	4.703	5.890	18000	HK 1210	4.6	BK 1210	5.2
12	18	12	0.8	6.175	6.935	17100	HK 1212	9.0	BK 1212	10.0
13	19	12	0.8	6.460	7.505	16200	HK 1312	10.0	BK 1312	11.0
14	20	12	0.8	6.745	8.075	14400	HK 1412	10.5	BK 1412	12.0
15	21	12	0.8	7.505	8.930	14400	HK 1512	11.0	BK 1512	13.0
15	21	16	0.8	9.975	13.680	14400	HK 1516	15.0	BK 1516	17.0
15	21	22	0.8	12.730	18.525	14400	HK 1522	20.0	-	-
16	22	12	0.8	7.220	9.215	13500	HK 1612	12.0	BK 1612	14.0
16	22	16	0.8	10.355	14.535	13500	HK 1616	16.0	BK 1616	18.0
16	22	22	0.8	12.445	18.430	13500	HK 1622	22.0	BK 1622	24.0
17	23	12	0.8	7.505	9.785	12600	HK 1712	12.0	-	-
18	24	12	0.8	7.695	10.355	11700	HK 1812	13.0	BK 1812	15.0
18	24	16	0.8	11.020	16.435	11700	HK 1816	18.0	BK 1816	20.0
20	26	10	0.8	6.080	7.790	10800	HK 2010	12.0	-	-
20	26	12	0.8	8.170	11.495	10800	HK 2012	14.0	-	-
20	26	16	0.8	12.065	19.095	10800	HK 2016	19.0	BK 2016	22.0
20	26	20	0.8	14.915	24.700	10800	HK 2020	24.0	BK 2020	27.0
20	26	30	0.8	20.710	38.000	10800	HK 2030	35.0	-	-
22	28	10	0.8	7.125	9.975	9900	HK 2210	13.0	-	-



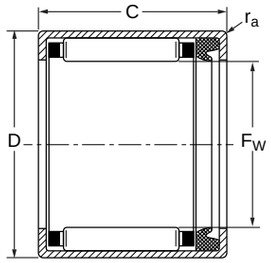
Open End - HK



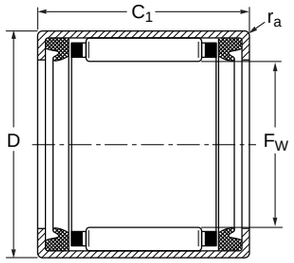
Closed End - BK

Basic Dimensions			Chamfer Dimension	Basic Load Ratings		Limiting Speed	Designation	Mass	Designation	Mass
F_w mm	D mm	C -0.3	r_a max	Dynamic C kN	Static C_0 kN	r/min	Open End	Open End g	Closed End	Closed End g
22	28	12	0.8	8.645	12.730	9900	HK 2212	15.0	BK 2212	18.0
22	28	16	0.8	12.730	20.995	9900	HK 2216	21.0	BK 2216	24.0
22	28	20	0.8	15.675	27.550	9900	HK 2220	26.0	-	-
25	32	12	0.8	10.450	14.440	9000	HK 2512	20.0	-	-
25	32	16	0.8	14.820	22.800	9000	HK 2516	27.0	-	-
25	32	20	0.8	18.905	31.350	9000	HK 2520	33.0	BK 2520	38.0
25	32	26	0.8	24.225	42.750	9000	HK 2526	44.0	BK 2526	48.0
25	32	38	0.8	32.300	62.700	9000	HK 2538	64.0	BK 2538	68.0
28	35	16	0.8	15.580	25.175	8100	HK 2816	29.0	-	-
28	35	20	0.8	19.855	34.200	8100	HK 2820	36.0	-	-
30	37	12	0.8	11.495	17.290	7650	HK 3012	23.0	BK 3012	28.0
30	37	16	0.8	16.340	27.550	7650	HK 3016	31.0	BK 3016	38.0
30	37	20	0.8	20.900	37.525	7650	HK 3020	39.0	BK 3020	47.0
30	37	26	0.8	26.600	51.300	7650	HK 3026	51.0	BK 3026	58.0
30	37	38	0.8	35.625	75.050	7650	HK 3038	76.0	BK 3038	84.0
35	42	12	0.8	12.445	20.235	6750	HK 3512	27.0	-	-
35	42	16	0.8	17.765	31.825	6750	HK 3516	36.0	-	-
35	42	20	0.8	22.610	43.700	6750	HK 3520	44.0	BK 3520	53.0
40	47	12	0.8	13.300	23.085	5850	HK 4012	30.0	-	-
40	47	16	0.8	19.000	36.575	5850	HK 4016	39.0	-	-
40	47	20	0.8	24.225	49.400	5850	HK 4020	54.0	BK 4020	62.0
45	52	12	0.8	14.155	26.125	5400	HK 4512	33.0	-	-
45	52	16	0.8	20.235	40.850	5400	HK 4516	46.0	-	-
45	52	20	0.8	25.650	56.050	5400	HK 4520	56.0	BK 4520	72.0
50	58	20	0.8	29.450	59.850	4500	HK 5020	70.0	-	-
50	58	25	0.8	36.575	79.800	4500	HK 5025	90.0	-	-
55	63	20	0.8	29.925	63.650	4230	HK 5520	74.0	-	-
55	63	28	0.8	41.800	97.850	4230	HK 5528	105.0	-	-
60	68	12	0.8	16.530	30.400	3960	HK 6012	49.0	-	-
60	68	20	0.8	31.825	71.250	3960	HK 6020	81.0	-	-
60	68	32	0.8	50.350	128.250	3960	HK 6032	136.0	-	-

Drawn Cup Needle Roller Bearings, Open End with Seals

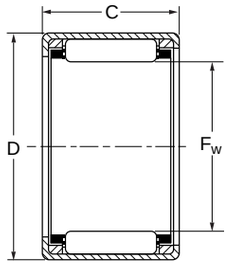


Open end with 1 side seal
- HK..RS

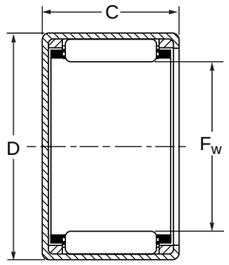


Open end with 2 side seals
- HK..2RS

Basic Dimensions				Chamfer Dimension	Basic Load Ratings		Limiting Speed	Designation	Mass	Designation	Mass
F_w mm	D mm	C -0.3	C_1 -0.3	r_a max	Dynamic C kN	Static C_O kN	Grease r/min	Open end with 1 side seals	Open end with 1 side seals g	Open end with 2 side seals	Open end with 2 side seals g
8	12	10	12	0.4	2.750	2.600	20000	HK 0810 RS	3.0	HK 0812.2RS	3.3
10	14	12	14	0.4	4.400	5.100	17000	HK 1012 RS	4.2	HK 1014.2RS	4.6
12	18	14	16	0.8	6.500	7.300	14000	HK 1214 RS	10.0	HK 1216.2RS	11.0
14	20	14	16	0.8	7.100	8.500	12000	HK 1414 RS	12.0	HK 1416.2RS	13.0
15	21	14	16	0.8	7.800	9.800	11000	HK 1514 RS	12.0	HK 1516.2RS	15.0
15	21	18	20	0.8	10.500	14.400	11000	HK 1518 RS	16.0	HK 1520.2RS	18.0
16	22	14	16	0.8	7.600	9.700	11000	HK 1614 RS	13.0	HK 1616.2RS	14.0
16	22	-	20	0.8	10.900	15.300	11000	-	-	HK 1620.2RS	18.0
18	24	14	16	0.8	8.100	10.900	9500	HK 1814 RS	14.0	HK 1816.2RS	15.0
20	26	-	16	0.8	8.600	12.100	8500	-	-	HK 2016.2RS	18.0
20	26	18	20	0.8	12.700	20.100	8500	HK 2018 RS	21.0	HK 2020.2RS	23.0
22	28	14	16	0.8	9.100	13.400	8000	HK 2214 RS	16.0	HK 2216.2RS	18.0
22	28	18	20	0.8	13.400	22.100	8000	HK 2218 RS	24.0	HK 2220.2RS	26.0
25	32	-	16	0.8	11.000	15.200	7000	-	-	HK 2516.2RS	27.0
25	32	18	20	0.8	15.600	24.000	7000	HK 2518 RS	29.0	HK 2520.2RS	31.0
25	32	-	24	0.8	19.900	33.000	7000	-	-	HK 2524.2RS	40.0
25	32	-	30	0.8	25.500	45.000	7000	-	-	HK 2530.2RS	47.0
28	35	18	20	0.8	16.400	26.500	6000	HK 2818 RS	31.0	HK 2820.2RS	34.0
30	37	-	16	0.8	12.100	18.200	6000	-	-	HK 3016.2RS	31.0
30	37	18	20	0.8	17.200	29.000	6000	HK 3018 RS	37.0	HK 3020.2RS	36.0
30	37	-	24	0.8	22.000	39.500	6000	-	-	HK 3024.2RS	44.0
35	42	-	16	0.8	13.100	21.300	5000	-	-	HK 3516.2RS	32.0
35	42	18	20	0.8	18.700	33.500	5000	HK 3518 RS	39.0	HK 3520.2RS	41.0
40	47	-	16	0.8	14.000	24.300	4500	-	-	HK 4016.2RS	37.0
40	47	18	20	0.8	20.000	38.500	4500	HK 4018 RS	45.0	HK 4020.2RS	48.0
45	52	18	20	0.8	21.300	43.000	4000	HK 4518 RS	50.0	HK 4520.2RS	54.0
50	58	22	24	0.8	31.000	63.000	3600	HK 5022 RS	76.0	HK 5024.2RS	81.0



BA..Z

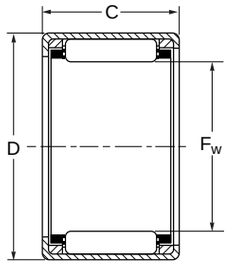


BAM

Basic Dimensions						Basic Load Ratings		Designation	Mass
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Open End BA...Z	Closed End g
1/4	6.350	7/16	11.112	1/4	6.35	1.323	0.970	BA 44 Z	2.1
1/4	6.350	7/16	11.112	5/16	7.92	1.323	0.970	BA 45 Z	2.5
1/4	6.350	7/16	11.112	7/16	11.13	2.381	2.117	BA 47 Z	3.5
5/16	7.938	1/2	12.700	5/16	7.92	1.676	1.411	BA 55 Z	3.0
5/16	7.938	1/2	12.700	3/8	9.52	2.381	2.117	BA 56 Z	3.6
5/16	7.938	1/2	12.700	7/16	11.13	2.999	2.911	BA 57 Z	4.3
5/16	7.938	1/2	12.700	9/16	14.27	3.793	3.881	BA 59 Z	5.4
3/8	9.525	9/16	14.288	5/16	7.92	2.029	1.852	BA 65 Z	3.5
3/8	9.525	9/16	14.288	3/8	9.52	2.822	2.734	BA 66 Z	4.2
3/8	9.525	9/16	14.288	1/2	12.70	3.793	4.145	BA 68 Z	5.7
3/8	9.525	9/16	14.288	9/16	14.27	4.410	5.027	BA 69 Z	6.3
3/8	9.525	9/16	14.288	5/8	15.88	5.116	5.998	BA 610 Z	7.0
7/16	11.112	5/8	15.875	3/8	9.52	2.999	3.087	BA 76 Z	4.8
7/16	11.112	5/8	15.875	7/16	11.13	3.704	4.234	BA 77 Z	5.6
7/16	11.112	5/8	15.875	1/2	12.70	3.969	4.586	BA 78 Z	6.4
7/16	11.112	5/8	15.875	5/8	15.88	5.380	6.791	BA 710 Z	7.9
1/2	12.700	11/16	17.462	5/16	7.92	2.205	2.293	BA 85 Z	4.4
1/2	12.700	11/16	17.462	3/8	9.52	3.087	3.440	BA 86 Z	5.3
1/2	12.700	11/16	17.462	7/16	11.13	3.969	4.675	BA 87 Z	6.3
1/2	12.700	11/16	17.462	1/2	12.70	4.234	5.116	BA 88 Z	7.2
1/2	12.700	11/16	17.462	5/8	15.88	5.733	7.497	BA 810 Z	8.9
1/2	12.700	11/16	17.462	3/4	19.05	7.056	9.878	BA 812 Z	10.6
9/16	14.288	3/4	19.050	5/16	7.92	2.470	2.646	BA 95 Z	4.9
9/16	14.288	3/4	19.050	3/8	9.52	3.440	4.057	BA 96 Z	5.9
9/16	14.288	3/4	19.050	7/16	11.13	4.410	5.557	BA 97 Z	6.9
9/16	14.288	3/4	19.050	1/2	12.70	4.675	6.086	BA 98 Z	7.9
9/16	14.288	3/4	19.050	5/8	15.88	6.350	8.908	BA 910 Z	9.9
9/16	14.288	3/4	19.050	3/4	19.05	7.850	11.642	BA 912 Z	11.7
5/8	15.875	13/16	20.638	5/16	7.92	2.558	2.911	BA 105 Z	5.3
5/8	15.875	13/16	20.638	7/16	11.13	4.498	5.998	BA 107 Z	7.6
5/8	15.875	13/16	20.638	1/2	12.70	4.851	6.527	BA 108 Z	8.7
5/8	15.875	13/16	20.638	5/8	15.88	6.615	9.702	BA 1010 Z	10.8

Designation	Mass	Interchange	
Open End BAM	g	Open End SCE	Closed End BCE
BAM 44	2.3	SCE 44	BCE 44
BAM 45	2.7	SCE 45	BCE 45
BAM 47	3.7	SCE 47	BCE 47
BAM 55	3.3	SCE 55	BCE 55
BAM 56	3.9	-	-
BAM 57	4.6	SCE 57	BCE 57
BAM 59	5.7	SCE 59	BCE 59
BAM 65	3.9	SCE 65	BCE 65
BAM 66	4.6	SCE 66	BCE 66
BAM 68	6.1	SCE 68	BCE 68
BAM 69	6.7	SCE 69	BCE 69
BAM 610	7.4	SCE 610	BCE 610
BAM 76	5.3	-	-
BAM 77	6.2	-	-
BAM 78	7.0	SCE 78	BCE 78
BAM 710	8.5	SCE 710	BCE 710
BAM 85	5.2	SCE 85	BCE 85
BAM 86	6.1	SCE 86	BCE 86
BAM 87	7.0	SCE 87	BCE 87
BAM 88	7.9	SCE 88	BCE 88
BAM 810	9.6	SCE 810	BCE 810
BAM 812	11.3	SCE 812	BCE 812
BAM 95	5.8	SCE 95	BCE 95
BAM 96	6.8	SCE 96	BCE 96
BAM 97	7.8	SCE 97	BCE 97
BAM 98	8.9	SCE 98	BCE 98
BAM 910	10.8	SCE 910	BCE 910
BAM 912	12.6	SCE 912	BCE 912
BAM 105	6.5	SCE 105	BCE 105
BAM 107	8.7	SCE 107	BCE 107
BAM 108	9.9	SCE 108	BCE 108
BAM 1010	12.0	SCE 1010	BCE 1010

10.03



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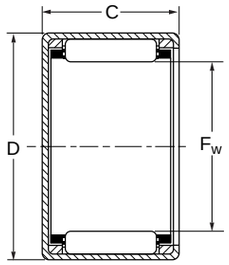
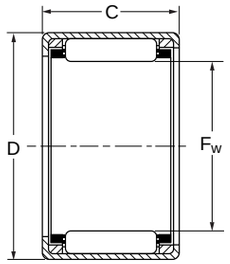


BAM

Basic Dimensions						Basic Load Ratings		Designation	Mass
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Open End BA...Z	Closed End g
5/8	15.875	13/16	20.638	3/4	19.05	8.114	12.613	BA 1012 Z	12.9
5/8	15.875	13/16	20.638	7/8	22.22	9.614	15.788	BA 1014 Z	15.1
5/8	15.875	13/16	20.638	1	25.40	11.025	18.787	BA 1016 Z	17.3
11/16	17.462	7/8	22.225	3/8	9.52	4.057	5.380	BA 116 Z	7.0
11/16	17.462	7/8	22.225	1/2	12.70	5.557	7.938	BA 118 Z	9.5
11/16	17.462	7/8	22.225	5/8	15.88	7.409	11.731	BA 1110 Z	11.8
11/16	17.462	7/8	22.225	3/4	19.05	9.173	15.347	BA 1112 Z	14.0
3/4	19.050	1	25.400	3/8	9.52	4.498	5.292	BA 126 Z	10.0
3/4	19.050	1	25.400	1/2	12.70	6.174	7.850	BA 128 Z	13.5
3/4	19.050	1	25.400	5/8	15.88	8.555	11.907	BA 1210 Z	17.0
3/4	19.050	1	25.400	3/4	19.05	10.760	15.876	BA 1212 Z	20.5
3/4	19.050	1	25.400	7/8	22.22	12.789	19.933	BA 1214 Z	23.5
3/4	19.050	1	25.400	1	25.40	14.641	23.814	BA 1216 Z	27.0
13/16	20.638	1 1/16	26.988	3/8	9.52	4.675	5.645	BA 136 Z	10.7
13/16	20.638	1 1/16	26.988	1/2	12.70	6.439	8.467	BA 138 Z	14.5
13/16	20.638	1 1/16	26.988	5/8	15.88	8.908	12.789	BA 1310 Z	18.2
13/16	20.638	1 1/16	26.988	3/4	19.05	11.113	17.111	BA 1312 Z	22.0
13/16	20.638	1 1/16	26.988	7/8	22.22	13.230	21.433	BA 1314 Z	25.0
13/16	20.638	1 1/16	26.988	1	25.40	15.259	25.666	BA 1316 Z	28.5
13/16	20.638	1 1/16	26.988	1 1/4	31.75	19.051	34.310	BA 1320 Z	35.5
7/8	22.225	1 1/8	28.575	3/8	9.52	4.851	6.086	BA 146 Z	11.5
7/8	22.225	1 1/8	28.575	1/2	12.70	6.703	9.085	BA 148 Z	15.6
7/8	22.225	1 1/8	28.575	3/4	19.05	11.554	18.346	BA 1412 Z	23.5
7/8	22.225	1 1/8	28.575	7/8	22.22	13.759	22.932	BA 1414 Z	27.0
7/8	22.225	1 1/8	28.575	1	25.40	15.788	27.430	BA 1416 Z	31.0
7/8	22.225	1 1/8	28.575	1 1/8	28.58	17.816	32.017	BA 1418 Z	34.5
7/8	22.225	1 1/8	28.575	1 3/8	34.92	21.609	41.101	BA 1422 Z	42.5
15/16	23.812	1 3/16	30.162	1/2	12.70	7.232	10.231	BA 158 Z	16.5
15/16	23.812	1 3/16	30.162	5/8	15.88	9.878	15.435	BA 1510 Z	20.5
15/16	23.812	1 3/16	30.162	1	25.40	17.023	30.870	BA 1516 Z	33.0
1	25.400	1 1/4	31.750	3/8	9.52	5.380	7.232	BA 166 Z	13.1
1	25.400	1 1/4	31.750	7/16	11.13	6.968	9.967	BA 167 Z	15.4

Designation	Mass	Interchange	
Open End BAM	g	Open End SCE	Closed End BCE
BAM 1012	14.0	SCE 1012	BCE 1012
BAM 1014	16.2	-	-
BAM 1016	18.4	-	-
BAM 116	8.4	SCE 116	BCE 116
BAM 118	10.8	SCE 118	BCE 118
BAM 1110	13.2	SCE 1110	BCE 1110
BAM 1112	15.4	SCE 1112	BCE 1112
BAM 126	11.7	SCE 126	BCE 126
BAM 128	15.2	SCE 128	BCE 128
BAM 1210	18.6	SCE 1210	BCE 1210
BAM 1212	22.0	SCE 1212	BCE 1212
BAM 1214	25.0	-	-
BAM 1216	28.5	-	-
BAM 136	12.6	SCE 136	BCE 136
BAM 138	16.4	SCE 138	BCE 138
BAM 1310	20.0	-	-
BAM 1312	23.5	SCE 1312	BCE 1312
BAM 1314	27.0	SCE 1314	BCE 1314
BAM 1316	30.5	-	-
BAM 1320	37.5	-	-
BAM 146	13.8	SCE 146	BCE 146
BAM 148	17.8	SCE 148	BCE 148
BAM 1412	26.0	SCE 1412	BCE 1412
BAM 1414	29.5	-	-
BAM 1416	33.5	SCE 1416	BCE 1416
BAM 1418	37.0	-	-
BAM 1422	44.5	-	-
BAM 158	19.0	-	-
BAM 1510	23.0	-	-
BAM 1516	35.5	SCE 1516	BCE 1516
BAM 166	16.0	-	-
BAM 167	18.3	SCE 167	BCE 167

10.03



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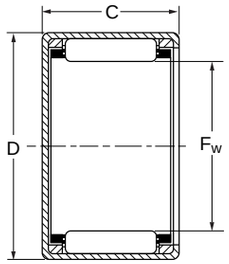

BAM

Basic Dimensions						Basic Load Ratings		Designation	Mass
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Open End BA...Z	Closed End g
1	25.400	1 1/4	31.750	1/2	12.70	7.409	10.849	BA 168 Z	17.7
1	25.400	1 1/4	31.750	5/8	15.88	10.231	16.317	BA 1610 Z	22.0
1	25.400	1 1/4	31.750	3/4	19.05	12.789	21.785	BA 1612 Z	26.5
1	25.400	1 1/4	31.750	7/8	22.22	15.259	27.342	BA 1614 Z	31.0
1	25.400	1 1/4	31.750	1	25.40	17.464	32.634	BA 1616 Z	35.5
1	25.400	1 1/4	31.750	1 1/4	31.75	21.874	43.659	BA 1620 Z	44.0
11/16	26.988	1 5/16	33.338	5/8	15.88	10.496	17.199	BA 1710 Z	23.5
11/16	26.988	1 5/16	33.338	1	25.40	17.993	34.398	BA 1716 Z	37.0
1 1/8	28.575	1 3/8	34.925	3/8	9.52	5.733	8.026	BA 186 Z	14.5
1 1/8	28.575	1 3/8	34.925	1/2	12.70	7.762	11.995	BA 188 Z	19.5
1 1/8	28.575	1 3/8	34.925	3/4	19.05	13.495	24.255	BA 1812 Z	29.5
1 1/8	28.575	1 3/8	34.925	1	25.40	18.434	36.250	BA 1816 Z	39.0
1 1/8	28.575	1 3/8	34.925	1 1/4	31.75	23.108	48.422	BA 1820 Z	48.5
1 3/16	30.162	1 1/2	38.100	5/8	15.88	13.495	20.286	BA 1910 Z	32.5
1 3/16	30.162	1 1/2	38.100	1	25.40	23.197	40.748	BA 1916 Z	52.0
1 1/4	31.750	1 1/2	38.100	1/2	12.70	8.203	13.230	BA 208 Z	21.5
1 1/4	31.750	1 1/2	38.100	5/8	15.88	11.290	19.933	BA 2010 Z	27.0
1 1/4	31.750	1 1/2	38.100	3/4	19.05	14.112	26.636	BA 2012 Z	32.5
1 1/4	31.750	1 1/2	38.100	1	25.40	19.316	39.866	BA 2016 Z	43.0
1 1/4	31.750	1 1/2	38.100	1 1/4	31.75	24.255	53.273	BA 2020 Z	53.5
1 5/16	33.338	1 5/8	41.275	1/2	12.70	9.967	14.200	BA 218 Z	28.5
1 5/16	33.338	1 5/8	41.275	5/8	15.88	13.847	21.521	BA 2110 Z	35.5
1 5/16	33.338	1 5/8	41.275	3/4	19.05	17.375	28.841	BA 2112 Z	43.0
1 3/8	34.925	1 5/8	41.275	1/2	12.70	8.820	14.994	BA 228 Z	23.5
1 3/8	34.925	1 5/8	41.275	3/4	19.05	15.170	30.164	BA 2212 Z	35.5
1 3/8	34.925	1 5/8	41.275	1	25.40	20.727	45.158	BA 2216 Z	47.5
1 3/8	34.925	1 5/8	41.275	1 1/4	31.75	26.019	60.329	BA 2220 Z	59.0
1 1/2	38.100	1 7/8	47.625	1/2	12.70	11.642	16.052	BA 248 Z	38.5
1 1/2	38.100	1 7/8	47.625	5/8	15.88	16.052	24.431	BA 2410 Z	48.5
1 1/2	38.100	1 7/8	47.625	3/4	19.05	20.286	32.987	BA 2412 Z	58.5
1 1/2	38.100	1 7/8	47.625	7/8	22.22	23.990	41.013	BA 2414 Z	69.0
1 1/2	38.100	1 7/8	47.625	1	25.40	27.959	49.833	BA 2416 Z	79.0

Designation	Mass	Interchange	
Open End BAM	g	Open End SCE	Closed End BCE
BAM 168	20.5	SCE 168	BCE 168
BAM 1610	25.0	-	-
BAM 1612	29.5	SCE 1612	BCE 1612
BAM 1614	33.5	-	-
BAM 1616	38.0	SCE 1616	BCE 1616
BAM 1620	46.5	-	-
BAM 1710	26.5	-	-
BAM 1716	40.5	-	-
BAM 186	18.1	SCE 186	BCE 186
BAM 188	23.0	SCE 188	BCE 188
BAM 1812	33.0	SCE 1812	BCE 1812
BAM 1816	42.5	SCE 1816	BCE 1816
BAM 1820	52.0	-	-
BAM 1910	37.5	-	-
BAM 1916	57.0	SCE 1916	BCE 1916
BAM 208	26.0	SCE 208	BCE 208
BAM 2010	31.5	SCE 2010	BCE 2010
BAM 2012	37.0	SCE 2012	BCE 2012
BAM 2016	47.5	SCE 2016	BCE 2016
BAM 2020	58.0	SCE 2020	BCE 2020
BAM 218	35.0	-	-
BAM 2110	41.5	SCE 2110	BCE 2110
BAM 2112	49.0	-	-
BAM 228	29.0	SCE 228	BCE 228
BAM 2212	41.0	SCE 2212	BCE 2212
BAM 2216	53.0	SCE 2216	BCE 2216
BAM 2220	64.0	SCE 2220	BCE 2220
BAM 248	47.5	SCE 248	BCE 248
BAM 2410	57.5	SCE 2410	BCE 2410
BAM 2412	67.5	SCE 2412	BCE 2412
BAM 2414	78.0	SCE 2414	BCE 2414
BAM 2416	88.0	SCE 2416	BCE 2416

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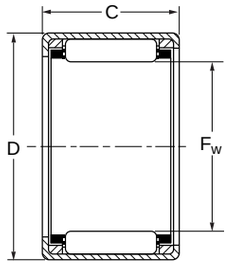

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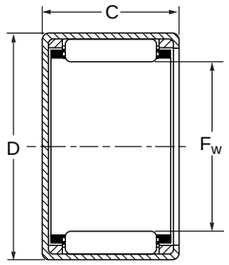
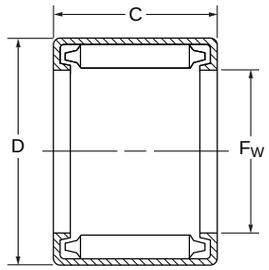


BAM

Basic Dimensions						Basic Load Ratings		Designation	Mass
						Dynamic	Static		
F_w inch	mm	D inch	mm	C inch	mm	C kN	C_O kN	Open End BA...Z	Closed End g
1 1/2	38.100	1 7/8	47.625	1 1/4	31.75	35.104	66.767	BA 2420 Z	97.5
1 5/8	41.275	2	50.800	1/2	12.70	12.348	17.816	BA 268 Z	41.0
1 5/8	41.275	2	50.800	5/8	15.88	17.023	26.989	BA 2610 Z	52.0
1 5/8	41.275	2	50.800	1	25.40	29.723	55.125	BA 2616 Z	85.0
1 5/8	41.275	2	50.800	1 1/4	31.75	37.220	73.823	BA 2620 Z	105.0
1 3/4	44.45	2 1/8	53.975	3/4	19.05	22.667	40.043	BA 2812 Z	67.5
1 3/4	44.45	2 1/8	53.975	1	25.40	31.223	60.593	BA 2816 Z	91.0
1 3/4	44.45	2 1/8	53.975	1 1/4	31.75	39.249	81.056	BA 2820 Z	112.0
1 3/4	44.45	2 1/8	53.975	1 1/2	38.10	46.746	101.430	BA 2824 Z	136.0
1 7/8	47.625	2 1/4	57.150	1/2	12.70	13.230	20.462	BA 308 Z	47.5
1 7/8	47.625	2 1/4	57.150	5/8	15.88	18.257	31.046	BA 3010 Z	60.0
1 7/8	47.625	2 1/4	57.150	3/4	19.05	23.108	41.895	BA 3012 Z	72.5
1 7/8	47.625	2 1/4	57.150	1	25.40	31.840	63.416	BA 3016 Z	97.5
2	50.800	2 3/8	60.325	1/2	12.70	13.847	22.226	BA 328 Z	50.0
2	50.800	2 3/8	60.325	1	25.40	33.340	68.796	BA 3216 Z	104.0
2	50.800	2 3/8	60.325	1 1/4	31.75	41.895	91.728	BA 3220 Z	128.0
2	50.800	2 3/8	60.325	1 1/2	38.10	49.921	115.542	BA 3224 Z	155.0
2 1/8	53.975	2 1/2	63.500	1/2	12.70	14.465	23.990	BA 348 Z	53.0
2 1/8	53.975	2 1/2	63.500	1	25.40	34.839	74.264	BA 3416 Z	109.0
2 1/8	53.975	2 1/2	63.500	1 1/2	38.10	52.126	124.362	BA 3424 Z	162.0
2 1/4	57.150	2 5/8	66.675	3/4	19.05	25.666	50.891	BA 3612 Z	85.5
2 1/4	57.150	2 5/8	66.675	1	25.40	35.368	76.999	BA 3616 Z	115.0
2 1/4	57.150	2 5/8	66.675	1 1/4	31.75	44.453	103.194	BA 3620 Z	143.0

Designation	Mass	Interchange	
Open End BAM	g	Open End SCE	Closed End BCE
BAM 2420	106.0	SCE 2420	BCE 2420
BAM 268	51.5	-	-
BAM 2610	62.5	SCE 2610	BCE 2610
BAM 2616	95.5	-	-
BAM 2620	115.0	SCE 2620	BCE 2620
BAM 2812	79.5	SCE 2812	BCE 2812
BAM 2816	103.0	SCE 2816	BCE 2816
BAM 2820	125.0	-	-
BAM 2824	148.0	SCE 2824	BCE 2824
BAM 308	61.0	-	-
BAM 3010	74.0	-	-
BAM 3012	86.5	-	-
BAM 3016	112.0	-	-
BAM 328	66.0	SCE 328	BCE 328
BAM 3216	119.0	SCE 3216	BCE 3216
BAM 3220	144.0	SCE 3220	BCE 3220
BAM 3224	170.0	-	-
BAM 348	70.5	-	-
BAM 3416	127.0	SCE 3416	BCE 3416
BAM 3424	180.0	-	-
BAM 3612	105.0	SCE 3612	BCE 3612
BAM 3616	135.0	SCE 3616	BCE 3616
BAM 3620	163.0	-	-



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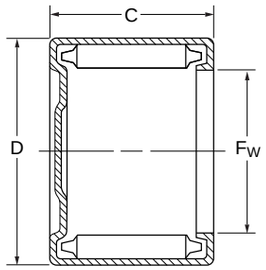

M-1

Basic Dimensions						Basic Load Ratings		Limiting Speed	
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Grease	Oil
1/8	3.1750	1/4	6.3500	1/4	6.3500	1.554	1.466	7290	11700
5/32	3.9700	9/32	7.1425	1/4	6.3500	1.790	1.814	6300	9900
5/32	3.9700	9/32	7.1425	5/16	7.9248	2.327	2.539	6300	9900
3/16	4.7625	11/32	8.7325	1/4	6.3500	1.994	1.922	6300	9900
3/16	4.7625	11/32	8.7325	3/8	9.5250	3.388	3.797	6300	9900
1/4	6.3500	7/16	11.1125	1/4	6.3500	2.463	2.367	5850	9000
1/4	6.3500	7/16	11.1125	5/16	7.9248	3.200	3.308	5850	9000
1/4	6.3500	7/16	11.1125	3/8	9.5250	4.085	4.526	5850	9000
1/4	6.3500	7/16	11.1125	7/16	11.1252	4.966	5.807	5850	9000
5/16	7.9375	1/2	12.7000	5/16	7.9248	3.677	4.125	4860	7470
5/16	7.9375	1/2	12.7000	3/8	9.5250	4.726	5.727	4860	7470
5/16	7.9375	1/2	12.7000	7/16	11.1252	5.687	7.249	4860	7470
5/16	7.9375	1/2	12.7000	9/16	14.2748	7.529	10.413	4860	7470
5/16	7.9375	1/2	12.7000	7/16	11.1252	6.328	6.608	6750	10800
5/16	7.9375	1/2	12.7000	9/16	14.2748	8.531	9.692	6750	10800
3/8	9.5250	9/16	14.2875	5/16	7.9248	4.085	4.966	4140	6390
3/8	9.5250	9/16	14.2875	3/8	9.5250	5.247	6.809	4140	6390
3/8	9.5250	9/16	14.2875	7/16	11.1252	6.328	8.731	4140	6390
3/8	9.5250	9/16	14.2875	1/2	12.7000	7.369	10.613	4140	6390
3/8	9.5250	9/16	14.2875	9/16	14.2748	8.411	12.536	4140	6390
3/8	9.5250	9/16	14.2875	5/8	15.8750	9.372	14.378	4140	6390
3/8	9.5250	9/16	14.2875	1/2	12.7000	8.411	9.852	5850	9000
7/16	11.1125	5/8	15.8750	3/8	9.5250	5.727	7.970	3690	5670
7/16	11.1125	5/8	15.8750	7/16	11.1252	6.929	10.173	3690	5670
7/16	11.1125	5/8	15.8750	1/2	12.7000	8.090	12.416	3690	5670
7/16	11.1125	5/8	15.8750	5/8	15.8750	10.213	16.821	3690	5670
7/16	11.1125	5/8	15.8750	1/2	12.7000	9.292	11.494	5130	7920
1/2	12.7000	11/16	17.4625	5/16	7.9248	4.806	6.608	3240	5040
1/2	12.7000	11/16	17.4625	3/8	9.5250	6.168	9.131	3240	5040
1/2	12.7000	11/16	17.4625	7/16	11.1252	7.489	11.695	3240	5040
1/2	12.7000	11/16	17.4625	1/2	12.7000	8.691	14.138	3240	5040
1/2	12.7000	11/16	17.4625	5/8	15.8750	11.014	19.184	3240	5040

Mass Approx.		Interchange	
Open Ends g	Closed Ends g	Open Ends	Closed Ends
0.91	-	B 24	-
0.91	-	B 2.1/2 4	-
1.36	-	B 2.1/2 5	-
1.36	1.82	B 34	M 341
2.27	2.72	B 35	M 361
2.27	2.72	B 44	M 441
3.18	3.63	B 45	M 451
3.63	-	B 46	-
4.09	4.99	B 47	M 471
3.63	4.09	B 55	M 551
4.54	-	B 56	-
4.99	5.90	B 57	M 571
6.36	-	B 59	-
7.26	8.17	BH 57	MH 571
9.08	-	BH 59	-
4.09	4.54	B 65	M 651
4.99	5.45	B 66	M 661
5.90	-	B 67	-
6.81	7.72	B 68	M 681
7.26	-	B 69	-
8.17	9.53	B 610	M 6101
9.53	-	BH 68	-
5.45	-	B 76	-
6.81	-	B 77	-
7.72	8.63	B 78	M 781
9.53	-	B 710	-
10.44	-	BH 78	-
5.45	6.36	B 85	M 851
6.36	7.26	B 86	M 861
7.26	8.17	B 87	M 871
8.63	9.53	B 88	M 881
10.44	11.80	B 810	M 8101

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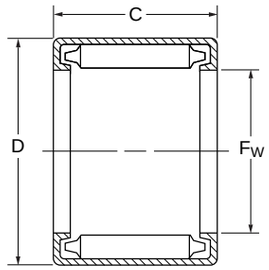

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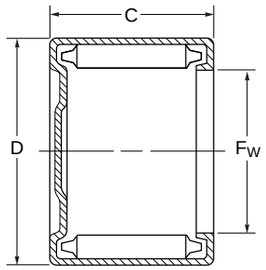


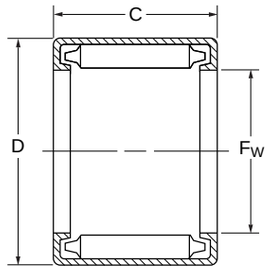
M-1

Basic Dimensions						Basic Load Ratings		Limiting Speed	
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Grease	Oil
1/2	12.7000	11/16	17.4625	3/4	19.0500	13.217	24.270	3240	5040
1/2	12.7000	11/16	17.4625	7/16	11.1252	8.531	10.613	4590	7110
1/2	12.7000	11/16	17.4625	1/2	12.7000	10.053	13.136	4590	7110
1/2	12.7000	11/16	17.4625	5/8	15.8750	12.936	18.183	4590	7110
1/2	12.7000	11/16	17.4625	3/4	19.0500	15.660	23.189	4590	7110
9/16	14.2875	3/4	19.0500	5/16	7.9248	5.166	7.489	2970	4500
9/16	14.2875	3/4	19.0500	3/8	9.5250	6.608	10.293	2970	4500
9/16	14.2875	3/4	19.0500	7/16	11.1252	7.970	13.136	2970	4500
9/16	14.2875	3/4	19.0500	1/2	12.7000	9.292	15.980	2970	4500
9/16	14.2875	3/4	19.0500	5/8	15.8750	11.775	21.627	2970	4500
9/16	14.2875	3/4	19.0500	3/4	19.0500	14.098	27.314	2970	4500
9/16	14.2875	13/16	20.6375	1/2	12.7000	10.773	14.819	4140	6390
9/16	14.2875	13/16	20.6375	5/8	15.8750	13.857	20.466	4140	6390
9/16	14.2875	13/16	20.6375	3/4	19.0500	16.781	26.113	4140	6390
5/8	15.8750	13/16	20.6375	5/16	7.9248	5.447	8.330	2700	4050
5/8	15.8750	13/16	20.6375	7/16	11.1252	8.451	14.618	2700	4050
5/8	15.8750	13/16	20.6375	1/2	12.7000	9.812	17.742	2700	4050
5/8	15.8750	13/16	20.6375	5/8	15.8750	12.456	24.030	2700	4050
5/8	15.8750	13/16	20.6375	3/4	19.0500	14.899	30.318	2700	4050
5/8	15.8750	7/8	22.2123	1/2	12.7000	11.454	16.461	3780	5850
5/8	15.8750	7/8	22.2123	5/8	15.8750	14.738	22.748	3780	5850
5/8	15.8750	7/8	22.2123	3/4	19.0500	17.822	29.036	3780	5850
5/8	15.8750	7/8	22.2123	1	25.4000	23.589	41.652	3780	5850
11/16	17.4625	7/8	22.2123	3/8	9.5250	7.369	12.576	2430	3780
11/16	17.4625	7/8	22.2123	1/2	12.7000	10.333	19.544	2430	3780
11/16	17.4625	7/8	22.2123	5/8	15.8750	13.096	26.473	2430	3780
11/16	17.4625	7/8	22.2123	3/4	19.0500	15.700	33.402	2430	3780
11/16	17.4625	15/16	23.8125	7/16	11.1252	10.253	14.618	3510	5400
11/16	17.4625	15/16	23.8125	5/8	15.8750	15.579	25.031	3510	5400
11/16	17.4625	15/16	23.8125	3/4	19.0500	18.824	31.960	3510	5400
3/4	19.0500	1	25.4000	3/8	9.5250	8.731	12.215	3240	5040
3/4	19.0500	1	25.4000	1/2	12.7000	12.696	19.785	3240	5040

Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

Mass Approx.		Interchange	
Open Ends g	Closed Ends g	Open Ends	Closed Ends
12.71	14.07	B 812	M 8121
10.44	-	BH 87	-
11.80	-	BH 88	-
14.98	-	BH 810	-
17.71	19.98	BH 812	MH 8121
5.90	6.36	B 95	M 951
6.81	8.17	B 96	M 961
8.17	9.53	B 97	M 971
9.08	10.44	B 98	M 981
11.80	13.17	B 910	M 9101
14.07	15.44	B 912	M 9121
13.17	-	BH 98	-
16.34	-	BH 910	-
19.52	-	BH 912	-
6.36	7.26	B 105	M 1051
9.08	9.99	B 107	M 1071
9.99	10.44	B 108	M 1081
12.71	14.53	B 1010	M 10101
15.44	17.25	B 1012	M 10121
14.07	15.89	BH 108	MH 1081
17.71	-	BH 1010	-
21.34	-	BH 1012	-
28.15	-	BH 1016	-
8.17	9.08	B 116	M 1161
10.90	12.26	B 118	M 1181
13.62	15.44	B 1110	M 11101
16.34	18.61	B 1112	M 11121
13.62	-	BH 117	-
19.07	21.34	BH1110	MH 11101
23.15	-	BH 1112	-
12.26	14.07	B 126	M 1261
16.34	18.61	B 128	M 1281

10.04



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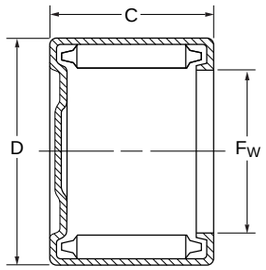


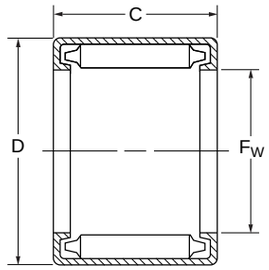
M-1

Basic Dimensions						Basic Load Ratings		Limiting Speed	
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Grease	Oil
3/4	19.0500	1	25.4000	5/8	15.8750	16.340	27.314	3240	5040
3/4	19.0500	1	25.4000	3/4	19.0500	19.745	34.884	3240	5040
13/16	20.6375	1 1/16	26.9875	3/8	9.5250	9.131	13.217	3060	4680
13/16	20.6375	1 1/16	26.9875	1/2	12.7000	13.257	21.427	3060	4680
13/16	20.6375	1 1/16	26.9875	7/8	22.2250	24.070	46.058	3060	4680
13/16	20.6375	1 1/16	26.9875	1	25.4000	27.314	54.068	3060	4680
13/16	20.6426	1 1/8	28.5750	1/2	12.7000	13.377	18.743	3690	5670
13/16	20.6375	1 1/8	28.5750	5/8	15.8750	17.742	26.914	3690	5670
13/16	20.6375	1 1/8	28.5750	3/4	19.0500	21.787	35.084	3690	5670
7/8	22.2250	1 1/8	28.5750	3/8	9.5250	9.492	14.258	2790	4320
7/8	22.2250	1 1/8	28.5750	1/2	12.7000	13.817	23.069	2790	4320
7/8	22.2250	1 1/8	28.5750	3/4	19.0500	21.507	40.851	2790	4320
7/8	22.2250	1 1/8	28.5750	1	25.4000	28.436	58.473	2790	4320
7/8	22.2250	1 1/8	28.5750	1 1/8	28.5750	31.720	67.284	2790	4320
7/8	22.2250	1 3/16	30.1625	5/8	15.8750	18.303	28.996	3420	5292
7/8	22.2250	1 3/16	30.1625	3/4	19.0500	22.508	37.807	3420	5292
7/8	22.2250	1 3/16	30.1625	1	25.4000	30.318	55.269	3420	5292
15/16	23.8125	1 3/16	30.1625	1/2	12.7000	14.338	24.751	2700	4050
15/16	23.8125	1 3/16	30.1625	1	25.4000	29.517	62.478	2700	4050
1	25.4000	1 1/4	31.7500	3/8	9.5250	10.213	16.300	2520	3870
1	25.4000	1 1/4	31.7500	7/16	11.1252	12.576	21.307	2520	3870
1	25.4000	1 1/4	31.7500	1/2	12.7000	14.859	26.393	2520	3870
1	25.4000	1 1/4	31.7500	5/8	15.8750	19.104	36.486	2520	3870
1	25.4000	1 1/4	31.7500	3/4	19.0500	23.109	46.458	2520	3870
1	25.4000	1 1/4	31.7500	1	25.4000	30.558	66.884	2520	3870
1	25.4000	1 5/16	33.3375	1/2	12.7000	14.979	23.069	3060	4680
1	25.4000	1 5/16	33.3375	5/8	15.8750	19.825	33.161	3060	4680
1	25.4000	1 5/16	33.3375	3/4	19.0500	24.390	43.254	3060	4680
1	25.4000	1 5/16	33.3375	7/8	22.2250	28.716	53.267	3060	4680
1	25.4000	1 5/16	33.3375	1	25.4000	32.841	63.279	3060	4680
1	25.4000	1 5/16	33.3375	1 1/4	31.7500	40.851	83.705	3060	4680
1	25.4000	1 5/16	33.3375	1 1/2	38.1000	48.060	103.730	3060	4680

Mass Approx.		Interchange	
Open Ends g	Closed Ends g	Open Ends	Closed Ends
20.43	23.61	B 1210	M 12101
24.52	28.15	B 1212	M 12121
13.17	-	B 136	-
17.71	19.98	B 138	M 1381
30.87	34.96	B 1314	M 13141
35.41	39.95	B 1316	M 13161
22.70	25.88	BH 138	MH 1381
28.60	30.87	BH 1310	MH 13101
34.50	39.04	BH 1312	MH 13121
14.07	15.89	B 146	M 1461
19.07	21.79	B 148	M 1481
28.15	31.78	B 1412	M 14121
37.68	42.68	B 1416	M 14161
42.68	48.58	B 1418	-
30.42	30.42	BH 1410	MH 14101
36.32	41.31	BH 1412	MH 14121
48.58	-	BH 1416	-
19.98	-	B 158	-
39.95	45.40	B 1516	M 15161
15.89	-	B 166	-
18.61	20.88	B 167	M 1671
21.34	24.06	B 168	M 1681
26.33	29.96	B 1610	M 16101
31.78	36.32	B 1612	M 16121
42.68	48.12	B 1616	M 16161
27.24	30.87	BH 168	MH 1681
34.05	-	BH 1610	-
40.86	46.31	BH 1612	MH 16121
47.67	-	BH 1614	-
54.48	61.74	BH 1616	MH 16161
68.10	-	BH 1620	-
81.72	108.96	BH 1624	MH 16241

Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

10.04



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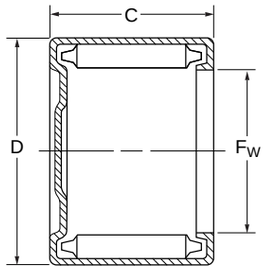


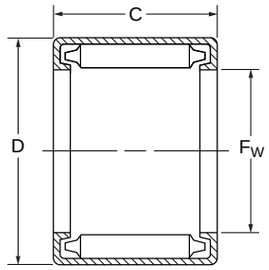
M-1

Basic Dimensions						Basic Load Ratings		Limiting Speed	
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Grease	Oil
1 1/16	26.9875	1 5/16	33.3375	5/8	15.8750	19.745	38.768	2340	3600
1 1/8	28.5750	1 3/8	34.9250	3/8	9.5250	10.894	18.343	2250	3420
1 1/8	28.5750	1 3/8	34.9250	1/2	12.7000	15.820	29.717	2250	3420
1 1/8	28.5750	1 3/8	34.9250	5/8	15.8750	20.345	41.252	2250	3420
1 1/8	28.5750	1 3/8	34.9250	3/4	19.0500	24.591	52.466	2250	3420
1 1/8	28.5750	1 3/8	34.9250	1	25.4000	32.561	75.294	2250	3420
1 1/8	28.5750	1 1/2	38.1000	3/4	19.0500	28.395	47.660	3240	5040
1 1/8	28.5750	1 1/2	38.1000	1	25.4000	38.288	70.088	3240	5040
1 1/8	28.5750	1 1/2	38.1000	1 1/4	31.7500	47.660	92.916	3240	5040
1 3/16	30.1625	1 1/2	38.1000	5/8	15.8750	21.707	39.409	2610	3960
1 3/16	30.1625	1 1/2	38.1000	1	25.4000	35.965	75.294	2610	3960
1 1/4	31.7500	1 1/2	38.1000	1/2	12.7000	16.701	33.001	2070	3150
1 1/4	31.7500	1 1/2	38.1000	5/8	15.8750	21.507	45.657	2070	3150
1 1/4	31.7500	1 1/2	38.1000	3/4	19.0500	25.992	58.073	2070	3150
1 1/4	31.7500	1 1/2	38.1000	1	25.4000	34.403	83.304	2070	3150
1 1/4	31.7500	1 1/2	38.1000	1 1/4	31.7500	42.453	108.936	2070	3150
1 1/4	31.7500	1 5/8	41.2750	1/2	12.7000	17.702	27.034	2970	4500
1 1/4	31.7500	1 5/8	41.2750	3/4	19.0500	29.797	52.866	2970	4500
1 1/4	31.7500	1 5/8	41.2750	1	25.4000	40.451	78.098	2970	4500
1 1/4	31.7500	1 5/8	41.2750	1 1/4	31.7500	50.463	103.329	2970	4500
1 5/16	33.3375	1 5/8	41.2750	1/2	12.7000	17.342	30.318	2340	3690
1 5/16	33.3375	1 5/8	41.2750	5/8	15.8750	22.989	43.655	2340	3690
1 5/16	33.3375	1 5/8	41.2750	1 1/4	31.7500	47.259	110.138	2340	3690
1 3/8	34.9250	1 5/8	41.2750	1/2	12.7000	17.582	36.325	1890	2880
1 3/8	34.9250	1 5/8	41.2750	3/4	19.0500	27.354	64.080	1890	2880
1 3/8	34.9250	1 5/8	41.2750	1	25.4000	36.165	91.715	1890	2880
1 3/8	34.9250	1 5/8	41.2750	1 1/4	31.7500	44.456	119.750	1890	2880
1 3/8	34.9250	1 3/4	44.4500	1/2	12.7000	19.104	30.198	2700	4230
1 3/8	34.9250	1 3/4	44.4500	5/8	15.8750	25.672	44.055	2700	4230
1 3/8	34.9250	1 3/4	44.4500	3/4	19.0500	31.760	58.073	2700	4230
1 3/8	34.9250	1 3/4	44.4500	1	25.4000	42.854	85.307	2700	4230
1 3/8	34.9250	1 3/4	44.4500	1 1/4	31.7500	53.667	113.342	2700	4230

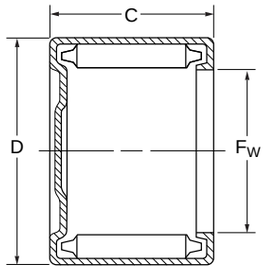
Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

Mass Approx.		Interchange	
Open Ends g	Closed Ends g	Open Ends	Closed Ends
28.15	31.78	B 1710	M 17101
17.71	19.98	B 186	M 1861
23.61	26.79	B 188	M 1881
29.51	-	B 1810	-
35.41	39.95	B 1812	M 18121
47.22	53.57	B 1816	M 18161
55.84	62.65	BH 1812	MH 18121
74.46	84.44	BH 1816	MH 18161
93.07	105.33	BH 1820	MH 18201
30.87	-	B 1910	M 19101
63.56	-	B 1916	-
25.88	29.51	B 208	M 2081
32.23	36.32	B 2010	M 20101
39.04	44.95	B 2012	M 20121
51.76	59.02	B 2016	M 20161
64.92	73.55	B 2020	M 20201
40.86	46.31	BH 208	MH 2081
61.29	69.46	BH 2012	MH 20121
81.27	92.16	BH 2016	MH 20161
101.70	115.32	BH 2020	MH 20201
34.50	39.04	B 218	M 2181
43.13	49.03	B 2110	M 21101
86.71	-	B 2120	-
28.15	31.78	B 228	M 2281
42.68	48.58	B 2212	M 22121
56.75	64.47	B 2216	M 22161
70.82	80.36	B 2220	M 22201
44.49	-	BH 228	-
55.39	-	BH 2210	-
66.28	74.91	BH 2212	MH 22121
88.53	100.33	BH 2216	MH 22161
110.78	125.30	BH 2220	-

10.04



B, BH



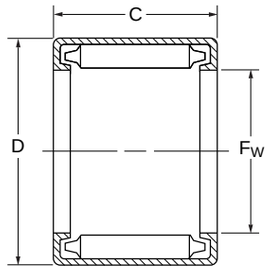
M-1

Basic Dimensions						Basic Load Ratings		Limiting Speed	
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Grease	Oil
1 1/2	38.1000	1 7/8	47.6250	1/2	12.7000	20.105	33.402	2520	3870
1 1/2	38.1000	1 7/8	47.6250	5/8	15.8750	26.874	48.461	2520	3870
1 1/2	38.1000	1 7/8	47.6250	3/4	19.0500	33.201	63.680	2520	3870
1 1/2	38.1000	1 7/8	47.6250	7/8	22.2250	39.169	78.899	2520	3870
1 1/2	38.1000	1 7/8	47.6250	1	25.4000	44.856	93.317	2520	3870
1 1/2	38.1000	1 7/8	47.6250	1 1/4	31.7500	55.670	124.155	2520	3870
1 5/8	41.2750	2	50.8000	1/2	12.7000	20.506	35.324	2340	3510
1 5/8	41.2750	2	50.8000	5/8	15.8750	27.594	51.665	2340	3510
1 5/8	41.2750	2	50.8000	1	25.4000	46.458	100.926	2340	3510
1 5/8	41.2750	2	50.8000	11/4	31.7500	57.672	133.767	2340	3510
1 3/4	44.4500	2 1/8	53.9750	3/4	19.0500	35.364	73.292	2160	3330
1 3/4	44.4500	2 1/8	53.9750	1	25.4000	48.060	108.536	2160	3330
1 3/4	44.4500	2 1/8	53.9750	11/4	31.7500	59.675	144.180	2160	3330
1 3/4	44.4500	2 1/8	53.9750	11/2	38.1000	70.889	179.424	2160	3330
1 7/8	47.6250	2 1/4	57.1500	1/2	12.7000	22.628	41.652	2070	3150
1 7/8	47.6250	2 1/4	57.1500	3/4	19.0500	37.367	79.700	2070	3150
1 7/8	47.6250	2 1/4	57.1500	1	25.4000	50.463	116.946	2070	3150
2	50.8000	2 3/8	60.3250	1/2	12.7000	22.869	43.254	1890	2970
2	50.8000	2 3/8	60.3250	1	25.4000	51.665	124.155	1890	2970
2	50.8000	2 3/8	60.3250	1 1/4	31.7500	64.481	164.606	1890	2970
2	50.8000	2 3/8	60.3250	1 1/2	38.1000	76.496	205.056	1890	2970
2	50.8000	2 3/8	60.3250	1 3/4	44.4500	87.710	245.507	1890	2970
2 1/16	52.3875	2 17/3	64.2925	3/4	19.0500	41.652	78.098	2340	3690
2 1/16	52.3875	2 17/32	64.2925	3/4	19.0500	57.672	119.750	2340	3690
2 1/16	52.3875	2 17/32	64.2925	1 1/2	38.1000	87.309	203.054	2340	3690
2 1/8	53.9750	2 1/2	63.5000	1/2	12.7000	23.509	46.058	1800	2790
2 1/8	53.9750	2 1/2	63.5000	1	25.4000	53.267	132.165	1800	2790
2 1/8	53.9750	2 1/2	63.5000	1 1/4	31.7500	66.083	175.019	1800	2790
2 1/8	53.9750	2 1/2	63.5000	1 1/2	38.1000	78.498	217.872	1800	2790
2 1/4	57.1500	2 5/8	66.6750	3/4	19.0500	42.854	94.919	1800	2700
2 1/4	57.1500	2 5/8	66.6750	1 1/4	31.7500	69.687	185.832	1800	2700
2 1/4	57.1500	2 5/8	66.6750	1 1/2	38.1000	82.904	231.089	1800	2700

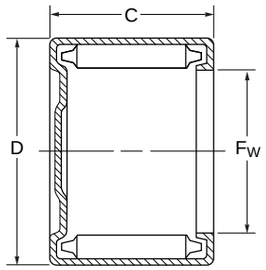
Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

Mass Approx.		Interchange	
Open Ends g	Closed Ends g	Open Ends	Closed Ends
47.67	54.03	B 248	M 2481
59.93	68.10	B 2410	M 24101
71.73	81.27	B 2412	M 24121
83.54	94.89	B 2414	M 24141
95.79	108.51	B 2416	M 24161
119.40	135.29	B 2420	M 24201
51.30	-	B 268	-
64.01	72.64	B 2610	M 26101
102.60	-	B 2616	-
128.03	145.28	B 2620	M 26201
82.17	93.07	B 2812	M 28121
109.87	124.40	B 2816	M 28161
137.11	-	B 2820	-
164.80	186.59	B 2824	M 26241
58.57	66.28	B 308	M 3081
87.62	-	B 3012	-
117.13	132.57	B 3016	M 30161
61.74	69.92	B 328	M 3281
123.94	140.29	B 3216	M 32161
154.81	175.24	B 3220	M 32201
186.14	211.11	B 3224	M 32241
217.01	245.61	B 3228	M 32281
122.13	-	BH 3312	-
162.53	184.32	BH 3316	MH 33161
243.80	276.49	BH 3324	MH 33241
65.38	-	B 348	-
138.02	156.63	B 3416	M 34161
163.89	-	B 3420	-
196.58	222.91	B 3424	M 34241
103.51	117.13	B 3612	M 36121
172.52	-	B 3620	-
207.02	234.72	B 3624	M 36241

10.04



B, BH



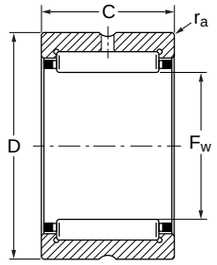
M-1

Basic Dimensions						Basic Load Ratings		Limiting Speed	
F_w inch	mm	D inch	mm	C inch	mm	Dynamic C kN	Static C_O kN	Grease	Oil
2 5/8	66.6750	3	76.2000	1	25.4000	60.075	163.805	1530	2250
2 3/4	69.8500	3 1/8	79.3750	5/8	15.8750	36.886	88.110	1440	2250
2 3/4	69.8500	3 1/8	79.3750	1	25.4000	62.078	171.414	1440	2250
2 3/4	69.8500	3 1/8	79.3750	1 1/4	31.7500	76.896	227.084	1440	2250
3 1/2	88.9000	4	101.6000	3/4	19.0500	58.473	134.969	1620	2430
5 1/2	139.7000	6	152.4000	3/4	19.0500	69.287	208.260	900	1440

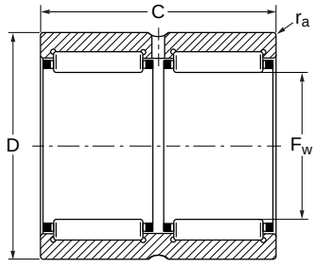
Mass Approx.		Interchange	
Open Ends g	Closed Ends g	Open Ends	Closed Ends
159.35	180.69	B 4216	M 42161
103.97	-	B 4410	-
166.16	-	B 4416	-
207.93	235.63	B 4420	M 44201
212.47	-	B 5612	-
325.52	-	B 8812	-

Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

10.04



NK, NKS
RNA 48
RNA 49, RNA 69 ($F_W \geqq 35$ mm)



RNA 69 ($F_w \geqq 40$ mm)

Basic Dimensions				Basic Load Ratings		Limiting Speed	Mass	
F_w mm	D mm	C mm	r_a max	Dynamic C kN	Static C_0 kN	r/min		NK
5	10	10	0.15	2.35	1.92	33300	3.1	NK 5/10 TN
5	10	12	0.15	3.00	2.65	33300	3.7	NK 5/12 TN
6	12	10	0.15	2.60	2.28	29700	4.7	NK 6/10 TN
6	12	12	0.15	3.35	3.15	29700	5.7	NK 6/12 TN
7	14	10	0.30	2.85	2.65	27900	6.9	NK 7/10 TN
7	14	12	0.30	3.65	3.60	27900	8.2	NK 7/12 TN
8	15	12	0.30	3.95	4.10	26100	8.7	NK 8/12 TN
8	15	16	0.30	5.10	5.80	26100	12.0	NK 8/16 TN
9	16	12	0.30	4.50	5.00	25200	10.3	NK 9/12 TN
9	16	16	0.30	5.90	7.10	25200	12.8	NK 9/16 TN
10	17	12	0.30	4.75	5.50	24300	10.1	NK 10/12 TN
10	17	16	0.30	6.20	7.80	24300	13.3	NK 10/16 TN
12	19	12	0.30	6.40	7.10	22500	12.1	NK 12/12
12	19	16	0.30	9.00	11.00	22500	15.9	NK 12/16
14	22	16	0.30	10.10	11.50	21600	20.7	NK 14/16
14	22	20	0.30	12.80	15.80	21600	25.5	NK 14/20
14	22	13	0.30	8.50	9.20	22500	16.5	-
15	23	16	0.30	10.70	12.70	20700	21.8	NK 15/16
15	23	20	0.30	13.50	17.40	20700	26.6	NK 15/20
16	24	16	0.30	11.30	13.90	19800	22.4	NK 16/16
16	24	20	0.30	14.40	18.80	19800	28.4	NK 16/20
16	24	13	0.30	9.40	10.90	21600	17.4	-
16	24	22	0.30	16.00	21.60	19800	31.0	-
17	25	16	0.30	11.90	15.00	19800	23.7	NK 17/16
17	25	20	0.30	15.10	20.40	19800	29.8	NK 17/20
18	26	16	0.30	12.50	16.20	18900	24.9	NK 18/16
18	26	20	0.30	15.80	22.00	18900	31.4	NK 18/20
19	27	16	0.30	13.00	17.40	18900	26.1	NK 19/16
19	27	20	0.30	16.50	23.60	18900	32.2	NK 19/20
20	28	16	0.30	13.00	17.50	18000	27.0	NK 20/16
20	28	20	0.30	16.40	23.80	18000	33.9	NK 20/20
20	28	13	0.30	10.60	13.60	19800	21.7	-

Designation			
NKS	RNA 48	RNA 49	RNA 69
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
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-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4900	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4901	-
-	-	-	RNA 6901
-	-	-	-
-	-	-	-
-	-	-	-
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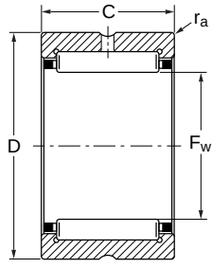
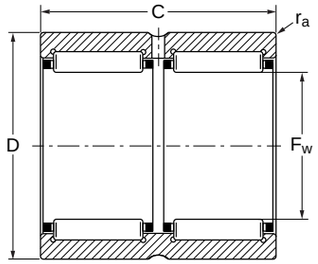
-	-	-	-
-	-	-	-
-	-	RNA 4902	-



NK, NKS
RNA 48
RNA 49, RNA 69 ($F_W \geqq 35$ mm)



RNA 69 ($F_w \geqq 40$ mm)

Basic Dimensions				Basic Load Ratings		Limiting Speed	Mass	
F_w mm	D mm	C mm	r_a max	Dynamic C kN	Static C_O kN	r/min	g	NK
20	28	23	0.30	17.30	25.50	18000	39.7	-
20	32	20	0.30	23.00	25.00	17100	48.7	-
21	29	16	0.30	13.50	18.70	18000	28.1	NK 21/16
21	29	20	0.30	17.10	25.50	18000	35.2	NK 21/20
22	30	16	0.30	14.00	19.90	17100	30.0	NK 22/16
22	30	20	0.30	17.70	27.00	17100	37.0	NK 22/20
22	30	13	0.30	11.00	14.60	18900	22.2	-
22	30	23	0.30	18.60	29.00	17100	42.4	-
22	35	20	0.60	24.50	28.00	15300	61.5	-
24	32	16	0.30	15.00	22.30	16200	31.9	NK 24/16
24	32	20	0.30	19.00	30.50	16200	40.0	NK 24/20
24	37	20	0.60	26.00	31.00	14400	65.5	-
25	33	16	0.30	14.90	22.40	15300	32.6	NK 25/16
25	33	20	0.30	18.80	30.50	15300	42.0	NK 25/20
25	37	17	0.30	21.00	25.50	15300	52.3	-
25	37	30	0.30	36.00	51.00	14400	100.0	-
25	38	20	0.60	27.50	33.50	14400	68.1	-
26	34	16	0.30	15.30	23.60	14400	34.0	NK 26/16
26	34	20	0.30	19.40	32.00	14400	42.0	NK 26/20
28	37	20	0.30	22.00	34.00	13500	52.2	NK 28/20
28	37	30	0.30	33.00	57.00	13500	82.0	NK 28/30
28	39	17	0.30	22.80	29.50	14400	50.2	-
28	39	30	0.30	37.50	55.00	13500	98.0	-
28	42	20	0.60	28.50	36.50	12600	83.6	-
29	38	20	0.30	21.90	34.00	13500	53.7	NK 29/20
29	38	30	0.30	32.50	57.00	13500	84.3	NK 29/30
30	40	20	0.30	22.60	36.00	12600	65.0	NK 30/20
30	40	30	0.30	33.50	60.00	12600	97.9	NK 30/30
30	42	17	0.30	23.60	31.50	13500	61.0	-
30	42	30	0.30	39.00	59.00	12600	112.0	-
30	45	22	0.60	32.00	40.00	11700	104.0	-
32	42	20	0.30	23.10	37.50	11700	68.0	NK 32/20

Designation			
NKS	RNA 48	RNA 49	RNA 69
-	-	-	RNA 6902
NKS 20	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4903	-
-	-	-	RNA 6903
NKS 22	-	-	-
-	-	-	-
-	-	-	-
NKS 24	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4904	-
-	-	-	RNA 6904
NKS 25	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 49/22	-
-	-	-	RNA 69/22
NKS 28	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4905	-
-	-	-	RNA 6905
NKS 30	-	-	-
-	-	-	-

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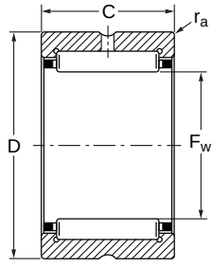
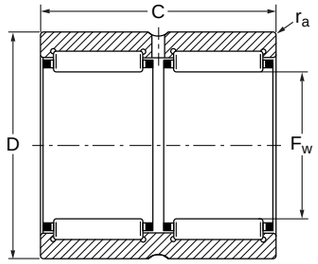


NK, NKS
RNA 48
RNA 49, RNA 69 ($F_W \geqq 35$ mm)



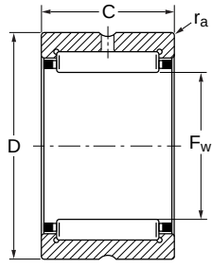
RNA 69 ($F_w \geqq 40$ mm)

Basic Dimensions				Basic Load Ratings		Limiting Speed	Mass	
F_w mm	D mm	C mm	r_a max	Dynamic C kN	Static C_0 kN	r/min	g	NK
32	42	30	0.30	34.50	63.00	11700	102.0	NK 32/30
32	45	17	0.30	24.40	33.50	11700	73.2	-
32	45	30	0.30	40.50	63.00	11700	135.0	-
32	47	22	0.60	33.50	43.50	10800	110.0	-
35	45	20	0.30	24.30	41.50	10800	73.8	NK 35/20
35	45	30	0.30	36.50	69.00	10800	112.0	NK 35/30
35	47	17	0.30	25.00	35.50	11700	69.4	-
35	47	30	0.30	43.50	71.00	10800	126.0	-
35	50	22	0.60	35.00	47.00	10800	118.0	-
37	47	20	0.30	24.90	43.50	10800	77.0	NK 37/20
37	47	30	0.30	37.00	73.00	10800	113.0	NK 37/30
37	52	22	0.60	36.50	50.00	9900	123.0	-
38	48	20	0.30	25.50	45.00	9900	79.4	NK 38/20
38	48	30	0.30	38.00	76.00	9900	116.0	NK 38/30
40	50	20	0.30	26.00	47.00	9900	82.7	NK 40/20
40	50	30	0.30	39.00	79.00	9900	125.0	NK 40/30
40	52	20	0.60	30.50	47.50	10800	89.1	-
40	52	36	0.60	47.00	82.00	9900	162.0	-
40	55	22	0.60	38.00	54.00	9000	129.0	-
42	52	20	0.30	26.50	49.00	9000	85.8	NK 42/20
42	52	30	0.30	39.50	82.00	9000	130.0	NK 42/30
42	55	20	0.60	31.50	50.00	9900	107.0	-
42	55	36	0.60	48.00	86.00	9000	193.0	-
43	53	20	0.30	27.00	51.00	9000	86.0	NK 43/20
43	53	30	0.30	40.50	85.00	9000	133.0	NK 43/30
43	58	22	0.60	39.00	57.00	8550	139.0	-
45	55	20	0.30	27.50	53.00	9000	91.5	NK 45/20
45	55	30	0.30	41.00	88.00	9000	139.0	NK 45/30
45	60	22	0.60	40.50	60.00	8550	145.0	-
47	57	20	0.30	28.50	56.00	8550	94.5	NK 47/20
47	57	30	0.30	43.00	94.00	8550	142.0	NK 47/30
48	62	22	0.60	43.00	67.00	8550	140.0	-

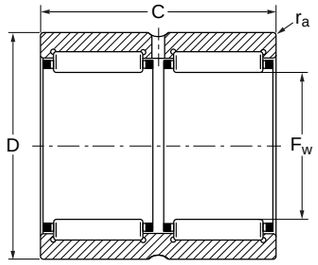
Designation			
NKS	RNA 48	RNA 49	RNA 69
-	-	-	-
-	-	RNA 49/28	-
-	-	-	RNA 69/28
NKS 32	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4906	-
-	-	-	RNA 6906
NKS 35	-	-	-
-	-	-	-
-	-	-	-
NKS 37	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 49/32	-
-	-	-	RNA 69/32
NKS 40	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4907	-
-	-	-	RNA 6907
-	-	-	-
-	-	-	-
NKS 43	-	-	-
-	-	-	-
-	-	-	-
NKS 45	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4908	-

Needle Roller Bearings, without Inner Ring NIS™

10.05



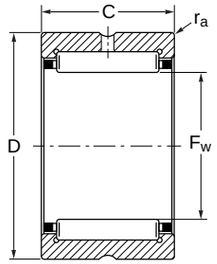
NK, NKS
RNA 48
RNA 49, RNA 69 ($F_W \geqq 35$ mm)



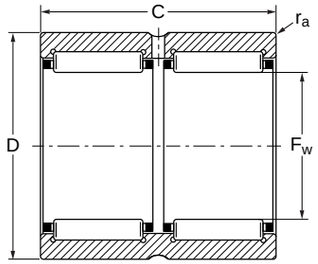
RNA 69 ($F_w \geqq 40$ mm)

Basic Dimensions				Basic Load Ratings		Limiting Speed	Mass	
F_w mm	D mm	C mm	r_a max	Dynamic C kN	Static C_0 kN	r/min	g	NK
48	62	40	0.60	66.00	116.00	8100	256.0	-
50	62	25	0.60	38.00	74.00	8100	158.0	NK 50/25
50	62	35	0.60	50.00	106.00	8100	221.0	NK 50/35
50	65	22	1.00	42.50	67.00	7650	157.0	-
52	68	22	0.60	45.00	73.00	7650	182.0	-
52	68	40	0.60	69.00	127.00	7200	338.0	-
55	68	25	0.60	40.00	82.00	7200	180.0	NK 55/25
55	68	35	0.60	53.00	118.00	7200	250.0	NK 55/35
55	72	22	1.00	45.00	74.00	6750	221.0	-
58	72	22	0.60	47.00	80.00	7200	163.0	-
58	72	40	0.60	73.00	139.00	6750	310.0	-
60	72	25	0.60	42.00	90.00	6750	185.0	NK 60/25
60	72	35	0.60	56.00	130.00	6750	258.0	NK 60/35
60	80	28	1.10	63.00	98.00	6300	335.0	-
63	80	25	1.00	58.00	100.00	6750	255.0	-
63	80	45	1.00	90.00	176.00	6300	470.0	-
65	78	25	0.60	44.00	98.00	6300	221.0	NK 65/25
65	78	35	0.60	59.00	142.00	6300	310.0	NK 65/35
65	85	28	1.10	67.00	108.00	5850	356.0	-
68	82	25	0.60	43.50	89.00	5850	241.0	NK 68/25
68	82	35	0.60	62.00	139.00	5850	338.0	NK 68/35
68	85	25	1.00	60.00	108.00	6300	275.0	-
68	85	45	1.00	94.00	191.00	5850	488.0	-
70	85	25	0.60	44.50	92.00	5850	260.0	NK 70/25
70	85	35	0.60	63.00	144.00	5850	370.0	NK 70/35
70	90	28	1.10	68.00	113.00	5400	380.0	-
72	90	25	1.00	61.00	112.00	5850	312.0	-
72	90	45	1.00	95.00	198.00	5400	580.0	-
73	90	25	1.00	53.00	100.00	5400	302.0	NK 73/25
73	90	35	1.00	75.00	156.00	5400	428.0	NK 73/35
75	92	25	1.00	54.00	104.00	5400	315.0	NK 75/25
75	92	35	1.00	77.00	162.00	5400	445.0	NK 75/35

Designation			
NKS	RNA 48	RNA 49	RNA 69
-	-	-	RNA 6908
-	-	-	-
-	-	-	-
NKS 50	-	-	-
-	-	RNA 4909	-
-	-	-	RNA 6909
-	-	-	-
-	-	-	-
NKS 55	-	-	-
-	-	RNA 4910	-
-	-	-	RNA 6910
-	-	-	-
-	-	-	-
NKS 60	-	-	-
-	-	RNA 4911	-
-	-	-	RNA 6911
-	-	-	-
-	-	-	-
NKS 65	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4912	-
-	-	-	RNA 6912
-	-	-	-
-	-	-	-
NKS 70	-	-	-
-	-	RNA 4913	-
-	-	-	RNA 6913
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-



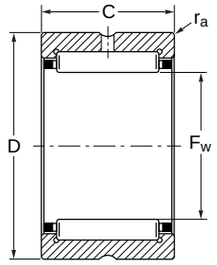
NK, NKS
RNA 48
RNA 49, RNA 69 ($F_W \geqq 35$ mm)



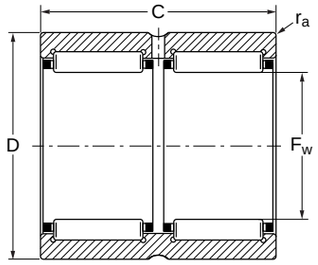
RNA 69 ($F_w \geqq 40$ mm)

Basic Dimensions				Basic Load Ratings		Limiting Speed	Mass	
F_w mm	D mm	C mm	r_a max	Dynamic C kN	Static C_0 kN	r/min	g	NK
75	95	28	1.10	71.00	123.00	5400	402.0	-
80	95	25	1.00	56.00	119.00	4950	301.0	NK 80/25
80	95	35	1.00	78.00	184.00	4950	425.0	NK 80/35
80	100	30	1.00	84.00	156.00	5400	460.0	-
80	100	54	1.00	128.00	265.00	4950	857.0	-
85	105	25	1.00	69.00	123.00	4500	425.0	NK 85/25
85	105	35	1.00	98.00	193.00	4500	600.0	NK 85/35
85	105	30	1.00	86.00	162.00	4950	489.0	-
85	105	54	1.00	130.00	275.00	4500	935.0	-
90	110	25	1.00	72.00	132.00	4410	450.0	NK 90/25
90	110	35	1.00	103.00	208.00	4410	630.0	NK 90/35
90	110	30	1.00	89.00	174.00	4500	516.0	-
90	110	54	1.00	135.00	300.00	4410	987.0	-
95	115	26	1.00	73.00	137.00	4230	490.0	NK 95/26
95	115	36	1.00	107.00	223.00	4230	680.0	NK 95/36
100	120	26	1.00	76.00	146.00	4050	515.0	NK 100/26
100	120	36	1.00	111.00	237.00	4050	715.0	NK 100/36
100	120	35	1.10	111.00	237.00	4320	657.0	-
100	120	63	1.10	166.00	400.00	4050	1200.0	-
105	125	26	1.00	78.00	155.00	3870	540.0	NK 105/26
105	125	36	1.00	114.00	250.00	3870	713.0	NK 105/36
105	125	35	1.10	114.00	250.00	4140	745.0	-
105	125	63	1.10	172.00	425.00	3870	1330.0	-
110	130	30	1.10	98.00	210.00	3690	650.0	NK 110/30
110	130	40	1.10	127.00	290.00	3690	830.0	NK 110/40
110	130	35	1.10	116.00	260.00	3960	719.0	-
110	130	63	1.10	174.00	440.00	3690	1460.0	-
115	140	40	1.10	128.00	270.00	3690	1150.0	-
120	140	30	1.00	94.00	216.00	3420	670.0	-
125	150	40	1.10	132.00	290.00	3420	1240.0	-
130	150	30	1.00	99.00	239.00	3150	730.0	-
135	165	45	1.10	181.00	390.00	3060	1860.0	-

Designation			
NKS	RNA 48	RNA 49	RNA 69
NKS 75	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4914	-
-	-	-	RNA 6914
-	-	-	-
-	-	-	-
-	-	RNA 4915	-
-	-	-	RNA 6915
-	-	-	-
-	-	-	-
-	-	RNA 4916	-
-	-	-	RNA 6916
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	RNA 4917	-
-	-	-	RNA 6917
-	-	-	-
-	-	-	-
-	-	RNA 4918	-
-	-	-	RNA 6918
-	-	-	-
-	-	-	-
-	-	RNA 4919	-
-	-	-	RNA 6919
-	-	RNA 4920	-
-	RNA 4822	-	-
-	-	RNA 4922	-
-	RNA 4824	-	-
-	-	RNA 4924	-



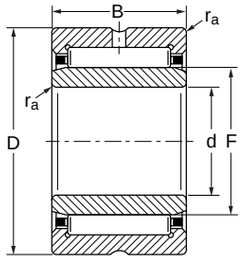
NK, NKS
RNA 48
RNA 49, RNA 69 ($F_W \geqq 35$ mm)



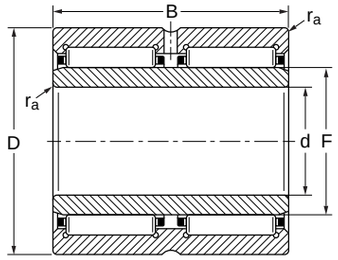
RNA 69 ($F_w \geqq 40$ mm)

Basic Dimensions				Basic Load Ratings		Limiting Speed	Mass	
F_w	D	C	r_a	Dynamic C	Static C_0			NK
mm	mm	mm	max	kN	kN	r/min	g	
145	165	35	1.10	118.00	310.00	2880	990.0	-
150	180	50	1.50	203.00	470.00	2880	2210.0	-
155	175	35	1.10	120.00	325.00	2700	1050.0	-
160	190	50	1.50	209.00	500.00	2700	2350.0	-
165	190	40	1.10	152.00	400.00	2520	1600.0	-
175	200	40	1.10	160.00	435.00	2340	1700.0	-
185	215	45	1.10	185.00	510.00	2250	2540.0	-
195	225	45	1.10	194.00	550.00	2070	2680.0	-
210	240	50	1.50	227.00	690.00	1980	3210.0	-
220	250	50	1.50	230.00	720.00	1890	3350.0	-
240	270	50	1.50	243.00	790.00	1710	3620.0	-
265	300	60	2.00	355.00	1080.00	1530	5400.0	-
285	320	60	2.00	370.00	1160.00	1440	5800.0	-
305	350	69	2.00	450.00	1300.00	1350	9300.0	-
330	380	80	2.10	620.00	1770.00	1260	12700.0	-
350	400	80	2.10	630.00	1850.00	1170	13400.0	-
370	420	80	2.10	640.00	1940.00	1080	14000.0	-
390	440	80	2.10	660.00	2020.00	1080	14800.0	-
415	480	100	2.10	1000.00	2900.00	990	26000.0	-

Designation			
NKS	RNA 48	RNA 49	RNA 69
-	RNA 4826	-	-
-	-	RNA 4926	-
-	RNA 4828	-	-
-	-	RNA 4928	-
-	RNA 4830	-	-
-	RNA 4832	-	-
-	RNA 4834	-	-
-	RNA 4836	-	-
-	RNA 4838	-	-
-	RNA 4840	-	-
-	RNA 4844	-	-
-	RNA 4848	-	-
-	RNA 4852	-	-
-	RNA 4856	-	-
-	RNA 4860	-	-
-	RNA 4864	-	-
-	RNA 4868	-	-
-	RNA 4872	-	-
-	RNA 4876	-	-



NKI (d≤ 30 mm)
NKIS
NA 49, NA 69 (d≤ 30 mm)
NA 48



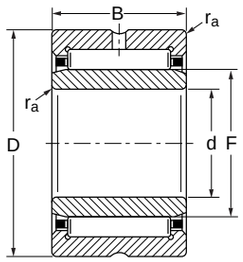
NA 69 (d ≥ 32 mm)

Basic Dimensions					Basic Load Ratings		Limiting Speed	Mass	
d	F	D	B	r_a	Dynamic C	Static C_0			NKI
mm	mm	mm	mm	max	kN	k.N	r/min	g	
5	8	15	12	0.30	3.95	4.10	28800	11.5	NKI 5/12
5	8	15	16	0.30	5.10	5.80	28800	15.3	NKI 5/16
6	9	16	12	0.30	4.50	5.00	27000	13.5	NKI 6/12
6	9	16	16	0.30	5.90	7.10	27000	17.4	NKI 6/16
7	10	17	12	0.30	4.75	5.50	26100	13.7	NKI 7/12
7	10	17	16	0.30	6.20	7.80	26100	18.2	NKI 7/16
9	12	19	12	0.30	6.40	7.10	24300	16.6	NKI 9/12
9	12	19	16	0.30	9.00	11.00	24300	21.9	NKI 9/16
10	14	22	16	0.30	10.10	11.50	22500	29.4	NKI 10/16
10	14	22	20	0.30	12.80	15.60	22500	37.1	NKI 10/20
10	14	22	13	0.30	8.50	9.20	22500	23	-
12	16	24	16	0.30	11.30	13.90	21600	33.3	NKI 12/16
12	16	24	20	0.30	14.40	18.80	21600	41.9	NKI 12/20
12	16	24	13	0.30	9.40	10.90	21600	26	-
12	16	24	22	0.30	16.00	21.60	21600	46	-
15	19	27	16	0.30	13.00	17.40	19800	38.8	NKI 15/16
15	19	27	20	0.30	16.50	23.60	19800	48.7	NKI 15/20
15	20	28	13	0.30	10.60	13.60	19800	34	-
15	20	28	23	0.30	17.30	25.50	19800	63.6	-
15	22	35	20	0.60	24.50	28.00	18000	92	-
17	21	29	16	0.30	13.50	18.70	18900	42.4	NKI 17/16
17	21	29	20	0.30	17.10	25.50	18900	53.4	NKI 17/20
17	22	30	13	0.30	11.00	14.60	18900	37	-
17	22	30	23	0.30	18.60	29.00	18900	72	-
17	24	37	20	0.60	26.00	31.00	16200	98	-
20	24	32	16	0.30	15.00	22.30	17100	49	NKI 20/16
20	24	32	20	0.30	19.00	30.50	17100	61	NKI 20/20
20	25	37	17	0.30	21.00	25.50	15300	75.2	-
20	25	37	30	0.30	36.00	51.00	15300	141	-
20	28	42	20	0.60	28.50	36.50	14400	129	-
22	26	34	16	0.30	15.30	23.60	16200	52	NKI 22/16
22	26	34	20	0.30	19.40	32.00	16200	65.4	NKI 22/20

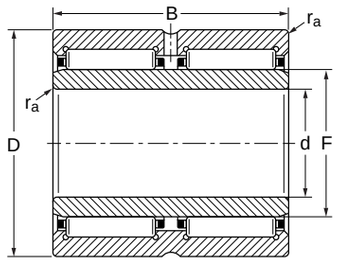
Designation			
NKIS	NA 48	NA 49	NA 69
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4900	-
-	-	-	-
-	-	-	-
-	-	NA 4901	-
-	-	-	NA 6901
-	-	-	-
-	-	-	-
-	-	NA 4902	-
-	-	-	NA 6902
NKIS 15	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4903	-
-	-	-	NA 6903
NKIS 17	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4904	-
-	-	-	NA 6904
NKIS 20	-	-	-
-	-	-	-
-	-	-	-

Needle Roller Bearings, with Inner Ring NIS™

10.06



NKI (d≤ 30 mm)
NKIS
NA 49, NA 69 (d≤ 30 mm)
NA 48



NA 69 (d ≥ 32 mm)

Basic Dimensions					Basic Load Ratings		Limiting Speed	Mass	
d	F	D	B	r_a	Dynamic C	Static C_0			NKI
mm	mm	mm	mm	max	kN	kN	r/min	g	
22	28	39	17	0.30	22.80	29.50	14400	80	-
22	28	39	30	0.30	37.50	55.00	14400	150	-
25	29	38	20	0.30	21.90	34.00	14400	79.4	NKI 25/20
25	29	38	30	0.30	32.50	57.00	14400	124	NKI 25/30
25	30	42	17	0.30	23.60	31.50	13500	88	-
25	30	42	30	0.30	39.00	59.00	13500	161	-
25	32	47	22	0.60	33.50	43.50	12600	162	-
28	32	42	20	0.30	23.10	37.50	12600	96.5	NKI 28/20
28	32	42	30	0.30	34.50	63.00	12600	146	NKI 28/30
28	32	45	17	0.30	24.40	33.50	11700	97.7	-
28	32	45	30	0.30	40.50	63.00	11700	182	-
30	35	45	20	0.30	24.30	41.50	11700	112	NKI 30/20
30	35	45	30	0.30	36.50	69.00	11700	170	NKI 30/30
30	35	47	17	0.30	25.00	35.50	11700	101	-
30	35	47	30	0.30	43.50	71.00	11700	192	-
30	37	52	22	0.60	36.50	50.00	10800	184	-
32	37	47	20	0.30	24.90	43.50	10800	118	NKI 32/20
32	37	47	30	0.30	37.00	73.00	10800	180	NKI 32/30
32	40	52	20	0.60	30.50	47.50	10800	158	-
32	40	52	36	0.60	47.00	82.00	10800	288	-
35	40	50	20	0.30	26.00	47.00	10800	127	NKI 35/20
35	40	50	30	0.30	39.00	79.00	10800	193	NKI 35/30
35	42	55	20	0.60	31.50	50.00	9900	170	-
35	42	55	36	0.60	48.00	86.00	9900	310	-
35	43	58	22	0.60	39.00	57.00	9900	220	-
38	43	53	20	0.30	27.00	51.00	9900	136	NKI 38/20
38	43	53	30	0.30	40.50	85.00	9900	207	NKI 38/30
40	45	55	20	0.30	27.50	53.00	9000	142	NKI 40/20
40	45	55	30	0.30	41.00	88.00	9000	216	NKI 40/30
40	48	62	22	0.60	43.00	67.00	8550	230	-
40	48	62	40	0.60	66.00	116.00	8550	430	-
40	50	65	22	1.00	42.50	67.00	8550	281	-

Designation			
NKIS	NA 48	NA 49	NA 69
-	-	NA 49/22	-
-	-	-	NA 69/22
-	-	-	-
-	-	-	-
-	-	NA 4905	-
-	-	-	NA 6905
NKIS 25	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 49/28	-
-	-	-	NA 69/28
-	-	-	-
-	-	-	-
-	-	NA 4906	-
-	-	-	NA 6906
NKIS 30	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 49/32	-
-	-	-	NA 69/32
-	-	-	-
-	-	-	-
-	-	NA 4907	-
-	-	-	NA 6907
NKIS 35	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4908	-
-	-	-	NA 6908
NKIS 40	-	-	-

Needle Roller Bearings, with Inner Ring NIS™

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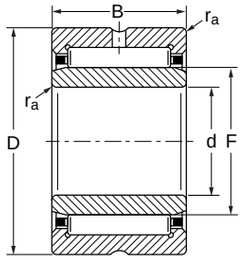
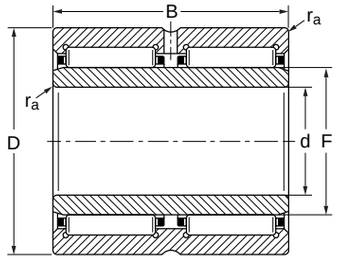


NKI (d≤ 30 mm)
NKIS
NA 49, NA 69 (d≤ 30 mm)
NA 48



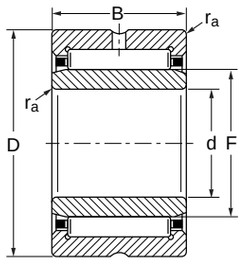
NA 69 (d ≥ 32 mm)

Basic Dimensions					Basic Load Ratings		Limiting Speed	Mass	
d	F	D	B	r_a	Dynamic C	Static C_0			
mm	mm	mm	mm	max	kN	kN	r/min	g	NKI
42	47	57	20	0.30	28.50	56.00	9000	148	NKI 42/20
42	47	57	30	0.30	43.00	94.00	9000	222	NKI 42/30
45	50	62	25	0.60	38.00	74.00	8100	229	NKI 45/25
45	50	62	35	0.60	50.00	105.00	8100	322	NKI 45/35
45	52	68	22	0.60	45.00	73.00	7650	271	-
45	52	68	40	0.60	69.00	127.00	7650	495	-
45	55	72	22	1.00	45.00	74.00	7650	336	-
50	55	68	25	0.60	40.00	82.00	7650	270	NKI 50/25
50	55	68	35	0.60	53.00	118.00	7650	379	NKI 50/35
50	58	72	22	0.60	47.00	80.00	7200	274	-
50	58	72	40	0.60	73.00	139.00	7200	515	-
50	60	80	28	1.10	63.00	98.00	6750	518	-
55	60	72	25	0.60	42.00	90.00	6750	272	NKI 55/25
55	60	72	35	0.60	56.00	130.00	6750	379	NKI 55/35
55	63	80	25	1.00	58.00	100.00	6750	393	-
55	63	80	45	1.00	90.00	176.00	6750	780	-
55	65	85	28	1.10	67.00	108.00	6300	558	-
60	68	82	25	0.60	43.50	89.00	6300	394	NKI 60/25
60	68	82	35	0.60	62.00	139.00	6300	553	NKI 60/35
60	68	85	25	1.00	60.00	108.00	6300	426	-
60	68	85	45	1.00	94.00	191.00	6300	808	-
60	70	90	28	1.10	68.00	113.00	5850	560	-
65	73	90	25	1.00	53.00	100.00	5850	467	NKI 65/25
65	73	90	35	1.00	75.00	156.00	5850	659	NKI 65/35
65	72	90	25	1.00	61.00	112.00	5850	456	-
65	72	90	45	1.00	95.00	198.00	5850	833	-
65	75	95	28	1.10	71.00	123.00	5400	641	-
70	80	95	25	1.00	56.00	119.00	5400	521	NKI 70/25
70	80	95	35	1.00	78.00	184.00	5400	737	NKI 70/35
70	80	100	30	1.00	84.00	156.00	5400	728	-
70	80	100	54	1.00	128.00	265.00	5400	1340	-
75	85	105	25	1.00	69.00	123.00	4950	641	NKI 75/25

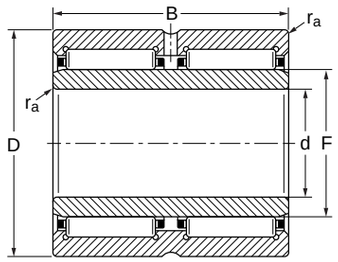
Designation			
NKIS	NA 48	NA 49	NA 69
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4909	-
-	-	-	NA 6909
NKIS 45	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4910	-
-	-	-	NA 6910
NKIS 50	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4911	-
-	-	-	NA 6911
NKIS 55	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4912	-
-	-	-	NA 6912
NKIS 60	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4913	-
-	-	-	NA 6913
NKIS 65	-	-	-
-	-	-	-
-	-	-	-
-	-	NA 4914	-
-	-	-	NA 6914
-	-	-	-

Needle Roller Bearings, with Inner Ring

10.06



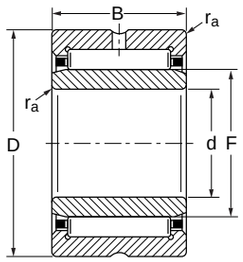
NKI (d≤ 30 mm)
NKIS
NA 49, NA 69 (d≤ 30 mm)
NA 48



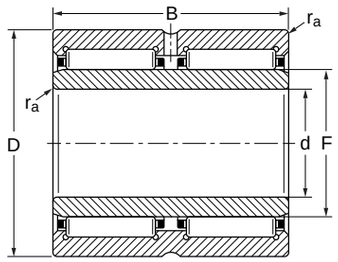
NA 69 (d ≥ 32 mm)

Basic Dimensions					Basic Load Ratings		Limiting Speed	Mass	
d	F	D	B	r_a	Dynamic C	Static C_0			NKI
mm	mm	mm	mm	max	kN	k.N	r/min	g	
75	85	105	35	1.00	98.00	193.00	4950	908	NKI 75/35
75	85	105	30	1.00	86.00	162.00	4950	775	-
75	85	105	54	1.00	130.00	275.00	4950	1450	-
80	90	110	25	1.00	72.00	132.00	4500	677	NKI 80/25
80	90	110	35	1.00	103.00	208.00	4500	959	NKI 80/35
80	90	110	30	1.00	89.00	174.00	4500	878	-
80	90	110	54	1.00	135.00	300.00	4500	1522	-
85	95	115	26	1.00	73.00	137.00	4410	743	NKI 85/26
85	95	115	36	1.00	107.00	223.00	4410	1040	NKI 85/36
85	100	120	35	1.10	111.00	237.00	4320	1250	-
85	100	120	63	1.10	166.00	400.00	4320	2200	-
90	100	120	26	1.00	76.00	146.00	4230	778	NKI 90/26
90	100	120	36	1.00	111.00	237.00	4230	1090	NKI 90/36
90	105	125	35	1.10	114.00	250.00	4140	1312	-
90	105	125	63	1.10	172.00	425.00	4140	2310	-
95	105	125	26	1.00	78.00	155.00	4050	816	NKI 95/26
95	105	125	36	1.00	114.00	250.00	4050	1145	NKI 95/36
95	110	130	35	1.10	116.00	260.00	3960	1371	-
95	110	130	63	1.10	174.00	440.00	3960	2500	-
100	110	130	30	1.10	98.00	210.00	3870	990	NKI 100/30
100	110	130	40	1.10	127.00	290.00	3870	1330	NKI 100/40
100	115	140	40	1.10	128.00	270.00	3690	1900	-
110	125	150	40	1.10	132.00	290.00	3420	2070	-
110	120	140	30	1.00	94.00	216.00	3510	1080	-
120	135	165	45	1.10	181.00	390.00	3060	2860	-
120	130	150	30	1.00	68.00	113.00	3240	1170	-
130	145	165	35	1.10	118.00	310.00	2970	1810	-
130	150	180	50	1.50	203.00	470.00	2880	3900	-
140	155	175	35	1.10	120.00	325.00	2790	1920	-
140	160	190	50	1.50	209.00	500.00	2700	4150	-
150	165	190	40	1.10	152.00	400.00	2610	2720	-
160	175	200	40	1.10	160.00	435.00	2430	2890	-

Designation			
NKIS	NA 48	NA 49	NA 69
-	-	-	-
-	-	NA 4915	-
-	-	-	NA 6915
-	-	-	-
-	-	-	-
-	-	NA 4916	-
-	-	-	NA 6916
-	-	-	-
-	-	-	-
-	-	NA 4917	-
-	-	-	NA 6917
-	-	-	-
-	-	-	-
-	-	NA 4918	-
-	-	-	NA 6918
-	-	-	-
-	-	-	-
-	-	NA 4919	-
-	-	-	NA 6919
-	-	-	-
-	-	-	-
-	-	NA 4920	-
-	-	NA 4922	-
-	NA 4822	-	-
-	-	NA 4924	-
-	NA 4824	-	-
-	NA 4826	-	-
-	-	NA 4926	-
-	NA 4828	-	-
-	-	NA 4928	-
-	NA 4830	-	-
-	NA 4832	-	-



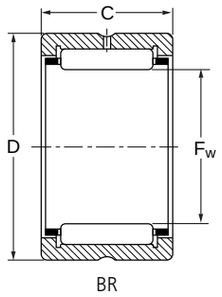
NKI (d≤ 30 mm)
NKIS
NA 49, NA 69 (d≤ 30 mm)
NA 48



NA 69 (d ≥ 32 mm)

Basic Dimensions					Basic Load Ratings		Limiting Speed	Mass	
d mm	F mm	D mm	B mm	r_a max	Dynamic C kN	Static C_O k.N	r/min	g	NKI
170	185	215	45	1.10	185.00	510.00	2250	3960	-
180	195	225	45	1.10	194.00	550.00	2160	4200	-
190	210	240	50	1.50	227.00	690.00	2070	5610	-
200	220	250	50	1.50	230.00	720.00	1980	5840	-
220	240	270	50	1.50	243.00	790.00	1800	6380	-
240	265	300	60	2.00	355.00	1080.00	1620	10000	-
260	285	320	60	2.00	370.00	1160.00	1530	10600	-
280	305	350	69	2.00	450.00	1300.00	1440	15300	-
300	330	380	80	2.10	620.00	1770.00	1260	21800	-
320	350	400	80	2.10	630.00	1850.00	1260	23000	-
340	370	420	80	2.10	640.00	1940.00	1170	24200	-
360	390	440	80	2.10	660.00	2020.00	1080	25600	-
380	415	480	100	2.10	1000.00	2900.00	990	42600	-

Designation			
NKIS	NA 48	NA 49	NA 69
-	NA 4834	-	-
-	NA 4836	-	-
-	NA 4838	-	-
-	NA 4840	-	-
-	NA 4844	-	-
-	NA 4848	-	-
-	NA 4852	-	-
-	NA 4856	-	-
-	NA 4860	-	-
-	NA 4864	-	-
-	NA 4868	-	-
-	NA 4872	-	-
-	NA 4876	-	-

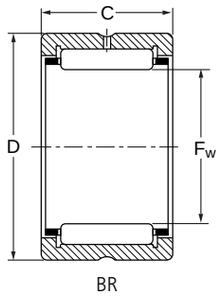


Basic Dimensions						Basic Load Ratings		Mass	Designation
F_w		D		C		Dynamic	Static		
inch	mm	inch	mm	inch	mm	kN	kN	g	Sealed Type BR
5/8	15.875	1 1/8	28.575	3/4	19.050	17.023	17.728	49.0	BR 101812
3/4	19.050	1 1/4	31.750	3/4	19.050	19.580	21.962	56.0	BR 122012
3/4	19.050	1 1/4	31.750	1	25.400	24.784	29.812	75.0	BR 122016
7/8	22.225	1 3/8	34.925	3/4	19.050	20.639	24.431	63.0	BR 142212
7/8	22.225	1 3/8	34.925	1	25.400	26.195	33.163	84.5	BR 142216
1	25.400	1 1/2	38.100	3/4	19.050	22.756	28.665	69.0	BR 162412
1	25.400	1 1/2	38.100	1	25.400	28.930	38.984	92.5	BR 162416
1 1/8	28.575	1 5/8	41.275	1	25.400	31.399	44.894	102.0	BR 182616
1 1/8	28.575	1 5/8	41.275	1 1/4	31.750	38.896	59.006	128.0	BR 182620
1 1/4	31.750	1 3/4	44.450	1	25.400	32.369	48.069	110.0	BR 202816
1 1/4	31.750	1 3/4	44.450	1 1/4	31.750	40.131	63.328	138.0	BR 202820
1 3/8	34.925	1 7/8	47.625	1	25.400	34.663	53.978	119.0	BR 223016
1 3/8	34.925	1 7/8	47.625	1 1/4	31.750	42.953	71.089	149.0	BR 223020
1 1/2	38.100	2 1/16	52.388	1	25.400	39.337	60.152	149.0	BR 243316
1 1/2	38.100	2 1/16	52.388	1 1/4	31.750	48.775	79.204	187.0	BR 243320
1 5/8	41.275	2 3/16	55.562	1	25.400	40.307	63.769	158.0	BR 263516
1 5/8	41.275	2 3/16	55.562	1 1/4	31.750	50.009	84.055	199.0	BR 263520
1 3/4	44.450	2 5/16	58.738	1	25.400	42.777	70.384	170.0	BR 283716
1 3/4	44.450	2 5/16	58.738	1 1/4	31.750	53.008	92.610	215.0	BR 283720
1 3/4	44.450	2 3/8	60.325	1 1/4	31.750	53.008	92.610	250.0	BR 283820
1 7/8	47.625	2 7/16	61.912	1 1/4	31.750	54.067	97.020	225.0	BR 303920
2	50.800	2 9/16	65.088	1	25.400	45.864	80.350	190.0	BR 324116
2	50.800	2 9/16	65.088	1 1/4	31.750	56.801	105.840	240.0	BR 324120

NIS™ Needle Roller Bearings, without Inner Ring - Inch Sizes

Designation		
HJ	MR	NCS
HJ-101812	MR-10-N	NCS 1012
HJ-122012	MR-12-N	NCS 1212
HJ-122016	MR-12	NCS 1216
HJ-142212	MR-14-N	NCS 1412
HJ-142216	MR-14	NCS 1416
HJ-162412	MR-16-N	NCS 1612
HJ-162416	MR-16	NCS 1616
HJ-182616	MR-18-N	NCS 1816
HJ-182620	MR-18	NCS 1820
HJ-202816	MR-20-N	NCS 2016
HJ-202820	MR-20	NCS 2020
HJ-223016	MR-22-N	NCS 2216
HJ-223020	MR-22	NCS 2220
HJ-243316	MR-24-N	NCS 2416
HJ-243320	MR-24	NCS 2420
HJ-263516	MR-26-N	NCS 2616
HJ-263520	MR-26	NCS 2620
HJ-283716	MR-28-N	NCS 2816
HJ-283720	MR-28-N	NCS 2820
-	-	-
HJ-303920	MR-30	NCS 3020
HJ-324116	MR-32-N	NCS 3216
HJ-324120	MR-32	NCS 3220

10.07



Basic Dimensions						Basic Load Ratings		Mass	Designation
F_w		D		C		Dynamic	Static		
inch	mm	inch	mm	inch	mm	kN	kN	g	Sealed Type BR
2 1/4	57.150	3	76.200	1 1/2	38.100	81.144	142.002	435.0	BR 364824
2 1/4	57.150	3	76.200	1 3/4	44.450	94.374	171.990	510.0	BR 364828
2 1/2	63.500	3 1/4	82.550	1 1/2	38.100	85.025	156.114	475.0	BR 405224
2 1/2	63.500	3 1/4	82.550	1 3/4	44.450	98.784	188.748	555.0	BR 405228
2 3/4	69.850	3 1/2	88.900	1 1/2	38.100	89.082	170.226	510.0	BR 445624
2 3/4	69.850	3 1/2	88.900	1 3/4	44.450	103.194	205.506	600.0	BR 445628
3	76.200	3 3/4	95.250	1 1/2	38.100	94.374	190.512	555.0	BR 486024
3	76.200	3 3/4	95.250	1 3/4	44.450	109.368	230.202	650.0	BR 486028
3 1/4	82.550	4 1/4	107.950	1 3/4	44.450	127.008	232.848	990.0	BR 526828
3 1/4	82.550	4 1/4	107.950	2	50.800	138.474	260.190	1140.0	BR 526832
3 1/2	88.900	4 1/2	114.300	2	50.800	145.530	283.122	1220.0	BR 567232
3 3/4	95.250	4 3/4	120.650	2	50.800	151.704	307.818	1290.0	BR 607632
4	101.600	5	127.000	2	50.800	158.760	330.750	1370.0	BR 648032

Needle Roller Bearings, without Inner Ring - Inch Sizes

Designation		
HJ	MR	NCS
HJ-364824	MR-36-N	NCS 3624
HJ-364828	MR-36	-
HJ-405224	MR-40-N	NCS 4024
HJ-405228	MR-40	-
HJ-445624	MR-44-N	NCS 4424
HJ-445628	MR-44	-
HJ-486024	MR-48-N	NCS 4824
HJ-486028	MR-48	-
HJ-526828	MR-52	NCS 5228
HJ-526832	-	NCS 5232
HJ-567232	MR-56	NCS 5632
HJ-607632	MR-60	-
HJ-648032	MR-64	-

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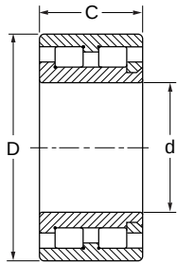
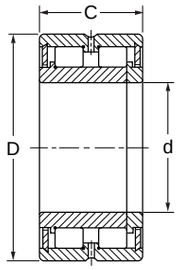
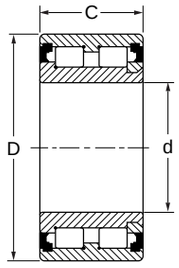


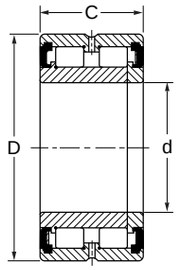
NAG 49
(d ≧ 17)



NAG 49

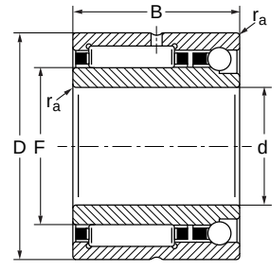


NAG 49..UU
(d ≦ 17)

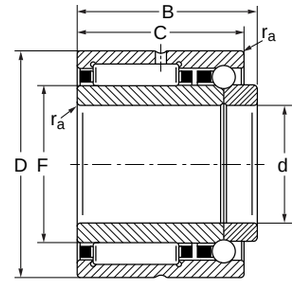


NAG 49..UU

Basic Dimensions			Basic Load Ratings		Designation	Mass	Designation	Mass
			Dynamic	Static				
d	D	B	C	C_0	Open Type	Open	Sealed Type	Sealed
mm	mm	mm	kN	kN	NAG 49	g	NAG 49..U	g
10	22	13	10.672	12.701	NAG 4900	25.5	NAG 4900 UU	25.5
12	24	13	11.466	14.200	NAG 4901	28.5	NAG 4901 UU	28.5
15	28	13	13.054	17.905	NAG 4902	38.0	NAG 4902 UU	38.0
17	30	13	13.671	19.404	NAG 4903	41.0	NAG 4903 UU	41.0
20	37	17	17.816	23.020	NAG 4904	76.5	NAG 4904 UU	76.5
25	42	17	19.933	28.312	NAG 4905	89.5	NAG 4905 UU	89.5
30	47	17	21.521	32.546	NAG 4906	103.0	NAG 4906 UU	103.0
35	55	20	32.281	52.479	NAG 4907	172.0	NAG 4907 UU	172.0
40	62	22	38.896	59.447	NAG 4908	225.0	NAG 4908 UU	225.0
45	68	22	40.925	65.621	NAG 4909	265.0	NAG 4909 UU	265.0
50	72	22	43.042	71.795	NAG 4910	270.0	NAG 4910 UU	270.0
55	80	25	53.978	92.610	NAG 4911	395.0	NAG 4911 UU	395.0
60	85	25	56.272	100.548	NAG 4912	425.0	NAG 4912 UU	425.0
65	90	25	58.653	108.486	NAG 4913	455.0	NAG 4913 UU	455.0
70	100	30	83.173	156.114	NAG 4914	725.0	NAG 4914 UU	725.0
75	105	30	85.642	164.052	NAG 4915	775.0	NAG 4915 UU	775.0
80	110	30	89.082	176.400	NAG 4916	815.0	NAG 4916 UU	815.0
85	120	35	116.424	219.618	NAG 4917	1190.0	NAG 4917 UU	1190.0
90	125	35	119.952	231.084	NAG 4918	1250.0	NAG 4918 UU	1250.0
95	130	35	122.598	243.432	NAG 4919	1300.0	NAG 4919 UU	1300.0
100	140	40	157.878	315.756	NAG 4920	1850.0	NAG 4920 UU	1850.0
110	150	40	164.052	339.570	NAG 4922	2010.0	NAG 4922 UU	2010.0
120	165	45	207.270	440.118	NAG 4924	2780.0	NAG 4924 UU	2780.0
130	180	50	238.140	505.386	NAG 4926	3750.0	NAG 4926 UU	3750.0
140	190	50	247.842	542.430	NAG 4928	3990.0	NAG 4928 UU	3990.0

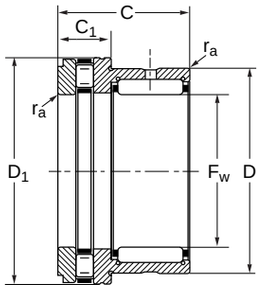


NKIA

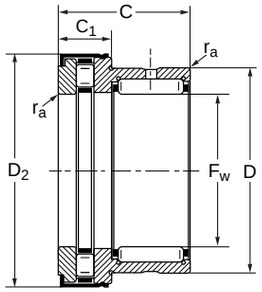


NKIB

Basic Dimensions						Basic Load Ratings		Limiting Speed	Designation	Mass
						Dynamic	Static			
d	F	D	B	C	r_a	C	C_0			
mm	mm	mm	mm	mm	max	kN	kN	r/min		g
12	16	24	16	-	0.3	6.8	7.5	21600	NKIA 5901	40
12	16	24	17.5	16	0.3	6.8	7.5	21600	NKIB 5901	43
15	20	28	18	-	0.3	9.5	12.2	19800	NKIA 5902	50
15	20	28	20	18	0.3	9.5	12.2	19800	NKIB 5902	52
17	22	30	18	-	0.3	9.9	13.1	18900	NKIA 5903	56
17	22	30	20	18	0.3	9.9	13.1	18900	NKIB 5903	58
20	25	37	23	-	0.3	18.9	23.0	15300	NKIA 5904	103
20	25	37	25	23	0.3	18.9	23.0	15300	NKIB 5904	107
22	28	39	23	-	0.3	20.5	26.6	14400	NKIA 59/22	118
22	28	39	25	23	0.3	20.5	26.6	14400	NKIB 59/22	122
25	30	42	23	-	0.3	21.2	28.4	13500	NKIA 5905	130
25	30	42	25	23	0.3	21.2	28.4	13500	NKIB 5905	134
30	35	47	23	-	0.3	22.5	32.0	11700	NKIA 5906	147
30	35	47	25	23	0.3	22.5	32.0	11700	NKIB 5906	151
35	42	55	27	-	0.6	28.4	45.0	9900	NKIA 5907	243
35	42	55	30	27	0.6	28.4	45.0	9900	NKIB 5907	247
40	48	62	30	-	0.6	38.7	60.3	8550	NKIA 5908	315
40	48	62	34	30	0.6	38.7	60.3	8550	NKIB 5908	320
45	52	68	30	-	0.6	40.5	65.7	7650	NKIA 5909	375
45	52	68	34	30	0.6	40.5	65.7	7650	NKIB 5909	380
50	58	72	30	-	0.6	42.3	72.0	7200	NKIA 5910	380
50	58	72	34	30	0.6	42.3	72.0	7200	NKIB 5910	385
55	63	80	34	-	1.0	52.2	90.0	6750	NKIA 5911	550
55	63	80	38	34	1.0	52.2	90.0	6750	NKIB 5911	555
60	68	85	34	-	1.0	54.0	97.2	6300	NKIA 5912	590
60	68	85	38	34	1.0	54.0	97.2	6300	NKIB 5912	595
65	72	90	34	-	1.0	54.9	100.8	5850	NKIA 5913	635
65	72	90	38	34	1.0	54.9	100.8	5850	NKIB 5913	640
70	80	100	40	-	1.0	75.6	140.4	5400	NKIA 5914	980
70	80	100	45	40	1.0	75.6	140.4	5400	NKIB 5914	985

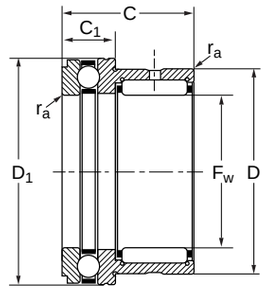


NKXR

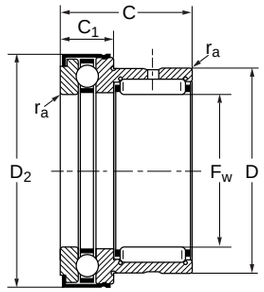


NKXR..Z

Basic Dimensions							Basic Load Ratings		Limiting Speed	Designation	Mass	Basic Load Ratings		Limiting Speed
							Dynamic	Static				Dynamic	Static	
F_w	D	D_1	D_2	C	C_1	r_a	C	C_0				C	C_0	nG
mm	mm	mm	mm	mm	mm	max	kN	kN	r/min		g	kN	kN	r/min
15	24	28.1	29.2	23	9	0.3	9.63	11.43	11700	NKXR 15	42	10.7	12.7	13000
17	26	30.1	31.2	25	9	0.3	10.71	13.5	10800	NKXR 17	50	11.9	15	12000
20	30	35.1	36.2	30	10	0.3	14.76	21.42	9000	NKXR 20	80	16.4	23.8	10000
25	37	42.1	43.2	30	11	0.6	16.92	27.45	7650	NKXR 25	120	18.8	30.5	8500
30	42	47.1	48.2	30	11	0.6	20.34	32.4	6750	NKXR 30	135	22.6	36	7500
35	47	52.1	53.2	30	12	0.6	21.87	37.35	5850	NKXR 35	157	24.3	41.5	6500
40	52	60.1	61.2	32	13	0.6	23.4	42.3	5400	NKXR 40	204	26	47	6000
45	58	65.2	66.5	32	14	0.6	24.75	47.7	4500	NKXR 45	244	27.5	53	5000
50	62	70.2	71.5	35	14	0.6	34.2	66.6	4320	NKXR 50	268	38	74	4800

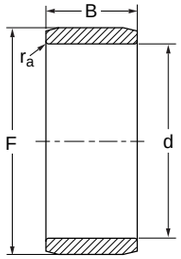


NKX



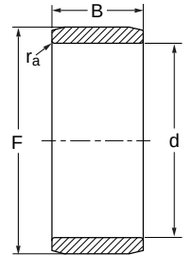
NKX..Z

Basic Dimensions							Basic Load Ratings		Limiting Speed	Designation	Mass	Basic Load Ratings		Limiting Speed
							Dynamic	Static				Dynamic	Static	
F_w	D	D_1	D_2	C	C_1	r_a	C	C_0				C	C_0	nG
mm	mm	mm	mm	mm	mm	max	kN	kN	r/min		g	kN	kN	r/min
12	21	26.1	27.2	23	9	0.3	8.1	9.9	9900	NKX 12	38	9	11	11000
15	24	28.1	29.2	23	9	0.3	9.63	11.43	8550	NKX 15	44	10.7	12.7	9500
17	26	30.1	31.2	25	9	0.3	10.71	13.5	7650	NKX 17	53	11.9	15	8500
20	30	35.1	36.2	30	10	0.3	14.76	21.42	6750	NKX 20	83	16.4	23.8	7500
25	37	42.1	43.2	30	11	0.6	16.92	27.45	5400	NKX 25	125	18.8	30.5	6000
30	42	47.1	48.2	30	11	0.6	20.34	32.4	4500	NKX 30	141	22.6	36	5000
35	47	52.1	53.2	30	12	0.6	21.87	37.35	4140	NKX 35	163	24.3	41.5	4600
40	52	60.1	61.2	32	13	0.6	23.4	42.3	3600	NKX 40	200	26	47	4000
45	58	65.2	66.5	32	14	0.6	24.75	47.7	3240	NKX 45	252	27.5	53	3600
50	62	70.2	71.5	35	14	0.6	34.2	66.6	2970	NKX 50	280	38	74	3300
60	72	85.2	86.5	40	17	1	37.8	81	2520	NKX 60	360	42	90	2800
70	85	95.2	96.5	40	18	1	40.05	82.8	2160	NKX 70	500	44.5	92	2400



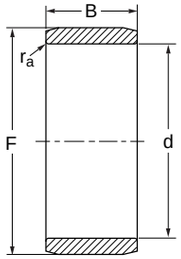
Inner Ring - IR

Basic Dimensions				Mass	Designation
d mm	F mm	B mm	r_a max	g	
5	8	12	0.3	2.8	IR 5 x 8 x 12
5	8	16	0.3	3.7	IR 5 x 8 x 16
6	9	12	0.3	3.0	IR 6 x 9 x 12
6	9	16	0.3	4.3	IR 6 x 9 x 16
6	10	10	0.3	3.7	IR 6 x 10 x 10
6	10	12	0.3	4.6	IR 6 x 10 x 12
7	10	10.5	0.3	3.1	IR 7 x 10 x 10.5
7	10	12	0.3	3.6	IR 7 x 10 x 12
7	10	16	0.3	4.9	IR 7 x 10 x 16
8	12	10	0.3	4.8	IR 8 x 12 x 10
8	12	10.5	0.3	5.0	IR 8 x 12 x 10.5
8	12	12	0.3	5.6	IR 8 x 12 x 12
8	12	12.5	0.3	5.9	IR 8 x 12 x 12.5
9	12	12	0.3	4.4	IR 9 x 12 x 12
9	12	16	0.3	6.0	IR 9 x 12 x 16
10	13	12.5	0.3	5.2	IR 10 x 13 x 12.5
10	14	12	0.3	7.3	IR 10 x 14 x 12
10	14	13	0.3	7.4	IR 10 x 14 x 13
10	14	14	0.3	8.1	IR 10 x 14 x 14
10	14	16	0.3	9.2	IR 10 x 14 x 16
10	14	20	0.3	11.5	IR 10 x 14 x 20
12	15	12	0.3	5.7	IR 12 x 15 x 12
12	15	12.5	0.3	6.1	IR 12 x 15 x 12.5
12	15	16	0.3	7.6	IR 12 x 15 x 16
12	15	16.5	0.3	8.1	IR 12 x 15 x 16.5
12	15	22.5	0.3	10.9	IR 12 x 15 x 22.5
12	16	12	0.3	7.9	IR 12 x 16 x 12
12	16	13	0.3	8.5	IR 12 x 16 x 13
12	16	14	0.3	9.4	IR 12 x 16 x 14
12	16	16	0.3	10.7	IR 12 x 16 x 16
12	16	20	0.3	13.5	IR 12 x 16 x 20
12	16	22	0.3	14.9	IR 12 x 16 x 22



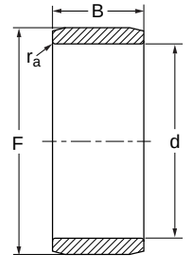
Inner Ring - IR

Basic Dimensions				Mass	Designation
d mm	F mm	B mm	r_a max	g	
14	17	17	0.3	9.5	IR 14 x 17 x 17
15	18	16	0.3	9.4	IR 15 x 18 x 16
15	18	16.5	0.3	9.8	IR 15 x 18 x 16.5
15	19	16	0.3	12.9	IR 15 x 19 x 16
15	19	20	0.3	16.3	IR 15 x 19 x 20
15	20	12	0.3	12.2	IR 15 x 20 x 12
15	20	13	0.3	13.5	IR 15 x 20 x 13
15	20	14	0.3	14.6	IR 15 x 20 x 14
15	20	23	0.3	24.4	IR 15 x 20 x 23
17	20	16	0.3	10.6	IR 17 x 20 x 16
17	20	16.5	0.3	11.1	IR 17 x 20 x 16.5
17	20	20	0.3	13.5	IR 17 x 20 x 20
17	20	20.5	0.3	13.8	IR 17 x 20 x 20.5
17	20	30.5	0.3	20.6	IR 17 x 20 x 30.5
17	21	16	0.3	15.0	IR 17 x 21 x 16
17	21	20	0.3	18.0	IR 17 x 21 x 20
17	22	13	0.3	14.9	IR 17 x 22 x 13
17	22	14	0.3	16.4	IR 17 x 22 x 14
17	22	16	0.3	18.4	IR 17 x 22 x 16
17	22	23	0.3	27.1	IR 17 x 22 x 23
17	24	20	0.6	33.8	IR 17 x 24 x 20
20	24	16	0.3	15.0	IR 20 x 24 x 16
20	24	20	0.3	21.3	IR 20 x 24 x 20
20	25	16	0.3	24.0	IR 20 x 25 x 16
20	25	17	0.3	25.0	IR 20 x 25 x 17
20	25	18	0.3	24.2	IR 20 x 25 x 18
20	25	20	0.3	27.5	IR 20 x 25 x 20
20	25	20.5	0.3	27.4	IR 20 x 25 x 20.5
20	25	26.5	0.3	38.0	IR 20 x 25 x 26.5
20	25	30	0.3	40.4	IR 20 x 25 x 30
20	25	38.5	0.3	52.5	IR 20 x 25 x 38.5
20	28	20	0.6	45.2	IR 20 x 28 x 20



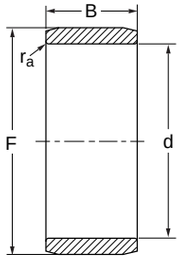
Inner Ring - IR

Basic Dimensions				Mass	Designation
d mm	F mm	B mm	r_a max	g	
22	26	16	0.3	18.2	IR 22 x 26 x 16
22	26	20	0.3	23.0	IR 22 x 26 x 20
22	28	17	0.3	29.5	IR 22 x 28 x 17
22	28	20	0.3	35.0	IR 22 x 28 x 20
22	28	20.5	0.3	36.0	IR 22 x 28 x 20.5
22	28	30	0.3	54.4	IR 22 x 28 x 30
25	29	20	0.3	25.9	IR 25 x 29 x 20
25	29	30	0.3	39.3	IR 25 x 29 x 30
25	30	16	0.3	25.7	IR 25 x 30 x 16
25	30	17	0.3	27.4	IR 25 x 30 x 17
25	30	18	0.3	29.8	IR 25 x 30 x 18
25	30	20	0.3	32.8	IR 25 x 30 x 20
25	30	20.5	0.3	33.4	IR 25 x 30 x 20.5
25	30	26.5	0.3	46.0	IR 25 x 30 x 26.5
25	30	30	0.3	53.0	IR 25 x 30 x 30
25	30	32	0.3	56.0	IR 25 x 30 x 32
25	30	38.5	0.3	64.5	IR 25 x 30 x 38.5
25	32	22	0.6	52.5	IR 25 x 32 x 22
28	32	17	0.3	24.5	IR 28 x 32 x 17
28	32	20	0.3	28.5	IR 28 x 32 x 20
28	32	30	0.3	43.5	IR 28 x 32 x 30
30	35	13	0.3	25.0	IR 30 x 35 x 13
30	35	16	0.3	34.0	IR 30 x 35 x 16
30	35	17	0.3	36.0	IR 30 x 35 x 17
30	35	18	0.3	35.1	IR 30 x 35 x 18
30	35	20	0.3	39.0	IR 30 x 35 x 20
30	35	20.5	0.3	39.7	IR 30 x 35 x 20.5
30	35	26	0.3	50.4	IR 30 x 35 x 26
30	35	30	0.3	58.5	IR 30 x 35 x 30
30	37	18	0.6	50.0	IR 30 x 37 x 18
30	37	22	0.6	61.6	IR 30 x 37 x 22
30	38	20	0.6	77.0	IR 30 x 38 x 20



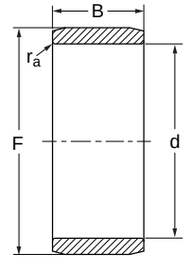
Inner Ring - IR

Basic Dimensions				Mass	Designation
d mm	F mm	B mm	r_a max	g	
32	37	20	0.3	42.0	IR 32 x 37 x 20
32	37	30	0.3	62.0	IR 32 x 37 x 30
32	40	20	0.6	68.0	IR 32 x 40 x 20
32	40	36	0.6	124.0	IR 32 x 40 x 36
33	37	13	0.3	21.9	IR 33 x 37 x 13
35	40	17	0.3	37.8	IR 35 x 40 x 17
35	40	20	0.3	44.2	IR 35 x 40 x 20
35	40	20.5	0.3	46.1	IR 35 x 40 x 20.5
35	40	30	0.3	67.1	IR 35 x 40 x 30
35	42	20	0.6	63.9	IR 35 x 42 x 20
35	42	21	0.6	68.0	IR 35 x 42 x 21
35	42	23	0.6	74.7	IR 35 x 42 x 23
35	42	36	0.6	117.0	IR 35 x 42 x 36
35	43	22	0.6	82.0	IR 35 x 43 x 22
38	43	20	0.3	48.1	IR 38 x 43 x 20
38	43	30	0.3	73.6	IR 38 x 43 x 30
40	45	17	0.3	42.5	IR 40 x 45 x 17
40	45	20	0.3	50.8	IR 40 x 45 x 20
40	45	20.5	0.3	51.8	IR 40 x 45 x 20.5
40	45	30	0.3	84.0	IR 40 x 45 x 30
40	48	22	0.6	91.6	IR 40 x 48 x 22
40	48	23	0.6	97.5	IR 40 x 48 x 23
40	48	40	0.6	170.0	IR 40 x 48 x 40
40	50	20	1.0	106.0	IR 40 x 50 x 20
40	50	22	1.0	118.0	IR 40 x 50 x 22
42	47	20	0.3	52.8	IR 42 x 47 x 20
42	47	30	0.3	81.0	IR 42 x 47 x 30
45	50	25	0.3	70.8	IR 45 x 50 x 25
45	50	25.5	0.3	75.1	IR 45 x 50 x 25.5
45	50	35	0.6	101.0	IR 45 x 50 x 35
45	52	22	0.6	89.0	IR 45 x 52 x 22
45	52	23	0.6	93.9	IR 45 x 52 x 23



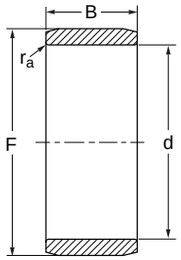
Inner Ring - IR

Basic Dimensions				Mass	Designation
d mm	F mm	B mm	r_a max	g	
45	52	40	0.6	164.0	IR 45 x 52 x 40
45	55	20	1.0	117.0	IR 45 x 55 x 20
45	55	22	1.0	129.0	IR 45 x 55 x 22
50	55	20	0.6	62.5	IR 50 x 55 x 20
50	55	25	0.6	78.0	IR 50 x 55 x 25
50	55	35	0.6	112.0	IR 50 x 55 x 35
50	58	22	0.6	115.0	IR 50 x 58 x 22
50	58	23	0.6	119.0	IR 50 x 58 x 23
50	58	40	0.6	208.0	IR 50 x 58 x 40
50	60	20	1.0	128.0	IR 50 x 60 x 20
50	60	25	1.0	162.0	IR 50 x 60 x 25
50	60	28	1.1	181.0	IR 50 x 60 x 28
55	60	25	0.6	85.5	IR 55 x 60 x 25
55	60	35	0.6	121.0	IR 55 x 60 x 35
55	63	25	1.0	141.0	IR 55 x 63 x 25
55	63	45	1.0	256.0	IR 55 x 63 x 45
55	65	28	1.1	198.0	IR 55 x 65 x 28
60	68	25	1.0	152.0	IR 60 x 68 x 25
60	68	35	0.6	213.0	IR 60 x 68 x 35
60	68	45	1.0	276.0	IR 60 x 68 x 45
60	70	25	1.0	195.0	IR 60 x 70 x 25
60	70	28	1.1	215.0	IR 60 x 70 x 28
65	72	25	1.0	141.0	IR 65 x 72 x 25
65	72	45	1.0	259.0	IR 65 x 72 x 45
65	73	25	1.0	164.0	IR 65 x 73 x 25
65	73	35	1.0	231.0	IR 65 x 73 x 35
65	75	28	1.1	229.0	IR 65 x 75 x 28
70	80	25	1.0	221.0	IR 70 x 80 x 25
70	80	30	1.0	267.0	IR 70 x 80 x 30
70	80	35	1.0	312.0	IR 70 x 80 x 35
70	80	54	1.0	488.0	IR 70 x 80 x 54
75	85	25	1.0	238.0	IR 75 x 85 x 25



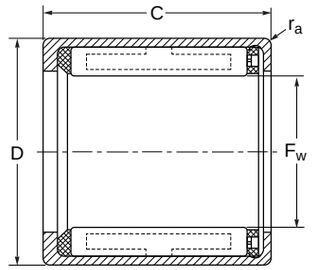
Inner Ring - IR

Basic Dimensions				Mass	Designation
d mm	F mm	B mm	r_a max	g	
75	85	30	1.0	287.0	IR 75 x 85 x 30
75	85	35	1.0	336.0	IR 75 x 85 x 35
75	85	54	1.0	520.0	IR 75 x 85 x 54
80	90	25	1.0	253.0	IR 80 x 90 x 25
80	90	30	1.0	304.0	IR 80 x 90 x 30
80	90	35	1.0	355.0	IR 80 x 90 x 35
80	90	54	1.0	556.0	IR 80 x 90 x 54
85	95	26	1.0	277.0	IR 85 x 95 x 26
85	95	36	1.0	388.0	IR 85 x 95 x 36
85	100	35	1.1	582.0	IR 85 x 100 x 35
85	100	63	1.1	1054.0	IR 85 x 100 x 63
90	100	26	1.0	294.0	IR 90 x 100 x 26
90	100	30	1.0	340.0	IR 90 x 100 x 30
90	100	36	1.0	406.0	IR 90 x 100 x 36
90	105	35	1.1	610.0	IR 90 x 105 x 35
90	105	63	1.1	1110.0	IR 90 x 105 x 63
95	105	26	1.0	313.0	IR 95 x 105 x 26
95	105	36	1.0	431.0	IR 95 x 105 x 36
95	110	35	1.1	657.0	IR 95 x 110 x 35
95	110	63	1.1	1170.0	IR 95 x 110 x 63
100	110	30	1.1	350.0	IR 100 x 110 x 30
100	110	40	1.1	505.0	IR 100 x 110 x 40
100	115	40	1.1	797.0	IR 100 x 115 x 40
110	120	30	1.0	409.0	IR 110 x 120 x 30
110	125	40	1.1	840.0	IR 110 x 125 x 40
120	130	30	1.0	442.0	IR 120 x 130 x 30
120	135	45	1.1	1044.0	IR 120 x 135 x 45
130	145	35	1.1	855.0	IR 130 x 145 x 35
130	150	50	1.5	1690.0	IR 130 x 150 x 50
140	155	35	1.1	917.0	IR 140 x 155 x 35
140	160	50	1.5	1800.0	IR 140 x 160 x 50
150	165	40	1.1	1122	IR 150 x 165 x 40



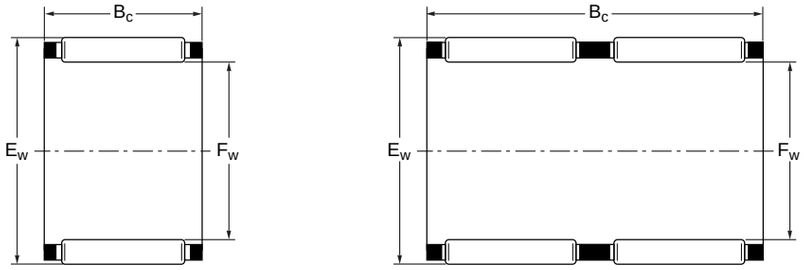
Inner Ring - IR

Basic Dimensions				Mass	Designation
d mm	F mm	B mm	r_a max	g	
160	175	40	1.1	1200	IR 160 x 175 x 40
170	185	45	1.1	1441	IR 170 x 185 x 45
180	195	45	1.1	1510	IR 180 x 195 x 45
190	210	50	1.5	2410	IR 190 x 210 x 50
200	220	50	1.5	2518	IR 200 x 220 x 50
220	240	50	1.5	2753	IR 220 x 240 x 50
240	265	60	2.0	4600	IR 240 x 265 x 60
260	285	60	2.0	4980	IR 260 x 285 x 60
280	305	69	2.0	6100	IR 280 x 305 x 69
300	330	80	2.1	9200	IR 300 x 330 x 80
320	350	80	2.1	9800	IR 320 x 350 x 80
340	370	80	2.1	10200	IR 340 x 370 x 80
360	390	80	2.1	10900	IR 360 x 390 x 80
380	415	100	2.1	16700	IR 380 x 415 x 100



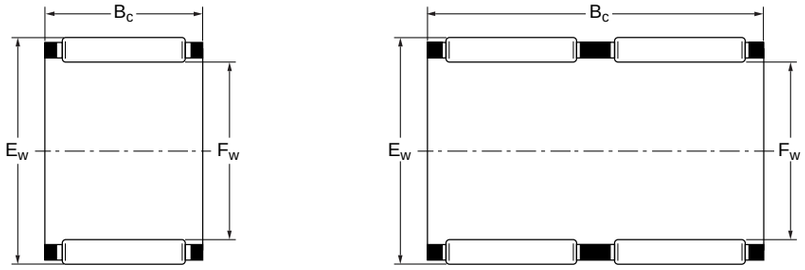
HF, HF..KF

Basic Dimensions			Chamfer Dimension	Limiting Speed	Mass	Designation	
F_w mm	D mm	C mm	r_a max	r/min	g	Plastic Springs	Steel Springs
4	8	6	0.3	32300	1.0	HF 0406 KF	-
4	8	6	0.3	32300	1.0	HF 0406 KFR	-
6	10	12	0.3	21850	3.0	HF 0612 KF	HF 0612
6	10	12	0.3	21850	3.0	HF 0612 KFR	HF 0612 R
8	12	12	0.3	16150	3.5	HF 0812 KF	HF 0812
8	12	12	0.3	16150	3.5	HF 0812 KFR	HF 0812 R
10	14	12	0.3	13300	4.0	HF 1012 KF	HF 1012
12	18	16	0.3	10450	11.0	-	HF 1216
14	20	16	0.3	9025	13.0	-	HF 1416
16	22	16	0.3	8075	14.0	-	HF 1616
18	24	16	0.3	7125	16.0	-	HF 1816
20	26	16	0.3	6650	17.0	-	HF 2016
25	32	20	0.3	5225	30.0	-	HF 2520
30	37	20	0.3	4275	36.0	-	HF 3020
35	42	20	0.3	3705	40.0	-	HF 3520



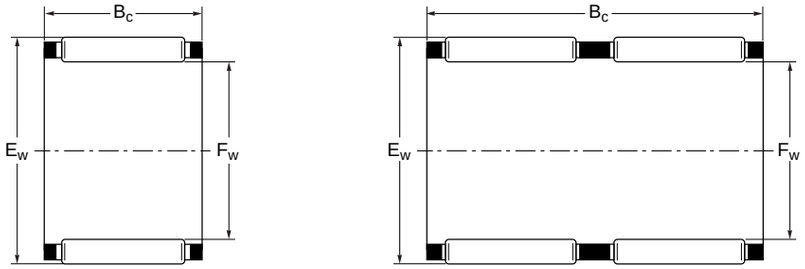
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
3	5	7	1.39	1.16	45000	0.3	KT 3 x 5 x 7
3	5	9	1.54	1.33	45000	0.4	KT 3 x 5 x 9
3	6	7	1.29	0.87	42300	0.4	KT 3 x 6 x 7
4	7	7	1.57	1.14	38700	0.5	KT 4 x 7 x 7
4	7	10	2.10	1.66	38700	0.7	KT 4 x 7 x 10
5	8	8	2.12	1.73	35100	0.7	KT 5 x 8 x 8
5	8	10	2.70	2.39	35100	0.9	KT 5 x 8 x 10
6	9	8	2.34	2.05	33300	0.8	KT 6 x 9 x 8
6	9	10	3.02	2.84	33300	1.1	KT 6 x 9 x 10
6	10	13	3.42	2.79	31500	1.9	KT 6 x 10 x 13
7	9	7	1.56	1.59	31500	0.8	KT 7 x 9 x 7
7	10	8	2.57	2.39	30600	0.9	KT 7 x 10 x 8
7	10	10	3.29	3.24	30600	1.0	KT 7 x 10 x 10
8	11	8	2.79	2.70	28800	1.0	KT 8 x 11 x 8
8	11	10	3.56	3.69	28800	1.2	KT 8 x 11 x 10
8	11	13	4.59	5.22	28800	1.7	KT 8 x 11 x 13
8	12	10	4.50	4.23	28800	2.0	KT 8 x 12 x 10
9	12	10	4.05	4.50	27900	1.5	KT 9 x 12 x 10
9	12	13	5.31	6.39	27900	2.1	KT 9 x 12 x 13
10	13	10	4.28	4.95	26100	1.6	KT 10 x 13 x 10
10	13	13	5.58	7.02	26100	2.3	KT 10 x 13 x 13
10	13	16	6.39	8.37	26100	2.9	KT 10 x 13 x 16
10	14	10	5.22	5.40	26100	2.5	KT 10 x 14 x 10
10	14	13	6.75	7.56	26100	4.6	KT 10 x 14 x 13
10	16	12	7.29	6.48	25200	5.5	KT 10 x 16 x 12
12	15	10	4.41	5.49	24300	2.9	KT 12 x 15 x 10
12	15	13	5.76	7.65	24300	2.3	KT 12 x 15 x 13
12	16	13	7.20	8.46	24300	5.5	KT 12 x 16 x 13
12	17	13	8.64	9.36	23400	4.9	KT 12 x 17 x 13
12	18	12	9.00	8.91	23400	6.0	KT 12 x 18 x 12
14	18	10	6.39	7.65	22500	4.0	KT 14 x 18 x 10
14	18	13	7.38	9.09	22500	6.5	KT 14 x 18 x 13



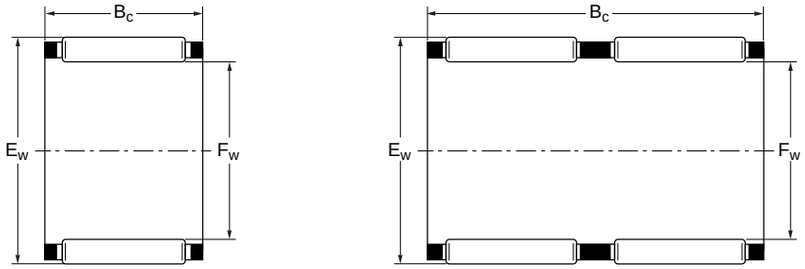
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
14	18	15	8.55	11.07	22500	5.0	KT 14 x 18 x 15
14	18	17	9.72	12.96	22500	8.0	KT 14 x 18 x 17
14	20	12	9.27	9.54	21600	8.5	KT 14 x 20 x 12
15	18	17	7.20	10.89	22500	4.6	KT 15 x 18 x 17
15	19	10	6.75	8.28	21600	5.0	KT 15 x 19 x 10
15	19	13	7.65	9.81	21600	7.0	KT 15 x 19 x 13
15	19	17	10.17	14.04	21600	9.5	KT 15 x 19 x 17
15	20	13	8.91	10.35	21600	7.0	KT 15 x 20 x 13
15	21	15	12.87	14.76	21600	11.0	KT 15 x 21 x 15
15	21	21	17.46	21.87	21600	17.0	KT 15 x 21 x 21
16	20	10	7.02	8.91	21600	5.5	KT 16 x 20 x 10
16	20	13	8.01	10.62	21600	7.5	KT 16 x 20 x 13
16	20	17	10.53	15.12	21600	10.0	KT 16 x 20 x 17
16	22	12	10.35	11.25	20700	10.0	KT 16 x 22 x 12
16	22	16	13.32	15.75	20700	12.0	KT 16 x 22 x 16
16	22	20	16.47	20.52	20700	17.0	KT 16 x 22 x 20
16	24	20	19.26	21.15	19800	22.0	KT 16 x 24 x 20
17	21	10	7.29	9.54	20700	5.5	KT 17 x 21 x 10
17	21	13	9.36	13.14	20700	6.5	KT 17 x 21 x 13
17	21	17	10.98	16.11	20700	9.5	KT 17 x 21 x 17
18	22	10	7.56	10.17	19800	6.0	KT 18 x 22 x 10
18	22	13	8.28	11.43	19800	8.0	KT 18 x 22 x 13
18	22	17	10.89	16.20	19800	11.0	KT 18 x 22 x 17
18	24	12	11.52	13.41	19800	12.0	KT 18 x 24 x 12
18	24	13	11.79	13.77	19800	13.0	KT 18 x 24 x 13
18	24	20	18.18	24.30	19800	18.0	KT 18 x 24 x 20
18	25	22	20.79	26.10	19800	23.0	KT 18 x 25 x 22
19	23	13	8.55	12.15	19800	8.0	KT 19 x 23 x 13
19	23	17	11.25	17.28	19800	11.0	KT 19 x 23 x 17
20	24	10	8.01	11.34	18900	6.5	KT 20 x 24 x 10
20	24	13	8.82	12.87	18900	9.0	KT 20 x 24 x 13
20	24	17	11.61	18.36	18900	12.0	KT 20 x 24 x 17



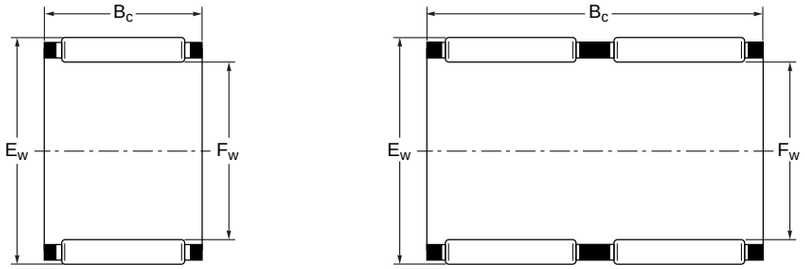
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
20	26	12	11.16	14.58	18900	11.0	KT 20 x 26 x 12
20	26	13	12.96	16.11	18900	12.0	KT 20 x 26 x 13
20	26	17	17.28	23.40	18900	16.0	KT 20 x 26 x 17
20	26	20	18.99	26.10	18900	19.0	KT 20 x 26 x 20
20	28	16	17.82	20.16	18000	20.0	KT 20 x 28 x 16
20	28	20	21.51	25.65	18000	27.0	KT 20 x 28 x 20
20	28	25	27.45	35.10	18000	32.0	KT 20 x 28 x 25
20	30	30	31.95	37.35	18000	49.0	KT 20 x 30 x 30
21	25	13	9.09	13.59	18900	9.0	KT 21 x 25 x 13
22	26	10	8.19	12.06	18000	7.5	KT 22 x 26 x 10
22	26	13	9.36	14.31	18000	9.5	KT 22 x 26 x 13
22	26	17	12.33	20.43	18000	12.0	KT 22 x 26 x 17
22	28	17	17.46	24.30	18000	18.0	KT 22 x 28 x 17
22	29	16	18.00	22.95	17100	16.0	KT 22 x 29 x 16
22	30	15	18.09	21.06	17100	18.0	KT 22 x 30 x 15
22	32	24	30.60	36.00	16200	43.0	KT 22 x 32 x 24
23	35	16	22.05	21.51	15300	29.0	KT 23 x 35 x 16
24	28	10	8.64	13.32	17100	8.5	KT 24 x 28 x 10
24	28	13	9.90	15.84	17100	10.0	KT 24 x 28 x 13
24	28	17	13.05	22.50	17100	13.0	KT 24 x 28 x 17
24	30	17	17.55	24.75	16200	19.0	KT 24 x 30 x 17
24	30	31	24.75	39.15	16200	32.0	KT 24 x 30 x 31 ZW
25	29	10	8.91	13.86	16200	8.5	KT 25 x 29 x 10
25	29	13	10.17	16.56	16200	11.0	KT 25 x 29 x 13
25	29	17	13.41	23.40	16200	14.0	KT 25 x 29 x 17
25	30	17	16.83	27.00	16200	16.0	KT 25 x 30 x 17
25	30	20	19.53	32.85	16200	18.0	KT 25 x 30 x 20
25	30	26	19.26	31.95	16200	19.0	KT 25 x 30 x 26 ZW
25	31	17	17.64	25.65	16200	19.0	KT 25 x 31 x 17
25	31	21	22.23	34.20	16200	20.0	KT 25 x 31 x 21
25	32	16	18.72	24.75	15300	21.0	KT 25 x 32 x 16
25	33	20	25.65	34.20	15300	33.0	KT 25 x 33 x 20



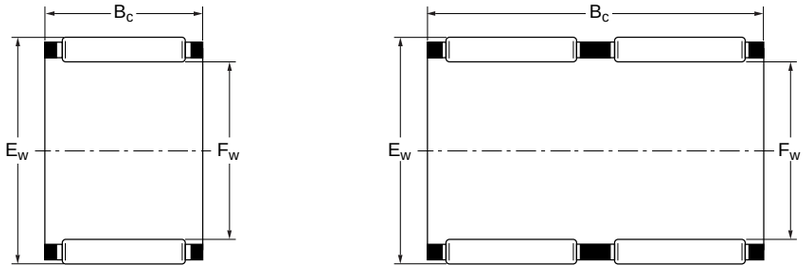
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
25	33	24	30.60	42.30	15300	39.0	KT 25 x 33 x 24
25	35	30	42.30	55.80	14400	65.0	KT 25 x 35 x 30
26	30	13	10.44	17.28	16200	11.0	KT 26 x 30 x 13
26	30	17	13.68	24.75	16200	15.0	KT 26 x 30 x 17
26	30	22	14.13	25.65	16200	12.0	KT 26 x 30 x 22 ZW
28	33	13	13.77	21.78	14400	13.0	KT 28 x 33 x 13
28	33	17	17.73	30.15	14400	17.0	KT 28 x 33 x 17
28	34	17	19.62	30.15	14400	24.0	KT 28 x 34 x 17
28	35	16	19.35	26.55	14400	24.0	KT 28 x 35 x 16
28	35	18	21.60	30.60	14400	27.0	KT 28 x 35 x 18
28	40	25	40.95	49.50	12600	70.0	KT 28 x 40 x 25
30	34	13	11.07	19.53	13500	14.0	KT 30 x 34 x 13
30	35	13	14.04	22.95	13500	14.0	KT 30 x 35 x 13
30	35	17	17.64	30.60	13500	19.0	KT 30 x 35 x 17
30	35	27	27.45	53.10	13500	30.0	KT 30 x 35 x 27
30	37	16	20.79	30.15	13500	27.0	KT 30 x 37 x 16
30	37	18	23.40	34.65	13500	30.0	KT 30 x 37 x 18
30	40	18	28.80	36.00	12600	48.0	KT 30 x 40 x 18
30	40	30	44.10	62.10	13500	73.0	KT 30 x 40 x 30
32	37	13	13.95	22.95	12600	18.0	KT 32 x 37 x 13
32	37	17	17.91	31.95	12600	19.0	KT 32 x 37 x 17
32	37	27	27.00	54.00	12600	30.0	KT 32 x 37 x 27
32	38	20	23.85	40.50	12600	30.0	KT 32 x 38 x 20
32	39	16	21.42	31.95	12600	37.0	KT 32 x 39 x 16
32	39	18	23.85	36.90	12600	31.0	KT 32 x 39 x 18
32	40	25	33.75	52.20	12600	49.0	KT 32 x 40 x 25
32	40	42	45.00	75.60	12600	77.0	KT 32 x 40 x 42 ZW
32	46	32	59.40	75.60	11700	119.0	KT 32 x 46 x 32
35	40	13	14.58	25.20	11700	19.0	KT 35 x 40 x 13
35	40	17	18.72	34.65	11700	21.0	KT 35 x 40 x 17
35	40	25	26.55	54.00	11700	31.0	KT 35 x 40 x 25
35	40	27	43.65	5.58	11700	39.0	KT 35 x 40 x 27



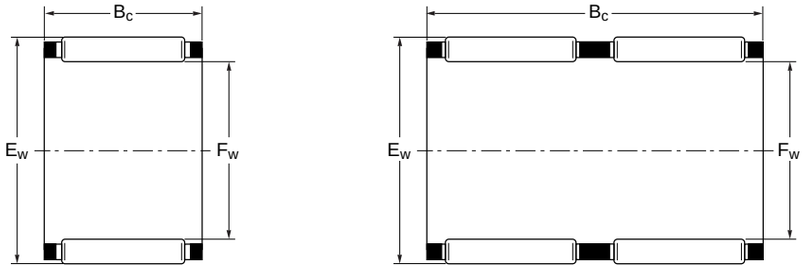
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
35	42	16	21.96	33.75	11700	34.0	KT 35 x 42 x 16
35	42	18	24.75	38.70	11700	34.0	KT 35 x 42 x 18
35	42	20	27.00	44.10	11700	37.0	KT 35 x 42 x 20
35	42	30	35.10	61.20	11700	67.0	KT 35 x 42 x 30
35	45	20	33.30	45.00	10800	56.0	KT 35 x 45 x 20
35	45	30	47.70	71.10	10800	80.0	KT 35 x 45 x 30
37	42	17	20.16	38.70	10800	22.0	KT 37 x 42 x 17
38	43	17	18.45	34.65	10800	29.0	KT 38 x 43 x 17
38	43	27	28.35	61.20	10800	43.0	KT 38 x 43 x 27
38	46	20	31.95	51.30	10800	47.0	KT 38 x 46 x 20
38	46	32	49.50	89.10	10800	76.0	KT 38 x 46 x 32
39	44	26	24.75	50.40	10800	45.0	KT 39 x 44 x 26 ZW
40	45	13	15.84	29.25	10800	22.0	KT 40 x 45 x 13
40	45	17	19.26	37.35	10800	31.0	KT 40 x 45 x 17
40	45	27	29.70	65.70	10800	46.0	KT 40 x 45 x 27
40	47	18	26.55	45.00	9900	39.0	KT 40 x 47 x 18
40	47	20	29.25	51.30	9900	42.0	KT 40 x 47 x 20
40	48	20	32.40	53.10	9900	49.0	KT 40 x 48 x 20
42	47	13	16.02	30.15	9900	18.0	KT 42 x 47 x 13
42	47	17	19.53	38.70	9900	32.0	KT 42 x 47 x 17
42	47	30	30.15	68.40	9900	54.0	KT 42 x 47 x 30 ZW
42	50	20	31.50	51.30	9900	53.0	KT 42 x 50 x 20
43	48	17	19.44	38.70	9900	30.0	KT 43 x 48 x 17
43	48	27	30.15	67.50	9900	50.0	KT 43 x 48 x 27
45	50	17	20.25	41.40	9000	34.0	KT 45 x 50 x 17
45	50	27	31.05	72.00	9000	51.0	KT 45 x 50 x 27
45	52	18	28.35	51.30	9000	42.0	KT 45 x 52 x 18
45	53	20	35.10	60.30	9000	55.0	KT 45 x 53 x 20
45	53	21	34.65	60.30	9000	60.0	KT 45 x 53 x 21
45	53	28	46.80	88.20	9000	81.0	KT 45 x 53 x 28
45	59	18	39.60	48.60	8550	72.0	KT 45 x 59 x 18
45	59	32	65.70	92.70	8550	148.0	KT 45 x 59 x 32



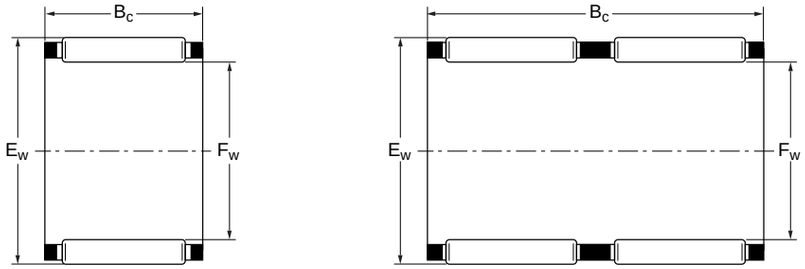
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
47	52	17	20.97	44.10	9000	35.0	KT 47 x 52 x 17
47	52	27	31.50	74.70	9000	51.0	KT 47 x 52 x 27
50	55	13.5	16.38	32.85	8550	30.0	KT 50 x 55 x 13.5
50	55	17	19.89	42.30	8550	35.0	KT 50 x 55 x 17
50	55	20	23.85	54.00	8550	43.0	KT 50 x 55 x 20
50	55	30	35.10	87.30	8550	65.0	KT 50 x 55 x 30
50	57	18	30.15	56.70	8100	47.0	KT 50 x 57 x 18
50	58	20	31.95	55.80	8100	75.0	KT 50 x 58 x 20
50	58	25	39.60	72.90	8100	90.0	KT 50 x 58 x 25
52	57	12	16.20	32.85	8100	24.0	KT 52 x 57 x 12
55	60	20	25.65	59.40	7650	40.0	KT 55 x 60 x 20
55	60	27	34.20	87.30	7650	60.0	KT 55 x 60 x 27
55	60	30	36.90	97.20	7650	71.0	KT 55 x 60 x 30
55	62	18	31.95	63.00	7650	52.0	KT 55 x 62 x 18
55	63	20	36.00	66.60	7650	67.0	KT 55 x 63 x 20
55	63	25	45.90	90.90	7650	80.0	KT 55 x 63 x 25
55	63	32	55.80	117.00	7650	102.0	KT 55 x 63 x 32
58	65	18	31.50	63.00	7200	52.0	KT 58 x 65 x 18
58	65	36	44.10	96.30	7200	127.0	KT 58 x 65 x 36 ZW
60	65	20	26.55	64.80	7200	52.0	KT 60 x 65 x 20
60	65	30	38.25	104.40	7200	77.0	KT 60 x 65 x 30
60	66	33	41.40	100.80	7200	104.0	KT 60 x 66 x 33 ZW
60	66	40	52.20	135.90	7200	116.0	KT 60 x 66 x 40 ZW
60	68	20	39.15	76.50	6750	71.0	KT 60 x 68 x 20
60	68	23	44.55	90.90	6750	94.0	KT 60 x 68 x 23
60	68	25	47.70	99.90	6750	89.0	KT 60 x 68 x 25
60	68	30	40.05	79.20	6750	129.0	KT 60 x 68 x 30 ZW
60	75	42	106.20	179.10	6750	240.0	KT 60 x 75 x 42
62	70	40	59.40	131.40	6750	174.0	KT 62 x 70 x 40 ZW
64	70	16	25.20	54.00	6750	53.0	KT 64 x 70 x 16
65	70	20	27.45	69.30	6750	56.0	KT 65 x 70 x 20
65	70	30	39.60	111.60	6750	83.0	KT 65 x 70 x 30



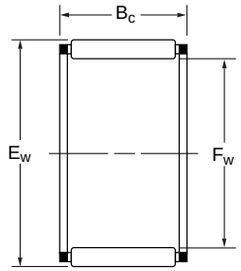
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
65	73	23	41.40	84.60	6300	108.0	KT 65 x 73 x 23
65	73	30	51.30	110.70	6300	141.0	KT 65 x 73 x 30
68	74	20	31.95	75.60	6300	71.0	KT 68 x 74 x 20
68	74	30	41.85	106.20	6300	100.0	KT 68 x 74 x 30
68	74	35	43.65	112.50	6300	120.0	KT 68 x 74 x 35 ZW
70	76	20	32.40	77.40	5850	71.0	KT 70 x 76 x 20
70	76	30	46.80	125.10	5850	110.0	KT 70 x 76 x 30
70	78	30	54.00	121.50	5850	148.0	KT 70 x 78 x 30
72	80	20	37.35	76.50	5850	98.0	KT 72 x 80 x 20
73	79	20	33.30	81.00	5850	75.0	KT 73 x 79 x 20
75	81	20	33.75	84.60	5850	79.0	KT 75 x 81 x 20
75	81	30	46.80	128.70	5850	114.0	KT 75 x 81 x 30
75	83	23	45.00	98.10	5400	124.0	KT 75 x 83 x 23
75	83	30	55.80	128.70	5400	147.0	KT 75 x 83 x 30
75	83	35	56.70	132.30	5400	182.0	KT 75 x 83 x 35 ZW
75	83	40	65.70	159.30	5400	211.0	KT 75 x 83 x 40
80	86	20	34.65	88.20	5400	60.0	KT 80 x 86 x 20
80	88	30	63.90	158.40	5400	138.0	KT 80 x 88 x 30
80	88	40	68.40	172.80	5400	227.0	KT 80 x 88 x 40 ZW
80	88	46	79.20	207.90	5400	260.0	KT 80 x 88 x 46 ZW
85	92	20	40.05	97.20	4950	102.0	KT 85 x 92 x 20
90	97	20	40.50	101.70	4500	109.0	KT 90 x 97 x 20
90	98	27	54.90	135.00	4500	150.0	KT 90 x 98 x 27
90	98	30	61.20	154.80	4500	172.0	KT 90 x 98 x 30
95	103	30	62.10	162.00	4410	165.0	KT 95 x 103 x 30
95	103	40	74.70	205.20	4410	266.0	KT 95 x 103 x 40 ZW
100	107	21	43.20	114.30	4230	120.0	KT 100 x 107 x 21
100	108	27	51.30	128.70	4230	185.0	KT 100 x 108 x 27
100	108	30	63.90	169.20	4230	180.0	KT 100 x 108 x 30
105	112	21	42.75	114.30	4050	129.0	KT 105 x 112 x 21
110	117	24	50.40	142.20	3870	172.0	KT 110 x 117 x 24
110	118	30	70.20	197.10	3870	217.0	KT 110 x 118 x 30



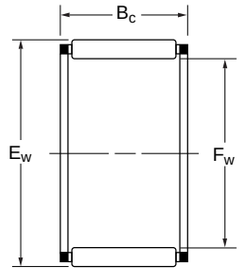
K..ZW

Basic Dimensions			Basic Load Ratings		Limiting Speed	Mass	Designation
			Dynamic	Static			
F_w mm	E_w mm	B_c mm	kN	kN	r/min	g	
115	123	27	56.70	153.00	3690	200.0	KT 115 x 123 x 27
120	127	24	53.10	156.60	3600	165.0	KT 120 x 127 x 24
125	133	35	77.40	234.00	3420	275.0	KT 125 x 133 x 35
130	137	24	54.90	167.40	3330	170.0	KT 130 x 137 x 24
135	143	35	81.90	261.00	3150	300.0	KT 135 x 143 x 35
145	153	26	66.60	202.50	2970	262.0	KT 145 x 153 x 26
150	160	46	132.30	423.00	2880	570.0	KT 150 x 160 x 46
155	163	26	67.50	212.40	2790	265.0	KT 155 x 163 x 26
160	170	46	136.80	459.00	2700	550.0	KT 160 x 170 x 46
165	173	26	72.90	238.50	2610	320.0	KT 165 x 173 x 26
175	183	32	89.10	315.00	2430	400.0	KT 175 x 183 x 32
185	195	37	115.20	382.50	2340	607.0	KT 185 x 195 x 37
195	205	37	119.70	405.00	2250	620.0	KT 195 x 205 x 37
210	220	42	138.60	504.00	2070	740.0	KT 210 x 220 x 42
220	230	42	142.20	531.00	1980	790.0	KT 220 x 230 x 42
240	250	42	147.60	567.00	1800	850.0	KT 240 x 250 x 42
265	280	50	229.50	774.00	1620	1810.0	KT 265 x 280 x 50



WJ and WJC

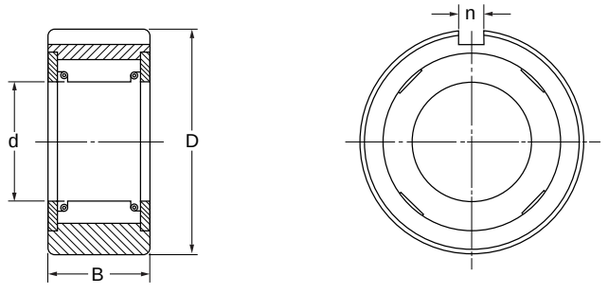
Basic Dimensions						Basic Load Ratings		Limiting Speed	Mass Approx.	Assembly Designation
						Dynamic	Static	Oil		
d		D		B		C	C_0			
inch	mm	inch	mm	inch	mm	kN	kN	r/min	g	
5/8	15.8750	7/8	22.2250	5/8	15.8750	3510	3990	29000	13.17	WJ 101410
5/8	15.8750	7/8	22.2250	7/8	22.2250	4780	5940	29000	18.16	WJ 101414
3/4	19.0500	1	25.4000	1	25.4000	6020	8370	24000	24.97	WJ 121616
13/16	20.6375	1 1/16	26.9875	7/8	22.2250	5650	7880	22000	20.88	WJ 131714
7/8	22.2250	1 1/8	28.5750	1	25.4000	6570	9770	20000	28.15	WJ 141816
1	25.4000	1 5/16	33.3375	3/4	19.0500	6320	8340	18000	34.96	WJ 162112
1	25.4000	1 5/16	33.3375	1	25.4000	8270	11800	18000	43.13	WJ 162116
1	25.4000	1 5/16	33.3375	1 1/4	31.7500	10000	15100	18000	55.84	WJ 162120
1 1/8	28.5750	1 1/2	38.1000	1	25.4000	9520	13000	16000	40.86	WJ 182416
1 1/8	28.5750	1 1/2	38.1000	1 1/4	31.7500	11700	16800	16000	71.73	WJ 182420
1 1/4	31.7500	1 5/8	41.2750	3/4	19.0500	7520	9830	14000	50.85	WJ 202612
1 1/4	31.7500	1 5/8	41.2750	1	25.4000	9910	14000	14000	60.84	WJ 202616
1 1/4	31.7500	1 5/8	41.2750	1 1/4	31.7500	12100	18200	14000	73.09	WJ 202620
1 1/4	31.7500	1 5/8	41.2750	1 1/2	38.1000	14300	22400	14000	105.78	WJ 202624
1 3/8	34.9250	1 3/4	44.4500	1	25.4000	10300	15100	13000	66.74	WJ 222816
1 3/8	34.9250	1 3/4	44.4500	1 1/4	31.7500	12600	19600	13000	83.08	WJ 222820
1 1/2	38.1000	1 7/8	47.6250	1	25.4000	10600	16100	12000	78.09	WJ 243016
1 1/2	38.1000	1 7/8	47.6250	1 1/4	31.7500	13000	20900	12000	89.89	WJ 243020
1 1/2	38.1000	1 7/8	47.6250	1 1/2	38.1000	15300	25800	12000	119.86	WJ 243024
1 1/2	38.1000	1 7/8	47.6250	1 3/4	44.4500	17400	30500	12000	133.93	WJ 243028
1 3/4	44.4500	2 1/8	53.9750	3/4	19.0500	8870	13400	9900	61.74	WJ 283412
1 3/4	44.4500	2 1/8	53.9750	1	25.4000	11700	19100	9900	83.99	WJ 283416
1 3/4	44.4500	2 1/8	53.9750	1 1/2	38.1000	16800	30600	9900	143.01	WJ 283424
2	50.8000	2 3/8	60.3250	3/4	19.0500	9610	15500	8600	84.90	WJ 323812
2	50.8000	2 3/8	60.3250	1	25.4000	12700	22100	8600	104.87	WJ 323816
2	50.8000	2 3/8	60.3250	1 1/4	31.7500	15500	28700	8600	124.85	WJ 323820
2	50.8000	2 3/8	60.3250	1 1/2	38.1000	18200	35300	8600	143.01	WJ 323824
2 1/16	52.3875	2 7/16	61.9125	1	25.4000	13000	23100	8300	98.97	WJ 333916
2 1/8	53.9750	2 1/2	63.5000	1	25.4000	11800	20700	8000	99.88	WJ 344016
2 1/8	53.9750	2 1/2	63.5000	1 1/2	38.1000	17600	34500	8000	165.71	WJ 344024
2 3/16	55.5625	2 9/16	65.0875	3/4	19.0500	10000	16900	7800	84.90	WJ 354112
2 3/16	55.5625	2 9/16	65.0875	1	25.4000	13000	24100	7800	103.06	WJ 354116



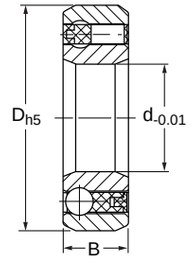
WJ and WJC

Basic Dimensions						Basic Load Ratings		Limiting Speed	Mass Approx.	Assembly Designation
						Dynamic	Static	Oil		
d		D		B		C	C_0			
inch	mm	inch	mm	inch	mm	kN	kN	r/min	g	
2 1/4	57.1500	2 5/8	66.6750	1	25.4000	12100	21600	7500	105.78	WJ 364216
2 1/4	57.1500	2 5/8	66.6750	1 1/4	31.7500	15200	28900	7500	132.11	WJ 364220
2 3/8	60.3250	2 3/4	69.8500	1 1/2	38.1000	18300	37600	7100	185.69	WJ 384424
2 1/2	63.5000	2 7/8	73.0250	1	25.4000	12500	23400	6700	136.65	WJ 404616
2 1/2	63.5000	2 7/8	73.0250	1 1/4	31.7500	15700	31400	6700	160.26	WJ 404620
2 1/2	63.5000	2 7/8	73.0250	1 1/2	38.1000	18700	39100	6700	179.78	WJ 404624
2 3/4	69.8500	3 1/8	79.3750	1	25.4000	13000	25300	6100	125.76	WJ 445016
3	76.2000	3 3/8	85.7250	1	25.4000	13400	27100	5600	159.81	WJ 485416
3	76.2000	3 3/8	85.7250	1 1/2	38.1000	19200	43100	5600	212.93	WJ 485424
3 1/4	82.5500	3 5/8	92.0750	1	25.4000	13800	28900	5100	146.64	WJ 525816
3 1/4	82.5500	3 5/8	92.0750	1 1/2	38.1000	19800	46000	5100	220.64	WJ 525824
3 1/2	88.9000	3 7/8	98.4250	1	25.4000	14200	30700	4700	173.88	WJ 566216
3 1/2	88.9000	4	101.6000	1	25.4000	17900	33800	4800	214.74	WJ 566416
3 1/2	88.9000	4	101.6000	1 1/2	38.1000	25600	53400	4800	359.57	WJ 566424
4	101.6000	4 1/2	114.3000	1	25.4000	18800	37450	4200	239.71	WJ 647216
4	101.6000	4 1/2	114.3000	1 1/2	38.1000	26800	59200	4200	369.56	WJ 647224
5	127.0000	6	152.4000	1 1/2	38.1000	47600	82100	3400	1018.78	WJ 809624

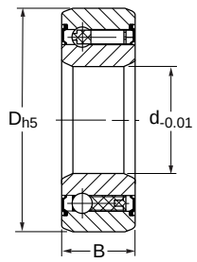
One Way Clutch



Basic Dimensions				Limiting Speed	Mass	Designation	Bearings Series
B	D	d	n				
mm	mm	mm	mm	r/min	kg		
25	40 - 0.014	16.510	4 X 2.5	2400	0.230	B 203	6203
25	40 - 0.039	16.510	4 X 2.5	2400	0.230	B 203	6203
25	47 - 0.014	18.796	5 X 3	2400	0.340	B 204	6204
25	47 - 0.039	18.796	5 X 3	2400	0.340	B 204	6204
25	52 - 0.017	23.622	5 X 3	1800	0.450	B 205	6205
25	52 - 0.042	23.622	5 X 3	1800	0.450	B 205	6205
28	62 - 0.017	32.766	7 X 4	1800	0.680	B 206	6206
28	62 - 0.042	32.766	7 X 4	1800	0.680	B 206	6206
28	72 - 0.017	42.088	7 X 4	1800	0.800	B 207	6207
28	72 - 0.042	42.088	7 X 4	1800	0.800	B 207	6207
32	80 - 0.017	46.761	10 X 4.5	1800	0.910	B 208	6207
32	80 - 0.042	46.761	10 X 4.5	1800	0.910	B 208	6207
32	85 - 0.020	46.761	10 X 4.5	1800	0.950	B 209	6209
32	85 - 0.045	46.761	10 X 4.5	1800	0.950	B 209	6209
32	90 - 0.020	56.109	10 X 4.5	1200	1.000	B 210	6210
32	90 - 0.045	56.109	10 X 4.5	1200	1.000	B 210	6210
32	100 - 0.020	56.109	10 X 4.5	1200	1.400	B 211	6211
32	100 - 0.045	56.109	10 X 4.5	1200	1.400	B 211	6211
42	110 - 0.020	70.029	10 X 4.5	1200	1.800	B 212	6212
42	110 - 0.045	70.029	10 X 4.5	1200	1.800	B 212	6212
42	120 - 0.020	70.029	10 X 4.5	1200	2.300	B 213	6213
42	120 - 0.045	70.029	10 X 4.5	1200	2.300	B 213	6213
42	125 - 0.024	79.356	12 X 4.5	1000	2.400	B 214	6214
42	125 - 0.060	79.356	12 X 4.5	1000	2.400	B 214	6214

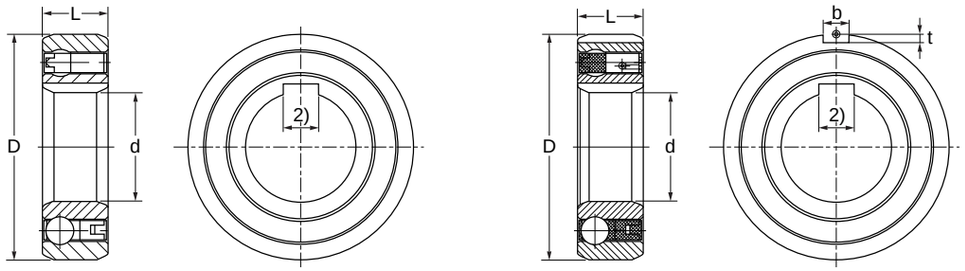


CSK



CSK..2RS

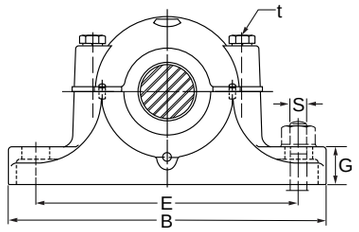
Basic Dimensions					Basic Load Ratings		Limiting Speed	Mass	Designation	Bearing Series
d	D	L	b	t	Dynamic C	Static C_0				
mm	mm	mm	mm	mm	kN	kN	r/min	kg		
15	35	11	-	-	7.40	3.42	8400	0.06	CSK 15 P	6202
15	35	11	2	0.60	7.40	3.42	8400	0.06	CSK 15 PP	6202
17	40	12	-	-	7.90	3.80	7350	0.07	CSK 17 P	6203
17	40	12	2	1.00	7.90	3.80	7350	0.07	CSK 17 PP	6203
20	47	14	-	-	9.40	4.46	6000	0.11	CSK 20 P	6204
20	47	14	3	1.50	9.40	4.46	6000	0.11	CSK 20 PP	6204
25	52	15	-	-	10.70	5.46	5200	0.14	CSK 25 P	6205
25	52	15	6	2.00	10.70	5.46	5200	0.14	CSK 25 PP	6205
30	62	16	-	-	11.70	6.45	4200	0.21	CSK 30 P	6206
30	62	16	6	2.00	11.70	6.45	4200	0.21	CSK 30 PP	6206
35	72	17	-	-	12.60	7.28	3600	0.30	CSK 35 P	6207
35	72	17	8	2.50	12.60	7.28	3600	0.30	CSK 35 PP	6207

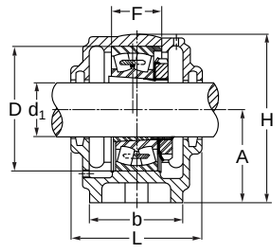


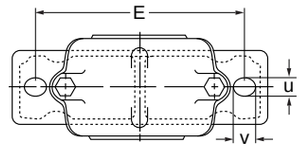
CSK..P CSK..PP

Basic Dimensions			Basis Load Ratings		Limiting Speed	Mass	Designation
d mm	D mm	B mm	C kN	C_0 kN	r/min	kg	
12	32	10	6.100	2.770	10,000	0.040	CSK 12
12	32	14	6.100	2.770	10,000	0.050	CSK 12 2RS
15	35	11	7.400	3.420	8,400	0.060	CSK 15
15	35	16	7.400	3.420	8,400	0.070	CSK 15 2RS
17	40	12	7.900	3.800	7,350	0.070	CSK 17
17	40	17	7.900	3.800	7,350	0.090	CSK 17 2RS
20	47	14	9.400	4.460	6,000	0.110	CSK 20
20	47	19	9.400	4.460	6,000	0.145	CSK 20 2RS
25	52	15	10.700	5.460	5,200	0.140	CSK 25
25	52	20	10.700	5.460	5,200	0.175	CSK 25 2RS
30	62	15	11.700	6.450	4,200	0.210	CSK 30
30	62	21	11.700	6.450	4,200	0.270	CSK 30 2RS
35	72	17	12.600	7.280	3,600	0.300	CSK 35
35	72	22	12.600	7.280	3,600	0.400	CSK 35 2RS

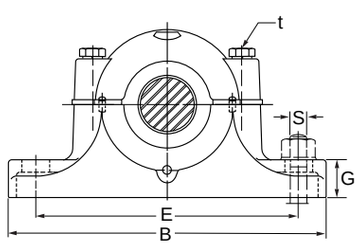
Plummer Blocks

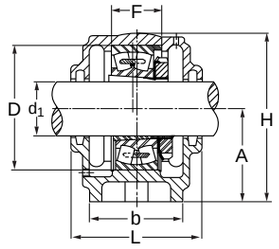


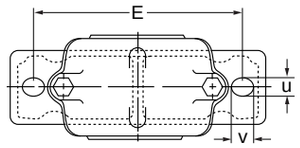




Housing No	Basic Dimensions												Mass	Bearing No		Adapter Sleeve		Locating Ring	
	Shaft Dia. d_1		D	B	b	G	F	A	L	H	E	t	u	v	S	kg	Self-Aligning Ball	Spherical Roller	Metric	Inch	Number	Qty
	Metric	Inch	H8				H13	h13														
SN 505	20	3/4	52	165	46	22	25	40	67	75	130	M8	15	20	M12	1.5	1205K 2205K	- 22205K	H205 H305	HE205 HE305	52 X 5 52 X 7	2 1
SN 506	25	1	62	185	52	22	30	50	77	90	150	M8	15	20	M12	1.74	1206K 2206K	- 22206K	H206 H306	HE206 HE306	62 X 7 62 X 10	2 1
SN 507	30	1 1/8	72	185	52	22	33	50	82	95	150	M10	15	20	M12	1.9	1207K 2207K	- 22207K	H207 H307	HS207 HS307	72 X 8 72 X 10	2 1
SN 508	35	1 1/4	80	205	60	25	33	60	85	110	170	M10	15	20	M12	2.63	1208K 2208K	- 22208K	H208 H308	HE208 HE308	80 X 7.5 80 X 10	2 1
SN 509	40	1 1/2	85	205	60	25	31	60	85	112	170	M10	15	20	M12	2.64	1209K 2209K	- 22209K	H209 H309	HE209 HE309	85 X 6 85 X 8	2 1
SN 510	45	1 3/4	90	205	60	25	33	60	90	115	170	M10	15	20	M12	2.8	1210K 2210K	- 22210K	H210 H310	HE210 HE310	90 X 6.5 90 X 10	2 1
SN 511	50	2	100	255	70	28	33	70	95	130	210	M12	18	23	M16	4.32	1211K 2211K	- 22211K	H211 H311	HE211 HE311	100 X 6 100 X 8	2 1
SN 512	55	2 1/8	110	255	70	30	38	70	105	135	210	M12	18	23	M16	4.99	1212K 2212K	- 22212K	H212 H312	HS212 HS312	110 X 8 110 X 10	2 1
SN 513	60	2 1/4	120	275	80	30	43	80	110	150	230	M12	18	23	M16	5.64	1213K 2213K	- 22213K	H213 H313	HE213 HE313	120 X 10 120 X 12	2 1
SN 515	65	2 1/2	130	280	80	30	41	80	115	155	230	M12	18	23	M16	6.19	1213K 1213K	- -	H213 H313	HE213 HE313	120 X 10 120 X 12	2 1
SN 516	70	2 3/4	140	315	90	32	43	95	120	175	260	M16	22	27	M20	8.17	1216K 2216K	- 22216K	H216 H316	HE216 HE316	140 X 8.5 140 X 10	2 1
SN 517	75	3	150	320	90	32	46	95	125	185	260	M16	22	27	M20	9.37	1217K 2217K	- 22217K	H217 H317	HE217 HE317	150 X 9 150 X 10	2 1
SN 518	80	3 1/4	160	345	100	35	62.4	100	145	195	290	M16	22	27	M20	11.5	1218K 2218K -	- 22218K 23218K	H218 H318 H2318	HE218 HE318 HE2318	160 X 16.2 160 X 11.2 160 X 10	2 2 1
SN 519	85	-	170	345	100	35	53	112	140	210	290	M16	22	28	M20	13.5	1219K -	- 22219K	H219 H319	HE219 HE319	170 X 10.5 170 X 10	2 1
SN 520	90	3 1/2	180	380	110	40	70.3	112	160	218	320	M20	26	32	M24	16.3	2220K -	22220K 23220K	H320 H2320	HE320 HE2320	180 X 12.1 180 X 10	2 1

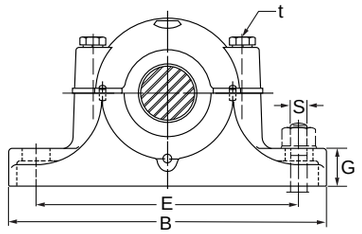


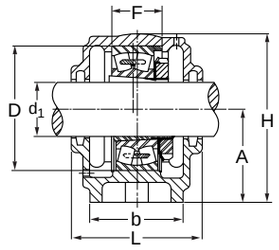


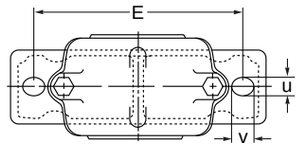


Housing No	Basic Dimensions											
	Shaft Dia. d_1		D	B	b	G	F	A	L	H	E	t
	Metric	Inch	H8				H13	h13				
SN 522	100	4	200	410	120	45	80	125	175	240	350	M20
SN 524	110	4.1/4	215	41	120	45	86	140	185	270	350	M20
SN 526	115	4.1/2	230	445	130	50	90	150	190	290	380	M24
SN 528	125	5	250	500	150	50	98	150	205	305	420	M24
SN 530	135	5.1/4	270	530	160	60	106	160	220	325	450	M24
SN 532	140	5.1/2	290	550	160	60	114	170	235	345	470	M24

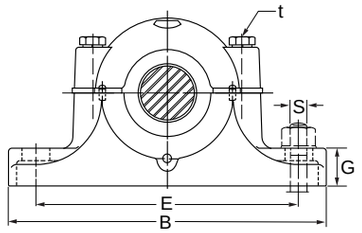
			Mass	Bearing No		Adapter Sleeve		Locating Ring	
u	v	S	kg	Self-Aligning Ball	Spherical Roller	Metric	Inch	Number	Qty
26	32	M24	25.1	2222K	22222K	H322	HE322	200 X 13.5	2
				-	23222K	H2322	HE2322	200 X 10	1
26	34	M24	27.2	-	22224K	H3124	HE3124	215 X 14	2
				-	23224K	H2324	HE2324	215 X 10	1
28	35	M24	35.2	-	22226K	H3126	HE3126	230 X 13	2
				-	23226K	H2326	HE2326	230 X 10	1
34	44	M30	43.7	-	22228K	H3128	HE3128	250 X 15	2
				-	23228K	H2328	HE2328	250 X 10	1
34	42	M30	45.3	-	22230K	H3130	HE3130	270 X 16.5	2
				-	23230K	H2330	HE2330	270 X 10	1
32	44	M30	50.75	-	22232K	H3132	HE3132	290 X 17	2
				-	23232K	H2332	HE2332	290 X 10	1

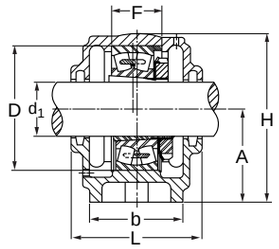


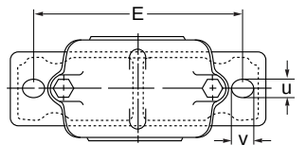




Housing No	Basic Dimensions												Mass	Bearing No		Adapter Sleeve		Locating Ring	
	Shaft Dia. d_1		D	B	b	G	F	A	L	H	E	t	u	v	S	kg	Self-Aligning Ball	Spherical Roller	Metric	Inch	Number	Qty
	Metric	Inch	H8				H13	h13														
SN 605	20	3/4	62	185	52	22	34	50	80	90	150	M8	16	20	M12	2.11	1305K	-	H305	HE305	62 X 8.5	2
																	2305K	-	H2305	HE2305	62 X 10	1
SN 606	25	1	72	185	52	22	37	50	82	95	150	M10	16	20	M12	2.09	1306K	-	H306	HE306	72 X 9	2
																	2306K	-	H2306	HE2306	72 X 10	1
SN 607	30	1 1/8	80	205	60	25	41	60	90	110	170	M10	16	20	M12	3.4	1307K	-	H307	HE307	80 X 10	2
																	2307K	-	H2307	HE2307	80 X 10	1
SN 608	35	1 1/4	90	205	60	25	43	60	95	115	170	M10	15	24	M12	3.6	1308K	21308K	H308	HE308	90 X 10	2
																	2308K	22308K	H2308	HE2308	90 X 10	1
SN 609	40	1 1/2	100	255	70	28	46	70	105	130	210	M12	19	25	M16	5.3	1309K	21309K	H309	HE309	100 X 10.5	2
																	2309K	22309K	H2309	HE2309	100 X 10	1
SN 610	45	1 3/4	110	255	70	30	50	70	115	135	210	M12	18	23	M16	5.5	1310K	21310K	H310	HE310	110 X 10	2
																	2310K	22310K	H2310	HE2310	110 X 10	1
SN 611	50	2	120	275	80	30	53	80	120	150	230	M12	20	28	M16	6.9	1311K	21311K	H311	HE311	120 X 12	2
																	2311K	22311K	H2311	HE2311	120 X 10	1
SN 612	55	2 1/8	130	280	80	30	56	80	125	155	230	M12	20	28	M16	8.8	1312K	21312K	H312	HE312	130 X 12.5	2
																	2312K	22312K	H2312	HE2312	130 X 10	1
SN 613	60	2 1/4	140	315	90	32	58	95	130	175	260	M16	22	30	M20	9.8	1313K	21313K	H313	HE313	140 X 12.5	2
																	2313K	22313K	H2313	HE2313	140 X 10	1
SN 615	65	2 1/2	160	345	100	35	65	100	140	195	290	M16	23	28	M20	13	1315K	21315K	H315	HE315	160 X 14	2
																	2315K	22315K	H2315	HE2315	160 X 10	1
SN 616	70	2 3/4	170	345	100	35	68	112	145	212	290	M16	23	30	M20	15.5	1316K	21316K	H316	HE316	170 X 14.5	2
																	2316K	22316K	H2316	HE2316	170 X 10	1
SN 617	75	3	180	380	110	40	70	112	155	218	320	M20	26	35	M24	16.3	1317K	21317K	H317	HE317	180 X 14.5	2
																	2317K	22317K	H2317	HE2317	180 X 10	1
SN 618	80	3 1/8	190	400	110	33	74	112	160	230	335	M20	27	38	M24	20	1318K	-	H318	HE318	190 X 15.5	2
																	2318K	22318K	H2318	HE2318	190 X 10	1
SN 619	85	-	200	420	120	36	77	125	170	245	350	M20	28	36	M24	28	1319K	-	H319	HE319	200 X 16	2
																	2319K	22319K	H2319	HE2319	200 X 10	1
SN 620	90	3 1/2	215	420	120	38	83	140	175	280	350	M20	27	33	M24	30.5	1320K	-	H320	HE320	215 X 18	2
																	2320K	22320K	H2320	HE2320	215 X 10	1
SN 622	100	4	240	460	130	40	90	150	190	300	390	M20	28	32	M24	42	1322K	-	H322	HE322	240 X 20	2
																	2322K	22322K	H2322	HE2322	240 X 10	1

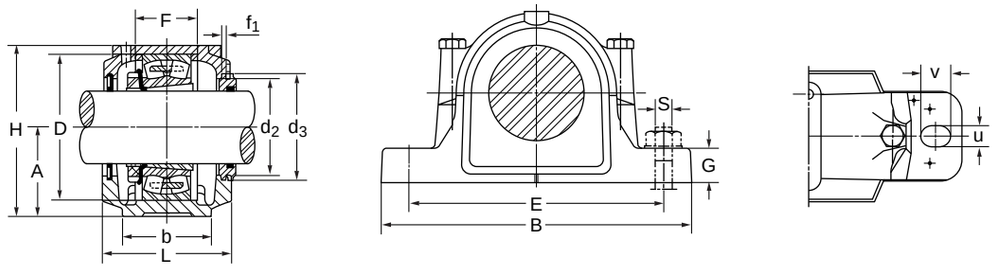




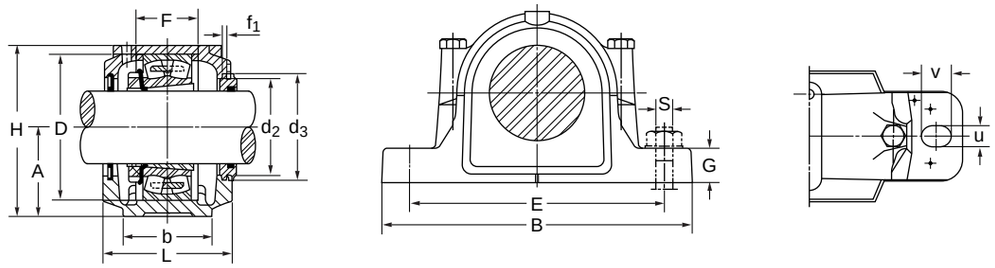


Housing No	Basic Dimensions											
	Shaft Dia. d_1		D	B	b	G	F	A	L	H	E	t
	Metric	Inch	H8				H13	h13				
SN 624	110	4 1/4	260	540	160	50	96	160	205	325	450	M24
SN 626	115	4 1/2	280	560	160	50	103	170	215	350	470	M24
SN 628	125	5	300	630	170	55	112	180	235	375	520	M30
SN 630	135	5 1/4	320	680	180	55	118	190	245	395	560	M30
SN 632	140	5 1/2	340	710	190	60	124	200	255	415	580	M30

			Mass	Bearing No		Adapter Sleeve		Locating Ring	
u	v	S	kg	Self-Aligning Ball	Spherical Roller	Metric	Inch	Number	Qty
34	42	M30	59	-	22324K	H2324	HE2324	260 X 10	1
34	42	M30	61.5	-	22326K	H2326	HE2326	280 X 10	1
34	46	M30	88	-	22328K	H2328	HE2328	300 X 10	1
38	44	M30	89	-	22330K	H2330	HE2330	320 X 10	1
40	52	M36	127	-	22332K	H2332	HE2332	340 X 10	1

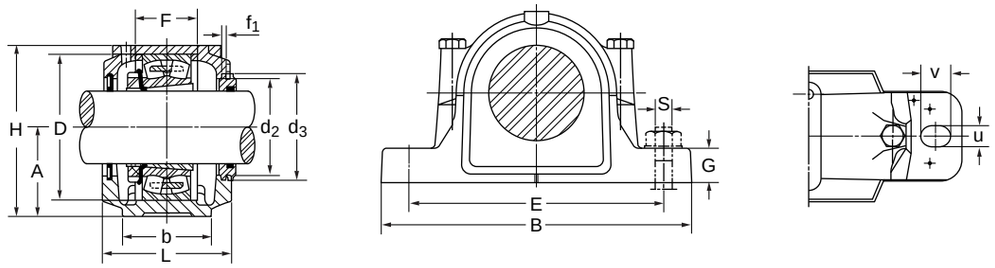


Shaft Dia.	Housing No	Bearing No		Accessories	Sealing Arrangement	Locating Ring	
mm		Self- Aligning Ball	Spherical Roller	Adapter Sleeve	TSNA-G	Number	Qty
20	SNK 505	1205K	-	H205	-	52 X 10	1
20	SNK 505	2205K	-	H305	-	52 X 7	1
20	SNK 506-605	1305K	-	H305	-	62 X 7.5	2
20	SNK 506-605	2305K	-	H2305	-	62 X 8	1
25	SNK 506-605	1206K	-	H206	-	62 X 8	2
25	SNK 506-605	2206K	-	H306	-	62 X 6	2
25	SNK 507-606	1306K	-	H306	-	72 X 7.5	2
25	SNK 507-606	2306K	-	H2306	-	72 X 7	1
30	SNK 507-606	1207K	-	H207	TSN 507 G	72 X 8.5	2
30	SNK 507-606	2207K	22207K	H307	TSN 507 G	72 X 5.5	2
30	SNK 508-607	1307K	-	H307	TSN 607 G	80 X 9	2
30	SNK 508-607	2307K	-	H2307	TSN 607 G	80 X 8	1
35	SNK 508-607	1208K	-	H208	TSN 508 G	80 X 10.5	2
35	SNK 508-607	2208K	22208K	H308	TSN 508 G	80 X 8	2
35	SNK 510-608	1308K	21308K	H308	TSN 608 G	90 X 9	2
35	SNK 510-608	2308K	22308K	H2308	TSN 608 G	90 X 8	1
40	SNK 509	1209K	-	H209	TSN 509 G	85 X 5.5	2
40	SNK 509	2209K	22209K	H309	TSN 509 G	85 X 7	1
40	SNK 511-609	1309K	21309K	H309	TSN 609 G	100 X 9.5	2
40	SNK 511-609	2309K	22309K	H2309	TSN 609 G	100 X 8	1
45	SNK 510-608	1210K	-	H210	TSN 510 G	90 X 10.5	2
45	SNK 510-608	2210K	22210K	H310	TSN 510 G	90 X 9	2
45	SNK 512-610	1310K	21310K	H310	TSN 610 G	110 X 10.5	2
45	SNK 512-610	2310K	22310K	H2310	TSN 610 G	110 X 8	1
50	SNK 511-609	1211K	-	H211	TSN 511 G	100 X 11.5	2
50	SNK 511-609	2211K	22211K	H311	TSN 511 G	100 X 9.5	2
50	SNK 513-611	1311K	21311K	H311	TSN 611 G	120 X 11	2
50	SNK 513-611	2311K	22311K	H2311	TSN 611 G	120 X 8	1
55	SNK 512-610	1212K	-	H212	TSN 512 G	110 X 13	2
55	SNK 512-610	2212K	22212K	H312	TSN 512 G	110 X 10	2
55	SNK 515-612	1312K	21312K	H312	TSN 612 G	130 X 12.5	2
55	SNK 515-613	2312K	22312K	H2312	TSN 612 G	130 X 10	1

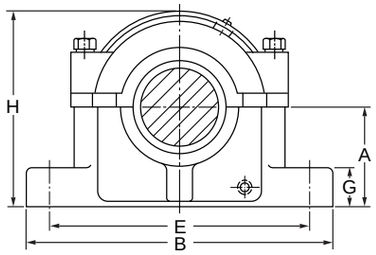


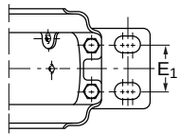
Shaft Dia.	Housing No	Bearing No		Accessories	Sealing Arrangement	Locating Ring	
mm		Self- Aligning Ball	Spherical Roller	Adapter Sleeve	TSNA-G	Number	Qty
60	SNK 513-611	1213K	-	H213	TSN 513 G	120 X 14	2
60	SNK 513-611	2213K	22213K	H313	TSN 513 G	120 X 10	2
60	SNK 516-613	1313K	21313K	H313	TSN 613 G	140 X 12.5	2
60	SNK 516-613	2313K	22313K	H2313	TSN 613 G	140 X 10	1
65	SNK 515-612	1215K	-	H215	TSN 515 G	130 X 15.5	2
65	SNK 515-612	2215K	22215K	H315	TSN 515 G	130 X 12.5	2
65	SNK 518-615	1315K	21315K	H315	TSN 615 G	160 X 14	2
65	SNK 518-615	2315K	22315K	H2315	TSN 615 G	160 X 10	1
70	SNK 516-613	1216K	-	H216	TSN 516 G	140 X 16	2
70	SNK 516-613	2216K	22216K	H316	TSN 516 G	140 X 12.5	2
70	SNK 519-616	1316K	21316K	H316	TSN 616 G	170 X 14.5	2
70	SNK 519-616	2316K	22316K	H2316	TSN 616 G	170 X 10	1
75	SNK 517	1217K	-	H217	TSN 517 G	150 X 16.5	2
75	SNK 517	2217K	22217K	H317	TSN 517 G	150 X 12.5	2
75	SNK 520-617	1317K	21317K	H317	TSN 617 G	180 X 14.5	2
75	SNK 520-617	2317K	22317K	H2317	TSN 617 G	180 X 10	1
80	SNK 518-615	1218K	-	H218	TSN 518 G	160 x 17.5	2
80	SNK 518-615	2218k	22218k	H318	TSN 518 G	160 X 12.5	2
80	SNK 518-615	-	23218K	H2318	TSN 518 G	160 X 12.5	1
85	SNK 519-616	1219K	-	H219	TSN 519 G	170 X 18	2
85	SNK 519-616	2219K	22219K	H319	TSN 519 G	170 X 12.5	2
85	SNK 522-619	-	22319K	H2319	TSN 619 G	200 X 13	1
90	SNK 520-617	1220K	-	H220	TSN 520 G	180 X 18	2
90	SNK 520-617	2220K	22220K	H320	TSN 520 G	180 X 12	2
90	SNK 520-617	-	23220K	H2320	TSN 520 G	180 X 9.7	1
90	SNK 524-620	-	22320K	H2320	TSN 620 G	215 X 13	1
100	SNK 522-619	1222K	-	H222	TSN 522 G	200 X 21	2
100	SNK 522-619	2222K	22222K	H322	TSN 522 G	200 X 13.5	2
100	SNK 522-619	-	22322K	H2322	TSN 522 G	200 X 10	1
110	SNK 524-620	-	22224K	H3124	TSN 524 G	215 X 14	2
110	SNK 524-620	-	22324K	H2324	TSN 524 G	215 X 10	1
115	SNK 526	-	22226K	H3126	TSN 526 G	230 X 13	2

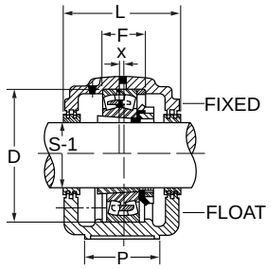
12.03



Shaft Dia.	Housing No	Bearing No		Accessories	Sealing Arrangement	Locating Ring	
mm		Self- Aligning Ball	Spherical Roller	Adapter Sleeve	TSNA-G	Number	Qty
115	SNK 526	-	23226K	H2326	TSN 526 G	230 X 10	1
125	SNK 528	-	22228K	H3128	TSN 528 G	250 X 15	2
125	SNK 528	-	23228K	H2328	TSN 528 G	250 X 10	1
135	SNK 530	-	22230K	H3130	TSN 530 G	270 X 16.5	2
135	SNK 530	-	23230K	H2330	TSN 530 G	270 X 10	1
140	SNK 532	-	22232K	H3132	TSN 532 G	290 X 17	2
140	SNK 532	-	23232K	H2332	TSN 532 G	290 X 10	1

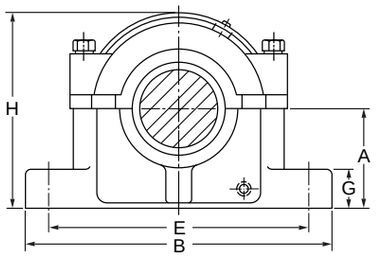


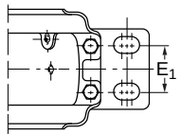


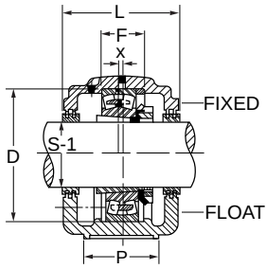


Housing No	Basic Dimensions												
	A	B	p	G	E		E1	H	L	Bolts (No, Req'd)	D	F	
	in.	in.	in.	in.	Max. in.	Max. in.	in.	in.	in.	in.	in.	mm	mm
SAF 216	3.1/2	13	3.1/2	1.1/4	11	9.5/8	2.1/8	6.15/16	5.3/8	(2) 3/4	(4) 5/8	140	43
SAF 217	3.3/4	13	3.1/2	1.1/4	11	9.7/8	2.1/8	7.3/8	5.3/8	(2) 3/4	(4) 5/8	150	46
SAF 218	4	13.3/4	3.7/8	1.5/16	11.5/8	10.3/8	2.1/8	7.3/4	5.3/4	(2) 3/4	(4) 5/8	160	50
SAF 220	4.1/2	15.1/4	4.3/8	1.3/4	13.1/8	11.5/8	2.3/8	8.3/4	6	(2) 7/8	(4) 3/4	180	56
SAF 222	4.15/16	16.1/2	4.3/4	2	14.1/2	12.5/8	2.3/4	9.5/8	6.1/2		(4) 3/4	200	63
SAF 224	5.1/4	16.1/2	4.3/4	2.1/8	14.1/2	13.1/4	2.3/4	10.1/4	7.3/8		(4) 3/4	215	68
SAF 226	6	18.3/8	5.1/8	2.3/8	16	14.5/8	3.1/4	11.1/2	8		(4) 7/8	230	74
SAF 228	6	20.1/8	5.7/8	2.3/8	17.1/8	16	3.3/8	11.3/4	7.5/8		(4) 1	250	78
SAF 230	6.5/16	21.1/4	6.1/4	2.1/2	18.1/4	17	3.3/4	12.1/2	8.3/8		(4) 1	270	83
SAF 232	6.11/16	22	6.1/4	2.5/8	19.1/4	17.3/8	3.3/4	13.5/16	8.3/4		(4) 1	290	90
SAF 234	7.1/16	24.3/4	6.3/4	2.3/4	21.5/8	19.3/8	4.1/4	14.3/16	9.5/8		(4) 1	310	96
SAF 236	7.1/2	26.3/4	7.1/8	3	23.5/8	20.7/8	4.5/8	14.7/8	10		(4) 1	320	96
SAF 238	7.7/8	28	7.1/2	3.1/8	24.3/8	21.5/8	4.1/2	15.11/16	10.3/4		(4) 1 1/4	340	102
SAF 240	8.1/4	29.1/2	8	3.3/8	25	22.1/2	5	16.1/2	11.1/4		(4) 1 1/4	360	108

Shaft Dia.		Mass	Complete Set	Pillow Block	Bearing	Accessories						
S-2	S-3		Unit Number	Housing	Number	Locknut	Lockwasher	Labyrinth Seal Ring		Stabilizing Ring (1 Req'd)	End Plug (EPR)	
								S-2 Shaft (1 Req'd)	S-3 Shaft (1 Req'd)			
in.	in.	kg										
3.5/8	3	10.2	SAF 22216	SAF 216	22216	KM 16	MB 16	LER 82	LER 54	SR-16-13	9	
3.15/16	3.3/16	12.8	SAF 22217	SAF 217	22217	KM 17	MB 17	LER 89	LER 63	SR-17-14	9	
4.1/8	3.3/8	15.4	SAF 22218	SAF 218	22218	KM 18	MB 18	LER 112	LER 191	SR-18-15	11	
4.1/2	3.13/16	22.6	SAF 22220	SAF 220	22220	KM 20	MB 20	LER 118	LER 106	SR-20-17	12	
4.7/8	4.3/16	28.9	SAF 22222	SAF 222	22222	KM 22	MB 22	LER 121	LER 113	SR-22-19	14	
5.5/16	4.9/16	30.5	SAF 22224	SAF 224	22224	KM 24	MB 24	LER 127	LER 119	SR-24-20	15	
5.7/8	4.15/16	46.0	SAF 22226	SAF 226	22226	KM 26	MB 26	LER 136	LER 122	SR-26- 0	27	
6.1/4	5.5/16	50.5	SAF 22228	SAF 228	22228	KM 28	MB 28	LER 144	LER 127	SR-28- 0	16	
6.5/8	5.3/4	65.5	SAF 22230	SAF 230	22230	KM 30	MB 30	LER 151	LER 134	SR-30- 0	17	
7	6.1/16	75.8	SAF 22232	SAF 232	22232	KM 32	MB 32	LER 156	LER 142	SR-32- 0	18	
7.7/16	6.7/16	80.0	SAF 22234	SAF 234	22234	KM 34	MB 34	LER 161	LER 148	SR-34- 0	19	
7.13/16	6.7/8	94.7	SAF 22236	SAF 236	22236	KM 36	MB 36	LER 165	LER 154	SR-36-30	20	
8.3/8	7.1/4	127.1	SAF 22238	SAF 238	22238	KM 38	MB 38	LER 171	LER 160	SR-38-32	21	
8.3/4	7.5/8	152.8	SAF 22240	SAF 240	22240	KM 40	MB 40	LER 175	LER 164	SR-40-34	22	

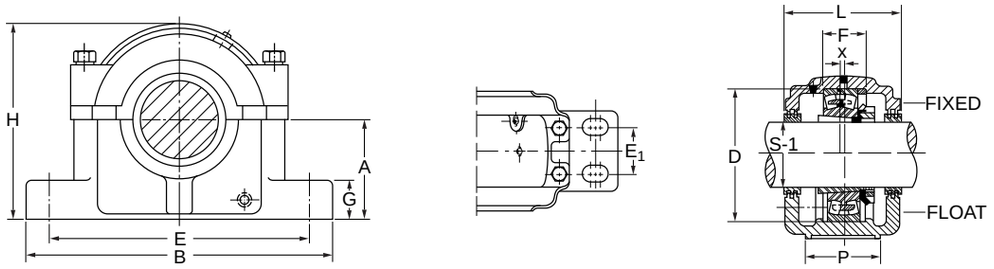






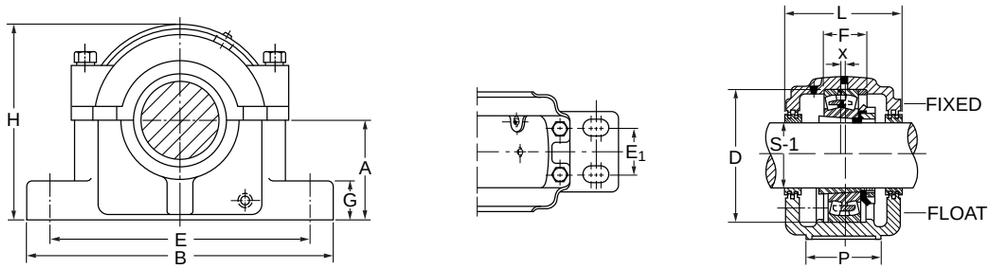
Housing No	Basic Dimensions												
	A	B	p	G	E		E1	H	L	Bolts (No, Req'd)		D	F
	in.	in.	in.	in.	Max. in.	Max. in.	in.	in.	in.	in.	in.	mm	mm
SAF 308	2.1/2	8.1/4	2.3/8	1	7	6.1/2		4.13/16	4	(2) 1/2		90	42.8
SAF 309	2.3/4	9.5/8	2.3/4	1	7.7/8	7.3/8		5.5/16	4.1/4	(2) 5/8		100	46
SAF 310	3	10.5/8	2.3/4	1.1/8	9	7.3/4		5.13/16	4.5/8	(2) 5/8		110	51
SAF 311	3.1/4	11	3.1/8	1.3/16	9.1/2	8.1/8	2	6.3/16	5	(2) 5/8	(4) 1/2	120	53
SAF 313	3.1/2	13	3.1/2	1.1/4	11	9.5/8	2.1/8	6.15/16	5.3/8	(2) 3/4	(4) 5/8	140	58
SAF 315	4	13.3/4	3.7/8	1.5/16	11.5/8	10.3/8	2.1/8	7.13/16	6.1/4	(2) 3/4	(4) 5/8	160	65
SAF 316	4.1/4	14.1/4	3.7/8	1.5/16	12.5/8	10.5/8	2.1/8	8.1/4	6.1/2	(2) 3/4	(4) 5/8	170	68
SAF 317	4.1/2	15.1/4	4.3/8	1.3/4	13.1/8	11.5/8	2.3/8	8.3/4	6.3/4	(2) 7/8	(4) 3/4	180	70
SAF 318	4.3/4	15.1/2	4.3/8	2	13.1/2	12	2.1/4	9.3/16	6.7/8		(4) 3/4	190	74
SAF 320	5.1/4	16.1/2	4.3/4	2.1/8	14.1/2	13.1/4	2.3/4	10.1/4	7.3/8		(4) 3/4	215	83
SAF 322	6	18.3/8	5.1/8	2.3/8	16	14.5/8	3.1/4	11.1/2	8		(4) 7/8	240	90
SAF 324	6.5/16	21.1/4	6.1/4	2.1/2	18.1/4	17	3.3/4	12.1/2	8.3/8		(4) 1	260	96
SAF 326	6.11/16	22	6.1/4	2.5/8	19.1/4	17.3/8	3.3/4	13.5/16	8.3/4		(4) 1	280	103
SAF 328	7.1/16	24.3/4	6.3/4	2.3/4	21.5/8	19.3/8	4.1/4	14.3/16	9.5/8		(4) 1	300	112
SAF 330	7.1/2	26.3/4	7.1/8	3	23.5/8	20.7/8	4.5/8	14.7/8	9.3/4		(4) 1	320	118
SAF 332	7.7/8	28	7.1/2	3.1/8	24.3/8	21.5/8	4.1/2	15.11/16	10.3/4		(4) 1.1 4	340	124

Shaft Dia.		Mass	Complete Set	Pillow Block	Bearing	Accessories						
S-2	S-3		Unit Number	Housing	Number	Locknut	Lockwasher	Labyrinth Seal Ring		Stabilizing Ring (1 Req'd)	End Plug (EPR)
								S-2 Shaft (1 Req'd)	S-3 Shaft (1 Req'd)		
in.	in.	kg									
1.15/16	1.7/16	5.0	SAF 22308	SAF 308	222308	KM 08	MB 08	LER 24	LER 17	SR-10- 8	3
2.1/8	1.11/16	6.4	SAF 22309	SAF 309	22309	KM 09	MB 09	LER 28	LER 20	SR-11- 9	4
2.3/8	1.7/8	7.9	SAF 22310	SAF 310	22310	KM 10	MB 10	LER 35	LER 23	SR- 0-10	4
2.9/16	2.1/16	9.0	SAF 22311	SAF 311	22311	KM 11	MB 11	LER 40	LER 27	SR-13-11	6
3.1/16	2.7/16	12.8	SAF 22313	SAF 313	22313	KM 13	MB 13	LER 55	LER 37	SR-16-13	7
3.7/16	2.13/16	17.7	SAF 22315	SAF 315	22315	KM 15	MB 15	LER 79	LER 46	SR-18-15	8
3.5/8	3	22.2	SAF 22316	SAF 316	22316	KM 16	MB 16	LER 84	LER 60	SR-19-16	10
3.15/16	3.3/16	24.0	SAF 22317	SAF 317	22317	KM 17	MB 17	LER 109	LER 188	SR-20-17	11
4.1/8	3.3/8	26.3	SAF 22318	SAF 318	22318	KM 18	MB 18	LER 112	LER 191	SR-21-18	11
4.1/2	3.13/16	36.3	SAF 22320	SAF 320	22320	KM 20	MB 20	LER 118	LER 106	SR-24-20	12
4.7/8	4.3/16	43.1	SAF 22322	SAF 322	22322	KM 22	MB 22	LER 121	LER 113	SR- 0-22	14
5.5/16	4.9/16	63.4	SAF 22324	SAF 324	22324	KM 24	MB 24	LER 127	LER 119	SR- 0-24	15
5.7/8	4.15/16	78.7	SAF 22326	SAF 326	22326	KM 26	MB 26	LER 136	LER 122	SR- 0-26	27
6.1/4	5.5/16	92.8	SAF 22328	SAF 328	22328	KM 28	MB 28	LER 144	LER 127	SR- 0-28	16
6.5/8	5.3/4	111.2	SAF 22330	SAF 330	22330	KM 30	MB 30	LER 151	LER 134	SR-36-30	17
7	6.1/16	129.3	SAF 22332	SAF 332	22332	KM 32	MB 32	LER 156	LER 142	SR-38-32	18



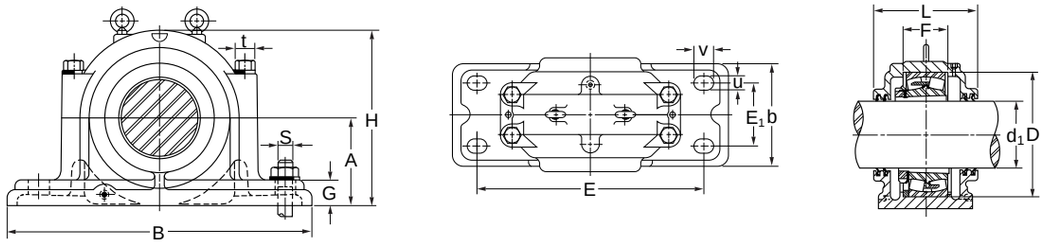
Housing No	Basic Dimensions											
	A	B	p	G	E		E1	H	X	L	Bolts (No, Req'd)	
	in.	in.	in.	in.	Max. in.	Max. in.	in.	in.	in.	in.	in.	in.
SAF 509	2.1/4	8.1/4	2.3/8	13/16	7	6.1/4		4.3/8	3.5/8	0.114	(2) 1/2	
SAF 510	2.1/2	8.1/4	2.3/8	15/16	7	6.1/2		4.3/4	3.5/8	0.133	(2) 1/2	
SAF 511	2.3/4	9.5/8	2.3/4	15/16	7.7/8	7.3/8		5.1/4	3.7/8	0.114	(2) 5/8	
SAF 513	3	11	3.1/8	1	9.1/2	8.1/8	2	5.15/16	4.1/2	0.157	(2) 5/8	(4) 1/2
SAF 515	3.1/4	11.1/4	3.1/8	1.1/8	9.5/8	8.5/8	1.7/8	6.3/8	4.3/4	0.118	(2) 5/8	(4) 1/2
SAF 516	3.1/2	13	3.1/2	1.3/16	11	9.5/8	2.1/8	6.7/8	4.7/8	0.187	(2) 3/4	(4) 5/8
SAF 517	3.3/4	13	3.1/2	1.1/4	11	9.7/8	2.1/8	7.5/16	5	0.187	(2) 3/4	(4) 5/8
SAF 518	4	13.3/4	3.7/8	1.5/16	11.5/8	10.3/8	2.1/8	7.3/4	5.3/4	0.187	(2) 3/4	(4) 5/8
SAF 520	4.1/2	15.1/4	4.3/8	1.3/4	13.1/8	11.5/8	2.3/8	8.3/4	6.1/8	0.187	(2) 7/8	(4) 3/4
SAF 522	4.15/16	16.1/2	4.3/4	2	14.1/2	12.5/8	2.3/4	9.5/8	6.1/2	0.187		(4) 3/4
SAF 524	5.1/4	16.1/2	4.3/4	2.1/8	14.1/2	13.1/4	2.3/4	10.1/4	7.3/8	0.187		(4) 3/4
SAF 526	6	18.3/8	5.1/8	2.3/8	16	14.5/8	3.1/4	11.1/2	8	0.187		(4) 7/8
SAF 528	6	20.1/8	5.7/8	2.3/8	17.1/8	16	3.3/8	11.3/4	7.5/8	0.187		(4) 1
SAF 530	6.5/16	21.1/4	6.1/4	2.1/2	18.1/4	17	3.3/4	12.1/2	8.3/8	0.187		(4) 1
SAF 532	6.11/16	22	6.1/4	2.5/8	19.1/4	17.3/8	3.3/4	13.5/16	8.3/4	0.187		(4) 1
SAF 534	7.1/16	24.3.4	6.3/4	2.3/4	21.5/8	19.3/8	4.1/4	14.3/16	9.5/8	0.187		(4) 1
SAF 536	7.1/2	26.3/4	7.1/8	3	23.5/8	20.7/8	4.5/8	14.7/16	10	0.187		(4) 1
SAF 538	7.7/8	28	7.1/2	3.1/8	24.3/8	21.5/8	4.1/2	15.11/16	10.3/4	0.187		(4) 1.1/4
SAF 540	8.1/4	29.1/2	8	3.3/8	25	22.1/2	5	16.1/2	11.1/4	0.187		(4) 1.1/4
SAF 544	9.1/2	32.3/4	8.3/4	3.3/4	27.7/8	24.3/4	5.1/4	18.5/8	12	0.187		(4) 1.1/2

		Shaft Dia.	Mass	Complete Block	Pillow Block	Bearing	Accessories			
D	F	S-1		Block Number	Housing Only	Number	Adapter Locknut and Lockwasher	Labyrinth Seal Ring (2 Req'd)	Stabilizing Ring (1 Req'd)	End Plug (EPR)
mm	mm	in.	kg							
85	29	1.7/16	4.2	SAF 22509	SAF 509	22209K	SNW 9	LER 17	SR- 9- 9	3
90	30	1.11/16	4.6	SAF 22510	SAF 510	22210K	SNW 10	LER 20	SR-10- 0	4
100	31	1.15/16	5.6	SAF 22511	SAF 511	22211K	SNW 11	LER 24	SR-11- 0	5
120	39	2.3/16	8.2	SAF 22513	SAF 513	22213K	SNW 13	LER 29	SR-13- 0	6
130	37	2.7/16	8.2	SAF 22515	SAF 515	22215K	SNW 15	LER 37	SR-15- 0	7
140	43	2.11/16	12.0	SAF 22516	SAF 516	22216K	SNW 16	LER 44	SR-16-13	8
150	46	2.15/16	13.3	SAF 22517	SAF 517	22217K	SNW 17	LER 53	SR-17-14	9
160	50	3.3/16	16.3	SAF 22518	SAF 518	22218K	SNW 18	LER 188	SR-18-15	11
180	56	3.7/16	22.4	SAF 22520	SAF 520	22220K	SNW 20	LER 102	SR-20-17	12
200	63	3.15/16	26.8	SAF 22522	SAF 522	22222K	SNW 22	LER 109	SR-22-19	13
215	68	4.3/16	31.8	SAF 22524	SAF 524	22224K	SNW 24	LER 113	SR-24-20	14
230	74	4.7/16	42.3	SAF 22526	SAF 526	22226K	SNW 26	LER 117	SR-26- 0	15
250	78	4.15/16	49.2	SAF 22528	SAF 528	22228K	SNW 28	LER 122	SR-28- 0	27
270	83	5.3/16	61.6	SAF 22530	SAF 530	22230K	SNW 30	LER 125	SR-30- 0	16
290	90	5.7/16	70.4	SAF 22532	SAF 532	22232K	SNW 32	LER 130	SR-32- 0	16
310	96	5.15/16	82.4	SAF 22534	SAF 534	22234K	SNW 34	LER 140	SR-34- 0	18
320	96	6.7/16	96.9	SAF 22536	SAF 536	22236K	SNW 36	LER 148	SR-36-30	19
340	102	6.15/16	127.2	SAF 22538	SAF 538	22238K	SNW 38	LER 155	SR-38-32	20
360	108	7.3/16	147.3	SAF 22540	SAF 540	22240K	SNW 40	LER 159	SR-40-34	21
400	111	7.15/16	174.7	SAF 22544	SAF 544	22244K	SNW 44	LER 167	SR-44-38	23



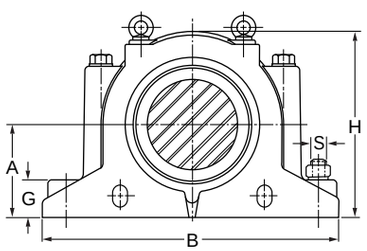
Housing No	Basic Dimensions										
	A	B	p	G	E		E1	H	L	Bolts (No, Req'd)	
	in.	in.	in.	in.	Max. in.	Max. in.	in.	in.	in.	in.	in.
SAF 609	2.3/4	9.5/8	2.3/4	1	7.7/8	7.3/8		5.5/16	4.1/4	(2) 5/8	
SAF 610	3	10.5/8	2.3/4	1.1/8	9	7.3/4		5.13/16	4.5/8	(2) 5/8	
SAF 611	3.1/4	11	3.1/3	1.3/16	9.1/2	8.1/8	2	6.3/16	4.7/8	(2) 5/8	(4) 1/2
SAF 613	3.1/2	13	3.1/2	1.1/4	11	9.5/8	2.1/8	6.15/16	5.3/8	(2) 3/4	(4) 5/8
SAF 615	4	13.3/4	3.7/8	1.5/16	11.5/8	10.3/8	2.1/8	7.3/4	6.1/4	(2) 3/4	(4) 5/8
SAF 616	4.1/4	14.1/4	3.7/8	1.5/16	12.5/8	10.5/8	2.1/8	8.1/4	6.1/2	(2) 3/4	(4) 5/8
SAF 617	4.1/2	15.1/4	4.3/8	1.3/4	13.1/8	11.5/8	2.3/8	8.3/4	6.3/4	(2) 7/8	(4) 3/4
SAF 618	4.3/4	15.1/2	4.3/8	2	13.1/2	12	2.1/4	9.3/16	6.7/8		(4) 3/4
SAF 620	5.1/4	16.1/2	4.3/4	2.1/8	14.1/2	13.1/4	2.3/4	10.1/4	7.3/8		(4) 3/4
SAF 622	6	18.3/8	5.1/8	2.3/8	16	14.5/8	3	11.1/2	8		(4) 7/8
SAF 624	6.5/16	21.1/4	6.1/4	2.1/2	18.1/4	17	3.3/4	12.1/2	8.3/8		(4) 1
SAF 626	6.11/16	22	6.1/4	2.5/8	19.1/4	17.3/8	3.3/4	13.5/16	8.3/4		(4) 1
SAF 628	7.1/16	24.3/4	6.3/4	2.3/4	21.5/8	19.3/8	4.1/4	14.3/16	9.5/8		(4) 1
SAF 630	7.1/2	26.3/4	7.1/8	3	23.5/8	20.7/8	4.5/8	14.7/8	9.3/4		(4) 1
SAF 632	7.7/8	28	7.1/2	3.1/8	24.5/8	21.5/8	4.1/2	15.11/16	10.3/4		(4) 1.1/4
SAF 634	8.1/4	29.1/2	8	3.3/8	25	22.1/2	5	16.1/2	11.1/4		(4) 1.1/4
SAF 636	8.7/8	31.1/4	8.1/4	3.1/2	26.5/8	24	5.1/4	17.3/4	11.3/8		(4) 1.1/4
SAF 638	9.1/2	32.3/4	8.3/4	3.3/4	27.7/8	24.3/4	5.1/4	18.5/8	12		(4) 1.1/2
SAF 640	9.7/8	34.1/4	9	4	29.1/2	26.1/4	5.1/2	20	12.1/16		(4) 1.1/2

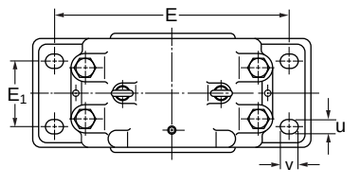
		Shaft Dia.	Mass	Complete Block	Pillow Block	Bearing	Accessories			
D	F	S-1		Block Number	Housing Only	Number	Adapter Locknut and Lockwasher	Labyrinth Seal Ring (2 Req'd)	Stabilizing Ring (1 Req'd)	End Plug (EPR)
mm	mm	in.	kg							
100	46	1.7/16	5.4	SAF 22609	SAF 609	22309K	SNW 109	LER 17	SR-11- 9	3
110	51	1.11/16	7.5	SAF 22610	SAF 610	22310K	SNW 110	LER 20	SR- 0-10	4
120	53	1.15/16	9.0	SAF 22611	SAF 611	22311K	SNW 111	LER 24	SR-13-11	5
140	58	2.3/16	12.8	SAF 22613	SAF 613	22313K	SNW 113	LER 32	SR-16-13	6
160	65	2.7/16	16.5	SAF 22615	SAF 615	22315K	SNW 115	LER 37	SR-18-15	7
170	68	2.11/16	21.3	SAF 22616	SAF 616	22316K	SNW 116	LER 44	SR-19-16	8
180	70	2.15/16	25.6	SAF 22617	SAF 617	22317K	SNW 117	LER 184	SR-20-17	10
190	74	3.3/16	28.0	SAF 22618	SAF 618	22318K	SNW 118	LER 188	SR-21-18	11
215	83	3.7/16	34.4	SAF 22620	SAF 620	22320K	SNW 120	LER 102	SR-24-20	12
240	90	3.15/16	47.9	SAF 22622	SAF 622	22322K	SNW 122	LER 109	SR- 0-22	13
260	96	4.3/16	65.1	SAF 22624	SAF 624	22324K	SNW 124	LER 113	SR- 0-24	14
280	103	4.7/16	73.5	SAF 22626	SAF 626	22326K	SNW 126	LER 117	SR- 0-26	15
300	112	4.15/16	86.1	SAF 22628	SAF 628	22328K	SNW 128	LER 122	SR- 0-28	27
320	118	5.3/16	115.8	SAF 22630	SAF 630	22330K	SNW 130	LER 125	SR-36-30	16
340	124	5.7/16	120.0	SAF 22632	SAF 632	22332K	SNW 132	LER 130	SR-38-32	16
360	130	5.15/16	136.8	SAF 22634	SAF 634	22334K	SNW 134	LER 140	SR-40-34	18
380	136	6.7/16	167.3	SAF 22636	SAF 636	22336K	SNW 136	LER 148	SR- 0-36	19
400	142	6.15/16	196.9	SAF 22638	SAF 638	22338K	SNW 138	LER 155	SR-44-38	20
420	148	7.3/16	218.7	SAF 22640	SAF 640	22340K	SNW 140	LER 159	SR- 0-40	21

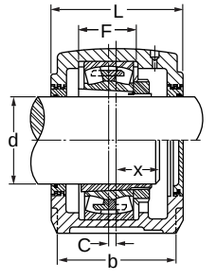


Housing No	Basic Dimensions												
	d1	D H8	A h13	B	E	B	G	F H13	H	L	E1	u	v
SD 3034	150	260	160	540	450	200	50	77	320	230	110	35	52
SD 3036	160	280	170	560	470	220	50	84	340	250	120	35	52
SD 3038	170	290	170	560	470	220	50	85	345	250	120	35	52
SD 3040	180	310	180	620	510	230	60	92	360	270	140	35	55
SD 3044	200	340	200	700	570	260	65	100	400	290	160	35	55
SD 3048	220	360	210	740	610	270	65	102	420	300	170	35	55
SD 3052	240	400	240	820	680	300	70	114	475	330	190	42	62
SD 3056	260	420	250	860	710	320	85	116	500	350	200	42	62
SD 3060	280	460	280	920	770	330	85	128	550	360	210	42	62
SD 3064	300	480	280	940	790	340	85	131	560	370	210	42	62
SD 3068	320	520	310	1020	860	370	100	143	615	400	230	50	70
SD 3072	340	540	325	1060	890	390	100	144	640	410	250	50	70
SD 3076	360	560	340	1080	900	390	100	145	665	410	260	50	70

		Mass	Bearing	Accessories			
t	Bolt S	kg	Number	Adapter Sleeve	Locating Ring Number	Locating Ring Qty	ZF Seal
M24	M30	71	23034K	H3034	SR260 X 10	1	ZF34
M24	M30	77	23036K	H3036	SR280 X 10	1	ZF36
M24	M30	78	23038K	H3038	SR290 X 10	1	ZF38
M24	M30	85	23040K	H3040	SR310 X 10	1	ZF40
M30	M30	118	23044K	H3044	SR340 X 10	1	ZF44
M30	M30	136	23048K	H3048	SR360 X 10	1	ZF48
M30	M36	190	23052K	H3052	SR400 X 10	1	ZF52
M36	M36	242.2	23056K	H3056	SR420 X 10	1	ZF56
M36	M36	295	23060K	H3060	SR460 X 10	1	ZF60
M36	M36	291	23064K	H3064	SR480 X 10	1	ZF64
M36	M42	386	23068K	H3068	SR520 X 10	1	ZF68
M36	M42	434	23072K	H3072	SR540 X 10	1	ZF72
M36	M42	453	23076K	H3076	SR560 X 10	1	ZF76



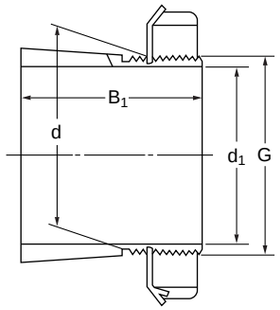




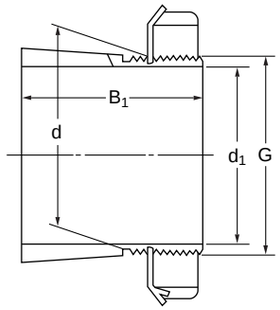
Housing No	Shaft Dia		Basic Dimensions										
	d		A	B	F	E	b	G	H	L	E1	X	U
	Metric	Inch											
SD 3134	150	6	170	510	108	430	180	70	335	230	100	65	28
SD 3136	160	6.5	180	530	116	450	190	75	355	240	110	68	30
SD 3138	170	6.75	190	560	124	480	210	80	375	260	120	80	35
SD 3140	180	7	210	610	132	510	230	85	410	280	130	82	35
SD 3144	200		220	640	140	540	240	90	435	290	140	90	36
SD 3148	220		240	700	148	600	260	95	475	310	150	100	38
SD 3152	240		260	770	164	650	280	100	515	320	160	105	45
SD 3156	260		280	790	166	670	280	105	550	330	160	105	45
SD 3160	280		300	830	180	710	310	110	590	350	190	110	44
SD 3164	300		320	880	196	750	330	115	630	370	200	120	45
SD 3168	320		340	965	210	840	380	120	670	390	240	135	52
SD 3172	340		360	1040	212	890	390	130	720	400	255	145	60
SD 3176	360		380	1120	214	980	400	135	750	405	255	145	68
SD 3180	380		400	1245	220	1050	420	140	790	425	270	150	75

	Bolt	Mass	Bearing	Accessories			
V	S		Number	Adapter Sleeve		Locating Ring	
		kg		Metric	Inch	Number	Qty
35	M24	66	23134K	H3134	HE3134	280 X 10	2
38	M24	75	23136K	H3136	HE3136	300 X 10	2
48	M24	87	23138K	H3138	HE3138	320 X 10	2
42	M30	113	23140K	H3140	HE3140	340 X 10	2
46	M30	129	23144K	H3144		370 X 10	2
46	M30	163	23148K	H3148		400 X 10	2
60	M36	199	23152K	H3152		400 X 10	2
60	M36	226	23156K	H3156		460 X 10	2
64	M36	283	23160K	H3160		500 X 10	2
72	M36	346	23164K	H3164		540 X 10	2
70	M45	514	23168K	H3168		580 X 10	2
77	M50	594	23172K	H3172		600 X 10	2
88	M55	702	23176K	H3176		620 X 10	2
96	M60	740	23180K	H3180		650 X 10	2

Accessories



Basic Dimensions				Mass	Designation		
d_1 mm	d mm	B_1 mm	G mm	kg	Adapter Sleeve with Lock Nut and Washer	Lock Nut	Washer
17	20	24	M 20X1	0.036	H 204	KM 4	MB 4
17	20	28	M 20X1	0.040	H 304	KM 4	MB 4
20	25	26	M 25X1.5	0.064	H 205	KM 5	MB 5
20	25	29	M 25X1.5	0.071	H 305	KM 5	MB 5
20	25	35	M 25X1.5	0.085	H 2305	KM 5	MB 5
25	30	27	M 30X1.5	0.086	H 206	KM 6	MB 6
25	30	31	M 30X1.5	0.095	H 306	KM 6	MB 6
25	30	38	M 30X1.5	0.110	H 2306	KM 6	MB 6
30	35	29	M 35X1.5	0.120	H 207	KM 7	MB 7
30	35	35	M 35X1.5	0.140	H 307	KM 7	MB 7
30	35	43	M 35X1.5	0.160	H 2307	KM 7	MB 7
35	40	31	M 40X1.5	0.160	H 208	KM 8	MB 8
35	40	36	M 40X1.5	0.170	H 308	KM 8	MB 8
35	40	46	M 40X1.5	0.220	H 2308	KM 8	MB 8
40	45	33	M 45X1.5	0.210	H 209	KM 9	MB 9
40	45	39	M 45X1.5	0.230	H 309	KM 9	MB 9
40	45	50	M 45X1.5	0.270	H 2309	KM 9	MB 9
45	50	35	M 50X1.5	0.240	H 210	KM 10	MB 10
45	50	42	M 50X1.5	0.270	H 310	KM 10	MB 10
45	50	55	M 50X1.5	0.340	H 2310	KM 10	MB 10
50	55	37	M 55X2	0.280	H 211	KM 11	MB 11
50	55	45	M 55X2	0.320	H 311	KM 11	MB 11
50	55	59	M 55X2	0.390	H 2311	KM 11	MB 11
55	60	38	M 60X2	0.310	H 212	KM 12	MB 12
55	60	47	M 60X2	0.360	H 312	KM 12	MB 12
55	60	62	M 60X2	0.450	H 2312	KM 12	MB 12
60	65	40	M 65X2	0.360	H 213	KM 13	MB 13
60	65	50	M 65X2	0.420	H 313	KM 13	MB 13
60	65	65	M 65X2	0.520	H 2313	KM 13	MB 13
60	70	52	M 70X2	0.670	H 314	KM 14	MB 14
60	70	68	M 70X2	0.880	H 2314	KM 14	MB 14
65	75	43	M 75X2	0.660	H 215	KM 15	MB 15



Basic Dimensions				Mass	Designation		
d_1 mm	d mm	B_1 mm	G mm	kg	Adapter Sleeve with Lock Nut and Washer	Lock Nut	Washer
65	75	55	M 75X2	0.780	H 315	KM 15	MB 15
65	75	73	M 75X2	1.100	H 2315	KM 15	MB 15
70	80	46	M 80X2	0.810	H 216	KM 16	MB 16
70	80	59	M 80X2	0.950	H 316	KM 16	MB 16
70	80	78	M 80X2	1.200	H 2316	KM 16	MB 16
75	85	50	M 85X2	0.940	H 217	KM 17	MB 17
75	85	63	M 85X2	1.100	H 317	KM 17	MB 17
75	85	82	M 85X2	1.350	H 2317	KM 17	MB 17
80	90	52	M 90X2	1.100	H 218	KM 18	MB 18
80	90	65	M 90X2	1.300	H 318	KM 18	MB 18
80	90	86	M 90X2	1.600	H 2318	KM 18	MB 18
85	95	55	M 95X2	1.250	H 219	KM 19	MB 19
85	95	68	M 95X2	1.400	H 319	KM 19	MB 19
85	95	90	M 95X2	1.800	H 2319	KM 19	MB 19
90	100	58	M 100X2	1.400	H 220	KM 20	MB 20
90	100	71	M 100X2	1.600	H 320	KM 20	MB 20
90	100	76	M 100X2	1.800	H 3120	KM 20	MB 20
90	100	97	M 100X2	2.000	H 2320	KM 20	MB 20
100	110	63	M 110X2	1.800	H 222	KM 22	MB 22
100	110	77	M 110X2	2.040	H 322	KM 22	MB 22
100	110	81	M 110X2	2.100	H 3122	KM 22	MB 22
100	110	105	M 110X2	2.750	H 2322	KM 22	MB 22
110	120	88	M 120X2	2.500	H 3124	KM 24	MB 24
110	120	112	M 120X2	3.000	H 2324	KM 24	MB 24
115	130	92	M 130X2	3.450	H 3126	KM 26	MB 26
115	130	121	M 130X2	4.450	H 2326	KM 26	MB 26
125	140	97	M 140X2	4.100	H 3128	KM 28	MB 28
125	140	131	M 140X2	5.400	H 2328	KM 28	MB 28
135	150	111	M 150X2	5.250	H 3130	KM 30	MB 30
135	150	139	M 150X2	6.400	H 2330	KM 30	MB 30
140	160	119	M 160X3	7.250	H 3132	KM 32	MB 32
140	160	147	M 160X3	8.800	H 2332	KM 32	MB 32

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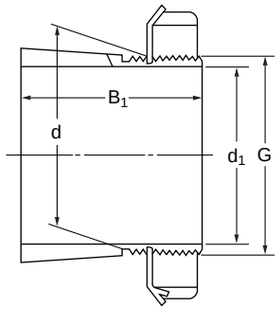
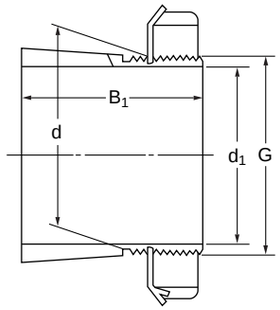
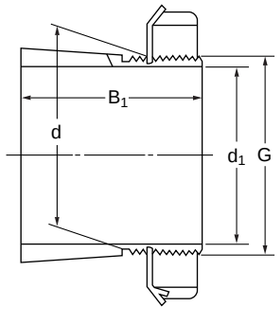


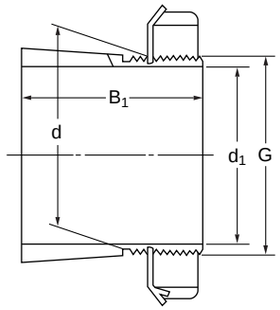
Basic Dimensions				Mass	Designation		
d_1 mm	d mm	B_1 mm	G mm	kg	Adapter Sleeve with Lock Nut and Washer	Lock Nut	Washer
150	170	122	M 170X3	8.100	H 3134	KM 34	MB 34
150	170	154	M 170X3	9.900	H 2334	KM 34	MB 34
160	180	131	M 180X3	9.150	H 3136	KM 36	MB 36
160	180	161	M 180X3	11.000	H 2336	KM 36	MB 36
170	190	141	M 190X3	10.500	H 3138	KM 38	MB 38
170	190	169	M 190X3	12.000	H 2338	KM 38	MB 38
180	200	150	M 200X3	12.000	H 3140	KM 40	MB 40
180	200	176	M 200X3	13.500	H 2340	KM 40	MB 40



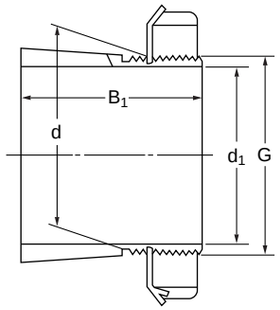
Basic Dimensions						Mass	Designation		
d_1 inch	mm	d mm	B_1 mm	G mm		kg	Adapter Sleeve with Nut and Looking Device	Lock Nut	Washer
3/4	19.050	25	26	M 25X1.5		0.070	HE 205	KM 5	MB 5
3/4	19.050	25	29	M 25X1.5		0.080	HE 305	KM 5	MB 5
3/4	19.050	25	35	M 25X1.5		0.090	HE 2305	KM 5	MB 5
7/8	22.225	30	27	M 30X1.5		0.110	HS 206	KM 6	MB 6
7/8	22.225	30	31	M 30X1.5		0.120	HS 306	KM 6	MB 6
15/16	23.813	30	27	M 30X1.5		0.100	HA 206	KM 6	MB 6
15/16	23.813	30	31	M 30X1.5		0.120	HA 306	KM 6	MB 6
15/16	23.813	30	38	M 30X1.5		0.130	HA 2306	KM 6	MB 6
1	25.400	30	27	M 30X1.5		0.080	HE 206	KM 6	MB 6
1	25.400	30	31	M 30X1.5		0.100	HE 306	KM 6	MB 6
1	25.400	30	38	M 35X1.5		0.110	HE 2306	KM 6	MB 6
1.1/8	28.575	35	29	M 35X1.5		0.140	HS 207	KM 7	MB 7
1.1/8	28.575	35	35	M 35X1.5		0.160	HS 307	KM 7	MB 7
1.3/16	30.163	35	29	M 35X1.5		0.120	HA 207	KM 7	MB 7
1.3/16	30.163	35	35	M 35X1.5		0.140	HA 307	KM 7	MB 7
1.3/16	30.163	35	43	M 35X1.5		0.160	HA 2307	KM 7	MB 7
1.1/4	31.750	40	31	M 40X1.5		0.190	HE 208	KM 8	MB 8
1.1/4	31.750	40	36	M 40X1.5		0.220	HE 308	KM 8	MB 8
1.1/4	31.750	40	46	M 40X1.5		0.280	HE 2308	KM 8	MB 8
1.3/8	34.925	40	31	M 40X1.5		0.160	HS 208	KM 8	MB 8
1.3/8	34.925	40	36	M 40X1.5		0.170	HS 308	KM 8	MB 8
1.7/16	36.512	45	33	M 45X1.5		0.260	HA 209	KM 9	MB 9
1.7/16	36.512	45	39	M 45X1.5		0.290	HA 309	KM 9	MB 9
1.7/16	36.512	45	50	M 45X1.5		0.350	HA 2309	KM 9	MB 9
1.1/2	38.100	45	33	M 45X1.5		0.200	HE 209	KM 9	MB 9
1.1/2	38.100	45	39	M 45X1.5		0.240	HE 309	KM 9	MB 9
1.1/2	38.100	45	50	M 45X1.5		0.310	HE 2309	KM 9	MB 9
1.5/8	41.275	50	35	M 50X1.5		0.310	HS 210	KM 10	MB 10
1.5/8	41.275	50	42	M 50X1.5		0.360	HS 310	KM 10	MB 10
1.5/8	41.275	50	55	M 50X1.5		0.400	HS 2310	KM 10	MB 10
1.11/16	42.863	50	35	M 50X1.5		0.280	HA 210	KM 10	MB 10
1.11/16	42.863	50	42	M 50X1.5		0.320	HA 310	KM 10	MB 10



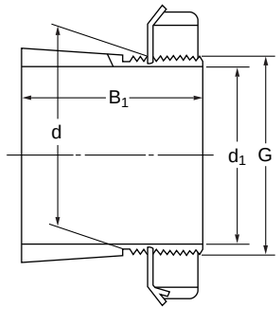
Basic Dimensions					Mass	Designation		
d_1 inch	mm	d mm	B_1 mm	G mm	kg	Adapter Sleeve with Nut and Looking Device	Lock Nut	Washer
1.11/16	42.863	50	55	M 50X1.5	0.400	HA 2310	KM 10	MB 10
1.3/4	44.450	50	35	M 50X1.5	0.260	HE 210	KM 10	MB 10
1.3/4	44.450	50	42	M 50X1.5	0.290	HE 310	KM 10	MB 10
1.3/4	44.450	50	55	M 50X1.5	0.360	HE 2310	KM 10	MB 10
1.7/8	47.625	55	37	M 55X2	0.330	HS 211	KM 11	MB 11
1.7/8	47.625	55	45	M 55X2	0.380	HS 311	KM 11	MB 11
1.15/16	49.213	55	37	M 55X2	0.300	HA 211	KM 11	MB 11
1.15/16	49.213	55	45	M 55X2	0.340	HA 311	KM 11	MB 11
1.15/16	49.213	55	59	M 55X2	0.420	HA 2311	KM 11	MB 11
2	50.800	55	37	W 55X1/19	0.260	HE 211 B	HM 11	MB 11
2	50.800	55	45	W 55X1/19	0.290	HE 311 B	HM 11	MB 11
2	50.800	55	59	W 55X1/19	0.360	HE 2311 B	HM 11	MB 11
2.1/8	53.975	60	38	M 60X2	0.350	HS 212	KM 12	MB 12
2.1/8	53.975	60	47	M 60X2	0.400	HS 312	KM 12	MB 12
2.1/8	53.975	60	62	M 60X2	0.490	HS 2312	KM 12	MB 12
2.3/16	55.563	65	40	M 65X2	0.490	HA 213	KM 13	MB 13
2.3/16	55.563	65	50	M 65X2	0.580	HA 313	KM 13	MB 13
2.3/16	55.563	65	65	M 65X2	0.750	HA 2313	KM 13	MB 13
2.1/4	57.150	65	40	M 65X2	0.440	HE 213	KM 13	MB 13
2.1/4	57.150	65	50	M 65X2	0.520	HE 313	KM 13	MB 13
2.1/4	57.150	65	65	M 65X2	0.650	HE 2313	KM 13	MB 13
2.3/8	60.325	65	40	M 65X2	0.440	HS 213	KM 13	MB 13
2.3/8	60.325	65	50	M 65X2	0.710	HS 2313	KM 13	MB 13
2.3/8	60.325	65	65	M 65X2	0.800	HS 2313	KM 13	MB 13
2.7/16	61.913	75	43	M 75X2	0.750	HA 215	KM 15	MB 15
2.7/16	61.913	75	55	M 75X2	0.910	HA 315	KM 15	MB 15
2.7/16	61.913	75	73	M 75X2	1.150	HA 2315	KM 15	MB 15
2.1/2	63.500	75	43	M 75X2	0.700	HE 215	KM 15	MB 15
2.1/2	63.500	75	55	M 75X2	0.850	HE 315	KM 15	MB 15
2.1/2	63.500	75	73	M 75X2	1.090	HE 2315	KM 15	MB 15
2.5/8	66.675	75	43	M 75X2	0.700	HS 215	KM 15	MB 15
2.5/8	66.675	75	55	M 75X2	0.710	HS 315	KM 15	MB 15



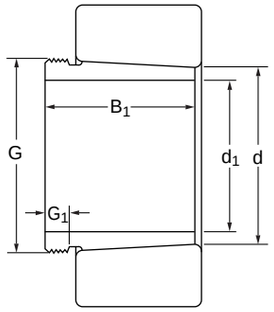
Basic Dimensions					Mass	Designation		
d_1 inch	mm	d mm	B_1 mm	G mm	kg	Adapter Sleeve with Nut and Looking Device	Lock Nut	Washer
2.5/8	66.675	75	73	M 75X2	0.900	HS 2315	KM 15	MB 15
2.11/16	68.263	80	46	M 80X2	0.870	HA 216	KM 16	MB 16
2.11/16	68.263	80	59	M 80X2	1.050	HA 316	KM 16	MB 16
2.11/16	68.263	80	78	M 80X2	1.300	HA 2316	KM 16	MB 16
2.3/4	69.850	80	46	M 80X2	0.810	HE 216	KM 16	MB 16
2.3/4	69.850	80	59	M 80X2	0.970	HE 313	KM 16	MB 16
2.3/4	69.850	80	78	M 80X2	1.200	HE 2316	KM 16	MB 16
2.15/16	74.613	85	50	M 85X2	0.940	HA 217	KM 17	MB 17
2.15/16	74.613	85	63	M 85X2	1.100	HA 317	KM 17	MB 17
2.15/16	74.613	85	82	M 85X2	1.400	HA 2317	KM 17	MB 17
3	76.200	85	50	M 85X2	0.870	HE 217	KM 17	MB 17
3	76.200	85	63	M 85X2	1.000	HE 317	KM 17	MB 17
3	76.200	85	82	M 85X2	1.300	HE 2317	KM 17	MB 17
3.3/16	80.963	90	52	M 90X2	1.050	HA 218	KM 18	MB 18
3.3/16	80.963	90	65	M 90X2	1.250	HA 318	KM 18	MB 18
3.3/16	80.963	90	86	M 90X2	1.500	HA 2318	KM 18	MB 18
3.1/4	82.550	90	52	M 90X2	0.970	HE 218	KM 18	MB 18
3.1/4	82.550	90	65	M 90X2	1.100	HE 318	KM 18	MB 18
3.1/4	82.550	90	86	M 90X2	1.400	HE 2318	KM 18	MB 18
3.1/4	82.550	95	55	M 95X2	1.350	HE 219	KM 19	MB 19
3.1/4	82.550	95	68	M 95X2	1.600	HE 319	KM 19	MB 19
3.1/4	82.550	95	90	M 95X2	2.000	HE 2319	KM 19	MB 19
3.7/16	87.313	100	58	M 100X2	1.550	HA 220	KM 20	MB 20
3.7/16	87.313	100	71	M 100X2	1.800	HA 320	KM 20	MB 20
3.7/16	87.313	100	97	M 100X2	2.350	HA 2320	KM 20	MB 20
3.1/2	88.900	100	58	M 100X2	1.450	HE 220	KM 20	MB 20
3.1/2	88.900	100	71	M 100X2	1.750	HE 320	KM 20	MB 20
3.1/2	88.900	100	76	M 100X2	1.800	HE 3120	KM 20	MB 20
3.1/2	88.900	100	97	M 100X2	2.200	HE 2320	KM 20	MB 20
4	101.600	110	63	M 110X2	1.650	HE 222	KM 22	MB 22
4	101.600	110	77	M 110X2	1.900	HE 322	KM 22	MB 22
4	101.600	110	81	M 110X2	2.250	HE 3122	KM 22	MB 22



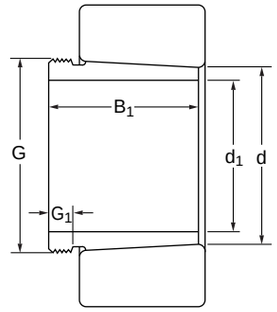
Basic Dimensions					Mass	Designation		
d_1 inch	mm	d mm	B_1 mm	G mm	kg	Adapter Sleeve with Nut and Looking Device	Lock Nut	Washer
4	101.600	110	105	M 110X2	2.400	HE 2322	KM 22	MB 22
4.3/16	106.363	120	88	M 120X2	2.900	HA 3124	KM 24	MB 24
4.3/16	106.363	120	112	M 120X2	3.600	HA 2324	KM 24	MB 24
4.1/4	107.950	120	88	M 120X2	2.800	HE 3124	KM 24	MB 24
4.1/4	107.950	120	112	M 120X2	3.350	HE 2324	KM 24	MB 24
4.7/16	112.713	130	92	M 130X2	3.750	HA 3126	KM 26	MB 26
4.7/16	112.713	130	121	M 130X2	4.740	HA 2326	KM 26	MB 26
4.1/2	114.300	130	92	M 130X2	3.600	HE 3126	KM 26	MB 26
4.1/2	114.300	130	121	M 130X2	4.550	HE 2326	KM 26	MB 26
4.15/16	125.413	140	97	M 140X2	4.100	HA 3128	KM 28	MB 28
4.15/16	125.413	140	131	M 140X2	5.300	HA 2328	KM 28	MB 28
5	127.000	140	97	M 140X2	3.800	HE 3128	KM 28	MB 28
5	127.000	140	131	M 140X2	5.000	HE 2328	KM 28	MB 28
5.3/16	131.763	150	111	M 150X2	5.800	HA 3130	KM 30	MB 30
5.3/16	131.763	150	139	M 150X2	7.100	HA 2330	KM 30	MB 30
5.1/4	133.350	150	111	M 150X2	5.500	HE 3130	KM 30	MB 30
5.1/4	133.350	150	139	M 150X2	6.800	HE 2330	KM 30	MB 30
5.7/16	138.113	160	119	M 160X3	7.550	HA 3132	KM 32	MB 32
5.7/16	138.113	160	147	M 160X3	9.400	HA 2332	KM 32	MB 32
5.1/2	139.700	160	119	M 160X3	7.300	HE 3132	KM 32	MB 32
5.1/2	139.700	160	147	M 160X3	8.800	HE 2332	KM 32	MB 32
5.15/16	150.813	170	122	M 170X3	7.800	HA 3134	KM 34	MB 34
5.15/16	150.813	170	154	M 170X3	9.600	HA 2334	KM 34	MB 34
6	152.400	170	122	M 170X3	7.550	HE 3134	KM 34	MB 34
6	152.400	170	154	M 170X3	9.200	HE 2334	KM 34	MB 34
6.7/16	163.513	180	131	M 180X3	8.150	HA 3136	KM 36	MB 36
6.7/16	163.513	180	161	M 180X3	9.900	HA 2336	KM 36	MB 36
6.1/2	165.100	180	131	M 180X3	7.800	HE 3136	KM 36	MB 36
6.1/2	165.100	180	161	M 180X3	9.350	HE 2336	KM 36	MB 36
6.3/4	171.450	190	141	M 190X3	10.200	HE 3138	KM 38	MB 38
6.3/4	171.450	190	169	M 190X3	11.700	HE 2338	KM 38	MB 38
6.15/16	176.213	190	141	M 190X3	8.500	HA 3138	KM 38	MB 38



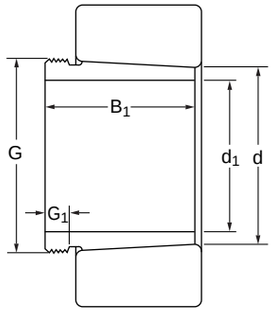
Basic Dimensions					Mass	Designation		
d_1 inch	mm	d mm	B_1 mm	G mm	kg	Adapter Sleeve with Nut and Looking Device	Lock Nut	Washer
6.15/16	176.213	190	169	M 190X3	10.000	HA 2338	KM 38	MB 38
7	177.800	200	150	M 200X3	12.300	HE 3140	KM 40	MB 40
7	177.800	200	176	M 200X3	14.200	HE 2340	KM 40	MB 40
7.3/16	182.563	200	150	M 200X3	11.200	HA 3140	KM 40	MB 40
7.3/16	182.563	200	176	M 200X3	12.600	HA 2340	KM 40	MB 40



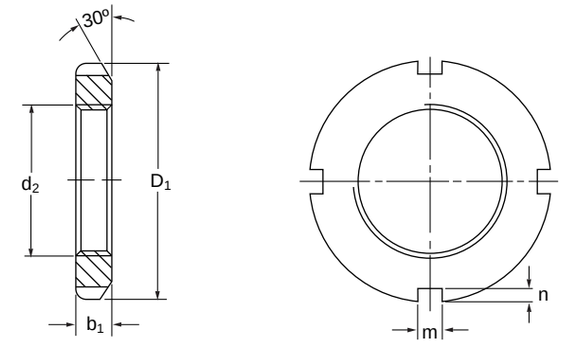
Basic Dimensions					Mass	Designation	
d_1 mm	d mm	B_1 mm	G mm	G_1 mm	kg	Withdrawal Sleeve -	Appropriate Nut for Dismounting -
35	40	29	M 45x1.5	6	0.090	AH 308	KM 9
35	40	40	M 45x1.5	7	0.130	AH 2308	KM 9
40	45	31	M 50X1.5	6	0.120	AH 309	KM10
40	45	44	M 50X1.5	7	0.160	AH 2309	KM10
45	50	35	M 55X2	7	0.130	AHX 310	KM 11
45	50	50	M 55X2	9	0.190	AHX 2310	KM 11
50	55	37	M 60X2	7	0.160	AHX 311	KM 12
50	55	54	M 60X2	10	0.260	AHX 2311	KM 12
55	60	40	M 65X2	8	0.190	AHX 312	KM 13
55	60	58	M 65X2	11	0.300	AHX 2312	KM 13
60	65	42	M 70X2	8	0.220	AH 313	KM 14
60	65	61	M 70X2	12	0.360	AH 2313	KM 14
65	70	43	M 75X2	8	0.240	AH 314	KM 15
65	70	64	M 75X2	12	0.420	AHX 2314	KM 15
70	75	45	M 80X2	8	0.290	AH 315	KM 16
70	75	68	M 80X2	12	0.480	AHX 2315	KM 16
75	80	48	M 90X2	8	0.370	AH 316	KM 18
75	80	71	M 90X2	12	0.570	AHX 2316	KM 18
80	85	52	M 95X2	9	0.430	AHX 317	KM 19
80	85	74	M 95X2	13	0.650	AHX 2317	KM 19
85	90	53	M 100X2	9	0.460	AHX 318	KM 20
85	90	63	M 100X2	10	0.570	AHX 3218	KM 20
85	90	79	M 100X2	14	0.760	AHX 2318	KM 20
90	95	57	M 105X2	10	0.540	AHX 319	KM 21
90	95	85	M 105X2	16	0.900	AHX 2319	KM 21
95	100	59	M 110X2	10	0.580	AHX 320	KM 22
95	100	64	M 110X2	11	0.660	AHX 3120	KM 22
95	100	73	M 110X2	11	0.760	AHX 3220	KM 22
95	100	90	M 110X2	16	1.000	AHX 2320	KM 22
105	110	63	M 120X2	12	0.770	AHX 322	KM 24
105	110	68	M 120X2	11	0.760	AHX 3122	KM 24
105	110	82	M 120X2	11	1.000	AHX 3222	KM 24



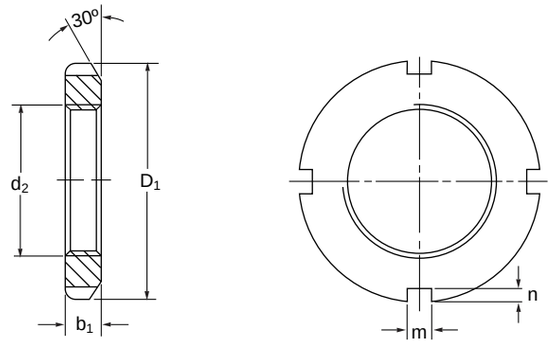
Basic Dimensions					Mass	Designation	
d_1 mm	d mm	B_1 mm	G mm	G_1 mm	kg	Withdrawal Sleeve -	Appropriate Nut for Dismounting -
105	110	98	M 120X2	16	1.300	AHX 2322	KM 24
105	110	82	M 115X2	13	0.710	AH 24122	KM 23
115	120	60	M 130X2	13	0.73	AHX 3024	KM 26
115	120	75	M 130X2	12	0.940	AHX 3124	KM 26
115	120	90	M 130X2	13	1.300	AHX 3224	KM 26
115	120	105	M 130X2	17	1.550	AHX 2324	KM 26
115	120	73	M 125X2	13	0.700	AH 24024	KM 25
115	120	93	M 130X2	13	1.000	AH 24124	KM 26
125	130	67	M 140X2	14	0.91	AHX 3026	KM 28
125	130	78	M 140X2	12	1.100	AHX 3126	KM 28
125	130	98	M 140X2	15	1.500	AHX 3226	KM 28
125	130	115	M 140X2	19	1.850	AHX 2326	KM 28
125	130	83	M 135X2	14	0.900	AH 24026	KM 27
125	130	94	M 140X2	14	1.150	AH 24126	KM 28
135	140	68	M 150X2	14	1.000	AHX 3028	KM 30
135	140	83	M 150X2	14	1.300	AHX 3128	KM 30
135	140	104	M 150X2	15	1.750	AHX 3228	KM 30
135	140	125	M 150X2	20	2.250	AHX 2328	KM 30
135	140	83	M 145X2	14	0.950	AH 24028	KM 29
135	140	99	M 150X2	14	1.300	AH 24128	KM 30
145	150	72	M 160X3	15	1.150	AHX 3030	KM 32
145	150	96	M 160X3	15	1.700	AHX 3130	KM 32
145	150	114	M 160X3	17	2.100	AHX 3230	KM 32
145	150	135	M 160X3	24	2.750	AHX 2330	KM 32
145	150	90	M 155X3	15	1.050	AH 24030	KM 31
145	150	115	M 160X3	15	1.550	AH 24130	KM 32
150	160	77	M 170X3	16	2.000	AH 3032	KM 34
150	160	103	M 170X3	16	3.000	AH 3132	KM 34
150	160	124	M 170X3	20	3.700	AH 3232	KM 34
150	160	140	M 170X3	24	4.350	AH 2332	KM 34
150	160	95	M 170X3	15	2.300	AH 24032	KM 34
150	160	124	M 170X3	15	3.000	AH 24132	KM 34



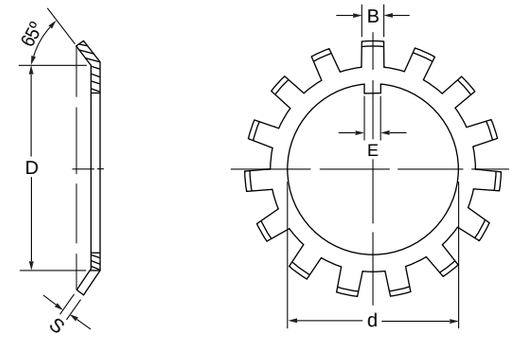
Basic Dimensions					Mass	Designation	
d_1 mm	d mm	B_1 mm	G mm	G_1 mm	kg	Withdrawal Sleeve -	Appropriate Nut for Dismounting -
160	170	85	M 180X3	17	2.450	AH 3034	KM 36
160	170	104	M 180X3	16	3.200	AH 3134	KM 36
160	170	134	M 180X3	24	4.350	AH 3234	KM 36
160	170	146	M 180X3	24	4.850	AH 2334	KM 36
160	170	106	M 180X3	16	2.700	AH 24034	KM 36
160	170	125	M 180X3	16	3.250	AH 24134	KM 36
170	180	92	M 190X3	17	2.800	AH 3036	KM 38
170	180	105	M 190X3	17	3.400	AH 2236	KM 38
170	180	116	M 190X3	19	3.900	AH 3136	KM 38
170	180	140	M 190X3	24	4.850	AH 3236	KM 38
170	180	154	M 190X3	26	5.500	AH 2336	KM 38
170	180	116	M 190X3	16	3.200	AH 24036	KM 38
170	180	134	M 190X3	16	3.750	AH 24136	KM 38
180	190	96	M 200X3	18	3.300	AH 3038	KM 40
180	190	112	M 200X3	18	3.900	AH 2238	KM 40
180	190	125	M 200X3	20	4.500	AH 3138	KM 40
180	190	145	M 200X3	25	5.400	AH 3238	KM 40
180	190	160	M 200X3	26	6.100	AH 2338	KM 40
180	190	118	M 200X3	18	3.550	AH 24038	KM 40
180	190	146	M 200X3	18	4.450	AH 24138	KM 40



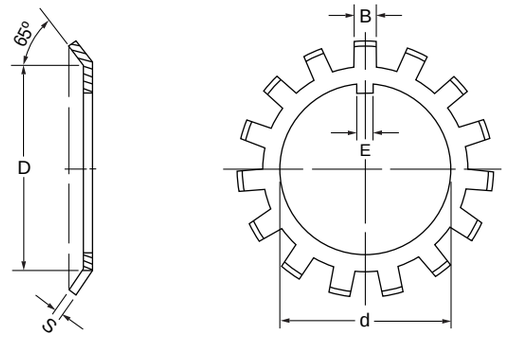
Basic Dimensions					Mass	Designation	Reference Number
d_2 mm	D_1 mm	b_1 mm	m mm	n mm	kg		
M10 X 0.75	18	4	3	2	0.004	KM 0	AN 00
M12 X 1	22	4	3	2	0.007	KM 1	AN 01
M15 X 1	25	5	4	2	0.010	KM 2	AN 02
M17 X 1	28	5	4	2	0.013	KM 3	AN 03
M20 X 1	32	6	4	2	0.019	KM 4	AN 04
M25 X 1.5	38	7	5	2	0.025	KM 5	AN 05
M30 X 1.5	45	7	5	2	0.043	KM 6	AN 06
M35 X 1.5	52	8	5	2	0.053	KM 7	AN 07
M40 X 1.5	58	9	6	2.5	0.085	KM 8	AN 08
M45 X 1.5	65	10	6	2.5	0.119	KM 9	AN 09
M50 X 1.5	70	11	6	2.5	0.148	KM 10	AN 10
M55 X 2	75	11	7	3	0.158	KM 11	AN 11
M60 X 2	80	11	7	3	0.174	KM 12	AN 12
M65 X 2	85	12	7	3	0.203	KM 13	AN 13
M70 X 2	92	12	8	3.5	0.242	KM 14	AN 14
M75 X 2	98	13	8	3.5	0.287	KM 15	AN 15
M80 X 2	105	15	8	3.5	0.397	KM 16	AN 16
M85 X 2	110	16	8	3.5	0.451	KM 17	AN 17
M90 X 2	120	16	10	4	0.556	KM 18	AN 18
M95 X 2	125	17	10	4	0.658	KM 19	AN 19
M100 X 2	130	18	10	4	0.698	KM 20	AN 20
M105 X 2	140	18	12	5	0.845	KM 21	AN 21
M110 X 2	145	19	12	5	0.965	KM 22	AN 22
M115 X 2	150	19	12	5	1.010	KM 23	AN 23
M120 X 2	155	20	12	5	1.080	KM 24	AN 24
M125 X 2	160	21	12	5	1.190	KM 25	AN 25
M130 X 2	165	21	12	5	1.250	KM 26	AN 26
M135 X 2	175	22	14	6	1.550	KM 27	AN 27
M140 X 2	180	22	14	6	1.560	KM 28	AN 28
M145 X 2	190	24	14	6	1.800	KM 29	AN 29
M150 X 2	195	24	14	6	2.030	KM 30	AN 30
M155 X 3	200	25	16	7	2.300	KM 31	AN 31



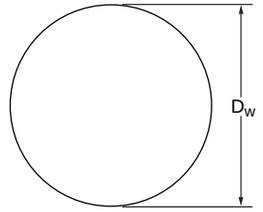
Basic Dimensions					Mass	Designation	Reference Number
d_2 mm	D_1 mm	b_1 mm	m mm	n mm	kg		
M160 X 3	210	25	16	7	2.590	KM 32	AN 32
M165 X 3	210	26	16	7	2.700	KM 33	AN 33
M170 X 3	220	26	16	7	2.800	KM 34	AN 34
M180 X 3	230	27	18	8	3.070	KM 36	AN 36
M190 X 3	240	28	18	8	3.390	KM 38	AN 38
M200 X 3	250	29	18	8	3.690	KM 40	AN 40



Basic Dimensions					Mass	Designation	Reference Number
d mm	D mm	S mm	E mm	B mm	(100/kg)	-	-
10	13.5	1	3	3	0.131	MB 0	AW 00
12	17	1	3	3	0.192	MB 1	AW 01
15	21	1	4	4	0.253	MB 2	AW 02
17	24	1	4	4	0.313	MB 3	AW 03
20	26	1	4	4	0.350	MB 4	AW 04
25	32	1.25	5	5	0.640	MB 5	AW 05
30	38	1.25	5	5	0.780	MB 6	AW 06
35	44	1.25	6	5	1.040	MB 7	AW 07
40	50	1.25	6	6	1.230	MB 8	AW 08
45	56	1.25	6	6	1.520	MB 9	AW 09
50	61	1.25	6	6	1.600	MB 10	AW 10
55	67	1.25	8	7	1.960	MB 11	AW 11
60	73	1.5	8	7	2.530	MB 12	AW 12
65	79	1.5	8	7	2.900	MB 13	AW 13
70	85	1.5	8	8	3.340	MB 14	AW 14
75	90	1.5	8	8	3.560	MB 15	AW 15
80	95	1.75	10	8	4.640	MB 16	AW 16
85	102	1.75	10	8	5.240	MB 17	AW 17
90	108	1.75	10	10	6.230	MB 18	AW 18
95	113	1.75	10	10	6.700	MB 19	AW 19
100	120	1.75	12	10	7.650	MB 20	AW 20
105	126	1.75	12	12	8.260	MB 21	AW 21
110	133	1.75	12	12	9.400	MB 22	AW 22
115	137	2	12	12	10.800	MB 23	AW 23
120	138	2	14	12	10.500	MB 24	AW 24
125	148	2	14	12	11.800	MB 25	AW 25
130	149	2	14	12	11.300	MB 26	AW 26
135	160	2	14	12	14.400	MB 27	AW 27
140	160	2	16	14	14.200	MB 28	AW 28
145	172	2	16	14	16.800	MB 29	AW 29
150	171	2	16	14	15.500	MB 30	AW 30
155	181	2.5	16	16	20.900	MB 31	AW 31

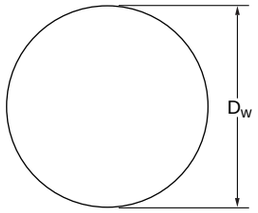


Basic Dimensions					Mass	Designation	Reference Number
d mm	D mm	S mm	E mm	B mm	(100/kg)		
160	182	2.5	18	16	22.200	MB 32	AW 32
165	193	2.5	18	16	24.100	MB 33	AW 33
170	193	2.5	18	16	24.700	MB 34	AW 34
180	203	2.5	20	18	26.800	MB 36	AW 36
190	214	2.5	20	18	27.800	MB 38	AW 38
200	226	2.5	20	18	29.300	MB 40	AW 40
220	250	3	24	20	40.000	MB 44	AW 44
240	270	3	24	20	40.000	MB 48	AW 48
260	300	3	28	24	60.000	MB 52	AW 52
280	320	3	28	24	62.000	MB 56	AW 56



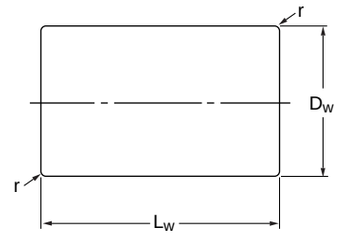
Basic Dimensions		Mass	Designations
D_w mm	inch	Per 10 kg	
0.4	-	0.0003	RB 0.4
0.5	-	0.0005	RB 0.5
1	-	0.0040	RB 1
1.5	-	0.0140	RB1.5
1.588	0.0625	0.0160	RB 1.588
2	-	0.0330	RB 2
2.381	0.0938	0.0550	RB 2.381
2.5	-	0.0640	RB 2.5
3	-	0.111	R 3
3.175	0.1250	0.132	RB 3.175
3.5	-	0.177	RB 3.5
3.969	0.1563	0.257	RB 3.969
4	-	0.263	RB 4
4.5	-	0.374	RB 4.5
4.762	0.1875	0.446	RB 4.762
5	-	0.514	RB 5
5.556	0.2188	0.702	RB 5.556
6	-	0.882	RB 6
6.350	0.2500	1.03	RB 6.35
6.5	-	1.13	RB 6.5
7	-	1.41	RB 7
7.144	0.2813	1.50	RB 7.144
7.5	-	1.74	RB 7.5
7.938	0.3125	2.06	RB 7.938
8	-	2.10	RB 8
8.5	-	2.52	RB 8.5
8.731	0.3438	2.66	RB 8.731
9	-	3.00	RB 9
10.5	-	0.476	RB 10.5
11	-	0.547	RB 11
11.112	0.4375	0.564	RB 11.112
11.5	-	0.625	RB 11.5

Basic Dimensions		Mass	Designations
D_w mm	inch	Per Ball kg	
11.906	0.4688	0.693	RB 11.906
12	-	0.71	RB 12
12.5	-	0.803	RB 12.5
12.700	0.5000	0.842	RB 12.7
13	-	0.903	RB 13
13.494	0.5313	1.01	RB 13.494
14	-	1.13	RB 14
14.288	0.5625	1.2	RB 14.288
15	-	1.39	RB 15
15.081	0.5938	1.41	RB 15.081
15.875	0.6250	1.65	RB 15.875
16	-	1.68	RB 16
16.5	-	1.85	RB 16.5
16.669	0.6563	1.91	RB 16.669
17	-	2.02	RB 17
17.462	0.6875	2.19	RB 17.462
18	-	2.4	RB 18
18.256	0.7188	2.5	RB 18.256
19	-	2.82	RB 19
19.050	0.7500	2.84	RB 19.05
19.844	0.7813	3.24	RB 19.844
20	-	3.29	RB 20
20.5	-	3.54	RB 20.5
20.638	0.8125	3.62	RB 20.638
21	-	3.81	RB 21
22	-	4.38	RB 22
22.225	0.875	0.452	RB 22.225
22.5	-	0.468	RB 22.5
23.0	-	0.500	RB 23
23.812	0.938	0.555	RB 23.812
24	-	0.568	RB 24
25	-	0.642	RB 25

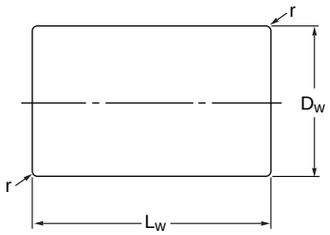


Basic Dimensions		Mass	Designations
D_w mm	inch	Per 10 kg	
25.400	1	0.674	RB 25.4
26	-	0.723	RB 26
26.988	1.0625	0.808	RB 26.988
28	-	0.902	RB 28
28.575	1.1250	0.955	RB 28.575
30	-	1.110	RB 30
30.162	1.1875	1.130	RB 30.162
31.750	1.2500	1.320	RB 31.75
32	-	1.350	RB 32
33	-	1.480	RB 33
33.338	1.3125	1.520	RB 33.338
34	-	1.620	RB 34
34.925	1.3750	1.750	RB 34.925
35	-	1.77	RB 35
36	-	1.92	RB 36
36.512	1.4375	2.00	RB 36.512
38	-	2.25	RB 38
38.100	1.5000	2.27	RB 38.1
39.688	1.5625	2.57	RB 39.688
40	-	2.63	RB 40
41.275	1.6250	2.90	RB 41.275
42.862	1.6875	3.24	RB 42.862
44.450	1.7500	3.61	RB 44.45
45	-	3.74	RB 45
46.038	1.8125	0.403	RB 46.038
47.625	1.875	0.446	RB 47.625
49.212	1.9375	0.49	RB 49.212
50	-	0.514	RB 50
50.8	2	0.539	RB 50.8
53.975	2.125	0.646	RB 53.975
55	-	0.679	RB 55
57.150	2.250	0.767	RB 57.15

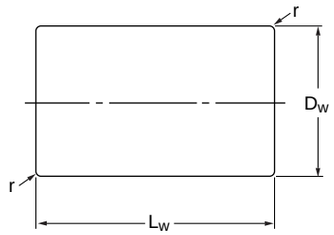
Basic Dimensions		Mass	Designations
D_w mm	inch	Per Ball kg	
60	-	0.882	RB 60
60.325	2.3750	0.902	RB 60.325
63.500	2.50	1.03	RB 63.5
65	-	1.13	RB 65
66.675	2.625	1.22	RB 66.675
69.850	2.750	1.4	RB 69.85
70	-	1.41	RB 70
73.025	2.875	1.6	RB 73.025
75	-	1.74	RB 75
76.200	3.000	1.82	RB 76.2
80	-	2.1	RB 80
82.550	3.250	2.31	RB 82.55
85	-	2.52	RB 85
88.900	3.500	2.89	RB 88.9
90	-	3	RB 90
95	-	3.52	RB 95
95.250	3.750	3.55	RB 95.25
100	-	4.11	RB 100
110	-	5.47	RB 110
120	-	7.1	RB 120
127	5	8.42	RB 127
150	-	13.9	RB 150
200	-	32.9	RB 200
250	-	64.2	RB 250



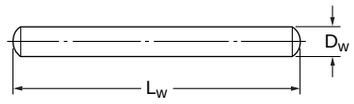
Basic Dimensions				Mass	Designations
D_w mm	L_w mm	r min mm	r max mm	Per 100 kg	
3	5	0.2	0.4	0.027	RC 3X5
3.5	5	0.2	0.4	0.037	RC 3.5X5
3.5	8	0.2	0.4	0.060	RC 3.5X8
4	4	0.2	0.4	0.038	RC 4X4
4	6	0.2	0.4	0.058	RC 4X6
4	8	0.2	0.4	0.078	RC 4X8
4.5	6	0.2	0.6	0.073	RC 4.5X6
5	5	0.2	0.6	0.075	RC 5X5
5	6	0.2	0.6	0.091	RC 5X6
5	7	0.2	0.6	0.106	RC 5X7
5	8	0.2	0.6	0.121	RC 5X8
5	10	0.2	0.6	0.152	RC 5X10
5.5	5.5	0.2	0.6	0.100	RC 5.5X5.5
5.5	8	0.2	0.6	0.146	RC 5.5X8
6	6	0.2	0.6	0.130	RC 6X6
6	8	0.2	0.6	0.178	RC 6X8
6	12	0.2	0.6	0.261	RC 6X12
6.5	6.5	0.2	0.6	0.166	RC 6.5X6.5
6.5	9	0.2	0.6	0.230	RC 6.5X9
7	7	0.2	0.6	0.206	RC 7X7
7	10	0.2	0.6	0.296	RC 7X10
7	14	0.2	0.6	0.417	RC 7X14
7.5	7.5	0.2	0.6	0.254	RC 7.5X7.5
7.5	11	0.2	0.6	0.374	RC 7.5X11
8	8	0.2	0.6	0.308	RC 8X8
8	12	0.2	0.6	0.465	RC 8X12
9	9	0.3	0.7	0.440	RC 9X9
9	14	0.3	0.7	0.680	RC 9X14
10	10	0.3	0.7	0.600	RC 10X10
10	14	0.3	0.7	0.850	RC 10X14
11	11	0.3	0.7	0.810	RC 11X11
11	15	0.3	0.7	1.100	RC 11X15

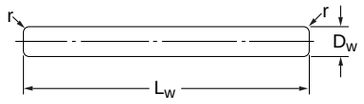


Basic Dimensions				Mass	Designations
D_w mm	L_w mm	r min mm	r max mm	Per 100 kg	
12	12	0.3	0.7	1.040	RC 12X12
12	18	0.3	0.7	1.570	RC 12X18
13	13	0.4	0.8	1.33	RC 13X13
13	20	0.4	0.8	2.040	RC 13X20
14	14	0.4	0.8	1.660	RC 14X14
14	20	0.4	0.8	2.380	RC 14X20
15	15	0.4	0.8	2.040	RC 15X15
15	22	0.4	0.8	3.000	RC 15X22
16	16	0.4	0.8	2.480	RC 16X16
16	24	0.4	0.8	3.730	RC 16X24
17	17	0.4	1.0	2.970	RC 17X17
17	24	0.4	1.0	4.200	RC 17X24
18	18	0.4	1.0	3.570	RC 18X18
18	26	0.4	1.0	5.100	RC 18X26
19	19	0.4	1.0	4.160	RC 19X19
19	28	0.4	1.0	6.100	RC 19X28
20	20	0.4	1.0	4.850	RC 20X20
20	30	0.4	1.0	7.300	RC 20X30
21	21	0.5	1.1	5.600	RC 21X21
21	30	0.5	1.1	8.000	RC 21X30
22	22	0.5	1.1	6.400	RC 22X22
22	34	0.5	1.1	10.000	RC 22X34
23	23	0.5	1.1	7.400	RC 23X23
23	34	0.5	1.1	11.200	RC 23X34
24	24	0.5	1.1	8.400	RC 24X34
24	36	0.5	1.1	12.600	RC 24X36
25	25	0.5	1.1	9.500	RC 25X25
25	36	0.5	1.1	13.700	RC 25X36
26	26	0.5	1.1	10.700	RC 26X26
26	40	0.5	1.1	16.400	RC 26X40
28	28	0.6	1.4	13.300	RC 28X28
28	44	0.6	1.4	21.000	RC 28X44



Basic Dimensions				Mass	Designations
D_w mm	L_w mm	r min mm	r max mm	Per 100 kg	
30	30	0.6	1.4	16.300	RC 30X30
30	48	0.6	1.4	26.200	RC 30X48
32	32	0.6	1.4	19.900	RC 32X32
32	52	0.6	1.4	32.400	RC 32X52
34	34	0.6	1.4	23.900	RC 34X34
34	55	0.6	1.4	38.700	RC 34X55
36	36	0.7	1.7	28.300	RC 36X36
36	58	0.7	1.7	45.700	RC 36X58
38	38	0.7	1.7	33.300	RC 38X38
38	62	0.7	1.7	55.000	RC 38X62
40	40	0.7	1.7	38.900	RC 40X40
40	65	0.7	1.7	63.000	RC 40X65





Basic Dimensions				Mass	Designations	
D_w mm	L_w mm	r min mm	r max mm	Per 100 kg	Needle Rollers with Sphered Ends	Needle Rollers with Flat Ends
1.5	5.8	0.1	0.4	0.008	RN 1.5X5.8 B	RN 1.5X5.8 BF
1.5	7.8	0.1	0.4	0.011	RN 1.5X7.8 B	RN 1.5X7.8 BF
1.5	9.8	0.1	0.4	0.013	RN 1.5X9.8 B	RN 1.5X9.8 BF
1.5	11.8	0.1	0.4	0.016	RN 1.5X11.8 B	RN 1.5X11.8 BF
1.5	13.8	0.1	0.4	0.018	RN 1.5X13.8 B	RN 1.5X13.8 BF
2	7.8	0.1	0.4	0.019	RN 2X7.8 B	RN 2X7.8 BF
2	9.8	0.1	0.4	0.024	RN 2X9.8 B	RN 2X9.8 BF
2	11.8	0.1	0.4	0.029	RN 2X11.8 B	RN 2X11.8 BF
2	13.8	0.1	0.4	0.034	RN 2X13.8 B	RN 2X13.8 BF
2	15.8	0.1	0.4	0.039	RN 2X15.8 B	RN 2X15.8 BF
2	17.8	0.1	0.4	0.044	RN 2X17.8 B	RN 2X17.8 BF
2	19.8	0.1	0.4	0.049	RN 2X19.8 B	RN 2X19.8 BF
2	21.8	0.1	0.4	0.054	RN 2X21.8 B	RN 2X21.8 BF
2.5	7.8	0.1	0.4	0.030	RN 2.5X7.8 B	RN 2.5X7.8 BF
2.5	9.8	0.1	0.4	0.038	RN 2.5X9.8 B	RN 2.5X9.8 BF
2.5	11.8	0.1	0.4	0.045	RN 2.5X11.8 B	RN 2.5X11.8 BF
2.5	13.8	0.1	0.4	0.053	RN 2.5X13.8 B	RN 2.5X13.8 BF
2.5	15.8	0.1	0.4	0.061	RN 2.5X15.8 B	RN 2.5X15.8 BF
2.5	17.8	0.1	0.4	0.069	RN 2.5X17.8 B	RN 2.5X17.8 BF
2.5	19.8	0.1	0.4	0.076	RN 2.5X19.8 B	RN 2.5X19.8 BF
2.5	21.8	0.1	0.4	0.084	RN 2.5X21.8 B	RN 2.5X21.8 BF
2.5	23.8	0.1	0.4	0.092	RN 2.5X23.8 B	RN 2.5X23.8 BF
3	9.8	0.1	0.4	0.054	RN 3X9.8 B	RN 3X9.8 BF
3	11.8	0.1	0.4	0.065	RN 3X11.8 B	RN 3X11.8 BF
3	13.8	0.1	0.4	0.076	RN 3X13.8 B	RN 3X13.8 BF
3	15.8	0.1	0.4	0.087	RN 3X15.8 B	RN 3X15.8 BF
3	17.8	0.1	0.4	0.099	RN 3X17.8 B	RN 3X17.8 BF
3	19.8	0.1	0.4	0.110	RN 3X19.8 B	RN 3X19.8 BF
3	23.8	0.1	0.4	0.132	RN 3X23.8 B	RN 3X23.8 BF
3	27.8	0.1	0.4	0.154	RN 3X27.8 B	RN 3X27.8 BF
3.5	29.8	0.1	0.6	0.225	RN 3.5X29.8 B	RN 3.5X29.8 BF
3.5	34.8	0.1	0.6	0.265	RN 3.5X34.8 B	RN 3.5X34.8 BF
4	39.8	0.1	0.6	0.390	RN 4X39.8 B	RN 4X39.8 BF
5	49.8	0.1	0.6	0.750	RN 5X49.8 B	RN 5X49.8 BF

Special Bearings

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