































	Referenztable Reference Table	06		Kunststofflager (POM) Plastic Bearings	122
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KEY TO APPLICATION ICONS

	Ölschmierung Oil lubrication		Lösungsmittelresistent Chemical solvent resistant		Geeignet für hohe Temperaturen Suitable for high temperatures
	Fettschmierung Grease lubrication		Wetterbeständig Outdoor durability		Gummidichtscheiben verfügbar Rubber seal option available
	Keine Schmierung No lubricant		Geeignet für niedrige Temperaturen Suitable for low temperatures		Geeignet für hohe Drehzahlen Suitable for high speed applications
	Geeignet für hohe Tragzahlen Suitable for heavy load rating		Geeignet für geräuscharme Anwendungen Suitable for low noise applications		Metalldickscheiben verfügbar Metal shield option available
	Einseitig gerichtete Umdrehung One way rotation				

Material

S = Rostfreier Stahl / Stainless Steel
Kein Präfix / No Prefix = Chromstahl / Chrome Steel

Referenz / Bearing type

MF = Metrisch mit Flansch / Metric with Flange
MR = Metrisch / Metric
R = Zöllig / Inch
FR = Zöllig mit Flansch / Inch with Flange
F = Metrisch mit Flansch / Metric with Flange
Kein Präfix / No Prefix = Metrisch / Metric

Typenbezeichnung / Bearing Part Number

Dichtscheiben / Shields

2Z = Metaldichtscheiben / Metal Shields
2RS = Gummidichtscheiben / Rubber Seals
2TS = PTFE Dichtscheiben / PTFE Seals
2TZ = Metall / PTFE Dichtungsscheiben / Metal / PTFE Shields

Kein Suffix / No Suffix = Offen / Open

S	FR	144	-2Z	.. Abm./Dimen. ..
	FR	85		"
		635	-2RS	"
S		682X		"

Allgemeine Merkmale / General Details

Material	Komponenten Components		Merkmale Details	Anwendungsbereiche Application
	Ringe Rings	Kugeln Balls		
Kugellagerchromstahl Ball Bearing Chrome Steel 100 Cr6 (Nr. 1.3505)	✓	✓	Gute Verschleißfestigkeit Hard wearing Schlag- und Korrosionsbeständigkeit Good shock and corrosive resistance	Standard Standard
Rostfreier Stahl Stainless Steel AISI 440 C (Nr. 1.4125) †	✓	✓	Sehr gute Korrosionsbeständigkeit Very good corrosive resistance	Nahrungsmittel, Pharma, Schiffsbau und andere korrosive Umgebungen Food industry, pharmaceutical industry, ship building and other corrosive surroundings
AISI 420 (Nr. 1.4021)	✓	✓	Sehr gute Korrosionsbeständigkeit Very good corrosive resistance	Nahrungsmittel, Pharma, Schiffsbau und andere korrosive Umgebungen Food industry, pharmaceutical industry, ship building and other corrosive surroundings
AISI304	✓	✓	Sehr gute Korrosionsbeständigkeit Very good corrosive resistance	Korrosive Medien Corrosive surroundings
AISI316	✓	✓	Ausgezeichnete Korrosionsbeständigkeit Excellent corrosive resistance	Korrosive Medien Corrosive surroundings
AISI316L	✓	✓	Ausgezeichnete Korrosionsbeständigkeit Excellent corrosive resistance	Korrosive Medien Corrosive surroundings
Si3N4	✓	✓	Hohe thermische Isolation, Exzellente Korrosionsbeständigkeit High temperature insulation Excellent corrosive resistance	Chemische-, Elektro- und Nahrungsmittelindustrie, Marine, Medizintechnik Chemistry, Electronic, Food, Marine & Medical
Zr02	✓	✓	Hohe thermische Isolation, Exzellente Korrosionsbeständigkeit High temperature insulation Excellent corrosive resistance	Chemische-, Elektro- und Nahrungsmittelindustrie, Marine, Medizintechnik Chemistry, Electronic, Food, Marine & Medical
Zr02	✓	✓	Hohe thermische Isolation, Exzellente Korrosionsbeständigkeit High temperature insulation Excellent corrosive resistance	Chemische-, Elektro- und Nahrungsmittelindustrie, Marine, Medizintechnik Chemistry, Electronic, Food, Marine & Medical

†Die statische und dynamische Belastung von AISI 440 C-Lagern liegt bei ca. 75-80% von 100 Cr6-Lagern.
†The static and dynamic load rating of AISI 440 C - ball bearings is approximately 75-80% of the 100 Cr6 - ball bearings.

Technische Eigenschaften der Kunststoffe / Plastic properties

Material	HDPE	PP	POM	PA6	PA66	PBT GF30	PVDF	PPS	PTFE	PEEK	PI
Long time working temp.(°C)	90	100	110	100	100	120	150	230	260	260	300
Density	0.96	0.91	1.42	1.13	1.14	1.53	1.77	1.35	2.18	1.32	1.35
Tensile strength at yield	25	30	70	85	80		50	75	25	95	
Tensile strength at break	35		170			13.5	4.6				116
Ball indentation hardness	50	80		160	170	190	80	190	30		
Impact strength	(None)					60		50			75
Coefficient of sliding friction	0.29	0.3	0.34	0.38-0.45	0.35-0.42	0.24	0.3		0.08-0.01	0.3-0.38	0.3-0.38
Slide wear		11	4.6	0.23	0.9				21		0.3-0.38
Vicat softening temp. (°C)	130	165	175	220	260	225	172	280	327	343	
DSC/Tg (°C) Heat deflection temp.	-95	-18	-60	60	72	60	-18	90	-20	143	
HDT/A (°C) Heat deflection temp.	42-49	65	124	75	100	210	95	110	55	140	368
HDT/B (°C) Max working temp.	70-85	105	170	190	>200	225	140		121	182	
Short time (°C)	90	140	150	160	170	200	150	260	260	300	350
Coef. of linear expansion	13-15	17	10	8	8	3.5	13	5	12	5.0	4.9
Dielectric constant at 1Mhz	2.4	2.25	3.7	3.7-7	3.6-5	3.8	8		2.1	3.2-3.3	3.1
Volume resistivity	>										
Anti-hot water and alkali for washing	+	+	-	(+)	(+)	-	+	+	+	+	(+)
Flammability UL94	HB	HB	HB	HB	HB	HB	V0	V0	V0	V0	V0
Anti-weathering	-	-	-	-	-	-	+	-	-	-	(+)

Für weitergehende technische Informationen wenden Sie sich bitte an Ihren offiziellen ZEN-Händler
For further technical information please contact your local authorized ZEN distributor

Technische Merkmale / Technical Details

Material	Härte Hardness	Max. Temp. Max. Temp.	C	Si	Mn	P	S	Cr	Mo	Ni
100 Cr6 (Nr. 1.3505)	60-64HRC	Max. 150°C	0.5~1.10	0.15~0.35	≤0.5	≤0.025	≤0.025	1.3~1.6	≤0.08	
AISI440 C (Nr. 1.4125)	≥58HRC	Max. 230°C	0.95~1.2	≤1.1	≤1.0	≤0.04	≤0.03	16.0~18.0	≤0.75	
AISI420 (Nr. 1.4021)	≤55HRC	Max. 230°C	0.16~0.25	≤1.0	≤1.5	≤0.04	≤0.03	12.0~14.0		
AISI304	15~20HRC	Max. 900°C	≤0.07	≤1.00	≤2.00	≤0.035	≤0.030	17.0~19.0		8.0~10.0
AISI316	15~20HRC	Max. 900°C	≤0.08	≤1.00	≤2.00	≤0.035	≤0.030	16.0~19.0	1.80-2.50	10.0~14.0
AISI 316L	15~20HRC	Max. 450°C	≤0.03	≤1.00	≤2.00	≤0.035	≤0.030	16.0~18.0	2.00-3.00	12.0~15.0
Si3N4	75~80HRC	Max. 1050°C	Component:		88% Si3N4 / 4% Al2O3 / 4% Y2O3 / 4% Other					
ZrO2	70HRC	Max. 750°C	Component:		95% ZrO2 / 5% Y2O3					
Al2O3	80HRC	Max. 1750°C	Component:		99.5% Al2O3 / 0.5% Others					

Tolerance of inner ring (ISO)

d(mm)		ΔDmp					ΔDs		VDp										VDmp			
		P0		P6	P5	P4	P4		P0		P6		P5		P4		P0	P6	P5	P4		
							Diameter series		Diameter series		Diameter series		Diameter series		Diameter series							
							0,2,3	7,8,9	0	2,3	7,8,9	0	2,3	7,8,9	0,2,3	7,8,9					0,2,3	
Over	incl.	Upper	Lower	Lower	Lower	Upper	Lower	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.			
0.6(1)	2.5	0	-8	-7	-5	-4	0	-4	10	8	6	9	7	5	5	4	4	3	6	5	3	2
2.5	10	0	-8	-7	-5	-4	0	-4	10	8	6	9	7	5	5	4	4	3	6	5	3	2
10	18	0	-8	-7	-5	-4	0	-4	10	8	6	9	7	5	5	4	4	3	6	5	3	2
18	30	0	-10	-8	-6	-5	0	-5	13	10	8	10	8	6	6	5	5	4	8	6	3	2.5
30	50	0	-12	-10	-8	-6	0	-6	15	12	9	13	10	8	8	6	6	5	9	8	4	3
50	80	0	-15	-12	-9	-7	0	-7	19	15	11	15	11	9	9	7	7	5	11	9	5	3.5
80	120	0	-20	-15	-10	-8	0	-8	25	20	15	19	15	11	10	8	8	6	15	11	5	4
120	180	0	-25	-18	-13	-10	0	-10	31	25	19	23	23	14	13	10	10	8	19	14	7	5
180	250	0	-30	-22	-15	-12	0	-12	38	31	23	28	28	17	15	12	12	9	23	17	8	6
250	315	0	-35	-25	-18	-14	0	-14	44	36	28	31	31	19	18	14	x	x	26	19	9	x
315	400	0	-40	-30	-23	-17	0	-17	50	40	30	38	38	23	23	18	x	x	30	23	12	x

Note 1: The upper value of the bore diameter in this table is not applicable when the distance from the bearing ring face is less than 1.2 times the chamfer dimension.
Note 2: According to the revision of ANSI/ABMA Std.20-1996, the classes ABEC1-ABEC3-ABEC5-ABEC7 are equivalent to ISO CLASS6-CLASS5-CLASS4.

Tolerance of outer ring (ISO)

D(mm)		Δdmp						Δds		Vdp												Vdmp			
		P0P6P5P4						P4		P0				P6				P5		P4		P0	P6	P5	P4
								Diameter series	Diameter series	Diameter series	Diameter series	Diameter series	Diameter series	Diameter series	Diameter series										
																Open	Seal Shield	Open	Seal Shield	Open	Open				
		0,2,3	7,8,9	0	2,3	2,3	7,8,9	0	2,3	2,3	7,8,9	0,2,3	7,8,9	0,2,3											
Over	incl.	Upper	Lower	Lower	Lower	Lower	Upper	Lower	Max.				Max.				Max.		Max.		Max.	Max.	Max.	Max.	
2.5(1)	6	0	-8	-7	-5	-4	0	-4	10	8	6	10	9	7	5	5	4	4	3	6	5	3	2		
6	18	0	-8	-7	-5	-4	0	-4	10	8	6	10	9	7	5	5	4	4	3	6	5	3	2		
18	30	0	-9	-8	-6	-5	0	-5	12	9	7	12	10	8	6	10	6	5	5	4	7	6	3	2.5	
30	50	0	-11	-9	-7	-6	0	-6	14	11	8	16	11	9	7	13	7	5	6	5	8	7	4	3	
50	80	0	-13	-11	-9	-7	0	-7	16	13	10	20	14	11	8	16	9	7	7	5	10	8	5	3.5	
80	120	0	-15	-13	-10	-8	0	-8	19	15	11	26	16	12	10	20	10	8	6	11	10	5	4		
120	150	0	-18	-15	-11	-9	0	-9	23	18	14	30	19	14	11	25	11	8	9	7	14	11	6	5	
150	180	0	-20	-18	-13	-10	0	-10	31	24	19	38	23	16	12	30	13	10	10	8	19	14	7	5	
180	250	0	-23	-20	-15	-11	0	-11	38	30	23	X	25	18	13	X	15	11	11	8	23	15	8	6	
250	315	0	-25	-22	-18	-13	0	-13	44	34	26	X	31	21	15	X	18	14	13	10	26	19	9	7	
315	400	0	-28	-24	-20	-15	0	-15	50	38	30	X	35	23	16	X	20	15	15	11	30	21	10	8	
400	500	0	-32	-27	-23	X	0	X	56	42	34	X	41	26	X	23	17	X	X	X	34	25	12	X	
500	630	0	-40	-34	-28	X	0	X	63	48	38	X	48	30	X	28	19	X	X	X	38	29	14	X	
630	800	0	-45	-38	-32	X	0	X	94	68	55	X	56	36	X	35	26	X	X	X	55	34	18	X	

Note(1) : Size 2.5mm is included in this classification.
Note(2) : The outer ring width variations for CLASS0 and CLASS6 are the same as for the inner ring of the same bearing size.

d	: Nominal bore diameter	D	: Nominal outside diameter
Δd_{mp}	: Single plane mean bore diameter deviation	ΔD_{mp}	: Single plane mean outside diameter deviation
Δd_s	: Deviation of a single bore diameter	ΔD_s	: Deviation of a single outside diameter
$V d_p$: Bore diameter variation in a single radial plane	$V D_p$: Outside diameter variation in a single radial plane
$V d_{mp}$: Mean bore diameter variation	$V D_{mp}$: Mean outside diameter variation
$\Delta B_s (\Delta C_s)$: Deviation of a single inner and outer ring width from the nominal dimension	K α	: Radial runout of assembled bearing outer ring
$V B_s (V C_s)$: Variation of a inner and outer ring width	S α	: Variation of a outside surface generatrix inclination with face
K α	: Radial runout of assembled bearing inner ring	Sea	: Assembled bearing outer ring face runout with raceway
S α	: Face runout with bore	V α	: Variation of the outer ring width
S α	: Assembled bearing inner ring face runout with raceway	ΔD_{fs}	: Flange outside diameter deviation
		ΔC_{fs}	: Flange width deviation

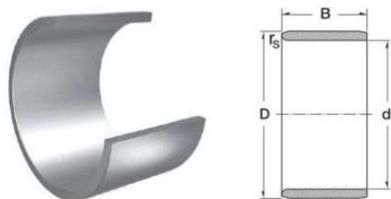
Unit μm																
ΔB_s (ΔC_s)			VBs (VCs) ^a				Kia				Sd		Sia		d(mm)	
Single bearing			Inner/outer ring		Inner ring		P0	P6	P5	P4	P5	P4	P5	P4		
F0 F6	P5 P4	P0	P6	P5	P4											
Upper	Lower	Lower	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Over	Incl.
0	-40	-40	12	12	5	2.5	10	5	4	2.5	7	3	7	3	0.6(1)	2.5
0	-120	-40	15	15	5	2.5	10	6	4	2.5	7	3	7	3	2.5	10
0	-120	-80	20	20	5	2.5	10	7	4	2.5	7	3	7	3	10	18
0	-120	-120	20	20	5	2.5	13	8	4	3	8	4	8	4	18	30
0	-120	-120	20	20	5	3	15	10	5	4	8	4	8	4	30	50
0	-150	-150	25	25	6	4	20	10	5	5	8	5	8	5	50	80
0	-200	-200	25	25	7	4	25	13	6	5	9	5	9	5	80	120
0	-250	-250	30	30	8	5	30	18	8	6	10	6	10	7	120	180
0	-300	-300	30	30	10	6	40	20	10	8	11	7	13	8	180	250
0	-350	-350	35	35	13	x	50	25	13	x	13	x	15	x	250	315
0	-400	-400	40	40	15	x	60	30	15	x	15	x	20	x	315	400

Note(1) : 0.6mm is included in this classification.
Note(2) : The inner ring width variation is the same for the outer ring of the same bearing size, CLASS5 and CLASS4 referring to outer ring only.

Unit μm

Kca				SD		Sea		Vcs ²		D(mm)		ΔDis				ΔCis			
P0	P6	P5	P4	P5	P4	P5	P4	P5	P4			Flanged type							
												P0	P6	P5	P4	P0	P6	P5	P4
Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	Over	Inc	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
15	8	5	3	8	4	8	5	5	2.5	2.5(1)	6	+125	-50	0	-25	0	-50	0	-50
15	8	5	3	8	4	8	5	5	2.5	6	18	+125	-50	0	-25	0	-50	0	-50
15	9	6	4	8	4	8	5	5	2.5	18	30	+125	-50	0	-25	0	-50	0	-50
20	10	7	5	8	4	8	5	5	2.5	30	50	+125	-50	0	-25	0	-50	0	-50
25	13	8	5	8	4	10	5	6	3	50	80	+125	-50	0	-25	0	-50	0	-50
35	18	10	6	9	5	11	6	8	4	80	120								
40	20	11	7	10	5	13	7	8	5	120	150								
45	23	13	8	10	5	14	8	8	5	150	180								
50	25	15	10	11	7	15	10	10	7	180	250								
60	30	18	11	13	8	18	11	11	7	250	315								
70	35	20	13	13	10	20	13	13	8	315	400								
80	50	23	X	15	X	23	X	15	X	400	500								
100	60	25	X	18	X	25	X	18	X	500	630								
120	75	30	X	20	X	30	X	20	X	630	800								

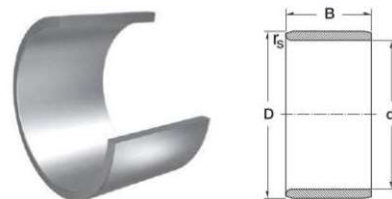
Innenringe der Type IR / IR Inner Ring Series



132

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
5.0	8.0	12.0	IR 5X8X12	5.0	3 g
5.0	8.0	16.0	IR 5X8X16	5.0	4 g
6.0	9.0	12.0	IR 6X9X12	6.0	3 g
6.0	9.0	16.0	IR 6X9X16	6.0	4 g
7.0	10.0	12.0	IR 7X10X12	7.0	4 g
7.0	10.0	10.5	IR 7X10X10.5	7.0	3 g
7.0	10.0	10.5	LR 7X10X10.5	7.0	3 g
7.0	10.0	16.0	IR 7X10X16	7.0	4 g
8.0	12.0	12.5	IR 8X12X12.5	8.0	6 g
8.0	12.0	10.5	IR 8X12X10.5	8.0	5 g
8.0	12.0	10.5	LR 8X12X10.5	8.0	5 g
9.0	12.0	12.0	IR 9X12X12	9.0	4 g
9.0	12.0	16.0	IR 9X12X16	9.0	6 g
10.0	13.0	12.5	IR 10X13X12.5	10.0	5 g
10.0	13.0	12.5	LR 10X13X12.5	10.0	5 g
10.0	14.0	13.0	IR 10X14X13	10.0	7 g
10.0	14.0	16.0	IR 10X14X16	10.0	9 g
10.0	14.0	20.0	IR 10X14X20	10.0	12 g
12.0	15.0	12.5	IR 12X15X12.5	12.0	6 g
12.0	16.0	12.0	IR 12X16X12	12.0	8 g
12.0	15.0	12.0	IR 12X15X12	12.0	6 g
12.0	15.0	12.5	LR 12X15X12.5	12.0	6 g
12.0	15.0	16.0	IR 12X15X16	12.0	8 g
12.0	15.0	16.5	IR 12X15X16.5	12.0	8 g
12.0	15.0	16.5	LR 12X15X16.5	12.0	8 g
12.0	15.0	22.5	IR 12X15X22.5	12.0	11 g
12.0	15.0	22.5	LR 12X15X22.5	12.0	11 g
12.0	16.0	13.0	IR 12X16X13	12.0	9 g
12.0	16.0	16.0	IR 12X16X16	12.0	11 g
12.0	16.0	20.0	IR 12X16X20	12.0	14 g

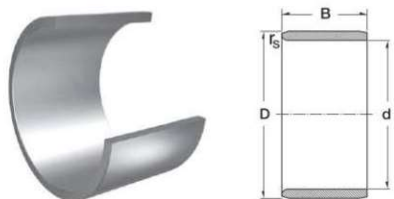
Innenringe der Type IR / IR Inner Ring Series



133

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
12.0	16.0	22.0	IR 12X16X22	12.0	15 g
14.0	17.0	17.0	IR 14X17X17	14.0	10 g
15.0	18.0	16.5	IR 15X18X16.5	15.0	10 g
15.0	20.0	23.0	IR 15X20X23	15.0	25 g
15.0	18.0	12.5	LR 15X18X12.5	15.0	7 g
15.0	18.0	16.0	IR 15X18X16	15.0	9 g
15.0	18.0	16.5	LR 15X18X16.5	15.0	10 g
15.0	19.0	16.0	IR 15X19X16	15.0	12 g
15.0	19.0	20.0	IR 15X19X20	15.0	16 g
15.0	20.0	13.0	IR 15X20X13	15.0	14 g
17.0	20.0	16.0	IR 17X20X16	17.0	11 g
17.0	20.0	20.0	IR 17X20X20	17.0	14 g
17.0	21.0	20.0	IR 17X21X20	17.0	19 g
17.0	22.0	13.0	IR 17X22X13	17.0	15 g
17.0	20.0	16.5	IR 17X20X16.5	17.0	11 g
17.0	20.0	16.5	LR 17X20X16.5	17.0	11 g
17.0	20.0	20.5	IR 17X20X20.5	17.0	14 g
17.0	20.0	20.5	LR 17X20X20.5	17.0	14 g
17.0	20.0	30.5	IR 17X20X30.5	17.0	21 g
17.0	20.0	30.5	LR 17X20X30.5	17.0	21 g
17.0	21.0	16.0	IR 17X21X16	17.0	15 g
17.0	22.0	16.0	IR 17X22X16	17.0	18 g
17.0	22.0	23.0	IR 17X22X23	17.0	27 g
17.0	24.0	20.0	IR 17X24X20	17.0	34 g
20.0	24.0	20.0	IR 20X24X20	20.0	21 g
20.0	25.0	12.5	LR 20X25X12.5	20.0	17 g
20.0	25.0	20.5	LR 20X25X20.5	20.0	28 g
20.0	24.0	16.0	IR 20X24X16	20.0	15 g
20.0	25.0	16.5	LR 20X25X16.5	20.0	22 g
20.0	25.0	17.0	IR 20X25X17	20.0	25 g

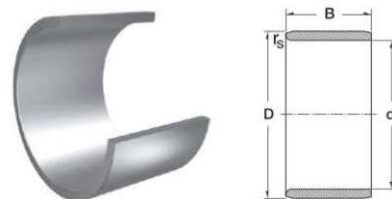
Innenringe der Type IR / IR Inner Ring Series



134

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
20.0	25.0	20.0	IR 20X25X20	20.0	28 g
20.0	25.0	20.5	IR 20X25X20.5	20.0	27 g
20.0	25.0	26.5	IR 20X25X26.5	20.0	38 g
20.0	25.0	26.5	LR 20X25X26.5	20.0	38 g
20.0	25.0	30.0	IR 20X25X30	20.0	40 g
20.0	25.0	38.5	IR 20X25X38.5	20.0	53 g
20.0	25.0	38.5	LR 20X25X38.5	20.0	53 g
20.0	28.0	20.0	IR 20X28X20	20.0	45 g
22.0	28.0	20.5	IR 22X28X20.5	22.0	36 g
22.0	26.0	16.0	IR 22X26X16	22.0	18 g
22.0	26.0	20.0	IR 22X26X20	22.0	23 g
22.0	28.0	17.0	IR 22X28X17	22.0	30 g
22.0	28.0	20.0	IR 22X28X20	22.0	35 g
22.0	28.0	20.5	LR 22X28X20.5	22.0	36 g
22.0	28.0	30.0	IR 22X28X30	22.0	54 g
25.0	30.0	12.5	IR 25X30X12.5	25.0	20 g
25.0	30.0	20.0	IR 25X30X20	25.0	33 g
25.0	30.0	32.0	IR 25X30X32	25.0	54 g
25.0	29.0	20.0	IR 25X29X20	25.0	26 g
25.0	29.0	30.0	IR 25X29X30	25.0	39 g
25.0	30.0	12.5	LR 25X30X12.5	25.0	20 g
25.0	30.0	16.5	LR 25X30X16.5	25.0	27 g
25.0	30.0	20.5	IR 25X30X20.5	25.0	33 g
25.0	30.0	20.5	LR 25X30X20.5	25.0	33 g
25.0	30.0	26.5	IR 25X30X26.5	25.0	46 g
25.0	30.0	26.5	LR 25X30X26.5	25.0	46 g
25.0	30.0	30.0	IR 25X30X30	25.0	53 g
25.0	30.0	38.5	IR 25X30X38.5	25.0	65 g
25.0	30.0	38.5	LR 25X30X38.5	25.0	65 g
25.0	32.0	22.0	IR 25X32X22	25.0	53 g

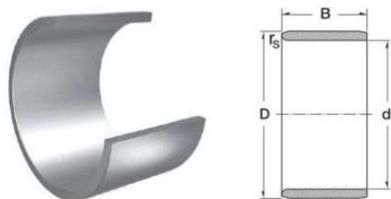
Innenringe der Type IR / IR Inner Ring Series



135

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
28.0	32.0	17.0	IR 28X32X17	28.0	25 g
28.0	32.0	20.0	IR 28X32X20	28.0	29 g
28.0	32.0	30.0	IR 28X32X30	28.0	44 g
30.0	35.0	16.0	IR 30X35X16	30.0	31 g
30.0	35.0	20.5	IR 30X35X20.5	30.0	39 g
30.0	35.0	30.0	IR 30X35X30	30.0	59 g
30.0	35.0	12.5	LR 30X35X12.5	30.0	23 g
30.0	35.0	13.0	IR 30X35X13	30.0	25 g
30.0	35.0	16.5	LR 30X35X16.5	30.0	31 g
30.0	35.0	17.0	IR 30X35X17	30.0	36 g
30.0	35.0	20.0	IR 30X35X20	30.0	39 g
30.0	35.0	20.5	LR 30X35X20.5	30.0	40 g
30.0	35.0	26.0	IR 30X35X26	30.0	50 g
30.0	37.0	18.0	IR 30X37X18	30.0	50 g
30.0	37.0	22.0	IR 30X37X22	30.0	62 g
32.0	37.0	20.0	IR 32X37X20	32.0	42 g
32.0	37.0	30.0	IR 32X37X30	32.0	62 g
32.0	40.0	20.0	IR 32X40X20	32.0	68 g
32.0	40.0	36.0	IR 32X40X36	32.0	124 g
33.0	37.0	13.0	IR 33X37X13	33.0	22 g
35.0	40.0	17.0	IR 35X40X17	35.0	39 g
35.0	40.0	20.0	IR 35X40X20	35.0	46 g
35.0	40.0	30.0	IR 35X40X30	35.0	68 g
35.0	40.0	12.5	LR 35X40X12.5	35.0	27 g
35.0	40.0	16.5	LR 35X40X16.5	35.0	37 g
35.0	40.0	20.5	IR 35X40X20.5	35.0	46 g
35.0	40.0	20.5	LR 35X40X20.5	35.0	46 g
35.0	42.0	36.0	IR 35X42X36	35.0	117 g
35.0	43.0	22.0	IR 35X43X22	35.0	82 g
38.0	43.0	20.0	IR 38X43X20	38.0	48 g

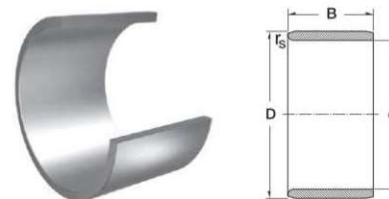
Innenringe der Type IR / IR Inner Ring Series



136

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
38.0	43.0	30.0	IR 38X43X30	38.0	74 g
40.0	45.0	10.0	IR 40X45X10	40.0	26 g
40.0	45.0	20.0	IR 40X45X20	40.0	51 g
40.0	45.0	30.0	IR 40X45X30	40.0	77 g
40.0	45.0	16.5	LR 40X45X16.5	40.0	41 g
40.0	45.0	17.0	IR 40X45X17	40.0	43 g
40.0	45.0	20.5	IR 40X45X20.5	40.0	52 g
40.0	45.0	20.5	LR 40X45X20.5	40.0	52 g
40.0	48.0	22.0	IR 40X48X22	40.0	92 g
40.0	48.0	40.0	IR 40X48X40	40.0	170 g
40.0	50.0	22.0	IR 40X50X22	40.0	118 g
42.0	47.0	20.0	IR 42X47X20	42.0	53 g
42.0	47.0	30.0	IR 42X47X30	42.0	81 g
45.0	50.0	20.0	IR 45X50X20	45.0	57 g
45.0	50.0	35.0	IR 45X50X35	45.0	101 g
45.0	52.0	22.0	IR 45X52X22	45.0	88 g
45.0	50.0	20.5	LR 45X50X20.5	45.0	59 g
45.0	50.0	25.0	IR 45X50X25	45.0	71 g
45.0	50.0	25.5	IR 45X50X25.5	45.0	75 g
45.0	50.0	25.5	LR 45X50X25.5	45.0	75 g
45.0	52.0	40.0	IR 45X52X40	45.0	164 g
45.0	55.0	22.0	IR 45X55X22	45.0	129 g
50.0	55.0	20.0	IR 50X55X20	50.0	63 g
50.0	55.0	35.0	IR 50X55X35	50.0	112 g
50.0	58.0	22.0	IR 50X58X22	50.0	115 g
50.0	58.0	40.0	IR 50X58X40	50.0	209 g
50.0	60.0	25.0	IR 50X60X25	50.0	163 g
50.0	60.0	28.0	IR 50X60X28	50.0	183 g
50.0	55.0	20.5	LR 50X55X20.5	50.0	64 g
50.0	55.0	25.0	IR 50X55X25	50.0	78 g

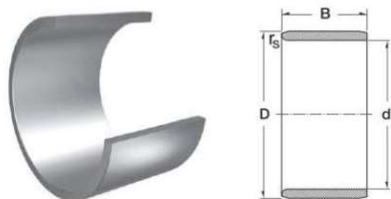
Innenringe der Type IR / IR Inner Ring Series



137

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
55.0	60.0	35.0	IR 55X60X35	55.0	121 g
55.0	60.0	25.0	IR 55X60X25	55.0	86 g
55.0	63.0	25.0	IR 55X63X25	55.0	141 g
55.0	63.0	45.0	IR 55X63X45	55.0	256 g
55.0	65.0	28.0	IR 55X65X28	55.0	198 g
60.0	68.0	45.0	IR 60X68X45	60.0	275 g
60.0	70.0	25.0	IR 60X70X25	60.0	195 g
60.0	70.0	60.0	IR 60X70X60	60.0	463 g
60.0	68.0	25.0	IR 60X68X25	60.0	152 g
60.0	68.0	35.0	IR 60X68X35	60.0	213 g
60.0	70.0	28.0	IR 60X70X28	60.0	215 g
65.0	72.0	45.0	IR 65X72X45	65.0	259 g
65.0	75.0	28.0	IR 65X75X28	65.0	236 g
65.0	72.0	25.0	IR 65X72X25	65.0	414 g
65.0	73.0	25.0	IR 65X73X25	65.0	164 g
65.0	73.0	35.0	IR 65X73X35	65.0	231 g
70.0	80.0	25.0	IR 70X80X25	70.0	224 g
70.0	80.0	54.0	IR 70X80X54	70.0	480 g
70.0	80.0	30.0	IR 70X80X30	70.0	267 g
70.0	80.0	35.0	IR 70X80X35	70.0	312 g
75.0	85.0	25.0	IR 75X85X25	75.0	238 g
75.0	85.0	30.0	IR 75X85X30	75.0	287 g
75.0	85.0	35.0	IR 75X85X35	75.0	336 g
75.0	85.0	54.0	IR 75X85X54	75.0	520 g
80.0	90.0	35.0	IR 80X90X35	80.0	355 g
80.0	90.0	25.0	IR 80X90X25	80.0	253 g
80.0	90.0	30.0	IR 80X90X30	80.0	304 g
80.0	90.0	54.0	IR 80X90X54	80.0	556 g
85.0	95.0	26.0	IR 85X95X26	85.0	277 g
85.0	95.0	36.0	IR 85X95X36	85.0	388 g

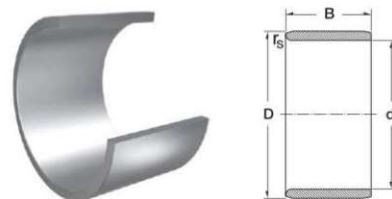
Innenringe der Type IR / IR Inner Ring Series



138

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
85.0	100.0	35.0	IR 85X100X35	85.0	582 g
85.0	100.0	63.0	IR 85X100X63	85.0	1054 g
90.0	100.0	26.0	IR 90X100X26	90.0	294 g
90.0	100.0	30.0	IR 90X100X30	90.0	340 g
90.0	100.0	36.0	IR 90X100X36	90.0	406 g
90.0	105.0	35.0	IR 90X105X35	90.0	610 g
90.0	105.0	63.0	IR 90X105X63	90.0	1110 g
95.0	105.0	26.0	IR 95X105X26	95.0	313 g
95.0	105.0	36.0	IR 95X105X36	95.0	431 g
95.0	110.0	35.0	IR 95X110X35	95.0	657 g
95.0	110.0	63.0	IR 95X110X63	95.0	1170 g
100.0	110.0	30.0	IR 100X110X30	100.0	350 g
100.0	110.0	40.0	IR 100X110X40	100.0	505 g
100.0	115.0	40.0	IR 100X115X40	100.0	797 g
110.0	120.0	30.0	IR 110X120X30	110.0	409 g
110.0	125.0	40.0	IR 110X125X40	110.0	840 g
120.0	130.0	30.0	IR 120X130X30	120.0	442 g
120.0	135.0	45.0	IR 120X135X45	120.0	1044 g
130.0	145.0	35.0	IR 130X145X35	130.0	855 g
130.0	150.0	50.0	IR 130X150X30	130.0	1690 g
140.0	155.0	35.0	IR 140X155X35	140.0	917 g
140.0	160.0	50.0	IR 140X160X50	140.0	1800 g
150.0	165.0	40.0	IR 150X165X40	150.0	1122 g
160.0	175.0	40.0	IR 160X175X40	160.0	1200 g
170.0	185.0	45.0	IR 170X185X45	170.0	1441 g
180.0	195.0	45.0	IR 180X195X45	180.0	1510 g
190.0	210.0	50.0	IR 190X210X50	190.0	2410 g
200.0	220.0	50.0	IR 200X220X50	200.0	2518 g
220.0	240.0	50.0	IR 220X240X50	220.0	2753 g
240.0	265.0	60.0	IR 240X265X60	240.0	4600 g

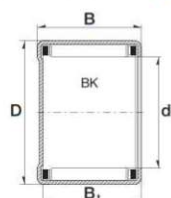
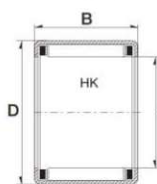
Innenringe der Type IR / IR Inner Ring Series



139

Dimension (mm)			Designation/Type	Shaft Diameter (mm)	Mass (g) approx.
d	D	B			
260.0	285.0	60.0	IR 260X285X60	260.0	4980 g
280.0	305.0	69.0	IR 280X305X69	280.0	6100 g
300.0	330.0	80.0	IR 300X330X80	300.0	9200 g
320.0	350.0	80.0	IR 320X350X80	320.0	9800 g
340.0	370.0	80.0	IR 340X370X80	340.0	10200 g
360.0	390.0	80.0	IR 360X390X80	360.0	10900 g
380.0	415.0	100.0	IR 380X415X100	380.0	16700 g

Nadellager der Type HK & BK / Needle Roller Bearings



Needle Roller Bearings

HK series with open ends

Drawn Cup

Needle Roller Bearings

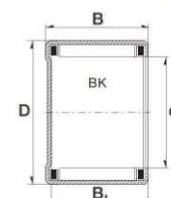
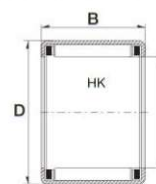
BK series with closed ends



140

Designation/Type		Dimension (mm)				* Load Rating		* Limiting speed x1000rpm	Mass (g) approx.
with open ends	with closed end	d	D	B (Tol.-0.3)	B ₁ min. only BK	C, dyn. N	C, stat. N		
HK 0306-TV	BK 0306	3.0	6.5	6.0	0.0	1230	840	46.0	1 g
HK 0408	-	4.0	8.0	8.0	0.0	1780	1310	41.0	2 g
HK 0509	BK 0509	5.0	9.0	9.0	0.0	2400	1990	38.0	2 g
HK 0606	-	6.0	10.0	6.0	0.0	1610	1220	35.0	2 g
HK 0608	-	6.0	10.0	8.0	-	2030	1650	35.0	2 g
HK 0609	BK 0609	6.0	10.0	9.0	7.4	2850	2600	35.0	3 g
HK 0709	BK 0709	7.0	11.0	9.0	7.4	3100	2950	31.0	3 g
HK 0808	BK 0808	8.0	12.0	8.0	6.4	2750	2600	28.0	3 g
HK 0810	BK 0810	8.0	12.0	10.0	8.4	3800	3950	28.0	3 g
HK0810-RS	-	8.0	12.0	10.0	0.0	3800	3950	28.0	3 g
HK0810-2RS	-	8.0	12.0	10.0	0.0	3800	3950	28.0	3 g
HK0812-RS	-	8.0	12.0	12.0	0.0	3800	3950	28.0	3 g
HK0812-2RS	-	8.0	12.0	12.0	0.0	3800	3950	28.0	3 g
HK 0908	-	9.0	13.0	8.0	-	3550	3750	25.5	3 g
HK 0910	BK 0910	9.0	13.0	10.0	8.4	4250	4650	25.5	4 g
HK 0912	BK 0912	9.0	13.0	12.0	10.4	5300	6300	25.5	5 g
HK 1010	BK 1010	10.0	14.0	10.0	8.4	4400	5100	23.3	4 g
HK 1012	BK 1012	10.0	14.0	12.0	10.4	5500	6800	23.3	5 g
HK1012-RS	-	10.0	14.0	12.0	0.0	5500	6800	23.3	4 g
HK1012-2RS	-	10.0	14.0	12.0	0.0	5500	6800	23.3	4 g
HK1014-2RS	-	10.0	14.0	12.0	0.0	4400	5100	23.3	4 g
HK 1015	BK 1015	10.0	14.0	15.0	13.4	6800	8800	23.3	6 g
HK 1210	BK 1210	12.0	16.0	10.0	8.4	4950	6200	20.0	5 g
HK 1212	BK 1212	12.0	18.0	12.0	9.3	6500	7300	18.7	9 g
HK1214-2RS	-	12.0	16.0	14.0	0.0	6500	7300	20.0	8 g
HK1214-RS	-	12.0	18.0	14.0	0.0	6500	7300	18.7	10 g
HK1216-2RS	-	12.0	18.0	14.0	0.0	6500	7300	18.7	10 g
HK 1312	BK 1312	13.0	19.0	12.0	9.3	6300	7300	17.5	10 g
HK 1412	BK 1412	14.0	20.0	12.0	9.3	7100	8500	16.5	11 g
HK1414-RS	-	14.0	20.0	14.0	0.0	7100	8500	16.5	12 g

Nadellager der Type HK & BK / Needle Roller Bearings



Needle Roller Bearings

HK series with open ends

Drawn Cup

Needle Roller Bearings

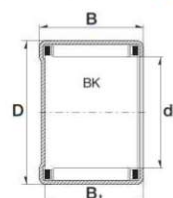
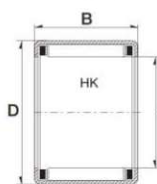
BK series with closed ends



141

Designation/Type		Dimension (mm)				* Load Rating		* Limiting speed x1000rpm	Mass (g) approx.
with open ends	with closed end	d	D	B (Tol.-0.3)	B ₁ min. only BK	C, dyn. N	C, stat. N		
HK1416-2RS	-	14.0	20.0	14.0	0.0	7100	8500	16.5	12 g
HK 1512	BK 1512	15.0	21.0	12.0	9.3	7900	9400	15.6	11 g
HK1514-RS	-	15.0	21.0	14.0	0.0	7800	9800	15.6	12 g
HK 1516	BK 1516	15.0	21.0	16.0	13.3	10500	14400	15.6	15 g
HK1516-2RS	-	15.0	21.0	14.0	0.0	10500	14400	15.6	12 g
HK1518-RS	-	15.0	21.0	18.0	0.0	10500	14400	15.6	16 g
HK1520-2RS	-	15.0	21.0	18.0	0.0	10500	14400	15.6	18 g
HK1522-ZW	-	15.0	21.0	22.0	0.0	13400	19500	15.6	20 g
HK 1612	BK 1612	16.0	22.0	12.0	9.3	7600	9700	14.7	12 g
HK 1614-RS	-	16.0	22.0	14.0	0.0	7600	9700	14.7	13 g
HK 1616	BK 1616	16.0	22.0	16.0	13.3	10900	15300	14.7	16 g
HK1616-2RS	-	16.0	22.0	14.0	0.0	10900	15300	14.7	13 g
HK1620-2RS	-	16.0	22.0	20.0	0.0	10900	15300	14.7	18 g
HK 1622-ZW	BK 1622-ZW	16.0	22.0	22.0	0.0	13100	19400	14.7	22 g
HK 1712	-	17.0	23.0	12.0	-	7900	10300	14.0	12 g
HK 1812	BK 1812	18.0	24.0	12.0	9.3	8100	10900	13.3	13 g
HK1814-RS	-	18.0	24.0	14.0	0.0	8100	10900	13.3	14 g
HK 1816	BK 1816	18.0	24.0	16.0	13.3	11600	17300	13.3	18 g
HK1816-2RS	-	18.0	24.0	14.0	0.0	11600	17300	13.3	15 g
HK 2010	-	20.0	26.0	10.0	-	6400	8200	12.2	12 g
HK 2012	-	20.0	26.0	12.0	-	8600	12100	12.2	14 g
HK 2016	BK 2016	20.0	26.0	16.0	13.3	12700	20100	12.2	19 g
HK2016-2RS	-	20.0	26.0	16.0	0.0	12700	20100	12.2	18 g
HK2018-RS	-	20.0	26.0	18.0	0.0	12700	20100	12.2	21 g
HK 2020	BK 2020	20.0	26.0	20.0	17.3	15700	26000	12.2	24 g
HK2020-2RS	-	20.0	26.0	18.0	0.0	15700	26000	12.2	23 g
HK2030-ZW	-	20.0	26.0	30.0	0.0	21800	40000	12.2	35 g
HK 2210	-	22.0	28.0	10.0	-	7500	10500	11.2	13 g
HK 2212	BK 2212	22.0	28.0	12.0	9.3	9100	13400	11.2	15 g
HK2214-RS	-	22.0	28.0	14.0	0.0	9100	13400	11.2	16 g

Nadellager der Type HK & BK / Needle Roller Bearings



Needle Roller Bearings
HK series with open ends

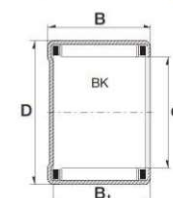
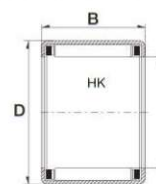
Drawn Cup
Needle Roller Bearings
BK series with closed ends



142

Designation/Type		Dimension (mm)				* Load Rating		* Limiting speed x1000rpm	Mass (g) approx.
with open ends	with closed end	d	D	B (Tol.-0.3)	B ₁ min. only BK	C, dyn. N	C, stat. N		
HK 2216	BK 2216	22.0	28.0	16.0	13.3	13400	22100	11.2	21 g
HK2216-2RS	-	22.0	28.0	14.0	0.0	13400	22100	11.2	16 g
HK2218-RS	-	22.0	28.0	18.0	0.0	13400	22100	11.2	24 g
HK 2220	-	22.0	28.0	20.0	-	16500	29000	11.2	26 g
HK2220-2RS	-	22.0	28.0	18.0	0.0	16500	29000	11.2	24 g
HK 2512	-	25.0	32.0	12.0	-	11000	15200	9.8	20 g
HK 2516	BK2516	25.0	32.0	16.0	-	15600	24000	9.8	27 g
HK2516-2RS	-	25.0	32.0	16.0	0.0	15600	24000	9.8	27 g
HK2518-RS	-	25.0	32.0	18.0	0.0	15600	24000	9.8	29 g
HK 2520	BK 2520	25.0	32.0	20.0	17.3	19900	33000	9.8	33 g
HK2520-2RS	-	25.0	32.0	18.0	0.0	19900	33000	9.8	29 g
HK2524-2RS	-	25.0	32.0	24.0	0.0	19900	33000	9.8	40 g
HK 2526	BK 2526	25.0	32.0	26.0	23.3	25500	45000	9.8	44 g
HK2530-2RS	-	25.0	32.0	30.0	0.0	25500	45000	9.8	47 g
HK2538-ZW	BK2538-ZW	25.0	32.0	38.0	0.0	34000	66000	9.8	64 g
HK 2816	-	28.0	35.0	16.0	-	16400	26500	8.9	29 g
HK2818-RS	-	28.0	35.0	18.0	0.0	16400	26500	8.9	31 g
HK 2820	-	28.0	35.0	20.0	-	20900	36000	8.9	36 g
HK2820-2RS	-	28.0	35.0	18.0	0.0	20900	26500	8.9	34 g
HK 3012	BK 3012	30.0	37.0	12.0	9.3	12100	18200	8.4	23 g
HK 3016	BK 3016	30.0	37.0	16.0	13.3	17200	29000	8.4	31 g
HK3016-2RS	-	30.0	37.0	16.0	0.0	17200	29000	8.4	31 g
HK3018-RS	-	30.0	37.0	18.0	0.0	17200	29000	8.4	37 g
HK 3020	BK 3020	30.0	37.0	20.0	17.3	22000	39500	8.4	39 g
HK3020-2RS	-	30.0	37.0	18.0	0.0	22000	39500	8.4	37 g
HK3022	-	30.0	37.0	22.0	0.0	24800	46000	8.4	42 g
HK3024-2RS	-	30.0	37.0	24.0	0.0	22000	39500	8.4	44 g
HK 3026	BK 3026	30.0	37.0	26.0	23.3	28000	54000	8.4	51 g
HK3038-ZW	BK3038-ZW	30.0	37.0	38.0	0.0	37500	79000	8.4	76 g
HK3220	-	32.0	39.0	20.0	0.0	23000	42500	7.9	41 g

Nadellager der Type HK & BK / Needle Roller Bearings



Needle Roller Bearings
HK series with open ends

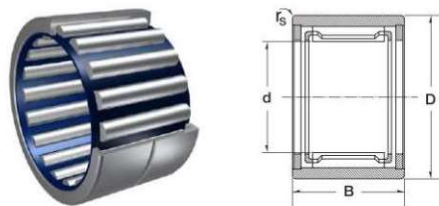
Drawn Cup
Needle Roller Bearings
BK series with closed ends



143

Designation/Type		Dimension (mm)				* Load Rating		* Limiting speed x1000rpm	Mass (g) approx.
with open ends	with closed end	d	D	B (Tol.-0.3)	B ₁ min. only BK	C, dyn. N	C, stat. N		
HK3224	-	32.0	39.0	24.0	0.0	27500	54000	7.9	49 g
HK 3512	-	35.0	42.0	12.0	-	13100	21300	7.3	27 g
HK 3516	-	35.0	42.0	16.0	-	18700	33500	7.3	36 g
HK3516-2RS	-	35.0	42.0	16.0	0.0	18700	33500	7.3	32 g
HK3518-RS	-	35.0	42.0	18.0	0.0	18700	33500	7.3	39 g
HK 3520	BK 3520	35.0	42.0	20.0	17.3	23800	46000	7.3	44 g
HK3520-2RS	-	35.0	42.0	18.0	0.0	18700	46000	7.3	41 g
HK 4012	-	40.0	47.0	12.0	-	14000	24300	6.4	30 g
HK 4016	-	40.0	47.0	16.0	-	20000	38500	6.4	39 g
HK4016-2RS	-	40.0	47.0	16.0	0.0	20000	38500	6.4	37 g
HK4018-RS	-	40.0	47.0	18.0	0.0	20000	38500	6.4	45 g
HK 4020	BK 4020	40.0	47.0	20.0	17.3	25500	52000	6.4	54 g
HK4020-2RS	-	40.0	47.0	18.0	0.0	25500	52000	6.4	48 g
HK 4512	-	45.0	52.0	12.0	-	14900	27500	5.8	33 g
HK 4516	-	45.0	52.0	16.0	-	21300	43000	5.8	46 g
HK4518-RS	-	45.0	52.0	18.0	0.0	21300	43000	5.8	50 g
HK 4520	BK 4520	45.0	52.0	20.0	17.3	27000	59000	5.8	56 g
HK4520-2RS	-	45.0	52.0	18.0	0.0	27000	59000	5.8	50 g
HK 5020	-	50.0	58.0	20.0	-	31000	63000	5.2	70 g
HK5022-RS	-	50.0	58.0	22.0	0.0	31000	63000	5.2	76 g
HK5024-2RS	-	50.0	58.0	22.0	0.0	31000	63000	5.2	76 g
HK 5025	-	50.0	58.0	25.0	-	38500	84000	5.2	90 g
HK 5520	-	55.0	63.0	20.0	-	31500	67000	4.8	74 g
HK 5528	-	55.0	63.0	28.0	-	44000	103000	4.8	105 g
HK 6012	-	60.0	68.0	12.0	-	17400	32000	4.4	49 g
HK 6020	-	60.0	68.0	20.0	-	33500	75000	4.4	81 g
HK 6032	-	60.0	68.0	32.0	-	53000	135000	4.4	136 g

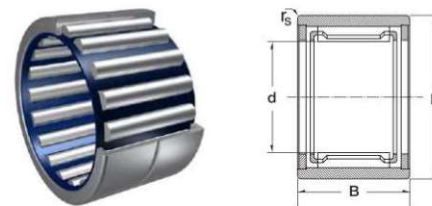
Nadellager der Type NK / NK Needle Roller Bearings



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Dimension (mm)				Designation/Type	*Load Rating		*Limiting Speed x1000rpm		Mass (g) approx.
d	D	B	r _s		C, dyn. N	C, stat. N	Grease	Oil	
5.0	10.0	10.0	0.15	NK 5/10 B TN	2385	1728	24.0	39.0	3 g
5.0	10.0	12.0	0.15	NK 5/12 TN	3060	2385	24.0	39.0	4 g
6.0	12.0	10.0	0.15	NK 6/10	2655	2052	22.0	36.0	5 g
6.0	12.0	12.0	0.15	NK 6/12 TN	3420	2835	22.0	36.0	6 g
7.0	14.0	10.0	0.3	NK 7/10 TN	3060	2385	20.0	34.0	7 g
7.0	14.0	12.0	0.3	NK 7/12 TN	3690	3150	20.0	34.0	8 g
8.0	15.0	12.0	0.3	NK 8/12	4005	3690	19.0	32.0	8 g
8.0	15.0	16.0	0.3	NK 8/16	5220	5220	19.0	32.0	12 g
9.0	16.0	12.0	0.3	NK 9/12	4590	4500	18.0	30.0	10 g
9.0	16.0	16.0	0.3	NK 9/16	5940	6390	18.0	30.0	13 g
10.0	17.0	12.0	0.3	NK 10/12	4770	4950	17.0	28.0	10 g
10.0	17.0	16.0	0.3	NK 10/16	6300	7020	17.0	28.0	13 g
12.0	19.0	12.0	0.3	NK 12/12	6480	6390	16.0	26.0	12 g
12.0	19.0	16.0	0.3	NK 12/16	9090	9900	16.0	26.0	16 g
14.0	22.0	13.0	0.3	RNA 4900	8640	8280	15.0	25.0	16 g
14.0	22.0	16.0	0.3	NK 14/16	10260	10350	15.0	25.0	21 g
14.0	22.0	20.0	0.3	NK 14/20	13050	14040	15.0	25.0	25 g
14.0	22.0	13.0	0.3	RNA 4900-2RS	6930	6210	15.0	25.0	16 g
15.0	23.0	16.0	0.3	NK 15/16	10890	11430	14.4	24.0	21 g
15.0	23.0	20.0	0.3	NK 15/20	13860	15480	14.4	24.0	27 g
15.0	23.0	12.0	0.3	NK 15/12	10890	11430	21.0	-	19 g
16.0	24.0	13.0	0.3	RNA 4901	9540	9810	14.0	23.0	17 g
16.0	24.0	16.0	0.3	NK 16/16	11520	12510	14.0	23.0	22 g
16.0	24.0	20.0	0.3	NK 16/20	14670	16920	14.0	23.0	28 g
16.0	24.0	22.0	0.3	RNA 6901	16290	19440	14.0	23.0	31 g
16.0	24.0	13.0	0.3	RNA 4901-2RS	7740	7470	14.0	23.0	17 g
16.0	24.0	22.0	0.3	RNA 6901-2RS	14490	20880	14.0	23.0	31 g
17.0	25.0	16.0	0.3	NK 17/16	12150	13500	14.0	23.0	24 g
17.0	25.0	20.0	0.3	NK 17/20	15390	18360	14.0	23.0	30 g
18.0	26.0	16.0	0.3	NK 18/16	12690	14580	14.0	22.0	25 g

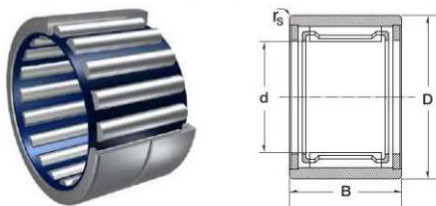
Nadellager der Type NK / NK Needle Roller Bearings



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Dimension (mm)				Designation/Type	*Load Rating		*Limiting Speed x1000rpm		Mass (g) approx.
d	D	B	r _s		C, dyn. N	C, stat. N	Grease	Oil	
18.0	26.0	20.0	0.3	NK 18/20	16110	19800	14.0	22.0	31 g
19.0	27.0	16.0	0.3	NK 19/16	13230	15660	14.0	22.0	26 g
19.0	27.0	20.0	0.3	NK 19/20	16830	21240	14.0	22.0	32 g
20.0	28.0	13.0	0.3	RNA 4902	10800	12240	13.0	20.0	22 g
20.0	28.0	16.0	0.3	NK 20/16	13140	15750	13.0	20.0	27 g
20.0	28.0	20.0	0.3	NK 20/20	16740	21420	13.0	20.0	34 g
20.0	28.0	23.0	0.3	RNA 6902	17550	22950	13.0	20.0	40 g
20.0	32.0	20.0	0.6	NKS 20	23400	22500	13.0	20.0	49 g
20.0	28.0	13.0	0.3	RNA 4902-2RS	8730	9270	13.0	20.0	22 g
20.0	28.0	23.0	0.3	RNA 6902-2RS	17550	22950	13.0	20.0	40 g
21.0	29.0	16.0	0.3	NK 21/16	13680	16830	13.0	20.0	28 g
21.0	29.0	20.0	0.3	NK 21/20	17370	22950	13.0	20.0	35 g
22.0	30.0	13.0	0.3	RNA 4903	11160	13140	12.0	19.0	22 g
22.0	30.0	16.0	0.3	NK 22/16	14220	17910	12.0	19.0	30 g
22.0	30.0	20.0	0.3	NK 22/20	18000	24300	12.0	19.0	37 g
22.0	30.0	23.0	0.3	RNA 6903	18990	26100	12.0	19.0	42 g
22.0	35.0	20.0	0.6	NKS 22	24750	25200	12.0	19.0	61 g
22.0	30.0	13.0	0.3	RNA 4903-2RS	9000	9900	12.0	19.0	22 g
22.0	30.0	23.0	0.3	RNA 6903-2RS	18990	26100	12.0	19.0	42 g
24.0	32.0	16.0	0.3	NK 24/16	15210	20070	10.0	17.0	32 g
24.0	32.0	20.0	0.3	NK 24/20	19260	27450	10.0	17.0	40 g
24.0	37.0	20.0	0.6	NKS 24	26550	27900	10.0	17.0	65 g
25.0	33.0	16.0	0.3	NK 25/16	15120	20160	10.0	17.0	33 g
25.0	33.0	20.0	0.3	NK 25/20	19170	27450	10.0	17.0	42 g
25.0	37.0	17.0	0.3	RNA 4904	21330	22950	10.0	17.0	52 g
25.0	37.0	30.0	0.3	RNA 6904	36450	45900	10.0	17.0	100 g
25.0	38.0	20.0	0.6	NKS 25	27900	30150	10.0	17.0	68 g
25.0	37.0	17.0	0.3	RNA 4904-2RS	17550	17910	10.0	17.0	52 g
25.0	37.0	30.0	0.3	RNA 6904-2RS	36450	45900	10.0	17.0	100 g
26.0	34.0	16.0	0.3	NK 26/16	15570	21240	9.5	16.0	34 g

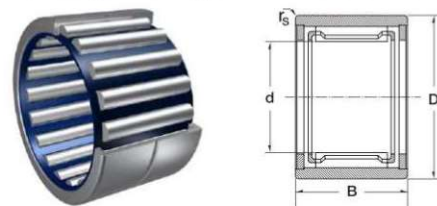
Nadellager der Type NK / NK Needle Roller Bearings



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Dimension (mm)				Designation/Type	*Load Rating		*Limiting Speed x1000rpm		Mass (g) approx.
d	D	B	r _s		C, dyn. N	C, stat. N	Grease	Oil	
26.0	34.0	20.0	0.3	NK 26/20	19800	28800	9.5	16.0	42 g
28.0	37.0	20.0	0.3	NK 28/20	22320	30600	9.0	15.0	52 g
28.0	37.0	30.0	0.3	NK 28/30	33300	51300	9.0	15.0	82 g
28.0	39.0	17.0	0.3	RNA 49/22	23400	26550	9.0	15.0	50 g
28.0	39.0	30.0	0.3	RNA 69/22	37800	49500	9.0	15.0	98 g
28.0	42.0	20.0	0.3	NKS 28	29250	32850	9.0	15.0	84 g
28.0	39.0	17.0	0.3	RNA 49/22-2RS	20970	28800	9.0	15.0	50 g
28.0	39.0	30.0	0.3	RNA 69/22-2RS	33210	51300	9.0	15.0	98 g
29.0	38.0	20.0	0.3	NK 29/20	24750	35100	8.5	14.0	54 g
29.0	38.0	30.0	0.3	NK 29/30	33300	51300	8.5	14.0	84 g
30.0	40.0	20.0	0.3	NK 30/20	25200	36900	8.5	14.0	65 g
30.0	40.0	30.0	0.3	NK 30/30	37800	62100	8.5	14.0	98 g
30.0	42.0	17.0	0.3	RNA 4905	23850	28350	8.5	14.0	61 g
30.0	42.0	30.0	0.3	RNA 6905	39600	53100	8.5	14.0	112 g
30.0	45.0	22.0	0.6	NKS 30	32850	36000	8.5	14.0	104 g
30.0	42.0	17.0	0.3	RNA 4905-2RS	19620	21780	8.5	14.0	61 g
30.0	42.0	30.0	0.3	RNA 6905-2RS	39600	53100	8.5	14.0	112 g
32.0	42.0	20.0	0.3	NK 32/20	26550	40050	8.0	13.0	68 g
32.0	42.0	30.0	0.3	NK 32/30	35100	56700	8.0	13.0	102 g
32.0	45.0	17.0	0.3	RNA 49/28	24750	30150	8.0	13.0	73 g
32.0	45.0	30.0	0.3	RNA 69/28	40950	56700	8.0	13.0	135 g
32.0	47.0	22.0	0.6	NKS 32	34200	39150	8.0	13.0	110 g
32.0	45.0	17.0	0.3	RNA 49/28-2RS	22590	32850	8.0	13.0	73 g
32.0	45.0	30.0	0.3	RNA 69/28-2RS	35640	58950	8.0	13.0	135 g
35.0	45.0	20.0	0.3	NK 35/20	27900	43650	7.5	12.0	74 g
35.0	45.0	30.0	0.3	NK 35/30	41400	72900	7.5	12.0	122 g
35.0	47.0	17.0	0.3	RNA 4906	25650	31950	7.5	12.0	69 g
35.0	47.0	30.0	0.3	RNA 6906	44100	63900	7.5	12.0	126 g
35.0	50.0	22.0	0.6	NKS 35	35550	42300	7.5	12.0	118 g
35.0	47.0	17.0	0.3	RNA 4906-2RS	21510	25650	7.5	12.0	69 g

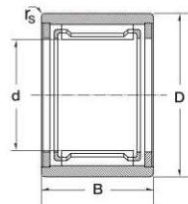
Nadellager der Type NK / NK Needle Roller Bearings



147

Dimension (mm)				Designation/Type	*Load Rating		*Limiting Speed x1000rpm		Mass (g) approx.
d	D	B	r _s		C, dyn. N	C, stat. N	Grease	Oil	
35.0	47.0	30.0	0.3	RNA 6906-2RS	44100	63900	7.5	12.0	126 g
37.0	47.0	20.0	0.3	NK 37/20	25200	39150	7.0	11.0	77 g
37.0	47.0	30.0	0.3	NK 37/30	65700	37800	7.0	11.0	113 g
37.0	52.0	22.0	0.6	NKS 37	37350	45000	7.0	11.0	123 g
38.0	48.0	20.0	0.3	NK 38/20	26100	40500	7.0	11.0	79 g
38.0	48.0	30.0	0.3	NK 38/30	38700	68400	7.0	11.0	116 g
40.0	50.0	20.0	0.3	NK 40/20	30150	50400	6.7	10.0	83 g
40.0	50.0	30.0	0.3	NK 40/30	39600	71100	6.7	10.0	125 g
40.0	52.0	20.0	0.6	RNA 49/32	31050	42750	6.7	10.0	89 g
40.0	52.0	36.0	0.6	RNA 69/32	42570	81000	6.7	10.0	162 g
40.0	55.0	22.0	0.6	NKS 40	38250	48600	6.7	10.0	129 g
40.0	52.0	20.0	0.6	RNA 49/32-2RS	27720	45900	6.7	10.0	89 g
40.0	52.0	36.0	0.6	RNA 69/32-2RS	42570	81000	6.7	10.0	162 g
42.0	52.0	20.0	0.3	NK 42/20	27000	44100	6.7	10.0	86 g
42.0	52.0	30.0	0.3	NK 42/30	40050	73800	6.7	10.0	130 g
42.0	55.0	20.0	0.6	RNA 4907	31950	45000	6.7	10.0	107 g
42.0	55.0	36.0	0.6	RNA 6907	43560	83700	6.7	10.0	193 g
42.0	55.0	20.0	0.6	RNA 4907-2RS	26550	35550	6.7	10.0	107 g
42.0	55.0	36.0	0.6	RNA 6907-2RS	43560	83700	6.7	10.0	193 g
43.0	53.0	20.0	0.3	NK 43/20	27450	45900	6.3	9.5	86 g
43.0	53.0	30.0	0.3	NK 43/30	40950	76500	6.3	9.5	133 g
43.0	58.0	22.0	0.6	NKS 43	39600	51300	6.3	9.5	139 g
45.0	55.0	20.0	0.3	NK 45/20	31500	55800	6.3	9.5	91 g
45.0	55.0	30.0	0.3	NK 45/30	46800	92700	6.3	9.5	139 g
45.0	60.0	22.0	0.6	NKS 45	40950	54000	6.0	9.0	145 g
47.0	57.0	20.0	0.3	NK 47/20	29250	50400	6.0	9.0	94 g
47.0	57.0	30.0	0.3	NK 47/30	43650	84600	6.0	9.0	142 g
48.0	62.0	22.0	0.6	RNA 4908	43650	60300	5.6	8.5	140 g
48.0	62.0	40.0	0.6	RNA 6908	60390	112500	5.6	8.5	256 g
48.0	62.0	22.0	0.6	RNA 4908-2RS	36900	47700	5.6	8.5	140 g

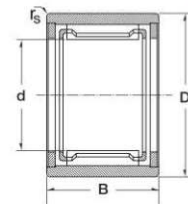
Nadellager der Type NK / NK Needle Roller Bearings



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Dimension (mm)				Designation/Type	*Load Rating		*Limiting Speed x1000rpm		Mass (g) approx.
d	D	B	r _s		C, dyn. N	C, stat. N	Grease	Oil	
48.0	62.0	40.0	0.6	RNA 6908-2RS	60390	112500	5.6	8.5	256 g
50.0	62.0	25.0	0.6	NK 50/25	43650	78300	5.6	8.5	158 g
50.0	62.0	35.0	0.6	NK 50/35	60300	118800	5.6	8.5	221 g
50.0	65.0	22.0	1	NKS 50	43200	60300	5.6	8.5	157 g
52.0	68.0	22.0	0.6	RNA 4909	45900	65700	5.3	8.0	182 g
52.0	68.0	40.0	0.6	RNA 6909	63360	123300	5.3	8.0	338 g
52.0	68.0	22.0	0.6	RNA 4909-2RS	38700	53100	5.3	8.0	182 g
52.0	68.0	40.0	0.6	RNA 6909-2RS	63360	123300	5.3	8.0	338 g
55.0	68.0	25.0	0.6	NK 55/25	40950	73800	5.0	7.5	180 g
55.0	68.0	35.0	0.6	NK 55/35	54000	106200	5.0	7.5	250 g
55.0	72.0	22.0	1	NKS 55	45900	66600	5.0	7.5	221 g
58.0	72.0	22.0	0.6	RNA 4910	47700	72000	4.8	7.0	163 g
58.0	72.0	40.0	0.6	RNA 6910	66330	135000	4.8	7.0	310 g
58.0	72.0	22.0	0.6	RNA 4910-2RS	40500	57600	4.8	7.0	163 g
58.0	72.0	40.0	0.6	RNA 6910-2RS	66330	135000	4.8	7.0	310 g
60.0	72.0	25.0	0.6	NK 60/25	47700	92700	4.8	7.0	185 g
60.0	72.0	35.0	0.6	NK 60/35	56700	117000	4.8	7.0	258 g
60.0	80.0	26.0	1.1	NKS 60	63900	88200	4.8	7.0	335 g
63.0	80.0	25.0	1	RNA 4911	58500	90000	4.5	6.7	255 g
63.0	80.0	45.0	1	RNA 6911	80730	171000	4.5	6.7	470 g
63.0	80.0	25.0	1	RNA 4911-2RS	51480	95400	4.5	6.7	255 g
63.0	80.0	45.0	1	RNA 6911-2RS	76950	150300	4.5	6.7	470 g
65.0	78.0	25.0	0.6	NK 65/25	45000	88200	4.5	6.3	221 g
65.0	78.0	35.0	0.6	NK 65/35	59400	127800	4.3	6.3	310 g
65.0	85.0	26.0	1.1	NKS 65	67500	97200	4.3	6.0	365 g
68.0	82.0	25.0	0.6	NK 68/25	44550	80100	4.0	6.0	241 g
68.0	82.0	35.0	0.6	NK 68/35	63000	125100	4.0	6.0	338 g
68.0	85.0	25.0	1	RNA 4912	61200	97200	4.0	6.0	275 g
68.0	85.0	45.0	1	RNA 6912	84150	183600	4.0	6.0	488 g
68.0	85.0	25.0	1	RNA 4912-2RS	51300	92340	4.0	6.0	275 g

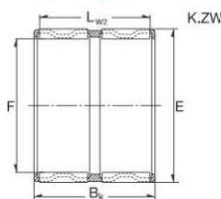
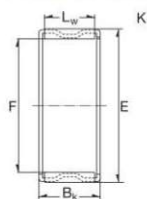
Nadellager der Type NK / NK Needle Roller Bearings



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Dimension (mm)				Designation/Type	*Load Rating		*Limiting Speed x1000rpm		Mass (g) approx.
d	D	B	r _s		C, dyn. N	C, stat. N	Grease	Oil	
68.0	85.0	45.0	1	RNA 6912-2RS	80370	163260	4.0	6.0	488 g
70.0	85.0	25.0	0.6	NK 70/25	45000	82800	4.0	6.0	260 g
70.0	85.0	35.0	0.6	NK 70/35	63900	129600	4.0	6.0	370 g
70.0	90.0	28.0	1.1	NKS 70	69300	101700	4.0	6.0	380 g
72.0	90.0	25.0	1	RNA 4913	62100	100800	4.0	6.0	312 g
72.0	90.0	45.0	1	RNA 6913	85680	190800	4.0	6.0	580 g
72.0	90.0	25.0	1	RNA 4913-2RS	51750	99450	4.0	6.0	312 g
72.0	90.0	45.0	1	RNA 6913-2RS	81225	169290	4.0	6.0	580 g
73.0	90.0	25.0	0.6	NK 73/25	54000	90000	3.8	5.6	302 g
73.0	90.0	35.0	0.6	NK 73/35	76500	140400	3.8	5.6	428 g
75.0	92.0	35.0	1	NK 75/35	78300	145800	6.1	-	445 g
85.0	105.0	35.0	1	NK 85/35	99900	173700	5.4	-	600 g
105.0	125.0	36.0	1	NK 105/36	116100	225000	4.4	-	713 g

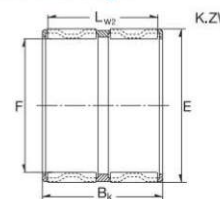
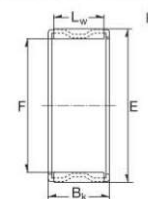
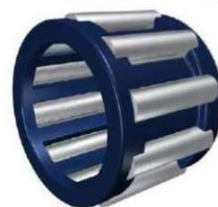
Nadelkränze der Type K / K Needle Roller Bearings



150

Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
5.0	8.0	8.0	K 5X8X8 TN	2300	1880	37.0	>1 g
5.0	8.0	10.0	K 5X8X10 TN	2800	2450	37.0	>1 g
6.0	9.0	8.0	K 6X9X8 TN	2560	2240	35.0	>1 g
6.0	9.0	10.0	K 6X9X10 TN	3300	3100	35.0	1 g
6.0	10.0	13.0	K 6X9X13 TN	3500	2800	33.0	>1 g
7.0	10.0	8.0	K 7X10X8 TN	2750	2550	32.0	1 g
7.0	10.0	10.0	K 7-X10X10 TN	3350	3400	32.0	1 g
8.0	11.0	8.0	K 8X11X8 TN	3000	2900	30.0	1 g
8.0	11.0	10.0	K 8X11X10 TN	3830	3950	30.0	1 g
8.0	11.0	13.0	K 8X11X13 TN	5000	5700	30.0	1 g
8.0	12.0	10.0	K 8X12X10 TN	4900	4600	30.0	1 g
9.0	12.0	10.0	K 9X12X10 TN	4200	4700	30.0	1 g
9.0	12.0	13.0	K 9X12X13 TN	5500	6700	30.0	1 g
10.0	13.0	10.0	K 10X13X10 TN	4500	5250	27.0	1 g
10.0	13.0	13.0	K 10X13X13 TN	6000	7600	27.0	2 g
10.0	13.0	16.0	K 10X13X16 TN	6300	7800	27.0	2 g
10.0	14.0	10.0	K 10X14X10 TN	7000	7900	26.0	2 g
10.0	14.0	13.0	K 10X14X13 TN	8000	9100	27.0	4 g
10.0	16.0	12.0	K 10X16X12 TN	7000	9300	27.0	3 g
12.0	15.0	9.0	K 12X15X9 TN	4120	5210	25.0	2 g
12.0	15.0	10.0	K 12X15X10 TN	4320	5730	25.0	1 g
12.0	15.0	13.0	K 12X15X13 TN	6000	8100	25.0	2 g
12.0	16.0	8.0	K 12X16X8 TN	4200	4700	25.0	2 g
12.0	16.0	10.0	K 12X16X10 TN	6000	6900	25.0	3 g
12.0	16.0	13.0	K 12X16X13 TN	7900	9200	25.0	3 g
12.0	17.0	13.0	K 12X17X13 TN	9300	10000	24.0	4 g
12.0	18.0	12.0	K 12X18X12 TN	9800	8000	24.0	5 g
12.0	15.0	20.0	K 12X15X20 TN	8200	12000	25.0	3 g
14.0	17.0	10.0	K 14X17X10	5100	6800	23.0	4 g
14.0	17.0	17.0	K 14X17X17	9300	14000	23.0	6 g
14.0	18.0	10.0	K 14X18X10	6800	8300	23.0	4 g

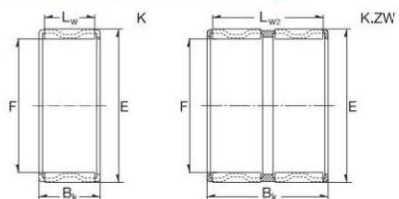
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
14.0	18.0	13.0	K 14X18X13	8100	9800	23.0	6 g
14.0	18.0	14.0	K 14X18X14	9200	12000	23.0	5 g
14.0	18.0	15.0	K 14X18X15	10000	13000	23.0	7 g
14.0	18.0	17.0	K 14X18X17	10500	13900	23.0	8 g
14.0	20.0	12.0	K 14X20X12	9900	10500	22.0	18 g
15.0	18.0	14.0	K 15X18X14	7500	11000	23.0	5 g
15.0	18.0	17.0	K 15X18X17	9600	15900	23.0	5 g
15.0	19.0	10.0	K 15X19X10	7200	9000	23.0	5 g
15.0	19.0	13.0	K 15X19X13	8300	9800	22.0	7 g
15.0	19.0	17.0	K 15X19X17	10300	15000	22.0	8 g
15.0	19.0	24.0	K 15X19X24	12800	20100	22.0	10 g
15.0	20.0	13.0	K 15X20X13	9700	11000	22.0	8 g
15.0	21.0	12.0	K 15X21X12	10000	13000	22.0	10 g
15.0	21.0	15.0	K 15X21X15	13800	16000	22.0	13 g
15.0	21.0	21.0	K 15X21X21	18000	24000	22.0	18 g
16.0	20.0	10.0	K 16X20X10	7600	9700	22.0	5 g
16.0	20.0	13.0	K 16X20X13	8700	11300	22.0	7 g
16.0	20.0	17.0	K 16X20X17	11200	16300	22.0	9 g
16.0	21.0	10.0	K 16X21X10	9000	12000	22.0	6 g
16.0	22.0	12.0	K 16X22X12	11000	12000	21.0	10 g
16.0	22.0	13.0	K 16X22X13	12000	13400	21.0	11 g
16.0	22.0	16.0	K 16X22X16	14300	17000	21.0	13 g
16.0	22.0	20.0	K 16X22X20	18000	22300	21.0	16 g
16.0	23.0	14.0	K 16X23X14	19000	21000	19.0	20 g
16.0	24.0	20.0	K 16X24X20	21100	23000	20.0	24 g
17.0	21.0	10.0	K 17X21X10	7900	10100	21.0	5 g
17.0	21.0	13.0	K 17X21X13	10000	14100	21.0	7 g
17.0	21.0	17.0	K 17X21X17	12000	17400	21.0	9 g
17.0	23.0	14.0	K 17X23X14	11000	15000	21.0	11 g
18.0	22.0	10.0	K 18X22X10	8200	9900	20.0	6 g
18.0	22.0	13.0	K 18X22X13	9000	12100	20.0	7 g

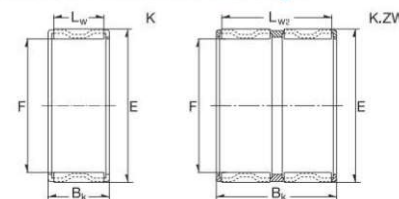
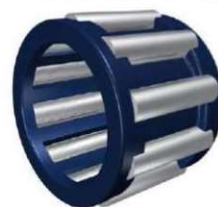
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*Limiting Speed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
18.0	22.0	17.0	K 18X22X17	11900	17600	20.0	10 g
18.0	24.0	12.0	K 18X24X12	11200	12900	20.0	11 g
18.0	24.0	13.0	K 18X24X13	12900	14900	20.0	12 g
18.0	24.0	13.5	K 18X24X13.5	12900	14900	20.0	13 g
18.0	24.0	20.0	K 18X24X20	20000	26500	20.0	19 g
18.0	25.0	14.0	K 18X25X14	16500	18800	20.0	14 g
18.0	25.0	22.0	K 18X25X22	22900	28400	20.0	24 g
18.0	26.0	14.0	K 18X26X14	18000	20000	18.0	19 g
18.0	28.0	16.0	K 18X28X16	19000	18400	19.0	24 g
19.0	23.0	13.0	K 19X23X13	9300	13000	20.0	8 g
19.0	23.0	17.0	K 19X23X17	12000	18600	20.0	11 g
20.0	24.0	10.0	K 20X24X10	8700	12100	19.0	6 g
20.0	24.0	12.0	K 20X24X12	9600	13800	19.0	8 g
20.0	24.0	13.0	K 20X24X13	9600	13800	19.0	8 g
20.0	24.0	17.0	K 20X24X17	12400	20000	19.0	11 g
20.0	26.0	12.0	K 20X26X12	13100	15700	19.0	13 g
20.0	26.0	16.0	K 20X26X16	18000	25000	18.5	17 g
20.0	26.0	17.0	K 20X26X17	18700	25500	19.0	18 g
20.0	26.0	20.0	K 20X26X20	20600	28500	18.0	22 g
20.0	28.0	20.0	K 20X28X20	23400	28000	18.0	26 g
20.0	28.0	25.0	K 20X28X25	30000	28500	18.0	36 g
20.0	30.0	30.0	K 20X30X30	35000	41000	19.0	56 g
21.0	25.0	13.0	K 21X25X13	9600	14500	19.0	9 g
21.0	25.0	17.0	K 21X25X17	12800	21000	18.0	12 g
22.0	26.0	10.0	K 22X26X10	8700	12900	18.0	7 g
22.0	26.0	13.0	K 22X26X13	10000	15400	18.0	9 g
22.0	26.0	17.0	K 22X26X17	13100	22100	18.0	12 g
22.0	27.0	13.0	K 22X27X13	14000	23000	18.0	10 g
22.0	28.0	17.0	K 22X28X17	19000	26500	19.0	19 g
22.0	28.0	23.0	K 22X28X23	20000	27000	17.0	26 g
22.0	29.0	16.0	K 22X29X16	19500	25000	17.0	22 g

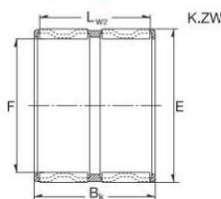
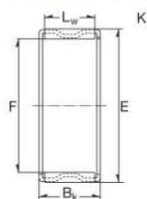
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*Limiting Speed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
22.0	30.0	15.0	K 22X30X15 TN	19600	22900	18.9	14 g
22.0	30.0	20.0	K 22X30X20	21000	23500	18.9	28 g
23.0	32.0	24.0	K 22X32X24	33500	39500	16.0	43 g
24.0	35.0	16.0	K 23X35X16 TN	24000	23400	15.0	30 g
24.0	28.0	10.0	K 24X28X10	9400	14300	17.0	8 g
24.0	28.0	13.0	K 24X28X13	10500	17000	17.0	10 g
24.0	28.0	17.0	K 24X28X17	14000	24500	17.0	13 g
24.0	29.0	13.0	K 24X29X13	13100	19100	16.0	13 g
24.0	30.0	17.0	K 24X30X17	19000	27000	16.0	21 g
24.0	30.0	31.0	K 24X30X31	27000	43000	16.0	39 g
25.0	29.0	10.0	K 25X29X10	9700	14900	16.0	8 g
25.0	29.0	13.0	K 25X29X13	10800	17900	16.0	10 g
25.0	29.0	17.0	K 25X29X17	14500	25500	16.0	13 g
25.0	30.0	13.0	K 25X30X13	14100	21300	16.0	12 g
25.0	30.0	20.0	K 25X30X20	21100	28000	16.0	20 g
25.0	30.0	25.0	K 25X30X25	21700	40400	15.0	21 g
25.0	30.0	26.0	K 25X30X26	20100	26500	15.0	21 g
25.0	31.0	17.0	K 25X31X17	19000	28000	16.0	21 g
25.0	31.0	21.0	K 25X31X21	24100	37500	16.0	26 g
25.0	32.0	16.0	K 25X32X16	20500	27500	15.0	24 g
25.0	33.0	20.0	K 25X33X20	28000	37500	15.0	32 g
25.0	33.0	24.0	K 25X33X24	33900	46500	15.0	38 g
25.0	34.0	18.0	K 25X34X18	48000	67000	15.0	32 g
25.0	35.0	30.0	K 25X35X30	46500	61500	14.0	65 g
25.0	30.0	26.0	K 25X30X26	21000	35000	14.0	27 g
26.0	30.0	10.0	K 26X30X10	9500	15500	16.0	9 g
26.0	30.0	13.0	K 26X30X13	11100	18700	16.0	11 g
26.0	30.0	17.0	K 26X30X17	14700	27000	16.0	15 g
26.0	31.0	13.0	K 26X31X13	12400	18400	15.0	9 g
26.0	30.0	22.0	K 26X30X22	15200	28000	16.0	12 g
27.0	32.0	17.0	K 27X32X17	16000	34000	17.0	29 g

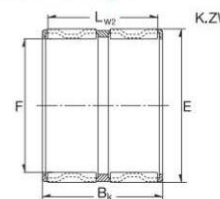
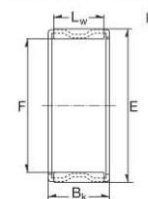
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
28.0	32.0	16.5	K 28X32X16.5	15000	32400	14.0	18 g
28.0	32.0	17.0	K 28X32X17	15000	32400	14.0	18 g
28.0	33.0	13.0	K 28X33X13	14800	23600	14.0	15 g
28.0	33.0	17.0	K 28X33X17	19100	33000	14.0	19 g
28.0	33.0	27.0	K 28X33X27 TN	22800	40500	14.0	19 g
28.0	34.0	17.0	K 28X34X17	21300	35000	14.0	24 g
28.0	35.0	16.0	K 28X35X16	21000	29000	14.0	29 g
28.0	35.0	18.0	K 28X35X18	23500	33500	14.0	31 g
28.0	35.0	20.0	K 28X35X20	24000	34000	14.0	35 g
28.0	35.0	27.0	K 28X35X27	34500	54500	14.0	47 g
28.0	36.0	16.0	K 28X36X16	34000	47000	11.0	40 g
28.0	40.0	18.0	K 28X40X18	33000	36500	12.0	50 g
28.0	40.0	25.0	K 28X40X25	45000	54500	12.0	71 g
30.0	34.0	13.0	K 30X34X13	11800	21200	13.0	14 g
30.0	35.0	13.0	K 30X35X13	11500	25000	13.0	16 g
30.0	35.0	17.0	K 30X35X17	19100	33500	13.0	21 g
30.0	35.0	27.0	K 30X35X27	30000	58500	13.0	33 g
30.0	37.0	16.0	K 30X37X16	22500	33000	13.0	26 g
30.0	38.0	25.0	K 30X38X25	16000	39000	13.0	43 g
30.0	40.0	18.0	K 30X40X18	31500	39500	12.0	44 g
30.0	40.0	30.0	K 30X40X30	48500	68500	13.0	78 g
30.0	35.0	26.0	K 30X35X26	23500	43500	12.0	32 g
32.0	37.0	13.0	K 32X37X13	15000	25000	12.0	18 g
32.0	37.0	17.0	K 32X37X17	19400	35000	12.0	22 g
32.0	37.0	27.0	K 32X37X27	29500	59500	12.0	36 g
32.0	37.0	28.0	K 32X37X28 TN	23100	43000	12.0	22 g
32.0	38.0	16.0	K 32X38X16	21000	34000	12.0	25 g
32.0	38.0	20.0	K 32X38X20	26000	44500	12.0	31 g
32.0	38.0	26.0	K 32X38X26 TN	27000	46500	12.0	25 g
32.0	39.0	16.0	K 32X39X16	23500	35000	12.0	36 g
32.0	39.0	18.0	K 32X39X18	26000	40500	12.0	37 g

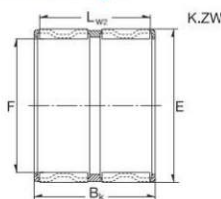
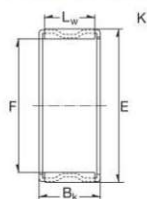
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
32.0	40.0	20.0	K 32X40X20	37000	40500	12.0	48 g
32.0	40.0	36.0	K 32X40X36	53500	91500	12.0	73 g
32.0	46.0	32.0	K 32X46X32	65500	82500	11.0	119 g
32.0	40.0	42.0	K 32X40X42 TN	49500	83500	12.0	77 g
35.0	40.0	13.0	K 35X40X13	15800	27500	11.0	18 g
35.0	40.0	17.0	K 35X40X17	20300	38000	11.0	25 g
35.0	40.0	25.0	K 35X40X25	29000	59500	11.0	31 g
35.0	40.0	27.0	K 35X40X27 TN	24500	48000	11.0	23 g
35.0	40.0	27.0	K 35X40X27	27800	62100	11.0	28 g
35.0	40.0	30.0	K 35X40X30	25000	49500	11.0	43 g
35.0	42.0	16.0	K 35X42X16	23900	37000	11.0	34 g
35.0	42.0	18.0	K 35X42X18	27000	42500	11.0	39 g
35.0	42.0	30.0	K 35X42X30	38500	67500	11.0	62 g
35.0	43.0	18.0	K 35X43X18	28000	41500	11.0	38 g
35.0	45.0	20.0	K 35X45X20	36500	49500	10.0	55 g
35.0	45.0	30.0	K 35X45X30	52500	78500	10.0	80 g
35.0	45.0	49.0	K 35X45X49	81500	13400	10.0	120 g
35.0	40.0	30.0	K 35X40X30	31500	65500	11.0	48 g
35.0	42.0	20.0	K 35X42X20	29500	48500	11.0	41 g
36.0	41.0	30.0	K 36X41X30	23000	43000	11.0	52 g
36.0	42.0	16.0	K 36X42X16	24000	42000	11.0	50 g
37.0	42.0	17.0	K 37X42X17	21900	42500	10.0	25 g
37.0	42.0	27.0	K 37X42X27	31500	67500	10.0	40 g
37.0	45.0	26.0	K 37X45X26	43500	73500	10.0	60 g
38.0	43.0	17.0	K 38X43X17	20000	38000	10.0	26 g
38.0	43.0	27.0	K 38X43X27	31000	67500	10.0	43 g
38.0	46.0	20.0	K 38X46X20	35000	56500	10.0	46 g
38.0	46.0	32.0	K 38X46X32	54500	98500	10.0	72 g
39.0	44.0	24.0	K 39X44X24	28000	58500	10.0	38 g
39.0	44.0	26.0	K 39X44X26	27000	55500	10.0	29 g
40.0	44.0	13.0	K 40X44X13	13500	28000	10.0	20 g

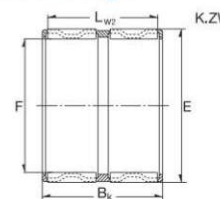
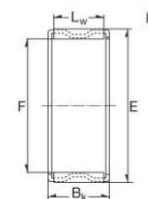
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
40.0	45.0	13.0	K 40X45X13	17100	32000	10.0	21 g
40.0	45.0	17.0	K 40X45X17	20900	41000	10.0	27 g
40.0	45.0	21.0	K 40X45X21	24400	49500	10.0	36 g
40.0	45.0	27.0	K 40X45X27	32500	72500	10.0	46 g
40.0	46.0	17.0	K 40X46X17	24500	44500	9.0	30 g
40.0	47.0	18.0	K 40X47X18	29000	49500	9.0	45 g
40.0	47.0	20.0	K 40X47X20	32000	56500	9.0	42 g
40.0	48.0	20.0	K 40X48X20	35500	58500	9.0	57 g
40.0	45.0	30.0	K 40X45X30	26000	53500	9.0	48 g
42.0	47.0	13.0	K 42X47X13	17300	33000	9.0	22 g
42.0	47.0	17.0	K 42X47X17	21100	42500	9.0	31 g
42.0	47.0	25.0	K 42X47X25 TN	27000	57500	9.0	25 g
42.0	47.0	27.0	K 42X47X27	33000	74500	9.0	46 g
42.0	48.0	35.0	K 42X48X35	35000	76000	9.0	60 g
42.0	50.0	18.0	K 42X50X18	31000	49500	9.0	53 g
42.0	50.0	20.0	K 42X50X20	34500	56500	9.0	54 g
42.0	47.0	30.0	K 42X47X30	31000	75500	9.0	54 g
43.0	48.0	17.0	K 43X48X17	21000	42500	9.0	29 g
43.0	48.0	27.0	K 43X48X27	33000	74500	9.0	45 g
43.0	50.0	18.0	K 43X50X18	30500	53500	9.0	48 g
45.0	49.0	19.0	K 45X49X19	17500	40000	8.0	27 g
45.0	50.0	17.0	K 45X50X17	22000	45000	8.0	25 g
45.0	50.0	27.0	K 45X50X27	34000	79500	8.0	50 g
45.0	50.0	32.0	K 45X50X32 TN	38000	90500	8.0	45 g
45.0	52.0	18.0	K 45X52X18	31000	56500	8.0	51 g
45.0	52.0	21.0	K 45X52X21 TN	39500	57500	8.0	32 g
45.0	53.0	20.0	K 45X53X20	38500	66500	8.0	62 g
45.0	53.0	21.0	K 45X53X21	38000	66500	8.0	65 g
45.0	53.0	22.0	K 45X53X22	42000	66500	8.0	68 g
45.0	53.0	28.0	K 45X53X28	51500	97500	8.0	78 g
45.0	59.0	18.0	K 45X59X18 TN	43500	53500	7.0	60 g

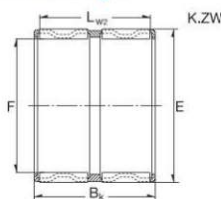
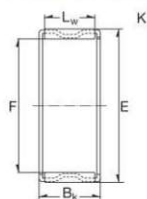
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
45.0	59.0	32.0	K 45X59X32	72500	101500	7.0	145 g
45.0	59.0	36.0	K 45X59X36	75500	108500	7.0	195 g
45.0	51.0	36.0	K 45X51X36	44500	98500	7.0	85 g
47.0	52.0	17.0	K 47X52X17	22800	48500	8.0	32 g
47.0	52.0	27.0	K 47X52X27	34500	82500	8.0	50 g
47.0	53.0	25.0	K 47X53X25	38000	81500	8.0	53 g
47.0	55.0	28.0	K 47X55X28	52500	99500	7.5	62 g
48.0	54.0	19.0	K 48X54X19	30000	60500	7.5	44 g
48.0	54.0	25.0	K 48X54X25	31000	91000	7.5	55 g
50.0	55.0	13.5	K 50X55X13.5	17500	36000	7.5	31 g
50.0	55.0	17.0	K 50X55X17	21400	46500	7.5	35 g
50.0	55.0	20.0	K 50X55X20	26000	59500	7.5	39 g
50.0	55.0	30.0	K 50X55X30	38500	96500	7.5	59 g
50.0	57.0	18.0	K 50X57X18	33000	62500	7.0	53 g
50.0	58.0	20.0	K 50X58X20	35000	61500	7.0	64 g
50.0	58.0	25.0	K 50X58X25	43500	80500	7.0	81 g
52.0	57.0	12.0	K 52X57X12	17500	36000	7.0	24 g
55.0	60.0	20.0	K 55X60X20	28000	65500	6.5	43 g
55.0	60.0	27.0	K 55X60X27	37500	96500	6.5	60 g
55.0	60.0	30.0	K 55X60X30	40500	10300	6.5	68 g
55.0	61.0	20.0	K 55X61X20	41000	11000	6.5	56 g
55.0	62.0	18.0	K 55X62X18	35000	68500	6.5	58 g
55.0	63.0	15.0	K 55X63X15	24500	40500	6.5	53 g
55.0	63.0	20.0	K 55X63X20	39500	79500	6.5	73 g
55.0	63.0	25.0	K 55X63X25	49500	99500	6.5	88 g
55.0	63.0	32.0	K 55X63X32	61500	129500	6.5	117 g
55.0	60.0	40.0	K 55X60X40	48000	132000	6.5	96 g
56.0	61.0	20.0	K 56X61X20	27000	64500	6.5	45 g
58.0	63.0	17.0	K 58X63X17	21500	63500	6.0	42 g
58.0	64.0	19.0	K 58X64X19	24500	77500	6.0	53 g
58.0	65.0	18.0	K 58X65X18	34500	69500	6.0	52 g

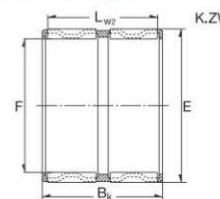
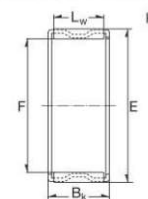
Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
58.0	65.0	38.0	K 58X65X38	48500	106500	6.0	106 g
60.0	65.0	20.0	K 60X65X20	29000	71500	6.0	50 g
60.0	65.0	30.0	K 60X65X30	42000	115500	6.0	71 g
60.0	68.0	20.0	K 60X68X20	43000	84500	5.5	79 g
60.0	68.0	23.0	K 60X68X23	49000	100500	5.5	94 g
60.0	68.0	25.0	K 60X68X25	52500	110500	5.5	97 g
60.0	68.0	27.0	K 60X68X27	59000	120500	6.0	98 g
60.0	75.0	42.0	K 60X75X42	11300	19200	5.5	240 g
60.0	66.0	33.0	K 60X66X33	45500	111500	6.0	104 g
60.0	66.0	40.0	K 60X66X40	57500	150500	5.5	116 g
60.0	68.0	30.0	K 60X68X30	44000	87500	5.5	136 g
60.0	68.0	34.0	K 60X68X34	47500	95500	5.5	140 g
62.0	70.0	40.0	K 62X70X40	65500	145500	5.5	147 g
63.0	70.0	21.0	K 63X70X21	45000	100500	5.5	75 g
64.0	70.0	16.0	K 64X70X16	27500	59500	5.5	53 g
65.0	70.0	20.0	K 65X70X20	30000	76500	5.5	49 g
65.0	70.0	30.0	K 65X70X30	43500	123500	5.5	83 g
65.0	73.0	23.0	K 65X73X23	45500	93500	5.5	100 g
65.0	73.0	30.0	K 65X73X30	56500	122500	5.5	126 g
68.0	74.0	20.0	K 68X74X20	35000	83500	5.5	65 g
68.0	74.0	30.0	K 68X74X30	46000	117500	5.5	97 g
68.0	74.0	35.0	K 68X74X35	48000	124500	5.5	116 g
68.0	75.0	32.0	K 68X75X32	53500	127500	4.5	120 g
70.0	76.0	20.0	K 70X76X20	35500	85500	4.5	70 g
70.0	76.0	30.0	K 70X76X30	51500	138500	4.5	100 g
70.0	78.0	25.0	K 70X78X25	51500	111500	4.5	115 g
70.0	78.0	30.0	K 70X78X30	59500	134500	4.5	136 g
70.0	80.0	30.0	K 70X80X30	72500	147500	4.5	150 g
70.0	78.0	46.0	K 70X78X46	77500	18800	4.5	230 g
72.0	80.0	20.0	K 72X80X20	41000	84500	4.5	94 g
73.0	79.0	20.0	K 73X79X20	36500	99500	4.5	69 g

Nadelkränze der Type K / K Needle Roller Bearings



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Dimension (mm)			Designation/Type	*Load Rating		*LimitingSpeed x1000rpm Oil	Mass (g) approx.
F	E	BK		C, dyn. N	C, stat. N		
75.0	81.0	20.0	K 75X81X20	37000	93500	4.5	72 g
75.0	81.0	30.0	K 75X81X30	51500	142000	4.5	106 g
75.0	83.0	23.0	K 75X83X23	49500	108000	4.0	113 g
75.0	83.0	30.0	K 75X83X30	61500	142000	4.0	174 g
75.0	83.0	35.0	K 75X83X35	62500	146500	4.0	165 g
75.0	83.0	40.0	K 75X83X40	72500	176500	4.0	190 g
80.0	86.0	20.0	K 80X86X20	38000	97500	4.0	76 g
80.0	86.0	30.0	K 80X86X30	55500	158500	4.0	114 g
80.0	88.0	30.0	K 80X88X30	71500	178500	4.0	141 g
80.0	88.0	40.0	K 80X88X40	75500	191500	4.0	204 g
80.0	88.0	46.0	K 80X88X46	87500	23000	4.0	235 g
85.0	92.0	20.0	K 85X92X20	44000	107500	3.5	96 g
90.0	87.0	20.0	K 90X97X20	44500	112500	3.0	103 g
90.0	98.0	27.0	K 90X98X27	60500	149500	3.0	150 g
90.0	98.0	30.0	K 90X98X30	67500	171500	3.0	172 g
95.0	102.0	20.0	K 95X102X20	45500	122500	2.9	110 g
95.0	103.0	30.0	K 95X103X30	68500	179500	2.9	177 g
95.0	103.0	40.0	K 95X103X40	82500	227500	2.9	250 g
100.0	107.0	21.0	K 100X107X21	47500	126500	2.7	120 g
100.0	108.0	27.0	K 100X108X27	56500	142500	2.7	176 g
100.0	108.0	30.0	K 100X108X30	70500	187500	2.7	190 g
105.0	112.0	21.0	K 105X112X21	47000	126500	2.5	123 g
105.0	113.0	30.0	K 105X113X30	71500	196500	2.5	198 g
110.0	117.0	24.0	K 110X117X24	55500	157500	2.3	146 g
110.0	118.0	30.0	K 110X118X30	77500	218500	2.3	217 g