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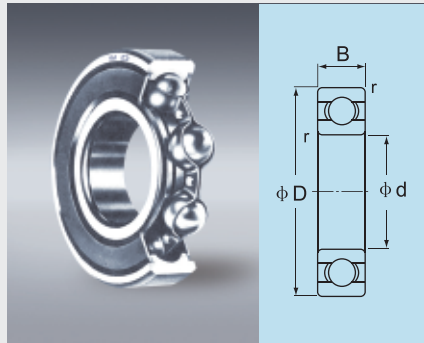
Standard Bearing Catalog



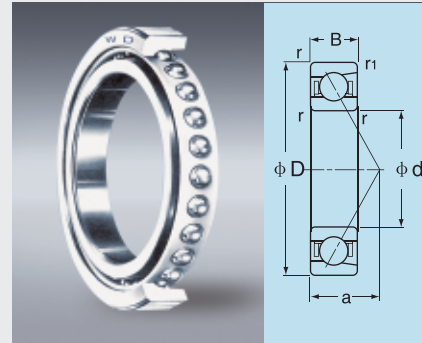
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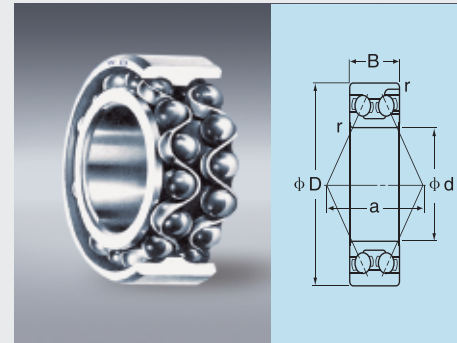
STANDARD BEARING SERIES



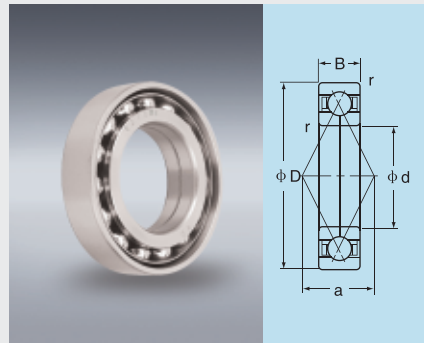
Deep groove ball bearings



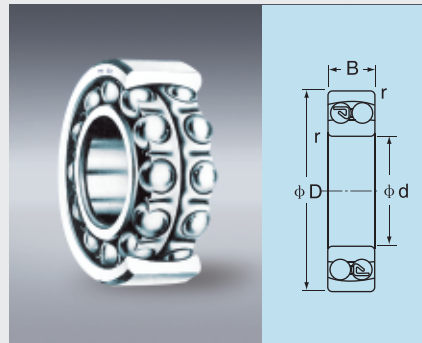
Angular contact ball bearings - single row



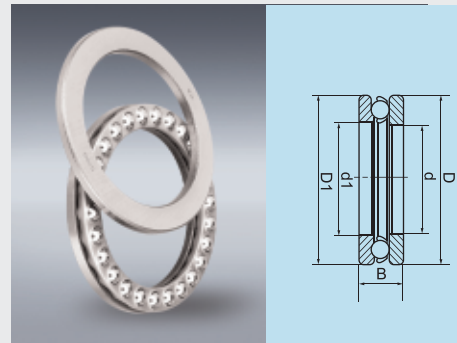
Angular contact ball bearings - double row



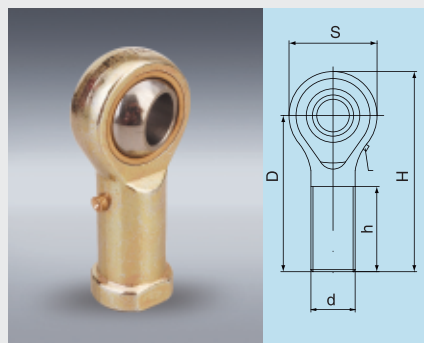
Four-point contact ball bearings



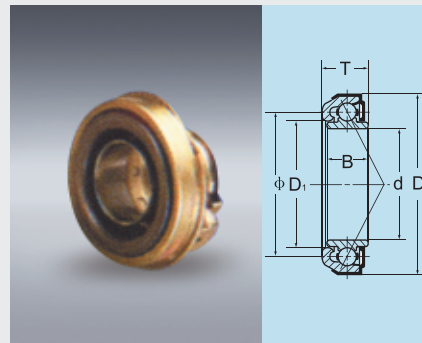
Self-aligning ball bearings



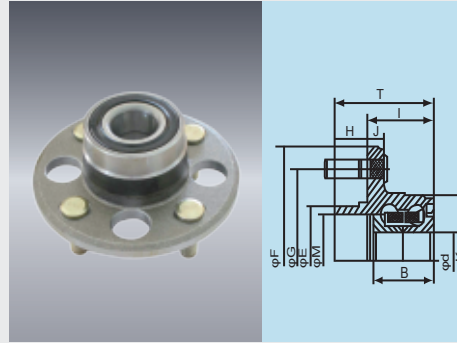
Thrust ball bearings



Spherical plain bearings & rod end



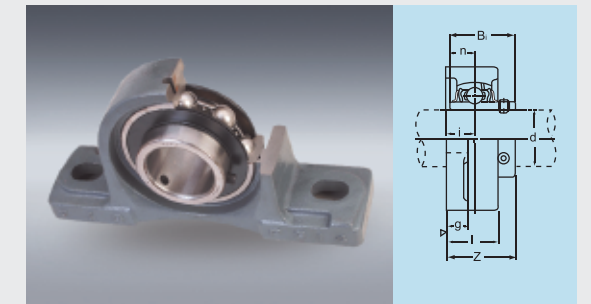
Automobile clutch release bearings



Automobile wheel hub bearings



Automobile water pump bearings



Insert ball bearings



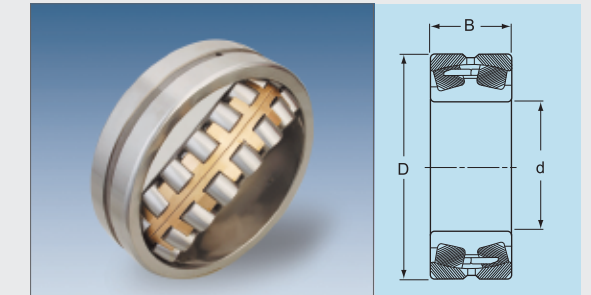
Needle roller bearings



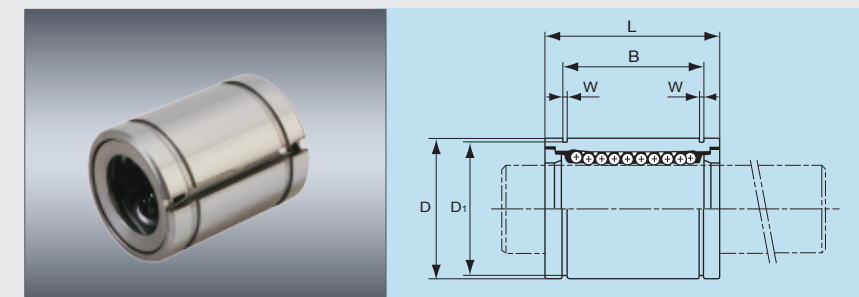
Cylindrical roller bearings



Tapered roller bearings



Spherical roller bearings



Linear motion bearings

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Characteristics of various of Bearings

Suitability +++ excellent ++ good + fair - poor -- unsuitable ← → one way double way	Radial Load	Axial Load	Compound Load	Shield & Seal	Self Aligning	Rings Separable	High Speed	High Rigidity	High 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 Ball Bearing	--	↔	--	--	--	++	+	+	+	+	-	--
Thrust Cylindrical Roller Bearing	--	↔	--	--	--	++	-	++	++	-	-	--
Thrust Needle Roller Bearing	--	↔	--	--	--	++	-	++	+	-	-	--
Thrust Spherical Roller Bearing	--	↔	+	--	--	++	+	++	+	+	-	--
Self-Aligning Roller Bearing	+++	↔	++	--	+++	--	+	-	+	+	++	--

Material

The rings, balls, needles and rollers of WD bearings can be made of refining bearing steel AISI52100, stainless steel AISI440C, AISI420, etc.

Cages are normally punch-pressed from brass strips H62 or steel strips 08, SPCC BQB402, as well as stainless steel strips AISI304, AISI302, fiber reinforced phenolic resin, plastics or copper stock, etc; The shields can be made of Japanese SPCC JISG3141 or stainless steel AISI304 or AISI302.

Seals: synthetic rubber hot pressed with phosphatizing steel (AISI304 or AISI302 may be used for stainless steel bearings) skeleton.

The chemical composition of bearing steel and stainless steel are listed as follows:

Steel No.	C%	Si%	Mn%	S%	P%	Cr%
AISI52100	0.95-1.05	0.15-0.3	0.25-0.45	<0.025	<0.025	1.3-1.6
AISI440C	0.90-1.05	<0.8	<0.8	<0.04	<0.03	16-19

Bearing Precision Class

Standards	Precision Grade				
	G	E	D	C	B
GB	G	E	D	C	B
ISO	Normal Class	Class 6	Class 5	Class 4	Class 2
ANSI	ABEC 1	ABEC 3	ABEC 5	ABEC 7	ABEC 9
DIN	P0	P6	P5	P4	P2
JIS	0	6	5	4	2

Rolling Bearing's Tolerance

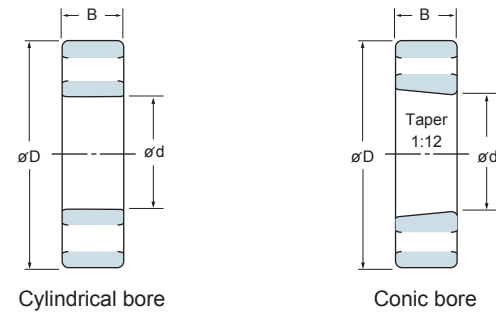


Table 4-01 Precision of radial bearings (excepting taper roller bearings)

1. Inner ring (bore)

Unit: μm

Bore d mm	Δd_{mp}			V _{dp}									V _{dmp}		
	P0	P6	P5	Dimension series 7,8,9			Dimension series 0,1			Dimension series 2,3,4			P0	P6	P5
over to	over to	over to	over to	max			max			max			max		
2.5 10	0 -8	0 -7	0 -5	10	9	5	8	7	4	6	5	4	6	5	3
10 18	0 -8	0 -7	0 -5	10	9	5	8	7	4	6	5	4	6	5	3
18 30	0 -10	0 -8	0 -6	13	10	6	10	8	5	8	6	5	8	6	3
30 50	0 -12	0 -10	0 -8	15	13	8	12	10	6	9	8	6	9	8	4
50 80	0 -15	0 -12	0 -9	19	15	9	19	15	7	11	9	7	11	9	5
80 120	0 -20	0 -15	0 -10	25	19	10	25	19	8	15	11	8	15	11	5
120 150	0 -25	0 -18	0 -13	31	23	13	31	23	10	19	14	10	19	14	7
150 180	0 -25	0 -18	0 -13	31	23	13	31	23	10	19	14	10	19	14	7
180 250	0 -30	0 -22	0 -15	38	28	15	38	28	12	23	17	12	23	17	8

2. Inner ring (rotating precision & width)

Unit: μm

Bore d mm	K _{ia}			S _d	S _{ia} ⁽¹⁾	ΔB_s (For single bearing)			ΔB_s ⁽²⁾ (For matched bearing)			V _{Bs}		
	P0	P6	P5	P5	P5	P0	P6	P5	P0	P6	P5	P0	P6	P5
over to	max			max	max	over to	over to	over to	over to	over to	over to	max		
2.5 10	10	6	4	7	7	0 -120	0 -120	0 -40	0 -250	0 -250	0 -250	15	15	5
10 18	10	7	4	7	7	0 -120	0 -120	0 -80	0 -250	0 -250	0 -250	20	20	5
18 30	13	8	4	8	8	0 -120	0 -120	0 -120	0 -250	0 -250	0 -250	20	20	5
30 50	15	10	5	8	8	0 -120	0 -120	0 -120	0 -250	0 -250	0 -250	20	20	5
50 80	20	10	5	8	8	0 -150	0 -150	0 -150	0 -380	0 -380	0 -250	25	25	6
80 120	25	13	6	9	9	0 -200	0 -200	0 -200	0 -380	0 -380	0 -380	25	25	7
120 150	30	18	8	10	10	0 -250	0 -250	0 -250	0 -500	0 -500	0 -380	30	30	8
150 180	30	18	8	10	10	0 -250	0 -250	0 -250	0 -500	0 -500	0 -380	30	30	8
180 250	40	20	10	11	13	0 -300	0 -300	0 -300	0 -500	0 -500	0 -500	30	30	10

Remarks:

- The S_{ia} tolerance is suitable for deep groove ball bearings & angular contact ball bearings
- The ΔB_s is suitable for all rings of the matched bearings

3. Precision of radial bearings (excepting taper roller bearings) Outer ring (OD)

Unit: μm

Bore D mm	ΔD_{mp}			V _{Dp}									Close Type		V _{Dmp}			
	P0	P6	P5	Dimension series 7,8,9			Dimension series 0,1			Dimension series 2,3,4			Dimension series 2,3,4		Dimension series 0,1,2,3,4		P0 ⁽¹⁾	P6 ⁽¹⁾
over to	over to	over to	over to	max			max			max			P0(max ¹)	P6(max ¹)	max			
6 18	0 -8	0 -7	0 -5	10	9	5	8	7	4	6	5	4	10	9	6	5	3	
18 30	0 -9	0 -8	0 -6	12	10	6	9	8	5	7	6	5	12	10	7	6	3	
30 50	0 -11	0 -9	0 -7	14	11	7	11	9	5	8	7	5	16	13	8	7	4	
50 80	0 -13	0 -11	0 -9	16	14	9	13	11	7	10	8	7	20	16	10	8	5	
80 120	0 -15	0 -13	0 -10	19	16	10	19	16	8	11	10	8	26	20	11	10	5	
120 150	0 -18	0 -15	0 -11	23	19	11	23	19	8	14	11	8	30	25	14	11	6	
150 180	0 -25	0 -18	0 -13	31	23	13	31	23	10	19	14	10	38	30	19	14	7	
180 250	0 -30	0 -20	0 -15	38	25	15	38	25	11	23	15	11	-	-	23	15	8	

4. Outer ring (rotating precision & width)

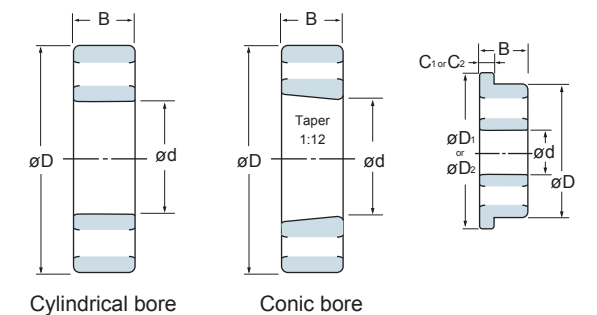
Unit: μm

Bore D mm	K _{oa}			S _D	S _{oa} ⁽²⁾	ΔC_s	V _{Cs}	
	P0	P6	P5	P5	P5	P0,P6,P5	P0,P6	P5
over to	max			max	max	over to	max	
6 18	15	8	5	8	8	same as ΔB_s of same d	same as V _{Bs} of same d	5
18 30	15	9	6	8	8			5
30 50	20	10	7	8	8			5
50 80	25	13	8	8	10			6
80 120	35	18	10	9	11			8
120 150	40	20	11	10	13			8
150 180	45	23	13	10	14			8
180 250	50	25	15	11	15			10

5. Flanged outer rings

Unit: μm

Bore D mm	ΔD_{1s} ΔD_{2s}		ΔC_{1s} ΔC_{2s}	
	P0,P6	P5	P0,P6,P5	
over to	over to	over to	over to	
6 18	+125 -50	0 -25	0 -50	
18 30	+125 -50	0 -25	0 -50	



Remarks:

- The V_{Ds} & V_{Dmp} tolerance are suitable for bearings without any snap rings
- The S_{oa} tolerance is suitable for deep groove ball bearings & angular contact ball bearings

Rolling Bearing's Tolerance

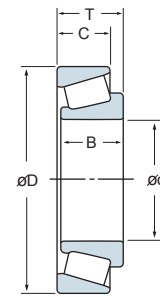


Table 4-02 Precision of taper roller bearings

1. Inner ring

Unit:um

Bore d mm	Δd_{mp}		Vd_b		Vd_{mp}		K_{ia}		ΔB_s		
	P0,P6X	P6	P0,P6X	P6	P0,P6X	P6	P0,P6X	P6	P0	P6X	P6
over to	over to	over to	max		max		max		over to	over to	over to
10 18	0 -12	0 -7	12	7	9	5	15	7	0 -120	0 -50	0 -120
18 30	0 -12	0 -8	12	8	9	6	18	8	0 -120	0 -50	0 -120
30 50	0 -12	0 -10	12	10	9	8	20	10	0 -120	0 -50	0 -120
50 80	0 -15	0 -12	15	12	11	9	25	10	0 -150	0 -50	0 -150
80 120	0 -20	0 -15	20	15	15	11	30	13	0 -200	0 -50	0 -200
120 150	0 -25	0 -18	25	18	19	14	35	18	0 -250	0 -50	0 -250
180 250	0 -30	0 -22	30	22	23	16	50	20	0 -300	0 -50	0 -300

2. Outer ring

Unit:um

Bore d mm	ΔD_{mp}		VD_p		VD_{mp}		K_{es}		ΔC_s	
	P0,P6X	P6	P0,P6X	P6	P0,P6X	P6	P0,P6X	P6	P6X	P0,P6
over to	over to	over to	max		max		max		over to	over to
18 30	0 -12	0 -8	12	8	9	6	18	9	0 -100	same as ΔB_s of same d
30 50	0 -14	0 -9	14	9	11	7	20	10	0 -100	
50 80	0 -16	0 -11	16	11	12	8	25	13	0 -100	
80 120	0 -18	0 -13	18	13	14	10	35	18	0 -100	
120 150	0 -20	0 -15	20	15	15	11	40	20	0 -100	
150 180	0 -25	0 -18	25	18	19	14	45	23	0 -100	
180 250	0 -30	0 -20	30	20	23	15	50	25	0 -100	

Table 4-03 Precision of thrust ball bearings

1. Shaft washers & Middle washers

Unit:um

Bore d mm	Δd_{mp} or Δd_{zmp}		Vd_s or Vd_{2p}	S_i	
	P0,P6		P0,P6	P0	P6
over to	over to	over to	max	max	
- 18	0 -8	0 -8	6	10	5
18 30	0 -10	0 -10	8	10	5
30 50	0 -12	0 -12	9	10	6
50 80	0 -15	0 -15	11	10	7
80 120	0 -20	0 -20	15	15	8
120 180	0 -25	0 -25	19	15	9
180 250	0 -30	0 -30	23	20	10

2. House washers

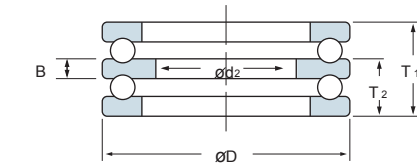
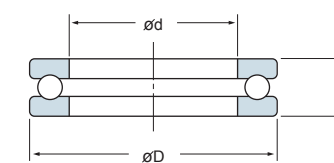
Unit:um

Bore d mm	ΔD_{mp}		VD_p	S_e
	P0,P6		P0,P6	P0,P6
over to	over to	over to	max	max
10 18	0 -11	0 -11	8	same as S_i of same d or d_2
18 30	0 -13	0 -13	10	
30 50	0 -16	0 -16	12	
50 80	0 -19	0 -19	14	
80 120	0 -22	0 -22	17	
120 180	0 -25	0 -25	19	
180 250	0 -30	0 -30	23	

3. Height & middle washer's height

Unit:um

Bore d mm	Single direction		Double direction				
	ΔT_s		ΔT_{1s}		ΔT_{2s}		ΔB_s
	P0		P0		P0		P0
over to	over to	over to	over to	over to	over to	over to	
- 30	0 -75	0 -75	+50 -150	0 -75	0 -75	0 -50	
30 50	0 -100	0 -100	+75 -200	0 -100	0 -100	0 -75	
50 80	0 -125	0 -125	+100 -250	0 -125	0 -125	0 -100	
80 120	0 -150	0 -150	+125 -300	0 -150	0 -150	0 -125	
120 180	0 -175	0 -175	+150 -350	0 -175	0 -175	0 -150	
180 250	0 -200	0 -200	+175 -400	0 -200	0 -200	0 -175	



Rolling Bearing's Tolerance

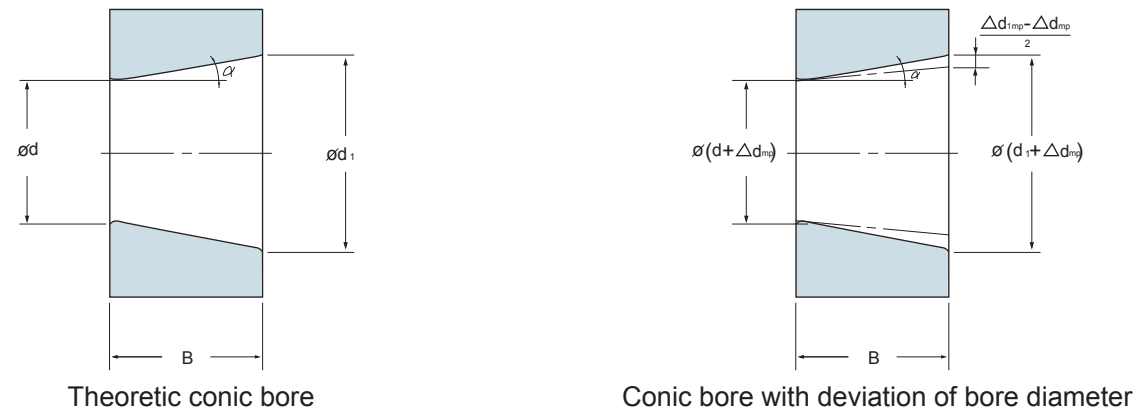


Table 4-04 Precision of conic bore radial bearings

Unit: μm

Bore d mm		Δd_{mp}		$\Delta d_{imp} - \Delta d_{mp}$		$Vd_b^{(1)}$
		P0		P0		P0
over	to	over	to	over	to	max
-	10	+15	0	+15	0	10
10	18	+18	0	+18	0	10
18	30	+21	0	+21	0	13
30	50	+25	0	+25	0	15
50	80	+30	0	+30	0	19
80	120	+35	0	+35	0	25
120	180	+40	0	+40	0	31
180	250	+46	0	+46	0	38

Remarks:

- The above tolerance is suitable for conic bore inner rings with taper being 1:12
- α : 1/2 of metric taper of the conic bore
 $\alpha = 2^\circ 23' 9.4''$
 $\alpha = 2.38594^\circ$
 $\alpha = 0.041643 \text{ rad}$

ISO 1132 / GB4199 Bearing Tolerance Symbols & Definitions

d/ds	Nominal bore diameter/Single bore diameter
dmp	Mean bore diameter;arithmetical mean of the largest & smallest single bore diameters measured in one radial plane
Δd_{mp}	dmp-d; Deviation of mean bore diameter from the nominal dimension
Δd_s	ds-d; Deviation of single bore diameter from the nominal dimension
Vdp	Bore diameter variation; difference between the largest & smallest single bore diameters in one radial plane
Vdmp	dmp max-dmp min;Mean bore diameter variation;difference between the largest & smallest mean bore diameters
D/Ds	Nominal outside diameter/Single outside diameter
Dmp	Mean outside diameter;arithmetical mean of the largest & smallest single outside diameters in one radial plane
ΔD_{mp}	Dmp-D;Deviation of mean outside diameter from nominal dimension
ΔD_s	Ds-D;Deviation of mean outside diameter from nominal dimension
VDp	Outside diameter variation;difference between the largest & smallest single outside diameter in one radial plane
VDmp	Dmp max-Dmp min;Mean outside diameter variation;difference between the largest & smallest mean outside diameters
Bs/Cs	Single inner ring/outer ring width
ΔB_s	Bs-B;Deviation of a single inner ring width from nominal dimension
ΔC_s	Cs-C;Deviation of a single outer ring width from nominal dimension
VBs	Bs max - Bs min; Variation of inner ring widths;difference between the largest & smallest single inner ring width
VCs	Cs max - Cs min; Variation of outer ring widths;difference between the largest & smallest single outer ring width
B,C,T	Nominal bearing width/height
Ts	Actual bearing width/height
ΔT_s	Deviation of the actual bearing width/height
Kia	Radial runout of assembled bearing inner ring
Kea	Radial runout of assembled bearing outer ring
Sd	Side face runout of inner ring with reference to bore
SD	Variation in inclination of outside cylindrical surface to outer ring side face
Sia	Axial runout; assembled bearing inner ring face runout with raceway
Sea	Axial runout; assembled bearing outer ring face runout with raceway
r	Nominal chamfer dimension
rs	Radial/axial single chamfer dimension
rs min	Smallest radial/axial single chamfer dimension
rs max	Largest radial/axial single chamfer dimension

Internal Radial Clearance

Table 6-05 Internal radial clearance of electrical motor bearings

1. For deep groove ball bearings Unit:um

Bore d mm		Radial clearance CM	
over	to	min.	max.
10	18	4	11
18	30	5	12
30	50	9	17
50	80	12	22
80	120	18	30
120	160	24	38

Remarks:

1.The correction due to testing load shall be same as Table 6-01

2. For cylindrical roller bearings Unit:um

Bore d mm		Radial clearance			
		CT		CM	
over	to	min.	max.	min.	max.
24	40	15	35	15	30
40	50	20	40	20	35
50	65	25	45	25	40
65	80	30	50	30	45
80	100	35	60	35	55
100	120	35	65	35	60

Remarks:

1."CT" is for the bearing interchangeable by the same manufacturer
2."CM" is for bearing not interchangeable by the same manufacturer

Table 6-06 Internal radial clearance of cylindrical roller bearings & needle roller bearings

1. Cylindrical bore Unit:um

Bore d mm		Radial clearance									
		C2		C0		C3		C4		C5	
over	to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
-	10	0	25	20	45	35	60	50	75	-	-
10	24	0	25	20	45	35	60	50	75	65	90
24	30	0	25	20	45	35	60	50	75	70	95
30	40	5	30	25	50	45	70	60	85	80	105
40	50	5	35	30	60	50	80	70	100	95	125
50	65	10	40	40	70	60	90	80	110	110	140
65	80	10	45	40	75	65	100	90	125	130	165
80	100	15	50	50	85	75	110	105	140	155	190
100	120	15	55	50	90	85	125	125	165	180	220

2. Conic bore Unit:um

Bore d mm		Radial clearance											
		C1 NA		C2 NA		C0 NA		C3 NA		C4 NA		C5 NA	
over	to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
12	14	-	-	-	-	-	-	-	-	-	-	-	-
14	24	10	20	20	30	35	45	45	55	55	65	75	85
24	30	10	25	25	35	40	50	50	60	60	70	80	95
30	40	12	25	25	40	45	55	55	70	70	80	95	110
40	50	15	30	30	45	50	65	65	80	80	95	110	125
50	65	15	35	35	50	55	75	75	90	90	110	130	150
65	80	20	40	40	60	70	90	90	110	110	130	150	170
80	100	25	45	45	70	80	105	105	125	125	150	180	205
100	120	25	50	50	80	95	120	120	145	145	170	205	230

Table 6-07 Internal radial clearance of spherical roller bearings

1. Cylindrical bore Unit:um

Bore d mm		Radial clearance									
		C2		C0		C3		C4		C5	
over	to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
14	18	10	20	20	35	35	45	45	60	60	75
18	24	10	20	20	35	35	45	45	60	60	75
24	30	15	25	25	40	40	55	55	75	75	95
30	40	15	30	30	45	45	60	60	80	80	100
40	50	20	35	35	55	55	75	75	100	100	125
50	65	20	40	40	65	65	90	90	120	120	150
65	80	30	50	50	80	80	110	110	145	145	180
80	100	35	60	60	100	100	135	135	180	180	225
100	120	40	75	75	120	120	160	160	210	210	260
120	140	50	95	95	145	145	190	190	240	240	300
140	160	60	110	110	170	170	220	220	280	280	350
160	180	65	120	120	180	180	240	240	310	310	390
180	200	70	130	130	200	200	260	260	340	340	430

2. Conic bore Unit:um

Bore d mm		Radial clearance									
		C2		C0		C3		C4		C5	
over	to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
18	24	15	25	25	35	35	45	45	60	60	75
24	30	20	30	30	40	40	55	55	75	75	95
30	40	25	35	35	50	50	65	65	85	85	105
40	50	30	45	45	60	60	80	80	100	100	130
50	65	40	55	55	75	75	95	95	120	120	160
65	80	50	70	70	95	95	120	120	150	150	200
80	100	55	80	80	110	110	140	140	180	180	230
100	120	65	100	100	135	135	170	170	220	220	280
120	140	80	120	120	160	160	200	200	260	260	330
140	160	90	130	130	180	180	230	230	300	300	380
160	180	100	140	140	200	200	260	260	340	340	430
180	200	110	160	160	220	220	290	290	370	370	470

Internal Radial Clearance

Table 6-08 Internal radial clearance of two row, four row or matched taper roller bearings(cylindrical bore)

Unit:um

Bore diameter mm		Radial clearance									
		C1		C2		C0		C3		C4	
over	to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
14	18	0	10	10	20	20	30	30	40	40	50
18	24	0	10	10	20	20	30	30	40	40	55
24	30	0	10	10	20	20	30	30	45	45	60
30	40	0	12	12	25	25	40	40	55	55	75
40	50	0	15	15	30	30	45	45	60	60	80
50	65	0	15	15	30	30	50	50	70	70	90
65	80	0	20	20	40	40	60	60	80	80	110
80	100	0	20	20	45	45	70	70	100	100	130
100	120	0	25	25	50	50	80	80	110	110	150
120	140	0	30	30	60	60	90	90	120	120	170
140	160	0	30	30	65	65	100	100	140	140	190

(Reference) The relationship between Radial clearance & Axil clearance

Deep groove ball bearings

$$\Delta_a = \sqrt{\Delta_r(4m_0 - \Delta_r)}$$

Double angular contact ball bearings

$$\Delta_a = 2\sqrt{m_0^2 - (m_0 \cos \alpha - \frac{\Delta_r}{2})^2} - 2m_0 \sin \alpha$$

Matched angular contact ball bearings

$$\Delta_a = 2m_0 \sin \alpha - 2\sqrt{m_0^2 - (m_0 \cos \alpha + \frac{\Delta_r}{2})^2}$$

Δ_a : Axil clearance, mm

Δ_r : Radial clearance, mm

$$m = r_o + r_i - D_a$$

r_o : Radial of outer ring raceway curvature, mm

r_i : Radial of inner ring raceway curvature, mm

D_a : Diameter of balls, mm

α : Metric contacting angle

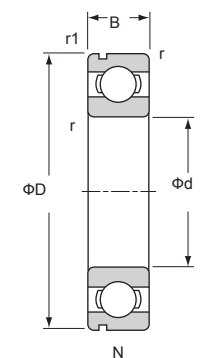
Rolling bearings — Specifications of vibration(acceleration) for deep groove ball bearings

The vibration and noise of deep groove ball bearings are normally classified as Z1,Z2 (higher class than Z1),and Z3 (highest class) measured by instrument of SO910-1;or V1,V2 (higher class than V1) , V3 (highest class) measured by BVT-1. While for bearings used for electric motors, the vibration & noise is measured by BVT-1 and classified as EMQ ZV1,ZV2 (higher class than ZV1) and ZV3 (highest class). Customer needs to mark the requirement of vibration and noise class in order.

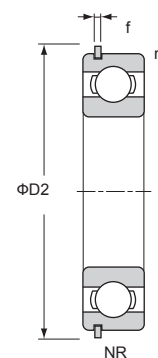
Single Bearing Vibration Speed Grade Can Not Be Over The Following Values (dB)

Bore diameter mm	Diameter Series (1)				Diameter Series (2)					Diameter Series (3)				
	Z	Z1	Z2	Z3	Z	Z1	Z2	Z3	Z4	Z	Z1	Z2	Z3	Z4
3	35	34	32	28	36	35	32	30	-	37	36	33	31	-
4	35	34	32	28	36	35	32	30	-	37	36	33	31	-
5	37	36	34	30	38	37	34	32	-	39	37	35	33	-
6	37	36	34	30	38	37	34	32	-	39	37	35	33	-
7	39	38	35	31	40	38	36	34	-	-	-	-	-	-
8	39	38	35	31	40	38	36	34	-	-	-	-	-	-
9	41	40	36	32	42	40	37	35	-	-	-	-	-	-
10	43	42	38	33	44	42	39	35	30	46	44	40	37	32
12	44	43	39	34	45	43	39	35	30	47	45	40	37	32
15	45	44	40	35	46	44	41	36	31	48	46	42	38	33
17	46	44	40	35	47	45	41	36	31	49	47	42	38	33
20	47	45	41	36	48	46	42	38	33	50	48	43	39	34
22	47	45	41	36	48	46	42	38	33	50	48	43	39	34
25	48	46	42	38	49	47	43	40	36	51	49	44	41	37
28	49	47	43	39	50	48	44	41	37	52	50	45	42	38
30	49	47	43	39	50	48	44	41	37	52	50	45	42	38
32	50	48	44	40	51	49	45	42	38	53	51	46	43	39
35	51	49	45	41	52	50	46	43	39	54	52	47	44	40
40	53	51	46	42	54	52	47	44	40	56	54	49	45	41
45	55	53	48	45	56	54	49	46	43	58	56	51	47	44
50	57	54	50	47	58	55	51	48	45	60	57	53	49	46
55	59	56	52	49	60	57	53	50	47	62	59	54	51	48
60	61	58	54	51	62	59	54	51	48	64	61	56	53	50

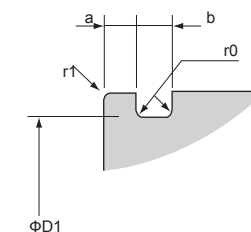
Bore diameter mm	Diameter Series (1)			Diameter Series (2)				Diameter Series (3)			
	Z	Z1	Z2	Z	Z1	Z2	Z3	Z	Z1	Z2	Z3
65	49	48	46	50	49	47	42	51	50	48	43
70	50	49	47	51	50	48	43	52	51	49	44
75	51	50	48	52	51	49	44	53	52	50	45
80	52	51	49	53	52	50	45	54	53	51	46
85	53	52	50	54	53	51	46	56	55	52	47
90	54	53	52	56	55	53	48	58	57	54	49
95	56	55	54	58	57	55	50	60	59	56	51
100	58	57	56	60	59	57	52	62	61	58	53
105	60	59	58	62	61	59	54	64	63	60	55
110	62	61	60	64	63	61	56	66	65	62	57
120	64	63	62	66	65	63	58	68	67	64	59



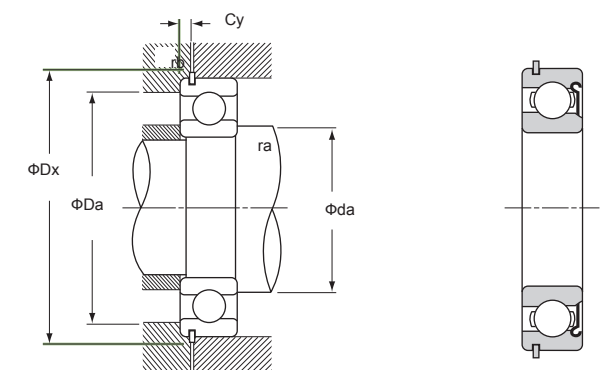
With snap ring groove



With snap ring



Snap ring groove



Single Row Deep Groove Ball Bearings With Snap Ring /Snap Ring Groove

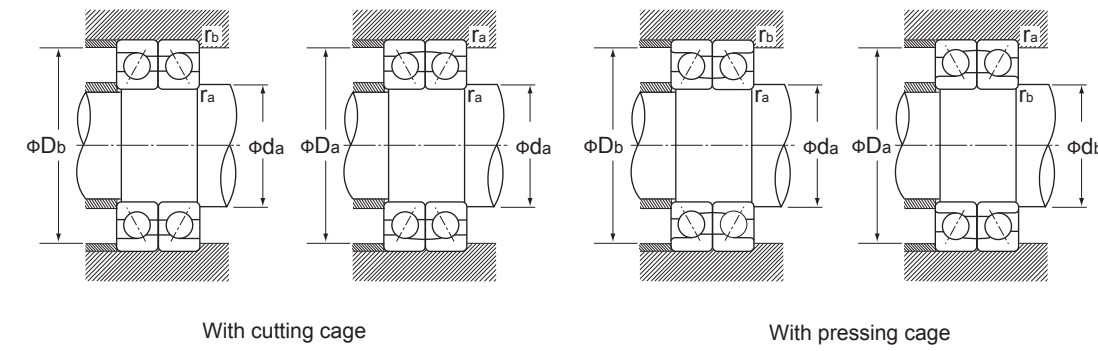
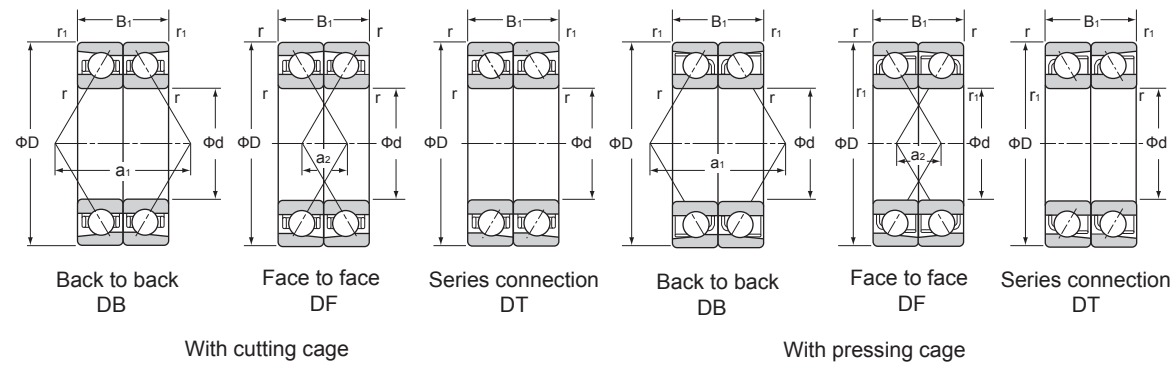
d	Boundary Dimensions (mm)				Basic Load Rating (kN)		Limiting Speed (rpm)		Bearing Designation	
	D	B	r (min.)	r ₁ (min.)	C _r	C _{or}	Grease	Oil	With snap ring groove	With snap ring
95	145	24	1.5	0.5	60.4	53.9	4400	5200	6019N	6019NR
	170	32	2.1	0.5	109	81.9	3700	4400	6219N	6219NR
	200	45	3	0.5	153	119	3300	4000	6319N	6319NR
100	150	24	1.5	0.5	60.2	54.2	4300	5100	6020N	6020NR
	180	34	2.1	0.5	122	93.1	3500	4200	6220N	6220NR
105	160	26	2	0.5	72.3	65.8	4000	4700	6021N	6021NR
	190	36	2.1	0.5	133	105	3300	3900	6221N	6221NR
110	170	28	2	0.5	82.0	73.0	3800	4500	6022N	6022NR
	200	38	2.1	0.5	144	117	3100	3700	6222N	6222NR
120	180	28	2	0.5	85.0	79.3	3600	4200	6024N	6024NR
130	200	33	2	0.5	106	101	3200	3800	6026N	6026NR



d 95~ 130mm

Snap Ring Groove Dimensions (mm)				Snap Ring Dimensions (mm)		Shoulder Dimensions (mm)					Mass (kg)	Bearing Designation	
D ₁ (max.)	a (max.)	b ±0.15	r ₀ (max.)	D ₂ (max.)	f ±0.05	d _a (min.)	D _a (max.)	D _x (min.)	C _y (max.)	r _a (max.)	r _b (max.)	Approx	
140.23	3.71	3.25	0.6	154.7	2.77	103	137	157	6.17	1.5	0.5	1.21	6019N
163.65	5.69	3.65	0.6	182.9	3.05	106	159	185	8.44	2	0.5	2.62	6219N
193.65	5.69	3.65	0.6	212.9	3.05	108	187	215	8.44	2.5	0.5	5.67	6319N
145.24	3.71	3.25	0.6	159.7	2.77	108	142	162	6.17	1.5	0.5	1.25	6020N
173.66	5.69	3.65	0.6	192.9	3.05	111	169	195	8.44	2	0.5	3.14	6220N
155.22	3.71	3.25	0.6	169.7	2.77	114	151	172	6.17	2	0.5	1.59	6021N
183.64	5.69	3.65	0.6	202.9	3.05	116	179	205	8.44	2	0.5	3.70	6221N
163.65	3.71	3.65	0.6	182.9	3.05	119	161	185	6.45	2	0.5	1.96	6022N
193.65	5.69	3.65	0.6	212.9	3.05	121	189	215	8.44	2	0.5	4.36	6222N
173.66	3.71	3.65	0.6	192.9	3.05	129	171	195	6.45	2	0.5	2.07	6024N
193.65	5.69	3.65	0.6	212.9	3.05	139	191	215	8.44	2	0.5	3.16	6026N





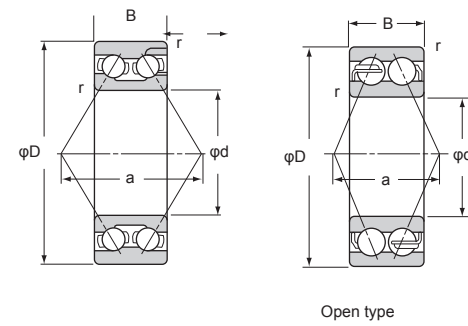
Matched Angular Contact Ball Bearings

d (105) ~120 mm

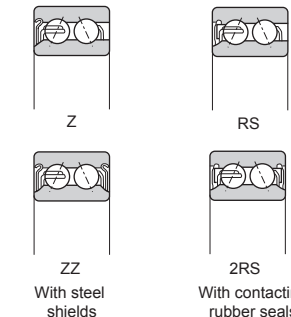
Boundary Dimensions (mm)					Basic Load Rating(kN)				Limiting Speed ¹⁾ (rpm)		Bearing Designation ²⁾			Distance of working points (mm)		Shoulder Dimensions (mm)					Mass (kg)		
d	D	B ₁	r (min.)	r ₁ (min.)	With cutting cage		With pressing cage		Grease	Oil	Back to back DB	Face to face DF	Series connection DT	a ₁	a ₂	d _a (min.)	d _b (min.)	D _a (max.)	D _b (max.)	r _a (max.)	r _b (max.)	Approx	
105	160	52	2	1	116	148	-	-	2600	3500	7021BDB	7021BDF	7021BDT	137.2	85.2	115	-	150	154.5	2	1	3.46	
	160	52	2	1	143	179	-	-	4800	6400	7021CDB	7021CDF	7021CDT	62.0	10.0	115	-	150	154.5	2	1	3.46	
	190	72	2.1	1.1	243	265	-	-	3100	3900	7221DB	7221DF	7221DT	122.1	50.1	117	-	178	183	2	1	8.36	
	190	72	2.1	1.1	220	241	-	-	2300	3100	7221BDB	7221BDF	7221BDT	161.0	89.0	117	-	178	183	2	1	8.54	
	190	72	2.1	1.1	264	287	-	-	4300	5700	7221CDB	7221CDF	7221CDT	75.9	3.9	117	-	178	183	2	1	8.35	
	225	98	3	1.1	337	386	-	-	2800	3500	7321DB	7321DF	7321DT	144.3	46.3	119	-	211	218	2.5	1	17.2	
	225	98	3	1.1	310	355	-	-	2100	2800	7321BDB	7321BDF	7321BDT	187.5	89.5	119	-	211	218	2.5	1	17.2	
	225	98	3	1.1	362	413	-	-	3900	5100	7321CDB	7321CDF	7321CDT	93.2	4.8	119	-	211	218	2.5	1	17.2	
	110	150	40	1.1	0.6	93.8	129	-	-	5100	6800	7922CDB	7922CDF	7922CDT	54.8	14.8	117	-	143	145	1	0.6	1.68
150		40	1.1	0.6	56.7	87.3	-	-	5100	6800	ACH922CDB	ACH922CDF	ACH922CDT	54.8	14.8	117	-	143	145	1	0.6	1.88	
170		56	2	1	99.5	144	-	-	4800	6300	ACH022CDB	ACH022CDF	ACH022CDT	65.5	9.5	120	-	160	164.5	2	0.8	4.27	
170		56	2	1	149	186	-	-	3300	4200	7022DB	7022DF	7022DT	108.9	52.9	120	-	160	164.5	2	1	4.28	
170		56	2	1	134	167	-	-	2500	3300	7022BDB	7022BDF	7022BDT	145.5	89.5	120	-	160	164.5	2	1	4.28	
170		56	2	1	164	203	-	-	4600	6100	7022CDB	7022CDF	7022CDT	65.5	9.5	120	-	160	164.5	2	1	4.28	
200		76	2.1	1.1	263	297	-	-	3000	3700	7222DB	7222DF	7222DT	128.7	52.7	122	-	188	193	2	1	9.80	
200		76	2.1	1.1	238	270	-	-	2200	3000	7222BDB	7222BDF	7222BDT	169.7	93.7	122	-	188	193	2	1	10.1	
200		76	2.1	1.1	286	321	-	-	4100	5400	7222CDB	7222CDF	7222CDT	80.1	4.1	122	-	188	193	2	1	9.80	
240		100	3	1.1	377	452	-	-	2600	3200	7322DB	7322DF	7322DT	152.7	52.7	124	-	226	233	2.5	1	20.2	
240		100	3	1.1	346	416	-	-	1900	2600	7322BDB	7322BDF	7322BDT	199.3	99.3	124	-	226	233	2.5	1	20.2	
240		100	3	1.1	404	484	-	-	3500	4700	7322CDB	7322CDF	7322CDT	97.7	2.3	124	-	226	233	2.5	1	20.2	
120		165	44	1.1	0.6	117	162	-	-	4700	6200	7924CDB	7924CDF	7924CDT	60.2	16.2	127	-	158	160	1	0.6	2.56
		165	44	1.1	0.6	66.2	104	-	-	4700	6200	ACH924CDB	ACH924CDF	ACH924CDT	60.2	16.2	127	-	158	160	1	0.6	2.58
	180	56	2	1	103	153	-	-	4400	5900	ACH024CDB	ACH024CDF	ACH024CDT	68.2	12.2	130	-	170	174.5	2	0.8	4.57	
	180	56	2	1	157	206	-	-	3100	3900	7024DB	7024DF	7024DT	114.6	58.6	130	-	170	174.5	2	1	4.54	
	180	56	2	1	140	186	-	-	2300	3100	7024BDB	7024BDF	7024BDT	153.9	97.9	130	-	170	174.5	2	1	4.54	
	180	56	2	1	173	226	-	-	4300	5700	7024CDB	7024CDF	7024CDT	68.2	12.2	130	-	170	174.5	2	1	4.54	
	215	80	2.1	1.1	283	332	-	-	2700	3400	7224DB	7224DF	7224DT	137.0	57.0	132	-	203	208	2	1	11.0	
	215	80	2.1	1.1	257	302	-	-	2100	2800	7224BDB	7224BDF	7224BDT	180.5	100.5	132	-	203	208	2	1	11.0	
	215	80	2.1	1.1	308	359	-	-	3800	5000	7224CDB	7224CDF	7224CDT	85.0	5.0	132	-	203	208	2	1	11.0	
	260	110	3	1.1	400	504	-	-	2400	3000	7324DB	7324DF	7324DT	164.7	54.7	134	-	246	253	2.5	1	25.2	
	260	110	3	1.1	366	462	-	-	1800	2400	7324BDB	7324BDF	7324BDT	214.4	104.4	134	-	246	253	2.5	1	25.2	
	260	110	3	1.1	431	542	-	-	3300	4400	7324CDB	7324CDF	7324CDT	105.9	4.1	134	-	246	253	2.5	1	25.2	

Remarks:

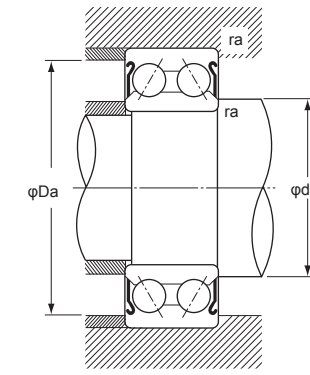
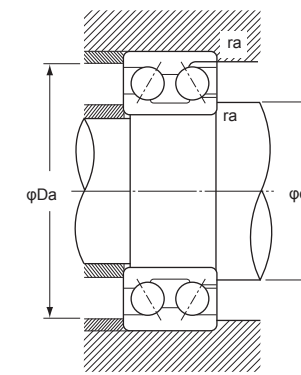
- 1) The above indicated Limiting Speed is for the types with machined cage; the one for types with pressed cage shall be 80% of above data.
- 2) Suffix B: 40° contacting angle; C: 15° contacting angle; no suffix: 30°



With ball filling notch
32,33 series



Without ball filling notch
52,53 series



Double Row Angular Contact Ball Bearing

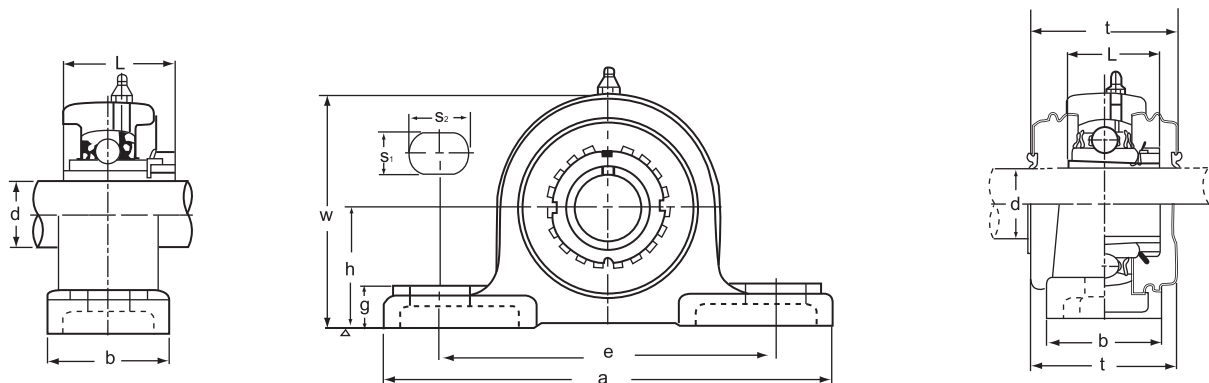
d 10 ~50mm

d	Boundary Dimensions (mm)			Basic Load Rating(kN)				Limiting Speed (rpm)			Bearing Designation			Distance of working points (mm) (Open) a	Shoulder Dimensions ¹⁾ (mm)			Mass (kg) Approx	
	D	B	r (min.)	Open type		Sealed type		Open Z,ZZ	RS,2RS	Oil open Z	Open type	With steel shields	With contacting rubber seals		da (min.)	Da (max.)	ra (max.)		
				C _r	C _{or}	C _r	C _{or}												
10	30	14.3	0.6	7.35	5.35	-	-	15000	-	20000	3200	-	-	19.5	14.5	-	25.5	0.6	0.052
12	32	15.9	0.6	9.70	7.15	-	-	14000	-	18000	3201	-	-	21.7	16.5	-	27.5	0.6	0.063
15	35	15.9	0.6	9.70	7.45	-	-	12000	-	16000	3202	-	-	23.6	19.5	-	30.5	0.6	0.072
	42	19	1	15.2	11.9	-	-	10000	-	14000	3302	-	-	27.6	20.5	-	36.5	1	0.132
17	40	17.5	0.6	13.8	10.8	-	-	11000	-	14000	3203	-	-	26.6	21.5	-	35.5	0.6	0.100
	40	17.5	0.6	13.2	8.15	12.7	8.35	11000	11000	14000	5203	5203 ZZ	5203 2RS	20.0	21.5	23.5	35.5	0.6	0.091
	47	22.2	1	21.7	17.1	-	-	9400	-	13000	3303	-	-	31.0	22.5	-	41.5	1	0.192
20	47	20.6	1	17.2	15.0	-	-	9000	-	12000	3204	-	-	31.5	25.5	-	41.5	1	0.170
	47	20.6	1	19.7	12.6	16.0	10.8	8800	8800	12000	5204	5204 ZZ	5204 2RS	23.5	25.5	26.6	41.5	1	0.120
	52	22.2	1.1	20.8	18.4	-	-	8200	-	11000	3304	-	-	33.8	27	-	45	1	0.230
	52	22.2	1.1	24.7	15.0	19.8	12.8	8300	8300	11000	5304	5304 ZZ	5304 2RS	25.9	27	28.3	45	1	0.230
25	52	20.6	1	18.9	18.2	-	-	7800	-	10000	3205	-	-	34.4	30.5	-	46.5	1	0.190
	52	20.6	1	21.4	14.8	18.9	13.8	7700	7700	10000	5205	5205 ZZ	5205 2RS	26.1	30.5	32.3	46.5	1	0.190
	62	25.4	1.1	28.9	26.5	-	-	6800	-	9100	3305	-	-	40.5	32	-	55	1	0.369
	62	25.4	1.1	32.7	20.8	27.5	18.5	6900	6900	9200	5305	5305 ZZ	5305 2RS	31.1	32	33.4	55	1	0.340
30	62	23.8	1	27.3	27.0	-	-	6500	-	8700	3206	-	-	40.7	35.5	-	56.5	1	0.320
	62	23.8	1	29.7	21.3	25.4	18.3	6400	6400	8600	5206	5206 ZZ	5206 2RS	30.8	35.5	38.6	56.5	1	0.290
	72	30.2	1.1	38.1	36.1	-	-	5800	-	7800	3306	-	-	47.2	37	-	65	1	0.585
	72	30.2	1.1	41.0	28.5	34.3	25.2	5800	5800	7700	5306	5306 ZZ	5306 2RS	36.2	37	41.3	65	1	0.510
35	72	27	1.1	36.8	37.5	-	-	5600	-	7500	3207	-	-	46.9	42	-	65	1	0.480
	72	27	1.1	39.2	29.0	31.7	24.6	5500	5500	7300	5207	5207 ZZ	5207 2RS	36.1	42	43.9	65	1	0.430
	80	34.9	1.5	48.6	46.8	-	-	5200	-	7000	3307	-	-	53.4	43.5	-	71.5	1.5	0.816
	80	34.9	1.5	51.2	36.2	46.1	32.8	5100	5100	6800	5307	5307 ZZ	5307 2RS	41.0	43.5	45.5	71.5	1.5	0.790
40	80	30.2	1.1	42.0	43.9	-	-	5000	-	6700	3208	-	-	52.6	47	-	73	1	0.650
	80	30.2	1.1	44.4	33.6	36.5	29.1	5000	5000	6700	5208	5208 ZZ	5208 2RS	39.2	47	49.5	73	1	0.570
	90	36.5	1.5	54.1	53.8	-	-	4600	-	6100	3308	-	-	58.9	48.5	-	81.5	1.5	1.07
	90	36.5	1.5	62.7	45.4	51.4	37.8	4600	4600	6100	5308	5308 ZZ	5308 2RS	44.9	48.5	52.1	81.5	1.5	1.05
45	85	30.2	1.1	45.4	51.4	-	-	4600	-	6100	3209	-	-	56.3	52	-	78	1	0.710
	85	30.2	1.1	49.9	38.4	41.7	33.9	4600	4600	6100	5209	5209 ZZ	5209 2RS	42.2	52	55.3	78	1	0.620
	100	39.7	1.5	66.1	67.3	-	-	4100	-	5500	3309	-	-	65.6	53.5	-	91.5	1.5	1.42
	100	39.7	1.5	75.1	55.7	68.9	51.4	4100	4100	5500	5309	5309 ZZ	5309 2RS	51.0	53.5	58.2	91.5	1.5	1.42
50	90	30.2	1.1	45.1	52.1	-	-	4300	-	5700	3210	-	-	58.8	57	-	83	1	0.760
	90	30.2	1.1	53.3	43.6	44.1	37.9	4300	4300	5600	5210	5210 ZZ	5210 2RS	44.5	57	58.9	83	1	0.670
	110	44.4	2	86.1	88.6	-	-	3800	-	5000	3310	-	-	71.7	60	-	100	2	1.95
	110	44.4	2	88.5	67.0	81.8	62.2	3600	3600	4800	5310	5310 ZZ	5310 2RS	56.6	60	64.4	100	2	1.93



SL TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)
UKPX-C WITH COVER, BOTH SIDES OPEN
UKPX-C WITH COVER, ONE SIDES CLOSED

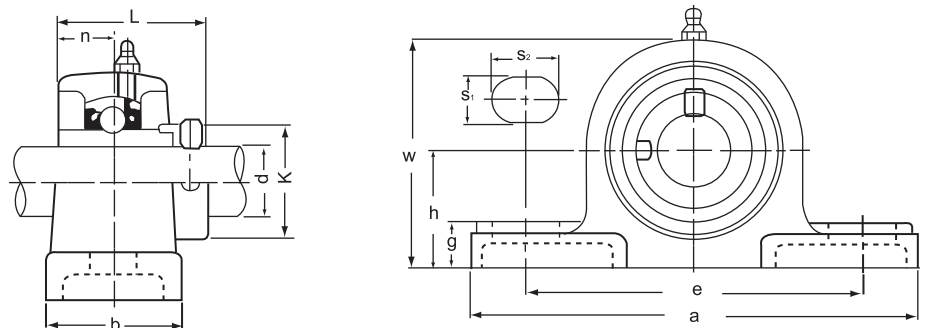


SL TYPE SEAL



L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)
UCP3-CC WITH COVER, BOTH SIDES OPEN
UCP3-CD WITH COVER, ONE SIDES CLOSED



UKPX

Table with 20 columns: Unit No., Shaft Dia. (In./mm), Dimensions (In./mm) (h, a, e, b, S2, S1, g, w, t, L, V), Bolt Used (mm/In.), Bearing No., Housing Adapter No./Used, and Weight (Kg). Rows include models UKPX05 to UKPX20.

UCP3

Table with 20 columns: Unit No., Shaft Dia. (In./mm), Dimensions (In./mm) (h, a, e, b, S2, S1, g, w, T1, T2, Bi, n), Bolt Used (mm/In.), Bearing No., Housing Adapter No./Used, and Weight (Kg). Rows include models UCP305 to UCP328.

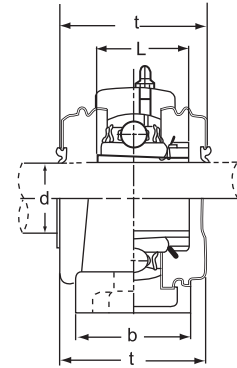
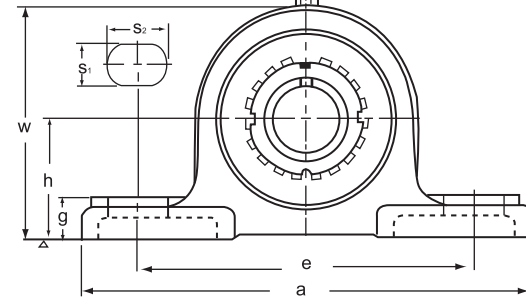
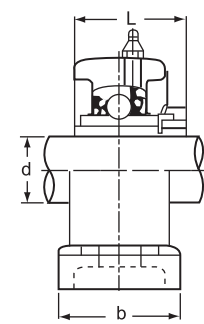


SL TYPE SEAL



L3 TYPE SEAL

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UCF2-C WITH OPEN COVER
UCF2-D WITH CLOSED COVER



UKP3

Table with 20 columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) (h, a, e, b, S2, S1, g, w, t1, t2, L, V), Bolt Used (mm, In.), Bearing No., Housing No., Adapter Used, and Weight (Kg). Rows include units UKP 305-328.

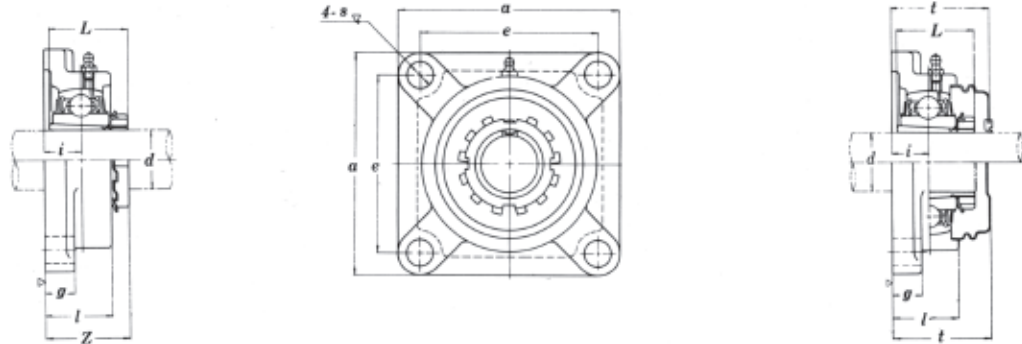
UCF2

Table with 20 columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) (a, e, i, g, l, s, Z, t, Bi, n), Bolt Used (mm, In.), Bearing No., Housing No., and Weight (Kg). Rows include units UCF 201-218.



SL TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UKFX-C.....WITH OPEN COVER
UKFX-D.....WITH CLOSED COVER

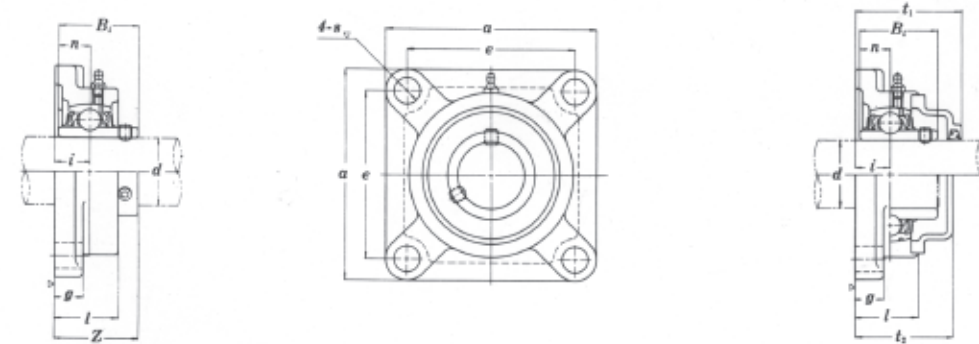


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UCF3-GC.....WITH OPEN COVER
UCF3-GD.....WITH CLOSED COVER



UKFX

Table with 17 columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) (a, e, i, g, l, s, z, t, L, V), Bolt Used (mm, In.), Bearing No., Housing Adapter No., Used, Weight (Kg). Rows include models UKF X05 to X20.

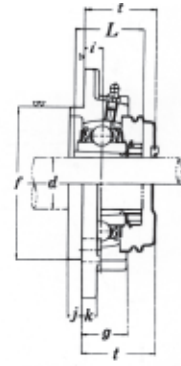
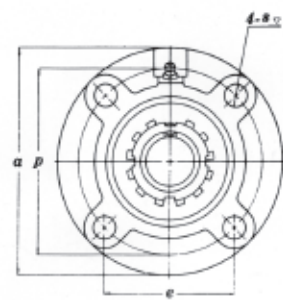
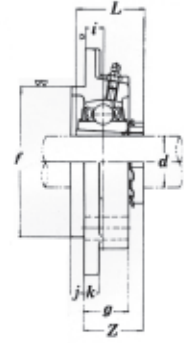
UCF3

Table with 17 columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) (a, e, i, g, l, s, Z, t1, t2, Bi, n), Bolt Used (mm, In.), Bearing No., Housing Adapter No., Used, Weight (Kg). Rows include models UCF 305 to 328.



SL TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UKFCX-C.....WITH OPEN COVER
UKFCX-D.....WITH CLOSED COVER

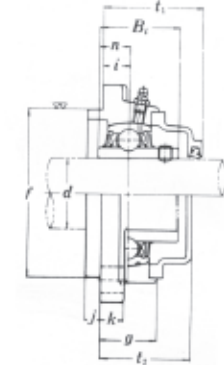
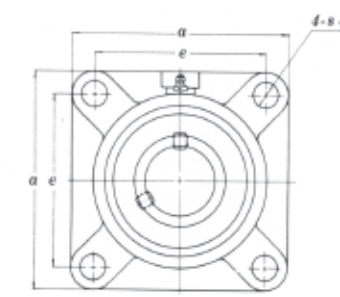
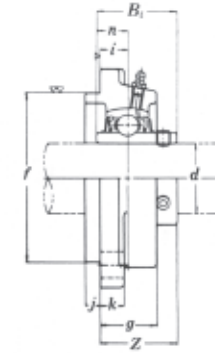


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UCFS3-GC.....WITH OPEN COVER
UCFS3-GD.....WITH CLOSED COVER



UKFCX

Table with columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) [a, p, e, i, s, j, k, g, f, Z, t, L, V], Bolt Used (mm, In.), Bearing No., Housing No., Adapter Used, Weight (Kg). Rows include models UKFC X05 to X20.

UCFS3

Table with columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) [a, e, i, s, j, k, g, f, Z, t1, t2, Bi, n], Bolt Used (mm, In.), Bearing No., Housing No., Weight (Kg). Rows include models UCFS 305 to 328.

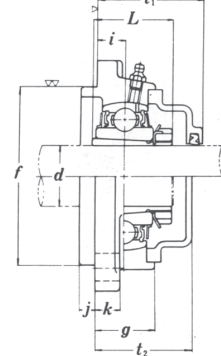
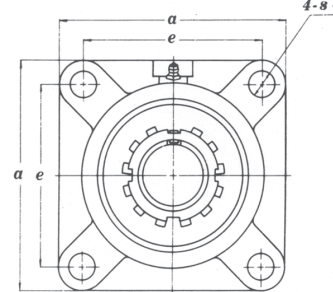
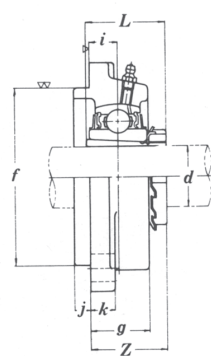


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UKFS3-GC WITH OPEN COVER
UKFS3-GD WITH CLOSED COVER

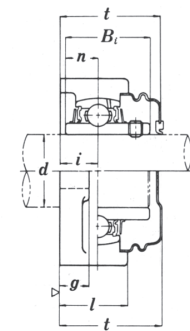
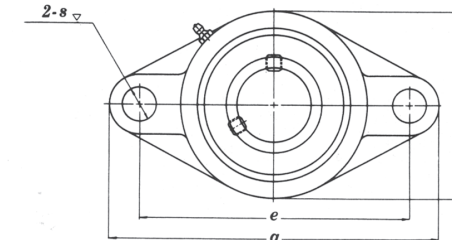
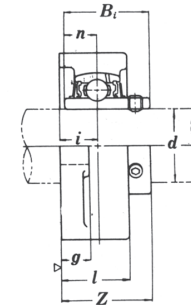


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(STAMPED STEEL COVER)
UCFL2-C WITH OPEN COVER
UCFL2-D WITH CLOSED COVER



UKFS3

Table with columns: Unit No., Shaft Dia. d (In./mm), Dimensions (In./mm) a, e, i, s, j, k, g, f, Z, t1, t2, L, Bolt Used (mm/In.), Bearing No., Housing No., Adapter Used, Weight (Kg). Rows include models UKFS 305-328.

UCFL2

Table with columns: Unit No., Shaft Dia. d (In./mm), Dimensions (In./mm) a, e, i, g, l, s, b, Z, t, Bi, n, Bolt Used (mm/In.), Bearing No., Housing No., Weight (Kg). Rows include models UCFL 201-218.

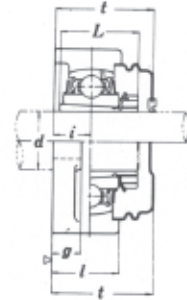
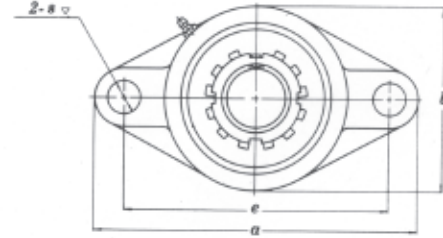
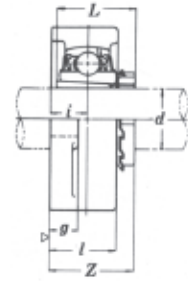


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD (STAMPED COVER)
 UKFL2-GC WITH OPEN COVER
 UKFL2-GD WITH CLOSED COVER



UKFL2

Unit No.	Shaft Dia. d		Dimensions (In./mm)													Bolt Used (mm)	Bearing No.	Housing No.	Adapter Used	Weight (Kg)
	(In.)	(mm)	a	e	i	g	l	s	h	Z	L	t	V							
UKFL205 205	3/4	20	5 1/8 130	3 5/16 99	5/8 16	1/2 13	1 1/16 27	5/8 16	2 1/16 68	1 3/8 34.7	1 9/16 40	1 5/32 29	3/4 18.7	14	1/2	UK 205	FL 205	HE2305 H 2305	0.68	
UKFL206 206 206 206	7/8 15/16 1	25	5 13/16 148	4 39/64 117	4 5/64 18	1/2 13	1 7/32 31	5/8 16	3 5/32 80	1 1/2 37.7	1 23/32 44.0	1 7/32 31	2 5/32 19.7	14	1/2	UK 206	FL 206	HS2306 HA2306 H 2306 HE2306	0.97	
UKFL207 207 207	1/8 1 3/16	30	6 11/32 161	5 1/8 130	3/4 19	9/16 14	1 11/32 34	5/8 16	3 17/32 90	1 5/8 41.2	2 15/16 49	1 3/8 35	7/8 22.2	14	1/2	UK 207	FL 207	HS2307 H 2307 HA2307	1.3	
UKFL208 208 208	1 1/4 1 3/8	35	6 7/8 175	5 43/64 144	5 3/64 21	9/16 14	1 13/32 36	5/8 16	3 15/10 100	1 3/4 44.7	2 5/32 55.0	1 13/32 36	1 5/16 23.7	14	1/2	UK 208	FL 208	HE2308 HS2308 H 2308	1.6	
UKFL209 209 209 209	1 7/16 1 1/2 1 5/8	40	7 13/32 188	5 53/64 148	5 5/64 22	1 9/32 15	1 1/2 38	3/4 19	4 1/4 108	1 7/8 47.2	2 7/32 56.0	1 17/32 39	1 25.7	16	5/8	UK 209	FL 209	HA2309 HE2309 H 2309 HS2309	2.0	
UKFL210 210 210	1 11/16 1 3/4	45	7 3/4 197	6 3/16 157	5 5/64 22	1 9/32 15	1 9/16 40	3/4 19	4 17/32 115	1 29/32 48.7	2 5/16 59	1 21/32 42	1 1/16 26.7	16	5/8	UK 210	FL 210	HA2310 HE2310 H 2310	2.3	
UKFL211 211 211 211	1 7/8 1 5/8 2	50	8 13/16 224	7 1/4 184	6 3/64 25	2 3/32 18	1 11/16 43	3/4 19	5 1/8 130	2 1/16 52.7	2 15/32 63	1 25/32 45	1 3/32 27.7	16	5/8	UK 211	FL 211	HS2311 HA2311 H 2311 HE2311	3.3	
UKFL212 212	2 1/8	55	9 27/32 250	7 61/64 202	1 9/64 29	2 3/32 18	1 7/8 48	2 9/32 23	5 1/2 140	2 9/32 58	2 7/8 73.0	1 27/32 47	1 5/32 29	20	3/4	UK 212	FL 212	HS2312 H 2312	4.1	
UKFL213 213 213 213	2 3/16 2 1/4 2 3/8	60	10 5/32 258	8 17/64 210	1 3/16 30	2 5/32 20	1 3/32 50	2 9/32 23	6 3/32 155	2 13/22 61.5	2 29/32 74	1 31/32 50	1 1/4 31.5	20	3/4	UK 213	FL 213	HA2313 HE2313 H 2313 HS2313	5.0	
UKFL215 215 215	2 7/16 2 1/2	65	10 13/16 275	8 55/64 225	1 11/32 34	2 5/32 20	2 7/32 56	2 9/32 23	6 1/2 165	2 11/16 68.5	3 9/32 83.0	2 5/32 55	1 11/32 34.5	20	3/4	UK 215	FL 215	HA2315 HE2315 H 2315	6.6	
UKFL216 216 216	2 11/16 2 3/4	70	11 13/32 290	9 11/64 233	1 11/32 34	2 5/32 20	2 9/32 58	6 3/64 25	7 3/32 180	2 13/16 71.8	3 15/32 88.0	2 5/16 59	1 1/2 37.8	22	7/8	UK 216	FL 216	HA2316 H 2313 HE2316	8.1	
UKFL217 217 217	2 5/8 3	75	12 305	9 49/64 248	1 27/64 36	7/8 22	2 15/32 63	6 3/64 25	7 15/32 190	2 31/32 75.8	3 5/8 92.0	2 15/32 63	1 9/16 39.8	22	7/8	UK 217	FL 217	HA2317 H 2317 HE2317	9.9	
UKFL218		80	12 19/32 320	10 7/16 265	1 37/64 40	2 9/32 23	2 11/16 68	6 3/64 25	8 1/16 205	3 7/32 81.8	3 31/32 101.0	2 9/16 65	1 21/32 41.8	22	7/8	UK 218	FL 218	H 2318	12.2	

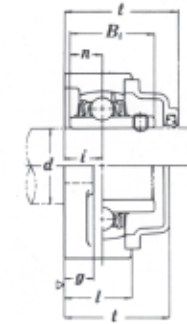
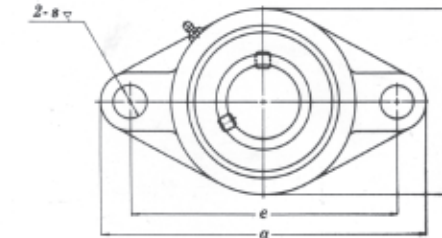
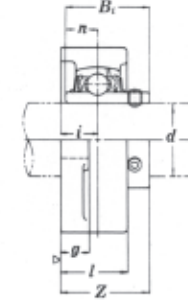


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)
 UCFLX-C WITH OPEN COVER
 UCFLX-D WITH CLOSED COVER



UCFLX

Unit No.	Shaft Dia. d		Dimensions (In./mm)													Bolt Used (mm)	Bearing No.	Housing No.	Weight (Kg)
	(In.)	(mm)	a	e	i	g	l	s	b	Z	t	Bi	n						
UCFL X05 X05-16	1	20	5 9/16 141	4 39/64 117	4 5/64 18	1/2 13	1 3/16 30	1 5/32 12	3 9/32 83	1 19/32 40.2	1 23/32 44.0	1.5000 38.1	0.6260 15.9	10	3/8	UC X05 X05-16	FL X05	1.1	
UCFL X06 X06-19 X06-20	1 5/8 1 1/4	25	6 5/32 156	5 1/8 130	3/4 19	9/16 14	1 11/32 34	5/8 16	3 3/4 95	1 3/4 44.4	1 15/16 49	1.6890 42.9	0.6890 17.5	14	1/2	UC X06 X06-19 X06-20	FL X06	1.5	
UCFL X07-22 X07 X07-23	1 3/8 1 7/16	35	6 23/32 171	5 43/64 144	5 3/64 21	9/16 14	1 1/2 38	5/8 16	4 1/8 105	2 1/32 51.2	2 5/32 55.0	1.9370 49.2	0.7480 19.0	14	1/2	UC X07-22 X07 X07-23	FL X07	1.9	
UCFL X08-24 X08	1 1/2 40	40	7 1/16 179	5 53/64 148	5 3/64 22	9/16 14	1 9/16 40	5/8 16	4 3/8 111	2 1/16 52.2	2 7/32 56.0	1.9370 49.2	0.7480 19.0	14	1/2	UC X08-27 X08	FL X08	2.1	
UCFL X09-27 X09-28 X09	1 11/16 1 3/4 45	45	7 7/16 189	6 3/16 157	5 3/64 23	9/16 14	1 9/16 40	5/8 16	4 9/16 116	2 3/16 55.6	2 11/32 60	2.0315 51.6	0.7480 19.0	14	1/2	UC X09-27 X09-28 X09	FL X09	2.4	
UCFL X10-31 X10 X10-32	1 11/16 2	50	8 1/2 216	7 1/4 184	1 1/32 26	2 3/32 20	1 23/32 44	5/8 19	5 1/4 133	2 1/32 59.4	2 1/2 64	2.1890 55.6	0.8740 22.2	16	5/8	UC X10-31 X10 X10-32	FL X10	3.8	



Radial Insert Ball Bearings and Housing Units

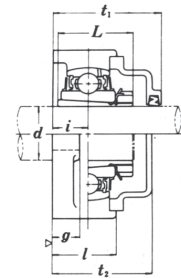
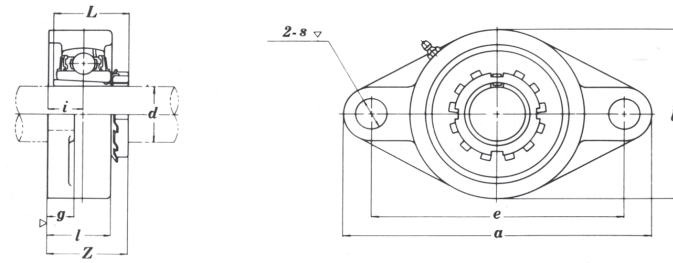


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UKFL3-GC.....WITH OPEN COVER
UKFL3-GD.....WITH CLOSED COVER

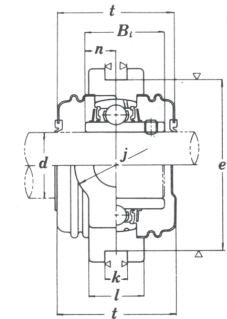
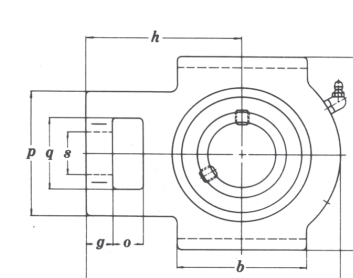
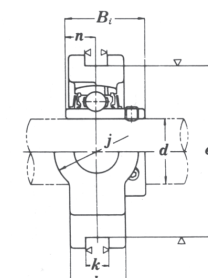


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(STAMPED STEEL COVER)
UCT2-C.....WITH OPEN COVER
UCT2-D.....WITH CLOSED COVER



UKFL3

Table with columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) (a, e, i, g, l, s, h, Z, t, L, V), Bolt Used (mm, In.), Bearing No., Housing No., Adapter Used, Weight (Kg). Rows include units UKFL 305 to 328.

UCT2

Table with columns: Unit No., Shaft Dia. d (In., mm), Dimensions (In., mm) (o, g, p, q, s, b, K, e, a, w, j, l, h, t, Bi, n), Bearing No., Housing No., Weight (Kg). Rows include units UCT 201 to 217.



SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(STAMPED STEEL COVER)
UKT2-C.....WITH COVER, BOTH SIDES OPEN
UKT2-D.....WITH COVER, ONE SIDES CLOSED

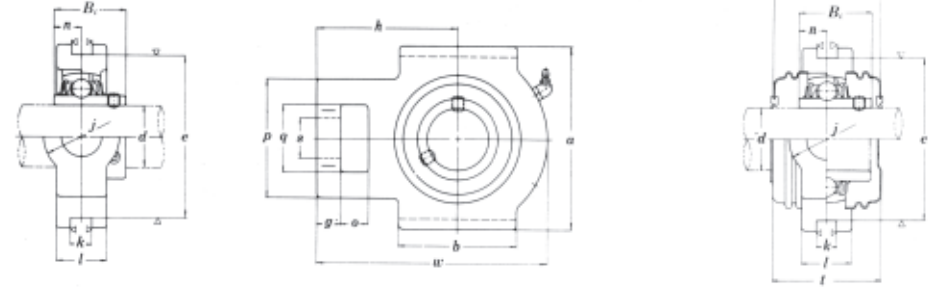
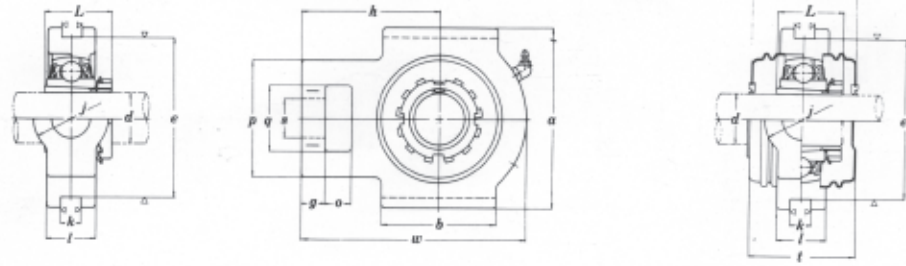


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UCTX-C.....WITH OPEN COVER
UCTX-D.....WITH CLOSED COVER



UKT2

Table with columns: Unit No., Shaft Dia. (In./mm), Dimensions (In./mm) [o, g, p, q, s, b, K, e, a, w, j, l, h, t, L, V], Bearing No., Housing No., Adapter Used, Weight (Kg). Rows include units UKT 205 through 217.

UCTX

Table with columns: Unit No., Shaft Dia. (In./mm), Dimensions (In./mm) [o, g, p, q, s, b, K, e, a, w, j, l, h, t, Bi, n], Bearing No., Housing No., Weight (Kg). Rows include units UCT X05 through X17.



SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(STAMPED STEEL COVER)
UKTX-C.....WITH OPEN COVER
UKTX-D.....WITH CLOSED COVER

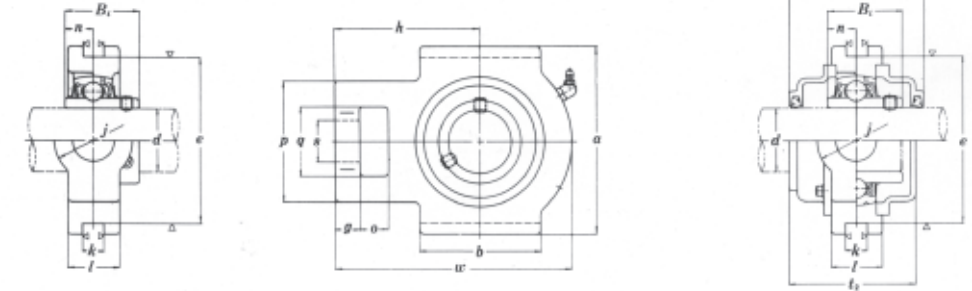
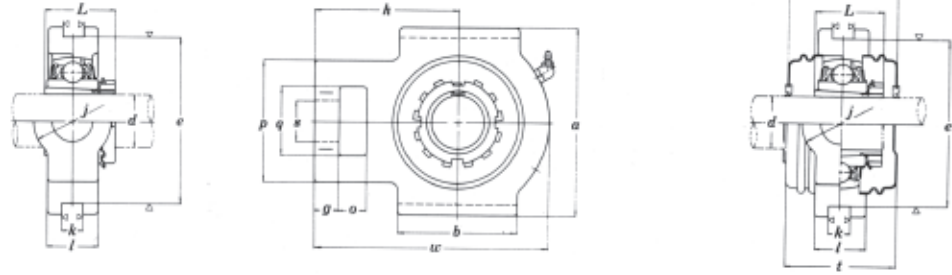


SL TYPE SEAL.



L3 TYPE SEAL.

DOUBLE PROTECTION METHOD(CAST-IRON COVER)
UCT3-GC.....WITH COVER, BOTH SIDES OPEN
UCT3-GD.....WITH COVER, ONE SIDES CLOSED



UKTX

Table with columns: Unit No., Shaft Dia. (In./mm), Dimensions (In./mm) (o, g, p, q, s, b, K, e, a, w, j, l, h, t, L, V), Bearing No., Housing Adapter No., Used, Weight (Kg). Rows include models UKTX05 to UKTX17.

UCT3

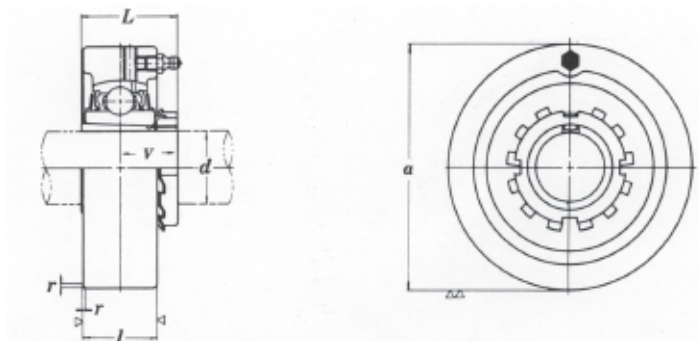
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SL TYPE SEAL



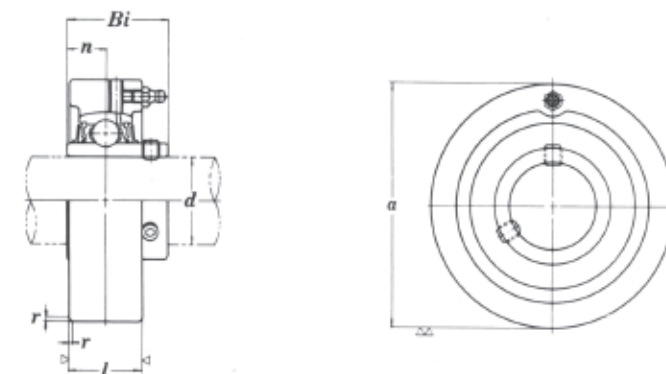
L3 TYPE SEAL



SL TYPE SEAL



L3 TYPE SEAL



UKC2

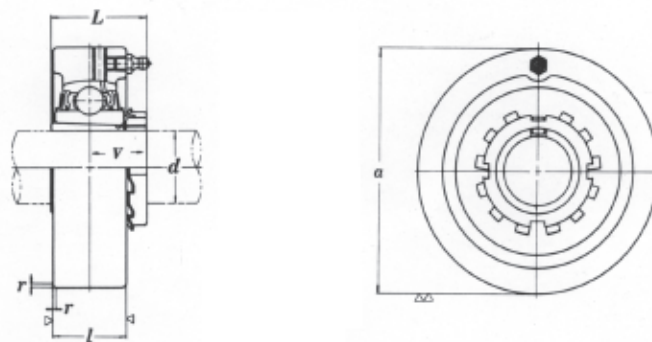
Unit No.	Shaft Dia. d		Dimensions (In.) (mm)				Bearing No.	Housing No.	Adapter Used	Weight (Kg)
	(In.)	(mm)	a	h	L	V				
UKC 205 205	3/4	20	3.1496 80	55/64 22	15/32 29	3/4 18.7	UK 205	C 205	HE2305 H 2305	0.68
UKC 206 206 206 206	7/8 15/16 1	25	3.3465 85	11/16 27	17/32 31	25/32 19.7	UK 206	C 206	HS2306 HA2306 H 2306 HE2306	0.85
UKC 207 207 207	1 1/8 1 3/16	30	3.5433 90	17/64 28	13/8 35	7/8 22.2	UK 207	C 207	HS2307 H 2307 HA2307	0.97
UKC 208 208 208	1 1/4 1 3/8	35	3.9370 100	13/16 30	1 13/32 36	15/16 23.7	UK 208	C 208	HE2308 HS2308 H 2308	1.3
UKC 209 209 209 209	1 7/16 1 1/2 1 5/8	40	4.3307 110	17/32 31	1 17/32 39	1 25.7	UK 209	C 209	HA2309 HE2309 H 2309 HS2309	1.6
UKC 210 210 210	1 11/16 1 3/4	45	4.7244 120	1 19/64 33	1 21/32 42	1 1/16 26.7	UK 210	C 210	HA2310 HE2310 H 2310	2.0
UKC 211 211 211 211	1 7/8 1 5/16 2	50	4.9213 125	13/8 35	1 25/32 45	1 3/32 27.7	UK 211	C 211	HS2311 HA2311 H 2311 HE2311	2.3
UKC 212 212	2 1/8	55	5.1181 130	1 1/2 38	1 27/32 47	1 5/32 29.0	UK 212	C 212	HS2312 H 2312	2.5
UKC 213 213 213 213	2 3/16 2 1/4 2 3/8	60	5.5118 140	1 37/64 40	1 31/32 50	1 1/4 31.5	UK 213	C 213	HA2313 HE2313 H 2313 HS2313	3.0

UCCX

Unit No.	Shaft Dia. d		Dimensions (In.) (mm)				Bearing No.	Housing No.	Weight (Kg)
	(In.)	(mm)	a	L	Bi	n			
UCC X05 X05-16	1	25	3.5433 90	1 1/16 27	1.5000 38.1	0.6260 15.9	UC X05 X05-16	C X05	1.0
UCC X06 X06-19 X06-20	1 3/16 1 1/4	30	3.9370 100	1 3/16 30	1.6890 42.9	0.6890 17.5	UC X06 X06-19 X06-20	C X06	1.3
UCC X07-22 X07 X07-23	1 3/8 1 7/16	35	4.3307 110	1 11/32 34	1.9370 49.2	0.7480 19.0	UC X07-22 X07 X07-23	C X07	1.7
UCC X08-24 X08	1 1/2	40	4.7244 120	1 1/2 38	1.9370 49.2	0.7480 19.0	UC X08-24 X08	C X08	2.1
UCC X09-27 X09-28 X09	1 11/16 1 3/4	45	4.7244 120	1 1/2 38	2.0315 51.6	0.7480 19.0	UC X09-27 X09-28 X09	C X09	2.2
UCC X10-31 X10 X10-32	1 15/16 2	50	5.1181 130	1 37/64 40	2.1890 55.6	0.8740 22.2	UC X10-31 X10 X10-32	C X10	2.8
UCC X11 X11-35 X11-36	2 3/16 2 1/4	55	5.9055 150	1 21/32 42	2.5630 65.1	1.0000 25.4	UC X11 X11-35 X11-36	C X11	4.0
UCC X12 X12-38 X12-39	2 3/8 2 7/16	60	6.2992 160	1 47/64 44	2.5630 65.1	1.0000 25.4	UC X12 X12-38 X12-39	C X12	4.6



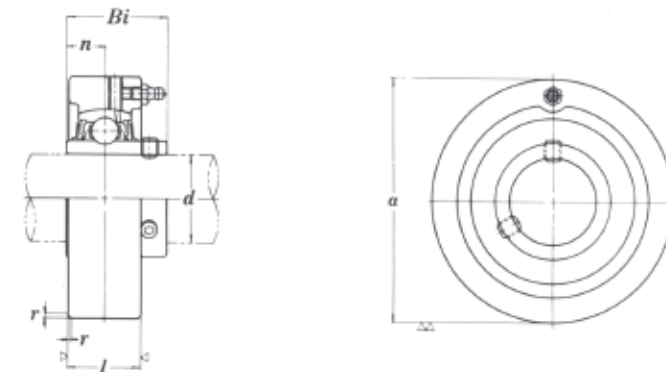
SL TYPE SEAL.



SL TYPE SEAL.



L3 TYPE SEAL.



UKCX

Unit No.	Shaft Dia. d		Dimensions (In./mm)				Bearing No.	Housing No.	Adapter Used	Weight (Kg)
	(In.)	(mm)	a	L	V					
UKC X05 X05	3/4	20	3.5433 90	1 1/16 27	13/8 35	25/32 19.7	UK X05	CX05	HE2305 H 2305	0.99
UKC X06 X06 X06 X06	7/8 15/16 1	25	3.9370 100	13/16 30	1 1/2 38	27/32 21.2	UK X06	CX06	HS2306 HA2306 H 2306 HE2306	1.3
UKC X07 X07 X07	1 1/8 13/16	30	4.3307 110	1 11/32 34	1 11/16 43	29/32 22.2	UK X07	CX07	HS2307 H 2307 HA2307	1.7
UKC X08 X08 X08	1 1/4 13/8	35	4.7244 120	1 1/2 38	1 13/16 46	31/32 24.7	UK X08	C X08	HE2308 HS2308 H 2308	2.3
UKC X09 X09 X09 X09	1 7/16 1 1/2 15/8	40	4.7244 120	1 1/2 38	1 31/32 50	1 25.7	UK X09	CX09	HA2309. HE2309 H 2309 HS2309	2.3
UKC X10 X10 X10	1 11/16 13/4	45	5.1181 130	1 37/64 40	2 5/32 55	1 3/32 27.7	UK X10	C X10	HA2310 HE2310 H 2310	2.8
UKC X11 X11 211 X11	1 7/8 1 5/16 2	50	5.9055 150	1 21/32 42	2 5/16 59	1 1/8 28.7	UK X11	C X11	HS2311 HA2311 H 2311 HE2311	3.8
UKC X12 X12	2 1/8	55	6.2992 160	1 47/64 44	2 7/16 62	1 3/16 30.5	UK X12	C X12	HS2312 H 2312	4.4

UCC3

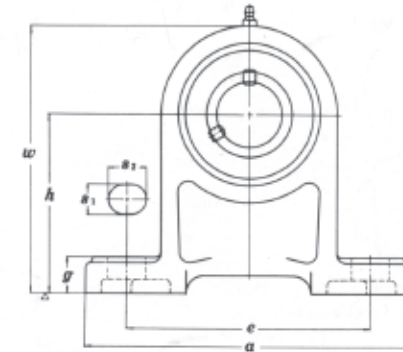
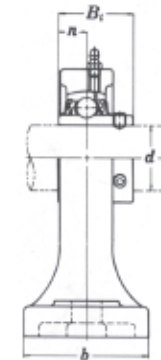
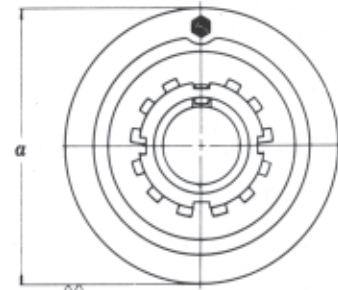
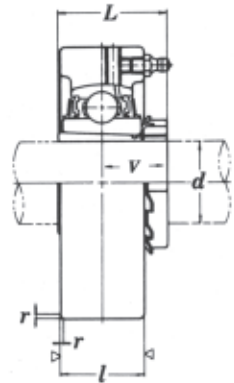
Unit No.	Shaft Dia. d		Dimensions (In./mm)				Bearing No.	Housing No.	Weight (Kg)
	(In.)	(mm)	a	L	Bi	n			
UCC 305 305-16	1	25	3.5433 90	1 1/32 26	1.4961 38	0.5906 15	UC305 305-16	C 305	1.5
UCC 306-18 306	1 1/8	30	3.9370 100	1 7/64 28	1.6929 43	0.6693 17	UC306-18 306	C 306	1.7
UCC 307-20 307-22 307 307-23	1 1/4 1 3/8 1 7/16	35	4.3307 110	1 7/64 32	1.8897 48	0.7480 19	UC 307-20 307-22 307 307-23	C 307	2.2
UCC 308-24 308	1 1/2	40	4.7244 120	1 11/32 34	2.0472 52	0.8661 19	UC308-24 308	C 308	2.2
UCC 309-28 309	1 3/4	45	5.1181 130	1 1/2 38	2.2441 57	0.8661 22	UC309-28 309	C 309	2.8
UCC 310-31 310	1 5/16	50	5.5118 140	1 37/64 40	2.4015 61	0.8661 22	UC310-31 310	C 310	3.2
UCC 311-32 311	2	55	5.9055 150	1 47/64 44	2.5984 66	0.9842 25	UC311-32 311	C 311	3.9
UCC 312		60	6.2992 160	1 13/16 46	2.7953 71	1.0236 26	UC312	C 312	4.8
UCC 313-40 313	2 1/4	65	6.6929 170	1 31/32 50	2.9528 75	1.1811 30	UC313-40 313	C 313	5.7
UCC 314-44 314	2 3/4	70	7.0866 180	2 3/64 52	3.0709 78	1.2992 33	UC314-44 314	C314	6.7
UCC 315 315-48	3	75	7.4803 190	2 11/64 55	3.2283 82	1.2598 32	UC315 315-48	C 315	7.8
UCC 316		80	7.8740 200	2 33/64 60	3.3858 86	1.3386 34	UC316	C 316	9.2
UCC 317		85	8.4646 215	2 33/64 64	3.7795 96	1.5748 40	UC317	C 317	11.7
UCC 318-56 318	3 1/2	90	8.8583 225	2 19/32 66	3.7795 96	1.5748 40	UC318-56 318	C 318	13.1
UCC 319		95	9.4488 240	2 53/64 72	4.0551 103	1.6142 41	UC319	C 319	15.8
UCC 320 320-64	4	100	10.2362 260	2 57/64 75	4.2519 108	1.6535 42	UC320 320-64	C 320	19.6
UCC 321		105	10.2362 260	2 57/64 75	4.4094 112	1.7323 44	UC321	C 321	27.0
UCC 322		110	11.8110 300	3 5/32 90	4.6063 117	1.8110 46	UC322	C322	29.2
UCC 324		120	12.5984 320	3 35/64 90	4.9606 126	2.0079 51	UC324	C 324	35.9
UCC 326		130	13.3858 340	3 15/16 100	5.3150 135	2.1260 54	UC326	C326	43.0
UCC 328		140	14.1732 360	3 15/16 100	5.7086 145	2.3228 59	UC328	C 328	52.9



SL TYPE SEAL



L3 TYPE SEAL



UKC3

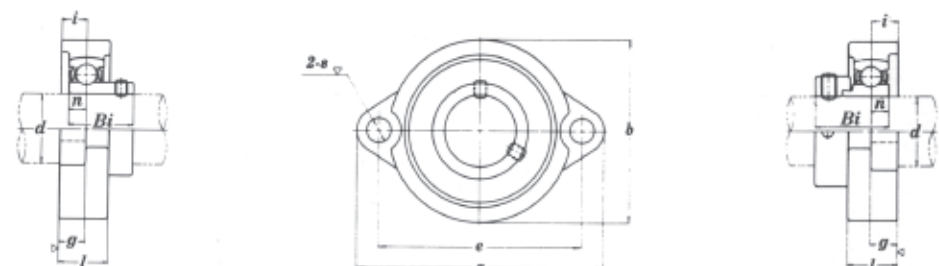
Unit No.	Shaft Dia. d		Dimensions (In.) (mm)				Bearing No.	Housing No.	Adapter Used	Weight (Kg)
	(In.)	(mm)	a	l	L	V				
UKC 305 305	3/4	20	3.5433 90	1 1/32 26	1.3780 35	27/32 21.7	UK 305	C 305	HE2305 H 2305	1.5
UKC 306 306 306	7/8	25	3.9370 100	17/64 28	1.4961 38	29/32 23.2	UK 306	C 306	HS2306 H 2306 HE2306	1.7
UKC 307 307 307	1 1/4	30	4.3307 110	17/64 32	1.6929 43	1 25.7	UK 307	C 307	HS2307 H 2307 HA2307	2.2
UKC 308 308 308	1 1/4	35	4.7244 120	1 1/32 34	1.8110 46	13/32 27.7	UK 308	C 308	HE2308 HS2308 H 2308	2.2
UKC 309 309 309	1 1/2	40	5.1181 130	1 1/2 38	1.9685 50	13/16 30.2	UK 309	C 309	HE2309 H 2309 HS2309	2.8
UKC 310 310 310	1 11/16 13/4	45	5.5118 140	137/64 40	2.1640 55	119/32 32.2	UK 310	C 310	HA2310 HE2310 H 2310	3.2
UKC 311 311 311	1 7/8	50	5.9055 150	147/64 44	2.3228 59	15/16 33.7	UK 311	C 311	HS2311 H 2311 HE2311	3.9
UKC 312 312	2 1/8	55	6.2992 160	113/16 46	2.4409 62	113/32 36.0	UK 312	C 312	HS2312 H 2312	4.8
UKC 313 313 313	2 1/4	60	6.6929 170	131/32 50	2.5591 65	1 1/2 38.0	UK 313	C 313	HE2313 H 2313 HS2313	5.7
UKC 315 315	2 1/2	65	7.4803 190	2 1/64 55	2.8740 73	12 1/32 42.0	UK 315	C 315	HE2315 H 2315	7.8
UKC 316 316	2 3/4	70	7.8740 200	2 33/64 60	3.0709 78	1 3/4 44.3	UK 316	C 316	HE2316 H 2316	9.2
UKC 317 317	3	75	8.4646 215	2 33/64 64	3.2283 82	1 7/8 47.8	UK 317	C 317	H 2317 HE2317	11.7
UKC 318		80	8.8583 225	2 19/32 66	3.3858 86	1 7/8 47.8	UK 318	C 318	H 2318	13.1
UKC 319 319	3 1/4	85	9.4488 240	2 53/64 72	3.5433 90	2 1/32 51.8	UK 319	C 319	HE2319 H 2319	15.8
UKC 320 320	3 1/2	90	10.2362 260	2 61/64 75	3.8189 97	2 1/8 53.8	UK 320	C 320	HE2320 H 2320	19.6
UKC 322 322	4	100	11.8110 300	3 5/32 80	4.1339 105	2 11/32 59.8	UK 322	C 322	H 2322 HE2322	29.2
UKC 324 324	4 7/16	110	12.5984 320	3 35/64 90	4.4094 112	2 7/32 65.5	UK 324	C 324	H 2324 HA2324	35.9
UKC 326 326	4 1/2	115	13.3858 340	3 15/16 100	4.7638 121	2 5/8 66.5	UK 326	C 326	HE2326 H 2326	43.0
UKC 328 328	4 15/16	125	14.1732 360	3 15/16 100	5.1575 131	2 27/32 72.5	UK 328	C 328	H 2328 HA2328	52.9

UCPH2

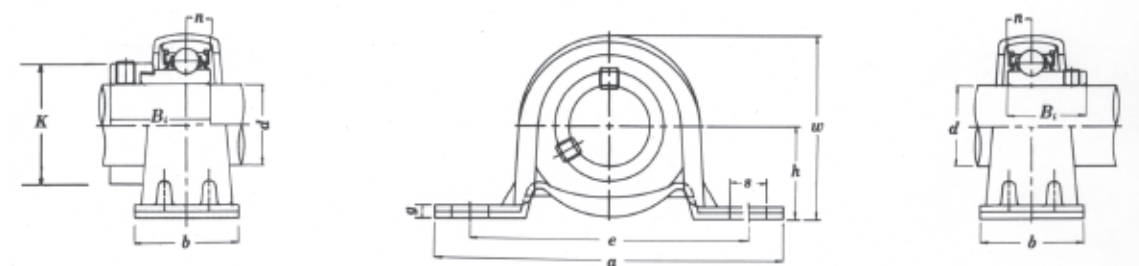
Unit No.	Shaft Dia. d		Dimensions (In.) (mm)								Bolt Used		Bearing No.	Housing No.	Weight (Kg)			
	(In.)	(mm)	h	a	e	b	s ₂	s ₁	g	w	Bi	n				(mm)	(In.)	
UCPH 201 201-8 202 202-10 204 204-12 204	1/2	12														UC 201 201-8 202 202-10 204 204-12 204	PH 204	0.96 0.94 0.93 0.91
UCPH 205-14 205-15 205 205-16	7/8 15/16 1	25	2 5/32 80	5 1/2 140	4 1/8 105	1 31/32 50	3/4 19	1/2 13	5/8 16	4 1/2 114	1.3425 34.1	0.5630 14.3	10	3/8	UC 205-14 205-15 205 205-16	PH 205	1.2	
UCPH 206-18 206 206-19	1 1/8 1 3/16	30	3 35/64 90	6 1/2 165	4 3/4 121	1 31/32 50	13/16 21	2 1/32 17	2 3/32 18	5 1/8 130	1.5000 38.1	0.6260 15.9	14	1/2	UC 206-18 206 206-19	PH 206	1.6	
UCPH 207-20 207-21 207-22 207 207-23	1 1/4 15/16 1 3/8 1 7/16	35	3 47/64 95	6 9/16 167	5 127	2 3/8 60	13/16 21	2 1/32 17	2 3/32 18	5 1/2 140	1.6890 42.9	0.6890 17.5	14	1/2	UC 207-20 207-21 207-22 207 207-23	PH 207	2.0	
UCPH 208-24 208-25 208	1 1/2 1 9/16	40	3 15/16 100	7 1/4 184	5 13/32 137	2 3/4 70	13/16 21	2 1/32 17	2 5/32 20	5 29/32 150	1.9370 49.2	0.7480 19.0	14	1/2	UC 208-24 208-25 208	PH 208	2.7	
UCPH 209-26 209-27 209-28 209	1 5/8 1 11/16 1 3/4	45	4 9/64 105	7 15/32 190	5 3/4 146	2 3/4 70	13/16 21	2 1/32 17	2 5/32 20	6 7/32 158	1.9370 49.2	0.7480 19.0	14	1/2	UC 209-26 209-27 209-28 209	PH 209	3.0	
UCPH 210-30 210-31 210 210-32	1 7/8 1 15/16 2	50	4 21/64 110	8 1/8 206	6 1/4 159	2 3/4 70	7/8 22	2 5/32 20	2 5/32 20	6 7/32 158	2.0315 51.6	0.7480 19.0	16	5/8	UC 210-30 210-31 210 210-32	PH 210	3.5	



L TYPE SEAL.



L TYPE SEAL.
SBPP2(SET SCREW LOCKING)
SAPP2(WITH ECCENTRIC LOCKING COLLAR),



SALF2 SBLF2

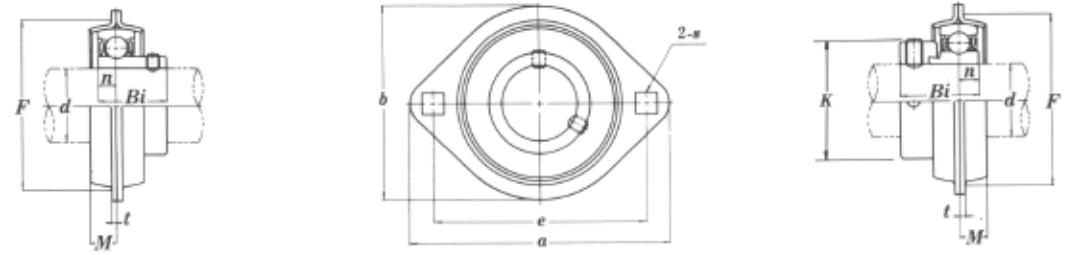
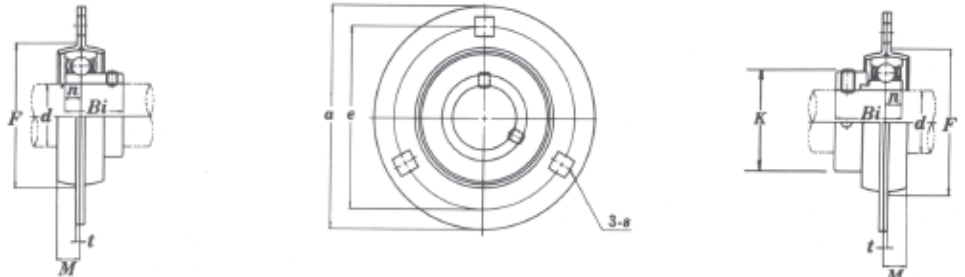
Unit No.	Shaft Dia. d (In.) (mm)	Dimensions (In.) (mm)											Bolt Used (in.) Z Bi K	S A L P Bearing No.	Weight (Kg)	S B L P Bearing No.	Weight (Kg)	Housing No.
		a	e	i	g	l	s	b	n	z	bi	k						
SALF SBLF 201 201-8 202 202-10 203	12													SA 201		SB 201		LF 203
	1/2	15	3 ³ / ₁₆	2 ¹ / ₂	3 ³ / ₈	3 ³ / ₈	2 ³ / ₃₂	5 ¹ / ₁₆	2 ¹ / ₁₆	0.2362	1/4	11/4	1.1260	1.1260	201-8	201-8	0.25	
	5/8	17	81	63.5	9.5	9.5	18.0	8	52	6.0		32.0	28.6	28.6	202	202-10		
															202-10	203		
SALF SBLF 204-12 204	3/4	20	3 ¹ / ₃₂	2 ³ / ₁₆	7 ¹ / ₁₆	7 ¹ / ₁₆	2 ⁵ / ₆₄	2 ⁵ / ₆₄	2 ¹ / ₃₂	0.2756	5/16	1 ³ / ₈	1.2204	1.2598	SA 204-12	SB 204-12	0.33	LF 204
			90	71.5	11	11	20.0	10	61	7.0		35	31	32	204	204		
SALF SBLF 205-15 205 205-16	7/8	25	3 ³ / ₄	2 ⁶ / ₆₄	7 ¹ / ₁₆	7 ¹ / ₁₆	2 ⁵ / ₆₄	2 ⁵ / ₆₄	2 ¹ / ₃₂	0.2953	5/16	1 ¹ / ₃₂	1.2204	1.5000	SA 205-14	SB 205-14	0.42	LF 205
			95	76.0	11	11	20.0	10	61	7.5		34.5	31	38.1	205	205-16	0.38	
SALF SBLF 206-18 206	1 1/8	30	4 ⁷ / ₁₆	3 ⁹ / ₁₆	1 ⁵ / ₃₂	1 ⁵ / ₃₂	7 ¹ / ₈	1 ⁵ / ₃₂	3	0.3150	3/8	1 ⁹ / ₁₆	1.4055	1.7480	SA 206-18	SB 206-18	0.60	LF 206
			113	90.5	12	12	22.5	12	76	8.0		39.7	33.7	44.4	206	206-19	0.57	
SALF SBLF 206-19 206-20	1 3/16													SA 206-18	SB 206-18		LF 206	
														206	206-19			
SALF SBLF 207-20 207-22 207 207-23	1 1/4													SA 207-21	SB 207-20		LF 207	
	1 3/8	35	4 ³ / ₁₆	3 ⁹ / ₁₆	1/2	1/2	1 ⁵ / ₃₂	1 ⁵ / ₃₂	3 ¹ / ₂	0.3346	3/8	1 ¹ / ₁₆	1.5315	2.1890	207-22	207-22	0.85	
			122	100.0	13	13	24.0	12	89	8.5		43.4	38.9	55.6	207-22	207-22		
														207-22	207-23			

SAPP2 SBPP2

Unit No.	Shaft Dia. d (In.) (mm)	Dimensions (In.) (mm)											Bolt Used (in.) Bi K	S A L P Bearing No.	Weight (Kg)	S B L P Bearing No.	Weight (Kg)	Housing No.	
		h	a	e	b	s	g	w	n	bi	k								
SAPP SBPP 201 201-8 202 202-10 203	12													SA 201		SB 201		PP 203	
	1/2	15	7/8	3 ³ / ₈	2 ⁴ / ₆₄	6 ³ / ₆₄	3/8	3.2	1 ² / ₃₂	0.2362	5/16	1.1260	1.1260	201-8	201-8	0.19	0.8661		202
	5/8	17	22.2	86	68	25	9.5	3.2	43.8	6.0		28.6	28.6	202	202-10				
														202-10	203				
SAPP SBPP 204-12 204	3/4	20	1	3 ² / ₃₂	2 ⁶ / ₆₄	1 ¹ / ₄	3/8	3.2	1 ⁶ / ₆₄	0.2756	5/16	1.2204	1.2598	SA 204-12	SB 204-12	0.23	0.9843	204	PP 204
			25.4	98	76	32	9.5	3.2	50.5	7.0		31	32	204	204				
SAPP SBPP 205-15 205 205-16	7/8	25	1 1/8	4 1/4	3 ² / ₆₄	1 1/4	2 ⁹ / ₆₄	4.0	2 ¹ / ₆₄	0.2953	3/8	1.2204	1.5000	SA 205-14	SB 205-14	0.32	0.9843	205	PP 205
			28.6	108	86	32	11.5	4.0	55.6	7.5		31	38.1	205	205-16	0.38			
SAPP SBPP 206-18 206	1 1/8	30	1 ⁵ / ₁₆	4 ² / ₃₂	3 ⁴ / ₆₄	1 1/2	2 ⁹ / ₆₄	4.0	2 ³ / ₆₄	0.3150	3/8	1.4055	1.7480	SA 206-18	SB 206-18	0.50	1.1811	206	PP 206
			33.3	118	95	38	11.5	4.0	66.3	8.0		33.7	44.4	206	206-19	0.47			
SAPP SBPP 206-19 206-20	1 3/16													SA 206-18	SB 206-18		LF 206		
														206	206-19				
														206-19	206-20				
														206-19	206-20				
SAPP SBPP 207-20 207-22 207 207-23	1 1/4													SA 207-21	SB 207-20		LF 207		
	1 3/8	35	1 ⁹ / ₁₆	5 ⁵ / ₆₄	4 ⁵ / ₃₂	1 ² / ₃₂	2 ⁹ / ₆₄	4.0	3 ¹ / ₈	0.3346	3/8	1.5315	2.1890	207-22	207-22	0.71	2.2598	207	
	7/16		39.7	129	106	42	11.5	4.0	78	8.5		38.9	55.6	207-22	207-22				
														207-22	207-23				



L TYPE SEAL

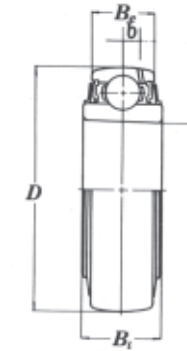
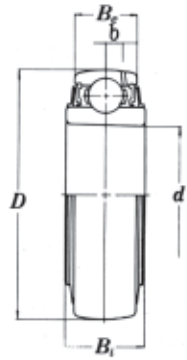


SAPF2 SBPF2

Unit No.	Shaft Dia. d (In.) (mm)	Dimensions (In.) (mm)										Bolt Used		SAPF Bearing		SBPF Bearing		Weight (Kg)	Housing (No.)		
		a	e	M	t	s	n	F (min)	(in.)	Bi	K	No.	(Kg)	Bi	No.	(Kg)	(No.)				
SAPF SBPF 201	12																				
	1/2	15	3 3/16	2 1/2	9/32		9/32	0.2362	1.9291	1/4	1.1260	1.1260	SA 201-201-8		0.8661	SB 201-201-8		0.27	PF 203		
	202	15	81	63.5	7.0	2	7.0	6.0	49		28.6	28.6	202	0.30	22.0	202	0.27	PF 203			
SAPF SBPF 202-10 203	5/8	17																			
	5/8	17	81	63.5	7.0	2	7.0	6.0	49		28.6	28.6	202-10 203		22.0	202-10 203		0.27	PF 203		
SAPF SBPF 204-12 204	3/4	20	3 19/32	2 3/16	5/16		11/32	0.2756	2.1654	5/16	1.2204	1.2598	SA 204-12 204	0.33	0.9843	SB 204-12 204	0.23	PF 204			
	3/4	20	91	71.5	8	2	8.7	7.0	55		31	32	204	0.33	25.0	204	0.23	PF 204			
SAPF SBPF 205-15 205 205-16	7/8	25	3 25/32	2 63/64	23/64		11/32	0.2953	2.3622	5/16	1.2204	1.5000	SA 205-14 205 205-16	0.42	0.9843	SB 205-14 205 205-16	0.38	PF 205			
	7/8	25	96	76	9	2	8.7	7.5	60		31	38.1	205 205-16	0.42	27.0	205 205-16	0.38	PF 205			
SAPF SBPF 206-18 206	1 1/8	30	4 7/16	3 9/16	25/64		13/32	0.3150	2.7953	3/8	1.4055	1.7480	SA 206-18 206	0.65	1.1811	SB 206-18 206	0.62	PF 206			
	1 1/8	30	113	90.5	10	2.6	10.5	8.0	71		33.7	44.4	206-19 206-20	0.65	30.0	206-19 206-20	0.62	PF 206			
SAPF SBPF 207-20 207-22 207 207-23	1 1/4	35	4 27/32	3 15/16	13/32		13/32	0.3346	3.190	3/8	1.5315	2.1890	SA 207-20 207-22 207-22 207-23	0.90	2.2598	SB 207-20 207-22 207 207-23	0.82	PF 207			
	1 1/4	35	123	100	10.5	2.6	10.5	8.5	81		38.9	55.6	207-22 207-22 207-23	0.90	32.0	207-22 207 207-23	0.82	PF 207			
	1 1/4	35	123	100	10.5	2.6	10.5	8.5	81		38.9	55.6	207-22 207-22 207-23	0.90	32.0	207-22 207 207-23	0.82	PF 207			

SAPFL2 SBPFL2

Unit No.	Shaft Dia. d (In.) (mm)	Dimensions (In.) (mm)										Bolt Used		SAPF Bearing		SBPF Bearing		Weight (Kg)	Housing (No.)		
		a	e	M	b	t	s	n	F (min)	(in.)	Bi	No.	(Kg)	Bi	No.	(Kg)	(No.)				
SAPFL SBPFL 201-8 202	12																				
	1/2	15	3 3/16	2 1/2	9/32		25/16	2.0	9/22	0.2362	1.9291	1/4	1.1260	1.1260	SA 201-201-8		0.8661	SB 201-201-8		0.19	PFL203
	1/2	15	81	63.5	7.0	59	2.0	7.1	6.0	49	6	28.6	28.6	202	0.22	0.8661	202	0.19	PFL203		
SAPFL SBPFL 203	5/8	17																			
	5/8	17	81	63.5	7.0	59	2.0	7.1	6.0	49	6	28.6	28.6	202-10 203		22	202-10 203		0.19	PFL203	
SAPFL SBPFL 204-12 204	3/4	20	3 19/32	2 19/16	5/16		25/8	2.0	11/32	0.2756	2.1654	5/16	1.2204	1.2598	SA 204-12 204	0.24	0.9843	SB 204-12 204	0.24	PFL204	
	3/4	20	91	71.5	8	67	2.0	8.7	7.0	55	6	31	32	204	0.24	25	204	0.24	PFL204		
SAPFL SBPFL 205-15 205 205-16	7/8	25	3 25/32	2 63/64	23/64		225/32	2.0	11/32	0.2953	2.3622	5/16	1.2204	1.5000	SA 205-14 205 205-16	0.32	1.0630	SB 205-14 205 205-16	0.28	PFL205	
	7/8	25	96	76.0	9	7.1	2.0	8.7	7.5	60	8	31	38.1	205 205-16	0.32	27	205 205-16	0.28	PFL205		
SAPFL SBPFL 206-18 206	1 1/8	30	4 7/16	3 9/16	25/64		35/16	2.6	7/16	0.3150	2.7953	3/8	1.4055	1.7480	SA 206-18 206	0.41	1.1811	SB 206-18 206	0.38	PFL206	
	1 1/8	30	113	90.5	10	84	2.6	11	8.0	71	8	35.7	44.5	206-19 206-20	0.41	30	206-19 206-20	0.38	PFL206		
SAPFL SBPFL 207-20 207-22 207 207-23	1 1/4	35	4 27/32	3 15/16	13/32		3 11/16	2.6	13/32	0.3346	3.1900	3/8	1.5315	2.1890	SA 207-20 207-22 207 207-23	0.70	1.2598	SB 207-20 207-22 207 207-23	0.62	PFL207	
	1 1/4	35	123	100	10.5	94	2.6	10.5	8.5	81	10	38.9	55.6	207-22 207 207-23	0.70	32.0	207-22 207 207-23	0.62	PFL207		
	1 1/4	35	123	100	10.5	94	2.6	10.5	8.5	81	10	38.9	55.6	207-22 207 207-23	0.70	32.0	207-22 207 207-23	0.62	PFL207		

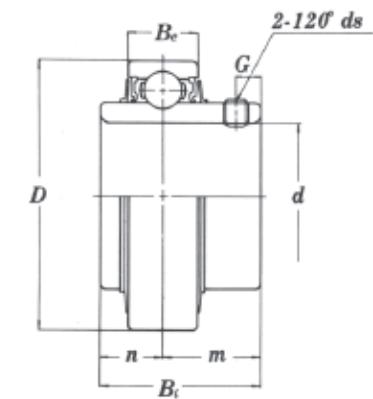
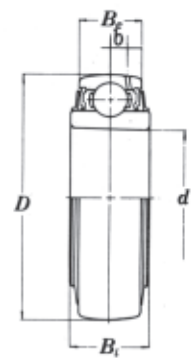


UK2

Bearing No.	Bore Dia. of Bearing d (in.) (mm)	Dimensions (in.) (mm)			Basic Load Rating	Basic Static Road Rating	Weight (kg)
		D	Bi	Be			
UK 205	0.9843 25	2.0472 52	0.8661 22	0.6693 17	1400	790	0.16
UK 206	1.1811 30	2.4409 62	0.9449 24	0.7480 19	1950	1130	0.25
UK 207	1.3780 35	2.8346 72	1.0236 26	0.7874 20	2570	1540	0.37
UK 208	1.5748 40	3.1496 80	1.0630 27	0.8268 21	2910	1790	0.47
UK 209	1.7717 45	3.3465 85	1.1024 28	0.8661 22	3200	2040	0.52
UK 210	1.9685 50	3.5433 90	1.1811 30	0.9055 23	3510	2320	0.59
UK 211	2.1654 55	3.9370 100	1.2598 32	0.9843 25	4300	2940	0.80
UK 212	2.3622 60	4.3307 110	1.3386 34	1.0630 27	5240	3610	1.02
UK 213	2.5591 65	4.7244 120	1.4567 37	1.1417 29	5720	4000	1.34
UK 215	2.9528 75	5.1181 130	1.4961 38	1.1811 30	6740	4820	1.50
UK 216	3.1496 80	5.5118 140	1.5748 40	1.2598 32	7260	5300	1.96
UK 217	3.3465 85	5.9055 150	1.6929 43	1.3386 34	8390	6180	2.42
UK 218	3.5433 90	6.2992 160	1.8110 46	1.4173 36	9600	7140	2.90

UKX

Bearing NO.	Bore Dia. of Bearing d (in.) (mm)	Dimensions (in.) (mm)			Basic Load Rating	Basic Static Road Rating	Weight (kg)
		D	Bi	Be			
UKX 05	0.9843 25	2.4409 62	0.9449 24	0.748 19	1950	1130	0.27
UKX 06	1.1811 30	2.8346 72	1.0236 26	0.7824 20	2570	1540	0.43
UKX 07	1.3780 35	3.1496 80	1.0630 27	0.8268 21	2910	1790	0.53
UKX 08	1.5748 40	3.3465 85	1.1024 28	0.866 22	3200	2040	0.58
UKX 09	1.7717 45	3.5433 90	1.1811 30	0.905 23	3510	2320	0.67
UKX 10	1.9685 50	3.9370 100	1.2598 32	0.9843 25	4330	2940	0.89
UKX 11	2.1654 55	4.3307 110	1.3386 34	1.0630 27	5240	3610	1.15
UKX 12	2.3622 60	4.7244 120	1.4567 37	1.1417 29	5720	4000	1.45
UKX 13	2.5591 65	4.9213 125	1.5748 40	1.1741 29	6220	4400	1.62
UKX 15	2.9528 75	5.5118 140	1.5748 40	1.2598 32	7260	5300	2.10
UKX 16	3.1496 80	5.9055 150	1.6929 43	1.3386 34	8390	6180	2.64
UKX 17	3.3465 85	6.2992 160	1.8110 46	1.4173 36	9600	7140	3.25
UKX 18	3.5433 90	6.6929 170	1.9685 50	1.5748 40	10900	8170	3.80
UKX 20	3.9370 100	7.4803 160	2.1260 54	1.6929 43	13300	10500	5.26

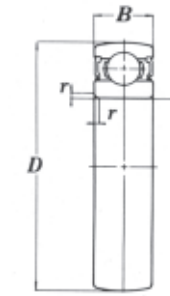
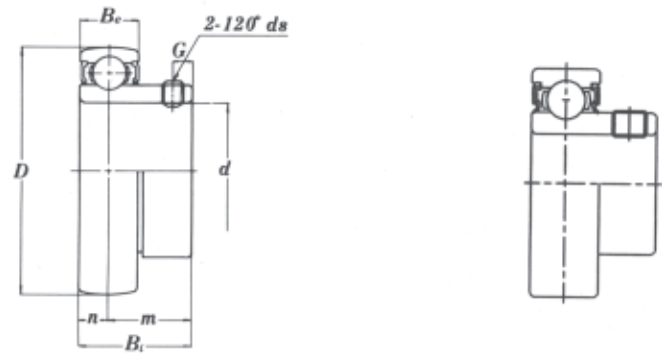


UK3

Unit No.	Shaft Dia. d (In.) (mm)	Dimensions (In.) (mm)			Basic Load Rating (kg)	Basic Static Road Rating (kg)	Weight (Kg)
		D	Be	Bi			
UK 305	0.9843 25	2.4409 62	0.8661 22	1.0630 27	2100	1090	0.40
UK 306	1.1811 30	2.8346 72	0.9449 24	1.1811 30	2660	1500	0.47
UK 307	1.3780 35	3.1496 80	1.0236 26	1.2992 33	3330	1920	0.60
UK 308	1.5748 40	3.5433 90	1.1024 28	1.3780 35	4070	2390	0.80
UK 309	1.7717 45	3.9370 100	1.1811 30	1.4961 38	4890	2950	1.08
UK 310	1.9685 50	4.3307 110	1.2598 32	1.5748 40	6200	3820	1.38
UK 311	2.1654 55	4.7244 120	1.3386 34	1.6929 43	7160	4480	1.78
UK 312	2.3622 60	5.1181 130	1.4173 36	1.8110 46	8180	5200	2.06
UK 313	2.5591 65	5.5118 140	1.4961 38	1.8898 48	9270	5980	2.71
UK 315	2.9528 75	6.2992 160	1.6535 42	2.1260 54	11300	7690	3.80
UK 316	3.1496 80	6.6929 170	1.7323 44	2.2441 57	12300	8640	4.39
UK 317	3.3465 85	7.0866 180	1.8110 46	2.3622 60	13300	9650	5.30
UK 318	3.5433 90	7.4803 190	1.8898 48	2.4803 63	14300	10700	6.20
UK 319	3.7402 95	7.8740 200	1.9685 50	2.5984 66	15300	11800	7.31
UK 320	3.9370 100	8.2677 210	2.0472 52	2.7165 70	16300	12900	8.42
UK 322	4.3307 110	9.4488 240	2.3622 60	3.1496 80	20500	17900	12.2
UK 324	4.7244 120	10.2362 260	2.5197 64	3.3858 86	20700	18500	16.1
UK 326	5.1181 130	11.0236 280	2.6772 68	3.6220 92	22900	21400	18.8
UK 328	5.5118 300	11.8110 300	2.8346 72	3.8583 98	25300	24600	23.9

UR2

Unit No.	Bore Dia. of Bearing d (In.) (mm)	Dimensions (In.) (mm)							Basic Load Rating (kg)	Basic Static Road Rating (kg)	Weight (Kg)	
		D	Bi	Be	n	m	G	ds				
UR 201	12											
UR 201-8	1/2	12	1.8504	1.2205	0.6299	0.5000	0.7205	0.1969	M6 x 0.75	1280	670	0.18
UR 202	15		47	31.0	16	12.7	18.3	5.0	1/4-28UNF			
UR 202-10	5/8	15										
UR 203	17											
UR 204-12	3/4	20	1.8504	1.2205	0.6299	0.5000	0.7205	0.1969	M6 x 0.75	1280	670	0.16
UR 204	20		47	31.0	16	12.7	18.3	5.0	1/4-28UNF			
UR 205-14	7/8	25	2.0472	1.3425	0.6693	0.5630	0.7795	0.2165	M6 x 0.75	1400	790	0.21
UR 205-15	15/16	25	52	34.1	17	14.3	19.8	5.5	1/4-28UNF			
UR 205-16	1	25										
UR 206-18	1 1/8	30	2.4409	1.5000	0.7480	0.6260	0.8740	0.2362	M6 x 0.75	1950	1130	0.33
UR 206	30		62	38.1	19	15.9	22.2	6.0	1/4-28UNF			
UR 206-19	1 3/16	30										
UR 207-20	1 1/4	35	2.8346	1.6890	0.7874	0.6890	1.0000	0.2559	M8 x 1.0	2570	1540	0.49
UR 207-22	1 3/8	35	72	42.9	20	17.5	25.4	6.5	5/16-24UNF			
UR 207	35											
UR 207-23	1 7/16	35										
UR 208-24	1 1/2	40	3.1496	1.9370	0.8268	0.7480	1.1890	0.3150	M8 x 1.0	2910	1790	0.65
UR 208	40		80	49.2	21	19.0	30.2	8.0	5/16-24UNF			
UR 209-26	1 5/8	45	3.3465	1.9370	0.8661	0.7480	1.1890	0.3150	M8 x 1.0	3200	2040	0.69
UR 209-27	1 11/16	45	85	49.2	22	19.0	30.2	8.0	5/16-24UNF			
UR 209-28	1 3/4	45										
UR 209	45											
UR 210-30	1 7/8	50	3.5433	2.0315	0.9055	0.7480	1.2835	0.3543	M10 x 1.25	3510	2320	0.81
UR 210-31	1 15/16	50	90	51.6	23	19.0	32.6	9.0	3/8-24UNF			
UR 210	50											
UR 210-32	2	50										
UR 211-32	2	55	3.9370	2.1890	0.9843	0.8740	1.3150	0.3543	M10 x 1.25	4330	2940	1.12
UR 211-34	2 1/8	55	100	55.6	25	22.2	33.4	9.0	3/8-24UNF			
UR 211	55											
UR 211-35	2 3/16	55										
UR 212-36	2 1/4	60	4.3307	2.5630	1.0630	1.0000	1.5630	0.4134	M10 x 1.25	5240	3610	1.52
UR 212	60		110	65.1	27	25.4	39.7	10.5	3/8-24UNF			
UR 212-38	2 3/8	60										
UR 212-39	2 1/16	60										
UR 213-40	2 1/2	65	4.7244	2.5630	1.1417	1.0000	1.5630	0.4724	M12 x 1.5	5720	4000	1.85
UR 213	65		120	65.1	29	25.4	39.7	12.0	7/16-20UNF			
UR 214-44	2 3/4	70	4.9213	2.9370	1.1417	1.1890	1.7480	0.4724	M12 x 1.5	6220	4400	2.05
UR 214	70		125	74.6	29	30.2	44.4	12.0	7/16-20UNF			
UR 215	3	75	5.1181	3.0630	1.1811	1.3110	1.7520	1.4724	M12 x 1.5	6740	4820	2.12
UR 215-48	3	75	130	77.8	30	33.3	44.5	12.0	7/16-20UNF			



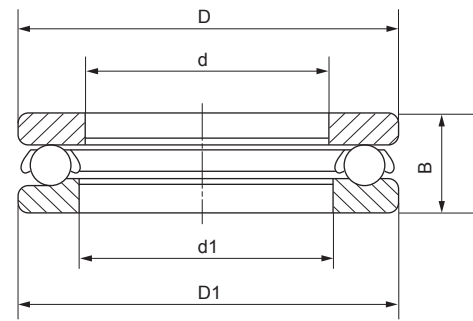
SB2 CSB2

Bearing No.	Bore Dia. of Bearing d (in.) (mm)	Be	Dimensions (in.) (mm)						Basic Load Rating	Basic Static Road Rating	Weight (kg)	
			D	Bi	n	m	G	ds				
SB 201 CSB 201-8	1/2	12	0.4724	1.5748	0.8661	0.2362	0.6299	0.1890	M6 X 0.75	960	480	0.10
202 202-10	5/8	15	0.4724	1.5748	0.8661	0.2362	0.6299	0.1890	1/4-28UNF	960	480	0.10
203	5/8	17	0.4724	1.5748	0.8661	0.2362	0.6299	0.1890	M6 X 0.75	960	480	0.10
SB 204-12 CSB 204	3/4	20	0.5512	1.8504	0.9843	0.2756	0.7087	0.1890	M6 X 0.75	1280	670	0.15
205-14 CSB 205	7/8	25	0.5906	2.0472	1.0630	0.2953	0.7677	0.2165	M6 X 0.75	1400	790	0.16
205-16	1	25	0.5906	2.0472	1.0630	0.2953	0.7677	0.2165	1/4-28UNF	1400	790	0.16
SB 206-18 CSB 206	1 1/8	30	0.6299	2.4409	1.1811	0.3150	0.8661	0.2362	M6 X 0.75	1950	1130	0.27
206-19	1 3/16	30	0.6299	2.4409	1.1811	0.3150	0.8661	0.2362	1/4-28UNF	1950	1130	0.27
SB 207-20 CSB 207-22	1 1/4	35	0.6693	2.8346	1.2598	0.3346	0.9252	0.2560	M8 X 1.0	2570	1540	0.35
207	1 3/8	35	0.6693	2.8346	1.2598	0.3346	0.9252	0.2560	5/16-24UNF	2570	1540	0.35
207-23	1 7/16	35	0.6693	2.8346	1.2598	0.3346	0.9252	0.2560	M8 X 1.0	2570	1540	0.35
SB 208-24 CSB 208	1 1/2	40	0.7087	3.1496	1.3386	0.3543	0.9843	0.3150	M8 X 1.0	2910	1790	0.43
209-26 CSB 209-27	1 5/8	45	0.7480	3.3465	1.6220	0.3740	1.2480	0.3150	M8 X 1.0	3200	2040	0.56
209-28	1 11/16	45	0.7480	3.3465	1.6220	0.3740	1.2480	0.3150	5/16-24UNF	3200	2040	0.56
209	1 3/4	45	0.7480	3.3465	1.6220	0.3740	1.2480	0.3150	M8 X 1.0	3200	2040	0.56
SB 210-30 210-31	1 7/8	50	0.7874	3.5433	1.7126	0.3937	1.3189	0.3543	M10 X 1.25	3510	2320	0.71
210	1 15/16	50	0.7874	3.5433	1.7126	0.3937	1.3189	0.3543	3/8-24UNF	3510	2320	0.71
210-32	2	50	0.7874	3.5433	1.7126	0.3937	1.3189	0.3543	M10 X 1.25	3510	2320	0.71
SB 211-32 211	2	55	0.8268	3.9370	1.7835	0.4134	1.3700	0.3543	M10 X 1.25	4330	2940	0.96
211-34	2 1/8	55	0.8268	3.9370	1.7835	0.4134	1.3700	0.3543	3/8-24UNF	4330	2940	0.96
211-35	2 9/16	55	0.8268	3.9370	1.7835	0.4134	1.3700	0.3543	M10 X 1.25	4330	2940	0.96
SB 212-36 212	2 1/4	60	0.8661	4.3307	2.1142	0.4331	1.6811	0.4134	M10 X 1.25	5240	3610	1.20
212-38	2 3/8	60	0.8661	4.3307	2.1142	0.4331	1.6811	0.4134	3/8-24UNF	5240	3610	1.20
212-39	2 7/16	60	0.8661	4.3307	2.1142	0.4331	1.6811	0.4134	M10 X 1.25	5240	3610	1.20

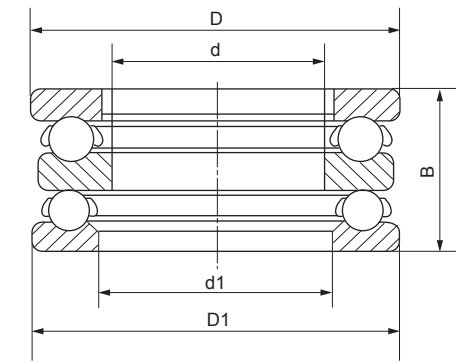
SC2

Bearing No.	Bore Dia. of Bearing d (in.) (mm)	Dimensions (in.) (mm)		Basic Load Rating	Basic Static Road Rating	Weight (kg)
		B	D			
SC 200	0.3937 10	0.3543 9	1.1811 30	510	240	0.030
SC 201	0.4724 12	0.3937 10	1.2598 32	690	300	0.035
SC 202	0.5906 15	0.4331 11	1.3780 35	760	370	0.040
SC 203	0.6693 17	0.4724 12	1.5748 40	960	480	0.07
SC 204	0.7874 20	0.5512 14	1.8504 47	1280	670	0.11
SC 205	0.9843 25	0.5906 15	2.0472 52	1400	790	0.18
SC 206	1.1811 30	0.6299 16	2.4409 62	1950	1130	0.20
SC 207	1.3780 35	0.6693 17	2.8346 72	2570	1540	0.30
SC 208	1.5748 40	0.7087 18	3.1496 80	2910	1790	0.36
SC 209	1.7717 45	0.7480 19	3.3465 85	3200	2040	0.42
SC 210	1.9685 50	0.7874 20	3.5433 90	3510	2320	0.46
SC 211	2.1654 55	0.8268 21	3.9370 100	4330	2940	0.61
SC 212	2.3622 60	0.8661 22	4.3307 110	5240	3610	0.77





51000

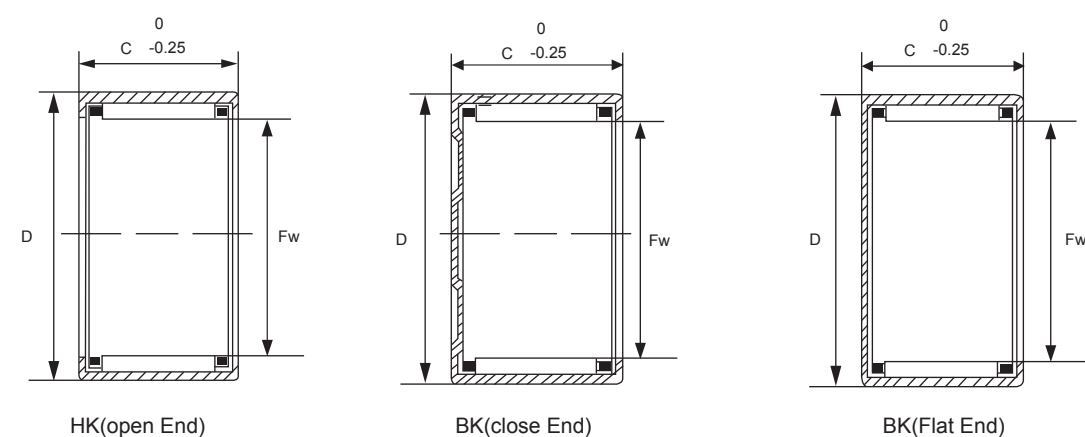
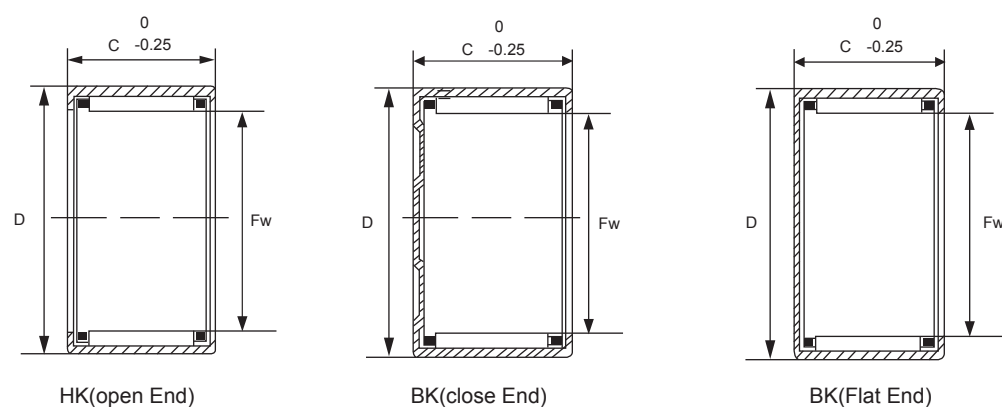


52000

Thrust Ball Bearings

Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)
51100	10X24X9	0.02	51200	10X26X11	0.03
51101	12X26X9	0.02	51201	12X28X11	0.03
51102	15X28X9	0.02	51202	15X32X12	0.05
51103	17X30X9	0.03	51203	17X35X12	0.05
51104	20X35X10	0.04	51204	20X40X14	0.08
51105	25X42X11	0.06	51205	25X47X15	0.11
51106	30X47X11	0.06	51206	30X52X16	0.13
51107	35X52X12	0.08	51207	35X62X18	0.22
51108	40X60X13	0.12	51208	40X68X19	0.28
51109	45X65X14	0.14	51209	45X73X20	0.30
51110	50X70X14	0.16	51210	50X78X22	0.37
51111	55X78X16	0.23	51211	55X90X25	0.59
51112	60X85X17	0.20	51212	60X95X26	0.65
51113	65X90X18	0.33	51213	65X100X27	0.78
51114	70X95X18	0.35	51214	70X100X27	0.79
51115	75X100X19	0.40	51215	75X105X27	0.83
51116	80X105X19	0.42	51216	80X115X28	0.91
51117	85X110X19	0.44	51217	85X125X31	1.20
51118	90X120X22	0.67	51218	90X135X35	1.70
51120	100X135X25	0.97	51220	100X150X38	2.20
51122	110X145X25	1.05	51222	110X160X38	2.40
51124	120X155X25	1.15	51224	120X170X39	2.65
51126	130X170X30	1.85	51226	130X190X45	4.00
51128	140X180X31	2.05	51228	140X200X46	4.35
51130	150X190X31	2.20	51230	150X215X50	6.10
51132	160X200X31	2.35	51232	160X225X51	6.55
51134	170X215X34	3.30			

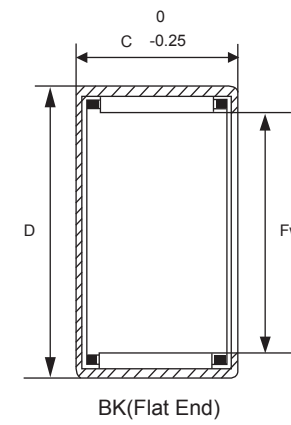
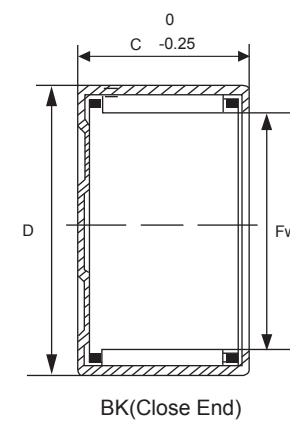
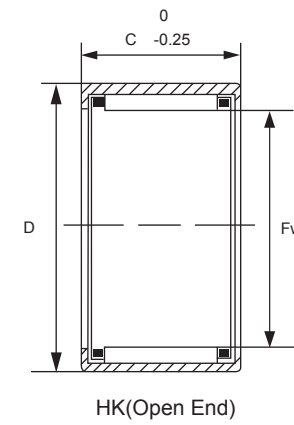
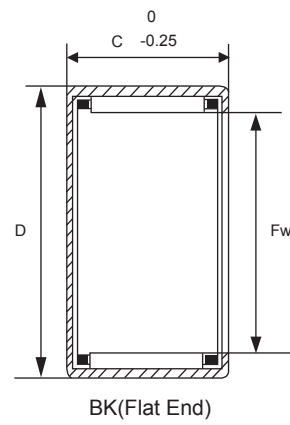
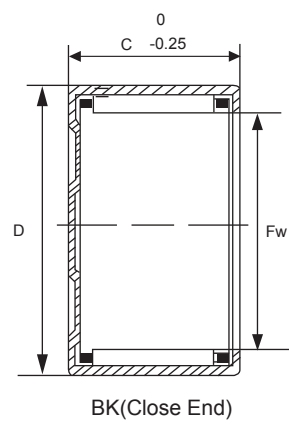
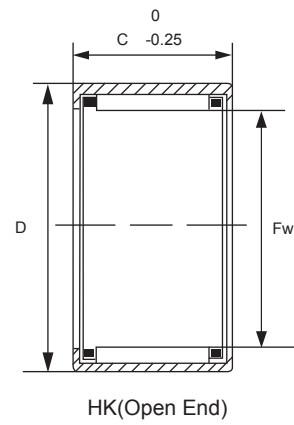
Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)
						52202	10X32X22	0.08
						52204	15X40X26	0.15
51305	25X52X18	0.17	51405	25X60X24	0.34	52205	20X47X28	0.22
51306	30X60X21	0.26	51406	30X70X28	0.52	52206	25X52X29	0.25
51307	35X68X24	0.38	51407	35X80X32	0.75	52207	30X62X34	0.41
51308	40X78X26	0.53	51408	40X90X36	1.10	52208	30X68X36	0.55
51309	45X85X28	0.66	51409	45X100X39	1.40	52209	35X73X37	0.60
51310	50X95X31	0.94	51410	50X110X43	2.00	52210	40X78X39	0.71
51311	55X105X35	1.30	51411	55X120X48	2.55	52211	45X90X45	1.10
51312	60X110X35	1.35	51412	60X130X51	3.10	52212	50X95X46	1.20
51313	65X115X36	1.50	51413	65X140X56	4.00	52213	55X100X47	1.35
51314	70X125X40	2.00	51414	70X150X60	5.00	52215	60X110X47	1.55
51315	75X135X44	2.60	51415	75X160X65	6.75	52216	60X115X48	1.70
51316	80X140X44	2.70	51416	80X170X68	7.95			
51317	85X150X49	3.55	51417	85X180X72	9.45			
51318	90X155X50	3.80	51418	90X190X77	11.00			
51320	100X170X55	4.95	51420	100X210X85	15.00			
51322	110X190X63	7.85						
51324	120X210X70	11.00						
51326	130X225X75	13.00						
51328	140X240X80	15.50						
51330	150X250X80	16.50						



Drawn Cup Needle Roller Bearings

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm	
	Current	Original Code		Fw	D	C	Cr	Dynamic Cor		Static
4	HK0408TN	37491/4	1.6	4	8	8	1540	1070	40000	
	BK0408TN	5941/4	1.8	4	8	8	1540	1070	40000	
5	HK05x08.5x0.7			5	8.5	7				
	HK05x09x08			5	9	8	2200	1790	36000	
	HK0509	47941/5	2	5	9	9	2200	1790	36000	
	BK0509	45941/5	2.1	5	9	9	2200	1790	36000	
6	HK0607	27941/6	1.8	6	10	7	1600	1400	30000	
	HK0608	37941/6	2.1	6	10	8	1830	1550	32000	
	BK0608	35941/6	2.2	6	10	8	1830	1550	32000	
	HK0609	47941/6	2.2	6	10	9	2650	2400	3000	
	BK0609	45941/6	2.6	6	10	9	2650	2400	3000	
	HK0611		2.3	6	10	11	1700	1500	29000	
	HK06x12x08	3941/6	2.5	6	12	8	2230	2010	33000	
7	HK0708			7	11	8	2800	2150	27000	
	HK0709	47941/9	2.3	7	11	9	2800	2150	27000	
	BK0709	45941/9	2.9	7	11	9	2800	2150	27000	
	HK07x12x08		2.2	7	12	8	3300	3220	37000	
8	HK07x12x09		2.4	7	12	9	3400	3150	37000	
	HK0808	37941/8	2.7	8	12	8	2550	2400	21000	
	BK0808	35941/8	3	8	12	8	2550	2400	21000	
	HK0810	57941/8	3	8	12	10	3700	3450	21000	
	BK0810	88941/8	3.4	8	12	10	3700	3450	21000	
	HK08x14x10	27942/8	5.35	8	14	10	3800	3950	25000	
	BK08x14x10	35942/8	5.8	8	14	10	3800	3950	25000	
9	HK08x14x12	37942/8	6.6	8	14	12	4100	4320	25000	
	HK0908	37941/9	3	9	13	8	3650	4050	25000	
	BK0908	35941/9	3.4	9	13	8	3650	4050	25000	
	HK0910	57941/9	4	9	13	10	4050	4250	25000	
	BK0910	55941/9	4.3	9	13	10	4050	4250	25000	
	HK0911		4.1	9	13	11	4300	4700	25000	
	HK0912	67941/9	4.6	9	13	12	5000	6000	25000	
	BK0912	65941/9	4.9	9	13	12	5000	6000	25000	
HK09x15x10	27942/9	5.6	9	15	10	5300	6300	25000		

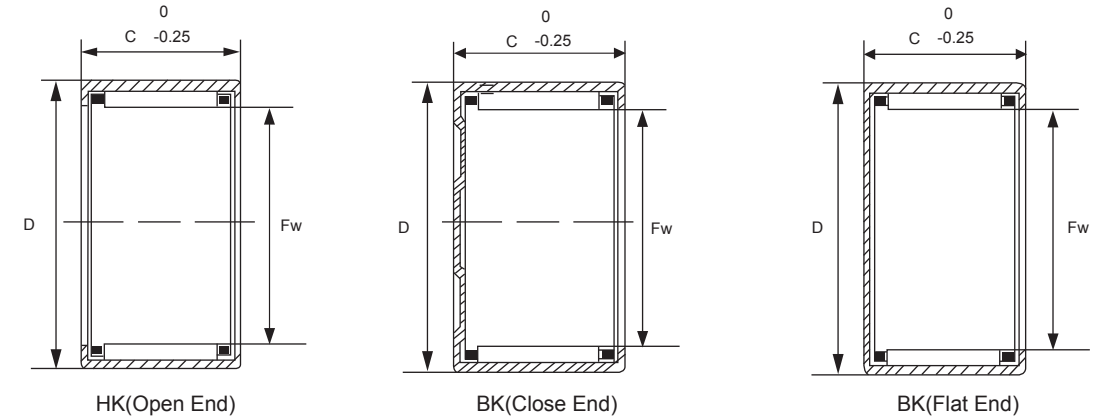
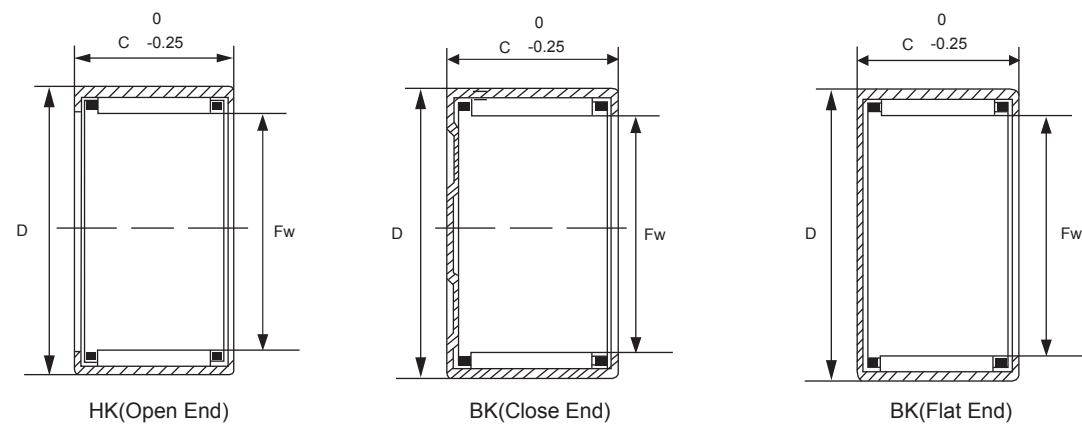
Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm	
	Current	Original Code		Fw	D	C	Cr	Dynamic Cor		Static
10	HK10x13x08		3.5	10	13	8	4100	4800	20000	
	HK1010	57941/10	4.1	10	14	10	3900	4800	19000	
	BK1010	55941/10	4.3	10	14	12	3900	4800	19000	
	HK1012	67941/10	4.8	10	14	12	5000	6300	19000	
	BK1012	65941/10	5	10	14	12	5000	6300	19000	
	HK1015		6	10	14	15	6700	7800	19000	
	BK1015		6.2	10	14	15	6700	7800	19000	
	HK10x15x15	644900	6.5	10	15	15	6800	8800	18000	
	HK10x16x10		6.5	10	16	10	6800	8800	18000	
	BK10x16x10		6.8	10	16	10	6800	8800	18000	
	HK10x16x12	DB1012	7.5	10	16	12	6800	8800	18000	
	HK10x16x15	7942/10	11	10	16	15	6800	8800	19000	
12	HK10x17x15		11.5	10	17	15	7200	8000	19000	
	Hk10x18x12		8.5	10	18	12	7200	8000	19000	
	HK1208	37941/12	3.3	12	16	8	7200	8000	19000	
	HK1210	57941/12	4.6	12	16	10	4150	5800	19000	
	BK1210	55941/12	5.2	12	16	10	4150	5800	19000	
	HK1212	67941/12	5.6	12	16	12	3800	5100	15000	
	BK1212	65941/12	6.2	12	16	12	3800	5100	15000	
	HK12x17x12	7941/12	7.5	12	17	12	5100	7000	15000	
	HK12x17x15	7942/12	9.5	12	17	15	5100	7000	15000	
	HK12x17x18	7943/12	11	12	17	18	5100	7000	15000	
	HK12x18x12	37942/12	9.1	12	18	12	5500	6300	17000	
	BK12x18x12	35942/12K	10.3	12	18	12	5500	6300	17000	
13	HK12x18x14	67942/12	10.6	12	18	14	6500	6300	15000	
	HK12x19x12		10	12	19	12	6800	7400	15000	
	HK1311		8.5	13	19	11	6300	6300	14000	
	HK1312		8.9	13	19	12	6200	7100	17000	
	BK1312		11.2	13	19	12	6200	7100	17000	
	HK13.5x19x12		13.5	13.5	19	12	6250	7590	16000	
	HK13.5x20x12	7941/13.5	10.8	13.5	20	12	6250	7590	16000	
	14	HK1410	27941/13.5	8.3	14	20	10	6700	7000	16000
BK1410		35941/14	12.1	14	20	10	6700	7000	16000	
HK1412		37941/14	10.5	14	20	12	6800	7500	16000	



Drawn Cup Needle Roller Bearings

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm	
	Current	Original Code		Fw	D	C	Cr	Dynamic Cor		Static
22	HK2216	57941/22	20.9	22	28	16	11400	18100	10010	
	BK2216	55941/22	24.3	22	28	16	11400	18100	10010	
	HK2220	77941/22	26.2	22	28	20	14500	25000	10010	
	BK2220	75941/22	29.9	22	28	20	14500	25000	10010	
	HK2230		32	22	28	30	17500	30400	9000	
	HK22x29x25		37	22	29	25	18100	31500	9000	
	HK22x29x30		43	22	29	30	19400	33100	9000	
	HK22x30x14	37941/22	21.9	22	30	14	19800	34000	9000	
24	HK24x30x7.5TN		10.6	24	30	7.5	5800	7200	10000	
25	HK2512	27941/25	20	25	32	12	10000	14200	9000	
	BK2512	25941/25	23.2	25	32	12	10000	14200	9000	
	HK2514	37941/25	21.9	25	32	14	13600	18700	9000	
	HK2516	7941/25	27.3	25	32	16	13600	20000	9000	
	BK2516	7941/25	31	25	32	16	13600	50000	9000	
	HK2518	57941/25	28.2	25	32	18	17500	25800	9000	
	HK2520	67941/25	34.1	25	32	20	17900	30000	9000	
	BK2520	65941/25	37.8	25	32	20	17900	30000	9000	
	HK2525	7943/25	40	25	32	25	22200	36700	9000	
	HK2526		44.8	25	32	26	22500	42000	9000	
	BK2526		49	25	32	26	22500	42000	9000	
	HK2538	87941/25	64.7	25	32	38	30000	58000	9000	
	BK2538	85941/25	69	25	32	38	30000	58000	9000	
	HK25x33x10		17	25	33	10	34800	69600	9000	
HK25x33x15		27.4	25	33	15	35700	70000	9000		
HK25x35x20	57942/25	44.9	25	35	20	36100	78650	9000		
28	HK2816	47941/28	30.1	28	35	16	15400	22500	8700	
	BK2816	45941/28	34.1	28	35	16	15400	22500	8700	
	HK2818	57941/258	31.7	28	35	18	18500	29300	8700	
	HK2820	67941/28	37.6	28	35	20	18900	32000	8700	
	BK2820	65941/28	43	28	35	20	18900	32000	8700	
30	HK3012	27941/30	24	30	37	12	10100	16200	8100	
	BK3012	25941/30	27.9	30	37	12	10100	16200	8100	
	HK3016	47941/30	32	30	37	16	15200	27000	8100	
	BK3016	45941/30	37.1	30	37	16	15200	27000	8100	

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm	
	Current	Original Code		Fw	D	C	Cr	Dynamic Cor		Static
30	HK3018	57491/30	33.6	30	37	18	19200	31500	8100	
	HK3020	6794/30	40.1	30	37	20	19700	33500	8100	
	BK3020	65941/30	46.5	30	37	20	19700	33500	8100	
	HK3026		52.9	30	37	26	24000	50000	8100	
	BK3026		59.4	30	37	26	24000	50000	8100	
	HK3038		76.1	30	37	38	32500	74000	8100	
	BK3038		82.5	30	37	38	32500	74000	8100	
	HK30X38X12	27941/30K	28	30	38	12	38100	80000	8100	
	HK30X38X16	7941/30	32.7	30	38	16	39000	82000	8100	
	HK30X38X24	7942/30	49	30	38	24	39910	88800	8100	
HK30X38X32	7943/30	69	30	38	32	38890	88700	8100		
32	HK32X38X11		17	32	38	11	19700	43200	7800	
	HK3224	77941/32	50.7	32	38	24	25500	52000	7300	
	HK3232	97941/32	66.4	32	39	32	22600	54300	7100	
	HK32X19X16			32	19	16				
	HK32X40X32	7943/32	72.7	32	40	32	27900	59890	7100	
	HK32X41X16			32	41	16				
35	HK3512	27941/35	27.7	35	42	12	12100	19300	7100	
	BK3512	25941/35	32.9	35	42	12	12100	19300	7100	
	HK3516	47941/35	36.9	35	42	16	15700	27500	7100	
	BK3516	45941/35	43.8	35	42	16	15700	27500	7100	
	HK3520	67941/35	46.1	35	42	20	20800	41000	7100	
	BK3520	65941/35	54.8	35	42	20	20800	41000	7100	
	HK35X43X16	7941/35	37	35	43	16	24200	47100	7100	
	HK35X43X25	7942/35	60.5	35	43	25	24440	48200	6200	
HK35X43X32	7943/35	80	35	43	32	24780	48880	6200		
HK35X45X12		31	35	45	12	24870	48880	6200		
36	HK36x42x12		23	36	42	12	15000	21000	6200	
38	HK38x48x30		102	38	48	30	16100	24100	6000	
40	HK4012	27941/40	31.1	40	47	12	14000	24300	6300	
	BK4012	25941/40	38.2	40	47	12	14000	24300	6300	



Drawn Cup Needle Roller Bearings

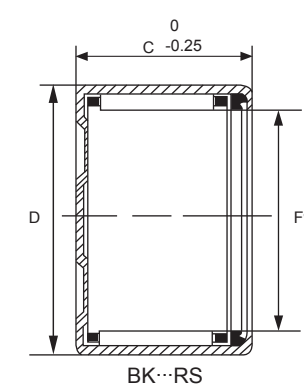
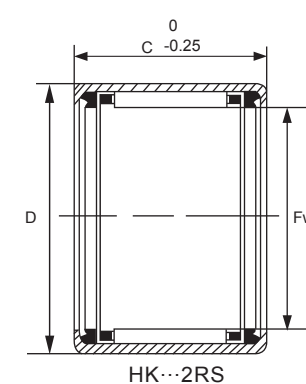
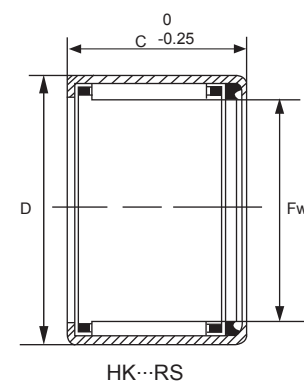
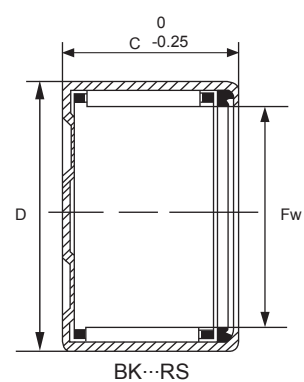
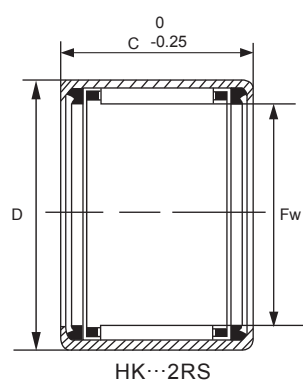
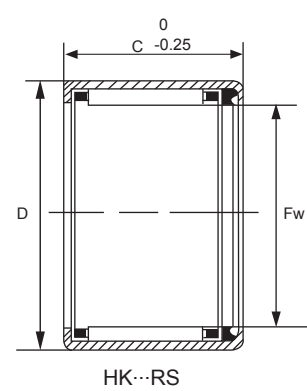
Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
40	HK4016	47941/40	41.4	40	47	16	20000	38500	6300
	BK4016	45941/40	51	40	47	16	20000	38500	6300
	HK4020	67941/41	51.8	40	47	20	25500	52000	6300
	BK4020	65941/40	62	40	47	20	25500	52000	6300
	HK40x50x32	7492/40	114.3	40	50	32	23000	42000	6000
	HK40x50x38	7943/40	130.8	40	50	38	24100	43000	6000
45	HK4512	27941/45	34.8	45	52	12	12900	22500	5800
	BK4512	25941/45	45	45	52	12	12900	22500	5800
	HK4516	47941/45	46.2	45	52	16	19300	38000	5800
	BK4516	45941/45	56	45	52	16	19300	38000	5800
	HK4520	67941/45	56	45	52	20	22000	51000	5800
	BK4520	65941/45	72	45	52	20	22000	51000	5800
	HK45x55x38	7943/45	135	45	55	38	27600	61000	5300
50	HK50x57x16		51.2	50	57	16	15200	32500	5300
	HK5012	27941/50	44.2	50	58	12	23600	57200	5300
	HK5020	57941/50	72	50	58	20	28000	60000	5300
	BK5020	55941/50	87.3	50	58	20	28000	60000	5300
	HK5025	7943/50	90.1	50	58	25	34500	80000	5300
	BK5025	5943/50	109	50	58	25	34500	80000	5300
	HK50X60X38		140	50	60	38	27770	63100	4600
55	HK5520	57941/55	78	55	63	20	29500	59900	4600
	BK5520	55941/55	93.8	55	63	20	29500	59900	4600
	HK5525	77941/55	109	55	63	25	33200	69980	4600
	HK5528	87941/55	111	55	63	28	39030	98000	4600
	BK5528	85941/55	132	55	63	28	39090	98000	4600
60	HK6012		49.2	60	68	12	12400	29000	4100
	BK6012		77	60	68	12	12400	29000	4100
	HK6020	5794/60	86	60	68	20	30500	72000	4100
	BK6020	55941/60	105	60	68	20	30500	72000	4100
	HK6032	87941/60	136	60	68	32	50000	131000	4100
	BK6032	8594/60	164	60	68	32	50000	131000	4100

Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
Inch Series									
7.94	BA55		3.4	7.94	12.7	7.92	1917	1703	38400
9.52	M681		4.3	9.52	14.29	12.7	4581	5515	29900
	BHA68		5	9.52	15.88	12.7	6004	6093	30000
12.7	BA87		6.6	12.7	17.46	11.13	1976	2500	18000
15.88	SCE108		12	15.88	22.22	12.7	8559	12060	18000
	SCH1012		20	15.88	22.22	19.05	10800	13440	18000
	SCE1012		20	15.88	22.22	19.05	10800	13440	18000
19.05	BA1210		16	19.05	25.4	15.88	11386	16413	16000
	BA1212		21	19.05	25.4	19.05	14144	21706	16000
	SCE1212		21	19.05	25.4	19.05	14144	21706	16000
	SCE1214PP		23	19.05	25.4	22.22	16140	23800	16000
	55000X22		36	19.05	30.17	47.6	18000	25000	16000
22.22	BA1816		29	22.22	34.92	25.4	20700	34500	13000
25.4	SCE16PP		44	25.4	31.75	25.4	22729	43501	11000



Needle Roller Bearings

Tolerance of width:0/-0.25mm,Special tolerance requirement shall be indicated on order
Limiting speed for grease:60% of the one for oil

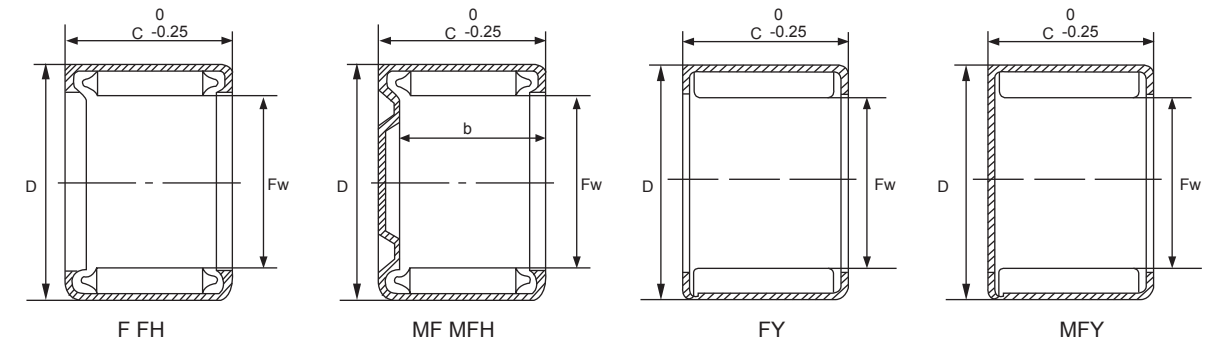
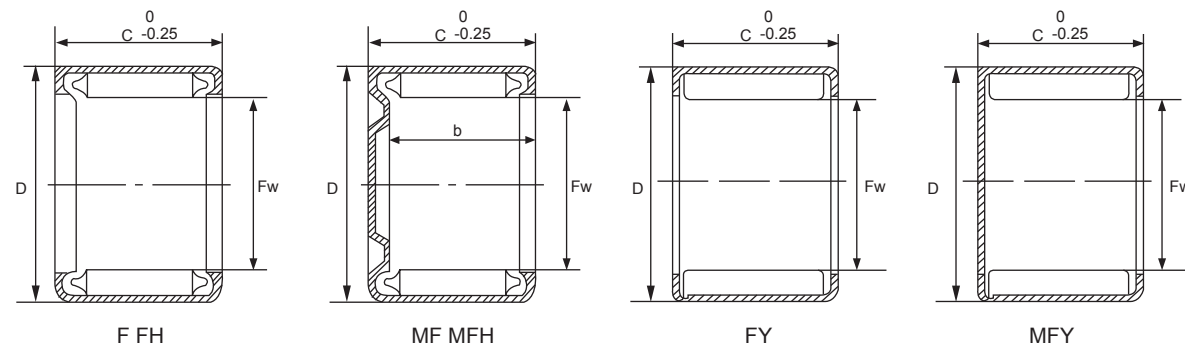


Sealed Drawn Cup Needle Roller Bearings

Shaft Diameter mm	Bearing Designation Current	Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed
			Fw	D	C	Cr Dynamic	Cor Static	Oil rpm
	mm							
8	HK0810 RS	2.9	8	12	10	2250	2100	19000
	HK0812 2RS	3.5	8	12	12	2250	2100	19000
9	HK09x13x12 RS	4	9	13	12	3800	4300	19000
10	HK1012 RS	4.2	10	14	12	4100	5000	19000
	HK1014 2RS	5.2	10	14	14	4100	5000	15000
12	HK1214 RS	10.7	12	18	14	6100	7000	15000
	HK1216 2RS	11.5	12	18	16	6100	7000	12000
13	HK13x19x12 RS	8.9	13	19	12	6800	7580	12000
14	HK1414 RS	12	14	20	14	6100	7500	13000
	HK1416 2RS	14	14	20	16	6100	7500	11000
	BK1414 RS	14.1	14	20	14	6100	7500	11000
15	HK1514 RS	12.6	15	21	14	6800	8800	11000
	HK1516 2RS	14.3	15	21	16	6800	8800	10000
	BK1514 RS	14.4	15	21	14	6800	8800	10000
	HK1518 RS	16	15	21	18	9500	11400	10000
	HK1520 2RS	18	15	21	20	9500	11400	10000
16	HK1614 RS	15.1	16	22	14	7200	9200	10000
	HK1616 2RS	15.1	16	22	16	7200	9200	10000
	BK1614 RS	15.3	16	22	14	7200	9200	10000
	HK1620 2RS	16.8	16	22	20	9900	12300	10000
	HK1625 2RS	16	16	22	25	9900	12300	10000
17	HK17x25x14 RS	17.7	17	25	14	8000	9800	10000
	HK17x25x15.5 RS	20	17	25	15.5	9320	10400	13000
	HK17x25x18 RS	23.5	17	25	18	10500	12600	13000
	HK17x25x20 RS	26.2	17	25	20	11600	13200	13000
18	HK1814 RS	15.1	18	24	14	7800	9900	13000
	HK1816 2RS	17	18	24	16	7800	9900	9200
20	HK2012 RS	11.7	20	26	12	9500	11900	9200
	HK2016 2RS	18.8	20	26	16	8000	10100	9000
	HK2018 RS	21.4	20	26	18	12700	20100	8200
	HK2020 2RS	23.5	20	26	20	12700	20100	7800
	BK2018 RS	24.4	20	26	18	12700	20100	7800
	HK20x29x18 RS	28.8	20	29	18	8700	9980	7800
22	HK2212 RS	14	22	28	12	9310	10000	9000

Shaft Diameter mm	Bearing Designation Current	Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed
			Fw	D	C	Cr Dynamic	Cor Static	Oil rpm
	mm							
22	HK2214 RS	18.3	22	28	14	9000	12400	7800
	HK2216 2RS	20.3	22	28	16	9000	12400	7800
	HK2218 RS	23.5	22	28	18	10400	20100	7800
	HK2220 2RS	25.5	22	28	20	10400	20100	7800
25	HK2516 2RS	27.3	25	32	16	9800	13200	6900
	HK2518 RS	31	25	32	18	13600	20000	6900
	HK2520 2RS	33.1	25	32	20	13600	20000	6900
	BK2518 RS	35.3	25	32	18	13600	20000	6900
	HK2524 2RS	39.7	25	32	24	17900	30000	6900
28	HK2530 2RS	47.3	25	32	30	24500	43000	6900
	HK2820 2RS	36.9	28	35	20	11400	22500	5300
	HK3016 2RS	28.5	30	37	16	10100	16200	5300
30	HK3018 RS	36.6	30	37	18	16200	26000	5300
	HK3020 2RS	39.1	30	37	20	16200	26000	5300
	HK3024 2RS	49.7	30	37	24	21000	38500	5300
	HK3516 2RS	36.4	35	42	16	10100	20300	4900
35	HK3518 RS	37.4	35	42	18	16700	30500	4900
	HK3520 2RS	41.1	35	42	20	16700	30500	4900
	HK4016 2RS	41.2	40	47	16	11000	21300	4200
40	HK4018 RS	47.3	40	47	18	19000	30500	4200
	HK4020 2RS	50.2	40	47	20	19000	30500	4200
	HK4518 RS	54.2	45	52	18	20300	41000	3800
45	HK4520 2RS	57.4	45	52	20	20300	41000	3800
	HK5022 RS	77.2	50	58	22	30000	61000	3200
50	HK5024 2RS	84	50	58	24	30000	61000	3200

Tolerance of width: 0/-0.25mm. Special tolerance requirement shall be indicated on order
Limiting speed for grease: 60% of the one for oil

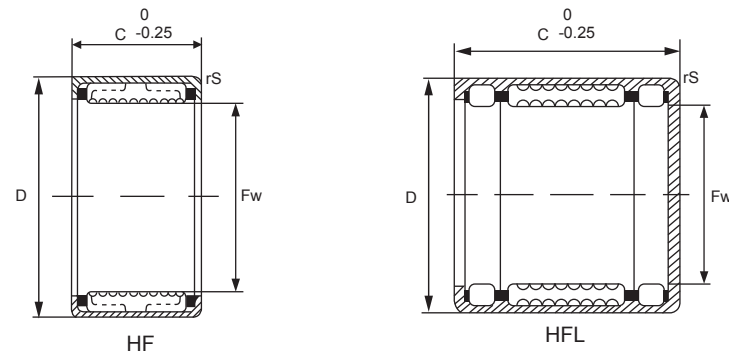


Drawn Cup Full Complement Needle Roller Bearings

Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
	mm		g	mm	mm	mm	N		rpm
6	F-0608	30941/6	2.5	6	10	8	3080	5800	12000
6.35	F6.35x11.11x11.13	B-47	3.2	6.35	11.11	11.13	3500	6050	12000
	MF6.35x11.11x11.13	M-471	4.1	6.35	11.11	11.13	3500	6050	12000
8	F-0810	50941/8	3.7	8	12	10	4050	7150	13000
	FH-0810	941/8	7	8	14	10	5200	7150	7400
	FH-0812	942/8	9	8	14	12	4550	7150	7400
9	F-0910	50941/9	4	9	13	10	4900	8050	12000
	FH0910	941/9	6	9	15	10	8000	11500	7100
	FH9x15x13	942/9	8	9	15	13	8560	12800	7100
9.52	F9.52x14.29x12.7	B-68	75	9.52	14.29	12.70	9000	13300	7100
10	F-1010	50941/10	4.2	10	14	10	5700	9350	11000
	FH-1010	941/10	6.5	10	16	10	6350	10800	11000
	F10x16x15	942/10	12	10	16	15	6890	11500	7100
		943/10		10	16	17	6500	11000	7000
12	F-1212	60941/12	6	12	16	12	6380	10900	7100
	F12x17x12	941/12	8	12	17	12	8400	11900	7100
	F12x17x15	942/12	10.5	12	17	15	9000	12500	7100
	F12x17x18	943/12	13	12	17	18	9800	13500	7100
15	F15x20x12	941/15	10	15	20	12	8400	11900	7100
	F15x20x16	942/15	13.6	15	20	16	9500	12800	7100
	F15x20x20	943/15	17.2	15	20	20	10500	16000	7100
	FY15x20x20	Y152020	20	15	20	20	10500	16000	7100
	F-1512	30941/15	12	15	21	12	9700	15900	8100
16	F-1616	50941/16	17	16	22	16	14100	25900	7700
17	F-1712	30941/17	13	17	23	12	10600	21600	7300
	F-1714	941/17	15	17	23	14	12500	22500	7300
	F-1718	942/17	21	17	23	18	13800	24800	7300
		943/17		17	23	22	13500	24000	7100
18	F1816	50941/18	18	18	24	16	15000	29100	6900
20	F-2014	941/20	17	20	26	14	15800	40500	6900
	F-2020	942/20	26	20	26	20	18800	42500	6900
	F20x26x25	943/20	33	20	26	25	20500	35500	6300

Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
	mm		g	mm	mm	mm	N		rpm
25	F-2516	941/25	28	25	32	16	18700	37900	5100
	F-2522	942/25	40	25	32	22	11000	16500	5100
	F25x32x25	943/25	43	25	32	25	11500	18500	5100
	F25x33x08	Y253308	16.7	25	33	8	12200	16800	4300
28	F-2820	60941/28	118	28	35	20	25700	58300	4600
30	F-3020	60941/30	42	30	37	20	26800		
	MF-3020	65941/30	48	30	37	20	26800	62500	4300
	F30x38x16	941/30	37.5	30	38	16	25500	57500	4600
	F30x38x24	942/30	37.5	30	38	24	28800	64500	4300
	F30x38x32	943/30	81.5	30	38	32	34500	78900	4300
32	F-3216	40941/32	35	32	39	16	25800	61500	4300
35	F3520	60941/35	49	35	42	20	24000	69100	3700
	F35x43x16	941/35	41	35	43	16	23500	68000	3700
	F35x43x25	942/35	72	35	43	25	38700	86200	3200
	F35x43x32	943/35	90	35	43	32	40500	97800	3200
40	F-4020	60941/40	56	40	47	20	30300	82600	3300
	FH4032	942/40	88	40	50	32	42500	108000	2600
	MFH-4032	86942/40	95	40	50	32	42500	108000	2600
	FH40x50x38	943/40	105	40	50	38	44800	118500	2600
45	F-4520		62	45	52	20	30400	90100	2900
	FH45x55x38	943/45	140	45	55	38	45800	128000	2900
50	F-5020	50941/50	78	50	58	20	35800	98000	2600
	FH50x60x38	943/50	145	50	60	38	50500	145800	2600
60	F60x68x40	943/60	185	60	68	40	50200	145000	2600

Tolerance of width: 0/-0.25mm. Special tolerance requirement shall be indicated on order



Drawn Cup Roller Clutch Bearing

Shaft Diameter mm	Bearing Designation		Boundary Dimensions				Edgo	Mass Approx g	Driving moment	Limiting Speed	
	Current	Original Code	Fw	D	C	Grease				Oil	
			mm			rpm					
4	HF0406	HF-0406	4	8	6	0.3	1	0.34	34000	14000	
6	HF0612	HF-0612	6	10	12	0.3	3	1.78	23000	13000	
8	HF0812		8	12	12	0.3	3.5	3.15	17000	11000	
10	HFL0822		8	12	22	0.3	6.3	3.15	17000	12000	
	HF1012		10	14	12	0.3	4	5.3	14000	11000	
12	HF1216	HF1216	12	18	16	0.3	10.5	12.2	10000	7000	
	HFL1226		12	18	26	0.3	18	12.2	10000	7000	
14	HF1416		14	20	16	0.3	13	17.3	9500	8000	
	HFL1426		14	20	26	0.3	20.3	17.3	9500	8000	
16	HF1616		16	22	16	0.3	14	20.5	8500	7500	
	HFL1624		16	22	24	0.3	19	20.5	8500	7500	
	HFL1624.5		16	22	24.5	0.3	20	20.5	8500	7500	
	HFL1626		16	22	26	0.3	22	20.5	8500	7500	
18	HF1816		18	24	16		15.5	24.1	7500	7500	
	HFL1826		18	24	26		24.4	24.1	7500	7500	
20	HF2016		20	26	16		17	28.5	7000	6500	
	HFL2016		20	26	26		27	28.5	7000	6500	
25	HF2520		25	32	20		30.9	66	5500	5500	
	HFL2530		25	32	30		44	66	5500	5500	
30	HF3020		30	37	20		36	90	4500	4500	
	HFL3030		30	37	30		51	90	4500	4500	
35	HF3520		35	42	20		40	121	3900	3900	
	HF3530		35	42	30		58	121	3900	3900	

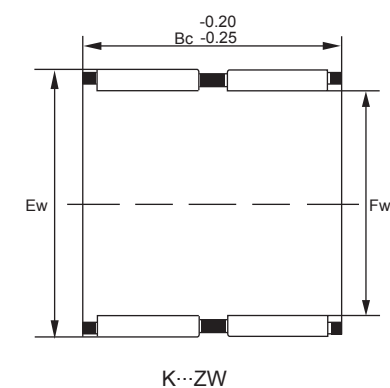
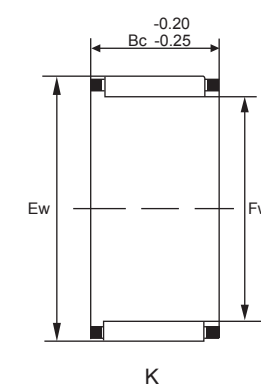
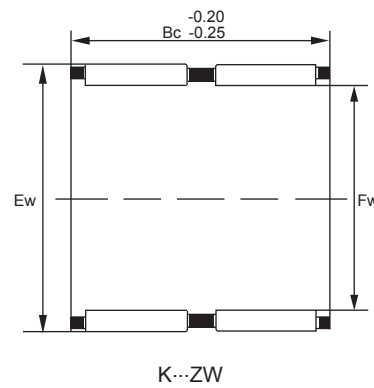
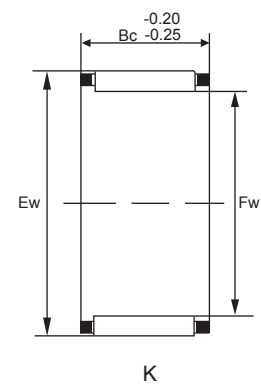
Radial Needle Roller and Cage Assemblies

Products Scope	WD supply the following bearings
Series	Structure explanation
K	Single row needle and cage assemblies
K...ZW	Double row needles and cage assemblies
K...D	Single row split type needle and assemblies
K...ZWD	Double row split type needles and cage assemblies

Radial needle roller and cage assemblies work as a separate bearing part, with high load carry capacity & high hardness. Every needle is accurately guided & retained by the cage.

Structure	designations(GB5846-86)	designations(GB/T272-93)
Single row	$K \frac{OO}{Fw} \frac{OO}{Ew} \frac{OO}{Bc}$	$K \frac{OO}{Fw} \times \frac{OO}{Ew} \times \frac{OO}{Bc}$
Double row	KKOOOOOO	KOOXOOXOOZW
Single row split type	KSOOOOOO	KOOXOOXOOD
Double row split type	KKSOOOOOO	KOOXOOXOOZWD

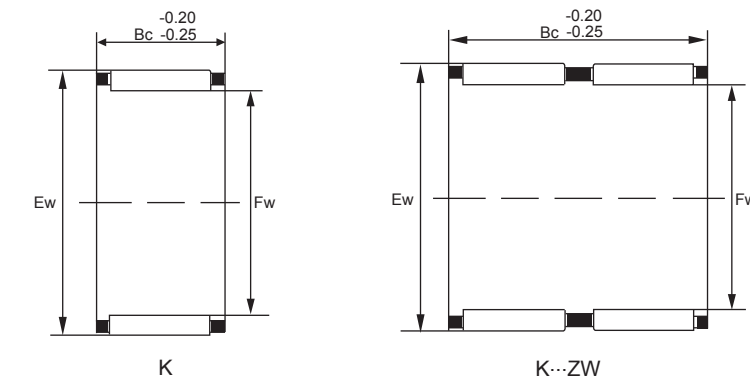
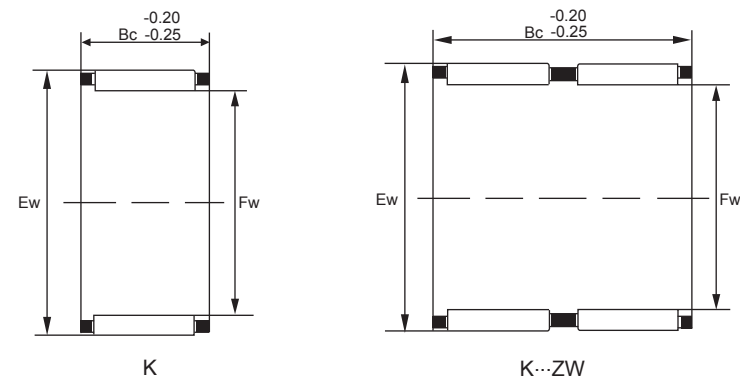




Radial Needle Roller and Cage Assemblies

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
				mm		N		Oil	
5	K5x8x8 TN	29241/5	0.7	5	8	8	2300	1880	37000
	K5x8x10 TN	39241/5	0.9	5	8	10	2800	2450	37000
6	K6x9x8 TN	29241/6	0.8	6	9	8	2560	2240	35000
	K6x9x10 TN	39241/6	1	6	9	10	3300	3100	35000
	K6x10x13 TN	49241/6	1.3	6	10	13	3500	2800	33000
7	K7x10x8 TN	29241/7	0.9	7	10	8	2750	2550	32000
	K7x10x10 TN	39241/7	1.1	7	10	10	3350	3400	32000
8	K8x11x8 TN	29241/8	1.1	8	11	8	3000	2900	30000
	K8x11x10 TN	39241/8	1.7	8	11	10	3830	3950	30000
	K8x11x13 TN	49241/8	1.8	8	11	13	5000	5700	30000
	K8x12x10 TN	29242/8	1.3	8	12	10	4900	4600	30000
9	K9x12x10 TN	39241/9	1.5	9	12	10	4200	4700	30000
	K9x12x13 TN	49241/9	1.9	9	12	13	5500	6700	30000
10	K10x13x10 TN	39241/10	1.6	10	13	10	4500	5250	27000
	K10x13x13 TN	39241/10	2.1	10	13	13	6000	7600	27000
	K10x13x16 TN		2.2	10	13	16	6300	7800	76000
	K10x14x10 TN	29242/10	2.9	10	14	10	7000	7900	27000
	K10x14x13 TN	39242/10	4.3	10	14	13	8000	9100	26000
	K10x16x12 TN	19244/10	3.7	10	16	12	7000	9300	27000
12	K12x15x9 TN		2.7	12	15	9	120	5210	25000
	K12x15x10 TN	39241/12	1.9	12	15	10	4320	5730	25000
	K12x15x13 TN	49241/12	2.4	12	15	13	6000	8100	25000
	K12x16x8 TN	19242/12	2.9	12	16	8	4200	4700	25000
	K12x16x10 TN	29242/12	3.4	12	16	10	6000	6900	25000
	K12x16x13 TN	39242/12	3.8	12	16	13	7900	9200	25000
	K12x17x13 TN	59242/12	4.4	12	17	13	9300	10000	24000
	K12x18x12 TN	19244/12	5	12	18	12	9800	8000	24000
	K12x15x20 TN	K12x15x20 TN	3.8	12	15	20	8200	12000	25000
14	K14x17x10		4	14	17	10	5100	6800	23000
	K14x17x17		6.8	14	17	17	9300	14000	23000
	K14x18x10	29242/14	4.8	14	18	10	6800	8300	23000
	K14x18x13	39242/14	6.3	14	18	13	8100	9800	23000
	K14x18x14		6.8	14	18	14	9200	12000	23000
	K14x18x15	49242/14	7.3	14	18	15	10000	13000	23000

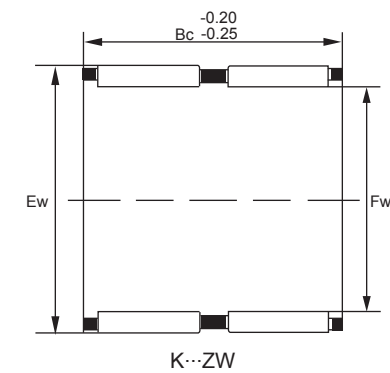
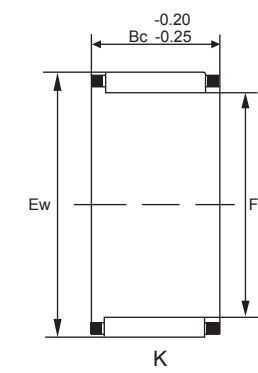
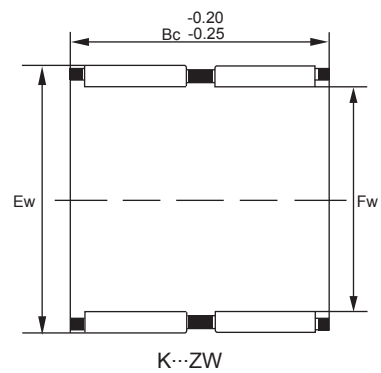
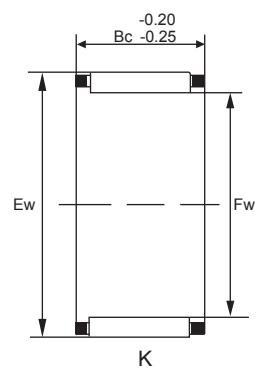
Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
				mm		N		Oil	
14	K14x18x17	59242/14	8.1	14	18	17	10500	13900	23000
	K14x20x12	19243/14	8.6	14	20	12	9900	10500	22000
15	K15x18x14		5.3	15	18	14	7500	11000	23000
	K15x18x17		6.4	15	18	17	9600	15900	23000
	K15x19x10	29242/15	5.1	15	19	10	7200	9000	22000
	K15x19x13	39241/15	7	15	19	13	8300	9800	22000
	K15x19x17	59241/15	8.8	15	19	17	10300	15000	22000
	K15x19x24 ZW	79241/15	10.5	15	19	24	12800	20100	22000
	K15x20x13	29242/15	8.9	15	20	13	9700	11000	22000
	K15x21x12	19243/15	10	15	21	12	10000	13000	22000
16	K15x21x15	39242/15	13	15	21	15	13800	16000	22000
	K15x21x21		18.2	15	21	21	18000	24000	22000
	K16x20x10	29241/16	5.7	16	20	10	7600	9700	22000
	K16x20x13	39241/16	7.1	16	20	13	8700	11300	22000
	K16x20x17	59241/16	9.2	16	20	17	11200	16300	22000
	K16x21x10	19242/16	3.7	16	21	10	9000	12000	22000
	K16x22x12	19243/16	10.4	16	22	12	11000	12000	21000
	K16x22x13		11.9	16	22	13	12000	13400	21000
	K16x22x16		13.7	16	22	16	14300	17000	21000
	K16x22x20	49243/16	16.7	16	22	20	18000	22300	21000
17	K16x23x14	19244/16	20	16	23	14	19000	21000	19000
	K16x24x20	19245/16	24.9	16	24	20	21100	23000	20000
	K17x21x10	29241/17	5.6	17	21	10	7900	10100	21000
	K17x21x13	39241/17	7.5	17	21	13	10000	14100	21000
	K17x21x17	59241/17	9.5	17	21	17	12000	17400	21000
18	K17x23x14	29243/17	11.5	17	23	14	11000	15000	21000
	K18x22x10	29241/18	6.1	18	22	10	8200	9900	20000
	K18x22x13	39241/18	7.7	18	22	13	9000	12100	20000
	K18x24x12	19243/18	11.6	18	24	12	11200	12900	20000
	K18x24x13		12.6	18	24	13	12900	14900	20000
	K18x24x13.5		13	18	24	13.5	12900	14900	20000
	K18x24x20	49243/18	19	18	24	20	20000	26500	20000
K18x25x14		14.9	18	25	14	16500	18800	20000	



Radial Needle Roller and Cage Assemblies

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
18	K18x25x22		24.3	18	25	22	22900	28400	20000
	K18x26x14		19	18	26	14	18000	20000	18000
	K18x28x16	19244/18	24	18	28	16	19000	18400	19000
19	K19x23x13		8.2	19	23	13	9300	13000	20000
	K19x23x17		11.1	19	23	17	12000	18600	20000
20	K20x24x10	29241/20	6.5	20	24	10	8700	12100	19000
	K20x24x12		8	20	24	12	9600	13800	19000
	K20x24x13	39241/20	8.9	20	24	13	9600	13800	19000
	K20x24x17	59241/20	11.2	20	24	17	12400	20000	19000
	K20x26x12	19243/20	13.2	20	26	12	13100	15700	19000
	K20x26x16	K9249/20	17.5	20	26	16	18000	25000	18500
	K20x26x17	39243/20	18.2	20	26	17	18700	25500	19000
	K20x26x20	49243/20	22	20	26	20	20600	28500	29000
	K20x28x20	19245/20	26.8	20	28	20	23400	28000	18000
	K20x28x25	29245/20	36.2	20	28	25	30000	28500	18000
	K20x30x30	39245/20	56	20	30	30	35000	41000	18000
	21	K21x25x13		9	21	25	13	9600	14500
K21x25x17			12	21	25	17	12800	21000	19000
22	K22x26x10	29241/22	7.1	22	26	10	8700	12900	18000
	K22x26x13	39241/22	9.4	22	26	13	10000	15400	18000
	K22x26x17	59241/22	12.1	22	26	17	13100	22100	18000
	K22x27x13	29242/22	10.8	22	27	13	14000	23000	18000
	K22x28x17	39243/22	19.7	22	28	17	19000	26500	18000
	K22x28x23	59243/22	26	22	28	23	20000	27000	19000
	K22x29x16	19244/22	22.2	22	29	16	19500	25000	17000
	K22x30x15 TN		14.4	22	30	15	19600	22900	17000
	K22x30x20	19245/22	28	22	30	20	21000	23500	18900
K22x32x24		43.4	22	32	24	33500	39500	16000	
23	K23x35x16 TN		30	23	35	16	24000	23400	15000
24	K24x28x10		8.1	24	28	10	9400	14300	17000
	K24x28x13		10.1	24	28	13	10500	17000	17000
	K24x28x17	9243/24	13.2	24	28	17	14000	24500	17000
	K24x29x13		13.5	24	29	13	13100	19100	16000
	K24x30x17		21.5	24	30	17	19000	27000	16000

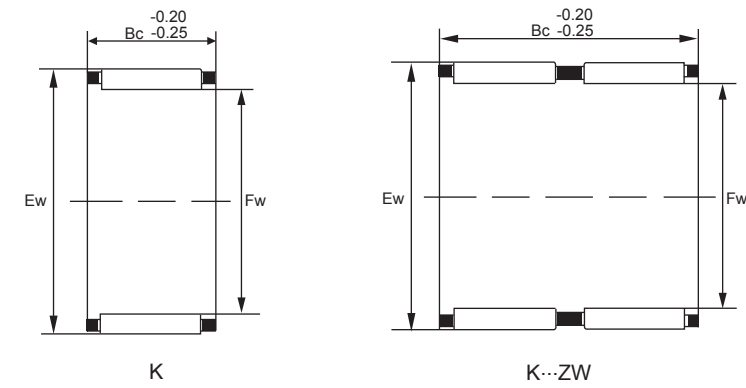
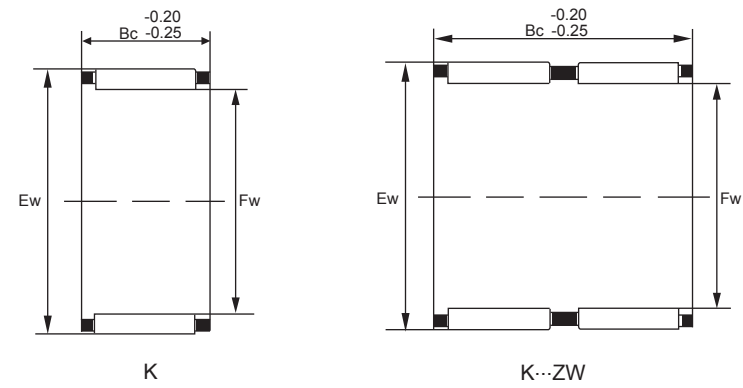
Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
24	K24x30x31		39.1	24	30	31	27000	43000	16000
25	K25x29x10	29241/25	8.3	25	29	10	9700	14900	16000
	K25x29x13	39241/25	10.4	25	29	13	10800	17900	16000
	K25x29x17	59241/25	13.7	25	29	17	14500	25500	16000
	K25x30x13	29242/25	12.9	25	30	13	14100	21300	16000
	K25x30x20	59242/25	20.5	25	30	20	21100	28000	16000
	K25x30x25		21	25	30	25	21700	40400	15000
	K25x30x26	52.436	21.6	25	30	26	20100	26500	15000
	K25x31x17	39243/25	21.8	25	31	17	19000	28000	16000
	K25x31x21	39243/25	26.2	25	32	21	24100	37500	16000
	K25x32x16	19244/25	24.5	25	32	16	20500	27500	15000
26	K25x33x20	19245/25	32	25	33	20	28000	37500	15000
	K25x33x24	29245/25	38.7	25	33	24	33900	46500	15000
	K25x34x18		32	25	34	18	48000	67000	15000
	K25x35x30	39245/25	65.5	25	35	30	46500	61500	14000
	K25x30x26 ZW		27	25	30	26	21000	35000	14000
	K26x30x10		9	26	30	10	9500	15500	16000
	K26x30x13		11.4	26	30	13	11100	18700	16000
	K26x30x17		15	26	30	17	14700	27000	16000
	K26x31x13		9.9	26	31	13	12400	18400	15000
	K26x30x22		12.3	26	30	22	15200	28000	16000
27	K27x32x17		29	27	32	27	16000	34000	17000
28	K28x32x16.5		16	28	32	16.5	15000	32400	14000
	K28x32x17	9242/28	18.2	28	32	17	15000	32400	14000
	K28x33x13	29241/28	15.2	28	33	13	14800	23600	14000
	K28x33x13	29241/28	15.2	28	33	13	14800	23600	14000
	K28x33x17	49241/28	19.5	28	33	17	19100	33000	14000
	K28x33x27 TN	79241/28	19	28	33	27	22800	40500	14000
	K28x34x17	39242/28	24.2	28	34	17	21300	35000	14000
	K28x35x16	19243/28	26	28	35	16	21000	29000	14000
	K28x35x18		31	28	35	18	23500	33500	14000
28	K28x35x20	29243/28	35	28	35	20	24000	34000	14000
	K28x35x27		47	28	35	27	34500	54500	14000
	K28x36x16		40	28	36	16	34000	47000	11000



Radial Needle Roller and Cage Assemblies

Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
28	K28x40x18		50	28	40	18	33000	36500	12000
	K28x40x25		71	28	40	25	45000	54500	12000
30	K30x34x13		14.6	30	34	13	11800	21200	13000
	K30x35x13	29241/30	16.3	30	35	13	15100	25000	13000
	K30x35x17	49241/30	21.3	30	35	17	19100	33500	13000
	K30x35x27	19241/30	33.3	30	35	27	30000	58500	13000
	K30x37x16	19243/30	26.4	30	37	16	22500	33000	13000
	K30x38x25	29244/30	43	30	38	25	16000	39000	13000
	K30x40x18		44	30	40	18	31500	39500	12000
	K30x40x30	49243/30	78	30	40	30	48500	68500	13000
	K30x35x26		32	30	35	26	23500	43500	12000
32	K32x37x13	29241/32	18.3	32	37	13	15000	25000	12000
	K32x37x17	49241/32	22.4	32	37	17	19400	35000	12000
	K32x37x27	19241/32	36.7	32	37	27	29500	59500	12000
	K32x37x28 TN		22.3	32	37	28	23100	43000	12000
	K32x38x16		25	32	38	16	21000	34000	12000
	K32x38x20	49242/32	31	32	38	20	26000	44500	12000
	K32x38x26 TN		25.2	32	38	26	27000	46500	12000
	K32x39x16	19243/32	36.7	32	39	16	23500	35000	12000
	K32x39x18		37.2	32	39	18	26000	40500	12000
	K32x40x20	19244/32	48	32	40	20	37000	40500	12000
	K32x40x36		73	32	40	36	53500	91500	12000
	K32x45x32		119	32	46	32	65500	82500	11000
	K32x40x42 TN		77.1	32	40	42	49500	83500	12000
35	K35x40x13	29241/35	18.8	35	40	13	15800	27500	11000
	K35x40x17	49241/35	25.3	35	40	17	20300	38000	11000
	K35x40x25	29244/35	31	35	40	25	29000	59500	11000
	K35x40x27 TN	19241/35	23.4	35	40	27	24500	48000	11000
	K35x40x27	79241/35	28	35	40	27	27800	62100	11000
	K35x40x30	39244/35	43	35	40	30	25000	49500	11000
	K35x42x16	19243/35	34	35	42	16	23900	37000	11000
	K35x42x18		39.2	35	42	18	27000	42500	11000
	K35x42x30	49243/35	62.4	35	42	30	38500	67500	11000
	K35x43x18		38	35	43	18	28000	41500	11000

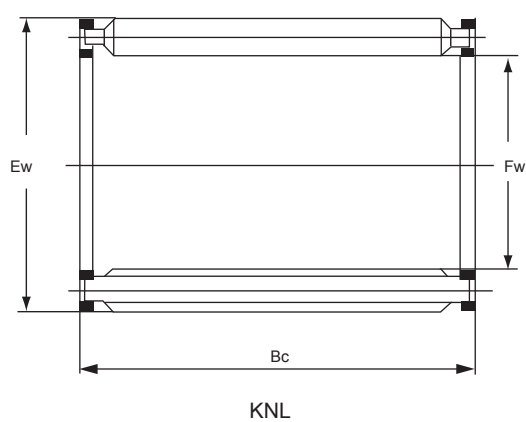
Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
35	K35x42x30	49243/35	62.4	35	42	30	38500	67500	11000
	K35x43x18		38	35	43	18	28000	41500	11000
	K35x45x20		55.5	35	45	20	36500	49500	10000
	K35x45x30	29245/35	80	35	45	30	52500	78500	10000
	K35x45x49		120	35	45	49	81500	13400	10000
	K35x40x30 ZW		48	35	40	30	31500	65500	11000
	K35x42x20 ZW	29243/35	41	35	42	20	29500	48500	11000
36	K36x41x30		52	36	41	30	23000	43000	11000
	K36x42x16		50	36	42	16	24000	42000	11000
37	K37x42x17		25.8	37	42	17	21900	42500	10000
	K37x42x27		40.7	37	42	27	31500	67500	10000
	K37x45x26		60.5	37	45	26	43500	73500	10000
38	K38x43x17	49241/38	26.9	38	43	17	20000	38000	10000
	K38x43x27	79241/38	43.2	38	43	27	31000	67500	10000
	K38x46x20	19244/38	46	38	46	20	35000	56500	10000
	K38x46x32		72.7	38	46	32	54500	98500	10000
39	K39x44x24		38	39	44	24	28000	58500	10000
	K39x44x46 ZW		29.5	39	44	26	27000	55500	10000
40	K40x44x13		20	40	44	13	13500	28000	10000
	L40x45x13	29241/40	21.5	40	45	13	17100	32000	10000
	K40x45x17	49241/40	27.4	40	45	17	20900	41000	10000
	K40x45x21		36.5	40	45	21	24400	49500	10000
	K40x45x27	19241/40	46	40	45	27	32500	72500	10000
	K40x46x17	39242/40	30	40	46	17	24500	44500	9000
	K40x47x18		45.2	40	47	18	29000	49500	9000
	K40x47x20	29243/40	42	40	47	20	32000	56500	9000
42	K40x48x20	19244/40	57.5	40	48	20	35500	58500	9000
	K40x45x30 ZW		48	40	45	30	26000	53500	9000
	K40x47x13	29241/42	22.5	42	47	13	17300	33000	9000
	K42x47x17	49241/42	31.1	42	47	17	21100	42500	9000
	K42x47x25 TN		25.4	42	47	25	27000	57500	9000
	K42x47x27	79241/42	46.6	42	47	27	33000	74500	9000
K42x48x35	79242/42	60	42	48	35	35000	76000	9000	



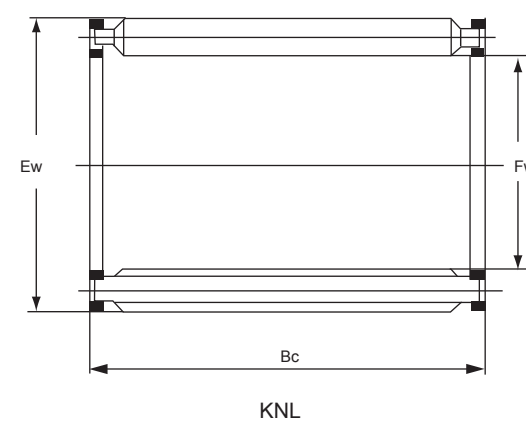
Radial Needle Roller and Cage Assemblies

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
42	K42x50x18		53	42	50	18	31000	49500	9000
	K42x50x20	19244/42	54	42	50	20	34500	56500	9000
	K42x47x30 ZW		54	42	47	30	31000	75500	9000
43	K43x48x17		29.3	43	48	17	21000	42500	9000
	K43x48x17		45.7	43	48	27	33000	74500	9000
	K43x50x18	9249/43	48.5	43	50	18	30500	53500	9000
45	K45x49x19		27	45	49	19	17500	40000	8000
	K45x50x17	49241/45	25.5	45	50	17	22000	45000	8000
	K45x50x27	19241/45	50	45	50	27	34000	79500	8000
	K45x50x32 TN		45	45	50	32	38000	90500	8000
	K45x52x18		51	45	52	18	31000	56500	8000
	K45x52x21 TN		32.9	45	52	21	39500	57500	8000
	K45x53x20	19244/45	62.2	45	53	20	28500	66500	8000
	K45x53x21		65	45	53	21	38000	66500	8000
	K45x53x22		68.4	45	53	22	42000	66500	8000
	K45x53x28		78	45	53	28	51500	97500	8000
	K45x59x18 TN		60.5	45	59	18	43500	53500	7000
	K45x59x32		145.5	45	59	32	72500	101500	7000
	K45x59x36		195	45	59	36	75500	108500	7000
K45x51x36 ZW		85	45	51	36	44500	98500	7000	
47	K47x52x17		32	47	52	17	22800	48500	8000
	K47x52x27		50.7	47	52	27	34500	82500	8000
	K47x53x25		53	47	53	25	38000	81500	8000
	K47x55x28		62.4	47	55	28	52500	99500	7500
48	K48x54x19	39242/48	44	48	54	19	30000	60500	7500
	K48x54x25	59242/48	55	48	54	25	31000	91000	7500
50	K50x55x13.5		31	50	55	13.5	17500	36000	7500
	K50x55x17	49241/50	35	50	55	17	21400	46500	7500
	K50x55x20	59241/50	39.4	50	55	20	26000	59500	7500
	K50x55x30	9243/50	59.4	50	55	30	38500	96500	7500
	K50x57x18		53.4	50	57	18	33000	62500	7000
	K50x58x20	19244/50	64.9	50	58	20	35000	61500	7000
	K50x58x25	29244/50	81	50	58	25	43500	80500	7000

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm	
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static		
52	K52x57x12		24	52	57	12	17500	36000	7000	
55	K55x60x20		43.4	55	60	20	28000	65500	6500	
	K55x60x27		60.5	55	60	27	37500	96500	6500	
	K55x60x30		68.6	55	60	30	40500	10300	6500	
	K55x61x20	49241/55	56	55	61	20	41000	11000	6500	
	K55x62x18		58.4	55	62	18	35000	69500	6500	
	K55x63x15		53	55	63	15	24500	40500	6500	
	K55x63x20	19243/55	73.3	55	63	20	39500	73500	6500	
55	K55x63x25	29243/55	88	55	63	25	49500	99500	6500	
	K55x63x32		117	55	63	32	61500	129500	6500	
	K55x60x40 ZW		96.5	55	60	40	48000	132000	6500	
	56	K56x61x20		45	56	61	20	27000	64500	6500
	58	K58x63x17		42	58	63	17	21500	63500	6000
K58x64x19			53	58	64	19	24500	77500	6000	
K58x65x18			52	58	65	18	34500	69500	6000	
K58x65x38 ZW			106	58	65	38	48500	106500	6000	
60	K60x65x20	49241/60	50.5	60	65	20	29000	71500	6000	
	K60x65x30	69241/60	71.2	60	65	30	42000	115500	6000	
	K60x68x20	19243/60	79	60	68	20	43000	84500	5500	
	K60x68x23		94	60	68	23	49000	100500	5500	
	K60x68x27		98	60	68	27	59000	120500	6000	
	K60x75x42		240	60	75	42	11300	19200	5500	
60	K60x66x33 ZW		104	60	66	33	45500	111500	6000	
	K60x66x40 ZW		116	60	66	40	57500	150500	5500	
	K60x68x30 ZW		136	60	68	30	44000	87500	5500	
	K60x68x34 ZW		140	60	68	34	47500	95500	5500	
	62	K62x70x40 ZW		147.5	62	70	40	65500	145500	5500
63	K63x70x21		75	63	70	21	45000	100500	5500	
64	K64x70x16		53	64	70	16	27500	59500	5500	
65	K65x70x20	49241/65	49	65	70	20	3000	76500	5500	
	K65x70x30		83	65	70	30	43500	123500	5500	
	K65x73x23		100	65	73	23	45500	93500	5000	
65	K65x73x30	39243/65	126	65	73	30	56500	122500	5000	
68	K68x74x20	49241/68	65	68	74	20	35000	83500	5000	



KNL



KNL

Radial Needle Roller and Cage Assemblies

Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
	Current	Original Code		Fw	Ew	Bc	Cr Dynamic	Cor Static	
68	K68x74x30	69241/68	97	68	74	30	46000	117500	5000
	K68x74x38 ZW	79241/68	116	68	74	35	48000	124500	5000
	K68x75x20		120	68	75	32	53500	127500	4500
70	K70x76x20	49241/70	70	70	76	20	35500	85500	4500
	K70x76x30	69241/70	100	70	76	30	51500	138500	4500
	K70x78x25	29243/70	115	70	78	25	51500	111500	4500
	K70x78x30	39243/70	136	70	78	30	59500	134500	4500
	K70x80x30	29244/70	150	70	80	30	72500	147500	4500
	K70x78x46 ZW		230	70	78	46	77500	18800	4500
72	K72x80x20	19243/72	94	72	80	20	41000	84500	4500
73	K73x79x20		69	73	79	20	36500	99500	4500
75	K75x81x20	49241/75	72	75	81	20	37000	93500	4500
	K75x81x30	69241/75	106	75	81	30	51500	142000	4500
	K75x83x23		113	75	83	23	49500	108000	4000
	K75x83x30	39243/75	147	75	83	30	61500	142000	4000
	K75x83x35 ZW	49243/75	165	75	83	35	62500	146500	4000
	K75x83x40 ZW	59243/75	190	75	83	40	72500	176500	4000
80	K80x86x20	49241/80	76	80	86	20	38000	97500	4000
	K80x86x30	69241/80	114	80	86	30	55500	158500	4000
	K80x88x30	39243/80	141	80	88	30	71500	178500	4000
	K80x88x40 ZW	59243/80	204	80	88	40	75500	191500	4000
	K80x88x46 ZW	69243/80	235	80	88	46	87500	23000	4000
85	K85x92x20	29241/85	96	85	92	20	44000	107500	3500
90	K90x97x20	29241/90	103	90	97	20	44500	112500	3000
	K90x98x27		150	90	98	27	60500	149500	3000
	K90x98x30	39242/90	172	90	98	30	67500	171500	3000
95	K95x102x20	29241/95	110	95	102	20	45500	122500	2900
	K95x103x30	39242/95	177	95	103	30	68500	179500	2900
	K95x103x40 ZW	59243/95	250	95	103	40	82500	227500	2900
100	K100x107x21		120	100	107	21	47500	126500	2700
	K100x108x27		176	100	108	27	56500	142500	2700
	K100x108x30	39242/100	190	100	108	30	70500	187500	2700
105	K105x112x21		123	105	112	21	47000	126500	2500
	K105x113x30	39242/105	198	105	113	30	71500	196500	2500
110	K110x117x24		146	110	117	24	55500	157500	2300
	K110x118x30	39244/110	217	110	118	30	77500	218500	2300

Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating	
	Current	Original Code		Fw	Ew	Bc	Cr Dynamic	Cor Static
19.051	KNL19.051x28.588x36.75	64903	70	19.051	28.588	36.75		
19.051	KNL19.051x28.588x43.25	64904	80	19.051	28.588	43.25		
20	KNL20x30.2x18	64704	40	20	30.2	18		
20.612	KNL20.612x33.325x35	864904	96	20.612	33.325	35		
20.638	KNL20.638x33.338x36.75	64705	92	20.638	33.338	36.75		
25	KNL25x38x24.7	64805	82	25	38	24.7		
25.4	KNL25.4x41.2x60.4	64905	265	25.4	41.2	60.4		
27.71	KNL27.71x42.825x44.1	64906	183	27.71	42.825	44.1		
28.575	KNL28.575x41.275x34.925	64806	122	28.575	41.275	34.925		
28.578	KNL28.578x41.275x40	94626	155	28.578	41.275	40		
29.975	KNL29.975x42x44.1	64706	160	29.975	42	44.1		
29.975	KNL29.975x42x31	9148/30	81	29.975	42	31		
31.75	KNL31.75x44.45x31.75	864807	115.8	31.75	44.45	31.75		
31.9	KNL31.9x41.46x32	31.9x41.46x32	95	31.9	41.46	32		
32	KNL32x50x45	30643/32	272	32	50	45		
32	KNL32x52x49	64907	329	32	52	49		
37.96	KNL37.96x53.9x36	37.96x53.9x36	208.3	37.96	53.9	36		
40	KNL40x60x30	10643/40	248	40	60	30		
52.412	KNL52.412x71.425x42.3	864911	441	52.412	71.245	42.3		
65	KNL65x89x58.9	864913	943	65	89	58.9		
74	KNL74x106x57.9	864915	1563	74	106	57.9		

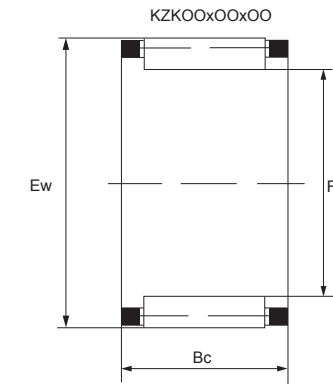
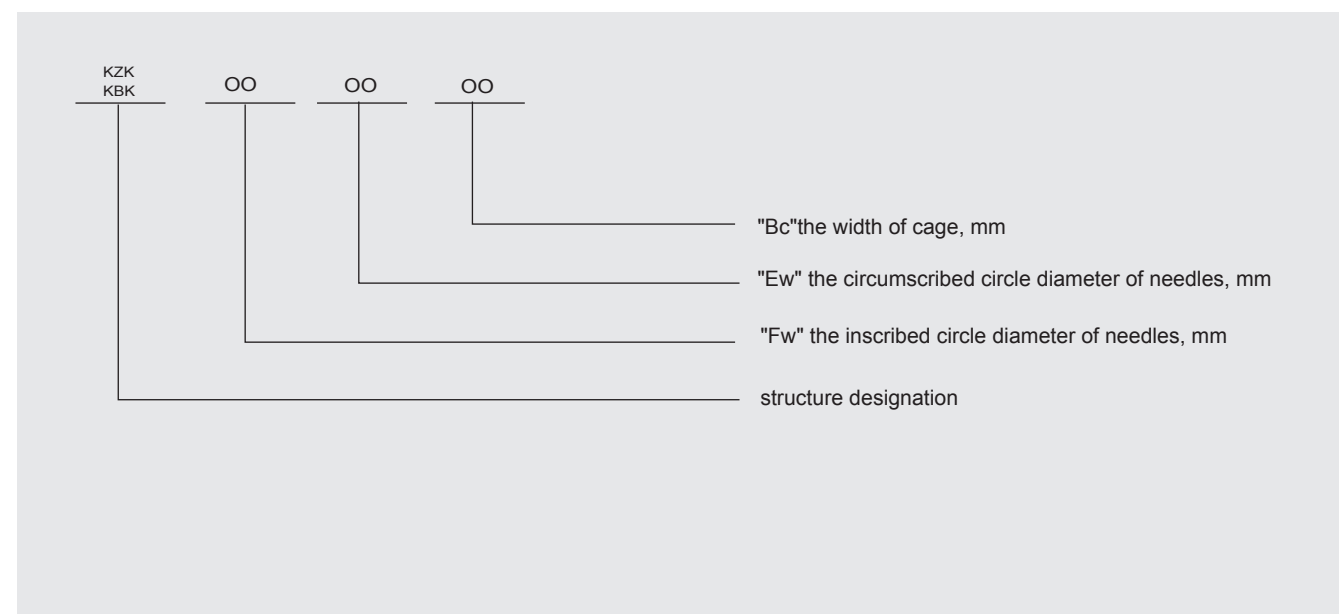
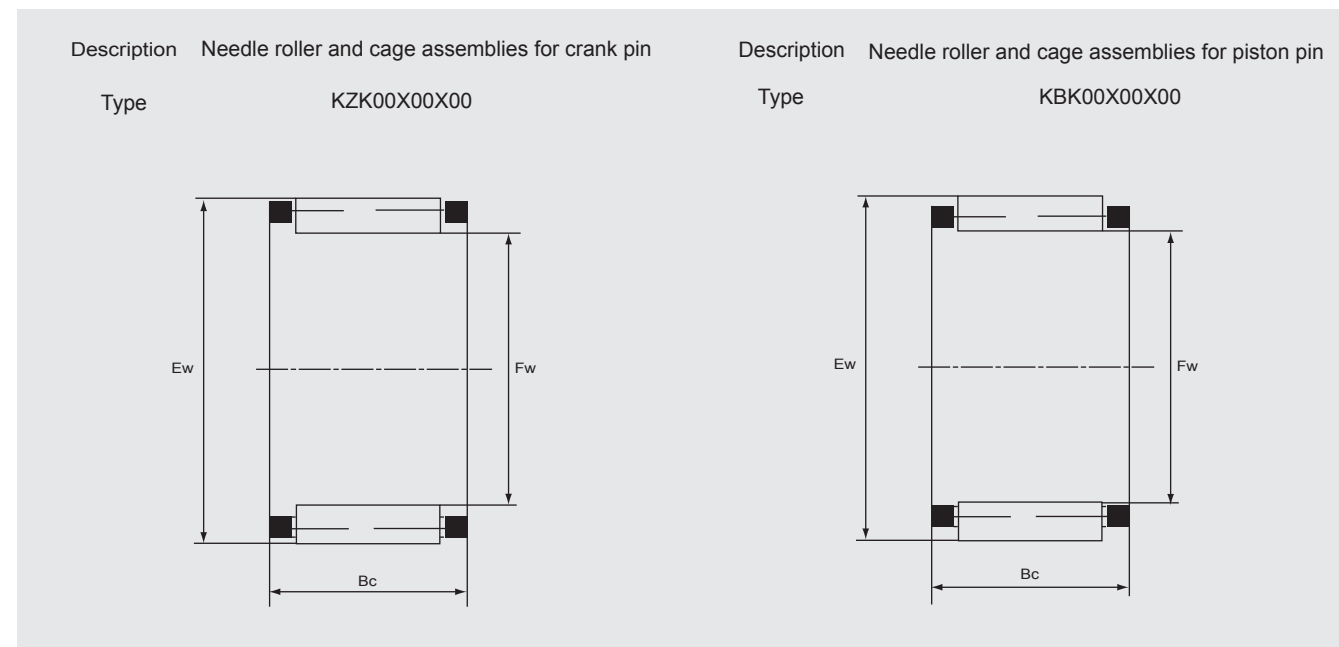
TN=plastic cage(working temperature:120°C continually;180°C shorly)
Tolerance of width:-0.20/-0.55mm. Special tolerance requirement shall be indicated on order
Limiting speed for grease:60% of the one for oil

Radial Needle And Cage Assemblies For Pin Of Connecting Rod

Products Scope	WD supply the following bearings
Series	Structure explanation
KZK	Needle roller and cage assemblies for crank pin
KBK	Needle roller and cage assemblies for piston pin

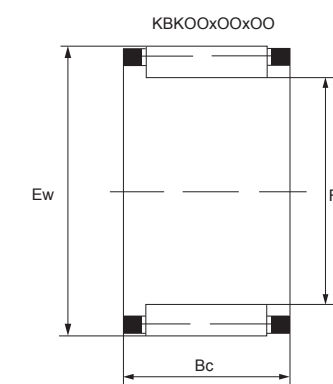
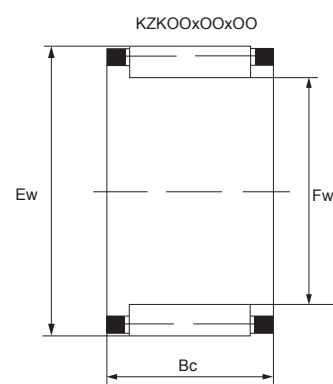
Radial needle roller and cage assemblies for pin of connecting rod is mainly used for engine, compressor & other pins of connecting rod.

The boundary dimentionts & structure can be according to the different application of customers.



Needle Roller and Cage Assemblies For Crank Pin Bearings

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions mm			Basic Load Rating N	
	Current	Original Code		Fw	Ew	Bc	Cr Dynamic	Cor Static
8	KZK8x12x8	19242/8	1.9	8	12	8	4700	4580
10	KZK10x14x10	29242/10	3.3	10	14	10	5000	51600
12	KZK12x15x13	49241/12	3.6	12	15	13	5300	7400
	KZK12x16x10	29242/12	3.5	12	16	10	6100	6900
	KZK12x16x11		3.7	12	16	11	6200	7100
	KZK12x17x10	19243/12	5	12	17	10	7020	7020
14	KZK12x18x10	19242/12	7.8	12	18	10	7400	7200
	KZK14x18x10	29241/14	4	14	18	10	7100	8500
	KZK14x19x10	19242/14	5.5	14	19	10	7300	7600
	KZK14x19x12		7.5	14	19	12	7460	7950
15	KZK14.4x20.4x10		6.5	14.4	20.4	10	8100	7800
	KZK15x19x9		5	15	19	9	6800	7100
	KZK15x19x10	29241/15	6	15	19	10	7200	8400
	KZK15x20x10	19242/15	7.5	15	20	10	7800	9100
16	KZK15x21x10		8.5	15	21	10	8400	10500
	KZK15x21x11		9.5	15	21	11	8500	10700
	KZK15.2x22.2x12		11.5	15.2	22.2	12	8600	11100
	KZK16x20x10	29241/16	5.8	16	20	10	8200	9200
17	KZK16x20x24	79241/16	6.3	16	20	24	8700	9400
	KZK16x21x10	19242/16	5.8	16	21	10	8800	9800
	KZK16x22x12	19243/16	9.5	16	22	12	11000	11900
	KZK16x22x14		11	16	22	14	13200	13930
18	KZK17x21x10	29241/17	6.7	17	21	10	7600	9000
	KZK17x23x11		9.5	17	23	11	8100	11300
	KZK18x22x10	29241/18	6.9	18	22	10	7600	9800
	KZK18x22x24		7.2	18	22	24	10100	17200
19	KZK18x24x11.6	19243/18	10	18	24	11.6	116000	13100
	KZK18x24x12	19243/18	10	18	24	12	11600	13100
	KZK18x24x13.3		12.4	18	24	13.3	9000	10700
	KZK18x24x13.5		12.4	18	24	13.5	9000	10700
20	KZK18x24x15	29243/18	14	18	24	15	13200	15500
	KZK19x25x16	19244/19K	13.9	19	25	16	12100	15500
	KZK19x28x14		20	19	28	14	12100	15000
	KZK20x25x16		12	20	25	16	9900	12300
22	KZK20x26x12	19243/20	9.6	20	26	12	10100	12500
	KZK20x26x14		12	20	26	14	12600	16700
	KZK20x26x17	9246/20	17	20	26	17	12700	17600
	KZK22x28x13		15	22	28	13	11900	16500
22	KZK22x28x14		16	22	28	14	12600	16800
	KZK22x28x15	29242/22	16.7	22	28	15	13500	18500
	KZK22x28x16	29243/22K	18	22	28	16	14400	20100
	KZK22x29x15		15.2	22	29	15	17800	21800
	KZK22x29x16	19244/22	19	22	29	16	17800	21800

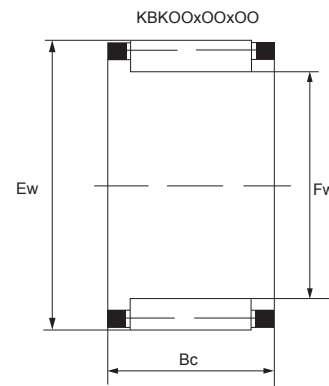


Needle Roller and Cage Assemblies For Crank Pin Bearings

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating	
	Current	Original Code		Fw	Ew	Bc	Cr Dynamic	Cor Static
22	KZK22x30x16	SZ-432	25.7	22	30	16	18700	22300
23	KZK23x29x13		12	23	29	13	10000	11300
	KZK23x30x14		19.4	23	30	14	93500	10100
	KZK23x30x16		22	23	30	16	9780	11800
23.1	KZK23.1x28.1x14	29242/23.1	12.9	23.1	28.1	14	10600	15800
24	KZK24x30x15		17	24	30	15	11200	13700
	KZK24x30x16		18	24	30	16	11200	13700
25	KZK25x30x28	69245/25	24	25	30	28	13300	15200
	KZK25x31x12	19243/25K	16	25	31	12	8700	8800
	KZK25x31x17	39243/25	23	25	31	17	9200	9750
	KZK25x31x20	49243/25	26	25	31	20	9700	10600
	KZK25x32x16	19244/25	22.7	25	32	16	18200	23100
	KZK25.1x30.1x14		14.1	25.1	30.1	14	13700	19000
26	KZK26x34x16	9284/26	25	26	34	16	11700	17500
28	KZK28x33x14		15.7	28	33	14	13200	21900
	KZK28x34x14		20	28	34	14	16500	20700
	KZK28x35x15		25	28	35	15	18000	22000
	KZK28x35x16	19243/28	27	28	35	16	18900	23000
	KZK28x36x16		29.1	28	36	16	19500	27000
	KZK28x38x13.6		40	28	38	13.6	17300	20300
30	KZK30x36x16		28.5	30	36	16	18900	22800
	KZK30x37x16	19243/30	29	30	37	16	21500	30500
	KZK30x38x16		34.4	30	38	16	22700	32600
	KZK30x38x18		38.8	30	38	18	26200	39600
32	KZK32x40x22	19244/32K	50	32	40	22	27800	39300
	KZK32x42x20		54	32	42	20	29000	41000
35	KZK35x42x20	29243/35	10	35	42	20	26000	40200
38	KZK38x46x20	19244/38	50	38	46	20	31100	43000
40	KZK40x48x17		50	40	48	17	29000	39000
	KZK40x48x20	19244/40	54	40	48	20	32500	51000

Tolerance of width:-0.20/-0.55mm. Special tolerance requirement shall be indicated on order

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating	
	Current	Original Code		Fw	Ew	Bc	Cr Dynamic	Cor Static
8	KBK8x11x10	39241/8	1.85	8	11	10	3500	4000
	KBK8x12x10	29242/8	2	8	12	10	3700	4100
9	KBK9x12x11.5		2.4	9	12	11.5	4200	4800
	KBK9x12x13	49241/9	2.75	9	12	13	4600	5800
	KBK9x12x14		3.5	9	12	14	4700	5900
	KBK9x13x12	39242/9	4.1	9	13	12	5300	5700
	KBK9x13x12.5		4.9	9	13	12.5	5300	5700
	KBK9x13x13	39242/9	5.1	9	13	13	5350	5600
10	KBK10x13x8	29241/10	2	10	13	8	4000	5000
	KBK10x13x10	39241/10	2.4	10	13	10	4200	5200
	KBK10x13x14.5	59241/10	5.1	10	13	14.5	5400	6600
	KBK10x13x16		5.7	10	13	16	6800	7700
	KBK10x14x10	29242/10	3.4	10	14	10	4400	4600
	KBK10x14x11		4	10	14	11	5200	5700
	KBK10x14x12		4.5	10	14	12	5400	6000
	KBK10x14x12.5		4.85	10	14	12.5	5600	6200
	KBK10x14x13	39242/10	5.4	10	14	13	5600	6200
11	KBK11x15x17		5	11	15	17	5200	7000
12	KBK12x15x13	49241/12	4.6	12	15	13	5500	7300
	KBK12x15x14.3		5.4	12	15	14.3	5800	7700
	KBK12x15x15	59241/12	5.6	12	15	15	5900	7800
	KBK12x15x16.5		6.2	12	15	16.6	6800	9900
	KBK12x15x17	69241/12	6.3	12	15	17	7000	10000
	KBK12x15x17.5		6.5	12	15	17.5	7000	10000
	KBK12x16x13	39242/12	6.7	12	16	13	6300	7600
	KBK12x16x15	149242/12KY	7.9	12	16	15	7500	9000
	KBK12x16x15.5		8.3	12	16	15.5	7600	10000
	KBK12x16x16	59241/12	8.5	12	16	16	7800	9300
	KBK12x16x17	59242/12	9.2	12	16	17	7900	9400
	KBK12x17x14		8	12	17	14	8000	9500
	KBK12x17x14.3		8.4	12	17	14.3	8000	9500
	KBK12x17x14.8		8.8	12	17	14.8	8300	9800
13	KBK13x17x14.5		7.1	13	17	14.5	8300	10200
	KBK13x17x17.5		8.6	13	17	17.5	9500	12100



Needle Roller and Cage Assemblies For Crank Piston Pin Bearings

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating	
	Current	Original Code		Fw	Ew	Bc	Cr Dynamic	Cor Static
				mm			N	
14	KBK14x18x10	29241/14	4.6	14	18	10	6260	7400
	KBK14x18x12		6.6	14	18	12	6380	7570
	KBK14x18x13	39241/14	7.6	14	18	13	7300	8700
	KBK14x18x14		6.33	14	18	14	7400	8800
	KBK14x18x14.5		8	14	18	14.5	7400	8800
	KBK14x18x15	49241/14	8.3	14	18	15	7600	8990
	KBK14x18x16.5		9.6	14	18	16.5	8800	9700
	KBK14x18x17	59241/14	10.1	14	18	17	8900	9800
	KBK14x18x20	69241/14	12	14	18	20	9000	10100
	KBK14x18x21		13	14	18	21	10500	12400
	KBK14x18x22		14	14	18	22	11100	13100
KBK14x19x17	49241/14K	10.3	14	19	17	11100	13100	
15	KBK15x19x10	29241/15Y	5	15	19	10	6500	8600
	KBK15x19x18		11	15	19	18	9900	11300
	KBK15x19x19		12	15	19	19	10100	12800
	KBK15x19x20	69241/15	12.9	15	19	20	11300	15500
	KBK15x20x24	SZ-433	18.6	15	20	24	14100	20000
16	KBK16x20x19		12	16	20	19	11700	16800
	KBK16x20x20	69241/16Y	13.4	16	20	20	12900	17600
	KBK16x20x21		14	16	20	21	12900	17600
	KBK16x20x22		15	16	20	22	13000	18700
	KBK16x21x19	59242/16	16	16	21	19	13000	18700
17.5	KBK17.5x22x16		9.3	17.5	22	16	11000	16300
18	KBK18x22x22		16.9	18	22	22	11500	17700
	KBK18x22x23.5		18	18	22	23.5	11900	19000
	KBK18x22x24		18.4	18	22	24	12000	20000
	KBK18x22x25		19.1	18	22	25	12700	20100
	KBK18x23x21		18	18	23	21	9900	10100
	KBK18x23x23	69241/18	20	18	23	23	10500	12000
	KBK18x24x20	49243/18	20	18	24	20	20000	25000
20	KBK20x24x30		22.1	20	24	30	14900	25500
	KBK20x25x22		19.5	20	25	22	15200	22300
	KBK20x25x25		23	20	25	25	17100	24000

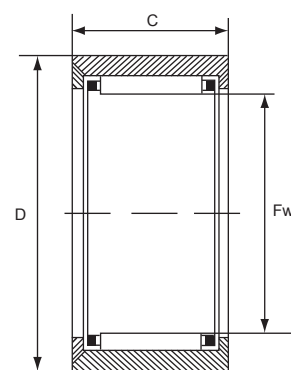
Tolerance of width:-0.20/-0.55mm. Special tolerance requirement shall be indicated on order

Heavy Duty Needle Roller Bearings

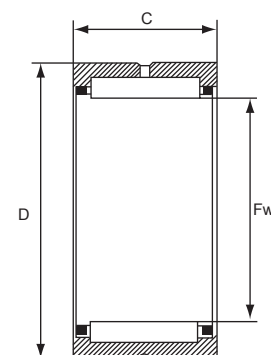
Products Scope	WD supply the following bearings
Series	Structure explanation
NK,NKS	Without inner ring, light series, heavy series
RNA49	Without inner ring, 49 dimension series
RNA69	Without inner ring double row needle roller bearing, 69 dimension series
RNA48	Without inner ring, 48 dimension series
NKI,NKIS	With inner ring, light series, heavy series
NA49	With inner ring, 49 dimension series
NA69	With inner ring double row needle roller bearing, 69 dimension series
NA48	With inner ring, 48 dimension series
RNA49...RS	Without inner ring, one side sealed, 49 dimension series
NA49...RS	Without inner ring, both side sealed, 49 dimension series
NA49...RS	With inner ring, one side sealed, 49 dimension series
NA9...2RS	With inner ring, both side sealed, 49 dimension series
NAO	Without slinger
RNAO	Without inner ring, without slinger for outer ring
RNAV	Without inner ring, full complement, 40 dimension series
NAV	With inner ring, full complement, 40 dimension series

Needle roller bearings are very low section bearings with relatively high load carrying capacity. They are available with many designs & dimension series. All needles are in G2 precision grade. Excepting the full complement series, needle roller bearings mainly use highly tough cages, which can precisely guide the needles.

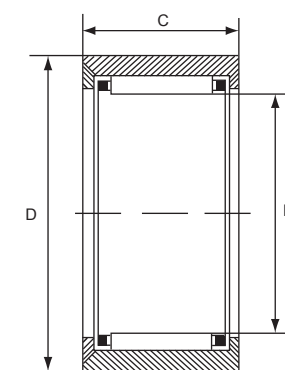




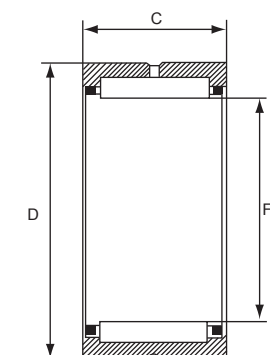
NK(Fw ≤ 10mm)
NKS(Fw ≤ 12mm)



NK(Fw ≥ 10mm) NKS(Fw ≥ 14mm)
RNA49, RNA69(Fw ≤ 35mm)



NK(Fw ≤ 10mm)
NKS(Fw ≤ 12mm)

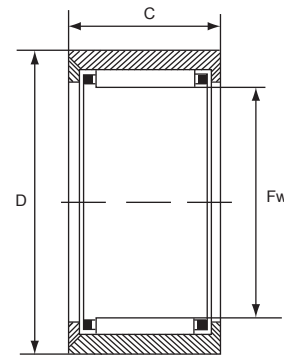


NK(Fw ≥ 10mm) NKS(Fw ≥ 14mm)
RNA49, RNA69(Fw ≤ 35mm)

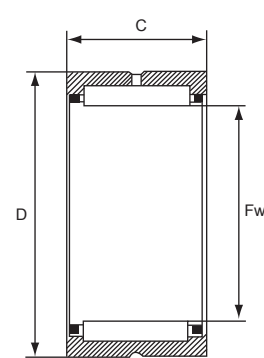
Heavy Duty Needle Roller Bearing Without Inner Ring

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm	
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static		
	N									
5	NK5/10 TN		2.9	5	10	10	2100	1400	36780	
8	NK8/12 TN		8.3	8	15	12	3050	3650	29112	
10	NK10/12 TN	4624097K	10	10	17	12	4750	5350	23500	
		5624097	16.6	10	17	15	4860	7100	23500	
12	NK12/12	644097	11.8	12	19	12	6050	6400	21640	
		5624098	15.4	12	19	15	6400	7100	21640	
12	NK12/16		16.8	12	19	16	8200	9800	21640	
14	NK14/16	4624900K	20.8	14	22	16	8260	9600	18322	
		NKS14	27	14	25	16	10400	10800	17652	
		RNA4900	24.4	14	22	13	8060	9000	18322	
		RNA6900	29.1	14	22	22	8281	11612	18322	
15	NK15/12	644800K	18.5	15	23	12	8600	10070	21004	
		RNA152815	31.7	15	28	15	13600	17200	100231	
		7948/15	16.1	15	22	12	8200	9800	8412	
		644302	18.2	15	25	12	10600	13500	17144	
16	NK16/16		20.8	16	24	16	9030	11900	15522	
			23.9	16	24	20	10400	16800	15522	
		624701	23.9	16	24	20	10400	16800	15522	
		RNA4901	16.6	16	24	13	6400	8900	15522	
		RNA6901	28.7	16	24	22	14000	18600	15522	
16	NKS16		30	16	28	14900	15000	20000		
17	NK17/16	644903K	21.5	17	25	16	9000	13500	14163	
18	NK18/20		30.5	18	26	20	10500	13800	13628	
20	NK20/16	644802	25.7	20	28	16	11500	13400	12716	
		624802	29.3	20	28	20	12400	21800	12716	
			20.8	20	26	16	9600	10800	9125	
			17.2	20	26	20	10500	11900	9125	
			46.8	20	32	20	20000	22000	18000	
			29.1	20	33	12	13000	17500	11124	
			6624101	24.3	20	28	25	11000	12900	12716
			RNA4902	4624902	20.5	20	28	13	10800	12800
	RNA6902	6634902	35.4	20	28	23	13000	25000	12716	
22	NK22/16	NK223016	29.2	22	30	16	13500	18000	11527	
		NK223516	34.6	22	35	16	18600	20800	12711	
		NKS22	60.2	22	35	20	21500	25000		

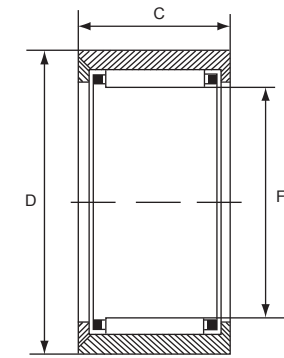
Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm	
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static		
	N									
22	RNA4903	4644903	20.7	22	30	13	12000	16800	16300	
		6634903	39.8	22	30	23	14000	19900	16300	
		624703	53	22	35	25	24500	28000	14187	
		634704L	42.5	22	30	30	17700	27100	16300	
		644704	27.4	22	28	16	10500	15050	15172	
		NK223516	49.4	22	35	16	18600	20800	16522	
23		634704KA	37.5	23	30	30	18960	29000	15711	
25	NK25/16	624904	30	25	33	16	12900	20400	15000	
		644804	38.4	25	33	20	16800	28500	15000	
		RNA4904	50.8	25	37	17	11912	16594	14060	
		RNA6904	6634904	97.7	25	37	30	26000	43000	14060
		NKS25	65	25	38	20	25800	31000	16300	
			624704	100.1	25	35	25	14900	22400	14060
25		644804K	63	25	33	30	18800	30500	14060	
26	NK26/16		30	26	34	16	15000	23000	16300	
			40	26	34	20	17000	30000	16300	
28	RNA283833		99.8	28	38	33	33000	57000	12000	
		F3833	99.8	28	38	33	33000	57000	12000	
		NKS28	80	28	42	20	25900	33500	14600	
30	NK30/20	644805	57.9	30	40	20	20600	32000	12066	
			95	30	40	30	31500	50000	14500	
		RNA4905	57	30	42	17	13452	20475	12066	
		RNA6905	6634905	106.5	30	42	30	26300	31750	12066
30		624905K	68	30	42	20	15400	24500	12066	
32	NK32/20	624705	75.4	32	42	20	17500	33500	12066	
		46449/32K	80	32	45	17	17400	30050	12000	
			100	32	47	22	31000	40000	12100	
			125	32	45	30	39500	61300	13100	
			644906	42	32	38	11	10750	30500	12000
32		644706	193	32	50	35	40500	63000	12000	
35	NK35/20	644806	70	35	45	20	13851	26900	12000	
		RNA4906	62.8	35	47	17	17000	30500	12000	
		RNA6906	6634906	116	35	47	30	35000	67000	12000
		644907	161	35	51	32	43500	71000	11680	



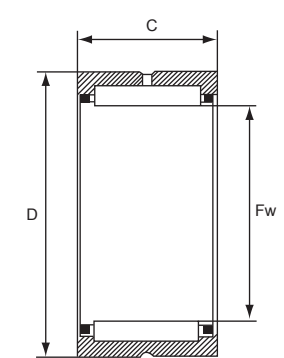
NK(Fw≤10mm)
NKS(Fw≤12mm)



NK(Fw≥10mm) NKS(Fw≥14mm)
RNA49, RNA69(Fw≤35mm)



NK(Fw≤10mm)
NKS(Fw≤12mm)

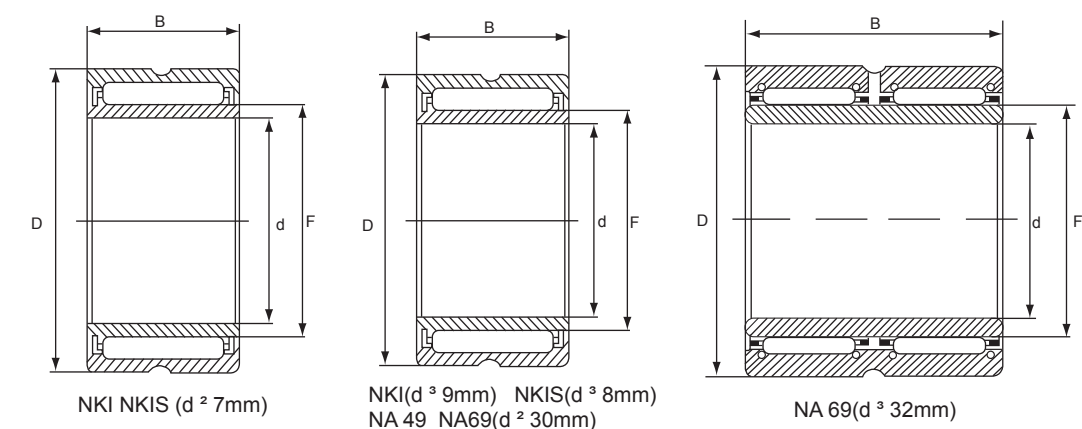
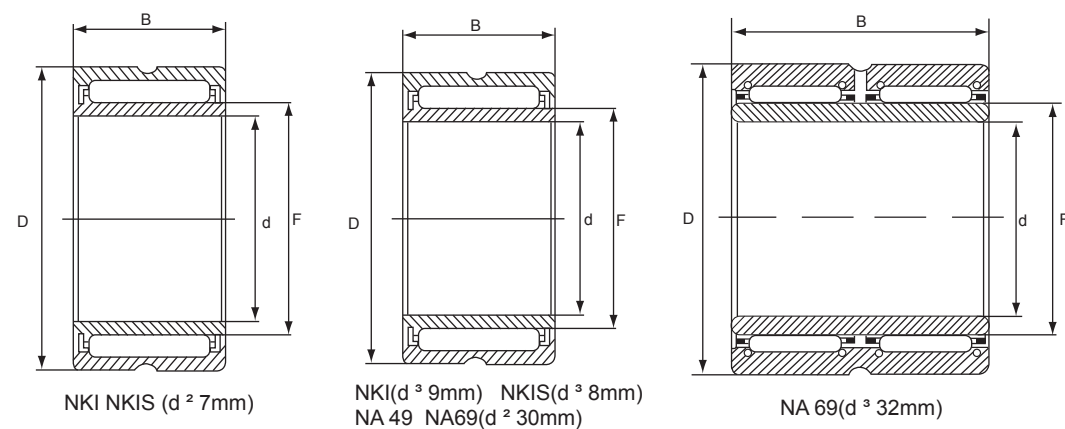


NK(Fw≥10mm) NKS(Fw≥14mm)
RNA49, RNA69(Fw≤35mm)

Heavy Duty Needle Roller Bearing Without Inner Ring

Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed	
	Current	Original Code		Fw	D	C	Cr	Dynamic Cor		Static
mm			g	mm					rpm	
37		624706	154	37	52	22	28500	45500	9027	
40	NK40/20		78.9	40	50	20	19600	43000	8881	
	NK40/30		120	40	50	30	22200	513500	8881	
	RNA69/32	66349/32	147	40	52	36	25500	68500	8881	
42	NK42/20		83	42	52	20	23900	45000	10000	
	NK42/30		125	42	52	30	27000	49000	10000	
	RNA4907	4624907	99.3	42	55	20	19800	41500	8710	
	RNA6907	6634907	160	42	55	36	26000	60500	8710	
		644708	148	42	65	22	31500	5100	8710	
43	NK43/20		84	43	53	20	25700	75000	10000	
	NK43/30		126	43	53	30	39000	75000	10000	
45	NK45/20	644808	81.5	45	55	20	19800	46500	7650	
		624708	75.3	45	55	22	20500	49600	7650	
		46449/38	80	45	58	20	21600	50500	7650	
48	RNA4908	4644908	132	48	62	22	31036	63873	8120	
	RNA6908	6634908	238	48	62	40	64000	112000	8120	
50	NK50/25		167	50	62	25	28000	67000	8140	
	NK50/35		236	50	62	35	32000	70100	8140	
		624708K	328	50	65	35	40000	62000	8140	
52	RNA4909	4624909	163	52	68	22	37000	69500	7625	
	RNA6909	6634909	308	52	68	40	61500	123500	7625	
55	NK55/25		167	55	68	25	30600	60800	7625	
		624709	210	55	68	25	36000	68000	7625	
58	RNA4910	4644910	161	58	72	22	41000	72000	7500	
	RNA4910	6634910	296	58	72	40	68000	1350000	7500	
60	NK60/25		154	60	72	25	39000	86000	7000	
63	RNA4911	4644911	241	63	80	25	50600	96580	6340	
	RNA6911	6634911	430	63	80	45	82560	172000	6340	
68	RNA4912	4644912	257	68	85	25	52800	91050	6100	
	RNA6912	6634912	436	68	85	45	88500	186000	6100	
72	RNA4913	4644913	300	72	90	25	57500	110500	6100	
	RNA6913	6634913	571	72	90	45	87600	194500	6100	
80	RNA4914	4644914	400	80	100	30	79000	154000	5130	
	RNA6914	6634914	815	80	100	54	121000	263000	5130	

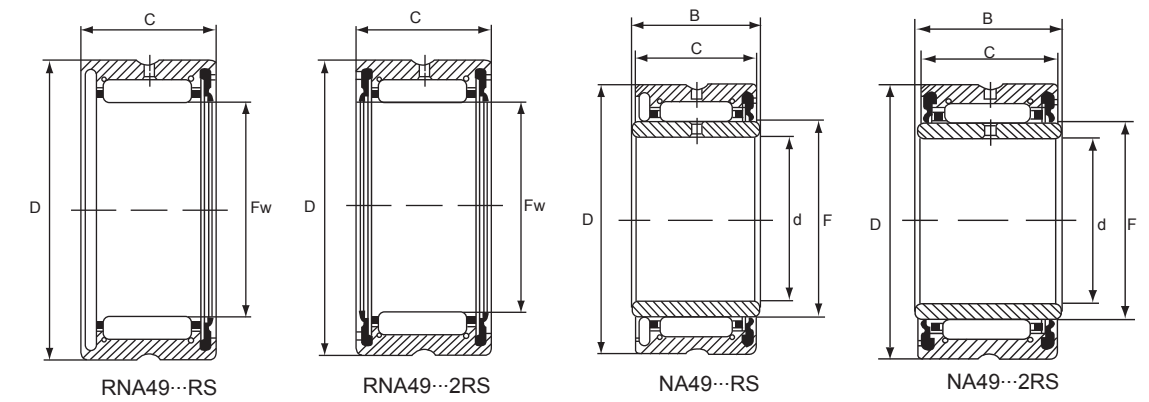
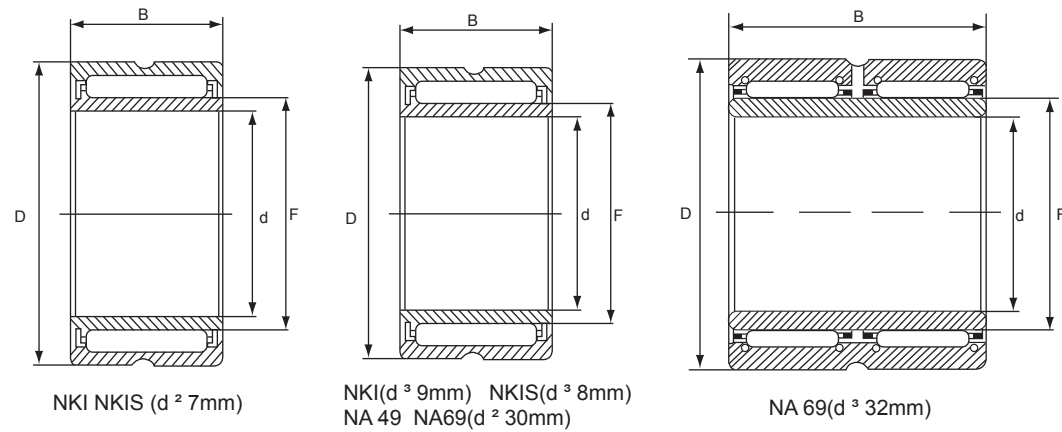
Shaft Diameter	Bearing Designation		Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed	
	Current	Original Code		Fw	D	C	Cr	Dynamic Cor		Static
mm			g	mm					rpm	
85	RNA4915	4644915	472	85	105	30	82000	158000	5130	
	RNA6915	6634915	923	85	105	54	128000	272000	5130	
90	RNA4916	4644916	496	90	110	30	81000	170500	4927	
	RNA6916	6634916	978	90	110	54	130500	280600	4927	
96		SG-421	496	96	115	29	73000	137000	4600	
100	RNA4917	4644917	608	100	120	35	98000	207000	4600	
	RNA6917	6634917	1112	100	120	63	161000	337000	4600	
105	RNA4918	4644918	713	105	125	35	98500	239000	4000	
	RNA6918	6634918	1250	105	125	63	174000	38000	4000	
110	RNA4919	4644919	685	110	130	35	112000	245000	3870	
	RNA6919	6634919	1325	110	130	63	196000	400000	3870	
115	RNA4920	4624920	1006	115	140	40	120000	264000	3710	
125	RNA4922	6634922	1200	125	150	40	124000	270000	3350	
135	RNA4924	4644924	1760	135	165	45	174000	386000	2920	
160	RNA4928	4644928	2350	160	190	50	200000	460000	2900	



Heavy Duty Needle Roller Bearing With Inner Ring

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions				Basic Load Rating			Limiting Speed rpm
	Current	Original Code		d	Fw	D	B	Cr Dynamic	Cor Static	Oil	
8	NK18		46	8	14	25	16	12400	11300	21500	
9	NK19/12		14.6	9	12	19	12	6200	7002	21700	
10	NK10/16		27.3	10	14	22	16	9808	10500	19650	
	NA4900	4524900	21	10	14	22	13	8006	9000	23700	
	NA6900	6534900	38.4	10	14	22	22	8281	11612	23700	
12	NA4901	4524901	25.1	12	16	24	13	5047	6352	20000	
	NKI12/20		39	12	16	24	20	14000	18400	21000	
	NA6901	6534901	44.5	12	16	24	22	11647	17052	20000	
	NKIS12		58	12	18	30	16	16000	17000	20000	
15	NKI15/16		38	15	19	27	16	8847	12853	19100	
	NKI15/20		45.7	15	19	27	20	12347	19053	19100	
	NA4902	4524902	32	15	20	28	13	6447	9053	18800	
	NA6902	6534902	61.6	15	20	28	23	13100	20900	18800	
	NKIS15		90	15	22	35	20	23500	24000	17000	
17	NK17/16		41.4	17	21	29	16	13000	18200	20000	
	NA4903	4544903	32.8	17	22	30	13	7010	10010	17000	
	NA6903	6534903	68.2	17	22	30	23	14400	24900	17000	
20	NKI20/16		48.5	20	24	32	16	10800	17000	16700	
	NA4904	4524904	70.2	20	25	37	17	11912	16594	16200	
	NKIS20		119	20	28	42	20	16500	35500	14000	
22	NKI22/16		50	22	25	34	16	8721	15340	16200	
	NA49/22		76	22	28	39	17	12996	19175	14360	
	NA69/22		130	22	28	39	30	21375	35750	14360	
25	NKI25/30		115	25	29	38	30	31500	56000	14000	
	NA4905	4524905	76	25	30	42	17	13452	20475	13832	
	NA6905	6534905	138	25	30	42	30	19300	31750	13832	
	NKIS25		160	25	32	47	22	32000	55000	12500	
		F-208277		25	32	47	22				
28	NA49/28	45449/28	90.7	28	32	45	17	13900	20100	13832	
	NA69/28		170	28	32	45	30	22400	36850	13832	
30	NKI28/20			28	32	42	20				
	NKI30/20			30	35	45	20				
	NKI30/30			30	35	45	30				

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions				Basic Load Rating			Limiting Speed rpm
	Current	Original Code		d	Fw	D	B	Cr Dynamic	Cor Static	Oil	
32	NKI32/20			32	37	47	20				
		TAFI324720		32	37	47	20				
	NA49/32	45449/32	150	32	40	52	20	19000	32600	11134	
	NA69/32	66349/32	272	32	40	52	36	25500	68500	11134	
35	NKI35/30		165	35	40	50	30	22200	51350	11134	
	NA4907	4524907	151	35	42	55	20	19800	41500	11134	
	NA6907	6534907	301	35	42	55	36	26000	60500	11134	
	NKIS35		210	35	43	58	22	33000	56000	9500	
40	NKI40/20		124	40	45	55	20	22000	48000	10127	
	NKI40/30		184	40	45	55	30	35000	86000	10127	
	NA4908	4544908	123	40	48	62	22	31036	63873	8567	
	NA6908	6534908	401	40	48	62	40	64000	112000	8567	
42	NKI42/20		138	42	47	57	20	26000	52500	9500	
45	NKI45/25		218	45	50	62	25	36000	70000	8567	
	NKI45/35		289	45	50	62	35	41500	102000	8567	
	NA4909	4544909	260	45	50	68	22	37000	96500	8052	
	NA6909	6534909	479	45	50	68	40	61500	123500	80523	
	NKIS45		306	45	55	72	22	43000	71000	7500	
50	NKI50/25	TAFI506825	262	50	55	68	25	32000	78000	7890	
	NA4910	4544910	264	50	58	72	22	41000	72000	7526	
	NA6910	6534910	457	50	58	72	40	68000	135000	7526	
	NKIS50		510	50	60	80	28	60000	95000	7200	
		NKI50/35	TAFI506835		50	55	68	35			
55	NKI55/35		357	55	60	72	35	48000	126800	7256	
	NA4911	4544911	386	55	63	80	25	50600	96580	7156	
	NA6911	6534911	760	55	63	80	45	82560	172000	7156	
60	NKI60/25		388	60	68	82	25	35500	85000	7156	
	NA4912	4544912	412	60	68	85	25	52800	110500	6022	
	NA6912	6534912	798	60	68	85	45	88500	186000	6022	
	NKIS60		550	60	70	90	28	65000	110000	6300	
65	NA4913	4544913	435	65	72	90	25	57500	110500	6022	
	NA6913	6534913	821	65	72	90	45	87600	194500	6022	
	NKI65/25			65	73	90	25				
70	NA4914	4544914	712	70	80	100	30	79000	15400	5111	



Heavy Duty Needle Roller Bearing With Inner Ring

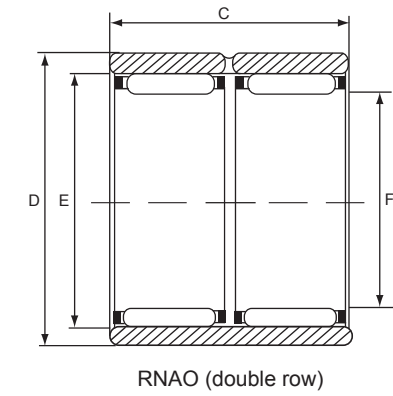
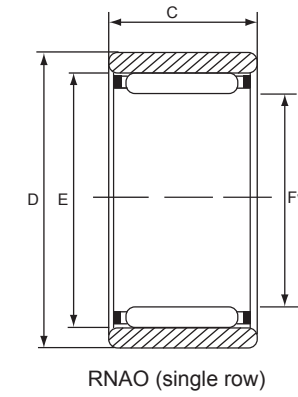
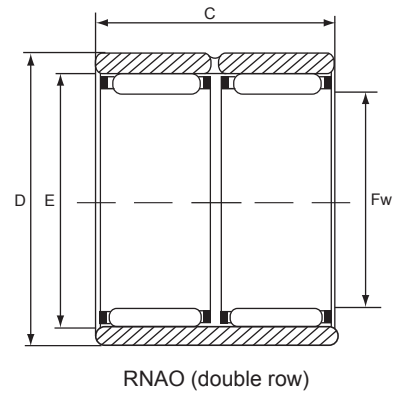
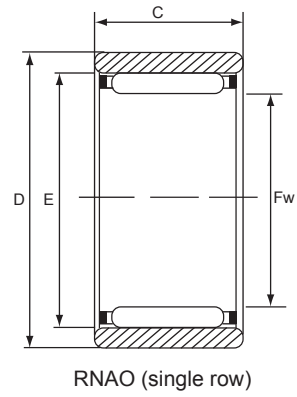
Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions				Basic Load Rating			Limiting Speed rpm	
	Current	Original Code		d	Fw	D	B	Cr	Dynamic	Cor		Static
70	NA6914	6534914	1326	70	80	100	54	121000	263000	5111		
	NKI170/35			70	80	95	35					
75	NA4915	4544915	765	75	85	105	30	82000	158000	5111		
	NA6915	6534915		75	85	105	54					
80	NA4916	4544916	870	80	90	110	30	81000	170500	5111		
	NA6916	6534916		80	90	110	54					
85	NA4917	4544917	1250	85	100	120	35	111000	237000	4600		
	NA6917	6534917		85	100	120	63					
90	NA4918	4544918	1312	90	105	125	35	114000	250000	4400		
	NA6918	6534918		90	105	125	63					
95	NA4619	4544919	1371	95	110	130	35	116000	260000	4200		
	NA6919	6534919		95	110	130	63					
100	NA4920	4544920	1900	100	115	140	40	120000	274000	4000		
	NKI100/30			100	110	130	30					
110	NA4922	4544922	2070	110	125	150	40	132000	290000	3700		
	NA4822			110	120	140	30					
120	NA4924	4544924	2860	120	135	165	45	181000	890000	3400		
	NA4824			120	130	150	30					
130	NA4926	4544926	3900	130	150	180	50	223000	470000	3100		
	NA4826			130	145	165	35					
140	NA4928	4544928	4150	140	160	190	50	209000	500000	2900		
	NA4828			140	155	175	35					

TN=plastic cage(working temperature:120°C continually:180°C shorty)
Limiting speed for grease:60% of the one for oil

Sealed Heavy Duty Needle Roller Bearing With Inner Or Without Inner Ring

Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions					Basic Load Rating			Limiting Speed rpm	
	Sealed on one side Current	Sealed on both sides Original Code		d	Fw F	D	C	B	Cr	Dynamic	Cor		Static
without inner ring													
14	RNA4900 RS	RNA4900.2 RS	16	14	22	13		4560	4660	13000			
16	RNA4901 RS	RNA4904.2 RS	18	16	24	13		4950	5800	12000			
20	RNA4902 RS	RNA4902.2 RS	21.5	20	28	13		5980	9500	10000			
22	RNA4903 RS	RNA4903.2 RS	23	22	30	13		6050	10100	9000			
25	RNA4904 RS	RNA4904.2 RS	56	25	37	17		14900	17500	7500			
30	RNA4905 RS	RNA4905.2 RS	60	30	42	17		16300	21500	6500			
35	RNA4906 RS	RNA4906.2 RS	69	35	47	17		20050	24900	5500			
42	RNA4907 RS	RNA4907.2 RS	107	42	55	20		22500	37000	4800			
48	RNA4908 RS	RNA4908.2 RS	154	48	62	22		33050	50900	4200			
52	RNA4909 RS	RNA4909.2 RS	157	52	68	22		34800	56800	3900			
58	RNA4910 RS	RNA4910.2 RS	160	58	72	22		37800	61500	3500			
with inner ring													
10	NA4900 RS	NA4900.2 RS	24.5	10	14	22	13	14	4560	4660	13000		
12	NA4901 RS	NA4901.2 RS	27.5	12	16	24	13	14	4950	4660	12000		
15	NA4902 RS	NA4902.2 RS	37	15	20	28	13	14	5950	9500	10000		
17	NA4903 RS	NA4903.2 RS	40	17	22	30	13	14	6050	10100	9000		
20	NA4904 RS	NA4904.2 RS	80	20	25	37	17	18	14900	17500	7500		
25	NA4905 RS	NA4905.2 RS	89.5	25	30	42	17	18	16300	21500	6500		
30	NA4906 RS	NA4906.2 RS	104	30	35	47	17	18	20050	24900	5500		
35	NA4907 RS	NA4907.2 RS	175	35	42	55	20	21	22500	37000	4800		
40	NA4908 RS	NA4908.2 RS	252	40	48	62	22	23	33050	50900	4200		
45	NA4909 RS	NA4909.2 RS	290	45	52	68	22	23	34800	56800	3900		
50	NA4910 RS	NA4910.2 RS	295	50	58	72	22	23	37800	61500	3500		

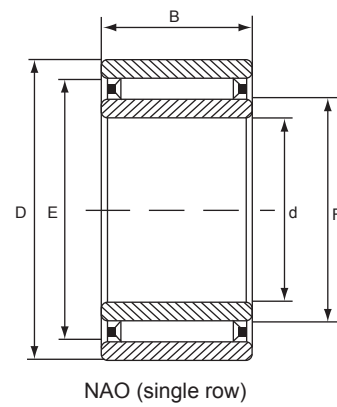
TN=plastic cage(working temperature:120°C continually:180°C shorty)
Limiting speed for grease:60% of the one for oil



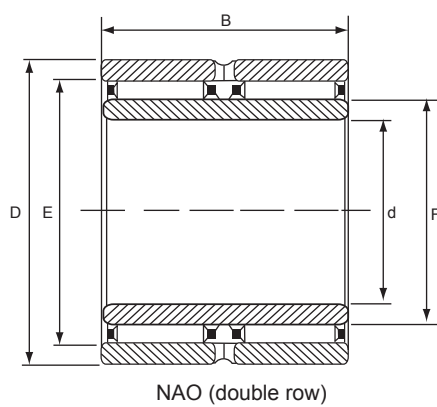
Heavy Duty Needle Roller Bearing Without Ribs

Shaft Diameter	Bearing Designation	Mass Approx	Boundary Dimensions				Basic Load Rating		Limiting Speed
			Fw	D	C	E	Cr Dynamic	Cor Static	Oil
mm		g	mm				N		rpm
5	RNAO5x10x8	2.8	5	10	8	8	2050	1720	27800
6	RNAO6x13x8 TN	5	6	13	8	9	2300	1880	30000
7	RNAO7x14x8 TN	5	7	14	8	10	2250	1950	31000
8	RNAO8x15x10 TN	7.8	8	15	10	11	3050	3820	28000
10	RNAO10x17x10 TN	9.1	10	17	10	13	3960	4500	20000
12	RNAO12x19x13.5 TN	14	12	19	13.5	15	5400	7500	22000
	RNAO12x22x12 TN	17.9	12	22	12	18	8950	8000	23000
15	RNAO15x23x13	18.5	15	23	13	19	6500	8900	21100
16	RNAO16x24x13	19.8	16	24	13	20	6200	8400	21100
	RNAO16x24x20	29.7	16	24	20	20	10200	14800	21100
	RNAO16x28x12	29.7	16	28	12	22	9500	10500	18000
17	RNAO17x25x13	21	17	25	13	21	9400	11600	18000
18	RNAO18x30x24	65	18	30	24	24	12100	16500	17600
20	RNAO20x28x13	24.5	20	28	13	24	7800	9600	16000
	RNAO20x28x26	48.1	20	28	26	24	10080	20500	16000
	RNAO20x32x12	36.6	20	32	12	26	10100	14100	16000
22	RNAO22x35x13	25.2	22	35	13	26	9200	12000	14000
	RNAO25x35x16	58	22	35	16	29	10000	15500	16000
25	RNAO25x35x17	49	25	35	17	29	10900	22000	15020
	RNAO25x35x26	67.8	25	35	26	29	12400	25000	15020
	RNAO25x37x16	59.2	25	37	16	32	15000	20900	12000
	RNAO25x37x32	108	25	37	32	32	25000	38900	12000
26	RNAO26x39x13	59	26	39	13	30	87600	10200	15020
30	RNAO30x40x17	59	30	40	17	35	12600	24000	10050
	RNAO30x40x26	92	30	40	26	35	16000	32000	10050
	RNAO30x42x16	49.9	30	42	16	37	13000	23200	10050
	RNAO30x42x32	126	30	42	32	37	29500	47000	10050
35	RNAO35x45x13	50	35	45	13	40	10200	22000	10000
	RNAO35x45x17	60	35	45	17	40	17800	24500	10000
	RNAO35x45x26	88	35	45	26	40	20500	40000	10000
	RNAO35x47x16	75	35	47	16	42	20400	31500	10000
	RNAO35x47x18	86	38	47	18	42	22500	35000	10000
37	RNAO37x52x18	149	35	47	32	42	32000	55000	10000
37	RNAO37x52x18	115	37	52	18	44	118900	35500	8800

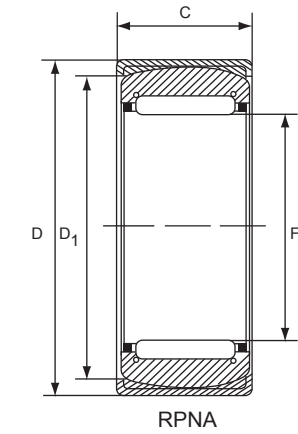
Shaft Diameter	Bearing Designation	Mass Approx	Boundary Dimensions				Basic Load Rating		Limiting Speed
			Fw	D	C	E	Cr Dynamic	Cor Static	Oil
mm		g	mm				N		rpm
40	RNAO40x50x17	72	40	50	17	45	15400	29800	8800
	RNAO40x50x34	151	40	50	34	45	25186	57200	11000
	RNAO40x55x20	144	40	55	20	47	26300	46100	10000
	RNAO40x55x40	268	40	55	40	48	54700	87000	10000
42	RNAO42x57x20	132	42	57	20	50	26720	43700	10000
45	RNAO45x55x17	82.5	45	55	17	50	18000	36000	9000
	RNAO45x62x40	368	45	62	40	53	42200	85050	9000
50	RNAO50x62x20	140	50	62	20	55	20690	46860	7500
	RNAO50x65x20	162	50	65	20	58	23200	40540	7000
	RNAO50x65x40	321	50	65	40	58	39040	80600	7000
55	RNAO55x68x20	157	55	68	20	60	22480	52074	6500
60	RNAO60x78x20	253	60	78	20	65	28500	65300	5550
	RNAO60x78x40	368	60	78	40	68	45000	99000	5550
65	RNAO65x85x30	394	65	85	30	73	37000	90900	4900
70	RNAO70x90x30	488	70	90	30	78	40010	10500	5100
80	RNAO80x100x30	527	80	100	30	88	52000	139000	4890
85	RNAO85x105x25	449	85	105	25	93	48600	106000	4900
90	RNAO90x105x26	323	90	105	26	98	42519	129000	4900
	RNAO90x110x30	600	90	110	30	98	58100	152000	4900
100	RNAO100x120x30	671	100	120	30	108	50000	158000	3100



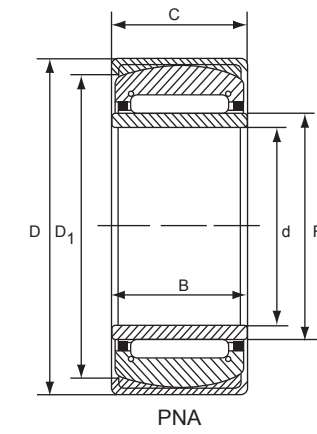
NAO (single row)



NAO (double row)



RPNA



PNA

Heavy Duty Needle Roller Bearing Without Ribs

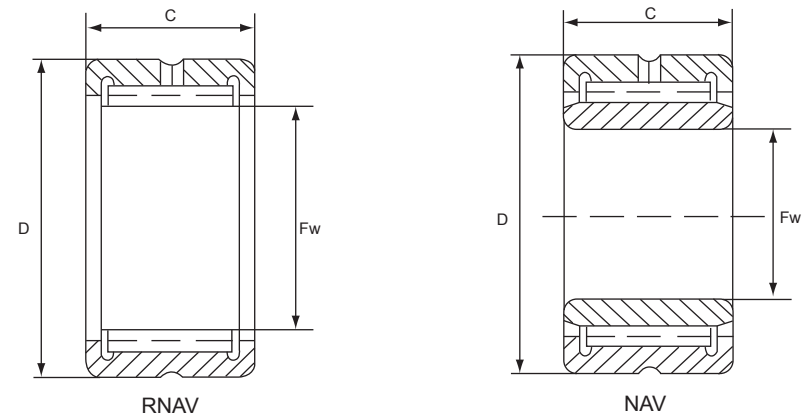
Shaft Diameter	Bearing Designation	Mass Approx	Boundary Dimensions					Basic Load Rating			Limiting Speed
			d	D	B	F	E	Cr Dynamic	Cor Static	Oil	
mm		g	mm					N			rpm
6	NAO6x17x10 TN	13	6	17	10	10	13	3950	5000	17080	
9	NAO9x22x12 TN	22	9	22	12	12	18	8800	7900	12090	
12	NAO12x24x13	29	12	24	13	16	20	8000	16000	15020	
	NAO12x24x20	43	12	24	20	16	20	10300	16800	20000	
	NAO12x28x12	38.6	12	28	12	16	22	9850	10500	19000	
15	NAO15x28x13	27.8	15	28	13	20	24	7800	10300	20600	
	NAO15x32x12	48.1	15	32	12	20	26	10400	14020	20000	
17	NAO17x30x13	39	17	30	13	22	26	9860	15000	20000	
	NAO17x35x16	70	17	35	16	22	29	16800	20050	10090	
20	NAO20x35x17	72	20	35	17	25	29	12600	20200	16000	
	NAO20x37x16	81	20	37	16	25	32	10000	18000	12700	
25	NAO25x40x17	78.9	25	40	17	30	35	10600	24000	10500	
	NAO25x42x16	83	25	42	16	30	37	13100	23500	10500	
	NAO25x42x32	189	25	42	32	30	37	26500	47000	10500	
30	NAO30x45x13	73	30	45	13	35	40	11200	25000	11207	
	NAO30x45x17	100	30	45	17	35	40	12800	28500	11207	
	NAO30x45x26	150	30	45	26	35	40	17500	32900	11207	
	NAO30x47x16	99.8	30	47	16	35	42	14400	17500	11207	
	NAO30x47x18	109	30	47	18	35	42	20000	33000	11207	
	NAO30x52x18	172	30	52	18	37	44	18000	25500	10900	
35	NAO35x50x17	103	35	50	17	40	45	20800	40506	10900	
	NAO35x55x20	175	35	55	20	40	47	28500	41000	10000	
	NAO35x57x20.5	206	35	57	20.5	42	50	26000	49000	10000	
40	NAO40x55x17	118	40	55	17	45	50	12500	36000	9000	
	NAO40x65x20	269	40	65	20	50	58	35000	61200	8000	
50	NAO50x68x20	219	50	68	20	55	60	24500	62000	7500	
	NAO50x78x20	400	50	78	20	60	68	33500	65000	6500	
70	NAO70x100x30	829	70	100	30	80	88	52600	129000	4000	
75	NAO75x105x25	676	75	105	25	85	93	42000	106000	3900	
80	NAO80x110x30	892	80	110	30	90	98	49020	112000	4200	
90	NAO90x120x30	1004	90	120	30	100	108	51000	128000	3900	

TN=plastic cage(working temperature:120°C continually;180°C shorty)
Limiting speed for grease:60% of the one for oil

Aligning Heavy Duty Needle Roller Bearing With Inner Or Without Inner Ring

Shaft Diameter	Bearing Designation	Mass Approx	Boundary Dimensions					Basic Load Rating			Limiting Speed
			d	Fw	D	B	D	S	Cr Dynamic	Cor Static	
mm		g	mm					N			rpm
without inner ring											
15	RPNA15/28	32	15	28	12	24.5	4660	5700	24000		
18	RPNA18/32	52	18	32	16	27	9800	14000	24000		
20	RPNA20/35	62	20	35	16	30.5	10500	15500	21000		
25	RPNA25/42	109	25	42	20	36.5	14900	27800	18000		
28	RPNA28/44	112	28	44	20	38.5	20500	31900	16000		
30	RPNA30/47	125	30	47	20	42	20980	33500	15000		
35	RPNA35/52	131	35	52	20	47.5	21500	39600	13000		
40	RPNA40/55	141	40	55	20	50.5	24000	44700	11000		
45	RPNA45/62	176	45	62	20	58	24800	50900	10000		
with inner ring											
12	PNA12/28	37	12	15	28	12	24.5	0.5	4660	5700	24000
15	PNA15/32	62	15	18	32	16	27	0.5	9800	14000	22000
17	PNA17/35	73	17	20	35	16	30.5	0.5	10500	15500	21000
20	PNA20/42	136	20	25	42	20	36.5	0.5	14900	27800	18000
22	PNA22/44	145	22	28	44	20	38.5	0.5	20500	31900	16000
25	PNA25/47	157	25	30	47	20	42	0.5	20908	33500	15000
30	PNA30/52	181	30	35	52	20	47.5	0.5	21500	39600	13000
35	PNA35/55	177	35	40	55	20	50.5	0.5	24000	44700	11000
40	PNA40/62	227	40	45	62	20	58	0.5	24800	50900	10000

"S": the permit displacement in axial direction of ring relative to outer ring
Limiting speed for grease:60% of the one for oil



Heavy Duty Complement Needle Roller Bearings

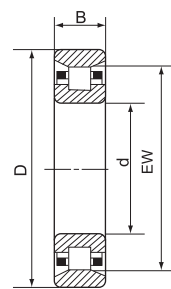
Shaft Diameter mm	Bearing Designation		Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
	Current	Original Code		Fw	D	C	Cr Dynamic	Cor Static	
21.87	RNAV4002	4084102	45	21.87	32	17	10800	29800	4500
24.3	RNAV4003	4084103	62	24.3	35	18	17900	37900	4300
28.7	RNAV4004	4084104	114	28.7	42	22	28150	60900	3900
33.5	RNAV4005	4084105	129	33.5	47	22	33800	70800	3700
40.1	RNAV4006	4084106	193	40.1	55	25	49900	96500	3500
45.9	RNAV4007	4084107	259	45.9	62	27	47600	122800	3100
51.6	RNAV4008	4084108	304	51.6	68	28	49900	137900	2700
57.4	RNAV4009	4084109	390	57.4	75	30	52500	153500	2600
62.1	RNAV4010	4084110	426	62.1	80	30	55700	166000	2500
69.8	RNAV4011	4084111	645	69.8	90	35	68500	225800	2300
74.6	RNAV4012	4084112	677	74.6	95	35	75400	239000	2100
80.3	RNAV4013	4084113	692	80.3	100	35	79500	256900	1900
88	RNAV4014	4084114	950	88	110	40	98800	354900	1700
92.7	RNAV4015	4084115	1000	92.7	115	45	101800	372900	1600
100.3	RNAV4016	4084116	1400	100.3	125	45	102900	373500	1500
104.8	RNAV4017	4084117	1540	104.8	130	45	103800	374800	1400
15	NAV4002	4074102	76	15	32	17	10800	29800	4500
17	NAV4003	4074103	94	17	35	18	1700	37900	4300
20	NAV4004	4074104	170	20	42	22	28150	60900	3900
25	NAV4005	4074105	195	25	47	22	33800	70800	3700
30	NAV4006	4074106	299	30	55	25	49900	96500	3500
35	NAV4007	4074107	402	35	62	27	47600	122800	3100
40	NAV4008	4074108	482	40	68	28	49900	137900	2700
45	NAV4009	4074109	617	45	75	30	52500	153500	2600
50	NAV4010	4074110	669	50	80	30	55700	166000	2500
55	NAV4011	4074111	1030	55	90	35	68500	225800	2300
60	NAV4012	4074112	1087	60	95	35	75400	239000	2100
65	NAV4013	4074113	1156	65	100	35	79500	256900	1900
70	NAV4014	4074114	1666	70	110	40	98800	354900	1700
75	NAV4015	4074115	1762	75	115	45	101800	372900	1600
80	NAV4016	4074116	2450	80	125	45	102900	373500	1500
85	NAV4017	4074117	2500	85	130	45	103800	374800	1400
17		74703	126	17	35	24.5	8700	10800	4200
15		74802	100	15	36	24.5	8900	11200	4400

Long Cylindrical Roller and Cage Assemblies

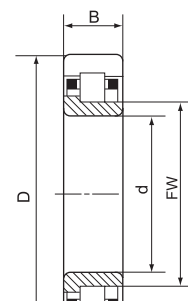
Current	Original Code	Boundary Dimensions		
		Fw	Ew	B
64903		19.051	28.588	36.75
64904		19.051	28.588	43.25
64904K	864904	20.612	33.325	35
KNL20x30.02x18	64704	20	30.02	18
KNL25x38x24.7	64805	25	38	24.7
64905		25.4	41.288	60.4
64706		29.975	42	44.1

Thrust needle roller and cage assemblies thrust washers

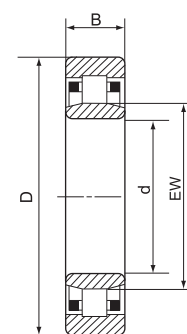
Current	Original Code	Boundary Dimensions		
		Dc1	Dc	Dw
889106	AXK3047	30	47	2
AS3047		30	47	1
889107	AXK3552	35	52	2



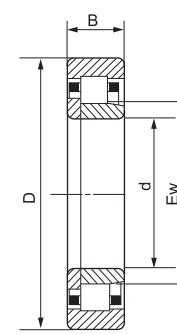
N 0000



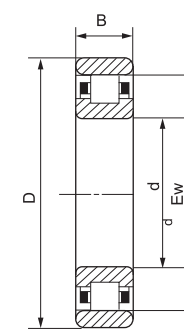
NJ 0000



NU 0000



NUP 0000

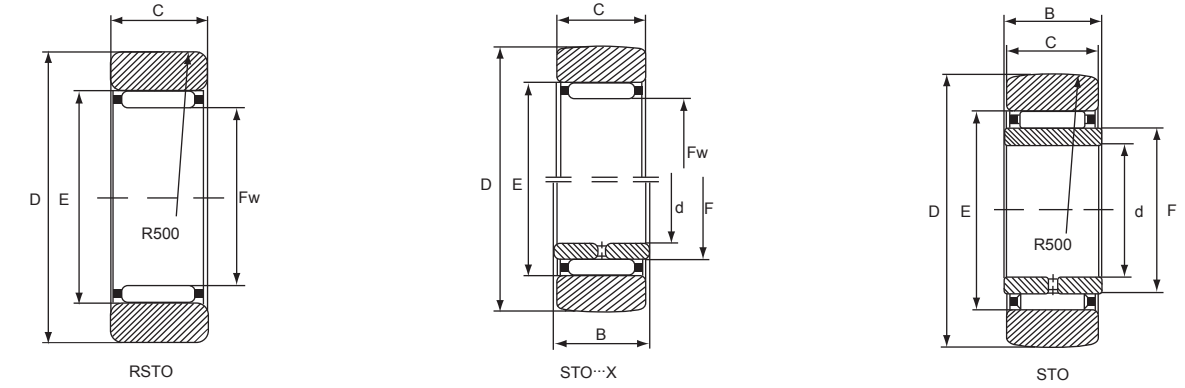
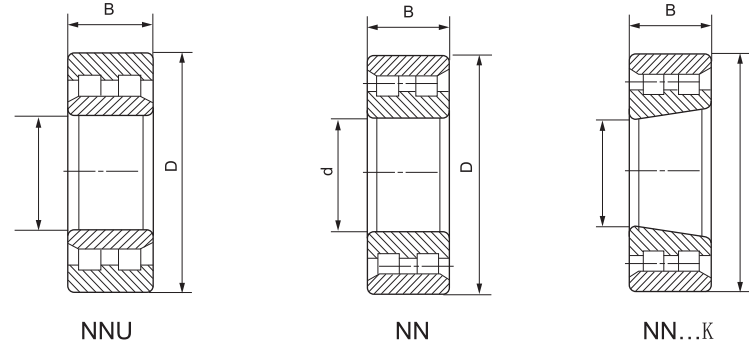


NF 0000

Cylindrical Roller Bearings

Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)
N202	15X35X11	0.046						
N203	17X40X12	0.066						
N204	20X47X14	0.11	N304	20X52X15	0.15			
N205	25X52X15	0.13	N305	25X62X17	0.24			
N206	30X62X16	0.20	N306	30X72X19	0.36	N406	30X90X23	0.753
N207	35X72X17	0.30	N307	35X80X21	0.48	N407	35X100X25	1.02
N208	40X80X18	0.37	N308	40X90X23	0.64	N408	40X110X27	1.30
N209	45X85X19	0.43	N309	45X100X25	0.88	N409	45X110X27	1.64
N210	50X90X20	0.48	N310	50X110X27	1.15	N410	50X130X31	2.01
N211	55X100X21	0.66	N311	55X120X29	1.45	N411	55X140X33	2.51
N212	60X110X22	0.81	N312	60X130X31	1.80	N412	60X150X35	3.02
N213	65X120X23	1.05	N313	65X140X33	2.25	N413	65X160X37	3.58
N214	70X125X24	1.15	N314	70X150X35	2.75	N414	70X180X42	5.26
N215	75X130X25	1.25	N315	75X160X37	3.30	N415	75X190X45	6.25
N216	80X140X26	1.50	N316	80X170X39	3.90	N416	80X200X48	7.28
N217	85X150X28	1.90	N317	85X180X41	4.70			
N218	90X160X30	2.35	N318	90X190X43	5.40			
N219	95X170X32	2.85	N319	95X200X45	6.25			
N220	100X180X34	3.45						
N221	105X190X36	3.95						
N222	110X200X38	4.80						

Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)
NU202	15X35X11	0.047						
NU203	17X40X12	0.068						
NU204	20X47X14	0.11	NU304	20X52X15	0.15			
NU205	25X52X15	0.13	NU305	25X62X17	0.24			
NU206	30X62X16	0.20	NU306	30X72X19	0.36	NU406	30X90X23	0.75
NU207	35X72X17	0.30	NU307	35X80X21	0.48	NU407	35X100X25	1.00
NU208	40X80X18	0.37	NU308	40X90X23	0.65	NU408	40X110X27	1.30
NU209	45X85X19	0.43	NU309	45X100X25	0.90	NU409	45X120X29	1.65
NU210	50X90X20	0.48	NU310	50X110X27	1.15	NU410	50X130X31	2.00
NU211	55X100X21	0.66	NU311	55X120X29	1.45	NU411	55X140X33	2.50
NU212	60X110X22	0.81	NU312	60X130X31	1.80	NU12	60X150X35	3.00
NU213	65X120X23	1.05	NU313	65X140X33	2.25	NU13	65X150X37	3.60
NU214	70X125X24	1.15	NU314	70X150X35	2.75	NU14	70X180X42	5.25
NU215	75X130X25	1.25	NU315	75X160X37	3.30	NU15	75X190X45	6.25
NU216	80X140X26	1.50	NU316	80X170X39	3.95	NU16	80X200X48	7.30
NU217	85X150X28	1.90	NU317	85X180X41	4.70			
NU218	90X160X30	2.35	NU318	90X190X43	5.45			
NU219	95X170X32	2.85	NU319	95X210X45	6.25			
NU220	100X180X34	3.45						
NU221	105X190X36	4.00						
NU222	110X200X38	4.80						



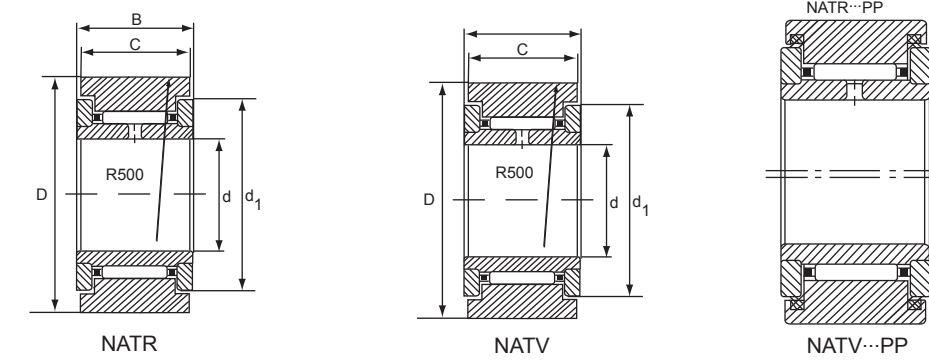
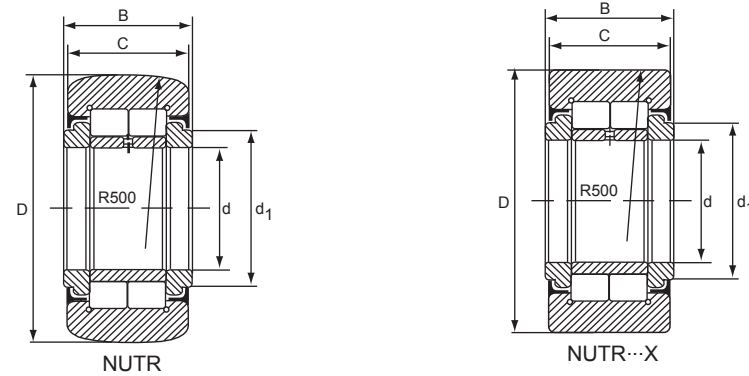
Cylindrical Roller Bearings

Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)	Bearing No.	dXDXB(mm)	Mass(kg)
NJ202	15X35X11	0.049						
NJ203	17X40X12	0.070						
NJ204	20X47X14	0.11	NJ304	20X52X15	0.15			
NJ205	25X52X15	0.14	NJ305	25X62X17	0.25			
NJ206	30X62X16	0.21	NJ306	30X72X19	0.37	NJ406	30X90X23	0.77
NJ207	35X72X17	0.31	NJ307	35X80X21	0.49	NJ407	35X100X25	1.05
NJ208	40X80X18	0.38	NJ308	40X90X23	0.67	NJ408	40X110X27	1.30
NJ209	45X85X19	0.44	NJ309	45X100X25	0.92	NJ409	45X120X29	1.65
NJ210	50X90X20	0.49	NJ310	50X110X27	1.15	NJ410	50X130X31	2.05
NJ211	55X100X21	0.67	NJ311	55X120X29	1.50	NJ411	55X140X33	2.55
NJ212	60X110X22	0.83	NJ312	60X130X31	1.90	NJ412	60X150X35	3.10
NJ213	65X120X23	1.05	NJ313	65X140X33	2.30	NJ413	65X160X37	3.65
NJ214	70X125X24	1.15	NJ314	70X150X35	2.80	NJ414	70X180X42	5.35
NJ215	75X130X25	1.30	NJ315	75X160X37	3.35	NJ415	75X190X45	6.40
NJ216	80X140X26	1.55	NJ316	80X170X39	4.00	NJ416	80X200X48	7.45
NJ217	85X150X28	1.95	NJ317	85X180X41	4.80			
NJ218	90X160X30	2.40	NJ318	90X190X43	5.55			
NJ219	95X170X32	2.90	NJ319	95X200X45	6.45			
NJ220	100X180X34	3.50						
NJ221	105X190X36	4.10						
NJ222	110X200X38	4.90						

Yoke Type Track Rollers Without Axial Guidance

Shaft Diameter mm	Bearing Designation	Boundary Dimensions							Basic Load Rating				Limiting Speed rpm		
		Mass g	Mass g	D mm	d mm	F mm	B mm	C mm	E mm	Cr Dynamic	Cor Static	CW N		Cow N	
															FW
16	RSTO 5TN	8.5		16	7	7.8	10	2800	2600	2550	2550	23000			
	RSTO 5TNX	8.5		16	7	7.8	10	2800	2600	1990	1990	23000			
19	RSTO 6TN	12.5	STO 6TN	17	19	6	10	10	9.8	13	4700	5450	3750	4500	20000
	RSTO 6TNX	12.5	STO 6TNX	17	19	6	10	10	9.8	13	4700	5450	3050	4000	20000
24	RSTO 8TN	21	STO 8TN	26	24	8	12	10	9.8	15	4800	6000	4200	5500	16000
	RSTO 8TNX	21	STO 8TNX	26	24	8	12	10	9.8	15	4800	6000	3000	5000	16000
30	RSTO 10	42	STO 10	49	30	10	14	12	11.8	20	10200	10500	8400	9200	11000
	RSTO 10X	42	STO 10X	49	30	10	14	12	11.8	20	10200	10500	8000	8800	11000
32	RSTO 12	49	STO 12	57	32	12	16	12	11.8	22	11300	12300	8900	10100	9000
	RSTO 12X	49	STO 12X	57	32	12	16	12	11.8	22	11300	12300	8500	9600	9000
35	RSTO 15	50	STO 15	63	35	15	20	12	11.8	26	13200	16000	9100	10700	6500
	RSTO 15X	50	STO 15X	63	35	15	20	12	11.8	26	13200	16000	8700	9900	6500
40	RSTO 17	88	STO 17	107	40	17	22	16	15.8	29	19800	25300	14300	17700	5500
	RSTO 17X	88	STO 17X	107	40	17	22	16	15.8	29	19800	25300	12500	15700	5500
47	RSTO 20	130	STO 20	152	47	20	25	16	15.8	32	20800	27800	16200	21500	4700
	RSTO 20X	130	STO 20X	152	47	20	25	16	15.8	32	20800	27800	15000	19900	4700
52	RSTO 25	150	STO 25	177	52	25	30	16	15.8	37	23000	33400	16500	22900	3600
	RSTO 25X	150	STO 25X	177	52	25	30	16	15.8	37	23000	33400	14000	20900	3600
62	RSTO 30	255	STO 30	308	62	30	38	20	19.8	46	35200	56700	23300	35000	2500
	RSTO 30X	255	STO 30X	308	62	30	38	20	19.8	46	35200	56700	21800	33000	2500
72	RSTO 35	375	STO 35	441	72	35	42	20	19.8	50	35800	58800	26000	41000	2200
80	RSTO 35X	375	STO 35X	441	72	35	42	20	19.8	50	35800	58800	24500	38900	2200
	RSTO 40	420	STO 40	530	80	40	50	20	19.8	58	35200	61800	24000	39000	1700
85	RSTO 40X	420	STO 40X	530	80	40	50	20	19.8	58	35200	61800	22500	36500	1700
	RSTO 45	453	STO 45	576	85	45	55	20	19.8	63	38900	73900	25500	43000	1500
90	RSTO 45X	453	STO 45X	576	85	45	55	20	19.8	63	38900	73900	24000	41500	1500
	RSTO 50	481	STO 50	617	90	50	60	20	19.8	68	43300	84800	26000	46500	1300

- TN=plastic cage(working temperature:120°C continually;180°C shorty)
- "F": the outer diameter of inner ring; "Fw": the inscribed circle diameter of needles in F6 tolerance
- Usually when the columned outer ring is mounted into the housing in normal tolerance,Cr and Cor is working; When the outer ring is used as track roller ,Cw and Cow is working
- Limiting speed for oil: about 30% higher than the one of grease



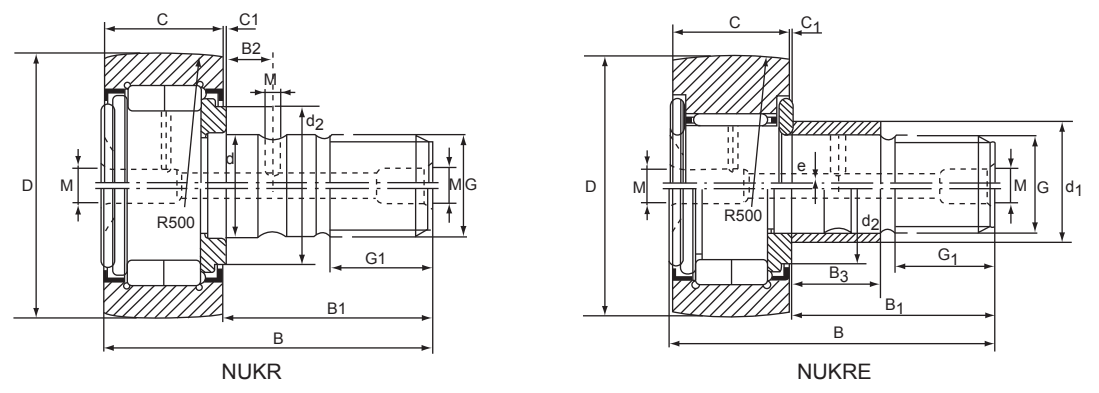
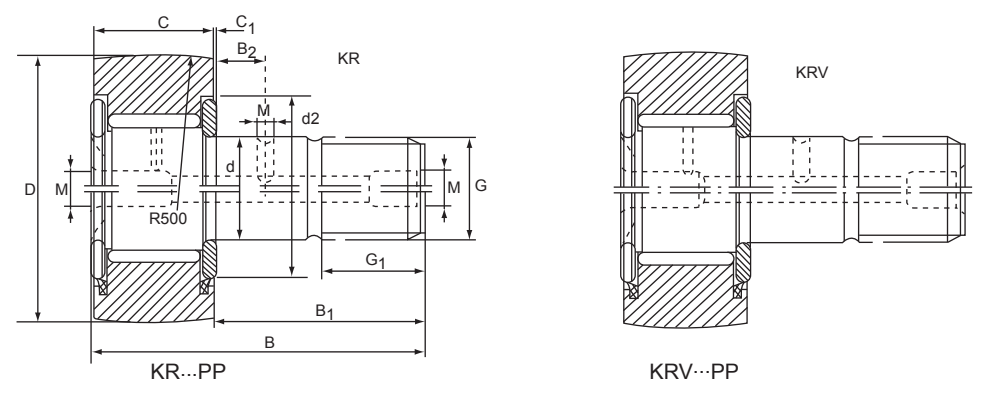
Yoke Type Track Rollers With Axial Guidance

Shaft Diameter mm	Bearing Designation and Approx Mass		Boundary Dimensions					Basic Load Rating		Limiting Speed
	With IR	Mass	d	D	B	C	d ₁	Cr Dynamic	Cor Static	Oil
		g								
35	NUTR15	99	15	35	19	18	20	20500	24500	6500
	NUTR202X		15	35	19	18	19.5	20500	24500	6500
40	NUTR17	147	17	40	21	20	22	21800	28500	5500
42	NUTR15 42	158	15	42	18	18	20	20500	24500	6500
47	NUTR17 47	220	17	47	21	20	22	21800	28500	5500
	NUTR20	245	20	47	25	24	27	36900	48900	4200
52	NUTR20 52	321	20	52	25	24	27	36900	48900	4200
	NUTR25	281	25	52	25	24	31	40800	58500	3400
62	NUTR25 62	450	25	62	25	24	31	10800	58500	3400
	NUTR30	465	30	62	29	28	38	56800	77500	2600
72	NUTR30 72	697	30	72	29	28	38	56800	77500	2600
	NUTR35	630	35	72	29	28	44	63000	91000	2100
80	NUTR35 80	836	35	80	29	28	44	63000	91000	2100
	NUTR40	816	40	80	32	30	51	87900	108000	1600
	NUTR3080		30	80	31	30	44	56800	77500	2500
85	NUTR45	883	45	85	32	30	55	93600	119000	1400
90	NUTR40 90	1129	40	90	32	30	51	87900	108000	1600
	NUTR50	950	50	90	32	30	60	98900	140000	1300
100	NUTR45 100	1396	45	100	32	30	55	93600	119000	1400
110	NUTR50 110	1690	50	110	32	30	60	98900	14000	1300

- Suffix designation "X": columned surface. For example, NATR 40 X
- Usually when the columned outer ring is mounted into the housing in normal tolerance, Cr and Cor is working; When the outer ring is used as track roller, Cw and Cow is working
- Limiting speed for oil: about 30% higher than the one of grease

Shaft Diameter mm	Bearing Designation		Boundary Dimensions							Basic Load Rating		Limiting Speed
	Without Seal	Sealed	Mass	d	D	B	C	d ₁	Cr Dynamic	Cor Static	Grease	
												g
16	NATR5	14	NATR5PP	14	5	16	12	11	12	3050	3000	22000
	NARV5	15	NARV5PP	15	5	16	12	11	12	4500	6300	8500
19	NATR6	20	NATR6PP	20	6	19	12	11	14	3600	36500	20000
	NARV6	21	NARV6PP	21	6	19	12	11	14	5700	8700	7000
24	NATR8	41	NATR8PP	41	8	24	15	14	19	4500	5400	5000
	NARV8	42	NARV8PP	42	8	24	15	14	19	8600	12000	5500
30	NATR10	64	NATR10PP	64	10	30	15	14	23	6100	7800	11000
	NARV10	65	NARV10PP	65	10	30	15	14	23	10900	17000	4500
32	NATR12	71	NATR12PP	71	12	32	15	14	25	6600	9800	9000
	NARV12	72	NARV12PP	72	12	32	15	14	25	11800	19000	3900
35	NATR15	103	NATR15PP	103	15	35	19	18	27	10500	17500	7000
	NARV15	105	NARV15PP	105	15	35	19	18	27	16000	32500	3400
40	NATR17	144	NATR17PP	144	17	40	21	20	32	11800	19400	6000
	NARV17	152	NARV17PP	152	17	40	21	20	32	196900	37000	2900
47	NATR20	246	NATR20PP	246	20	47	25	24	37	17500	29800	4900
	NARV20	254	NARV20PP	254	20	47	25	24	37	25800	57000	2600
52	NATR25	275	NATR25PP	275	25	52	25	24	42	19500	36500	3600
	NARV25	285	NARV25PP	285	25	52	25	24	42	29000	69600	2100
62	NATR30	470	NATR30PP	470	30	62	29	28	51	31000	57500	2600
	NARV30	481	NARV30PP	481	30	62	29	28	51	45500	104000	1700
72	NATR35	635	NATR35PP	635	35	72	29	28	58	34500	67500	2000
	NARV35	647	NARV35PP	647	35	72	29	28	58	50800	109500	1400
80	NATR40	805	NATR40PP	805	40	80	32	30	66	47000	91500	1700
	NARV40	890	NARV40PP	890	40	80	32	30	66	64000	139000	1300
85	NATR45	910	NATR45PP	910	45	85	32	30	72	49100	98000	1500
90	NATR50	960	NATR50PP	960	50	90	32	30	76	50500	10600	1300
	NARV50	990	NARV50PP	990	50	90	32	30	76	69500	187000	1000

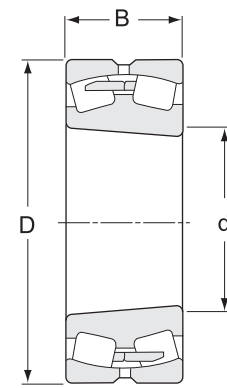
- Suffix designation "X": columned surface. For example, NATR 5X
- Usually when the columned outer ring is mounted into the housing in normal tolerance, Cr and Cor is working; When the outer ring is used as track roller, Cw and Cow is working
- Limiting speed for oil lubrication: about 30% higher than the one of grease; Limiting speed types will be 30% lower.



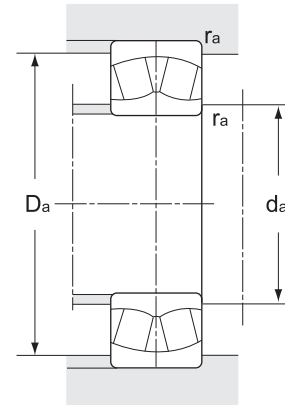
Stud Type Track Roller

OD mm	Bearing Designation and Approx Mass				Boundary Dimensions							Basic Load Rating				
	Without Eccentric Collar	Mass g	With Eccentric Collar	Mass g	D	d	C	B	B1	B2	G	G1	M	M1	C1	d2
16	KR 16	18	KRE 16	20	16	6	11	28	16		M6	8	4(5)		0.6	12
	KR 16 PP	18	KRE 16 PP	20	16	6	11	28	16		M6	8	4(5)		0.6	12
	KRV 16	20	KRVE 16	22	16	6	11	28	16		M6	8	4(5)		0.6	12
	KRV 16 PP	20	KRVE 16 PP	22	16	6	11	28	16		M6	8	4(5)		0.6	12
19	KR 19	28	KRE 19	31.2	19	8	11	32	20		M8	10	4(5)		0.6	14
	KR 19 PP	28	KRE 19 PP	31.2	19	8	11	32	20		M8	10	4(5)		0.6	14
	KRV 19	32	KRVE 19	35.2	19	8	11	32	20		M8	10	4(5)		0.6	14
	KRV 19 PP	32	KRVE 19 PP	35.2	19	8	11	32	20		M8	10	4(5)		0.6	14
22	KR 22	44	KRE 22	48.3	22	10	12	36	23		M10x1	12	4		0.6	17
	KR 22 PP	44	KRE 22 PP	48.3	22	10	12	36	23		M10x1	12	4		0.6	17
	KRV 22	45	KRVE 22	49.3	22	10	12	36	23		M10x1	12	4		0.6	17
	KRV 22 PP	45	KRVE 22 PP	49.3	22	10	12	36	23		M10x1	12	4		0.6	17
26	KR 26	58	KRE 26	62.3	26	10	12	36	23		M10x1	12	4		0.6	17
	KR 26 PP	58	KRE 26 PP	62.3	26	10	12	36	23		M10x1	12	4		0.6	17
	KRV 26	61	KRVE 26	65.3	26	10	12	36	23		M10x1	12	4		0.6	17
	KRV 26 PP	61	KRVE 26 PP	65.3	26	10	12	36	23		M10x1	12	4		0.6	17
30	KR 30	87	KRE 30	92.5	30	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
	KR 30 PP	87	KRE 30 PP	92.5	30	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
	KRV 30	89	KRVE 30	94.5	30	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
	KRV 30 PP	89	KRVE 30 PP	94.5	30	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
32	KR 32	98	KRE 32	103.5	32	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
	KR 32 PP	98	KRE 32 PP	103.5	32	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
	KRV 32	100	KRVE 32	105.5	32	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
	KRV 32 PP	100	KRVE 32 PP	105.5	32	12	14	40	25	6	M12x1.5	13	6	3	0.6	23
35	KR 35	169	KRE 35	181.5	35	16	18	52	32.5	8	M16x1.5	17	6	3	0.8	27
	KR 35 PP	169	KRE 35 PP	181.5	35	16	18	52	32.5	8	M16x1.5	17	6	3	0.8	27
	KRV 35	171	KRVE 35	183.5	35	16	18	52	32.5	8	M16x1.5	17	6	3	0.8	27
	KRV 35 PP	171	KRVE 35 PP	183.5	35	16	18	52	32.5	8	M16x1.5	17	6	3	0.8	27
	NUKR 35	164	NUKRE 35	176.5	35	16	18	52	32.5	8	M16x1.5	17	6	3	0.8	27
40	KR 40	247	KRE 40	262.8	40	18	20	58	36.5	8	M18x1.5	19	6	3	0.8	32
	KR 40 PP	247	KRE 40 PP	262.8	40	18	20	58	36.5	8	M18x1.5	19	6	3	0.8	32
	KRV 40	249	KRVE 40	264.8	40	18	20	58	36.5	8	M18x1.5	19	6	3	0.8	32
	KRV 40 PP	249	KRVE 40 PP	264.8	40	18	20	58	36.5	8	M18x1.5	19	6	3	0.8	32
	NUKR 40	242	NUKRE 40	257.8	40	18	20	58	36.5	8	M18x1.5	19	6	3	0.8	32

d1	Bearing Designation			Nut Tightening Torque MA Nm	Cr Dynamic	Cor Static	Basic Load Rating				Limiting Speed Grease rpm						
	B3	e	d1				Cw	Cow	Fr perm	For perm							
9	7	0.5	2.5	3650	6540	3020	3100										
11	9	0.5	6.8	3820	4160	3220	3100										
13	10	0.5	12.5	4770	5010	3450	4020										
15	11	0.5	18.2	6140	7700	5820	6400										
20	14	1	45.8	9900	15000	7900	10100										
22	16	1	68.7	9290	11400	8100	11500										

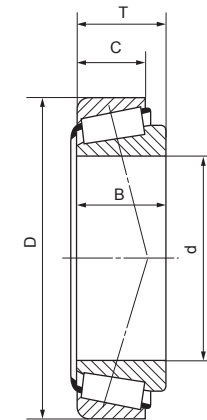


20000K(CAK)/(W33)



Spherical Roller Bearings

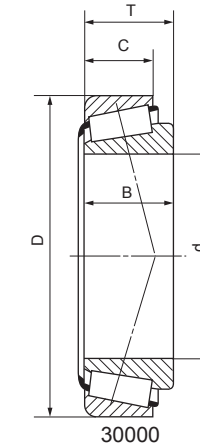
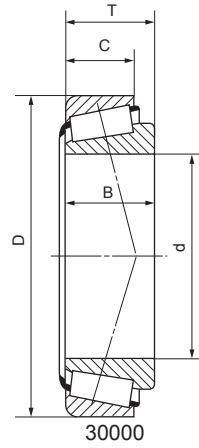
Principal dimensions			Bearing No.		Basic load ratings		Limiting speeds		Mass	Shoulder dia			Calculation factors			
d	D	B	Cylindrical Bore	Tapered Bore	Cr	Cor	Grease	Oil	W	d min	D max	R max	e	Y1	Y2	Y0
mm	mm	mm			KN	KN	r/min	r/min	Kg	mm	mm	mm				
170	310	86	22234		792	1300	850	1100	28.8	188	292	3	0.30	2.3	3.4	2.2
			22234/W33	22234K	792	1300	850	1100	28.487	188	292	3	0.30	2.3	3.4	2.2
			22234CA		1073	1500	1100	1400	28.41	188	292	3	0.25	2.6	3.8	2.5
			22234CA/W33	22234CAK	1073	1500	1100	1400	28.41	188	292	3	0.26	2.6	3.8	2.5
360	120		22334		1265	2060	750	950	60.75	188	342	3	0.39	1.7	2.6	1.7
			22334/W33	22334K	1265	2060	750	950	60.305	188	342	3	0.39	1.7	2.6	1.7
180	320	86	22236		808.6	1370	800	1000	30.90	198	302	3	0.29	2.3	3.5	2.3
			22236/W33	22236K	808.6	1370	800	1000	30.695	198	302	3	0.29	2.3	3.5	2.3
			22236CA		1111	1590	1100	1300	29.67	198	302	3	0.25	2.7	3.9	2.6
			22236CA/W33	22236CAK	1111	1590	1100	1300	29.47	198	302	3	0.25	2.7	3.9	2.6
380	126		22336		1386	2270	700	900	68.08	198	362	3	0.38	1.8	2.6	1.7
			22336/W33	22336K	1386	2270	700	900	67.611	198	362	3	0.38	1.8	2.6	1.7
190	340	92	22238		899.8	1510	750	950	37.41	208	322	3	0.29	2.3	3.5	2.3
			22238/W33	22238K	899.8	1510	750	950	36.993	208	322	3	0.29	2.3	3.5	2.3
			22238CA		1595	2490	800	1100	36.24	208	322	3	0.19	3.6	5.3	3.6
			22238CA/W33	22238CAK	1595	2490	800	1100	35.827	208	322	3	0.19	3.6	5.3	3.6
400	132		22338		1529	2530	670	850	83.22	212	378	4	0.36	1.8	2.7	1.8
			22338/W33	22338K	1529	2530	670	850	82.75	212	378	4	0.36	1.8	2.7	1.8
200	360	98	22240CA		1518	2640	750	1000	43.9	218	342	3	0.26	2.6	3.9	2.5
			22240CA/W33	22240CAK	1771	2790	750	1000	43.43	218	342	3	0.26	2.6	3.9	2.5



30000

Tapered Roller Bearings

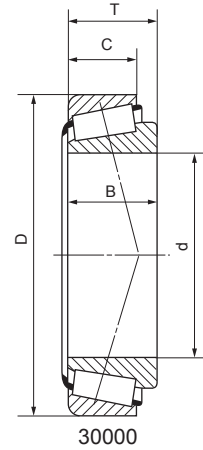
Bearing No.	d×D×T(mm)	Mass(kg)	Bearing No.	d×D×T(mm)	Mass(kg)
30202	15×35×11.75	0.06	30302	15×42×14.25	0.10
30203	17×40×13.25	0.08	30303	17×47×15.25	0.13
30204	20×47×15.25	0.12	30304	20×52×16.25	0.17
30205	25×52×16.25	0.15	30305	25×62×18.25	0.26
30206	30×62×17.25	0.23	30306	30×72×20.75	0.39
30207	35×72×18.25	0.32	30307	35×80×22.75	0.52
30208	40×80×19.75	0.42	30308	40×90×25.25	0.72
30209	45×85×20.75	0.48	30309	45×100×27.25	0.97
30210	50×90×21.75	0.54	30310	50×110×29.25	1.25
30211	55×100×22.75	0.70	30311	55×120×31.5	1.55
30212	60×110×23.75	0.88	30312	60×130×33.5	1.95
30213	65×120×24.75	1.15	30313	65×140×36	2.40
30214	70×125×26.25	1.25	30314	70×150×38	2.90
30215	75×130×27.25	1.40	30315	75×160×40	3.45
30216	80×140×28.25	1.60	30316	80×170×42.5	4.10
30217	85×150×30.5	2.05	30317	85×180×44.5	4.85
30218	90×160×32.5	2.55	30318	90×190×46.5	5.65
30219	95×170×34.5	3.00	30319	95×200×49.5	6.70
30220	100×180×37	3.65	30320	100×215×51.5	8.05
30221	105×190×39	4.25	30321	105×225×53.5	9.15
30222	110×200×41	5.10			
30224	120×215×43.5	6.15			
30226	130×230×43.75	7.60			
30228	140×250×45.75	8.65			



Tapered Roller Bearings

Bearing No.	d×D×T(mm)	Mass(kg)	Bearing No.	d×D×T(mm)	Mass(kg)	Bearing No.	d×D×T(mm)	Mass(kg)
32205	25×52×19.25	0.19	32303	17×47×20.25	0.170	32006X	30×55×17	0.17
32206	30×62×21.25	0.28	32304	20×52×22.25	0.230	32007X	35×62×18	0.22
32207	35×72×24.25	0.43	32305	25×62×25.25	0.360	32008X	40×68×19	0.27
32208	40×80×24.75	0.53	32306	30×72×28.75	0.550	32009X	45×75×20	0.34
32009	45×85×24.75	0.58	32307	35×80×32.75	0.730	32010X	50×80×20	0.37
32210	50×90×24.75	0.61	32308	40×90×35.25	1.000	32011X	55×90×23	0.55
32211	55×100×26.75	0.83	32309	45×100×38.25	1.350	32012X	60×95×23	0.59
32212	60×110×29.75	1.15	32310	50×110×42.25	1.800	32013X	65×100×23	0.63
32213	65×120×32.75	1.50	32311	55×120×45.5	2.300	32014X	70×110×25	0.84
32214	70×125×33.25	1.60	32312	60×130×48.5	2.850	32015X	75×115×25	0.9
32215	75×130×33.25	1.70	32313	65×140×51	3.450	32016X	80×125×29	1.3
32216	80×140×35.25	2.05	32314	70×150×54	4.300	32017X	85×130×29	1.35
32217	85×150×38.5	2.60	32315	75×160×58	5.200	32018X	90×140×32	1.75
32218	90×160×42.5	3.35	32316	80×170×61.5	6.200	32019X	95×145×32	1.8
32219	95×170×45.5	4.05	32317	85×180×63.5	6.850	32020X	100×150×32	1.9
32220	100×180×49	4.90	32318	90×190×67.5	5.900	32031X	105×160×35	2.4
32221	105×190×53	6.00	32319	95×200×71.5	11.000	32022X	110×170×38	3.05
32222	110×200×56	7.10	32320	100×215×77.5	12.500	32024X	120×180×38	3.24
32224	120×215×61.5	9.15	32321	105×225×81.5	14.500	32026X	130×200×45	4.95
32226	130×230×67.75	11.50	32322	110×240×84.5	17.000	32028X	140×210×45	5.25
32228	140×250×71.75	14.50				32030X	150×225×48	6.35
32230	150×270×77	17.50				32032X	160×240×51	7.75

Bearing No.	d×D×T(mm)	Mass(kg)	Bearing No.	d×D×T(mm)	Mass(kg)
5BC	28.313	0.0154	15113/15245	28.575×62×19.06	0.28
11BC	33.297	0.0275	16137/16282	34.925×72×19	0.36
09067/09195	19.05×49.225×18.034	0.1804	16150/16282	38.1×72×19	0.332
09081/09195	20.625×49.225×19.845	0.1555	1755/1729	22.225×56.896×19.368	0.254
TR101204/72487	50×123.825×36.512	2.101	17887/17831	45.23×79.985×19.842	0.41
LM104949/LM104911	50.8×82.55×21.59	0.42	18590/18520	41.275×73.025×16.667	0.285
JLM104947A/JLM104910	50×82×21.976	0.434	18790/18720	50.800×85×17.462	0.42
JLM104948/JLM104910	50×82×21.5	0.422	HM212047/HM212011	63.5×122.238×38.1	1.84
LM104949/JLM104910	50.8×82×21.976	0.418	HM212049/HM212011	66.675×122.238×38.1	1.85
LM104949E/LM104911	50.8×82.55×16.51	0.438	HM218248/HM218210	89.974×146.975×40	2.52
JLM104948/LM104911	50×82.55×21.115	0.424	24780/24720	41.275×76.2×22.225	0.424
LM104949/LM104912	50.8×82.931×21.59	0.425	25570/25520	36.513×82.931×23.813	0.651
LM102949/LM102910	45.242×73.431×19.558	0.303	25572/25520	38.1×82.931×23.813	0.642
11590/11520	15.875×42.862×14.288	1.001	25577/25520	42.875×82.931×23.812	0.69
LM11749/LM11710	17.462×39.878×13.843	0.083	25577/25522	42.875×83.058×23.876	0.70
LM11949/LM11910	19.05×45.237×15.494	0.124	25580/25520	44.45×82.931×23.812	0.561
M12649/M12610	21.43×50.005×17.526	0.174	25581/25520	44.45×82.931×23.812	0.563
LM12748/LM12710	21.43×45.237×15.494	0.118	25590/25520	45.618×82.931×23.812	0.54
LM12749/LM12710	22×45.237×15.494	0.116	25590/25521	45.618×83.058×23.812	0.534
LM12749/LM12711	22×46×15.494	0.121	25590/25522	45.618×83.058×23.876	0.538
13686/13620	38.1×69.012×19.05	0.296	25590/25523	45.618×82.931×26.988	0.584
14125A/14276	31.75×69.012×19.845	0.349	25877/25820	34.925×73.025×23.812	0.474
14137A/14276	34.925×69.012×19.845	0.325	25877/25821	34.925×73.025×23.812	0.468
14138A/14276	34.925×69.012×19.845	0.322	25880/25821	36.487×73.025×23.812	0.451
14138/14274	34.925×69.012×19.845	0.32	27687/27620	82.55×125.412×25.4	1.50
15101/15245	25.4×62×19.05	0.2821	2785/2720	33.338×76.2×23.813	0.544
15213/15245	31.75×62×19.05	0.2331	2788/2729	38.1×76.2×23.813	0.496
15123/15243	31.75×61.912×19.05	0.2301	2788/2720	38.1×76.2×23.812	0.49
15103S/15245	26.162×62×19.05	0.2791	2790/2720	33.338×76.2×23.812	0.549
15126/15245	31.75×62×19.05	0.255	2790/2729	33.338×76.2×23.812	0.555



Tapered Roller Bearings

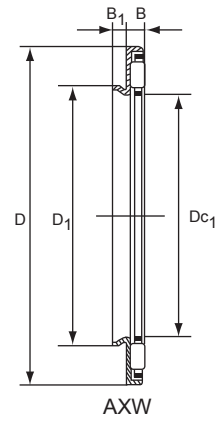
Bearing No.	d×D×T(mm)	Mass(kg)	Bearing No.	d×D×T(mm)	Mass(kg)
28580/28521	50.8X92.075X24.608	0.697	462/453X	57.15X104.775X30.162	1.08
28584/28521	52.388X92.075X24.608	0.669	L44643/L44610	25.4X50.292X14.224	0.129
28678/28622B	50.8X97.63X24.608	0.865	L44643L/L44610	25.4X50.292X14.224	0.129
28985/28920	60.325X101.6X25.4	0.79	L44649/L44610	26.988X50.292X14.224	0.124
29590/29522	66.675X107.95X25.4	0.874	L45449/L45410	29X50.292X14.224	0.113
29685/29620	73.025X112.712X25.4	0.861	LM48548/LM48510	34.92X65.088X18.034	0.2584
LM29749/LM29710	38.1X65.088X18.034	0.238	LM501349/LM501310	41.275X73.431X19.558	0.333
LM300894/LM300811	41X68X17.5	0.2403	LM501349/LM501314	41.275X73.431X21.43	0.353
JLM506849/10	55X90X23	0.69	HM518445/HM518410	88.9X152.4X39.688	2.875
57414/LM300811	41X68X17.5	0.2433	575/572	76.2X139.992X36.512	2.442
33275/33642	69.85X117.475X30.112	1.28	593/592A	88.9X152.4X39.688	2.78
33281/33472	71.438X120X29.794	1.33	LM603049/LM603011	45.242X77.788X19.842	0.358
33889/33821	50.8X95.25X27.783	0.862	LM603049/LM603012	45.242X77.788X21.43	0.377
3579/3524	42.862X87.312X30.162	0.805	A6075/A6157	19.05X39.992X12.014	0.066
368A/362A	50.8X88.9X20.638	0.153	L610549/L610510	63.5X94.458X19.05	0.449
368/362	50.8X90X20	0.562	LM67048/LM67010	31.75X59.131X15.875	0.179
3776/20	44.983X93.264X30.162	0.73	LM67049A/LM67010	31.75X59.131X15.875	0.184
3780/3720	50.8X93.264X30.162	0.856	67989/67920	209.55X282.575X46.038	7.73
3782/3720	44.45X93.264X30.162	0.735	L68149/L68110	34.981X59.131X15.875	0.1702
3872/3820	34.925X85.725X30.162	0.88	L68149/L68111	34.981X59.974X15.875	0.1770
387AS/382A	57.150X96.838X21	0.593	JL69349/JL69310	38X63X17	0.196
387A/382S	57.15X96.838X25.4	0.669	JM716649/JM716610	85X130X30	1.704
387A/382	57.15X98.425X21	0.646	78215C/78551	53.975X140.03X36.512	2.7122
387A/382A	57.15X96.838X21	0.598	M802048/M802011	41..275X82.55X26.543	0.615
U399/U360L	39.688X73.025X19.395	0.357	HM803146/HM803110	41.275X88.9X30.162	0.886
3982/3920	63.5X112.713X30.162	1.22	HM803149/HM803110	44.450X88.9X30.162	0.836
3984/3920	66.675X112.713X30.162	1.14	JL819349/JL819310	95X125X20	0.8382
390A/394A	63.5X110X22	0.851	M86649/M86610	30.162X64.292X21.433	0.337
42688/42620	76.2X127X30.162	0.40	M88048/M88010	33.338X68.262X22.225	0.3829
			HM88649/HM88610	34.925X72.333X25.4	0.479

Axial Cylindrical Roller and Cage Assemblies



products Scope	WD supply the following bearings
Series	Structure explanation
AXK	Thrust needle roller and cage assemblies
AXW	Thrust needle roller bearings
K811 K812 K893 K874 K894	Thrust cylindrical roller and cage assemblies
AS GS811 WS811 LS	Thrust washers
WS GS	Thrust bearing washers, housing washers

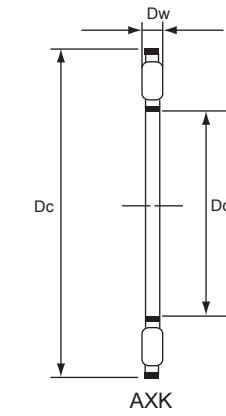
Thrust needle roller, cylindrical roller and cage assemblies is composed of rolling components(needles, cylindrical rollers), cages and thrust washers. The needles and cylindrical rollers are guided and retained by the thrust cage, working together with various of thrust washers, shafts, and housing washers. When mounting, the dimension tolerance, geometrical precision, toughness, axial run-out and roughness of the side of shaft shoulder and the underside of housing hole shall be according to ISO and GB standard.



Axial Needle Roller Bearing With Centring Spigot On The Bearing Washer

Shaft Diameter	Bearing Designation	Mass Approx	Boundary Dimensions					Basic Load Rating		Limiting Speed
			D _{c1}	D ₁	D	B	B ₁	Cr Dynamic	Cor Static	
mm		g	mm					N		rpm
10	AXW10	8.3	10	14	27	3.2	3	9100	24000	14000
12	AXW12	9.1	12	16	29	3.2	3	8900	27800	13000
15	AXW15	10.1	15	21	31	3.2	3.5	10900	638800	10000
17	AXW17	11	17	23	33	3.2	3.5	12700	45600	8500
20	AXW20	14	20	26	38	3.2	4	13900	57500	7000
25	AXW25	19.5	25	32	45	3.2	4	13900	57500	7000
30	AXW30	22	30	37	50	3.2	4	15900	69500	6000
35	AXW35	26.6	35	42	55	3.2	4	17000	80100	5500
40	AXW40	39.2	40	47	63	4.2	4	27800	109000	4700
45	AXW45	43.4	45	52	68	4.2	4	29500	119900	4300
50	AXW50	49.2	50	58	73	4.2	4.5	31800	140900	3900

1. The above data of limiting speed is based on the fully cooled oil lubrication; Limiting speed for grease lubrication is 25% of the above data.



Axial Needle Roller and Cage Assemblies

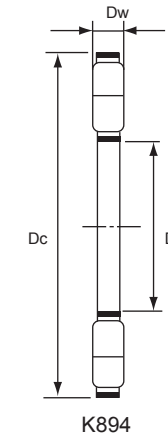
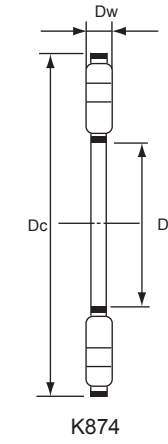
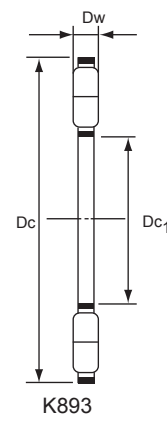
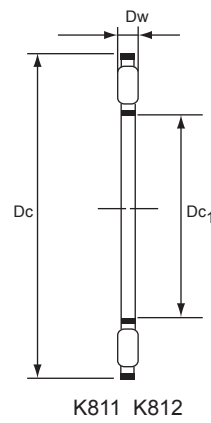
Shaft Diameter	Bearing Designation	Mass Approx	Boundary Dimensions			Basic Load Rating		Limiting Speed
			Fw	Ew	Bc	Cr Dynamic	Cor Static	
mm		g	mm			N		rpm
4	AXK0414TN	0.7	4	14	2	4380	7500	18000
5	AXK0515TN	0.8	5	15	2	4680	9100	17000
6	AXK0619TN	1	6	19	2	6740	15400	16000
8	AXK0821TN	2	8	21	2	7750	19000	15000
10	AXK1024	3	10	24	2	9150	24500	14000
12	AXK1226	3	12	26	2	9860	28600	13000
15	AXK1528	4	15	28	2	11200	35500	11000
17	AXK1730	4	17	30	2	11800	38600	10000
20	AXk2035	5	20	35	2	12900	45600	8500
25	AXK2542	7	25	42	2	13800	57800	7000
30	AXK3047	8	30	47	2	15600	96500	6000
35	AXKv3552	10	35	52	2	16900	80100	5500
40	AXK4060	16	40	60	3	27500	113500	4700
45	AXK4565	18	45	65	3	29050	127600	4300
50	AXK5070	20	50	70	3	31500	13800	3900
55	AXK5578	28	55	78	3	37400	185000	3500
60	AXK6085	33	60	85	3	43900	232500	3200
65	AXK6590	35	65	90	3	45800	254600	3000
70	AXK7095	60	70	95	4	53600	254400	2900
75	AXK75100	61	75	100	4	54500	264600	2700
80	AXK80105	63	80	105	4	55600	278500	2600
85	AXK85110	67	85	110	4	57500	28800	2400
90	AXK90120	86	90	120	4	72500	401000	2300
100	AXK100135	104	100	135	4	90500	559500	2000
110	AXK110145	122	110	145	4	96500	617500	1900
120	AXK120155	131	120	155	4	101500	679600	1700
130	AXK130170	205	130	170	5	132400	838900	1600
140	AXK140180	219	140	180	5	137200	899600	1500
150	AXK150190	232	150	190	5	142800	959000	1400
160	AXK160200	246	160	200	5	147600	1015000	1300

Inch Series

7.92	NTA-512	2	7.92	19.5	1.984	4600	4100	7000
22.22	NTA-1423	5	22.22	36.5	1.984	10400	40800	50000
50.80	NTA-3244	18	50.80	69.85	1.984	19500	115130	5600

1. TN=plastic cage(working temperature:120°C continually;180°C shorty)

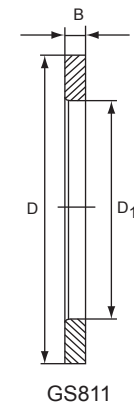
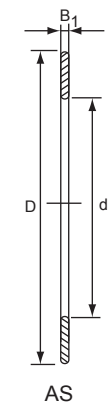
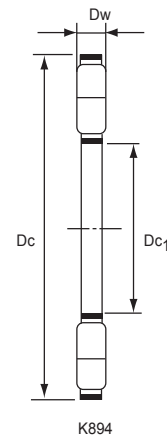
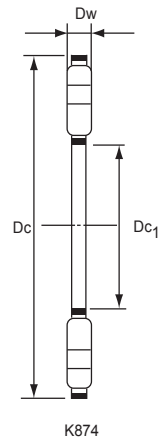
2. The above data of limiting speed is based on the fully cooled oil lubrication; Limiting speed for grease lubrication is 25% of the above data.



Axial Cylindrical Roller and Cage Assemblies

Shaft Diameter mm	Bearing Designation	Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
			Dc ₁	Dc	Dw	Cr Dynamic N	Cor Static N	
15	K81102TN	6	15	28	3.5	13500	28000	11000
17	K81103TN	9	17	30	3.5	14800	32900	10000
20	K81104TN	13	20	35	4.5	23700	52600	8500
25	K81105TN	15	25	42	5	32900	7000	7000
30	K81106TN	17	30	47	5	34800	85000	6000
	K81206TN	33	30	52	7.5	63500	139000	6000
	K89306TN	40	30	60	5.5	67900	188500	5000
35	K81107TN	19	35	52	5	38500	100900	5500
	K81207TN	43	35	62	7.5	79800	198100	4900
	K89307TN	53	35	68	6	79800	236500	4600
	K89407TN	111	35	80	9	149000	425000	4200
40	K81108TN	31	40	60	6	55000	147500	4800
	K81208TN	81	40	68	9	106500	264500	4400
	K89308TN	98	40	78	7	119000	384500	4000
	K87408	127	40	90	6.5	127000	478000	3600
	K89408TN	200	40	90	10	199000	579500	3700
45	K81109TN	35	45	65	6	58500	162500	4400
	K81209TN	121	45	85	7.5	138500	439000	3600
	K87409	174	45	100	7	153500	559800	3200
	K89409TN	262	45	100	11	238600	699200	3300
50	K81110TN	38	50	70	6	60700	167000	4000
	K81210TN	98	50	78	9	106000	309000	3700
	K89310TN	175	50	95	8	166500	557900	3200
	K87410TN	256	50	110	8	199600	738000	2900
	K89410TN	360	50	110	12	280500	899000	3000
55	K81111TN	45	55	78	6	87900	298700	3600
	K81211TN	166	55	90	11	153100	404500	3300
	K89311TN	195	55	105	9	183200	599800	2900
	K87411	303	55	120	8	221500	868600	2600
	K89411TN	473	55	120	13	339500	1049050	2700
60	K81112TN	82	60	85	7.5	102100	309500	3300
	K81212TN	176	60	95	11	171100	478000	3100
	K89312TN	210	60	110	9	195100	669800	2700
	K87412	380	60	130	9	259100	998600	2500

Shaft Diameter mm	Bearing Designation	Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
			Dc ₁	Dc	Dw	Cr Dynamic N	Cor Static N	
60	K89412TN	538	60	130	14	388000	1219500	2500
65	K81113TN	90	65	90	7.5	106500	339500	3100
	K81213TN	185	65	100	11	176800	499500	2900
	89313TN	210	65	115	9	193500	667900	2600
	K87413	470	65	140	10	299800	1139500	2300
70	K89143TN	790	65	140	15	444000	139600	2300
	K81114TN	92	70	95	7.5	110800	364500	2900
	K81214TN	212	70	105	11	186000	549700	2700
	K89314TN	290	70	125	10	238500	829600	2400
75	K87414	650	70	150	11	359000	1379600	2200
	K89414	920	70	150	16	449800	13896500	2100
	K81115TN	96	75	100	7.5	104500	339600	2700
	K81215TN	195	75	110	11	171500	498700	2600
80	K89315TN	375	75	135	11	284800	1009000	2200
	K87415	800	75	160	12	429500	1658900	2000
	K89415	1070	75	160	17	499600	1579800	2000
	K81116TN	95	80	105	7.5	105800	348800	2600
	K81216TN	234	80	115	11	200600	629600	2400
85	K89316TN	420	80	140	11	304500	1109800	2100
	K87416	880	80	170	12	449000	1807900	1900
	K89416	1410	80	170	18	559600	1769500	1900
	K81117TN	118	85	110	7.5	111900	3849600	2500
	K81217TN	280	85	125	12	216500	659700	2300
80	K89317	540	85	150	12	324600	1099600	2000
	K87417	1030	85	180	13	484600	1919100	1800
	K89417	1610	85	180	19	619500	1979800	1800
	K81118TN	150	90	120	9	140600	4599800	2300
	K81218TN	542	90	135	14	288900	886900	2100
100	K89318	620	90	155	12	329500	1199400	1900
	K87418	1130	90	190	13	508900	2086500	1700
	K89418	1870	90	190	20	678900	2199600	1700
	K81120TN	250	100	135	11	197000	649800	2000
100	K81220	600	100	150	15	279800	839600	1900
	K89320	810	100	170	13	379500	1399500	1700



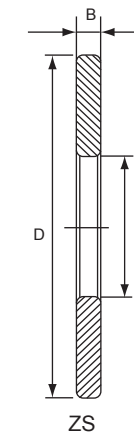
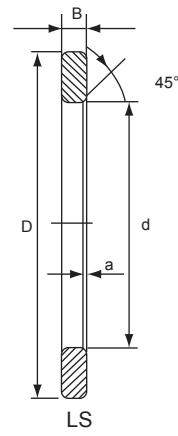
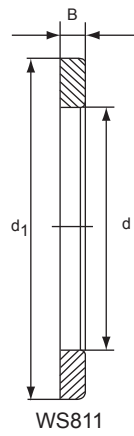
Axial Cylindrical Roller and Cage Assemblies

Shaft Diameter mm	Bearing Designation	Mass Approx g	Boundary Dimensions			Basic Load Rating		Limiting Speed rpm
			Dc ₁	Dc	Dw	Cr Dynamic	Cor Static	
100	K87420	1660	100	210	15	678900	2798900	1500
	K89420	2400	100	210	22	849000	2847900	1500
110	K81122	325	110	145	11	194600	649600	1900
	K81222	685	110	160	15	299800	939700	1800
	K8932	1150	110	190	15	499500	1867900	1600
	K87422	2150	110	230	17	809600	3349600	1400
	K89422	3300	110	230	24	998500	3397800	1400
120	K81124	340	120	155	11	202700	698900	1700
	K81224	730	120	170	15	309600	979600	1700
	K89324	1720	120	210	17	639500	2417600	1400
	K87424	2920	120	250	18	959600	4097900	1300
	K89424	4300	120	250	26	1159500	3987900	1300
130	K81126	414	130	170	12	232700	809600	1600
	K81226	1144	130	190	19	424500	1287900	1500
	K89326	1910	130	2250	18	709600	2697900	1300
	K87426	3410	130	270	19	1049500	4549600	1200
	K89426	5000	130	270	28	1329700	4599800	1200
140	K81128	448	140	180	12	241800	865900	1500
	K81228	1197	140	200	19	444500	1449700	1400
	K89328	2390	140	240	19	819700	3198900	1200
	K87428	3680	140	280	19	1109800	4749800	1100
	K89428	6000	140	280	28	1379600	4949800	1100
150	K81130	474	150	190	12	249600	929700	1400
	K81230	1520	150	215	21	589600	1938900	1300
	K89330	2510	150	250	19	837900	3347900	1200
	K87430	4450	150	300	21	1259800	5497900	1000
	K89430	7100	150	300	30	1569500	5698900	1000
160	K81132	505	160	200	12	259600	989600	1300
	K81232	1603	160	225	21	599500	2028900	1200
	K89332	3150	160	270	21	969600	3898800	1100
	K87432	5330	160	320	22	1447800	6598800	1000
	K89432	8600	160	320	32	1778600	6498800	950

1. The above data of limiting speed is based on the fully cooled oil lubrication; Limiting speed for grease lubrication is 25% of the above data.

Axial Bearing Washers

Shaft Diameter mm	Bearing Washer	Mass g	Housing Locating Washer	Mass g	Boundary Dimensions				
					d	D ₁	D	B ₁	B
4	AS0414	1			4	14	1		
5	AS0515	1			5	15	1		
6	AS0614/08	1			6	14	0.8		
6	AS0619	2			6	19	1	2.75	
8	AS0821	2			8	21	1	2.75	
10	AS1024	3			10	24	1	2.75	
12	AS1226	3			12	26	1	2.75	
15	AS1528	3	GS81102	8	15	16	28	1	2.75
17	AS1722/05	3			17	22	0.5		
17	AS1730	4	GS81103	9	17	18	30	1	2.75
20	AS2035	5	GS81104	12	20	21	35	1	2.75
25	AS2542	7	GS81105	19	25	26	42	1	3
30	AS3047	8	GS81106	20	30	32	47	1	3
35	AS3552	9	GS81107	27	35	37	52	1	3.5
40	AS4060	12	GS81108	37	40	42	60	1	3.5
45	AS4565	13	GS81109	47	45	47	65	1	4
50	AS5070	14	GS81110	51	50	52	70	1	4
55	AS5578	18	GS81111	82	55	57	78	1	5
60	AS6085	22	GS81112	92	60	62	85	1	4.75
65	AS6590	24	GS81113	110	65	67	90	1	5.25
70	AS7095	25	GS81114	120	70	72	95	1	5.25
75	AS75100	27	GS81115	136	75	77	100	1	5.75
80	AS80105	28	GS81116	144	80	82	105	1	5.75
85	AS85110	29	GS81117	151	85	87	110	1	5.75
90	AS90120	39	GS81118	225	90	92	120	1	6.5
100	AS100135	50	GS81120	350	100	102	135	1	7
110	AS110145	55	GS81122	385	110	112	145	1	7
120	AS120155	59	GS81124	415	120	122	155	1	7
130	AS130170	65	GS81128	643	130	132	170	1	9
140	AS140180	79	GS81130	749	140	142	180	1	9.5
150	AS150190	84	GS81132	796	150	152	190	1	9.5
160	AS160200	89	GS81132	842	160	162	200	1	9.5

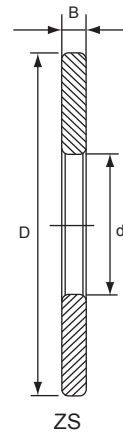


Axial Bearing Washers

Shaft Diameter mm	Bearing Washer	Mass g	Housing Locating Washer	Mass g	Boundary Dimensions mm			
					d	D	d ₁	B
6			LS0619	4	6	19		2.75
8			LS0821	4	8	21		2.75
10			LS1024	7	10	24		2.75
12			LS1226	8	12	26		2.75
15	WS81102	9	LS1528	9	15	28	28	2.75
17	WS81103	9	LS1730	9	17	30	30	2.75
20	WS81104	13	LS2035	13	20	35	35	2.75
25	WS81105	19	LS2542	19	25	42	42	3
30	WS81106	22	LS3047	22	30	47	47	3
35	WS81107	29	LS3552	29	35	52	52	3.5
40	WS81108	40	LS4060	40	40	60	60	3.5
45	WS81109	50	LS4565	50	45	65	65	4
50	WS81110	55	LS5070	55	50	70	70	4
55	WS81111	88	LS5578	88	55	78	78	5
60	WS81112	97	LS6085	97	60	85	85	4.75
65	WS81113	115	LS6590	115	65	90	90	5.25
70	WS81114	123	LS7095	123	70	95	95	5.25
75	WS81115	142	LS75100	142	75	100	100	5.75
80	WS81116	151	LS80105	151	80	105	105	5.75
85	WS81117	159	LS85110	159	85	110	110	5.75
90	WS81118	234	LS90120	234	90	120	120	6.5
100	WS81120	350	LS100135	350	100	135	135	7
110	WS81122	385	LS110145	385	110	145	145	7
120	WS81124	415	LS120155	415	120	155	155	7
130	WS81126	663	LS130170	663	130	171	171	9
140	WS81128	749	LS140180	749	140	180	178	9.5
150	WS81130	796	LS150190	196	150	190	188	9.5
160	WS81132	842	LS160200	842	160	200	198	9.5

Center Washers Of Axial Bearing

Shaft Diameter mm	Designation of Center Washers	Mass Approx g	Boundary Dimensions mm		
			d	D	B
For housing locating, carry load of both direction					
15	ZS1634	31	16	34	5.5
20	ZS2141	45	21	41	6
25	ZS2646	60	26	45	7
30	ZS3151	78	31	51	8
35	ZS3664	156	36	64	9
40	ZS4169	191	41	69	10
45	ZS4677	235	46	77	10
50	ZS5184	316	51	84	11.5
55	ZS5689	360	56	89	12
60	ZS6199	470	61	99	12.5
65	ZS66104	500	66	104	12.5
70	ZS71109	593	71	109	14.5
75	ZS76119	806	76	119	16
85	ZS86134	1180	86	134	18
100	ZS101154	1830	101	154	22
110	ZS111169	2210	111	169	22
120	ZS121179	2460	121	179	23
130	ZS131189	2740	131	189	24
140	ZS141199	3030	141	199	25
150	ZS151214	3830	151	214	27
160	ZS161224	4350	161	224	29



Center Washers Of Axial Bearing

Shaft Diameter mm	Designation of Center Washers	Mass Approx g	Boundary Dimensions		
			d	D	B
For shaft locating, carry load of both direction					
15	ZS1127	21	11	27	5.5
17	ZS1329	23	13	29	5.5
20	ZS1634	31	16	34	5.5
25	ZS2141	45	21	41	6
30	ZS2646	60	26	46	7
35	ZS3151	78	31	51	8
40	ZS3159	125	31	59	8
45	ZS3664	156	36	64	9
50	ZS4169	191	41	69	10
55	ZS4677	235	46	77	10
60	ZS5184	316	51	84	11.5
65	ZS5689	360	56	89	12
70	ZS5694	440	56	94	12.5
75	ZS6199	470	61	99	12.5
80	ZS66104	500	66	104	12.5
85	ZS71109	593	71	109	14.5
90	ZS76119	806	76	119	16
100	ZS86	1180	86	134	18
110	ZS96144	1430	96	144	20
120	ZS101154	1830	101	154	22
130	ZS111169	2210	111	169	22
140	ZS121179	2460	121	179	23
150	ZS131189	2740	131	189	24
160	ZS141199	3030	141	199	25

Water Pump Bearings

As the automobile's core, the engine is being improved with high efficiency. The water pump bearing needs more high capacity requirements. For example, more load, better heat reduction and better sealing capabilities.

Superior water pump bearings are a new style of bearing, made with these requirements. In fact, it is a kind of simple double-load bearing. The double-load bearing has no inner ring. The race-way of the roller rides on the shaft directly. The double-load bearing forms a hole, both side of the outer ring sealed with seal. At the same load condition, the size of radial load is smaller than other bearings, And the same axial load condition, the ability of load is high than other bearings. Because of good-hardness, precision rotation, simple structure, and easy dismounting, many countries, like AMERICA, JAPAN, and GERMANY all use this kind of structure. SBS develops all kinds of water pump bearing and they are used in automobiles that made in our factory in China. Water pump is formed by outer ring, water pump bearing, anti-water seal, impeller, fan and rollers, water pump bearing is the most important part of the water pump. Because the high speed of revolution, usually it reaches 9000r/min , it requires the high-load ability of water pump bearing, And only this can guarantee the life of bearing under the high speed revolution. Because of the limited space, bad operation condition, the water pump bearing should assure the normal revolution requirement, and the same time can decrease the bearing's ability of load. It is difficult for the seal of bearings, because the reliability and the wear ability of the bearing will effect the usage of the bearing. Totally, loading ability, operating seal and operating clearance, are the import and factors effecting the capability of the bearing.

The range of products

SBS can supply the water pump bearing with below structure

- WB double-row ball water pump spindle bearing
- WR single-row ball and single roller water pump spindle bearing
- WB...C double-row ball water pump spindle(angular contact)
- WR...C single-row ball and single roller water pump spindle bearing(Four-point angular contact)

Usually, WR and WB can satisfy the most of loading requirements.

Only under some special condition, the inner structure will be designed as the high-hardness, like WB...C and WR...C series water pump bearing.

Material and heating treatment

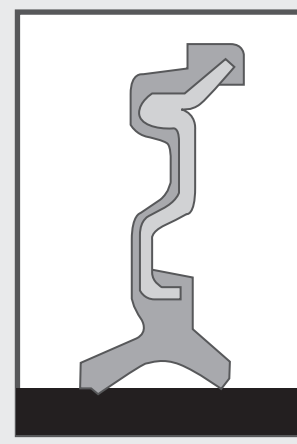
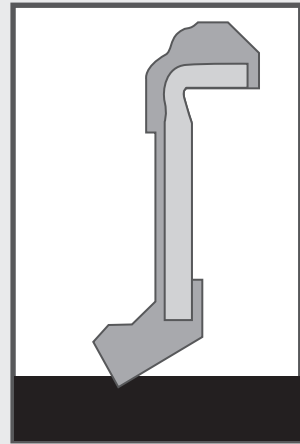
The ball and the roller of SBS are all made by high chrome steel, and shaft, outer ring uses carbon steel or chrome steel , Usually, if the shaft material is high-carbon, the hardness reaches 60-64HRC. And if the shaft material is high-chrome, the hardness reaches 58-62HRC. The hardness of ball and roller reaches 61-65HRC. And the hardness of outer ring is 60-64HRC.

Water Pump Bearings

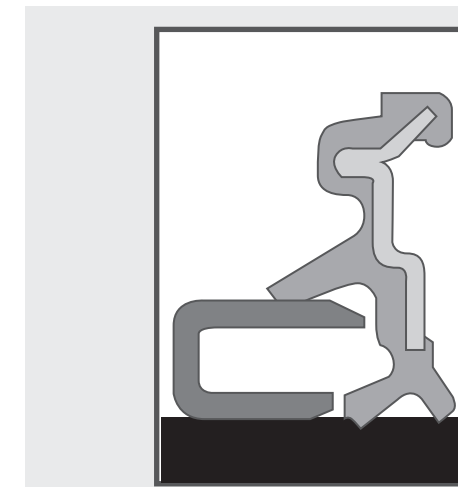
Lubrication and Seal

SBS water pump bearings use once-time lubrication and also it is a kind of lifetime lubrication. It is normal for a small quantity of grease to come out of the seal lip. This quantity should be 1/4 or 1/2 part of the space. In usual condition, NO 2# or NO 3# grease can satisfy the requirement of lubrication, but when the temperature is higher than 120°C. We should use high-level grease.

The function of the water pump bearing seals is to exclude contaminants, such as dust or coolant vapour, while retaining the lubricant. It is normal for a small quantity of grease to come out of the seal lip, as part of the lubrication of the seal lip interface. This quantity should not exceed 0.2g. The seal performance is determined by the material properties and the lip design, as detailed below.

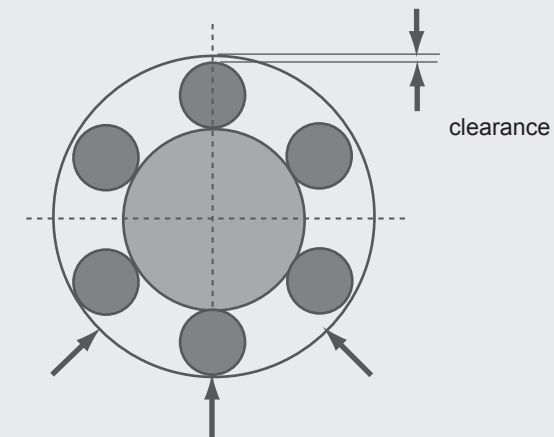


- **Conventional single lip snap type design**
 1. For normal automotive applications
 2. Vulcanized elastomer sealing element
 3. Ease of assembly
 4. Economical
- **Standard double lip interlocking design**
 1. For demanding applications
 2. Inward facing seal lip for improved grease retention
 3. Upgraded rubber material for better sealing against coolant
 4. Positive lock in outer ring, reduces possibility of seal spinning
 5. Optimized lip cross-section for torque and sealing performance



- **Triple lip interlocking design**
 1. For severe applications
 2. Inward facing seal lip for improved grease retention
 3. Upgraded rubber material for better sealing against coolant
 4. Positive lock in outer ring, reduces possibility of seal spinning
 5. Optimized lip cross-section for torque and sealing performance
 6. Additional stainless steel slinger and third lip for increasing sealing protection

Clearance



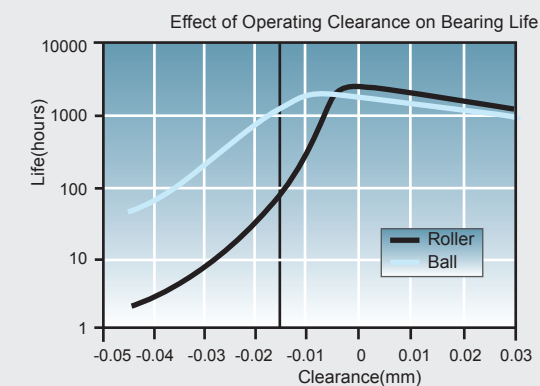
1. Recommended interference fit list for bearings with larger outer dimension and body

outer dimensions of bearings	bore dimension variation of pump body(μm)	
	pump body with iron material	pump body with aluminum material
--24	-27-- -48	-46-- -67
24--30	-33-- -53	-56-- -77
30--52	-34-- -59	-71-- -96

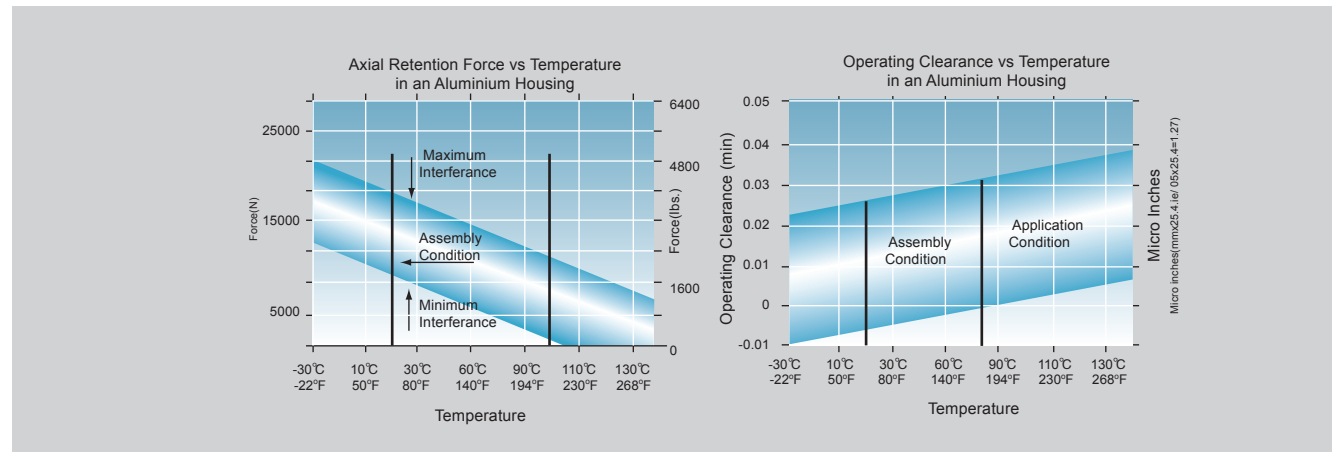
The internal bearing clearance in rolling bearings in operation greatly influences bearing performance in terms of fatigue life, vibration, noise, heat-generation, ect. Consequently, the selection of a proper internal clearance is one of the most important tasks. Theoretically, the longest bearing life can be expected when the clearance is slightly negative. However, it is difficult to achieve such an ideal condition, and an excessive negative clearance will greatly shorten the bearing life. Therefore, a clearance of zero or a slightly positive amount, instead of a negative one, should be selected in general.

When choosing the clearance, we should not only consider the decrease of the clearance, because of the interference fit between the outer ring and bearing seating, but also should consider the decrease of the clearance, because of the increasing of the temperature. The shell of the water pump bearing has two kinds of shell, one is iron, another is aluminum. The fit of the water pump bearing and shell is interference fit (For list one).

WD bearing has no special requirements. The radial clearance is 15-35μm. NSK water pump bearing's radial clearance is 10-40μm. FAG is 10-36μm.



Water Pump Bearings



Accuracy

The tolerance of water pump bearing needs to satisfy with LIST TWO.
 The coarseness of water pump bearing needs to satisfy with LIST THREE.
 The accuracy of revolution is not more than 0.025mm.

2. Tolerance of water pump bearings (μ m)

outer rings	D(mm)		ΔDmp		V _{Dp}	V _{Dmp}	ΔCs		V _{Cs}
	over	incl	high	low	max	max	high	low	max
	18	30	0	-11	12	8	0	-250	20
	30	50	0	-13	16	10	0	-250	20
	50	80	0	-15	20	11	0	-250	20

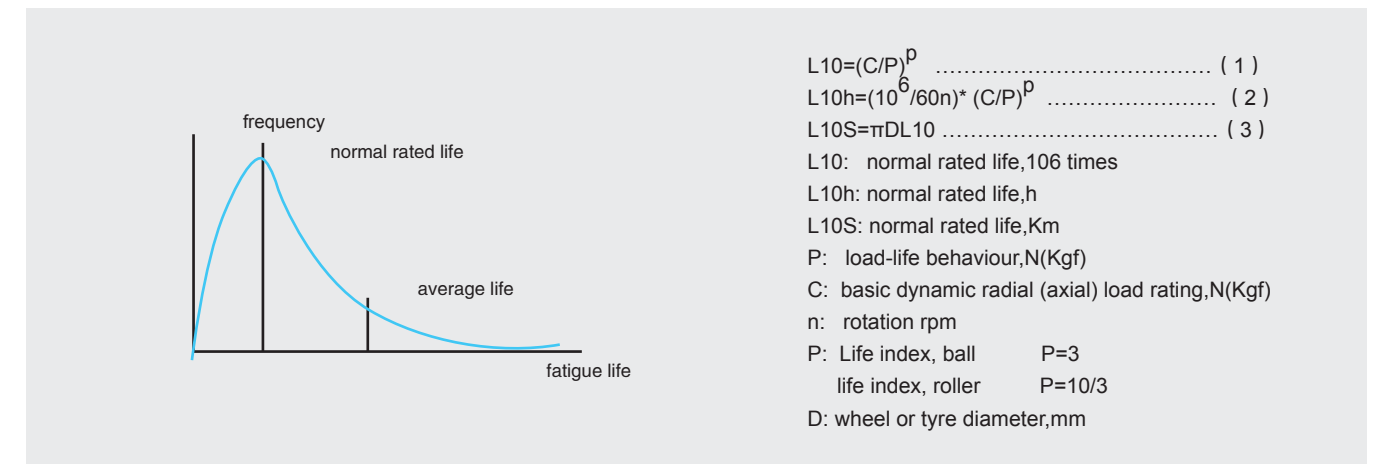
shaft	d(mm)		Δdmp		V _{Dp}	V _{Dmp}	ΔBs	
	over	incl	high	low	max	max	high	low
	10	18	0	-11	8	8	0	-500
	18	30	0	-11	9	9	0	-500

3. Surface roughness (μ m)

section	outer dimension	side surface	chamfer
	Ra not larger than		
outer rings	0.63	6.3	5
shaft	0.63	6.3	5

Bearing life

This load causes a total permanent deformation of the rolling element diameter at the most heavily loaded raceway contact. Even if the operation is normal, the raceway and rolling elements also appear deformation. This total revolution calls "material fatigue". Under the same revolving condition, even if the structure, size, material, the way of manufacture, the "fatigue life" will be different. So the L₁₀ is the lifetime expressed in millions of revolution. It is reached or exceeded by at least 90% of a large group of identical bearings. The relationship of basic dynamic load rating, equivalent dynamic load and basic life is expressed by following formula (1). Using time expresses the life of bearing (2).



$$L_{10} = (C/P)^P \quad (1)$$

$$L_{10h} = (10^6/60n) * (C/P)^P \quad (2)$$

$$L_{10S} = \pi D L_{10} \quad (3)$$

L₁₀: normal rated life, 10⁶ times
 L_{10h}: normal rated life, h
 L_{10S}: normal rated life, Km
 P: load-life behaviour, N(Kgf)
 C: basic dynamic radial (axial) load rating, N(Kgf)
 n: rotation rpm
 P: Life index, ball P=3
 life index, roller P=10/3
 D: wheel or tyre diameter, mm

Basic dynamic load rating

P is the life of exponent. For a ball bearing it is 3, and for a roller bearing, 10/3. For a constant speed, the life in hours calculated:

$$L_{10} = (C/P) \quad (1)$$

$$L_{10h} = (106/60n) * (C/P) \quad (2)$$

Maintenance and mounting

Comparing with the normal part of machine, the water pump bearing is a precise part. So we should be careful when we keep. SBS water pump bearing all use the package of anti-rust and the anti-rust oil. Only the package is not destroyed, the quality will be assured. The best maintenance condition is that the temperature is 20°C or so, the moistness is 65%, and should keep the shelf about 30cm above the ground. And should keep away the sunshine and the cold wall.

When mounting the bearing into the housing, care must be taken to prevent the transmitting of forces through the ball complement. In order to avert this, a sleeve should be used that contacts the outer ring race only. A mechanical press should be used. The hub, impeller and mechanical seal bores must be aligned with the shaft axis during their mounting. Again a press should be used and the opposite shaft end must be supported to prevent transmission of forces through the ball complement.

The function of the outer ring interference fit is to retain the bearing in the housing over the intended service temperature range. It also must provide adequate bearing support without inducing ovality into the raceways. If the interference fit is too light, the bearing could walk out of the housing. If the fit is too heavy, pre-load of the bearing may occur.

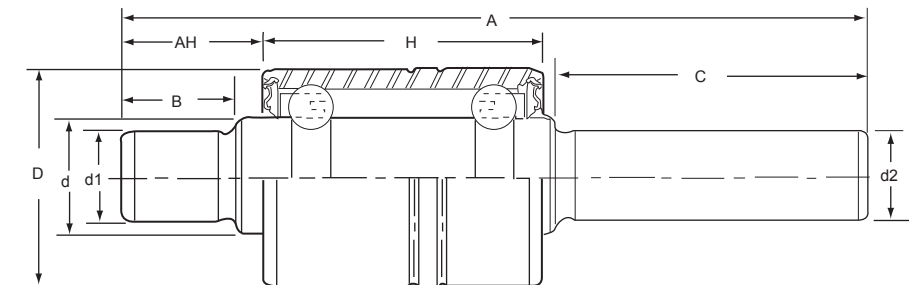
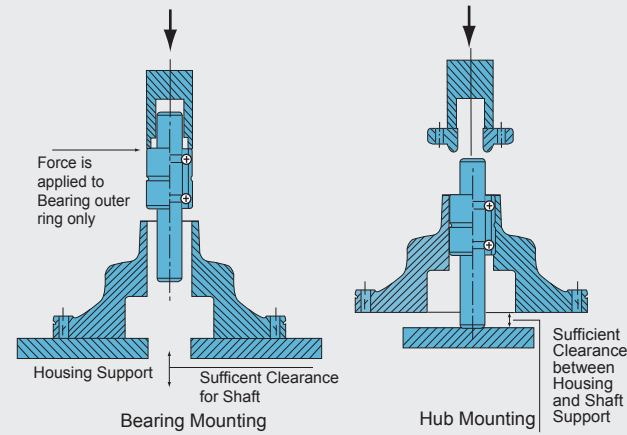
Water Pump Bearings

Housing requirements

Bore circularity < 0.010mm. Bore taper < 0.007mm per 25mm bore length.

Smoothing

During press in, material from the housing bore is removed resulting in less holding force. In cold conditions, material removal increases. This depends on the housing material and the housing bore surface finish.



Lack of attention to proper installation of pulleys, fans, fan spacers or viscous clutches will cause increased bearing loading during operation.

Typically, the water pump belt forces and weights of rotating components on the bearing shafts will load the outer ring raceways over only one-half of its circumference. This is called a point loaded condition.

Because of rotation with respect to the loads. The shaft raceways are loaded over their full circumference or, circumferentially loaded.

If the assembly procedure or mounted components contain or induce eccentricities at the mating surfaces, imbalance loads will be generated. If angularity occurs, gyroscopic moments are created due to the tilted, wobbling motion of the misaligned components during rotation. Angularity may also contribute to the eccentric imbalance loads. All eccentric and gyroscopic load components are non-stationary in direction and rotate with the shaft. This situation, if severe, will reverse the raceway loading patterns to that of point loaded shaft raceways and 360 degree circumferentially loaded outer ring raceways. The magnitudes of these loads increases with the square of the rotational speed.

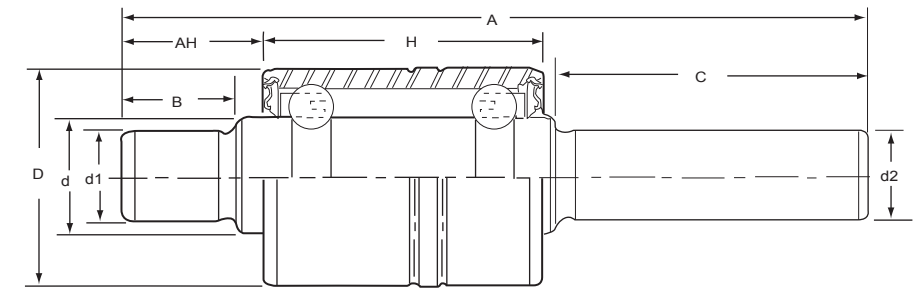
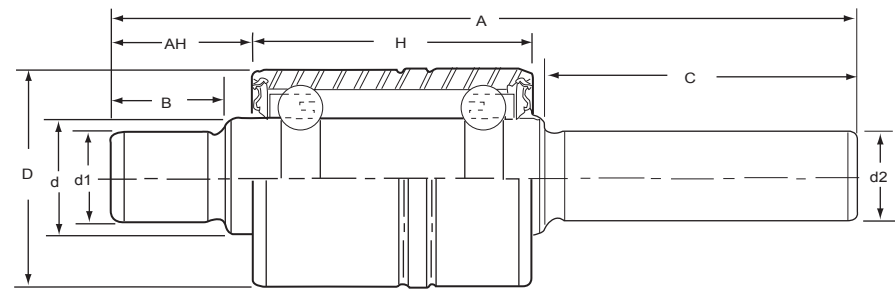
Other conditions generated under these circumstances are roller edge stressing and misaligned ball row tracking. This acts to elevate cage and lubricant stressing and increase bearing operating temperatures. As well, the L10 bearing fatigue life becomes shorter due to the increased equivalent load on each row.

Taken to extremes, imbalance and gyroscopic loads may become so high reaching the strength limitations of the shaft material. The dynamic stress reversals may initiate tiny micro-cracks in the hardened case layer. If operation such as this continues, the cracks will propagate across the entire shaft cross section and cause the shaft to fracture, often with catastrophic results.

The size of the water pump bearing has never a standard. To satisfy with different requirements.

WD	Bearing Designation				Boundary Dimensions mm								
	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WB1224065		395837			24	33.38	65.41	16	12033				
WB1224079		395671B			24	33.38	78.83	17	12038				
WB1224080		416787C			24	33.38	80	14.2	12738				
WB1224083-1		395835			24	33.38	82.73	16	12038				
WB1224083					24	25	83	21	12				
WB1224081-1		412619AA	FPS732		24	33.38	83.57	16.39	12738				
WB1224084		395726			24	33.38	83.9	22.2	12038				
WB1224085					24	27	85	21	12038				

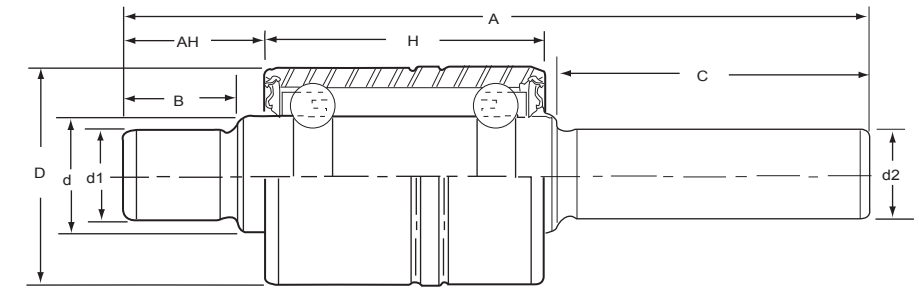
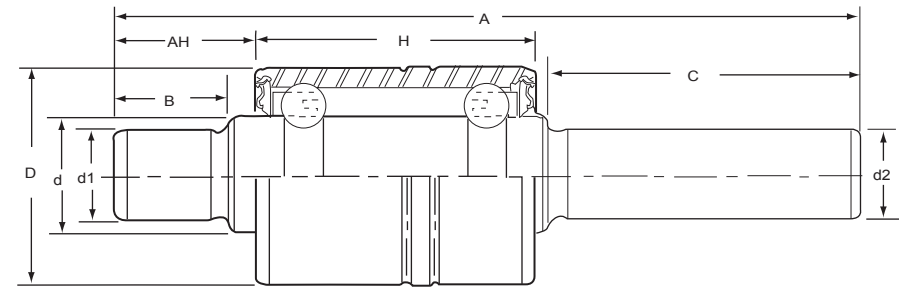




Water Pump Bearings

WD	Bearing Designation				Boundary Dimensions mm									
	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
WB1226086					26	39	86	12	12					
WB1226090				WPB12090BRS	26	39	89.5	16.5	12					
WB1226090-1				WPB12090ARS	26	39	90	14	12					
WB1226091				WPB12091RS	26	39	91	17	12					
WB1226093-1				WPB12093RS	26	39	92.5	16.5	12					
WB1226093					26	39	93	16	12					
WB1226094Y					26	39	94	21.5	12					
WB1226095	BWF26-4	WS2372		S16140R-5RS	26	39	94.5	21.5	12					
WB1226098				WPB12098-3RS	26	39	97.3	17.5	12					
WB1226099				S16140CRS	26	39	99	25	12					
WB1226102				S16140R-3RS	26	39	102.5	21.5	12					
WB1226103-1	BWF26-11	WS2407		WPB12103RS	26	39	103.5	21.5	12					
WB1226103				WPB12104ARS	26	39	103.5	17.5	12					
WB1226104					26	39	103.8	17.5	12					
WB1226105					26	39	104.4		12					
WB1226106				WPB12106RS	26	39	105.5	16.5	12					
WB1226114				WPB12114RS	26	39	113.5	17.5	12					
WB1226117					26	39	117	26	12					

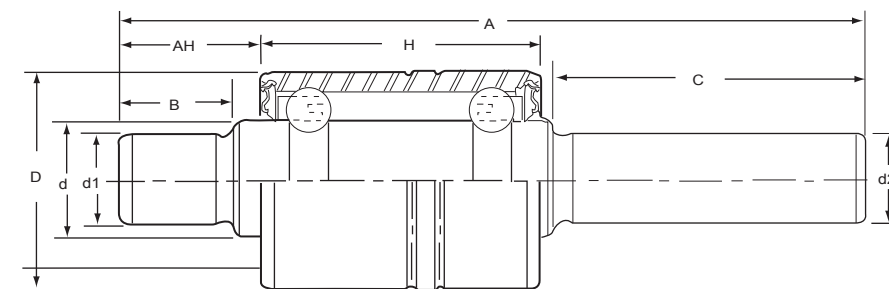
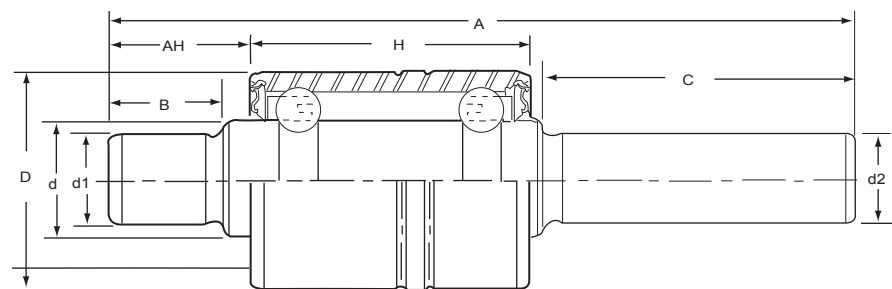
WD	Bearing Designation				Boundary Dimensions mm									
	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
WB1630068				WPB16068RS	30	38.89	68.4	25	15.918					
WB1630069		W2270			30	38.89	68.66	27.8	15.918					
WB1730071				WPB1730071RS	30	23	71	13.5	17				32	
WB1630078					30	38.89	73	17	16					
WB1630074			FPS878		30	38.89	73.91	11.4	15.918					
WB1630078			FPS832		30	38.89	75.6	27.01	15.918					
WB1730078				WPB1730078RS	30	23	77.8	15.5	15.918	12			37.3	
WB1630080-1					30	30	79.6		15.918	12			33	
WB1630080-4					30	27	80	15.9	15.918					
WB1630080-3					30	23	80.3	17.2	15.918	12			38.5	
WB1630080D					30	30	80	18	16	12	12	17	31	
WB1630081			FBS413		30	38.89	80.95	22.48	15.918					
WB1630083					30	27	82.5	17.7	15.918					
WB1630083D					30	30	83	18	16	12			33.8	
WB1630083C					30	25	83.1	16	15.918					
WB1630084					30	30	84	17	15.918	12			33	
WB1630084-1		W2334		WPB16084RS	30	38.89	84.4	13	15.918	12			30	
WB1630085-2					30	27	84.4	17	15.918					
WB1630085D			FBS855		30	38.89	84.99	15.07	15.918	12.037			28	
WB1530085					30	38.89	85	13.06	15	12			28.5	
WB1630085-1			FPS694		30	38.89	85.22	15.21	15.918	12.042			29.21	
WB1630086				WPB16086/1RBS	30	30	86	16.5	15.918	12			37	
WB1630086D					30	38.89	86	17	15.918	15	12	16	33	
WB1630087C					30	38.89	86.5	13.5	15.918	12.038			32.7	
WB1630087-4					30	38.89	86.5		15.918	12			32	
WB1630087-1					30	38.89	87.4		15.918					
WB1630088-2					30	30	87.5	13.5	15.918	12			37.5	
WB1630088-1					30	38.89	88	12.4	15.918	12			35.3	
WB1630091C					30	38.89	91	13.5	15.918	12			36	
WB1630091D				WPB16091RS	30	38.89	91.5	17.56	15.918	12	12	15.5	33	
WB1630092-1			FPS337		30	38.89	91.85	20.45	15.918	12.675	85	29.34		
WB1630092D					30	38.89	92	16.5	15.918	12	12	14.5	34.5	
WB1630092-2					30	38.89	92		16					



Water Pump Bearings

Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WB16300992	885477	W2364S	FPS908	885477ARSE	30	38.89	92.48	25.12	15.918	12.037		26.06	
WB1630093D				WPB16093-4RS	30	38.89	92.5	16.5	15.918	12		34.5	
WB1630093-1				WPB16093-1RS	30	38.89	93	18.5	15.918	12		32.6	
WB1630093	885330	W2366		WPB16093RS	30	38.89	93	18.5	15.918				
WB1630093					30	38.89	93.25	16.25	16	12	12	14.5	35.75
WB1630094			FPS926		30	38.89	94.5	35.11	15.918				
WB1630095				WPB16095CRS	30	38.89	94.6	19.2	15.918	12		33.5	
WB1530096			FPS744		30	38.89	96.5	17.87	15.918	12.052		35.45	
WB1630097					30	30	97		15.918				
WB1630098-1			FPS519		30	38.89	97.51	23.49	15.918				
WB1630098-2	885110	W2384S			30	38.89	97.65	19.05	15.918	12.675		36.53	
WB1630098-6					30	38.89	97.65		15.918				
WB1630098-3	885324		FPS849		30	38.89	97.82	17.88	15.918				
WB1630098A	885307	W2385	FPS595		30	38.89	98	17	15.918				
WB1630098-4		W2385-4			30	38.89	98	20	15.918				
WB1630098W					30	38.89	98	16.5	15.918				
WB1630098C				WPB16095-2RS	30	38.89	98	16	15.918	12		40.6	
WB1630098CA		W2385-6			30	38.89	98	17.06	15.918				
WB1630098-5		W2386S	FPS811		30	38.89	98	18.51	15.918	12.235		38	
WB1630099	885474	W2387S	FPS815	WPB16099-1RS	30	38.89	98.5	22.55	15.918	12		33.78	
WB1630099-3					30	38.89	98.5	16.25	16	12	12	14.5	50.25
WB1630099-1				WPB16099-5RS	30	38.89	98.5	16.5	15.918	12	12		40.5
WB1630099-2	885301				30	38.89	98.88	23.62	15.918	15	15	21.13	32.51
WB1530100			FBS810		30	36.5	100	23.5	15.918				
WB1630100				WPB16100ARS	30	38.89	100	24	15.918	12		35	
WB1630100-1					30	39	100	21	15.918	12		37.5	
WB1630101D	885328			BWF3044	30	38.89	101	24	15.918	14	12	20.5	35.1
WB1630101					30	38.89	101	25	16	12		35	
WB1630101-2					30	38.89	101.2	21.8	15.918				

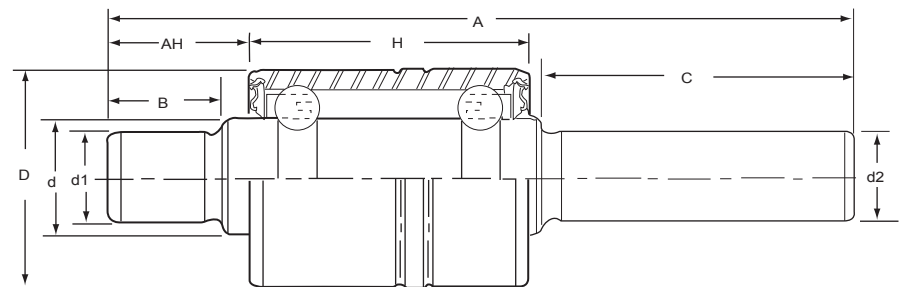
Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WB1630101-1	885467	W2398-1S	FPS919		30	38.89	101.24	29	15.918	12.007	12.687	25.4	31.01
WB1630102-1				885685RSH	30	38.89	101.5	17.5	15.918				
WB1630102	885321	W3399			30	38.89	101.5	17.5	15.918				
WB1630102-3		W2401-3	FPS120		30	38.89	102.01	16.92	15.918				
WB1630102-4				WPB16102CRSE	30	38.89	102.26	35	15.918	15	15	32.92	26.04
WB1630102A	885147		FPS1		30	38.89	102.5	22	15.918		12.675		38.5
WB1630102-5		W2404S	FPS623	WPB16102BRSE	30	38.89	102.62	24.45	15.918		12.674		38.1
WB1630103-1			FPS484		30	38.89	101.74	35.02	15.918	12.7	12.014	30.5	23.75
WB1630103-2	885405			WPB16102-4RSE	30	38.89	102.74	28.77	15.918	12.014	127	25.5	32
WB1630103-3			FPS532	WPB16102AHSE	30	38.89	102.87	22.7	15.918		12.675		38.1
WB1630103-4			FPS620	WPB16103ERSE	30	38.89	102.87	23.11	15.918				
WB1630103D				WPB16103-9RS	30	38.89	103	16.51	15.918		12		43
885140	885595	W2406-2	FPS17	885140BRSE	30	38.89	103.2	23.42	15.918				
WB1630104-6	BWF30AA		FPS734	R16150-1RS	30	38.89	103.5	21.58	15.918	12	12	18.26	39.75
WB1630104-2		W24071S	FPS835		30	38.89	103.5	21.56	15.918		12		39.75
WB1630104-3	BWF3088				30	38.89	103.51	19.56	15.918		12		42
WB1630104D					30	39	103.65	21.5	15.918		12		36
WB1630104-4			FPS601		30	38.89	103.84	22.33	15.918				
WB1230104-1					30	38.89	103.8	17.5	16	12	12	16	44.8
WB1630104					30	38.89	104	16.25	16	12	12	14.5	46.5
WB1630104-5					30	38.89	104		15.918		12		35.1
WB1630105-1		W2412-1			30	38.89	104.65	20.3	15.918				
WB1630105-2	885602	W2412	FPS239		30	38.89	104.68	27.05	15.918				
WB1630105-3			FPS917		30	38.89	105	47.16	15.918				
WB1630105-6					30	38.89	105		15.918		12		33.3
WB1630105-4			FPS26		30	38.89	105.16	23.95	15.918				
WB1630105					30	38.89	105.3	16.2	16	12	12	15	48



Water Pump Bearings

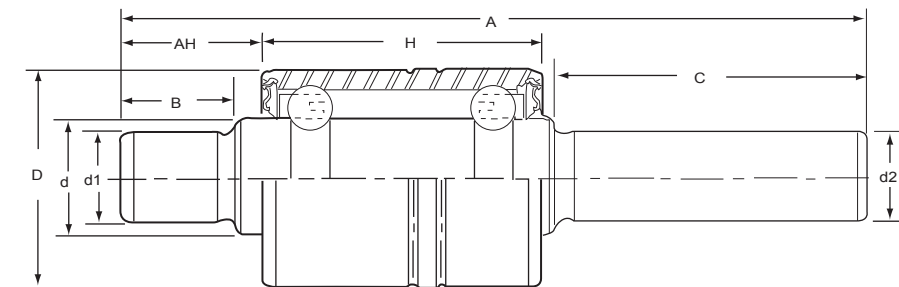
Bearing Designation					Boundary Dimensions mm									
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
885159	885159	W2414	FPS860		30	38.89	105.4	24.21	15.918					
WB1630105-5				885699RSE	30	38.89	105.46	20.63	15.918					
WB1630106-1		W2415-1S	FPS106	WPB16105BRS	30	38.89	105.5	24.05	15.918		12		40	
WB1630106-8					30	38.89	105.5	23.5	15.918		12		40.5	
WB1630106-2				WPB16106MRS	30	38.89	105.5	16.5	15.918	12	12	13.1	46	
WB1630106D					30	38.89	105.65	16.25	15.918	12	12	14.5	48	
WB1630106D-9					30	38.89	105.7	17.5	16	12	12	16	46.7	
WB1630106	885490		FPS104	WPB16106-3RSEH	30	38.89	106	26.11	16					
WB1630106-3	885097	W2417-2			30	38.89	106	20.65	15.918					
WB1630106D					30	38.89	106	25	16		12		40	
WB1630106W					30	38.89	106	30	15.918		12		34	
WB1630106G					30	38.89	106		16					
WB1630106-7					30	38.89	106.17	20.8	15.918					
WB1630106-4		W2418-1		WPS16106DRS	30	38.89	106.17	25.15	15.918					
WB1630106-5	885439	W2418S	FPS730K	WPB16106DRSE	30	38.89	106.17	25.12	15.918		12.738		38.86	
WB1630106					30	38.89	106.17		16					
WB1630106-6				WPB16106JRS	30	38.89	106.12	18.5	15.918		12		41	
WB1630107				WPS16107BRSE	30	38.89	105.5	27.8	15.918	15.01	12.052	26.1	35	
WB1630108				D607010RS	30	38.89	108	21.5	15.918		12		44.5	
WB1630109-1		W2428-1		885111-D	30	38.89	108.74	27.38	15.918		12			
WB1630109				WPB16109RS	30	38.89	109	27.31	16		12		33.5	
WB1630110		W2431-2S			30	38.89	109.5	25.1	15.918		12.04		38.8	
WB1630110-1	885107b	W2431	FPS520		30	38.89	109.52	14.67	15.918					
WB1530110-2	885305				30	38.89	110	23.52	15.918					
8855245	885524S	W2433-2	FPS456		30	38.89	110	24	15.918		12		46	
WB1630111					30	38.89	113.6	28.96	15.918					
WB1630112	885167			885167	30	38.89	111.51	23.8	15.918		12			
WB1630112D					30	38.89	111.65	21.5	15.918		12		44	
WB1630112-1		W2440-4	FPS208	885167DRSE	30	38.89	111.75	29.21	15.918					

Bearing Designation					Boundary Dimensions mm									
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
WB1630112-2	885098	W2440-1			30	38.89	111.91	26.7	15.918					
WB1630112-3	885327			WPB116112-5RS	30	38.89	112	25.15	15.918					
WB1630112-4		W2440-5S		BWF3076B	30	38.89	112	30	15.918			12	40.49	
WB1630112-5		W2441-1			30	38.89	112	27	15.918					
WB1630112-6		W2442			30	38.89	112.4	23.37	15.918					
WB1630113-1			FPS23		30	38.89	112.52	31.26	15.918					
WB1630113-2			FPS16		30	38.89	112.67	25.52	15.918					
WB1630113-3	885614				30	38.89	112.78	30	15.918					
WB1630113-7					30	38.89	113	18.5	15.918			12	53.6	
WB1630113-4		W2445		885155	30	38.89	113.11	31.75	15.918					
WB1630113-5			FPS48	WPB16113CRSE	30	38.89	113.21	32	15.918					
WB1630113-6	N885156	W2446	FPS24	885156-S	30	38.89	113.49	27.38	15.918					
WB1630114-3					30	38.89	113.6	17	15.918	12	12	1555.6		
WB1630114-1		W2447			30	38.89	113.67	31.6	15.918					
WB1630114					30	38.89	114	24	15.918					
WB1630114-4					30	38.89	114		15.918			12	47.8	
WB1630114-2	885697	W2450-2		C8DE8530A-1RSE	30	38.89	114.3	32	15.918					
WB1630115-1				WPB16115-1RS	30	38.89	114.54	29.4	15.918			12	42.5	
WB1630115-2	885133-A			885133ARSE	30	38.89	114.81	32	15.918					
WB1630115-5				WPB16115-3ARS	30	38.89	115	16.5	15.918			12	33	
WB1630115-4					30	38.89	115	26.11	16					
885167	885167		FPS153		30	38.89	115.51	27.8	15.918					
WB1630116-1	8851495	W2431	FPS54		30	38.89	115.75	26.85	15.918					
WB1630116-2				WPB16116-1RS	30	38.89	116	30.06	15.918			12	43	
WB1630116					30	38.89	116	26	15.918			12	46	

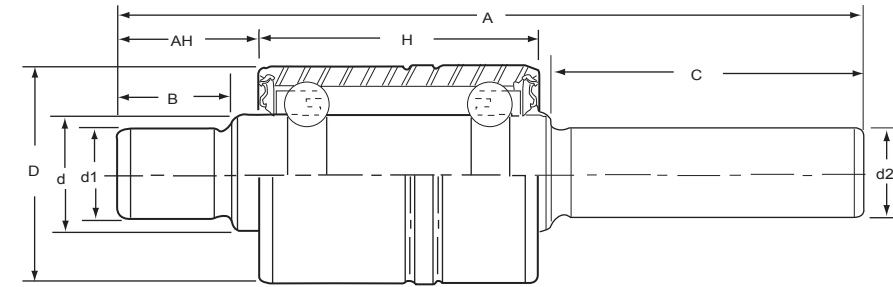
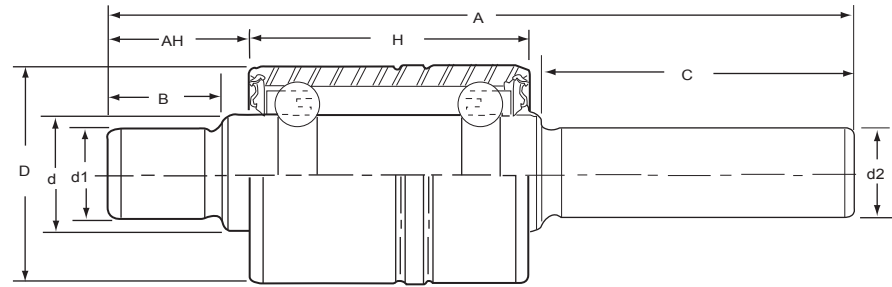


Water Pump Bearings

Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WB1630116C					30	38.89	116	27.11	15.918				
WB1630117					30	38.89	116.5	27.5	16		13		47
WB1630117-1		W2462-2		885190	30	38.89	117.35	33.96	15.918				
WB1630118		W2465			30	38.9	118.26	14.68	15.918				
WB1630119-3					30	38.89	119	22.5	15.918		12		55
885118	885118	W2468	FPS122	885118RSE	30	38.89	119.07	37.31	15.918				
WB1630119C					30	38.89	119.3	37.6	15.918				
WB1630119-1	885135S	W2470		885135CRSE	30	38.89	119.46	32.54	15.918				
WB1630119-2	885637				30	38.89	119.48	40.82	15.918				
WB1630120-1	885584S	W2472		885584	30	38.89	119.84	36.5	15.918				
WB1630120					30	38.89	120	31	15.918				
WB1630121-1		W2475		885222	30	38.9	120.65	28.12	15.918				
WB1630121	885105	W2476		885105	30	38.89	120.9	29.46	15.918				
WB1630121-2					30	39	121	24	15.918		12		53.6
WB1630122D					30	38.89	121.5	25	16		12		47.5
WB1630122-1	885238	W2478-1	FPS659		30	38.89	121.62	31.42	15.918				
WB1630122		W2479-1		885208	30	38.89	121.67	37.26	15.918				
WB1630122-2			FPS674		30	38.89	121.92	41.37	15.918		12.675		38.1
WB1630122X					30	38.89	122	26.5	15.918				
WB1630122-3					30	38.89	122.12	32.96	15.918		12.703		44.7
WB1630122-4	885476	W2481			30	38.89	122.17	33.88	15.918				
WB1630122-5	885168H		FPS290		30	38.89	122.22	28.67	15.918				
WB1630122-6	885168C	W2481-1	FPS163	885168-1	30	38.89	122.22	28.58	15.918				
885168	885168AD	W2481-6		885168AA	30	38.89	122.22	40.18	15.918				



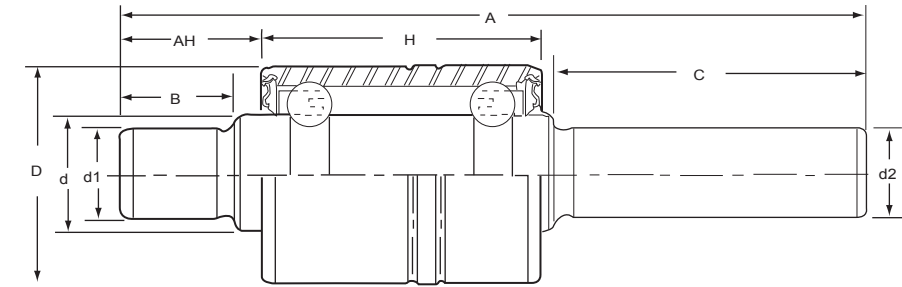
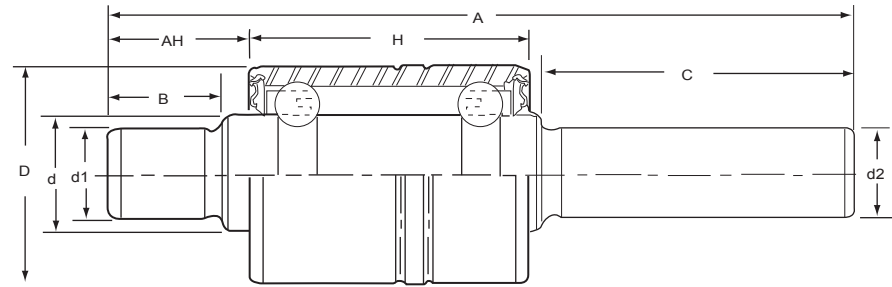
Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WB1630122-7					30	38.89	122.4	33.5	15.918				
WB1630123-1				WPB16122-1RSE30	39	123			15.918				
W6484-1					30	38.9	123		15.918				
WB1630123		W2484			30	38.9	123.04	36.86	15.918				
WB1630124-1					30	57.15	123.2	25.5	15.918				
WB1630124-6	885100B	W2486-2		885100B	30	38.89	123.67	31.75	15.918				
WB1630124-2			FPS109	WPB16124RS	30	38.89	124	42.61	15.918		12		40
WB1630124-3	885326	W2488S		BWF3089	30	38.89	124	41.78	15.918		12		40.49
WB1630124					30	38.89	124	21	15.918				
WB1630124-5					30	39	124	23	15.918		12		60.5
WB1630124-4	885245	W2489-2	FPS923	885245RSE	30	38.89	124.4	40	15.918				
WB1630125			FPS188		30	38.9	124.5	30.14	15.918		15.817		40.64
WB1630125-2					30	38.89	124.5	40	15.918				
WB1630125-1	885534S				30	38.89	124.97	39.12	15.918				
WB1630126		W2496			30	38.89	126	34.3	15.918				
WB1630127-1			FPS204	885142-C	30	38.89	127	44.52	15.918				
WB1630127-2			FPS374	WOB16127CRSE30	38.89	127	37.94	15.918		12.7			35.56
WB1630127-3	885142D	W2500-2			30	38.89	127	32.56	15.918				
WB1630127					30	38.89	127	36	16	M12		19	
WB1630127D					30	38.89	127	27	15.918		12		59
WB1630128					30	38.89	127.7	22.41	15.918				
WB1630128-1	885151B	W2405-6		885151-B	30	38.89	127.79	44.45	15.918				
WB1630128-2	885141		FPS18	885141RSE	30	38.89	127.79	25.8	15.918				
885168	885169	W2507	FPS42	885169-1	30	38.89	129	31.75	15.918				
WB1630130					30	38.89	129	41	15.918				
WB1630132		W2520	FPS389		30	38.89	132.16	50.42	15.918				
885104					30	38.89	132.16		15.918				
WB1630132-1	885104A				30	38.89	132.16	47.85	15.918				
WB1630133				885113-B	30	38.89	132.54	40.87	15.918				



Water Pump Bearings

Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WB1630133-1				885113CRSE	30	38.89	132.64	29.77	15.918				
WB1630133-2	885611	W3522-1	FPS661		30	38.89	132.64	29.77	15.918				
WB163033-3			FPS602		30	38.89	133.1	55.35	15.918				
WB1630133-4	885415	W2524-1			30	38.89	133.25	38.86	15.918				
WB1630134	885113	W2527		885113BRSE	30	38.89	133.86	42.65	15.918				
WB1630135	885158AA	W2531-1		K885158AA	30	38.89	134.92	33.15	15.918				
WB1630135-1	885437S	W2532	FPS786		30	38.89	135.28	50.85	15.918				
WB1630135-2				885437RSE	30	38.89	135.28	45.59	15.918				
WB1630136			FPS386	885093SRSE	30	38.89	135.74	44.5	15.918				
WB1630136-1	885093	W2534-1		885093S	30	38.89	135.74	52.4	15.918				
WB1630136-2	885158P	W2537	FPS7	885245RSE	30	38.89	136.4	39.4	15.918				
WB1630137				885672	30	38.89	137.49	40	15.918				
WB1630138		W2542	FPS287		30	38.89	137.67	46.23	15.918				
WB1630138-1	885158		FPS25	885158-1RSE	30	38.89	138.1	40.89	15.918				
WB1630138-2				885158-1	30	38.89	138.1	58.34	15.918				
WB1630138-3		W2543			30	38.89	138.1	45.7	15.918				
WB1630139	885603	W2548-1	FPS397	885603	30	38.89	139.32	35.05	15.918				
WB1630141	885248	W2555	FPS757	885248RSE	30	38.89	141	49	15.918				
WB1630141-1	885458	W2556	FPS885		30	38.89	141.22	38.93	15.918				
WB1630142		W2559			30	38.89	142.1	44.86	15.918				
WB1630143	885141	W2562	FPS19		30	38.89	142.88	40.08	15.918				
WB1630144			FPS525	885151-B	30	38.89	144.28	52.71	15.918	12.703		47.24	
WB1630146	885694S	W2575-1	FPS612	885141RSE	30	38.89	146.2	61.72	15.918				

Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WB1630150-1	885166C			885166C	30	38.89	150	35.1	15.918				
WB1630150					30	38.89	150	52	15.918	12	M10	50.5	48.5
WB1630154		W2606			30	38.89	154	34.04	15.918				
WB1630154-1			FPS776	885125C	30	38.89	154.23	29.77	15.918				
WB1630154-2	885613	W3607	FPS722		30	38.89	154.23	29.77	15.918				
WB1630156				885671	30	38.89	155.58	69.95	15.918				
WB1630160	885094	W2629-1		885094S	30	38.89	159.54	76.2	15.918				
WB1630160-1	885136B	W26294		885136B	30	38.89	159.77	62.66	15.918				
WB1630161	885117	W2637		885117	30	38.89	161.47	58.34	15.918				
WB1630166			FPS61		30	38.89	165.85	63.48	15.918				
WB1630167			FPS646		30	38.89	177.09	79.88	15.918				
WB1635073					35	22.5	73	14.5	16		12		34.2
WB1635091					35	38.9	91		15.918				
WB1635101					35	38.89	101				12		35
WB1835119					35	46	119	26.5	18		13		42.2
WB1736091					36	38.89	90.7	14	17		15		34
WB1736091-1					36	38.89	90.7		17		12		34

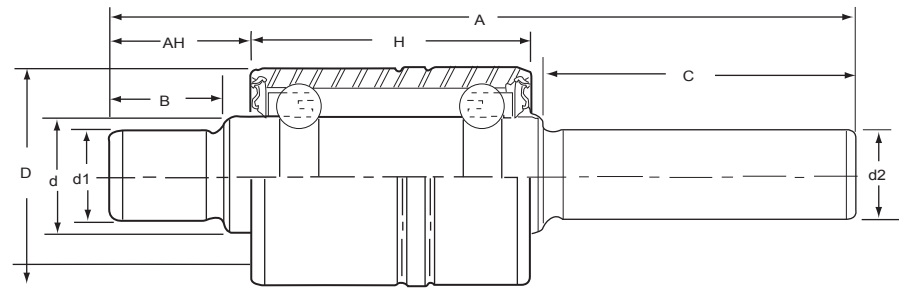


Water Pump Bearings

Bearing Designation					Boundary Dimensions mm									
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
WB1938121			FPS135	885800CRSE	38.1	53.975	120.65	24.260	18.961		15.918		39.675	
885802					38.1	53.975	95.4	14.7	18.948	15.926			11.3	
885825					38.1	41.275	120.65		18.961		15.918		43.26	
WB1938126			FPS470	885832RSE	38.1	53.975	133.25	30.861	18.961	15.918	15.918	27.432	37.338	
WB1938127-1				885775RSE	38.1	53.975	127	26.67	18.961	15.938	15.918	11.634	44.45	
WB1938127		WK25509	FPS139	885811RSE	38.1	53.975	127	31.369	18.961		15.918		38.1	
885869					38.1	53.975	127.48		18.961	15.918	15.918	13.72	39.29	
WB1938127-2				885869RSE	38.1	53.975	127.51	31.115	18.961	15.918	15.918	14.275	39.878	
WB1938132				885821BRSE	38.1	53.975	132.08	29.845	18.961	15.918	15.918	12.319	43.18	
WB1938134				W9B134RSE	38.1	53.975	135.05	37.605	18.961		15.918		39.678	
WB1938134-1				C9DE8530C	38.1	53.975	134.112	30.353	18.961		15.918		47.244	
WB1938136-2		WK2538-2		885735RSE	38.1	53.975	136.636	31.877	18.961		15.918		47.244	
WB1938136-1		WK2537-1	FPS662	885737RSE	38.1	53.975	136.398	36.195	18.961	15.918	15.918	12.219	43.434	
WB1938136		WK2538	FPS138	885810RSE	38.1	53.975	136.652	36.703	18.961	15.918	15.918	33.02	42.418	
WB938137				885870RSE	38.1	53.975	136.779	40.366	18.961	15.918	15.918	14.275	39.873	
WB1938140-1		WK2550	FPS399	885821RSE	38.1	53.975	139.7	35.56	18.961	15.918	15.918	15.392	47.752	
WB1938140-2				W9B140L	38.1	53.975	140	33.7	18.961	15.918	15.918	29	49.146	
WB1938140				885720RSE	38.1	53.975	140.589	39.624	18.961		15.918		43.815	
885815					38.1	53.975	141.76		18.961		15.918		51.59	
WB1938142		WK6558		885842ARSE	38.1	53.975	141.757	43.84	18.961		15.918		41.021	
WB1938143-1				885815ARSE	38.1	53.975	143.256	35.305	18.961		15.918		49.2	
WB1938143				885862ARSE	38.1	53.975	143.485	30.836	18.961	15.918	15.918	12.243	45.72	
WB1938144				80DA8530AA	38.1	53.975	143.764	41.021	18.961	15.918	15.918	37.5	44.577	
WB1938145				885802RSE	38.1	53.975	145.796	44.704	18.961		15.918		44.45	
WB1938145-1		WK2574-2	FPS366	885818RSE	38.1	53.975	145.796	44.704	18.961		15.918		40.767	
WB1938146				885747RSE	38.1	53.975	146.05	36.322	18.961	15.918	15.918	13.716	51.562	
WB1938146-1				885760RSE	38.1	53.975	146.05	36.322	18.961	15.918	15.918	33.02	51.562	

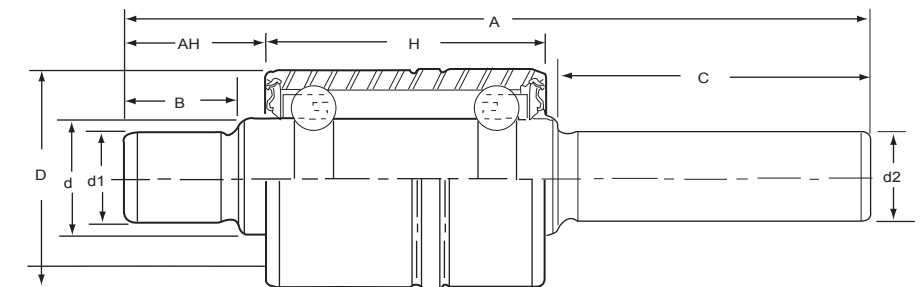
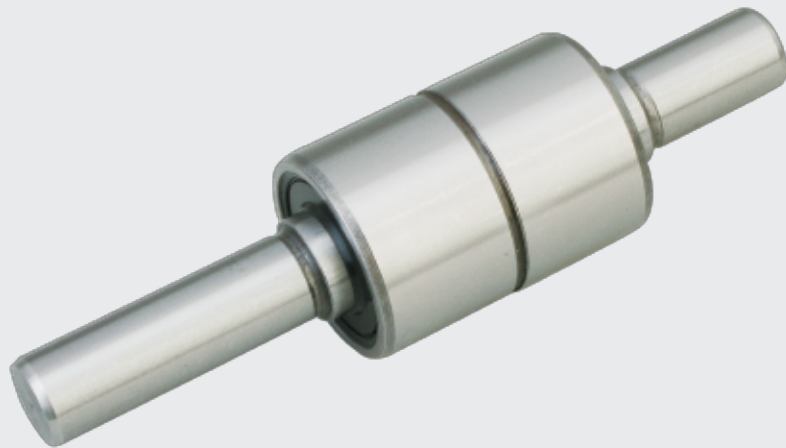
Bearing Designation					Boundary Dimensions mm									
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
885790					38.1	53.975	148.84		18.961	15.918	15.918	34.92	49.66	
WB1938150				885764RSE	38.1	53.975	150.52	35.052	18.961		15.918		58.318	
WB1938152				885844RSE	38.1	41.275	152.4	35.66	18.961	15.918	15.918	15.265	60.528	
WB1938153-1				885857RSE	38.1	53.975	152.908	53.694	18.961	15.918	15.918	28.448	41.783	
WB1938153-2				885865A	38.1	53.975	152.908	46.355	18.961	15.938	15.918	28.575	43.035	
WB1938153				885807CRSE	38.1	53.975	153.416	45.72	18.961		15.918		50.546	
WB1938154				885825CRSE	38.1	53.975	154.229	29.769	18.961	15.918	15.918	8.89	57.15	
885746					38.1	53.975	156.6		18.961	15.918	15.918		59.82	
885884					38.1	53.975	161		18.961	15.918	15.918	33.53	55.88	



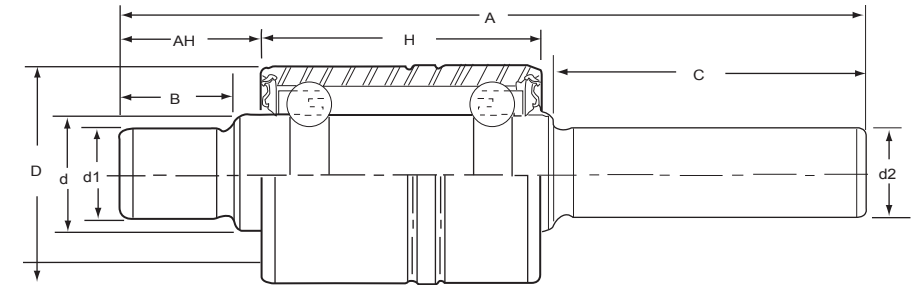
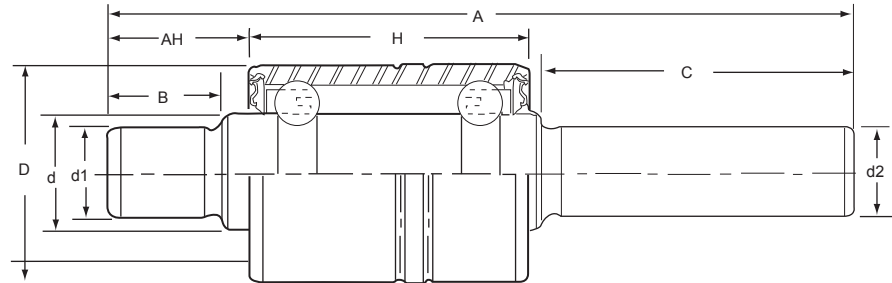


Water Pump Bearings

Bearing Designation					Boundary Dimensions mm									
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
WB1940113T					40	46	113	17	19		12		45.5	
WB1940113					40	46	113	23	19	17	15.939	42	20	
WB1940122					40	46	121.5	23	19	17	15.939	20	50.55	
WB1940123					40	46	123	23	19	15.918	15.918	21	52	
WB1940126					40	46	126	30.2	19		12		45	
WB1740136					40	46	136	26	19	17	17	24	62	
WB1940137					40	46	137	23	18.961		12		63	
WB1940143					40	46	143		19	15.918	15.918	20	72	
WB1942115					42	46	115.5	43	19	18	18	38.5	24	



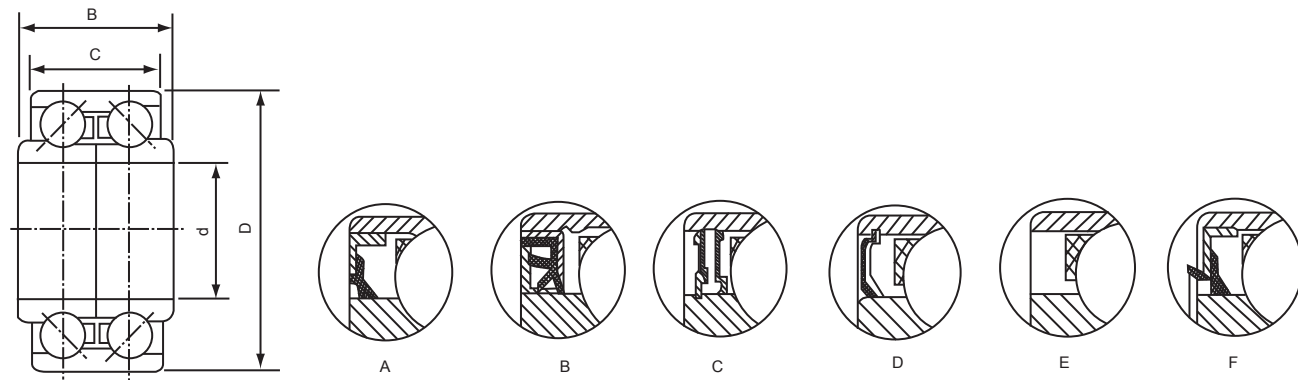
Bearing Designation					Boundary Dimensions mm									
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C	
WR1630079					30	28	79	14	16		12		34.5	
WR1630083					30	28	82.7	17.7	16		12		34.5	
WR1630084					30	30	84		15.918		12		36.6	
WR1630085-1					30	30	85	17	15.918		12		12.038	
WR1630085					30	30	85	17	15.918		12.038		36	
WR1630087C-2					30	38.8	86.5	13.5	15.918		12		32.7	
WR1630087C					30	38.8	86.5	13.5	15.918		12		32.7	
WR1630091-2					30	38.89	90.5	14.81	15.918		12		34.5	
WR1630091					30	38.89	91		15.918		12		36	
WR1630092					30	38.89	92		16		12			
WR1630093					30	38.9	93		15.918		12		33	
WR1930093-1					30	38.9	93.6		15.918		12		38	
WR1630095					30	33.38	95		15.918		12		37	
WR1630095-1					30	30	95.5	16.5	15.918		12		46.5	
WR1630096					30	38.9	95.5		15.918					
WR1630096-2					30	38.9	95.8		15.918		12		38.5	
WR1630096-3					30	38.9	96.52		15.918					
WR1630096					30	38.9	98	17	15.918					
WR1630100					30	46	100	17	16		12		34	
WR1630101					30	38.9	101		15.918					
WR1630102C					30	38.9	101.5		15.918					
WR1630102-3					30	38.89	101.5		15.918		12.038		41.65	
WR1630102-2					30	38.9	102.2		15.918		12		37.5	
WR1938133					30	38.89	103.12		15.918					
WR1938134-1					30	38.89	103.12	27.94	15.918					
WR1630105-1					30	39	104.2	16.9	15.918				46.5	
WR1630105C					30	38.8	104.5	16.5	15.918		12		48.2	
WR1230104					30	38.89	104.5	17.5	15.918	12	12	16	45.5	
WR1230106C					30	38.89	105.65	16.25	15.918	12	12	14.5	48.15	
WR1630106-1					30	38.9	105.7	17.5	15.918	12	12	16	46.7	
WR1630106-2					30	38.89	106	30	15.918		12			
WR1630106					30	38.9	106.2		15.918		12		41.4	
WR1630106-3					30	38.9	106.3		15.918		12		39.9	
WR1630107					30	38.89	107	21.5	15.918		12		43	
WR1630110					30	38.9	109.5		15.918	12.038	12.038	14	51.5	
WR1630110-1					30	38.89	110		15.918					
WR1630115-1					30	38.9	115.4		15.918		12		46.1	
WR1630117					30	38.89	116.6		15.918					
WR1630124					30	38.9	124	35	15.918	12	12	33	48	
WR1630133					30	38.9	132.7		15.918					
WR1630136					30	38.9	135.8		15.918		12		61.9	
WR1630139					30	38.89	139	23.11	15.918					
WR1630148					30	38.89	148	28.48	15.918					



Water Pump Bearings

Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WR1635096					35	38.9	96		15.918	12.038	12038	15	37
WR1635101-2					35	39	100.5	24	15.918		12		36
WR1635101A-1					35	39	101		15.918		12		34.8
WR1635101			W7R1101B		35	39	101	25	17.5	15.918	12	23.5	33.8
WR1635103					35	39	103.2	26.5	18	15.918	12	24.5	35.7
WR1635106					35	39	106	42	17.5	15.918	12	28.5	34.8
WR1635112			W7R112B		35	39	112		17.5	15.918	12	41.5	40.5
WR1635123					35	56	122.6		18		12		35.2
WR1635124			W7R124A		35	39	124	30	17.5	15.918	12	39.5	28.5
WR1938099					38.1	41.275	99	19.5	19	15.918	12	17.5	36
WR1938101					38.1	37	101		19	15.918	12	23.2	36.8
WR1938117-2					38.1	41.3	117.2		19		15.918		48
WR1938117					38.1	41.3	117.2		19		15.918		47.4
WR1938117-1					38.1	54	117.2		19		15.918		43
WR1938120					38.1	54	120.7		19		15.918		38.4
WR1938123					38.1	54	123		19	15.918	15.918	13.5	35.5
WR1938125					38.1	54	125.3		19		15.918		40
WR1938126-1					38.1	54	126		19	15.918	12	26.5	37
WR1938126					38.1	54	126		19	15.918	15.918	14	39
WR1938128					38.1	54	127.7		19		15.918		40
WR1938129					38.1	54	128.6		19		15.918		54.5
WR1938129-1					38.1	54	128.7		19		15.918		41.7
WR1938129-3					38.1	54	129		19		15.918		42.1
WR1938133					38.1	54	133		19	15.918	15.918	12	45
WR1938134-1					38.1	54	134		19		15.918		47.5
WR1938134					38.1	54	134.2	22.4	19		15.918		49.7
WR1938135-1					38.1	54	135		19		15.918		41.4
WR1938135					38.1	54	135		19		15.918		41
WR1938136-3					38.1	54	135		19		15.918		56
WR1938136-4					38.1	54	136.5		19		15.918		58.5
WR1938139					38.1	54	139.2		19		15.918		46.5
WR1938145					38.1	54	144.5		19		15.918		46
WR1938151					38.1	54	150.5		19	15.918	15.918	14	49
WR1938154					38.1	54	154.4		19	15.918	15.918	9.5	57
WR1938154					38.1	54	154.4		19	15.918	15.918	9.5	57
WR1938155					38.1	54	155.1		19		15.918		59.7
WR1938157					38.1	54	156.5		19	15.918	15.918	15	53
WR1938158					38.1	54	158.1		19	15.918	15.918	14.3	57
WR1938165					38.1	54	165.3		19		15.918		70.4
WR1938166					38.1	54	166.5		19		15.918		64

Bearing Designation					Boundary Dimensions mm								
WD	NSK	FAG	RHP	KOYO	D	H	A	AH	d	d1	d2	B	C
WR2040105					40	42	105		20		15.918		40.5
WR2040112					40	44	111.5		20		15.918		41
WR2040151					40	50	151		20		16		44
WR2242111					42	46	110.8		22		12		33.8
WR2042115					42	46	115.5		20		13		38.5
WR2242136					42	56	138.5		22		15.918		52.5
WR2247165					47	62.5	165		22		17		55.5
WR2552133					52	52	133		25		15.92		50
WR2552138C					52	56	138		25		15.92		50
WR2552138					52	56	92		25		15.92		50
WR2552138-4					52	56	138		25		15.92		50
WR2552140-1					52	52	140		25		15.92		47
WR2552143					52	56	143		25		15.92		50
WR2552145-1					52	52	145		25		15.92		62
WR2552150					52	56	150		25		15.92		57
WR2552153					52	56	153		25		15.92		54.5
WR2552155					52	70	155		25		15.92		50
WR2552162					52	56	162		25		15.92		59
WR2552163-1					52	56	163		25		15.92		50
WR2552163					52	56	163		25		15.92		50
WR2552164					52	56	164		25		15.92		64
WR2552165					52	56	165		25		15.92		54.5
WR2552208					52	56	208		25	M14	15.92	18	50
WR2555127A					55	60	127		25		15.92		40.9
WR2555145					55	60	145		25	19	15.92	28.5	50
WR3258133					58	52	133		32		15.92		51
WR3258140					58	52	140		25		15.92		51
WR1230104					58	62.5	152		25		17		62
WR3258155					58	70	155		25		15.918		51
WR2552165					52	78	165.5		25		15.918		50.5



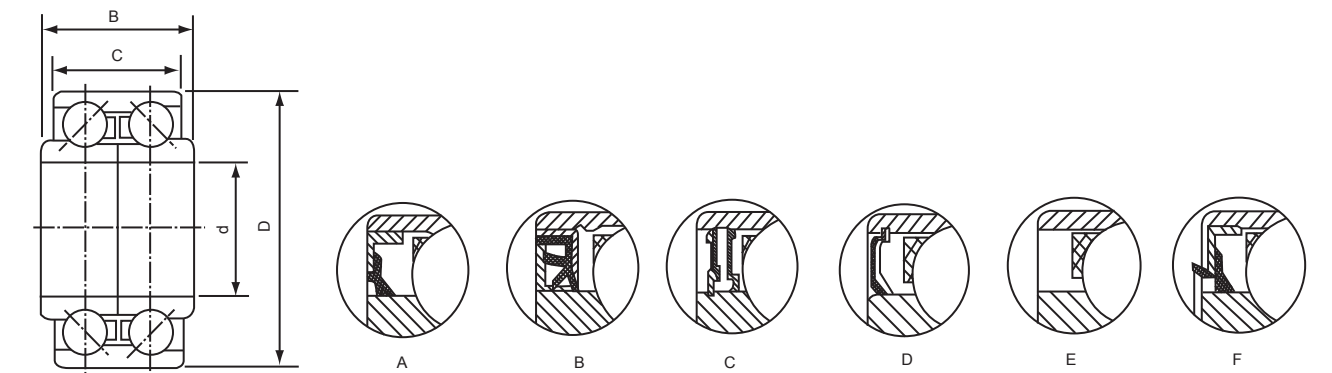
Wheel hub bearings (1st Generation)

WD No.	Basic Dimensions Type				Ref. No.	Mass (kg)					Renault, Peugeot, Citroen	
	d	D	B	C		Approx.	KOYO	FAG	SKF	SNR		NSK
DAC255200206	25	52	20.6	20.6	A	0.19						Fiat, Seat
DAC25520037		52	37	37	C	0.33		576467	445539AA	FC12025S01		
DAC25520042		52	42	42	C	0.36					25BWD01	
DAC25560032		56	32	32	D	0.35			BAH5000			
DAC27600050	27	60	50	50	C	0.42					27BWD01J	
DAC28580042	28	58	42	42	B	0.41	DAC28582RK				28BWD03A	
DAC28610042		61	42	42	-	0.51	DAC286142AW				28BWD01A	Toyota
DAC30550026	30	55	26	26	A	0.32					30BWD08	Fiat, LadaLancia, Seat, Volvo
DAC30600037		60	37	37	A	0.46	DAC3060372RS					Fiat, LadaLancia, Seat, Volvo
DAC30600337		60.03	37	37	A	0.41	DAC3060W	529891AB	BA2B633313C	GB10790S05		
DAC30600342		63.03	42	42	-	0.56	DAC3063W-1					
DAC30630042		63	42	42	A	0.57			30BWD01A			
DAC30640042		64	42	42	B	0.58	DAC3064	W2RKB				
DAC30650021		65	21	21	A	0.27		522372	BB1B630374			Fiat, Seat, Polski
DAC30680045		68	45	45	C	0.72					30BWD04	
DAC32720045	32	72	45	45	B	0.81					32BWB05	
DAC32730054		73	54	54	B	0.98	DAC3273W					
DAC34620037	34	62	37	37	C	0.42	DAC34620037	561447	BAHB311316B			Audi, Volkswagen, Chrysler
DAC34640034		64	34	34	D	0.43	DAC3464D					
DAC34640037		64	37	37	C	0.5	DAC3464G12RS	532066DE	309726DA	GB10884	34BWD11	Lada, Ople, Volkswagen, Bedford
DAC34640037A		64	37	37	C	0.5	DAC3464W-22RS					
DAC34660037		66	37	37	C	0.52	580400CA	636114A			34BWD10B	Ople, Vauxhall, Accord
DAC34680037		68	37	37	B	0.55	DAC3468DW				34BWD08A	
DAC34680037A		68	37	37	A	0.55	DAC34682RS					
DAC34680042		68	42	42	C	0.64	DAC34682RS				34BWD09A	
DAC35640037	35	64	37	37	D	0.41	DAC3564A-1		BAH0042			Daihatsu
DAC35640037A		64	37	37	D	0.46	DAC3564A					
DAC35650035		65	35	35	C	0.43	DAC3565WCS30	46238A	BT2B445620B	GB12004		Renault
DAC35650037		65	37	37	B	0.48					35BWD19E	
DAC35660032		66	32	32	C	0.4	DAC3566		445980A			Citroen
DAC35660033		66	33	33	C	0.42			BAHB633676	GB12306S01		Fiat
DAC35660037		66	37	37	C	0.49	DAC35660037	544307D	BAHB311309	GB12136		Volkswagen
DAC35680037		68	37	37	A	0.53	DAC3568A2RS	541153A	BAHB633295B	GB10840S02		Fiat, Lancia, Seat, Volvo, Zastava

WD No.	Basic Dimensions Type				Mass (kg)		Ref. No.					Renault, Peugeot, Citroen
	d	D	B	C	Approx.	KOYO	FAG	SKF	SNR	NSK		
DAC35680033/30	35	68	33	30	C	0.48						35BWD07A
DAC35680233/30	34.9968.02	33	30	-	-	0.49	DAC3568W-6					
Nissan												
DAC35680038/36	35	68	38	36	-	0.5						Citroen, Peugeot, Renault, Simca, Talbo 35BWD16
DAC35720028	72	28	28	-	0.46							Citroen, Peugeot, Renault, Simca, Talbot
DAC35720228	72.02	28	28	-	0.48		544033	BA2B441832AB	GB10679			
DAC35720033	72	33	33	C	0.58	DAC357233B-1W	548083	BA2B445535AEGB12094S04				Citroen, Peugeot
DAC35720033/31	72	33	31	B	0.55							35BWD06A
DAC35720233/31	72.02	33	31	-	0.54	DAC357233B1	562686		FWB14			
DAC35720034	72	34	34	-	0.58	DAC357234A	540763		DE0763CS46PX1			Lzw7100, Honda
DAC35720433	72.04	33	33	C	0.57			BAHB633669	GB12862			Fiat, Lancia
DAC35720045	72	45	45	A	0.63	DAC357245CW2RS						
DAC3577044234.9977.04	42	42	-	0.86	DAC3577W-3							
DAC35800045	35	80	45	45	B	1.1	DAC3580W-3HR4					
DAC35800047	80	47	47	A	0.96	DAC358047BW2RS						
DAC35800047A	80	47	47	A	1.03	DAC3580WHR4						
DAC36650037	36	65	37	37	-	0.45	DAC3665W					
DAC36680033	68	33	33	-	0.48	DAC3668AW				6BWD04		Suzuki
DAC36680033A	68	33	33	-	0.47	DAC3668W						
DAC36720042	72	42	42	A	0.68						36BWD03	
DAC36720534	72.04	34	34	-	0.57	DAC367234A					36BWD01B	Chrysler, Honda
DAC367600292/27	76	29.2	27	D	-				440 190			
DAC37720233	37	72	33	33	-	-			GB40547			Fiat, Ford, Lancia, Renault, Chrysler
DAC37720037	72	37	37	C	0.6				GB12807S03			
DAC37720237	72.02	37	37	C	0.6		527 631	BA2B633028CB	GB12258			Alfa Romeo, Fiat, Lancia Chrysler, Renault
DAC37720437	72.04	37	37	C	0.6		5623 98A	633531B	GB12131S03			
DAC37740045	74	45	45	C	0.81		541521C	309946AC			37BWD01	
DAC38700037	38	70	37	37	A	0.48					38BWD19	
DAC38700038	70	38	38	B	0.55	DAC3870DW		686908A				7100Charde
DAC38700038B	70	38	38	D	0.57						38BWD21	
DAC38710233/30	37.9971.02	33	30	-	0.5	DAC3871W-2			FW135			38BWD09A
DAC38710039	38	71	39	39	B	0.62					38BWD22	
DAC38720034	72	34	34	-	0.59	DAC3872A					38BWD04	
DAC38720040	72	40	40	D	0.63	DAC3872W-10	575069B	FW102				
DAC38720236/33	37.9972.02	36	33	-	0.56	DAC3872W-8			VKBA 1191			38BWD12
Honda, Rover												
DAC38730040	38	73	40	40	D	0.67	DAC3873-1					
DAC38740236/33	37.98874.0236	33	-	0.62	DAC3874W-6							38BWD24
Toyota												
DAC38740236/33B	37.9974.02	36	33	-	0.61				38BWD15			
DAC38740040	38	74	40	40	A	0.69					38BWD10B	

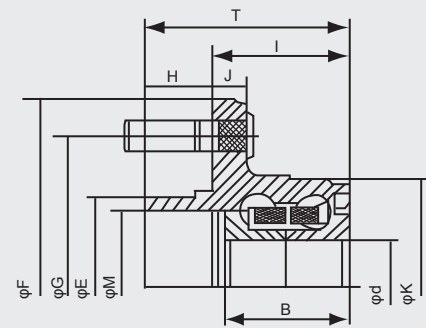
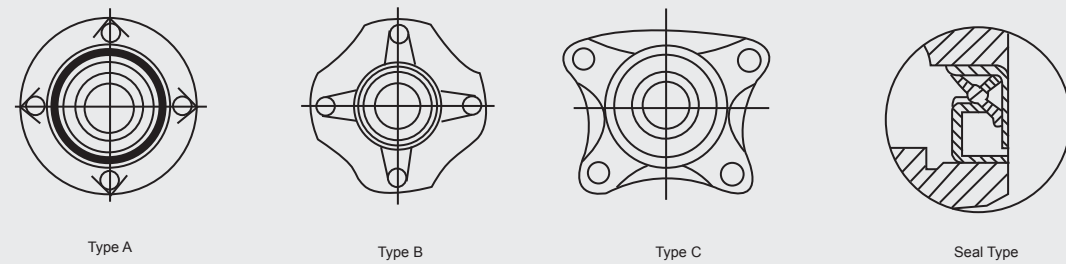
Wheel hub bearings (1st Generation)

WD No.	Basic Dimensions (mm)				Mass(kg)		Ref. No.					Renault, Peugeot, Citroen
	Type	d	D	B	C	Approx.	KOYO	FAG	SKF	SNR	NSK	
DAC38800036/33		38	80	36	33	-	0.79					38BWD18
DAC38800236/33	37.96780.0236	33				-	0.79	DAC3880W-1				
DAC39680037	39	68	37	37	B	0.49	DAC39680037	540733BA	BAHB311315	BD		39BWD03
DAC39720037		72	37	37	C	0.58	DAC3972D2RSF	542186A	BAHB311396B	GB12776		39BWD01L
DAC39720037A		72	37	37	C	0.5	DAC3972AW4					
DAC39720637		72.06	37	37	B	0.57		542186CA				
DAC39740039		74	39	39	C	0.68						39BWD05
DAC39/41750037	39/41	75	37	37	C		0.64	DAC39/41750037	567447B	BAHB633815A	GB12399S01	
Audi												
DAC40700043	40	70	43	43	D	0.63	DAC407043W					
DAC40720037		72	36	33	-	0.53	DAC4072					
DAC40720037		72	37	37	C	0.56		566 719	BAHB 311 443BGB12 320S 02			Volkswagen Seat
DAC40740036/34		74	36	34	-	0.62	DAC4074CW					40BWD16
Proton												
DAC40740036		74	36	36	D	0.64						40BWD15A
DAC40740040		74	40	40	C	0.66	DAC407440					40BWD06D
DAC40740042		74	42	42	B	0.71						40BWD12
DAC40750037		75	37	37	C	0.63		559 494	BAHB633966E			Chrysler, Volkswagen, Rover
DAC40760033		76	33	33	D	0.61			474743B	555 800		40BWD08A
DAC40760033/28		76	33	28	A	0.55			539166AB	474 743		
DAC40760041/38		76	41	38	C	0.7	DAC407612RS	559226		FW124		40BWD05
DAC408000302		80	30.2	30.2	-	0.68		523854	440320H	Y44F B10394S01		
DAC40800031		80	31	31	D	0.66				BA2B445469BA		
DAC40800036/34		80	6	34	-	0.74	DAC4080M1					FWB101
GM, Mitsubishi												
DAC40820040		82	40	40	A	0.88						Alfa Romeo, Audi, Porsche, Saab
DAC40840338		84.03	38	38	C	0.98						
DAC401080032/17		108	32	17	-	-						BA2B 445 533
												TGB1 0872 S02
DAC42750037	42	75	37	37	A	0.6	DAC427 5BW2RS	5454 95D	BA2B 633 457	GB12 010		
DAC42760033		76	33	33	C	0.65				555 801		42B WD12
DAC42760038/35		76	38	35	A	0.56						42BWD06
Nissan												
DAC42760040/37		76	40	37	A	0.66	DAC427602RSF	547059A	909 042			
DAC42780038		78	38	38	C	0.7	DAC4278A2RS					42BWD09
DAC42780041/38		78	41	38	C	0.75	DAC4278C2RS					
DAC42800036/34		80	36	34	-	0.76						42BWD13
DAC42800037		80	37	37	D	0.7				BAHB 633 770		
DAC42800045		80	45	45	B	0.86	DAC4280W-2					42BWD11
DAC42800045A		80	45	45	-	0.85	DAC4280WHR4					
DAC42800342		80.03	42	42	A	0.82	DAC4280B2RS	527243C	BA2B309609AD			



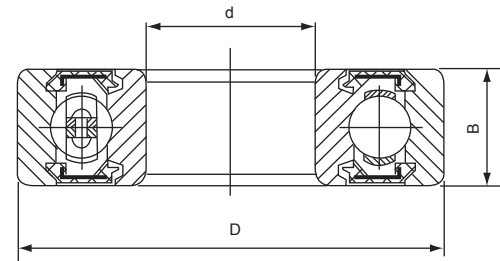
WD No.	Basic Dimensions (mm)				Mass(kg)		Ref. No.					Renault, Peugeot, Citroen
	Type	d	D	B	C	Approx.	KOYO	FAG	SKF	SNR	NSK	
DAC43790041/38		43	79	41	38	D	0.77	DAC4379-1				43BWD08
DAC43790045		79	45	45	C	0.89						43BWD13A
DAC43800050/45		80	50	45	-	0.91	DAC4380ACS69					43BWD03
DAC43820045		82	45	45	D	0.96	DAC4382W-3		FW153			43BWD06B
DAC43/45820037	43/4582	37	37	C		0.78	DAC43/45820037567519A	BAHB633814A				
Audi200												
DAC44840042/40		44	84	42	40	-	0.9	DAC4484B2RS				
DAC44840042/40A		84	42	40	A	0.9	DAC4484CW2RS					
DAC4580004545		80	45	45	C	0.8		564725AB				
DAC45830045		83	45	45	D	1	DAC4583					45BWD06
DAC45840039		84	39	39	C	0.85	DAC458439BW	547103E	BAHB309797CGB40264S01			Citroen, Mercedes, Peugeot, Volvo
DAC45840041/39		84	41	39	-	0.8	DAC4584DW					45BWD03
DAC45840042/40		84	42	40	A	0.9						45BWD09
DAC45840045		84	45	45	A	0.98						45BWD10
DAC45850041		85	41	41	B	0.9		580191				
DAC4679004546		79	45	45	C	0.81						46BWD01A
DAC4781005347		81	53	53	D	0.95	DAC4781WSH2					
DAC48890044/42		48	89	44	42	C	0.97	DAC4889W2RS				48BWD01
DAC4984005049		89	50	50	B	1						49BWD02
DAC49880046		88	46	46	C	1.08		572506E				49BWD01B
DAC5090003450		90	34	34	A	0.84		528514	633007C			

Wheel hub Units (2nd Generation)



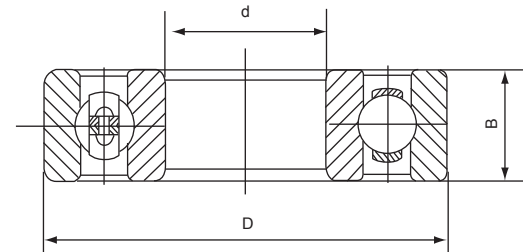
Shape Of Flange

Huanyu No.	Dimensions (mm)						Outer Ring Flange					Bolt Size	Bolt Hole Q'ty	Flange Shape	
	d	F	B	T	E	M	G	K	H	I	J				
DACF25A01	25	133	43	73.4	60	54.25	108	71	19.4	54	12.25	M121.5	14.22	5	A
DACF25A02		133	43	73.4	60	54.3	100	71	19.4	54	11	-	M121.5	4	A
DACF27A01	27	148	55	73	66	52	114.3	64	15.5	57.5	9	-	φ12.5	4	A
DACF28C01	28	-	42	-	-	61	97	66.2	-	51.8	7.5	-	φ10.5	4	C
DACF28A01		139	38	64.5	67	58	114.3	70	14	50.5	9	-	φ14	4	A
DACF28A02		140	48	70.5	67	59	114.3	63	14	50.5	9	M121.5	φ14	4	A
DACF28A03		140.8	50.5	71	56	47.8	100	66.6	18.9	52.1	4.5	M121.5	φ14	4	A
DACF30C01	30	-	42	-	-	63	99	68.2	-	51.8	7.5	-	φ10.5	4	C
DACF30C02		-	42	-	-	63	99	72	-	58.8	7.5	-	φ10.5	4	C
DACF30C03		-	42	-	-	63	99	73.6	-	51.8	7.5	-	φ10.5	4	C
DACF30A01		117	37	61.3	58	52	98	71.8	17	44.3	10	M121.5	-	4	A
DACF30A02		122	47	59.5	54	48	100	68	13.5	56	8	M121.5	φ12.56	4	A
DACF30A03		125	50	70.5	56	50	100	68.9	14	56.5	10	M121.5	φ14	4	A
DACF30A04		126	59	79	56	50.5	100	65.5	14.5	62.5	10	M121.5	φ14	5	A
DACF30A05		131	43	71.3	65	59	108	76	19	51	13.5	-	M121.5	4	A
DACF30A06		136	41	66	56	51	100	68.5	11.5	54.5	8	-	φ12.1	4	A
DACF30A07		136	40	66	56	51	100	68.5	11.5	54.5	8	M121.5	φ12.1	4	A
DACF30A08		140	50	70.5	67	59	114.3	68.9	14	56.5	9	M121.5	φ14	4	A
DACF30B01		152	41	67.5	64	58	114.3	67	11.5	55.5	9	M21.5	φ12.1	4	B
DACF30C04		-	50	-	66	58.3	90	68	10	44	10	-	M121.25	4	C
DACF31A01	31	120	40	61	57	50.5	100	73.8	19	42	12	-	M121.5	4	A
DACF32A01	32	128	34	58.2	65	60	108	80	16	42.2	12.5	-	M121.25	4	A
DACF33A01	33	140	47	71.2	67	59	114.3	77	14	54.7	9	M121.5	φ14	5	A
DACF34A01	34	139	42	64.5	67	58	114.3	74	14	50.5	9	M121.5	φ14	4	A
DACF34A02		139.5	42	70	64	58	114.3	75	15	55	9	M121.5	φ12.1	4	A
DACF345A01	34.5	139	52	65.5	63.26	58	108	86	13.5	52	10	M121.5	φ13.1	5	A
DACF35A01	35	137	45	69.5	65	53.3	108	81	20.5	49	12	M121.5	φ13.1	5	A
DACF35A02		137	45	74	65	57	110	81	25	49	12	-	M121.5	5	A
DACF36A01	36	140	50	71	67	59	114.3	79	14	57	11	M121.5	φ14	5	A
DACF37A01	37	139	45	64	72.5	66	120	84	19	45	11	-	M121.5	5	A
DACF37A02		139	45	64	72.5	66	120	80	19	45	11	-	M121.5	5	A
DACF37A03		139	45	64	72.5	66	120	80	19	45	11	-	M121.5	5	A
DACF38A01	38	146.5	52	77	70	64	114.3	76.8	15	62	9	M121.5	φ12.1	5	A
DACF40C01	40	-	43	43	84	-	106	84	16.4	26.5	10	-	M121.25	4	C
DACF43C01	43	-	44	44	82.8	-	102	86	16.5	27.5	15	-	M121.25	4	C



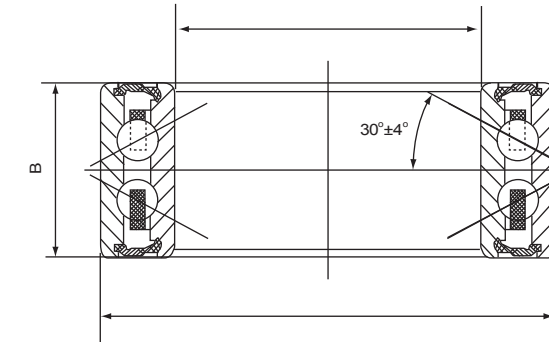
Bearing For Automotive Self-Starter

Bearing No.	d (mm)	D (mm)	B (mm)	Cr (kN)	Cor (kN)	Limit Rotational Speed	Work Rotational Speed
6904-2RS	20	37	9	6.37	3.70	22000	12000
6002-2RZ	15	32	9	5.59	2.84	24000	18000
6003-2RZ	17	35	10	6	3.25	22000	17000
6201-2RZ	12	32	10	6.82	3.06	24000	18000
6202-2RS	15	35	11	7.64	3.72	22000	17000
6203-2RZ	17	40	12	9.57	4.79	20000	16000
6204-2RZ	20	47	14	12.84	6.65	18000	14000
6205-2RZ	12	52	15	14.02	7.88	16000	12000
6301-2RZ	12	37	12	9.72	5.09	22000	17000



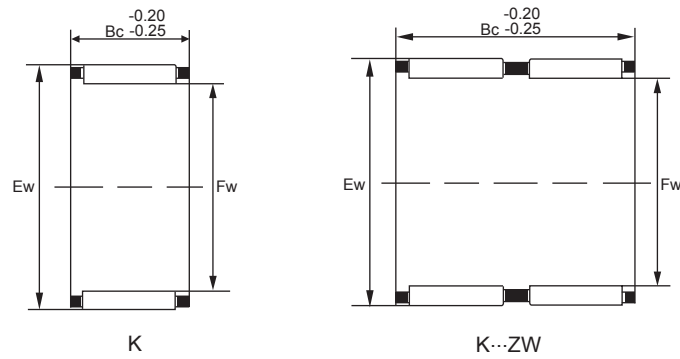
Bearing For Automotive Gear-Box

Bearing No.	d (mm)	D (mm)	B (mm)	Cr (kN)	Cor (kN)	Limit Rotational Speed	Work Rotational Speed
6008	40	68	15	17.03	11.70	11000	6000
6204 (N)	20	47	14	12.84	6.65	18000	9000
6204(-2RS)	20	47	14	12.84	6.65	14000	9000
6205(-2RS)	25	52	14	14.02	7.88	12000	8000
62/28 NR-2RS	28	58	16	17.90	9.77	7000	5500
6206 N-2RS	30	62	16	19.46	11.31	6700	5000
6208	40	80	18	29.52	18.14	10000	5600
6303-2RS	17	47	14	13.58	6.58	9500	6500
6304 (N)	20	52	15	15.94	7.88	17000	8500
6305 (N)	25	62	17	22.38	11.49	14000	7000
63/28 N-2RS	28	68	18	26.75	14.01	6500	4000

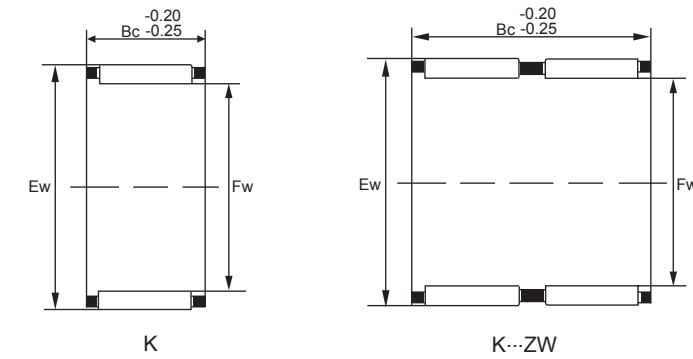


Clutch Bearing For Automotive Air-Condition Electromagnetism

	dimensions (mm)				reference code		
	d	D	B	C	NACHI	KOYO	NSK
4606-1AC2RS	30	47	18	18	-	83A693A	-
4606-2ACRS	47	21	18	18	30BG04S8G-2DS	83A693	-
4606-3ACRS	47	22	22	22	30BG4S13-2DST	-	-
4606-4ACRS	52	20	20	20	101.007	-	-
4606-5ACRS	52	22	22	22	30BGS10G-2DST	DAC3052-32RD	30BD5222DUUM6
4606-6ACRS	55	23	23	23	30BG05S5G-2DS	-	30BD40DU
4606-7ACRS	62	27	27	27	30BGS1-2NSL	-	5206
46/32-1C2RS	32	47	18	18	32BG04S3G	-	32BD4718DUK
46/32-2C2RS	55	23	23	23	32BG05S1-2DST	-	32BD45DU
4607-1AC2RS	50	20	20	20	35BGS5S07G-2DST	-	-
4607-2AC2RS	52	20	20	20	101.01	-	-
4607-3AC2RS	52	22	22	22	35BD5222DF	DAC35520022 -	35BD5222DF
4607-4AC2RS	35	52	23	23	35DG05S6G	-	-
4607-5AC2RS	55	20	20	20	35BG05S10G-2DST	DAC35550020	35BD219DUK
4607-6AC2RS	62	21	21	21	35BG06G-2DS	ii	ii
4607-7AC2RS	62	24	24	24	DF0789	-	35BD6224DV
4607-8AC2RS	62	28	28	28	-	-	35BD210DDV
46/38-1AC2RS	38	54	17	17	38BG05S2G-2DS	-	-
46/38-2AC2RS	62	24	24	24	101.008	-	-
4608-1AC2RS	40	55	24	24	40BGS40G	-	-
4608-2AC2RS	57	24	24	24	-	-	40BD45DU
4608-3AC2RS	57	24	20	20	40BG05S2G-2DS	-	40BD49
4608-4AC2RS	57	24	24	24	40BG05S1DS	-	40BD219V
4608-5AC2RS	62	20.625	20.625	20.625	6557684/6559496	83A5518	40BD49V / 907257
4608-6AC2RS	62	24	20.625	20.625	40BGS12G-2DS	-	-
4608-7AC2RS	62	24	24	24	40BGS35G-2DST	83A551B4	40BD219DU
4608-8AC2RS	24	24	24	24	40BGS39G-2DST	-	S2-DF
4608-9AC2RS	30	30	30	30	-	-	40BD6830DUK
4609-1AC2RS	45	20	20	20	-	-	0957
4609-2AC2RS	20	20	20	20	-	-	0954
4609-3AC2RS	32	32	32	32	45BG07S5G-2DST	-	-



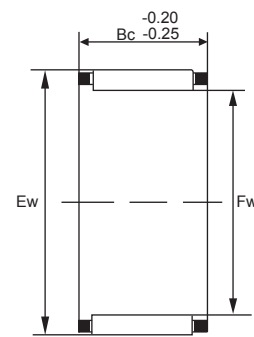
WD can supply various needle bearings for minicar, microbus, heavy load truck, light truck, tip lorry and agricultural truck, ect. For the types not listed below, please communicate with our technical team.



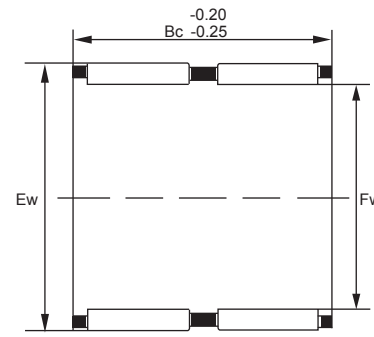
Needle Bearings For Automotive

Bearing Designation		Boundary Dimensions		
Current	Original Code	Fw	Ew	Bc
		mm		
K14x18x17	59241/14	14	18	17
K15x20x20	59242/15	15	20	20
K16x23x14	K9241/10	16	23	14
K17.5x22x16		17.5	22	16
K17.5x22x17	59241/17.5	17.5	22	17
K18x28x16		18	28	16
K20x26x28		20	26	28
K20x30x20	K9249/20	20	30	20
K20x30x23	K9249/20	20	30	23
K22x28x23		22	28	23
K23x35x15.2		23	35	15.2
K24x30x17		24	30	17
K25x29x13	9242/25	25	29	13
K25x29x17	9243/25	25	29	17
K25x30x20	29242/25	25	30	20
K25x30x24		25	30	24
K25x30x25	69242/25	25	30	25
K25x30x26	SZ-436	25	30	26
K25x30x33 ZWD		25	30	33
K25x32x25	39243/25	25	32	25
K25x33x24	9249/25	25	33	24
K27x32x23		27	32	23
K27x32x27	K9247/27	27	32	27
K27x40x30	49245/27	27	40	30
K27x40x43		27	40	43
K27x47x43	49245/27	27	47	43
K28x33x17	9242/28	28	33	17
K30x35x20	59241/30	30	35	20
K30x35x27	9243/30	30	35	27
K30x38x25	29244/30	30	38	25
K30x40x27	9249/30	30	40	27
K30x42x32	9248/30	30	42	32
K30x42x44.1	64706K1	30	42	44.1
K30x46x28		30	46	28
K32x37x20	59241/32	32	37	20
K32x37x25		32	37	25
K32x37x28		32	37	28
K32x37x36 ZW		32	37	36
K35x40x27	9243/35	35	40	27

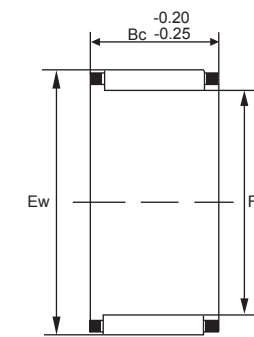
Bearing Designation		Boundary Dimensions		
Current	Original Code	Fw	Ew	Bc
		mm		
K35x40x31	9243/35	35	40	31
K36x40x28.8 ZW		36	40	28.8
K36x40x31 ZW		36	40	31
K37x42x30 ZW		37	42	30
K37x42x31		37	42	31
K38x43x36 ZW		38	43	36
K38x44x25	59242/35	38	44	25
K38x44x28		38	44	28
K38x46x20	19244/38	38	46	20
K38x46x30	39244/38	38	46	30
K38.4x44.4x44	SZ-450	38.4	44.4	44
K40x44x26 ZWK		40	44	26
K40x44x30 ZWDK		40	44	30
K40x45x17	9242/40	40	45	17
K40x45x27	9243/40	40	45	27
K40x45x30		40	45	30
K40x45x17	39242/40	40	46	17
K41x48x30 ZW		41	48	30
K42x48x35	79242/42	42	48	35
K43x49x31	SZ-418	43	49	31
K43x50x18	9249/43	43	50	18
K44x50x30.5 ZW		44	50	30.5
K45x49x30.7 ZW		45	49	30.7
K45x50x17	9242/45	45	50	17
K45x50x27	9243/45	45	50	27
K45x50x29		45	50	29
K45x50x31		45	50	31
K45x50x31 ZW		45	50	31
K46x52x37	SE417	46	52	37
K48x54x25	59242/48	48	54	25
K48x54x29	9247/48	48	54	29
KS48x54x40 ZW	62649/48	48	54	40
K49x55x32 ZW		49	55	32
K50x55x30	9243/50	50	55	30
K50x55x40		50	55	40
K51.5x59.5x35		51.5	59.5	35
K52x58x32 ZW		52	58	32
K54x62x21	9249/54	54	62	21
K55x60x30	9243/55	55	60	30



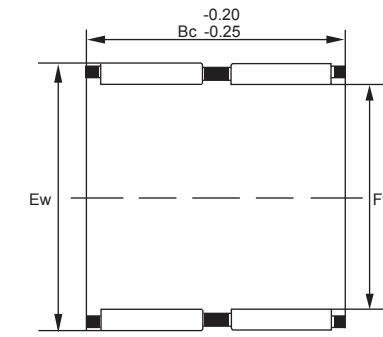
K



K...ZW



K



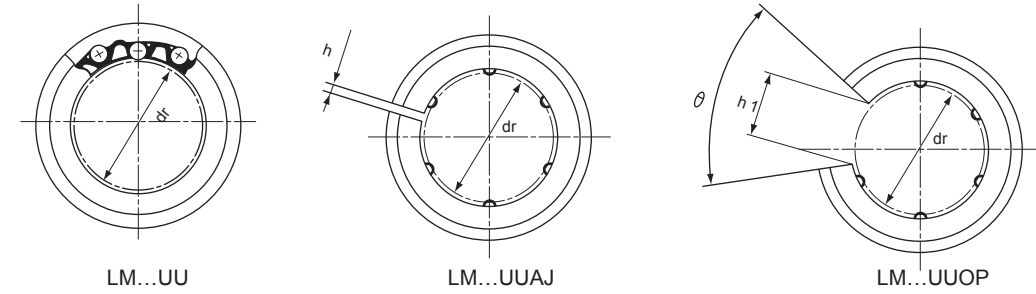
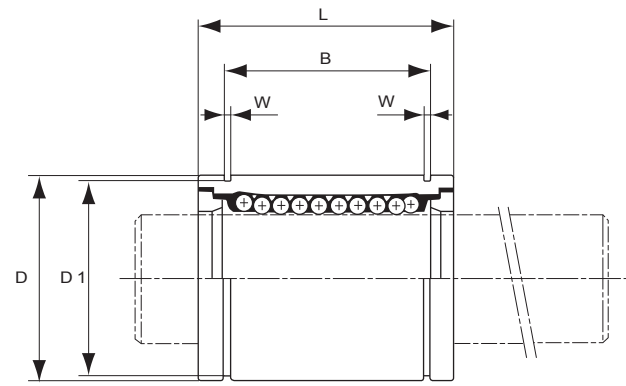
K...ZW

Needle Bearings For Automotive

Boundary Dimensions		Boundary Dimensions		
Current	Original Code	Fw	Ew	Bc
mm				
K48x54x25	59242/48	48	54	25
K48x54x29	9247/48	48	54	29
K48x54x40 ZW	62649/48	48	54	40
K49x55x32 ZW		49	55	32
K50x55x30	9243/50	50	55	30
K50x55x40		50	55	40
K51.5x59.5x35		51.5	59.5	35
K52x58x32 ZW		52	58	32
K54x62x21	9249/54	54	62	21
K55x60x30	9243/55	55	60	30
K55x61x20	49241/55	55	61	20
K55x62x40 ZWD	9348/55K	55	62	40
K56x61x30		56	61	30
K56x61x34	9249/56	56	61	34
K60x65x30		60	65	30
K60x66x21.2	DC6J70 T-450	60	66	21.2
K60x66x23.3		60	66	23.3
K60x66x30	9249/60	60	66	30
K62x70x20		62	70	20
K63x71x25	9246/63	63	71	25
K65x70x20	49249/65	65	70	20
K70x76x30	69241/70	70	76	30
K75x81x20	49241/75	75	81	20
K78x85x19.7	DC6J70 T-445	78	85	19.7
K78x85x23.3		78	85	23.3
K80x88x25	9246/80	80	88	25
K85x92x17.2	DC6170 T-440	85	92	17.2
K85x92x18.8		85	92	18.8

Boundary Dimensions		Boundary Dimensions		
Current	Original Code	Fw	D	C
mm				
With Cage				
HK10x15x15		10	15	15
HK16x22x17	SE435	16	22	17
HK1715RS	HK172315	17	23	15
HK2016	57941/20	20	26	16
HK2020	77941/20	20	26	20
HK2516	7941/25	25	32	16
HK2520	67941/25	25	32	20
HK25x34x20	57948/25	25	34	20
HK4020		40	48	20
HK55x61x12	77949/55	55	61	12
Full Complement				
F12x17x12	942/12	12	17	12
F15x20x12	942/15	15	20	12
F-1714	941/17	17	23	14
F20x26x15	943/20	20	26	15
F22x28x12	949/22	22	28	12
F-2516	40941/25	25	32	16
F-2520	60941/25	25	32	20
F-2525	943/25	25	32	25
F30x38x25	947/30K	30	38	25
F30x40x28	948/30K	30	40	28
F32x40x32	943/32	32	40	32
F40x50x38	943/40	40	50	38
FH45x55x38	943/45	45	55	38
F50x60x38	943/50	50	60	38
MF12x16x7		12	16	7
MF-1212	6941/12	12	17	12

Linear Motion Bearings



LM

SI UNIT:1N=0.102kg f

Clearance adjustment type	Open type	Model No.		Inscribed circle diameter dr			Outer diameter D			
		Number of ball rows	Mass g	Precision	Tolerance Grade	High Grade	Tolerance			
		LM 6UUAJ	4	8	6	0/-0.006	0/-0.009	12	0/-0.011	
		LM 8SUUAJ	4	11	8	0/-0.006	0/-0.009	15	0/-0.011	
		LM 8UUAJ	4	16	8	0/-0.006	0/-0.009	15	0/-0.011	
		LM 10UUAJ	4	30	10	0/-0.006	0/-0.009	19	0/-0.013	
		LM 12UUAJ	4	31.5	12	0/-0.006	0/-0.009	21	0/-0.013	
		LM 13UUAJ	4	43	13	0/-0.006	0/-0.009	23	0/-0.013	
		LM 16UUAJ	LM 16UUOP	5	69	16	0/-0.006	0/-0.009	28	0/-0.013
		LM 20UUAJ	LM 20UUOP	5	87	20	0/-0.007	0/-0.010	32	0/-0.016
		LM 25UUAJ	LM 25UUOP	6	220	25	0/-0.007	0/-0.010	40	0/-0.016
		LM 30UUAJ	LM 30UUOP	6	250	30	0/-0.007	0/-0.010	45	0/-0.016
		LM 35UUAJ	LM 35UUOP	6	390	35	0/-0.008	0/-0.012	52	0/-0.019
		LM 40UUAJ	LM 40UUOP	6	585	40	0/-0.008	0/-0.012	60	0/-0.019
		LM 50UUAJ	LM 50UUOP	6	1580	50	0/-0.008	0/-0.012	80	0/-0.022
		LM 60UUAJ	LM 60UUOP	6	2000	60	0/-0.009	0/-0.015	90	0/-0.022

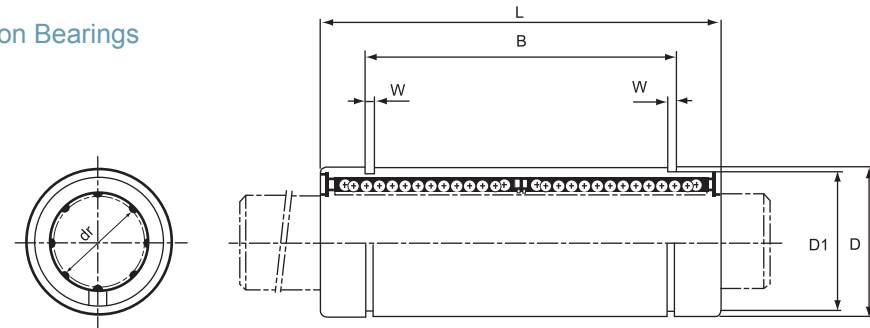
Main dimensions Length	L	B	mm					Eccentricity (max)		Radial clearance tolerance μm	Basic load rating	
			W	D1	h	h1	θ	Precision grade	μm High grade		C N	Co N
19	0/-0.2	13.5	0/-0.2	1.1	11.5	1	8	12	-5	21	27	
17	0/-0.2	11.5	0/-0.2	1.1	14.3	1	8	12	-5	18	23	
24	0/-0.2	17.5	0/-0.2	1.1	14.3	1	8	12	-5	27	41	
29	0/-0.2	22	0/-0.2	1.3	18	1	8	12	-5	38	56	
30	0/-0.2	23	0/-0.2	1.3	20	1.5	8	12	-5	42	61	
32	0/-0.2	23	0/-0.2	1.3	22	1.5	8	12	-7	52	79	
37	0/-0.2	26.5	0/-0.2	1.6	27	1.5	11	60	8	79	120	
42	0/-0.2	30.5	0/-0.2	1.6	30.5	1.5	11	60	10	88	140	
59	0/-0.3	41	0/-0.3	1.85	38	2	12.5	60	10	100	160	
64	0/-0.3	44.5	0/-0.3	1.85	43	2.5	15	60	10	160	280	
70	0/-0.3	49.5	0/-0.3	2.1	49	2.5	17	60	12	170	320	
80	0/-0.3	60.5	0/-0.3	2.1	57	3	20	60	12	220	410	
100	0/-0.3	74	0/-0.3	2.6	76.5	3	25	60	12	390	810	
110	0/-0.3	85	0/-0.3	3.15	86.5	3	30	60	17	480	1020	

LME

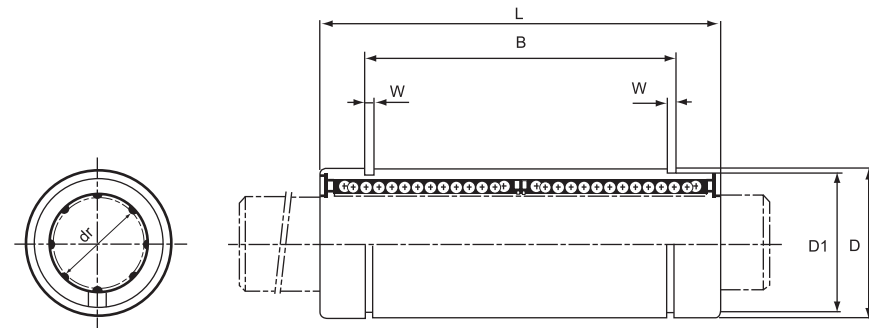
Clearance adjustment type	Open type	Model No.		Inscribed circle diameter dr		Outer diameter D			
		Number of ball rows	Mass g	Tolerance		Tolerance			
		LME 5UUAJ	4	12	5	+0.008/0	12	0/-0.008	
		LME 8UUAJ	4	20	8	+0.008/0	12	0/-0.008	
		LME12UUAJ	4	41	12	+0.008/0	12	0/-0.008	
		LME16UUAJ	LME16UUOP	5	57	16	+0.009/-0.001	12	0/-0.008
		LME20UUAJ	LME20UUOP	5	91	20	+0.009/-0.001	12	0/-0.008
		LME25UUAJ	LME25UUOP	6	215	25	+0.011/-0.001	12	0/-0.008
		LME30UUAJ	LME30UUOP	6	325	30	+0.011/-0.001	12	0/-0.008
		LME40UUAJ	LME40UUOP	6	705	40	+0.013/-0.002	12	0/-0.008
		LME50UUAJ	LME50UUOP	6	1130	50	+0.013/-0.002	12	0/-0.008
		LME60UUAJ	LME60UUOP	6	2220	60	+0.013/-0.002	12	0/-0.008

Main dimensions Length	L	B	mm					Eccentricity (max) μm	Radial clearance tolerance μm	Basic load rating		Model No.
			W	D1	h	h1	θ			C N	Co N	
22	0/-0.2	14.5	0/-0.2	1.1	11.5	1	12	-5	21	27	LME 5UU	
25	0/-0.2	16.5	0/-0.2	1.1	15.2	1	12	-5	27	41	LME 8UU	
32	0/-0.2	22.9	0/-0.2	1.3	21	1.5	12	-5	52	79	LME12UU	
36	0/-0.2	24.9	0/-0.2	1.3	24.9	1.5	10	78°	12	59	91	LME16UU
45	0/-0.2	31.5	0/-0.2	1.6	30.3	2	10	60°	15	88	140	LME20UU
53	0/-0.3	44.1	0/-0.3	1.85	37.5	2	12.5	60°	15	100	160	LME25UU
68	0/-0.3	52.1	0/-0.3	1.85	44.5	2	12.5	50°	15	160	280	LME30UU
80	0/-0.3	60.6	0/-0.3	2.15	50	3	16.8	50°	17	220	400	LME40UU
100	0/-0.3	77.6	0/-0.3	2.65	72	3	21	50°	17	390	810	LME50UU
125	0/-0.4	101.7	0/-0.4	3.15	86.5	3	27.2	54°	20	480	1020	LME60UU

Linear Motion Bearings



LM···LUU type



LM

Model No.	Number of Ball Rows	Mass g	Inscribed Circle Diameter		Out Diameter	
			dr	Tolerance	D	Tolerance
LM 6LUU	4	16	6	0/-0.010	12	0/-0.013
LM 8LUU	4	31	8	0/-0.010	15	0/-0.013
LM 10LUU	4	62	10	0/-0.010	19	0/-0.016
LM 12LUU	4	80	12	0/-0.010	21	0/-0.016
LM 13LUU	4	90	13	0/-0.010	23	0/-0.016
LM 16LUU	5	145	16	0/-0.010	28	0/-0.016
LM 20LUU	5	180	20	0/-0.012	32	0/-0.019
LM 25LUU	6	440	25	0/-0.012	40	0/-0.019
LM 30LUU	6	580	30	0/-0.012	45	0/-0.019
LM 35LUU	6	795	35	0/-0.012	52	0/-0.022
LM 40LUU	6	1170	40	0/-0.012	60	0/-0.022
LM 50LUU	6	2100	50	0/-0.012	80	0/-0.022
LM 60LUU	6	3500	60	0/-0.020	90	0/-0.025

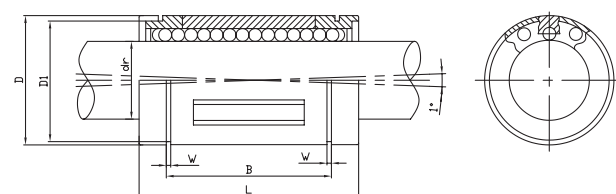
SI UNIT:1N=0.102kgf Unit: mm

Length L	Tolerance	B	Tolerance	W	D1	Eccentricity (max) μm	Radial clearance tolerance	Basic load rating	
								C N	Co N
35	0/-0.3	27	0/-0.3	1.1	11.5	15	15	324	529
45	0/-0.3	35	0/-0.3	1.1	14.3	15	15	431	784
55	0/-0.3	44	0/-0.3	1.3	18	15	15	588	1100
57	0/-0.3	46	0/-0.3	1.3	20	15	15	657	1200
61	0/-0.3	46	0/-0.3	1.3	22	15	15	814	1570
70	0/-0.3	53	0/-0.3	1.6	27	15	15	1230	2350
80	0/-0.3	61	0/-0.3	1.6	30.5	20	20	1400	2750
112	0/-0.4	82	0/-0.4	1.85	38	20	20	1560	3140
123	0/-0.4	89	0/-0.4	1.85	43	20	20	2490	5490
135	0/-0.4	99	0/-0.4	2.1	49	25	25	2650	6470
154	0/-0.4	121	0/-0.4	2.1	57	25	25	3430	8040
192	0/-0.4	148	0/-0.4	2.6	76.5	25	25	6080	15900
211	0/-0.4	170	0/-0.4	3.15	86.5	25	25	7650	20000

LME

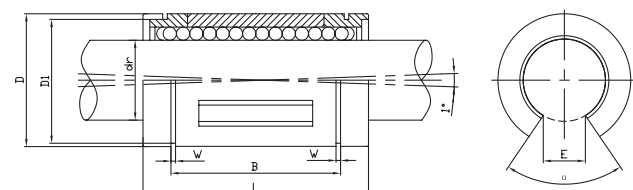
Model No.	Number of Ball Rows	Mass g	Inscribed Circle Diameter		Out Diameter	
			dr	Tolerance	D	Tolerance
LME 8LUU	4	31	8	+0.009/-0.001	16	0/-0.009
LME 12LUU	4	80	12	+0.009/-0.001	22	0/-0.011
LME 16LUU	5	145	16	+0.011/-0.001	26	0/-0.011
LME 20LUU	5	180	20	+0.011/-0.001	32	0/-0.013
LME 25LUU	6	440	25	+0.013/-0.002	40	0/-0.013
LME 30LUU	6	580	30	+0.013/-0.002	47	0/-0.013
LME 40LUU	6	1170	40	+0.016/-0.004	62	0/-0.015
LME 50LUU	6	2100	50	+0.016/-0.004	75	0/-0.015
LME 60LUU	6	3500	60	+0.016/-0.004	90	0/-0.020

Length L	Tolerance	B	Tolerance	W	D1	Eccentricity (max) μm	Radial clearance tolerance	Basic load rating	
								C N	Co N
45	0/-0.3	33	0/-0.3	1.1	15.2	15	15	431	784
57	0/-0.3	45.8	0/-0.3	1.3	21	15	15	657	1200
70	0/-0.3	49.8	0/-0.3	1.3	24.9	15	15	1230	2350
80	0/-0.3	61	0/-0.3	1.6	30.5	17	20	1400	2750
112	0/-0.4	82	0/-0.4	1.85	38	17	20	1560	3140
123	0/-0.4	104.2	0/-0.4	1.85	44.5	17	20	2490	5490
154	0/-0.4	121.2	0/-0.4	2.15	59	20	25	3430	8040
192	0/-0.4	155.2	0/-0.4	2.65	72	20	25	6080	15900
211	0/-0.4	170	0/-0.4	3.15	86.5	25	25	7650	20000



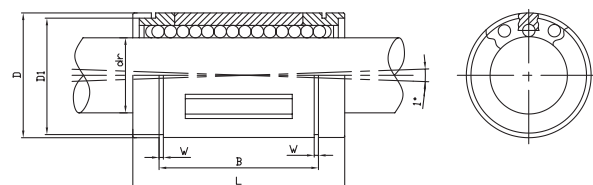
SLM

Bearing Code	Number of ball rows	Main Dimensions						Clearance H7/g6	Basic Load rating	
		dr	D	L	D1	B	W		C N	Co N
SLM16	5	16	28	37	27	26.5	1.6	0.011~0.042	153	128
SLM20	6	20	32	42	30.5	30.5	1.6		263	170
SLM25	6	25	40	59	38	41	1.85	0.012~0.05	388	281
SLM30	6	30	45	64	43	44.5	1.85		481	286
SLM40	6	40	60	80	57	60.5	2.1	0.013~0.055	663	584
SLM50	6	50	80	100	76.5	74	2.6		1169	810



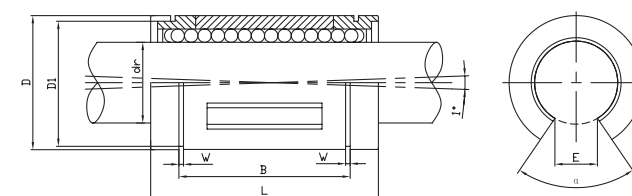
SLM-OP

Bearing Code	Number of ball rows	Main Dimensions								Clearance H7/g6	Basic Load rating	
		dr	D	L	D1	B	W	E	α		C N	Co N
SLM16OP	4	16	28	37	27	26.5	1.6	11	60°	0.011~0.042	153	128
SLM20OP	5	20	32	42	30.5	30.5	1.6	11	60°		263	170
SLM25OP	5	25	40	59	38	41	1.85	12.5	60°	0.012~0.05	388	281
SLM30OP	5	30	45	64	43	44.5	1.85	14	60°		481	286
SLM40OP	5	40	60	80	57	60.5	2.1	20	60°	0.013~0.055	663	584
SLM50OP	5	50	80	100	76.5	74	2.6	25	60°		1169	810



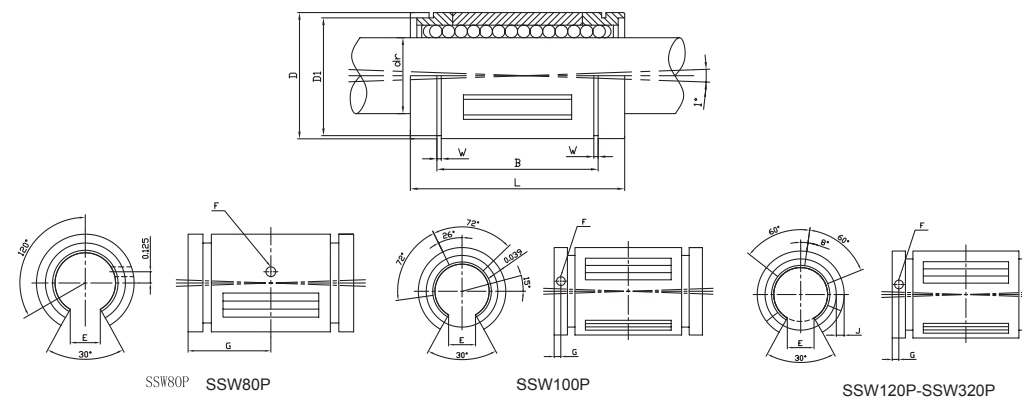
SKB

Bearing Code	Number of ball rows	Main Dimensions						Clearance H7/g6	Basic Load rating	
		dr	D	L	D1	B	W		C N	Co N
SKB10	5	10	19	29	18	21.7	1.35	0.01~0.04	77	56
SKB12	5	12	22	32	21	22.7	1.35	0.011~0.042	126	112
SKB16	5	16	26	36	24.9	24.7	1.35		153	128
SKB20	6	20	32	45	30.3	31.3	1.65		263	170
SKB25	6	25	40	58	37.5	43.8	1.9	0.012~0.05	388	281
SKB30	6	30	47	68	44.5	51.8	1.9		481	286
SKB40	6	40	62	80	59	60.4	2.2	0.013~0.055	663	584
SKB50	6	50	75	100	72	77.4	2.7		1169	810



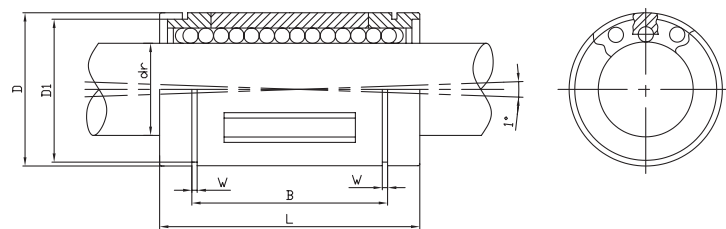
SKB-OP

Bearing Code	Number of ball rows	Main Dimensions								Clearance H7/g6	Basic Load rating	
		dr	D	L	D1	B	W	E	a		C N	Co N
SKB12OP	4	12	22	32	21	22.7	1.35	6.5	60°	0.011~0.042	132	129
SKB16OP	4	16	26	36	24.9	24.7	1.35	9	68°		167	135
SKB20OP	5	20	32	45	30.3	31.3	1.65	9	55°	0.012~0.05	268	176
SKB25OP	5	25	40	58	37.5	43.8	1.9	11.5	57°		399	291
SKB30OP	5	30	47	68	44.5	51.8	1.9	14	57°	0.013~0.055	495	296
SKB40OP	5	40	62	80	59	60.4	2.2	19.5	56°		684	602
SKB50OP	5	50	75	100	72	77.4	2.7	22.5	54°	1194	827	



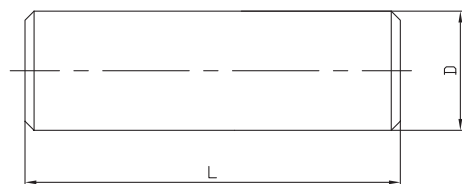
SSW-OP

Bearing Code	Number of ball rows	Main Dimensions										Clearance H7/g6	Basic Load rating	
		dr	D	L	B	D1	W	E	F	G	J		C N	Co N
SSW80P	4	1/2"	0.875"	1.25"	1.032"	0.8209"	0.0459"	0.313"	0.136"	0.625"		+0.011~+0.042	104	132
		12.7	22.225	31.75	26.213	20.85	1.166	7.95	3.45	15.875				
SSW100P	4	5/8"	1.125"	1.5"	1.112"	1.059"	0.0559"	0.375"	0.105"	0.125"	0.039	+0.011~+0.042	182	228
		15.875	28.575	38.1	28.245	26.899	1.42	9.525	2.667	3.175	0.991			
SSW120P	4	3/4"	1.25"	1.625"	1.272"	1.176"	0.0559"	0.438"	0.136"	0.125"	0.059	+0.012~+0.050	213	268
		19.05	31.75	41.275	32.309	29.87	1.42	11.125	3.454	3.175	1.499			
SSW160P	5	1"	1.5625"	2.25"	1.886"	1.4687"	0.0679"	0.563"	0.136"	0.125"	0.047	+0.012~+0.050	386	481
		25.4	39.688	57.15	47.904	37.305	1.725	14.3	3.454	3.175	1.194			
SSW200P	5	1-1/4"	2"	2.625"	2.011"	1.8859"	0.0679"	0.625"	0.201"	0.1875"	0.09	+0.012~+0.050	558	695
		31.75	50.8	66.675	51.079	47.9	1.725	15.875	5.105	4.763	2.286			
SSW240P	6	1-1/2"	2.375"	3"	2.422"	2.2389"	0.0859"	0.75"	0.201"	0.1875"	0.09	+0.013~+0.055	672	840
		38.1	60.325	76.2	61.519	56.868	2.182	19.05	5.105	4.763	2.286			
SSW320P	6	2"	3"	4"	3.206"	2.8379"	0.1029"	1"	0.265"	0.3125"		+0.013~+0.055	1102	1377
		50.8	76.2	101.6	81.432	72.083	2.614	25.4	6.731	7.938				



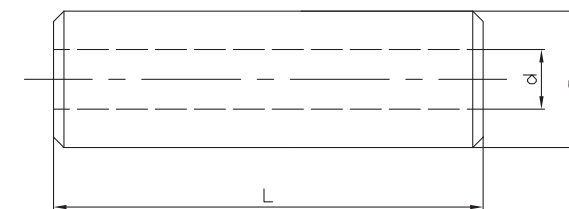
SSW

Bearing Code	Number of ball rows	Main Dimensions						Clearance H7/g6	Basic Load rating	
		dr	D	L	D1	B	W		C N	Co N _Z
SSW4	3	1/4 ~ 6.35	0.5 ~ 12.7	0.75 ~ 19.05	0.515 ~ 13.081	0.4687 ~ 11.905	0.039 ~ 0.991	+0.011~+0.042	27	36
SSW6	4	3/8 ~ 9.525	0.625 ~ 15.875	0.875 ~ 22.225	0.703 ~ 17.856	0.588 ~ 14.935	0.039 ~ 0.991	+0.011~+0.042	43	54
SSW8	4	1/2 ~ 12.7	0.875 ~ 22.225	1.25 ~ 31.75	1.032 ~ 26.213	0.8209 ~ 20.85	0.0459 ~ 1.166	+0.011~+0.042	104	132
SSW10	4	5/8 ~ 15.875	1.125 ~ 28.575	1.5 ~ 38.1	1.112 ~ 28.245	1.059 ~ 26.899	0.0559 ~ 1.42	+0.011~+0.042	182	228
SSW12	4	3/4 ~ 19.05	1.25 ~ 31.75	1.625 ~ 41.275	1.272 ~ 32.309	1.176 ~ 29.87	0.0559 ~ 1.42	+0.012~+0.050	213	268
SSW16	5	1 ~ 25.4	1.5625 ~ 39.688	2.25 ~ 57.15	1.886 ~ 47.904	1.4687 ~ 37.305	0.0679 ~ 1.725	+0.012~+0.050	386	481
SSW20	5	1-1/4 ~ 31.75	2 ~ 50.8	2.625 ~ 66.675	2.011 ~ 51.079	1.8859 ~ 47.9	0.0679 ~ 1.725	+0.012~+0.050	558	695
SSW24	6	1-1/2 ~ 38.1	2.375 ~ 60.325	3 ~ 76.2	2.422 ~ 61.519	2.2389 ~ 56.868	0.0859 ~ 2.182	+0.013~+0.055	672	840
SSW32	6	2 ~ 50.8	3 ~ 76.2	4 ~ 101.6	3.206 ~ 81.432	2.8379 ~ 72.083	0.1029 ~ 2.614	+0.013~+0.055	1102	1377



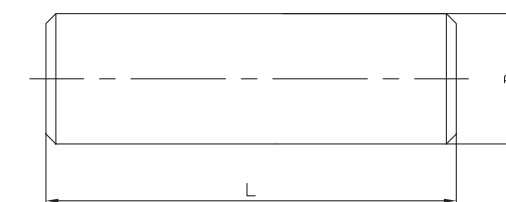
S

Type	D	Dimeter Tolerance		L	Depth of effective hardened layer	Weight (kg)
		g6	h6			
S6	6	-0.004 -0.012	0 -0.008	100-2000	>0.8	0.22
S8	8	-0.005 -0.014	0 -0.009	100-2000		0.4
S10	10	-0.005 -0.014	0 -0.009	100-2000	>1.0	0.62
S12	12			100-3000		0.89
S13	13	-0.006 -0.017	0 -0.011	100-3500		1.04
S16	16			100-4000		1.58
S20	20				>1.5	2.47
S25	25	-0.007 -0.02	0 -0.013			3.85
S30	30					5.55
S35	35			100-6000	>2.0	7.55
S40	40	-0.009 -0.025	0 -0.016			9.87
S50	50				>2.5	15.4



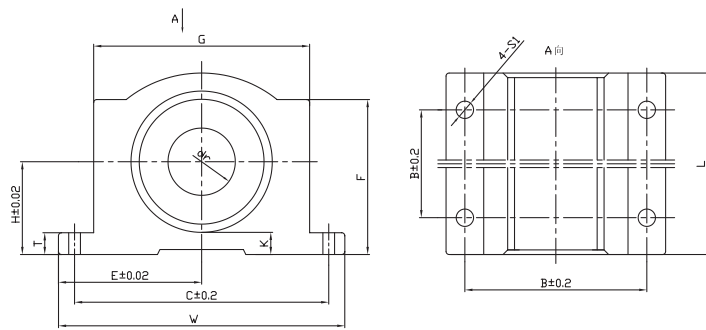
SP

Type	d	D	Dimeter Tolerance		Depth of effective hardened layer	Weight (kg)
			g6	h6		
SP13	6	13	-0.006 -0.017	0 -0.011	>1.0	0.82
SP16	8	16			>1.5	1.18
SP20	10	20	-0.007 -0.02	0 -0.013		1.85
SP25	15	25			>1.8	2.46
SP30	16	30				3.97
SP35	19	35	-0.009 -0.025	0 -0.016		5.32
SP40	20	40			>2.2	7.39
SP50	26	50				11.3



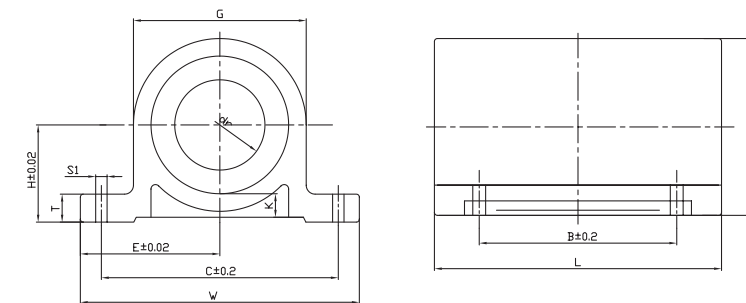
SI

Type	D	Dimeter Tolerance		Depth of effective hardened layer	Weight (kg)
		g6	h6		
Si4	6.35	-0.004 -0.012	0 -0.008	>0.6	0.25
Si6	9.525	-0.005 -0.014	0 -0.009	>1.0	0.56
Si8	12.7	-0.006 -0.017	0 -0.011		1
Si10	15.875				1.55
Si12	19.05	-0.007 -0.02	0 -0.013	>1.5	2.24
Si16	25.4			>1.8	4
Si20	31.75				6.21
Si24	38.1	-0.009 -0.025	0 -0.016	>2.2	8.95
Si32	50.8				15.9



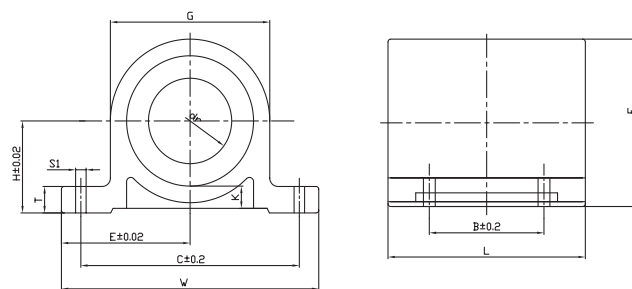
SWA-L

House Code	Shaft Diameter	Main Dimensions											Weight (kg)
		H	E	W	L	F	T	G	K	B	C	S1	
SWA8L	12.7	17.45	25.4	50.8	88.9	28.58	6.35	34.93	6.342	63.5	42.88	3.94	0.18
SWA10L	15.875	22.22	31.75	63.5	101.6	36.5	7.14	44.45	7.94	76.2	53.98	4.7	0.24
SWA12L	19.05	23.8	34.92	69.85	114.3	39.67	7.92	47.63	7.925	88.9	60.325	4.7	0.41
SWA16L	25.4	30.15	41.28	82.55	152.4	49.2	9.53	60.33	10.3	114.3	73.03	5.5	0.84
SWA20L	31.75	38.1	50.8	101.6	190.5	63.5	11.1	76.2	12.705	139.7	88.9	5.5	1.66
SWA24L	38.1	44.45	60.32	120.65	228.6	74.6	12.7	88.9	14.29	165.1	104.78	7.1	2.6



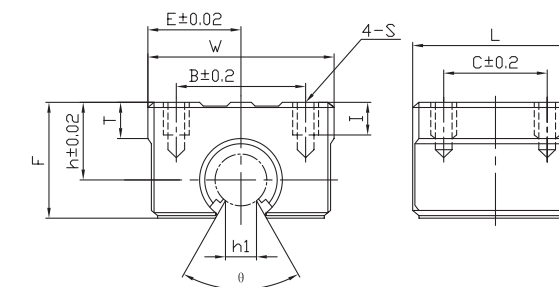
SWB-L

House Code	Shaft Diameter	Main Dimensions											Weight (kg)
		H	E	W	L	F	T	G	K	B	C	S1	
SWB8L	12.7	17.45	25.4	50.8	88.9	31.8	6.528	28.7	6.342	63.5	42.88	3.94	0.116
SWB12L	19.05	23.8	34.92	69.85	114.3	44.42	7.93	41.25	7.925	88.9	60.325	4.75	0.292
SWB16L	25.4	30.15	41.28	82.55	152.4	55.55	9.53	50.8	10.3	114.3	73.03	5.56	0.57
SWB20L	31.75	38.1	50.8	101.6	190.5	72.21	11.88	66.65	12.705	139.7	88.9	5.56	1.155
SWB24L	38.1	44.45	60.32	120.65	228.6	82.56	12.73	76.2	14.29	165.1	104.78	7.16	1.688



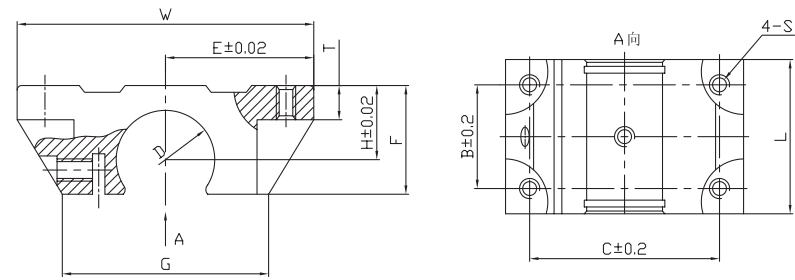
SWB

House Code	Shaft Diameter	Main Dimensions											Weight (kg)
		H	E	W	L	F	T	G	K	B	C	S1	
SWB8	12.7	17.45	25.4	50.8	42.88	31.8	6.528	28.7	6.342	25.4	42.88	3.94	0.058
SWB12	19.05	23.8	34.92	69.85	52.4	44.42	7.93	41.25	7.925	31.75	60.325	4.75	0.136
SWB16	25.4	30.15	41.28	82.55	71.45	55.55	9.53	50.8	10.3	44.45	73.03	5.56	0.264
SWB20	31.75	38.1	50.8	101.6	92.08	72.21	11.88	66.65	12.705	50.8	88.9	5.56	0.585
SWB24	38.1	44.45	60.32	120.65	101.6	82.56	12.73	76.2	14.29	63.5	104.78	7.16	0.765
SWB32	50.8	53.97	76.2	152.4	127	103.18	15.87	98.4	15.88	82.55	133.35	10.34	1.578



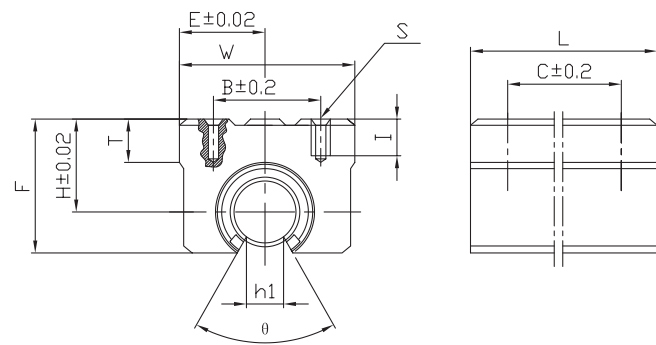
SME

House Code	Shaft Diameter	Main Dimensions										Mounting Dimension			BASIC LOAD RATING		Weight (kg)
		h	E	W	L	F	T	h1	θ	B	C	S	I	C N	Co N		
SME10	10	15	18	36	32	24	7	6	80°	25	20	M5	10	38	56	0.065	
SME12	12	17	20	40	39	27.6	8	8.5	80°	28	26	M5	10	42	61	0.1	
SME13	13	17	20	40	39	27.6	8	8.5	80°	28	26	M5	10	52	80	0.1	
SME16	16	20	22.5	45	45	33	9	10	80°	32	30	M5	12	59	91	0.15	
SME20	20	23	24	48	50	39	11	10	60°	35	35	M6	12	88	140	0.2	
SME25	25	27	30	60	65	47	14	11.5	50°	40	40	M6	12	100	160	0.45	
SME30	30	33	35	70	70	56	15	14	50°	50	50	M8	18	160	280	0.63	
SME35	35	37	40	80	80	63	18	16	50°	55	55	M8	18	170	320	0.92	
SME40	40	42	45	90	90	72	20	19	50°	65	65	M10	20	220	410	1.33	
SME50	50	53	60	120	110	92	25	23	50°	94	80	M10	20	390	810	3	



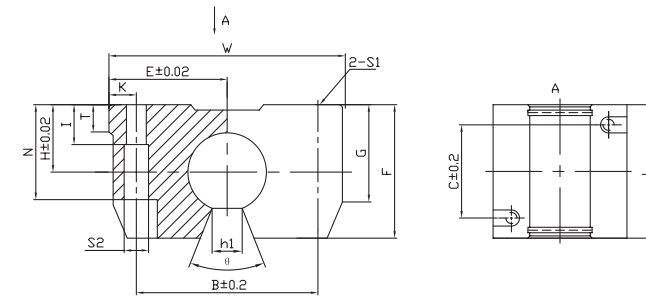
TBR

House Code	D	H	E	Main Dimensions								Weight (kg)
				T	F	G	W	B	C	L	S	
TBR16	28	17.86	31	8	27	48	62	30	50	42	M5	0.18
TBR20	32	20.99	34	10	31.4	52.4	68	37	54	51	M6	0.3
TBR25	40	28	41	12	41	61	82	50	65	65	M8	0.6
TBR30	45	33.48	45.5	12	48	65	91	60	75	75	M8	0.9



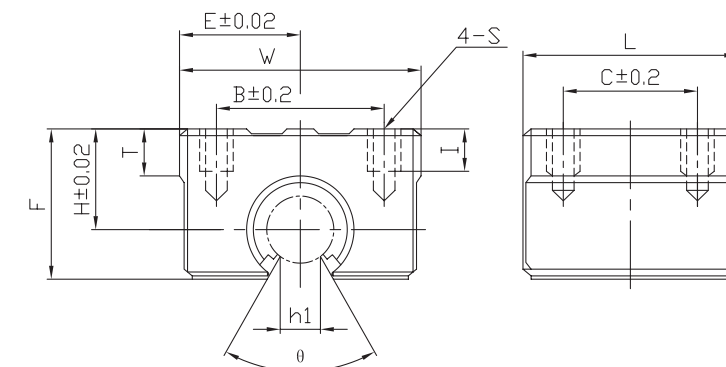
SME-L

House Code	Shaft Diameter	Main Dimensions								Mounting Dimension				Weight (kg)
		H	E	W	L	F	T	h1	θ	B	C	S	I	
SME16L	16	20	22.5	45	85	33	9	10	80°	32	60	M5	12	0.29
SME20L	20	23	24	48	96	39	11	10	80°	35	70	M6	12	0.51
SME25L	25	27	30	60	130	47	14	11.5	80°	40	100	M6	12	0.98
SME30L	30	33	35	70	140	56	15	14	80°	50	110	M8	18	1.45
SME40L	40	42	45	90	175	72	20	19	80°	65	140	M10	20	2.48



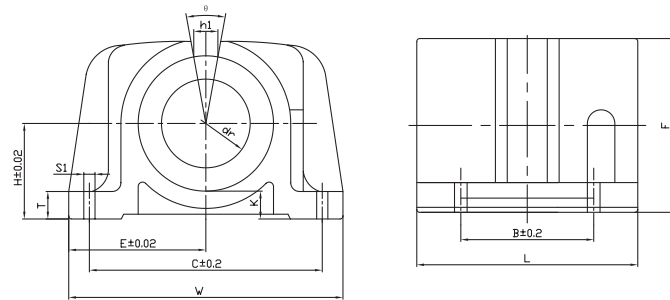
KBB-OP

House Code	Shaft Diameter	Main Dimensions										Mounting Dimension						Weight (kg)
		H	E	W	L	F	G	T	N	θ	h1	B	C	S1	S2	I	K	
KBB16OP	16	22	26.5	53	43	42	32	7	30	78°	10.8	40	26	M6	5.3	13	6.5	0.19
KBB20OP	20	25	30	60	54	50	39	7.5	34	60°	10.8	45	32	M8	6.6	18	7.5	0.31
KBB25OP	25	30	39	78	67	60	48	8.5	40	60°	12.5	60	40	M10	8.4	22	9	0.86
KBB30OP	30	35	43.5	87	79	70	57	9.5	48	60°	15	68	45	M10	8.4	22	9.5	0.91



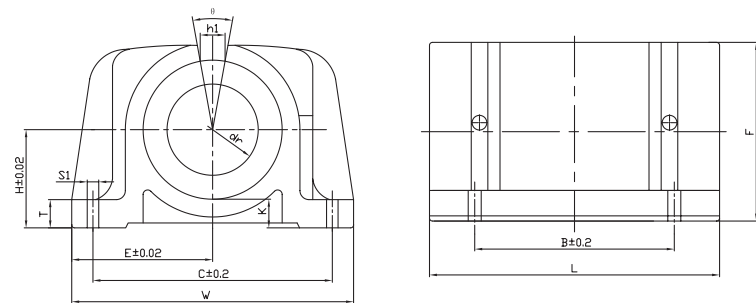
KBE

House Code	Shaft Diameter	Main Dimensions								Mounting Dimension				Basic Load Rating		Weight (kg)
		H	E	W	L	F	T	h1	θ	B	C	S	I	C _N	Co _N	
KBE10	10	15	18	36	32	24	7	6	80°	25	20	M5	10	38	56	0.065
KBE12	12	17	20	40	39	27.6	8	8.5	80°	28	26	M5	10	52	79	0.1
KBE16	16	20	22.5	45	45	33	9	10	80°	32	30	M5	10	59	91	0.15
KBE20	20	23	24	48	50	39	11	10	60°	35	35	M6	12	88	140	0.2
KBE25	25	27	30	60	65	47	14	11.5	60°	40	40	M6	12	100	160	0.45
KBE30	30	33	35	70	70	56	15	14	60°	50	50	M8	18	160	280	0.63
KBE40	40	42	45	90	90	72	20	19	60°	65	65	M10	20	220	410	1.33
KBE50	50	53	60	120	110	92	25	23	60°	94	80	M10	20	390	810	3



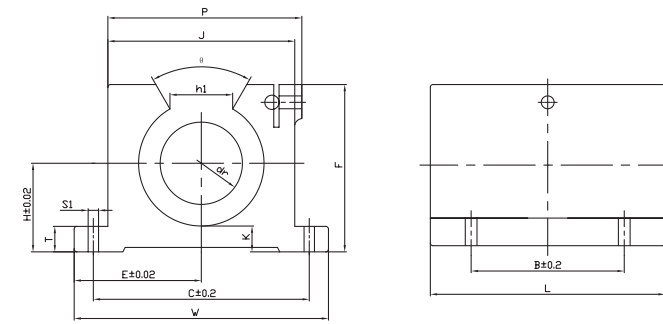
SWB-OP

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension					Weight (kg)
		H	E	W	L	F	θ	T	h1	K	B	C	S1	
SWB8OP	12.7	17.45	25.4	50.8	38.1	28.7	60°	6.53	10.64	6.342	25.4	42.88	3.94	0.06
SWB12OP	19.05	23.8	34.92	69.85	47.6	39.7	60°	7.87	15.87	7.925	31.75	60.325	4.75	0.135
SWB16OP	25.4	30.15	41.28	82.55	66.68	50.8	60°	9.53	19.3	10.3	44.45	73.03	5.56	0.268
SWB20OP	31.75	38.1	50.8	101.6	85.73	63.5	60°	11.88	24.2	12.705	50.8	88.9	5.56	0.536
SWB24OP	38.1	44.45	60.32	120.65	95.25	74.6	60°	12.7	29.5	14.29	63.5	104.78	7.16	0.794
SWB32OP	50.8	53.97	76.2	152.4	120.65	92.07	60°	15.8	37.3	15.88	82.55	133.35	10.34	1.35



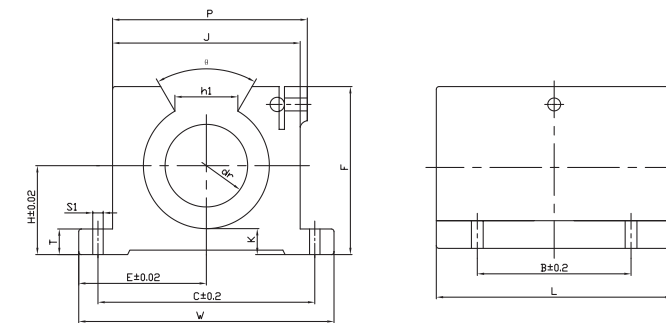
SWB-L-OP

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension					Weight (kg)
		H	E	W	L	F	θ	T	h1	K	B	C	S1	
SWB8L-OP	12.7	17.45	25.4	53	88.9	28.7	60°	6.53	10.64	6.342	63.5	42.88	3.94	0.123
SWB12L-OP	19.05	23.8	34.92	69.85	114.3	39.7	60°	7.87	15.87	7.925	88.9	60.325	4.75	0.305
SWB16L-OP	25.4	30.15	41.28	82.55	152.4	50.8	60°	9.53	19.3	10.3	114.3	73.03	5.56	0.612
SWB20L-OP	31.75	38.1	50.8	101.6	190.5	63.5	60°	11.88	24.2	12.705	139.7	88.9	5.56	1.128
SWB24L-OP	38.1	44.45	60.32	120.65	228.6	74.6	60°	12.7	29.5	14.29	165.1	104.78	7.16	1.778



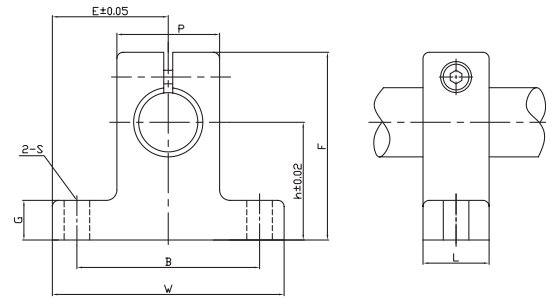
SWD

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension						Weight (Kg)	
		H	E	W	L	F	G	T	h1	B	C	S1	S2	I		K
SWD8	12.7	17.45	26.5	53	38.1	28.7	60°	6.53	10.64	6.342	35.75	36.5	25.4	42.88	3.96	0.071
SWD10	15.875	22.22	31.75	63.5	44.45	36.53	60°	7.11	13.49	7.942	44.5	46.04	28.57	53.97	4.75	0.126
SWD12	19.05	23.8	34.92	69.85	47.6	39.7	60°	7.87	15.87	7.925	48.41	49.98	31.75	60.325	4.75	0.158
SWD16	25.4	30.15	41.27	82.55	66.67	50.8	60°	9.65	19.3	10.3	61.11	62.69	44.45	73.03	5.54	0.355
SWD20	31.75	38.1	50.8	101.6	85.67	63.5	60°	11.1	24.2	12.705	76.2	78.58	50.8	88.9	5.54	0.679
SWD24	38.1	44.45	60.32	120.65	95.25	74.6	60°	12.7	30.16	14.29	88.9	90.48	63.5	104.78	7.137	0.926



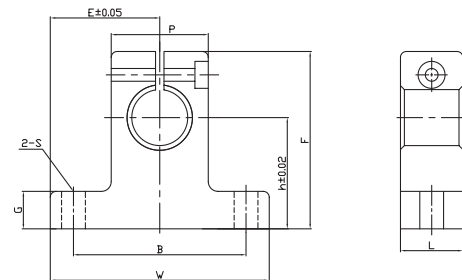
SWD-L

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension						Weight (Kg)	
		H	E	W	L	F	θ	T	h1	K	J	P	B	C		S1
SWD8L	12.7	17.45	26.5	53	88.9	28.7	60°	6.53	10.64	6.342	35.75	36.5	25.4	42.88	3.96	0.165
SWD10L	15.875	22.22	31.75	63.5	101.6	36.53	60°	7.11	13.49	7.942	44.5	46.04	28.57	53.97	4.75	0.288
SWD12L	19.05	23.8	34.92	69.85	114.3	39.7	60°	7.87	15.87	7.925	48.41	49.98	31.75	60.325	4.75	0.379
SWD16L	25.4	30.15	41.27	82.55	152.4	50.8	60°	9.65	19.3	10.3	61.11	62.69	44.45	73.03	5.54	0.811
SWD20L	31.75	38.1	50.8	101.6	190.5	63.5	60°	11.1	24.2	12.705	76.2	78.58	50.8	88.9	5.54	1.508
SWD24L	38.1	44.45	60.32	120.65	228.6	74.6	60°	12.7	30.16	14.29	88.9	90.48	63.5	104.78	7.137	2.222



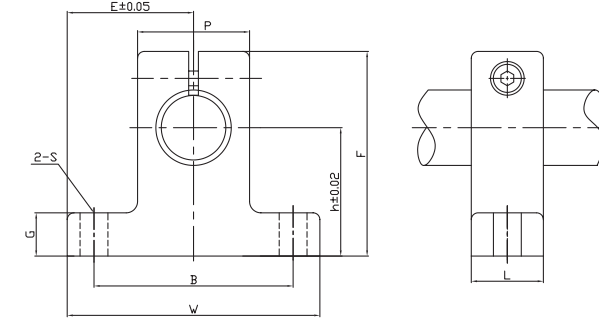
SK

Bearing Code	Shaft Diameter	Main Dimensions									Designation of clamping bolt	Designation of mounting bolt	Weight (kg)
		h	E	W	L	F	G	P	B	S			
SK3	3	20	21	42	14	37.5	6	18	32	5.5	M4	M5	0.024
SK4	4	20	21	42	14	37.5	6	18	32	5.5	M4	M5	0.024
SK5	5	20	21	42	14	37.5	6	18	32	5.5	M4	M5	0.024
SK6	6	20	21	42	14	37.5	6	18	32	5.5	M4	M5	0.024
SK8	8	20	21	42	14	37.5	6	18	32	5.5	M4	M5	0.024
SK10	10	20	21	42	14	37.5	6	18	32	5.5	M4	M5	0.024
SK12	12	23	21	42	14	37.5	6	20	32	5.5	M4	M5	0.03
SK13	13	23	21	42	14	37.5	6	20	32	5.5	M4	M5	0.03
SK16	16	27	24	48	16	44	8	25	38	5.5	M5	M6	0.04
SK20	20	31	30	60	20	51	10	30	45	6.6	M6	M6	0.07
SK25	25	35	35	70	24	60	12	38	56	6.6	M6	M8	0.13
SK30	30	42	42	84	28	70	12	44	64	9	M8	M10	0.18
SK35	35	50	49	98	32	82	15	50	74	11	M8	M10	0.27
SK40	40	60	57	114	36	96	15	60	90	11	M10	M10	0.42
SK50	50	70	63	126	40	120	18	74	100	14	M12	M12	0.75
SK60	60	80	74	148	45	136	18	90	120	14	M12	M12	1.1



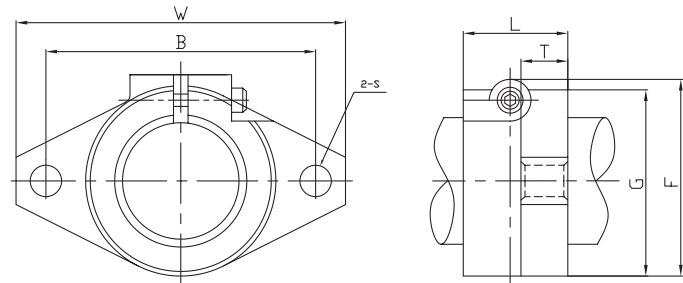
PA

Bearing Code	Shaft Diameter	Main Dimensions									Weight (kg)
		h	E	W	L	F	G	P	B	S	
PA12	12	20	21	42	12	35	5.5	20	32	4.3	0.021
PA16	16	25	25	50	16	42	6.5	26	40	4.3	0.04
PA20	20	30	30	60	20	50	8	32	45	4.3	0.075
PA25	25	35	37	74	25	58	9	38	60	5.3	0.13
PA30	30	40	42	84	28	68	10	45	68	6.4	0.195



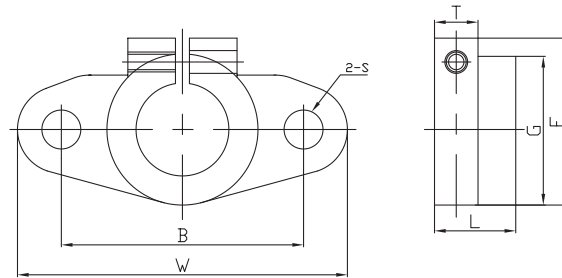
SKW

Bearing Code	Shaft Diameter	Main Dimensions									Weight (kg)
		h	E	W	L	F	G	P	B	S	
SKW4	0.25" 6.35	0.6875" 17.463	0.75" 19.05	1.50" 38.1	0.50" 12.7	1.063" 27	0.25" 6.35	0.50" 12.7	1.125" 28.575	0.156" 4	0.015
SKW6	0.375" 9.525	0.75" 19.05	0.8125" 20.637	1.625" 41.28	0.563" 14.3	1.187" 30.16	0.25" 6.35	0.688" 17.46	1.25" 31.75	0.156" 4	0.021
SKW8	0.50" 12.7	1.0" 25.4	1.0" 25.4	2.00" 50.8	0.63" 16	1.63" 41.4	0.25" 6.35	0.88" 22.35	1.50" 38.1	0.188" 4.8	0.035
SKW10	0.625" 15.875	1.0" 25.4	1.25" 31.75	2.5" 63.5	0.688" 17.46	1.75" 44.45	0.31" 7.88	1.0" 25.4	1.875" 47.625	0.218" 5.6	0.052
SKW12	0.75" 19.05	1.25" 31.75	1.25" 31.75	2.5" 63.5	0.75" 19.05	2.13" 54.1	0.31" 7.88	1.25" 31.75	2.00" 50.8	0.218" 5.6	0.082
SKW16	1.0" 25.4	1.50" 38.1	1.5315" 38.9	3.063" 77.8	1.0" 25.4	2.56" 65	0.38" 9.68	1.50" 38.1	2.5" 63.5	0.281" 7.2	0.145
SKW20	1.25" 31.75	1.75" 44.45	1.875" 47.625	3.75" 95.25	1.13" 28.7	3" 76.2	0.44" 11.18	2.00" 50.8	3" 76.2	0.346" 8.8	0.254
SKW24	1.50" 38.1	2.00" 50.8	2.1875" 55.563	4.375" 111.125	1.25" 31.75	3.5" 88.9	0.50" 12.7	2.25" 57.15	3.5" 88.9	0.346" 8.8	0.362
SKW32	2.00" 50.8	2.5" 63.5	2.75" 69.85	5.5" 139.7	1.50" 38.1	4.5" 114.3	0.63" 16	3" 76.2	4.5" 114.3	0.406" 10.5	0.716



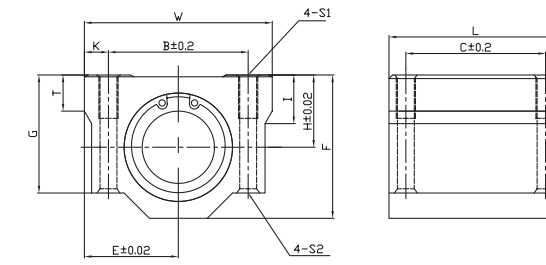
SHF

Bearing Code	Shaft Diameter	Main Dimensions							Designation of clamping bolt	Designation of mounting bolt	Weight (kg)
		W	L	T	F	G	B	S			
SHF10	10	43	10	5	24	20	32	5.5	M4	M5	0.013
SHF12	12	47	13	7	28	25	36	5.5	M4	M5	0.02
SHF13	13	47	13	7	28	25	36	5.5	M4	M5	0.02
SHF16	16	50	16	8	31	28	40	5.5	M4	M5	0.027
SHF20	20	60	20	8	37	34	48	7	M5	M6	0.04
SHF25	25	70	25	10	42	40	56	7	M5	M6	0.06
SHF30	30	80	30	12	50	46	64	9	M6	M8	0.11
SHF35	35	92	35	14	58	50	72	12	M8	M10	0.38
SHF40	40	102	40	16	67	56	80	12	M10	M10	0.51
SHF50	50	122	50	19	83	70	96	14	M12	M12	0.89
SHF60	60	140	60	23	95	82	112	14	M12	M12	1.5



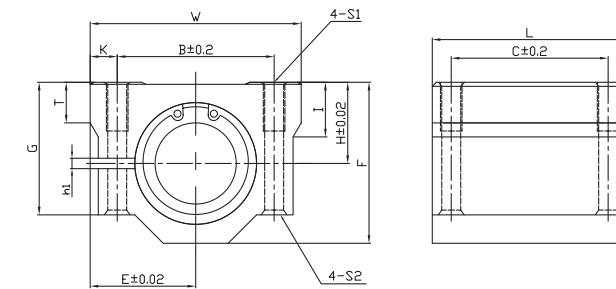
SHF-B

Bearing Code	Shaft Diameter	Main Dimensions							Designation of clamping bolt	Designation of mounting bolt	Weight (kg)
		W	L	T	F	G	B	S			
SHF10B	10	43	10	8.5	24	20	32	5.5	M4	M5	0.013
SHF12B	12	47	13	8.5	28	25	36	5.5	M4	M5	0.02
SHF13B	13	47	13	8.5	28	25	36	5.5	M4	M5	0.02
SHF16B	16	50	16	8.5	31	28	40	5.5	M4	M5	0.027
SHF20B	20	60	20	9	37	34	48	7	M5	M6	0.04
SHF25B	25	70	25	11	42	40	56	7	M5	M6	0.06
SHF30B	30	80	30	14	50	46	64	9	M6	M8	0.11
SHF35B	35	92	35	16	58	50	72	12	M8	M10	0.38
SHF40B	40	102	40	22	67	56	80	12	M10	M10	0.51



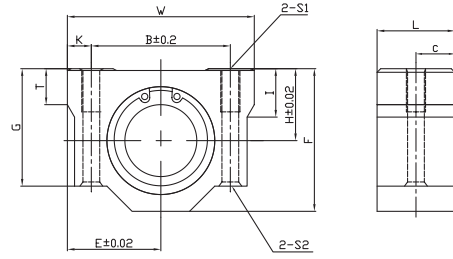
SMA

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension				Weight (Kg)		
		H	E	W	L	F	G	T	B	C	K	S1		S2	I
SMA8	8	11	17	34	30	22	18	6	24	18	5	M4	3.4	8	0.052
SMA10	10	13	20	40	35	26	21	8	28	21	6	M5	4.3	12	0.092
SMA12	12	15	21	42	36	28	24	8	30.5	26	5.75	M5	4.3	12	0.102
SMA13	13	15	22	44	39	30	24.5	8	33	26	5.5	M5	4.3	12	0.12
SMA16	16	19	25	50	44	38.5	32.5	9	36	34	7	M5	4.3	12	0.2
SMA20	20	21	27	54	50	41	35	11	40	40	7	M6	5.2	12	0.255
SMA25	25	26	38	76	67	51.5	42	12	54	50	11	M8	7	18	0.6
SMA30	30	30	39	78	72	59.5	49	15	58	58	10	M8	7	18	0.735
SMA35	35	34	45	90	80	68	54	18	70	60	10	M8	7	18	1.1
SMA40	40	40	51	102	90	78	62	20	80	60	11	M10	8.7	25	1.59
SMA50	50	52	61	122	110	102	80	25	100	80	11	M10	8.7	25	3.34
SMA60	60	58	66	132	122	114	94	30	108	90	12	M12	10.7	25	4.72



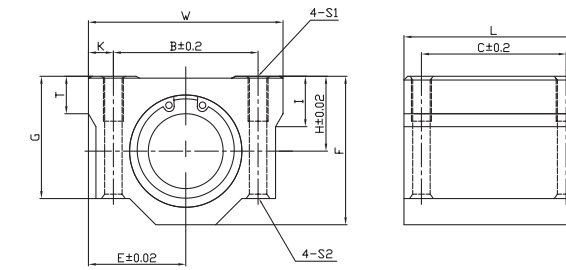
SMA-AJ

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension				Weight (Kg)		
		H	E	W	L	F	G	T	B	C	K	S1		S2	I
SMA8AJ	8	11	17	34	30	22	18	6	24	18	5	M4	3.4	8	0.052
SMA10AJ	10	13	20	40	35	26	21	8	28	21	6	M5	4.3	12	0.092
SMA12AJ	12	15	21	42	36	28	24	8	30.5	26	5.75	M5	4.3	12	0.102
SMA13AJ	13	15	22	44	39	30	24.5	8	33	26	5.5	M5	4.3	12	0.12
SMA16AJ	16	19	25	50	44	38.5	32.5	9	36	34	7	M5	4.3	12	0.2
SMA20AJ	20	21	27	54	50	41	35	11	40	40	7	M6	5.2	12	0.255
SMA25AJ	25	26	38	76	67	51.5	42	12	54	50	11	M8	7	18	0.6
SMA30AJ	30	30	39	78	72	59.5	49	15	58	58	10	M8	7	18	0.735
SMA35AJ	35	34	45	90	80	68	54	18	70	60	10	M8	7	18	1.1
SMA40AJ	40	40	51	102	90	78	62	20	80	60	11	M10	8.7	25	1.59
SMA50AJ	50	52	61	122	110	102	80	25	100	80	11	M10	8.7	25	3.34
SMA60AJ	60	58	66	132	122	114	94	30	108	90	12	M12	10.7	25	4.72



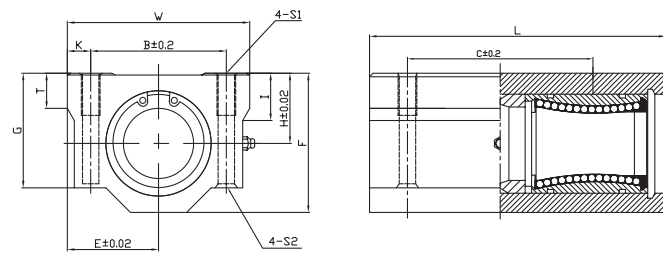
SMA-S

House Code	Shaft Diameter	Main Dimensions								Mounting Dimension					Weight (Kg)
		H	E	W	L	F	G	T	B	C	K	S1	S2	I	
SMA8S	8	11	17	34	15.5	22	18	6	24	7.75	5	M4	3.4	8	0.027
SMA10S	10	13	20	40	20	26	21	8	28	10	6	M5	4.3	12	0.053
SMA12S	12	15	21	42	21	28	24	8	30.5	10.5	5.75	M5	4.3	12	0.06
SMA13S	13	15	22	44	20.6	30	24.5	8	33	10.3	5.5	M5	4.3	12	0.064
SMA16S	16	19	25	50	24.1	38.5	32.5	9	36	12.05	7	M5	4.3	12	0.11
SMA20S	20	21	27	54	28.1	41	35	11	40	14.05	7	M6	5.2	12	0.144
SMA25S	25	26	38	76	38	51.5	42	12	54	19	11	M8	7	18	0.34
SMA30S	30	30	39	78	41.5	59.5	49	15	58	20.75	10	M8	7	18	0.424
SMA35S	35	34	45	90	45.5	68	54	18	70	22.75	10	M8	7	18	0.626
SMA40S	40	40	51	102	56.5	78	62	20	80	28.25	11	M10	8.7	25	1
SMA50S	50	52	61	122	69	102	80	25	100	34.5	11	M10	8.7	25	2.1



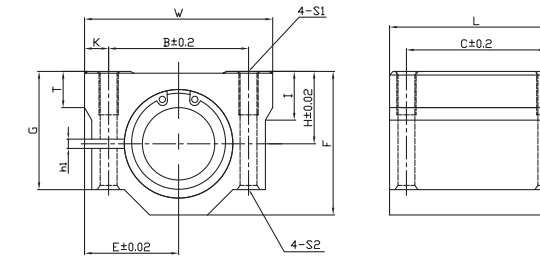
KBA

House Code	Shaft Diameter	Main Dimensions								Mounting Dimension					Weight (kg)
		H	E	W	L	F	G	T	B	C	K	S1	S2	I	
KBA8	8	11	17	34	30	22	18	6	24	18	5	M4	3.4	8	0.052
KBA10	10	13	20	40	35	26	21	8	28	21	6	M5	4.3	12	0.092
KBA12	12	15	22	44	39	30	24.5	8	33	26	5.5	M5	4.3	12	0.12
KBA16	16	19	25	50	44	38.5	32.5	9	36	34	7	M5	4.3	12	0.2
KBA20	20	21	27	54	53	41	35	11	40	40	7	M6	5.2	12	0.27
KBA25	25	26	38	76	67	51.5	42	12	54	50	11	M8	7	18	0.6
KBA30	30	30	39	78	76	59.5	49	15	58	58	10	M8	7	18	0.776
KBA40	40	40	51	102	90	78	62	20	80	60	11	M10	8.7	25	1.59
KBA50	50	52	61	122	110	102	80	25	100	80	11	M10	8.7	25	3.34
KBA60	60	58	66	132	137	114	94	30	108	90	12	M12	10.7	25	4.8



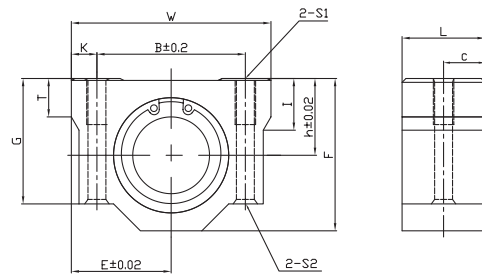
SMA-L

House Code	Shaft Diameter	Main Dimensions								Mounting Dimension					Weight (Kg)
		H	E	W	L	F	G	T	B	C	K	S1	S2	I	
SMA8L	8	11	17	34	58	22	18	6	24	42	5	M4	3.4	8	0.1
SMA10L	10	13	20	40	68	26	21	8	28	46	6	M5	4.3	12	0.18
SMA12L	12	15	21	42	70	28	24	8	30.5	50	5.75	M5	4.3	12	0.2
SMA13L	13	15	22	44	75	30	24.5	8	33	50	5.5	M5	4.3	12	0.23
SMA16L	16	19	25	50	85	38.5	32.5	9	36	60	7	M5	4.3	12	0.39
SMA20L	20	21	27	54	96	41	35	11	40	70	7	M6	5.2	12	0.49
SMA25L	25	26	38	76	130	51.5	42	12	54	100	11	M8	7	18	1.165
SMA30L	30	30	39	78	140	59.5	49	15	58	110	10	M8	7	18	1.43
SMA35L	35	34	45	90	155	68	54	18	70	120	10	M8	7	18	2.13
SMA40L	40	40	51	102	175	78	62	20	80	140	11	M10	8.7	25	3.09
SMA50L	50	52	61	122	215	102	80	25	100	160	11	M10	8.7	25	6.53
SMA60L	60	58	66	132	240	114	94	30	108	180	12	M12	10.7	25	9.29



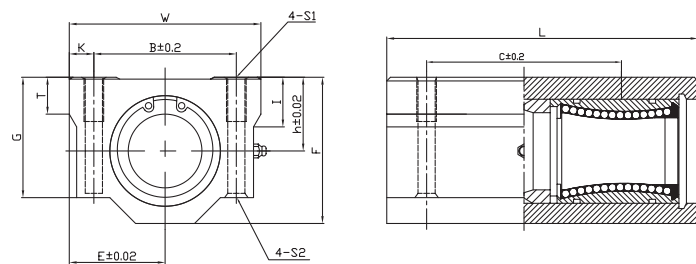
KBA-AJ

House Code	Shaft Diameter	Main Dimensions								Mounting Dimension					Weight (kg)	
		H	E	W	L	F	G	h1	T	B	C	K	S1	S2		I
KBA8AJ	8	11	17	34	30	22	18	1.5	6	24	18	5	M4	3.4	8	0.052
KBA10AJ	10	13	20	40	35	26	21	1.5	8	28	21	6	M5	4.3	12	0.092
KBA12AJ	12	15	22	44	39	30	24.5	1.5	8	33	26	5.5	M5	4.3	12	0.12
KBA16AJ	16	19	25	50	44	38.5	32.5	2	9	36	34	7	M5	4.3	12	0.2
KBA20AJ	20	21	27	54	53	41	35	2	11	40	40	7	M6	5.2	12	0.27
KBA25AJ	25	26	38	76	67	51.5	42	2	12	54	50	11	M8	7	18	0.6
KBA30AJ	30	30	39	78	76	59.5	49	2	15	58	58	10	M8	7	18	0.776
KBA40AJ	40	40	51	102	90	78	62	2	20	80	60	11	M10	8.7	25	1.59
KBA50AJ	50	52	61	122	110	102	80	2	25	100	80	11	M10	8.7	25	3.34
KBA60AJ	60	58	66	132	137	114	94	2	30	108	90	12	M12	10.7	25	4.8



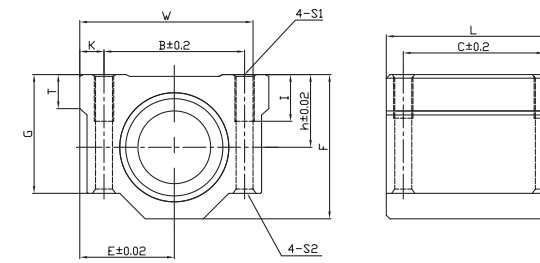
KBA-S

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension					Weight (kg)	
		h	E	W	L	F	G	T	B	C	K	S1	S2		I
KBA8S	8	11	17	34	14.5	22	18	6	24	7.25	5	M4	3.4	8	0.025
KBA10S	10	13	20	40	20	26	21	8	28	10	6	M5	4.3	12	0.053
KBA12S	12	15	22	44	20.9	30	24.5	8	33	10.45	5.5	M5	4.3	12	0.065
KBA16S	16	19	25	50	22.5	38.5	32.5	9	36	11.25	7	M5	4.3	12	0.1
KBA20S	20	21	27	54	29.1	41	35	11	40	14.55	7	M6	5.2	12	0.148
KBA25S	25	26	38	76	41.1	51.5	42	12	54	20.55	11	M8	7	18	0.368
KBA30S	30	30	39	78	49.1	59.5	49	15	58	24.55	10	M8	7	18	0.5
KBA40S	40	40	51	102	56.6	78	62	20	80	28.3	11	M10	8.7	25	1
KBA50S	50	52	61	122	72.6	102	80	25	100	36.3	11	M10	8.7	25	2.205



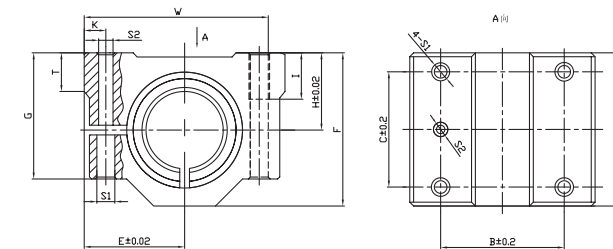
KBA-L

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension					Weight (kg)	
		h	E	W	L	F	G	T	B	C	K	S1	S2		I
KBA8L	8	11	17	34	58	22	18	6	24	42	5	M4	3.4	8	0.1
KBA10L	10	13	20	40	68	26	21	8	28	46	6	M5	4.3	12	0.18
KBA12L	12	15	22	44	77	30	24.5	8	33	64	5.5	M5	4.3	12	0.237
KBA16L	16	19	25	50	89	38.5	32.5	9	36	79	7	M5	4.3	12	0.405
KBA20L	20	21	27	54	100	41	35	11	40	90	7	M6	5.2	12	0.51
KBA25L	25	26	38	76	136	51.5	42	12	54	119	11	M8	7	18	1.22
KBA30L	30	30	39	78	154	59.5	49	15	58	132	10	M8	7	18	1.58
KBA40L	40	40	51	102	180	78	62	20	80	150	11	M10	8.7	25	3.18
KBA50L	50	52	61	122	230	102	80	25	100	200	11	M10	8.7	25	6.99



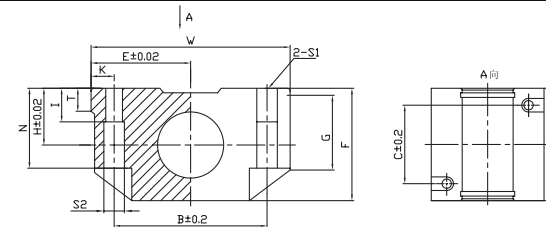
KBSB

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension					Weight (kg)	
		h	E	W	L	F	G	T	B	C	K	S1	S2		I
KBSB12	12	18	21.5	43	32	35	31	6	32	23	5.5	M5	4.3	32	0.095
KBSB16	16	22	26.5	53	36	42	37	7	40	26	6.5	M6	5.3	36	0.161
KBSB20	20	25	30	60	45	50	44	7.5	45	32	7.5	M8	6.6	45	0.262
KBSB25	25	30	39	78	58	60	52.5	8.5	60	40	9	M10	8.4	58	0.487
KBSB30	30	35	43.5	87	68	70	62	9.5	68	45	9.5	M10	8.4	68	0.726
KBSB40	40	45	54	108	80	90	80	11	86	58	12	M12	10.5	80	1.276



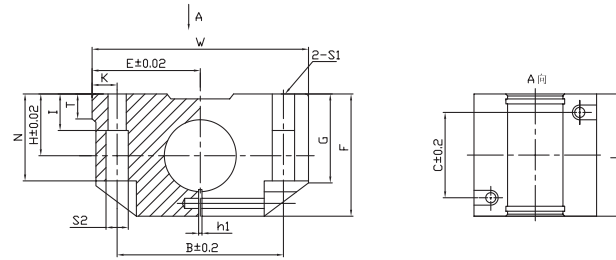
KBSB-AJ

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension					Weight (kg)	
		h	E	W	L	F	G	T	B	C	S	S1	S2		I
KBSB12AJ	12	18	21.5	43	32	35	31	6	32	23	4.5	M5	M5	32	0.095
KBSB16AJ	16	22	26.5	53	36	42	37	7	40	26	6	M6	M6	36	0.161
KBSB20AJ	20	25	30	60	45	50	44	7.5	45	32	7	M8	M8	45	0.262
KBSB25AJ	25	30	39	78	58	60	52.5	8.5	60	40	9	M10	M10	58	0.487
KBSB30AJ	30	35	43.5	87	68	70	62	9.5	68	45	9	M10	M10	68	0.726
KBSB40AJ	40	45	54	108	80	90	80	11	86	58	11	M12	M12	80	1.276



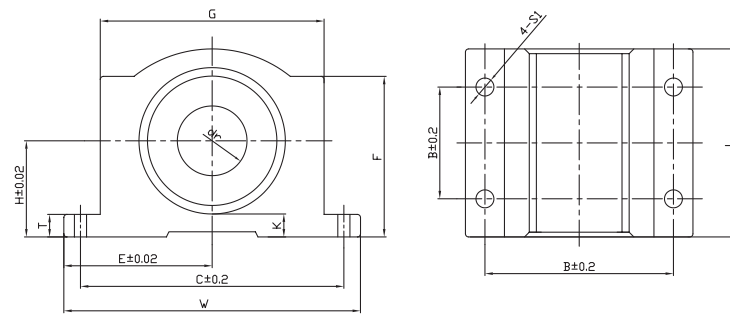
KBB

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension					Weight (kg)		
		H	E	W	L	F	G	T	N	B	C	S1	S2		I	K
KBB16	16	22	26.5	53	43	42	32	7	30	40	26	M6	5.3	13	6.5	0.19
KBB20	20	25	30	60	54	50	39	7.5	34	45	32	M8	6.6	18	7.5	0.31
KBB25	25	30	39	78	67	60	48	8.5	40	60	40	M10	8.4	22	9	0.86
KBB30	30	35	43.5	87	79	70	57	9.5	48	68	45	M10	8.4	22	9.5	0.91



KBB-AJ

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension						Weight (kg)		
		H	E	W	L	F	G	T	N	h1	B	C	S1	S2		I	K
KBB16AJ	16	22	26.5	53	43	42	32	7	30	1.5	40	26	M6	5.3	13	6.5	0.19
KBB20AJ	20	25	30	60	54	50	39	7.5	34	2	45	32	M8	6.6	18	7.5	0.31
KBB25AJ	25	30	39	78	67	60	48	8.5	40	2	60	40	M10	8.4	22	9	0.86
KBB30AJ	30	35	43.5	87	79	70	57	9.5	48	2	68	45	M10	8.4	22	9.5	0.91



SWA

House Code	Shaft Diameter	Main Dimensions							Mounting Dimension				Weight (kg)
		H	E	W	L	F	T	G	K	B	C	S1	
SWA8	12.7	17.45	25.4	50.8	42.88	28.58	6.35	34.93	6.342	25.4	42.88	3.94	0.09
SWA10	15.875	22.22	31.75	63.5	49.2	36.5	7.14	44.45	7.94	28.58	53.98	4.7	0.12
SWA12	19.05	23.8	34.92	69.85	52.4	39.67	7.92	47.63	7.925	31.75	60.325	4.7	0.19
SWA16	25.4	30.15	41.28	82.55	71.45	49.2	9.53	60.33	10.3	44.45	73.03	5.5	0.4
SWA20	31.75	38.1	50.8	101.6	92.08	63.5	11.1	76.2	12.705	50.8	88.9	5.5	0.8
SWA24	38.1	44.45	60.32	120.65	101.6	74.6	12.7	88.9	14.29	63.5	104.78	7.1	1.16

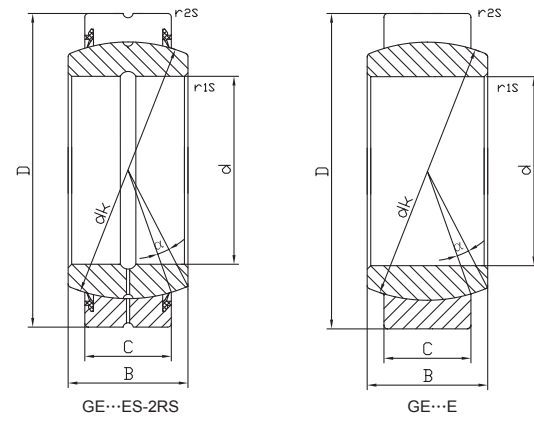
Spherical Plain Bearings & Rod Ends

Type	Structure	Designation	Size Range
Radial	Fitting Crack	GE...E,GE...ES,GEG...E,GEG...ES,GEF...ES	ID4-300mm
	Wide Inner Ring	GEEW...ES,GEEM...ES	ID12-80mm
	Two Pieces	GE...XS/K.GEK...XS	ID12-150mm
	Inch Dimension	GEZ...ES,GEGZ...ES,GEWZ...ES,	ID1/2" -6"
	Maintenance-free	GE...C,GEG...C,GE...ET,GE...XT,GEG...ET,GEG...XT,GEZ...ET	ID4-300mm
	Angular Contact	Normal	GAC...S
Inch Dimension		GACZ...S	ID1/2" -6"
Maintenance-free		GAC...T	ID25-200mm
Thrust	Normal	GX...S	ID10-200mm
	Maintenance-free	GX...T	ID10-200mm
Rod End	Combination	SI...E,SI...ES,SA...E,SA...ES	ID5-80mm
	Maintenance-free	SIJK...C,SI...ET,SI...C,SAJK...C,SA...ET,SA...C	ID5-80mm
	Inlaid Liner	SIB...S,SABP...S	ID5-30mm
	Welding Shank	SK...ES,SF...ES	ID15-80mm
Ball Joint	One Shank	SQD...	ID5-16mm
	Straight	SQZ...	ID5-22mm
	Wingding Shape	SQ...	ID5-22mm



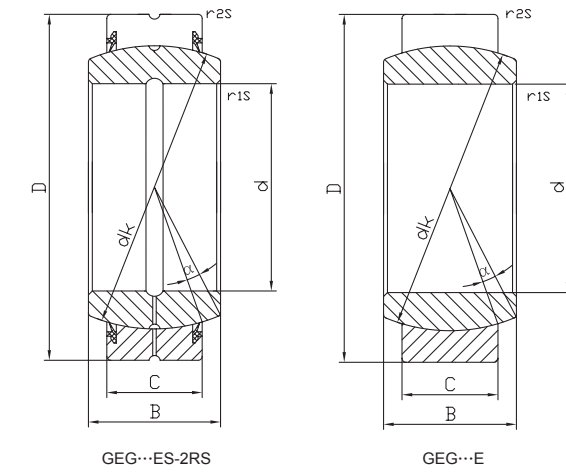
Spherical plain bearings with fittings groove (normal series)

Outer ring with single split in axial direction
 Lubrication grooves and holes in the outer and inner rings of type ES
 Outer ring of type -2RS with two seals
 Both outer and inner rings are properly phosphorlylate-treated



Spherical plain bearings with fittings groove (middle series)

Outer ring with single split in axial direction
 Lubrication grooves and holes in the outer and inner rings of type ES
 Outer ring of type -2RS with two seals
 Both outer and inner rings are properly phosphorlylate-treated

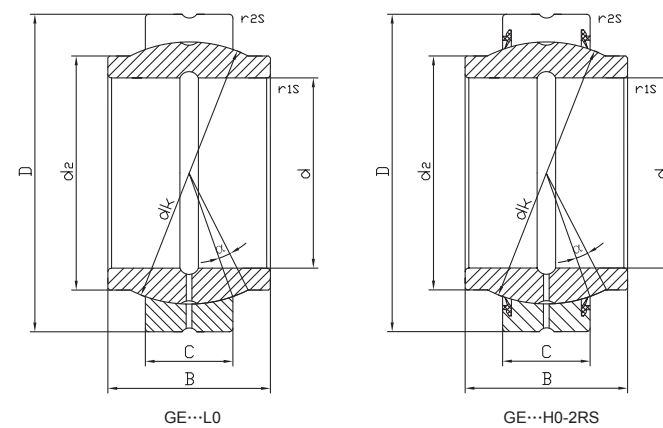


d	Dimensions (mm)				Basic Load Rating (K N)					Mass (kg)	
	D	B	C	dk	r1s (min)	r2s (min)	Cr	Cor	Bearing Code		
6	14	6	4	10	0.3		13	3.4	17	GE6E	0.004
8	16	8	5	13	0.3	0.3	15	5.5	27.5	GE8E	0.007
10	19	9	6	16	0.3	0.3	12	8.15	40.5	GE10E	0.011
12	22	10	7	18	0.3	0.3	11	10.8	54	GE12E	0.016
15	26	12	9	22	0.3	0.3	8	17	85	GE15E	0.025
17	30	14	10	25	0.3	0.3	10	21.2	106	GE17E	0.041
20	35	16	12	29	0.6	0.3	9	30	146	GE20E GE20E-2RS	0.061
25	42	20	16	35.5	0.6	0.6	7	48	240	GE25E GE25E-2RS	0.11
30	47	22	18	40.7	0.6	0.6	6	62	310	GE30E GE30E-2RS	0.14
35	55	25	20	47	0.6	1	6	80	400	GE35E GE35E-2RS	0.22
40	62	28	22	53	0.6	1	7	100	500	GE40E GE40E-2RS	0.3
45	68	32	25	60	0.6	1	7	127	640	GE45E GE45E-2RS	0.4
50	75	35	28	66	0.6	1	6	156	780	GE50E GE50E-2RS	0.54
60	90	44	36	80	1	1	6	245	1220	GE60E GE60E-2RS	1
70	105	49	40	92	1	1	6	315	1560	GE70E GE70E-2RS	1.5
80	120	55	45	105	1	1	6	400	2000	GE80E GE80E-2RS	2.2
90	130	60	50	115	1	1	5	490	2450	GE90E GE90E-2RS	2.7
100	150	70	55	130	1	1	7	610	3050	GE100E GE100E-2RS	4.3
110	160	70	55	140	1	1	6	655	3250	GE110E GE110E-2RS	4.7
120	180	85	70	160	1	1	6	950	4750	GE120E GE120E-2RS	8
140	210	90	70	180	1	1	7	1080	5400	GE140E GE140E-2RS	11

d	Dimensions (mm)				Basic Load Rating (K N)					Mass (kg)	
	D	B	C	dk	r1s (min)	r2s (min)	Cr	Cor	Bearing Code		
6	16	9	5	13	0.3	0.3	13	5.5	27.5	GEG6E	0.008
8	19	11	6	16	0.3	0.3	16	8.15	40.5	GEG8E	0.014
10	22	12	7	18	0.3	0.3	18	10.8	54	GEG10E	0.02
12	26	15	9	22	0.3	0.3	22	17	85	GEG12E	0.034
15	30	16	10	25	0.3	0.3	25	21.2	106	GEG15E	0.046
17	35	20	12	29	0.3	0.3	29	30	146	GEG17E	0.078
20	42	25	16	35.5	0.6	0.6	35.5	48	240	GEG20ES GEG20ES-2RS	0.15
25	47	28	18	40.7	0.6	0.6	40.7	12	310	GEG25ES GEG25ES-2RS	0.19
30	55	32	20	47	0.6	1	47	80	400	GEG30ES GEG30ES-2RS	0.29
35	62	35	23	53	0.6	1	53	100	500	GEG35ES GEG35ES-2RS	0.39
40	68	40	25	60	0.6	1	60	127	640	GEG40ES GEG40ES-2RS	0.52
45	75	43	28	66	0.6	1	66	156	780	GEG45ES GEG45ES-2RS	0.68
50	90	56	36	80	0.6	1	80	245	1220	GEG50ES GEG50ES-2RS	1.4
60	105	63	40	92	1	1	92	315	1560	GEG60ES GEG60ES-2RS	2
70	120	70	45	105	1	1	105	400	2000	GEG70ES GEG70ES-2RS	2.9
80	130	75	50	115	1	1	115	490	2450	GEG80ES GEG80ES-2RS	3.5
90	150	85	55	130	1	1	130	610	3050	GEG90ES GEG90ES-2RS	5.4
100	160	85	55	140	1	1	140	655	3250	GEG100ES GEG100ES-2RS	5.9

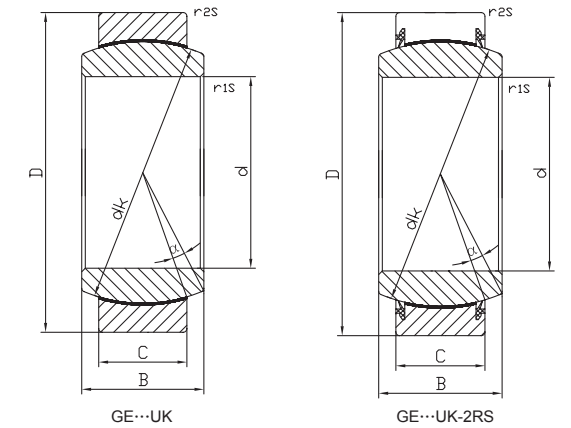
Spherical plain radial bearings with side inner ring and fitting groove

- Outer ring with single split in axial direction
- Inner ring with cylindrical extension at either side
- Outer ring of type -2RS with two seals
- Lubrication grooves and holes in the outer and inner rings, both outer and inner rings are properly phosphorilate-treated



Maintenance-free spherical plain radial bearings

- Outer ring pressed around inner ring to line SF1 material on the surface of spherical plain (GE...UK)
- Outer ring of type GE...UK-2RS with single split in axial direction
- Outer ring with two seals, to line PTFE fabric on the surface
- Spherical surface of inner ring with chromium plating

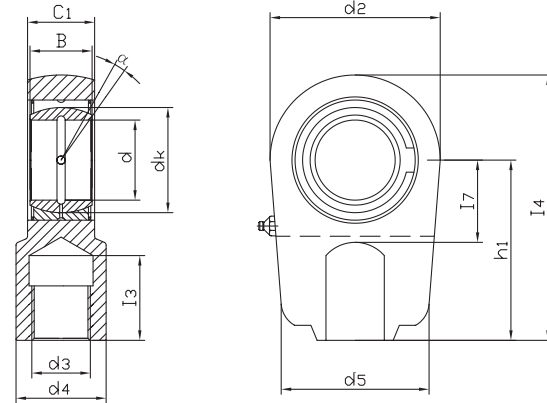


Dimensions (mm)								Basic Load Rating (K N)		Mass weight (kg)	
d	d2min	D	B	C	dk	r1s (min)	r2s (min)	Cr	Cor		
20	25	35	20	12	29	0.3	0.3	30	146	GE20LO	0.07
25	30	42	25	16	35.5	0.6	0.6	48	240	GE25LO	0.12
32	38	52	32	18	44	0.6	1	67	335	GE32LO	0.2
40	46	62	40	22	53	0.6	1	100	500	GE40LO	0.34
50	57	75	50	28	66	0.6	1	156	780	GE50LO	0.56
63	71.5	95	63	36	83	0.1	1	255	1270	GE63LO	1.2
70	79	105	70	40	92	1	1	315	1560	GE70LO	1.7
80	91	120	80	45	105	1	1	400	2000	GE80LO	2.4
20	24	35	24	12	29	0.2	0.3	30	146	GE20HO-2RS	0.057
25	29	42	29	16	35.5	0.2	0.6	48	240	GE25HO-2RS	0.1
30	34.2	47	30	18	40.7	0.2	0.6	62	310	GE30HO-2RS	0.14
35	40	55	35	20	47	0.3	1	80	400	GE35HO-2RS	0.24
40	45	62	38	22	53	0.3	1	100	500	GE40HO-2RS	0.29
45	51.5	68	40	25	60	0.3	1	127	640	GE45HO-2RS	0.43
50	56.5	75	43	28	66	0.3	1	156	780	GE50HO-2RS	0.54
60	67.7	90	54	36	80	0.3	1	245	1220	GE60HO-2RS	1.1
70	78	105	65	40	92	0.3	1	315	1560	GE70HO-2RS	1.6
80	90	120	74	45	105	0.3	1	400	2000	GE80HO-2RS	2.4

Dimensions (mm)								Basic Load Rating (K N)		Mass weight (kg)	
d	D	B	C	d1(min)	r1s (min)	r2s (min)	Cr	Cor			
4	12	5	3	6	0.3	0.3	16	2.1	5.4	GE4UK	0.003
5	14	6	4	8	0.3	0.3	13	3.6	9.1	GE5UK	0.005
6	14	6	4	8	0.3	0.3	13	3.6	9.1	GE6UK	0.004
8	16	8	5	10	0.3	0.3	15	5.8	14	GE8UK	0.008
10	19	9	6	13	0.3	0.3	12	8.6	21	GE10UK	0.011
12	22	10	7	15	0.3	0.3	10	11	28	GE12UK	0.015
15	26	12	9	18	0.3	0.3	8	18	45	GE15UK	0.027
17	30	14	10	20	0.3	0.3	10	30	60	GE17UK-2RS	0.041
20	35	16	12	24	0.3	0.3	9	42	83	GE20UK-2RS	0.066
25	42	20	16	29	0.6	0.6	7	68	137	GE25UK-2RS	0.119
30	47	22	18	34	0.6	0.6	6	88	176	GE30UK-2RS	0.153
35	55	25	20	39	0.6	1	6	112	224	GE35UK-2RS	0.233
40	62	28	22	45	0.6	1	7	140	280	GE40UK-2RS	0.306
45	68	32	25	50	0.6	1	7	180	360	GE45UK-2RS	0.427
50	75	35	28	55	0.6	1	6	220	440	GE50UK-2RS	0.546
60	90	44	36	66	1	1	6	345	695	GE60UK-2RS	1.04
70	105	49	40	77	1	1	6	440	880	GE70UK-2RS	1.55
80	120	55	45	88	1	1	6	567	1140	GE80UK-2RS	2.31
90	130	60	50	98	1	1	5	690	1370	GE90UK-2RS	2.75
100	150	70	55	109	1	1	7	858	1730	GE100UK-2RS	4.45
110	160	70	55	120	1	1	6	924	1860	GE110UK-2RS	4.82
120	180	85	70	130	1	1	6	1340	2700	GE120UK-2RS	8.05

Rod ends with locking slot and female thread

- Bearing with a stretching rod,with female thread clamping arrangement,the thread is right or left hand
- The type GIHR...DO is made up of a spherical plain radial bearing of type GE...ES and rod body
- The housing with a lubrication hole or a grease nipple

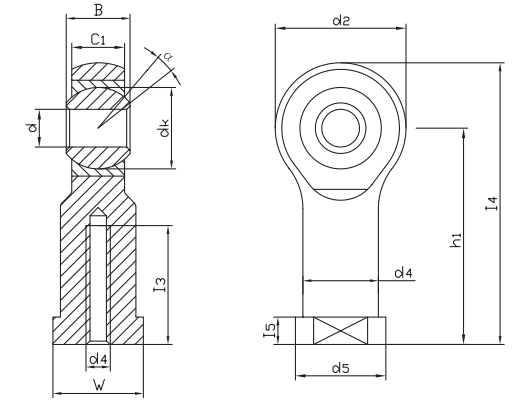


GIHR...DO

d	Dimensions (mm)											Basic Load Rating (K N)		Bearing Code	Mass (kg)		
	d3	d4	l3(min)	B	C1	d2	l7(min)	h1	l4	d5	d1	dk	Cr			Cor	weight
20	M16X1.5	25	17	16	19	56	25	50	78	41	24.1	29	9	30	72	GIHR20DO	0.43
25	M16X1.5	25	17	20	23	56	25	50	78	41	29.3	35.5	7	48	72	GIHR25DO	0.48
30	M22X1.5	32	23	22	28	64	30	60	92	46	34.2	40.7	6	62	106	GIHR30DO	0.74
35	M28X1.5	40	29	25	30	78	38	70	109	58	39.7	47	6	80	153	GIHR35DO	1.2
40	M35X1.5	49	36	28	35	94	45	85	132	66	45	53	7	100	250	GIHR40DO	2
50	M45X1.5	61	46	35	40	116	55	105	163	88	55.9	60	6	156	365	GIHR50DO	3.8
60	M58X1.5	75	59	44	50	130	65	130	200	90	66.8	66	6	245	400	GIHR60DO	5.4
70	M65X1.5	86	66	49	55	154	75	150	232	100	77.8	80	6	315	540	GIHR70DO	8.5
80	M80X2	102	81	55	60	176	80	170	165	125	80.4	92	6	400	670	GIHR80DO	12
90	M100X2	124	101	60	65	206	90	210	323	146	98	105	5	490	980	GIHR90DO	21.5
100	M110X2	138	111	70	70	230	105	235	360	166	109.5	115	7	610	1120	GIHR100DO	27.5
110	M120X3	152	125	70	80	265	115	265	407.54	190	121.2	130	6	655	1700	GIHR110DO	40.5
120	M130X3	172	135	85	90	340	140	310	490	217	135.5	160	6	950	2900	GIHR120DO	76

Maintenance-free rod ends with female thread

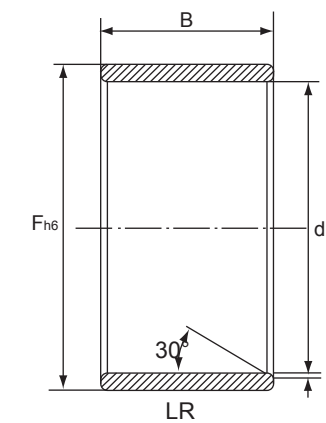
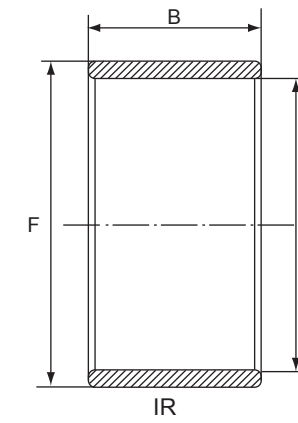
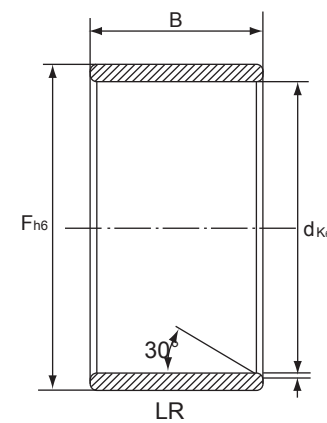
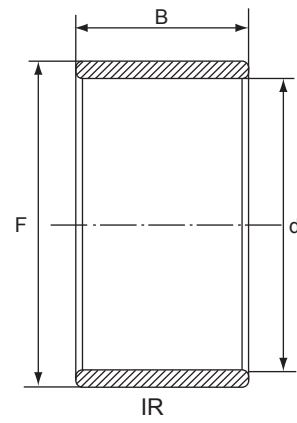
- Bearings with a stretching rod,stretching rod with right or left-hand female thread It is made up of a maintenance-free spherical-plain radial bearing and rod body
- To plate zinc on the surface of rod body,spherical surface of inner ring with chromium plating



SI...T/K

d	Dimensions (mm)											Basic Load Rating (K N)		Bearing Code	Mass (kg)		
	d3	W	B	C1(max)	h1	d2(max)	l4(max)	l5(max)	d4(max)	d5(max)	l3(min)	dk	Cr			Cor	weight
5	M5	9	8	6	27	18	36	4	8.5	12	8	11.11	13	3.25	5.7		0.016
6	M6	11	9	6.75	30	20	40	5	10	13	9	12.7	13	4.3	7.2	SI6T/K	0.022
8	M8	14	12	9	36	24	48	5	12.5	16	12	15.875	14	7.2	11.6	SI8T/K	0.047
10	M10	17	14	10.5	43	28	57	6.5	15	19	15	19.05	13	10	14.5	SI10T/K	0.077
12	M12	19	16	12	50	32	66	6.5	17.5	22	18	22.225	13	13.4	17	SI12T/K	0.1
14	M14	22	19	13.5	57	36	75	8	20	26	21	25.4	16	17	24	SI14T/K	0.16
16	M16	24	21	15	64	40	84	8	22	28	24	28.575	15	21.6	28.5	SI16T/K	0.22
18	M18X1.5	27	23	16.5	71	44	93	10	25	31	27	31.7	15	26	42.5	SI18T/K	0.32
20	M20X1.5	30	25	18	77	48	101	10	27.5	35	30	34.925	14	31.5	42.5	SI20T/K	0.42
22	M22X1.5	32	28	20	84	54	111	12	30	38	32	38.1	15	38	57	SI22T/K	0.54
25	M24X2	36	31	22	94	60	124	12	33.5	42	36	42.85	15	47.5	68	SI25T/K	0.72
28	M27X2	41	35	24	103	66	136	14	37	46	41	47.6	15	55	75.5	SI28T/K	0.82
30	M30X2	46	37	25	110	70	145	15	40	50	45	50.8	17	64	88	SI30T/K	1.1

For left-hand thread,suffic L is added to bearings number and thread sign,e.g.SI18T/K M8L-6H



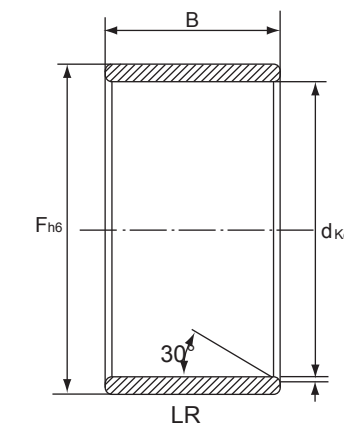
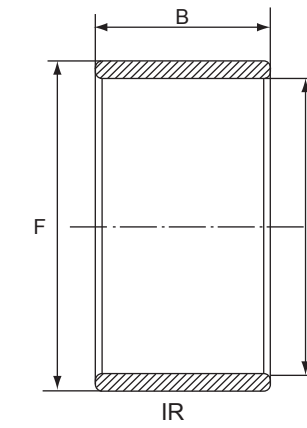
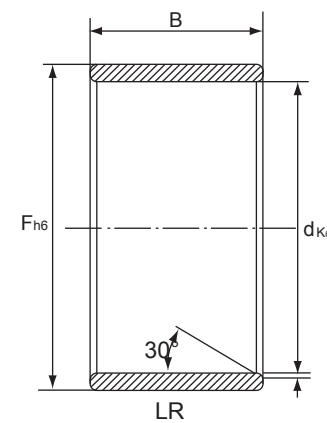
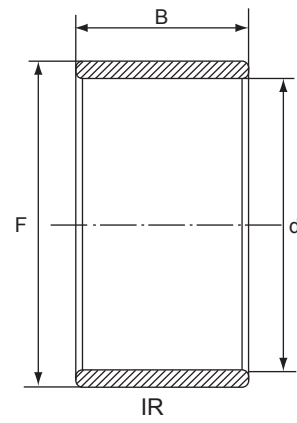
Inner Ring

Shaft Diameter	Bearing Designation	Boundary Dimensions			Mass Approx
		d	F	B	
mm		mm			g
5	IR5x8x12	5	8	12	2.79
	IR5x8x16	5	8	16	3.75
6	IR6x9x12	6	9	16	4.3
	IR6x9x16	6	9	16	4.3
	□ IR6x10x10	6	10	10	3.7
	■ IR6x10x12	6	10	12	4.6
7	IR/LR7x10x10.5	7	10	10.5	3.09
	IR7x10x12	7	10	12	3.61
	IR7x10x16	7	10	16	4.9
7.8	IR06x12x10.5C	7.8	12.2	10.7	
8	□ IR8x12x10	8	12	10	4.8
	IR/LR8x12x10.5	8	12	10.5	5
	■ IR8x12x12	8	12	12	5.7
	IR/LR8x12x12.5	8	12	12.5	5.9
9	IR9x12x12	9	12	12	4.5
	IR9x12x16	9	12	16	6.1
10	IR/LR10x13x12.5	10	13	12.5	5.2
	□ IR10x14x12	10	14	12	7.3
	IR10x14x13	10	14	13	7.4
	■ IR10x14x14	10	14	14	8
	IR10x14x16	10	14	16	9.2
	IR10x14x20	10	14	20	11.6
	12	IR12x15x12	12	15	12
IR/LR12x15x12.5		12	15	12.5	6.1
IR12x15x16		12	15	16	8
IR/LR12x15x16.5		12	15	16.5	8.1
IR/LR12x15x22.5		12	15	22.5	10.9
□ IR12x16x12		12	16	12	7.9
IR12x16x13		12	16	13	8.7
■ IR12x16x14		12	16	14	9.5
IR12x16x16		12	16	16	10.9
IR12x16x20		12	16	20	13.5
IR12x16x22	12	16	22	14.9	
IR12x16x12	12	16	12		

Shaft Diameter	Bearing Designation	Boundary Dimensions			Mass Approx
		d	F	B	
mm		mm			g
12	IR12x16x22.5	12	16	22.5	
	IR12x14x15.5	12	17	15.5	
	IR12x17x22.5	12	17	22.5	
14	R14x17x17	14	17	17	10
15	LR15x18x12.5	15	18	12.5	7.2
	IR15x18x16	15	18	16	9.6
15	IR15x18x16.5	15	18	16.5	9.9
	IR15x19x16	15	19	16	12.8
	IR15x19x20	15	19	20	16.4
	□ IR15x20x12	15	20	12	12.1
15	IR15x20x13	15	20	13	13.5
	■ IR15x20x14	15	20	14	14.7
	IR15x20x23	15	20	23	24.4
	IR17x20x16	17	20	16	10.7
17	IR/LR17x20x16.5	17	20	16.5	11.1
	IR17x20x20	17	20	20	13.5
	IR/LR17x20x20.5	17	20	20.5	13.8
	IR/LR17x20x30.5	17	20	30.5	20.6
	IR17x21x16	17	21	16	14.3
	IR17x21x20	17	21	20	18
	IR17x22x13	17	22	13	14.9
	■ IR17x22x14	17	22	14	16.4
IR17x22x16	17	22	16	18.7	
17	IR17x22x23	17	22	23	27.1
	IR17x24x20	17	24	20	33.6
20	IR20x24x16	20	24	16	16.5
	IR20x24x20	20	24	20	21.3
	LR20x25x12.5	20	25	12.5	16.3
	□ IR20x25x16	20	25	16	21.1
	LR20x25x16.5	20	25	16.5	21.7
	IR20x25x17	20	25	17	22.4
	■ IR20x25x18	20	25	18	24.3
	IR20x25x20	20	25	20	27.5
	IR/LR20x25x20.5	20	25	20.5	28.2
	IR20x24x16	20	24	16	16.5

Shaft Diameter	Bearing Designation	Boundary Dimensions			Mass Approx
		d	F	B	
mm		mm			g
20	IR/LR20x25x26.5	20	25	26.5	36.1
	IR20x25x30	20	25	30	40.9
	IR/LR20x25x38.5	20	25	38.5	52.5
22	IR20x28x20	20	28	20	45.2
	IR22x26x16	22	26	16	17.5
	IR22x26x20	22	26	20	23.2
	IR22x28x17	22	28	17	29.8
	IR22x28x20	22	28	20	35
	IR/LR22x28x20.5	22	28	20.5	36
	IR22x28x30	22	28	30	26.7
25	IR25x29x20	25	29	20	25.5
	IR25x29x30	25	29	30	39.3
	LR25x30x12.5	25	30	12.5	20
	□ IR25x30x16	25	30	16	26
	LR25x30x16.5	25	30	16.5	26.7
	IR25x30x17	25	30	17	27.5
	■ IR25x30x18	25	30	18	29.8
	IR25x30x20	25	30	20	32.6
	IR/LR25x30x20.5	25	30	20.5	33.5
	IR/LR25x30x26.5	25	30	26.5	43.3
25	IR25x30x30	25	30	30	50.1
	IR25x30x32	25	30	32	53
	IR/LR25x30x38.5	25	30	38.5	63.8
	IR25x32x22	25	32	22	51.7
	IR28x32x17	28	32	17	24.5
	IR28x32x20	28	32	20	28.4
	IR28x32x30	28	32	30	43.8
28.575	IRB1820	28.575	34.925	32	
29	IR29x32x13	29	32	13	14.8
30	LR30x35x12.5	30	35	12.5	23.3
	IR30x35x13	30	35	13	25
	IR30x35x16	30	35	16	30.8
	LR30x35x16.5	30	35	16.5	31.4
	IR30x35x17	30	35	17	32.3

Shaft Diameter	Bearing Designation	Boundary Dimensions			Mass Approx
		d	F	B	
mm		mm			g
30	■ IR30x35x18	30	35	18	35.3
	IR30x35x20	30	35	20	40
	IR/LR30x35x20.5	30	35	20.5	40.7
	IR30x35x26	30	35	26	50.3
	IR30x35x30	30	35	30	58.9
30	IR30x37x18	30	37	18	50
	IR30x37x22	30	37	22	60.8
	□ IR30x38x20	30	38	20	64.8
	IR30x37x20	32	37	20	42
32	IR32x37x30	32	37	30	62.7
	IR32x40x20	32	40	20	68
32	IR32x40x36	32	40	36	124
	IR33x37x13	33	37	13	21.9
34	IR34x42x20	34	42	20	
35	LR35x40x12.5	35	40	12.5	27.2
	LR35x40x16.5	35	40	16.5	37.4
	IR35x40x17	35	40	17	38.3
	IR35x40x20	35	40	20	44.4
	IR/LR35x40x20.5	35	40	20.5	46.1
	IR35x40x30	35	40	30	67.9
	□ IR35x42x20	35	42	20	63.9
	IR35x42x20.5	35	42	20.5	66
35	■ IR35x42x21	35	42	21	67.7
	■ IR35x42x23	35	42	23	74
	IR35x42x36	35	42	36	117
	IR35x43x22	35	43	22	82
38	IR38x43x20	38	43	20	48.1
	IR38x43x30	38	43	30	73.6
40	LR40x45x16.5	40	45	16.5	41.4
	IR40x45x17	40	45	17	42.5
	IR40x45x20	40	45	20	50.5
40	IR/LR40x45x20.5	40	45	20.5	52.5
	IR40x45x30	40	45	30	77.1
	IR40x48x22	40	48	22	92.3



Inner Ring

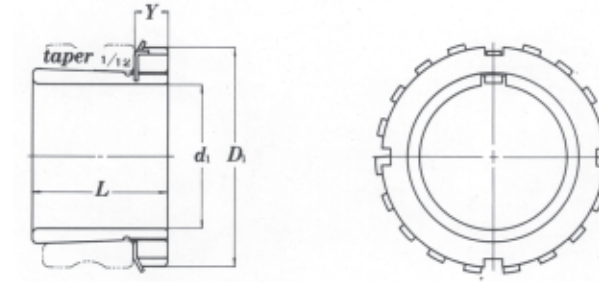
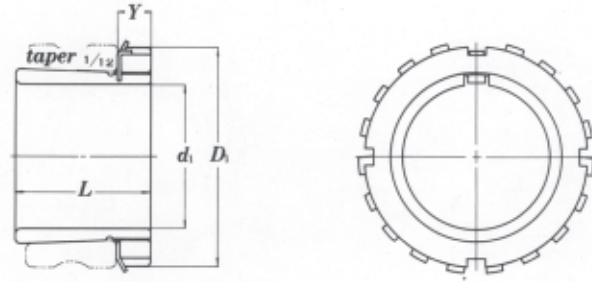
Shaft Diameter mm	Bearing Designation	Boundary Dimensions mm			Mass Approx g
		d	F	B	
40	■ IR40x48x23	40	48	23	97.3
	IR40x48x40	40	48	40	170
	□ IR40x50x20	40	50	20	106
	IR40x50x22	40	50	22	118
	IR40x45x22.5	40	45	22.5	
42	IR42x47x20	42	47	20	53.5
	IR42x47x30	42	47	30	81
45	LR45x50x20.5	45	50	20.5	58.8
	IR45x50x25	45	50	25	71.1
	IR/LR45x50x25.5	45	50	25.5	73.7
	IR45x50x35	45	50	35	101
	IR45x52x22	45	52	22	89
	■ IR45x52x23	45	52	23	93
	IR45x52x40	45	52	40	164
	□ IR45x55x20	45	55	20	117
	IR45x55x22	45	55	22	130
	IR45x50x20	45	50	20	
IR45x50x26	45	50	26		
IR45x50x40	45	50	40		
45.2	IR45.2x58x36	45.2	58	36	
47	IR47x60x35	47	60	35	
50	□ IR50x55x20	50	55	20	62.6
	LR50x55x20.5	50	55	20.5	64.1
	IR50x55x25	50	55	25	77.8
	IR50x55x35	50	55	35	112
	IR50x58x22	50	58	22	1153
	■ IR50x58x23	50	58	23	119
	IR50x58x40	50	58	40	209
	□ IR50x60x20	50	60	20	129
	IR50x60x25	50	60	25	163
	IR50x60x28	50	60	28	183
55	IR55x60x25	55	60	25	86
	IR55x60x35	55	60	35	121
	IR55x63x25	55	63	25	141

Shaft Diameter mm	Bearing Designation	Boundary Dimensions mm			Mass Approx g
		d	F	B	
55	IR55x63x45	55	63	45	256
	IR55x65x28	55	65	28	198
60	IR60x68x25	60	68	25	152
	IR60x68x35	60	68	35	213
	IR60x68x45	60	68	45	275
	IR60x70x25	60	70	25	195
	IR60x70x28	60	70	28	216
65	IR60x65x41	60	65	41	
	IR65x72x25	65	72	25	142
	IR65x72x45	65	72	45	259
70	IR65x73x25	65	73	25	164
	IR65x73x35	65	73	35	232
	IR65x75x28	65	75	28	230
	IR70x80x25	70	80	25	224
	IR70x80x30	70	80	30	267
75	IR70x80x35	70	80	35	313
	IR70x80x54	70	80	54	487
	IR70x80x56	70	80	56	506
	IR75x85x25	75	85	25	238
	IR75x85x30	75	85	30	2873
80	IR75x85x35	75	85	35	336
	IR75x85x54	75	85	54	520
	IR80x90x25	80	90	25	254
85	IR80x90x30	80	90	30	304
	IR80x90x35	80	90	35	355
	IR80x90x54	80	90	54	550
	IR85x95x26	85	95	26	280
88	IR85x95x36	85	95	36	390
	IR85x100x35	85	100	35	580
	IR85x100x63	85	100	63	1050
90	IR88x100x30	88	100	30	
	IR90x100x26	90	100	26	294
	IR90x100x30	90	100	30	340
	IR90x100x36	90	100	36	406

Shaft Diameter mm	Bearing Designation	Boundary Dimensions mm			Mass Approx g
		d	F	B	
90	IR90x105x35	90	105	35	610
	IR90x105x63	90	105	63	1110
95	IR95x105x26	95	105	26	313
	IR95x105x36	95	105	36	430
	IR95x110x35	95	110	35	643
100	IR95x110x63	95	110	63	1170
	IR100x110x30	100	110	30	370
	IR100x110x40	100	110	40	505
110	IR100x115x40	100	115	40	775
	IR110x120x30	110	120	30	409
120	IR110x125x40	110	125	40	840
	IR120x130x30	120	130	30	442
130	IR12x135x45	120	135	45	1000
	IR130x145x35	130	145	35	855
140	IR130x150x50	130	150	50	1690
	IR140x155x35	140	155	35	917
150	IR140x160x50	140	160	50	1800
	IR150x165x40	150	165	40	1120
160	IR160x175x40	160	175	40	1200

□ with lubrication hole
■ without lubrication hole and guiding edge

Inner Ring		Boundary Dimensions mm		
Current	Original Code	d	F	B
IR20x27x28		20	27	28
IR22x27x30		22	27	30
IR35x40x20	71351-B1	35	40	20
IR37x45x28	1701316-B1	37	45	28
IR40x50x31		40	50	31
IR50x60x43	DC6J70 T-138	50	60	43
IR70x78x40	DC6J70 T-119	70	78	40
IR71x78x40	DC6J70 T-118	71	78	40



H2300 HS2300 HE2300

Adapter No.	Bore Dia. of Sleeve d ₁		Dimensions (in.) (mm)			Sleeve No.	Locknut No.	Washer No.	Weight (kgf)
	(in.)	(mm)	L	Y	D ₁				
HE 2305X H 2305X	3/4	20	1 3/8 35	5/16 8	1 1/2 38	AE 2305X A 2305X	AN 05	AW 05X	0.085 0.095
H 2306X HE 2306X	1	25	1 1/2 38	5/16 8	1 3/4 45	A 2306X AE 2306X	AN 06	AW 06X	0.13 0.12
HS 2307X H 2307X	1 1/8	30	1 11/16 43	3/8 9	2 1/16 52	AS 2307X A 2307X	AN 07	AW 07X	0.19 0.17
HE 2308X HS 2308X H 2308X	1 1/4 1 3/8	35	1 13/16 46	13/32 10	2 9/32 58	AE 2308X AS 2308X A 2308X	AN 08	AW 08X	0.28 0.22 0.22
HE 2309X H 2309X HS 2309X	1 1/2 1 5/8	40	1 13/32 50	7/16 11	2 9/16 65	AE 2309X A 2309X AS 2309X	AN 09	AW 09X	0.32 0.28 0.25
HE 2310X H 2310X	1 3/4	45	2 5/32 55	15/32 12	2 3/4 70	AE 2310X A 2310X	AN 10	AW 10X	0.37 0.36
HE 2311X H 2311X HS 2311X	1 7/8 2	50	2 5/16 59	15/32 12	2 15/32 75	AS 2311X A 2311X AE 2311X	AN 11	AW 11X	0.50 0.42 0.40
HE 2312X H 2312X	2 1/8	55	2 7/16 62	1/3 13	3 5/32 80	AS 2312X A 2312X	AN 12	AW 12X	0.52 0.48
HE 2313X H 2313X HS 2313X	2 1/4 2 3/8	60	2 9/16 65	17/32 14	3 11/32 85	AE 2313X A 2313X AS 2313X	AN 13	AW 13X	0.69 0.56 0.55
HE 2315X H 2315X	2 1/2	65	2 7/8 73	9/16 15	3 27/32 98	AE 2315X A 2315X	AN 15	AW 15X	1.15 1.05
HE 2316X H 2316X	2 3/4	70	3 1/16 78	21/32 17	4 1/8 105	AE 2316X A 2316X	AN 16	AW 16X	1.3 1.3
H 2317X HE 2317X	3	75	3 7/32 82	11/16 18	1 1/32 110	A 2317X AE 2317X	AN 17	AW 17X	1.45 1.35
H 2318X		80	3 3/8 86	11/16 18	4 23/32 120	A 2318X	AN 18	AW 18X	1.7
HE 2319X H 2319X	3 1/4	85	3 17/32 90	3/4 19	4 29/32 125	AE 2319X A 2319X	AN 19	AW 19X	2.15 1.95
HE 2320X H 2320X	3 1/2	90	3 13/16 97	25/32 20	5 1/8 130	AE 2320X A 2320X	AN 20	AW 20X	2.3 2.2
H 2322X HE 2322X	4	100	4 1/8 105	13/16 21	5 23/32 145	A 2322X AE 2322X	AN 22	AW 22X	2.75 2.55
H 2324X		110	4 13/32 112	7/8 22	6 3/32 155	A 2324X	AN 24	AW 24X	3.2
HE 2326X H 2326X	4 1/2	115	4 3/4 121	29/32 23	6 1/2 165	AE 2326X A 2326X	AN 26	AW 26X	4.7 4.6
H 2328X		125	5 5/32 131	15/16 24	7 3/32 180	A 2328X	AN 28	AW 28X	5.5

Adapter No.	Bore Dia. of Sleeve d ₁		Dimensions (in.) (mm)			Sleeve No.	Locknut No.	Washer No.	Weight (kgf)
	(in.)	(mm)	L	Y	D ₁				
HE 305X H 305X	3/4	20	1 5/32 29	5/16 8	1 1/2 38	AE 305X A 305X	AN 05	AW 05X	0.08 0.075
H 306X HE 306X	1	25	1 7/32 31	5/16 8	1 3/4 45	A 306X AE 306X	AN 06	AW 06X	0.11 0.105
HS 307X H 307X	1 1/8	30	1 3/8 35	3/8 9	2 1/16 52	AS 307X A 307X	AN 07	AW 07X	0.15 0.14
HE 308X HS 308X H 308X	1 1/4 1 3/8	35	1 13/32 36	13/32 10	2 9/32 58	AE 308X AS 308X A 308X	AN 08	AW 08X	0.23 0.19 0.19
HE 309X H 309X HS 309X	1 1/2 1 5/8	40	1 17/32 39	7/16 11	2 9/16 65	AE 309X A 309X AS 309X	AN 09	AW 09X	0.28 0.25 0.23
HE 310X H 310X	1 3/4	45	1 21/32 42	15/32 12	2 3/4 70	AE 310X A 310X	AN 10	AW 10X	0.31 0.30
HE 311X H 311X HS 311X	1 7/8 2	50	1 25/32 45	15/32 12	2 15/16 75	AS 311X A 311X AE 311X	AN 11	AW 11X	0.41 0.35 0.33
HE 312X H 312X	2 1/8	55	1 27/32 47	1/3 13	3 5/32 80	AS 312X A 312X	AN 12	AW 12X	0.40 0.43
HE 313X H 313X HS 313X	2 1/4 2 3/8	60	1 31/32 50	17/32 14	3 11/32 85	AE 313X A 313X AS 313X	AN 13	AW 13X	0.56 0.46 0.45
HE 315X H 315X	2 1/2	65	2 5/32 55	9/16 15	3 27/32 98	AE 315X A 315X	AN 15	AW 15X	0.89 0.83
HE 316X H 316X	2 3/4	70	2 5/16 59	21/32 17	4 1/8 105	AE 316X A 316X	AN 16	AW 16X	1.05 1.05
H 317X HE 317X	3	75	2 15/32 63	11/16 18	4 11/32 110	A 317X AE 317X	AN 17	AW 17X	1.2 1.1
H 318X		80	2 9/16 95	11/16 18	4 23/32 120	A 318X	AN 18	AW 18X	1.4



SUPERIOR BEARING Limited Warranty

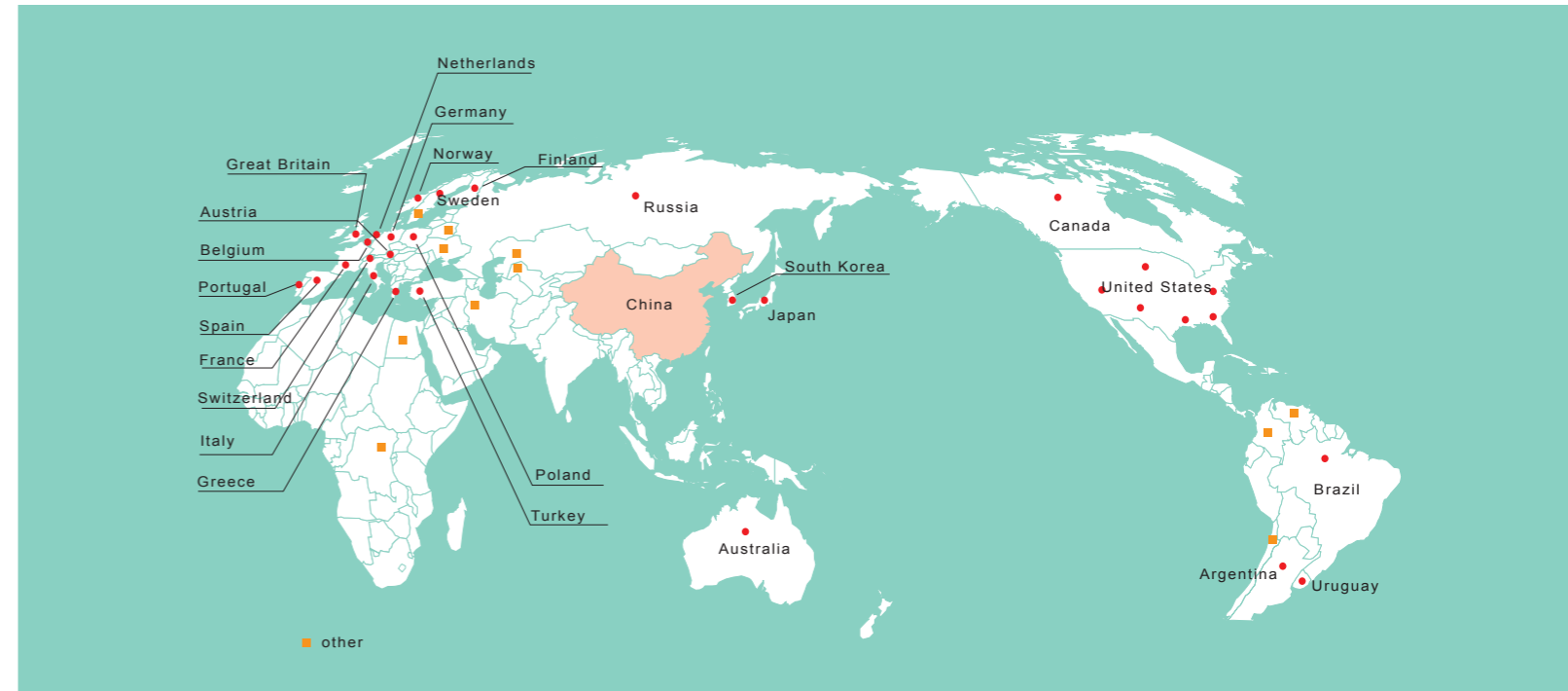
SBS bearings are warranted to be free of defects in materials and workmanship. The obligation of SBS under this warranty is limited to replacing any bearing which is proven to be defective within one year from the date of purchase, under the following provisions:

1. The Application of the product was approved by SBS
2. The defective product is returned to SBS for technical analysis
3. Analysis of the product by SBS verifies that the product was properly handled, mounted/installed, loaded, used and lubricated, and not subjected to abuse.

This warranty is in lieu of all warranties of merchant ability, fitness for purpose, or all other warranties, expressed or implied.

SBS will not be liable for any special, indirect or consequential damages. The remedies set forth herein are exclusive, and the liability of SBS with respect to any contract or sale or anything done in connection there with, in contract, in tort under any warranty, or otherwise, shall not exceed the price of the bearing on which such liability is based.

SBS bearings are available in the following markets:



Tai lake



Li-garden