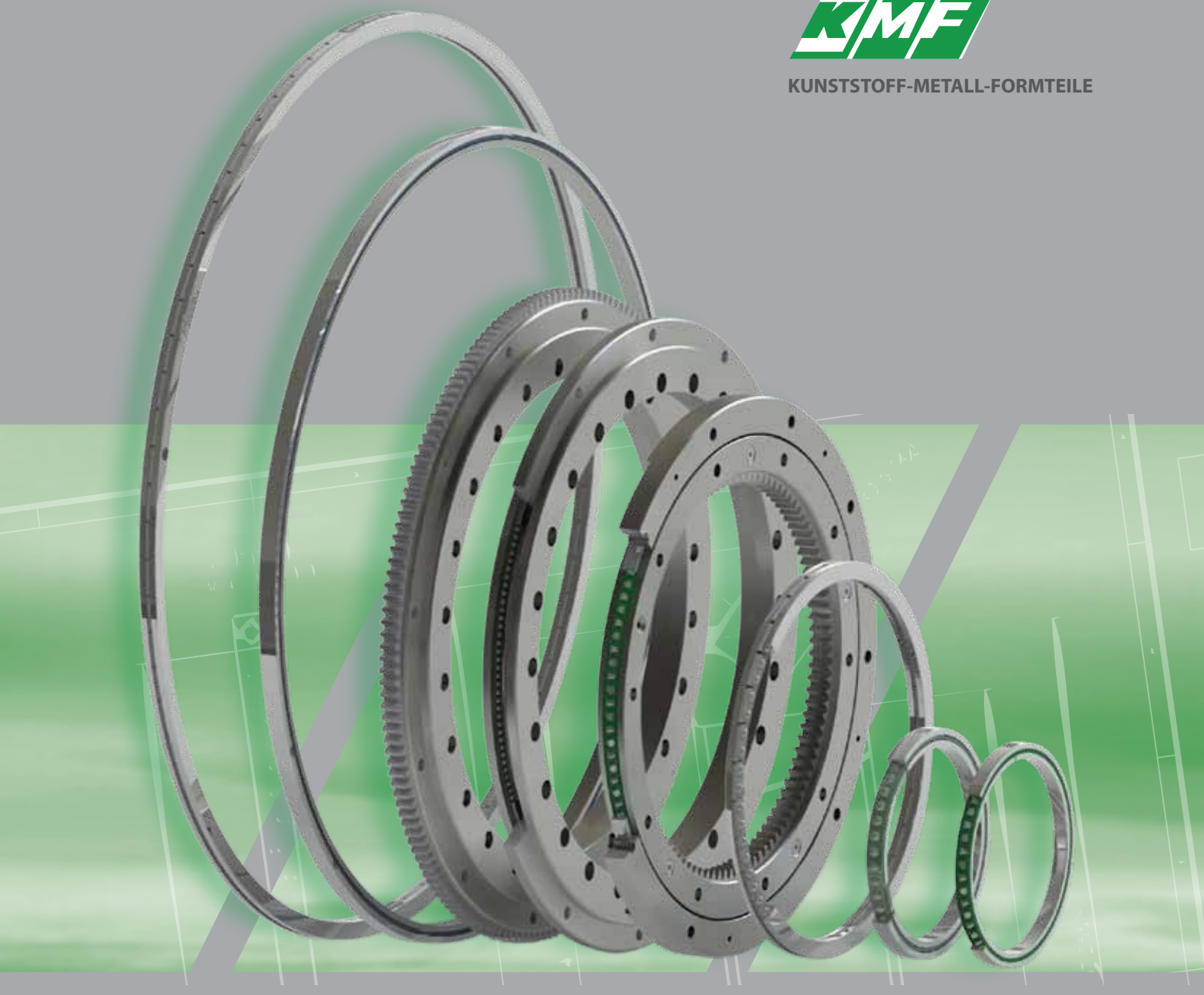
KUNSTSTOFF-METALL-FORMTEILE



SLIM-SPLIT-BEARING

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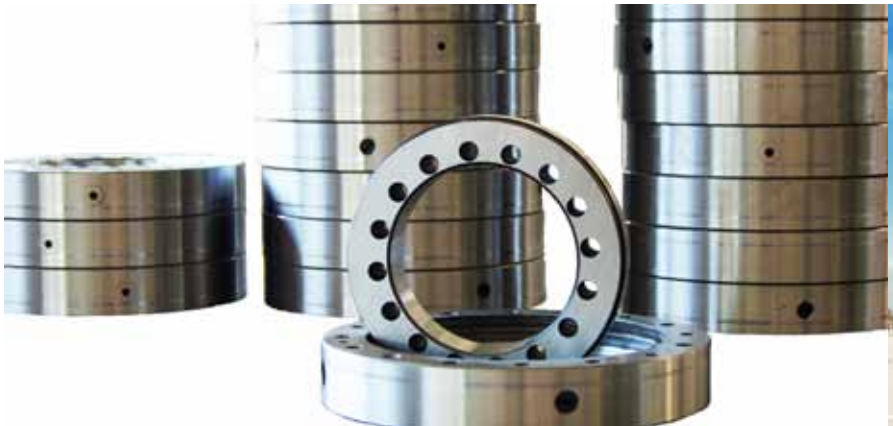


SLIM-SPLIT-BEARING

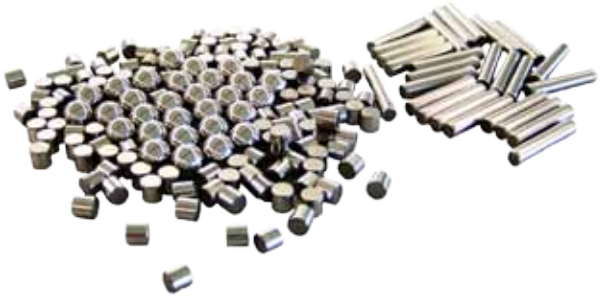
This catalogue presents all SLIM-SPLIT-BEARING products of our company. The name SLIM-SPLIT-BEARING results due to the splitted or opened bearing rings. Various bearings with various shapes and cross-cuts are available. All of them are manufactured with most modern and self-developed manufacturing methods. These bearings are manufactured at the company KMF – Kunststoff-Metall-Formteile under consideration of highest precision, quality and repeatability.

KUNSTSTOFF-METALL-FORMTEILE




KUNSTSTOFF-METALL-FORMTEILE

Table of content



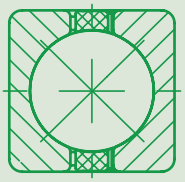
Thin ring bearing PBXS
3,175 x 3,175

Thin ring bearing PBXU
4,5 x 4,5

Thin ring bearing PBXA
6,35 x 6,35

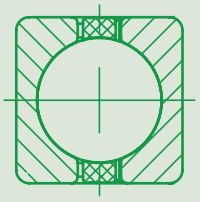
Thin ring bearing PBXC
9,525 x 9,525

Thin ring bearing
PBXD
12,7 x 12,7



Thin ring bearing
PBSD
12,7 x 12,7

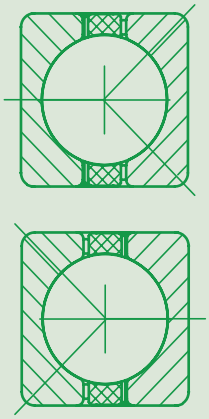
Thin ring bearing
PBCD
12,7 x 12,7



Thin ring bearing
PBXCD
12,7 x 12,7

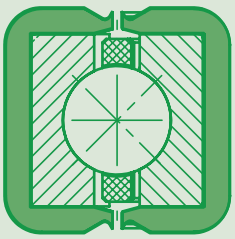
&

Thin ring bearing
PBCXD
12,7 x 12,7

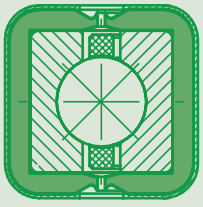


Whisper-
Thin ring bearing
PFXC
12,325 x 12,325

Whisper-
Thin ring bearing
PFXC
16,1 x 16,1



Sleeve-Whisper-
Thin ring bearing
HFXD
12,925 x 12,925



Example of calculations
for combined static
strength and nominal
service life

Technical description

Description of shape

A thin ring bearing generally means a single-row bearing, which has undependant of the bore diameter stable quadratic cross-cuts within one type series. The main characteristic features of these bearings are their extremely thin-walled bearing rings.

The KMF SLIM-SPLIT-BEARING is a four point contact ball bearing, which is able to take loads from all directions, such as axial, radial and moment loads, due to the pressure angle of 90°.

The bearing rings are manufactured by a special manufacturing process, which profiles, hardens and bends the rings in one single operation without any mechanical work. The bearing rings are not closed, but remain opened. That´s why they have characteristics of wire ball bearing insert elements, but it is more easy to assemble complete units.

The opened bearing rings enable the integration of a cage strip with holded and guided balls. A raceway system with more and bigger balls could be realised. Compared with the "classic" thin section bearings, higher static and dynamic load capacities can be achieved.

Materials

The KMF-SLIM-SPLIT-BEARINGS are manufactured in stainless steel. Bearing rings and balls are made of stainless and acid-resistant steel X46Cr13 (material No. 1.4034). The cage strip is made of Polyamide 12.

Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +100°C, for short periods up to +120°C. For special applications with higher temperatures or for example in clean room, vacuum or medic technical different options are possible; ceramic balls or additional cage alternatives with different materials like Teflon, PEEK, PTFE or PVDF are also available.

Sealing

The KMF-SLIM-SPLIT-BEARING is not sealed.

If a sealing system is necessary, it can be integrated directly in the surrounding construction. Alternatively to conventional sealing systems in the market, KMF offers profile seals as yard-goods made of Perbunan in many different styles and shapes. (see page 86 Accesoires – Sealing Profiles).

Thin ring bearing *PBXU*
PBXA
PBXC
PBXD

Bearing Cross-Cuts

The KMF-SLIM-SPLIT-BEARING can be offered in the following cross-cuts:

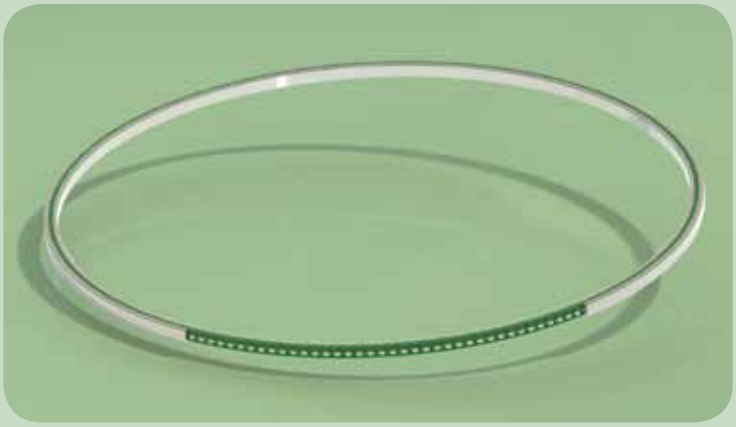
Cross-cuts		KMF-type
Short sign	Dimensions	
S	3,175 x 3,175 mm	PBXS
U	4,5 x 4,5 mm	PBXU
A	6,35 x 6,35 mm	PBXA
C	9,525 x 9,525 mm	PBXC
D	12,7 x 12,7 mm	PBXD
↪	12,7 x 12,7 mm	PBSD
↪	12,7 x 12,7 mm	PBCD

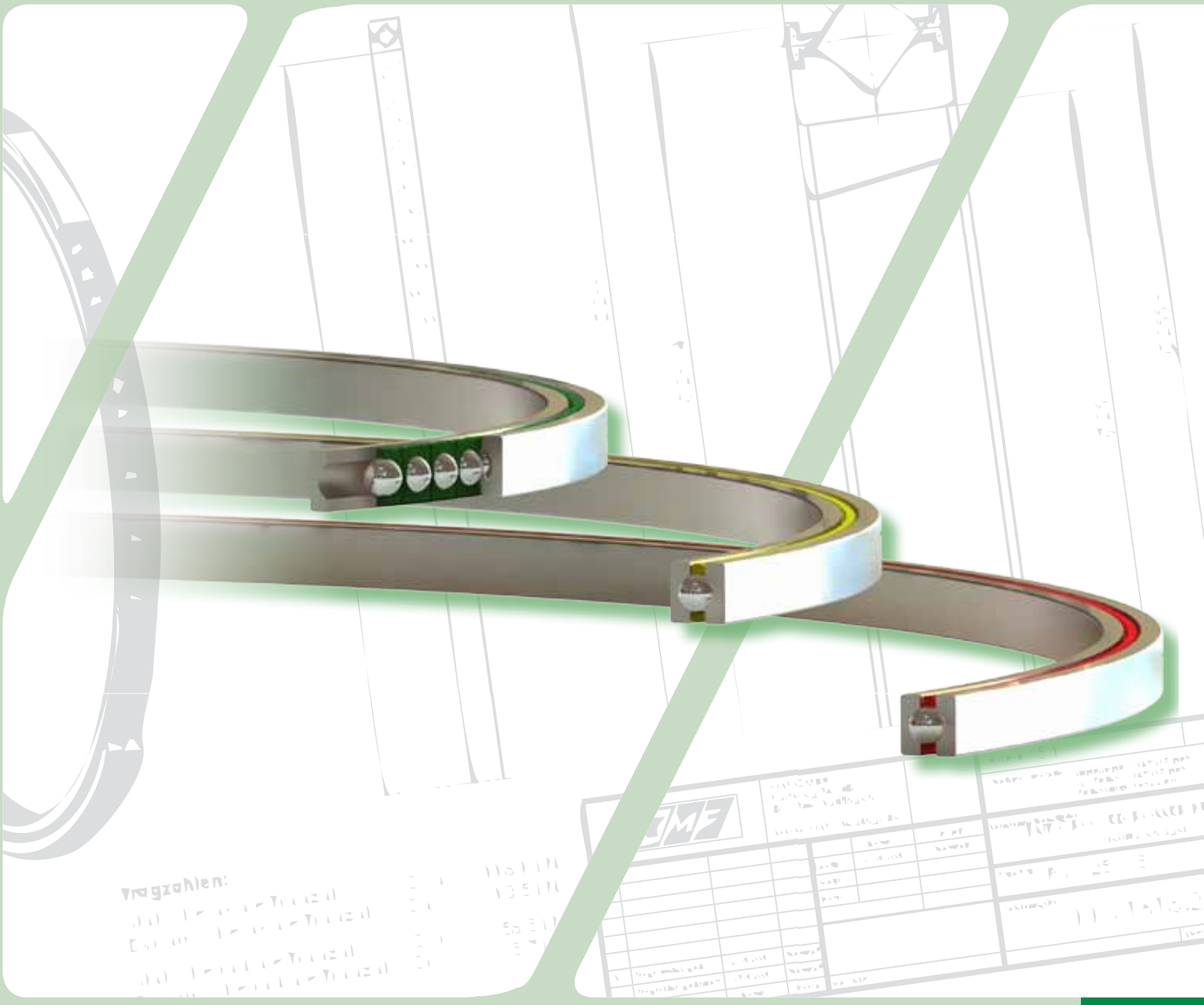
KMF can supply all bearing types of the complete diameter range of each type series within short terms. Also all other dimensions beneath the preferred series can be suplied within short terms as well.

Features

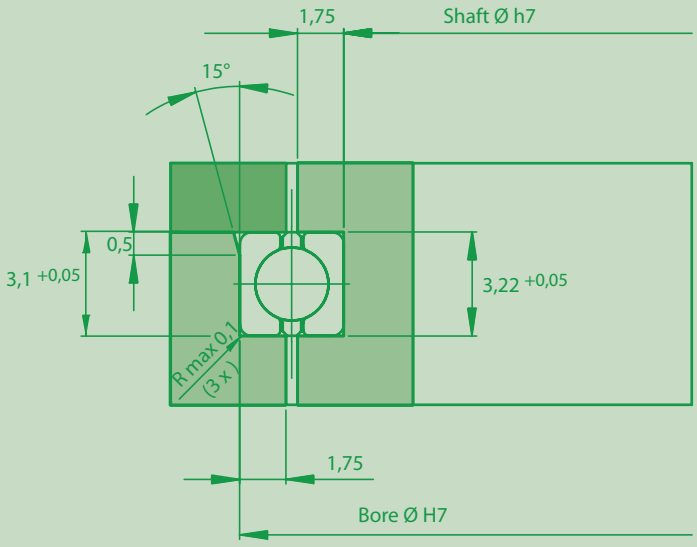
- Free choice of material of the connecting parts, e. g. aluminium
- The splitted bearing rings eliminates functional difficulties based on different material expansions, e. g. different material combinations as light metal steel and cast iron
- Corrosion resistant and low maintenance
- High static and dynamic Basic load ratings
- High durability
- High rigidity
- Low Mass
- Easy to install and economical mounting and dismounting, as special fixtures are not necessary
- Dimensions beneath preferred series can be supplied within short terms

Thin ring bearing PBXS





Fitted dimensions



Bearing dimensions

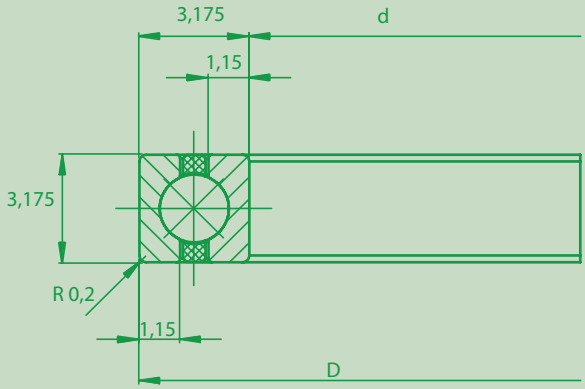
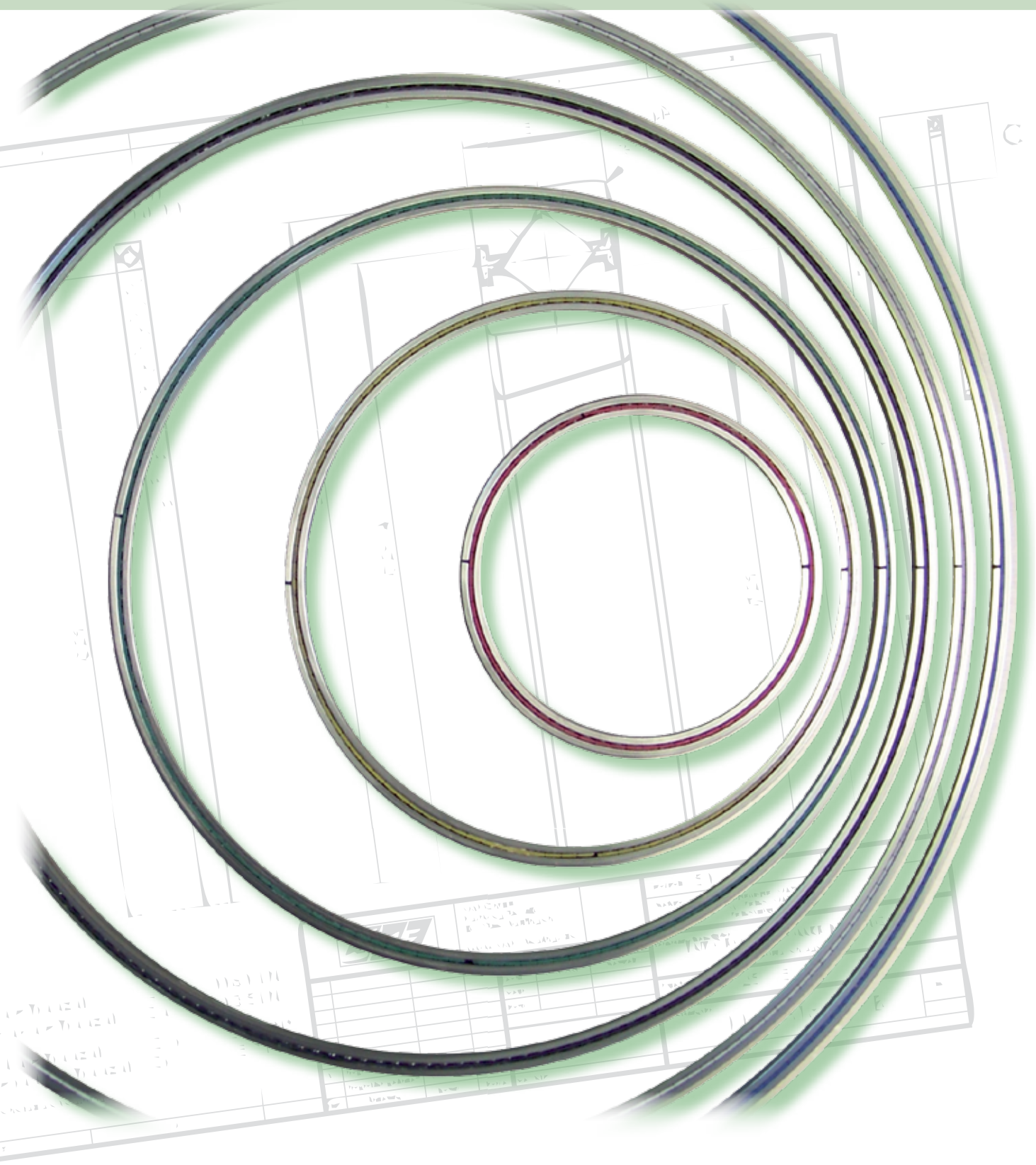


Table of dimensions (Type series PBXS)

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXS 015	38,10	1½	44,45	**1,23**	**4,0**	**1,12**	1,61	0,007	4010
PBXS 020	50,80	2	57,15	**1,36**	**5,3**	**1,23**	2,12	0,010	3010
PBXS 025	63,50	2 ½	69,85	**1,47**	**6,6**	**1,33**	2,60	0,013	2400
PBXS 030	76,20	3	82,55	**1,58**	**7,9**	**1,43**	3,15	0,015	2000
PBXS 035	88,90	3 ½	95,25	**1,67**	**9,2**	**1,51**	3,70	0,017	1720
PBXS 040	101,60	4	107,95	1,75	10,5	**1,58**	4,20	0,020	1500
PBXS 042	107,95	4 ¼	114,30	1,79	11,2	1,59	4,48	0,021	1410
PBXS 045	114,30	4 ½	120,65	1,83	11,8	1,65	4,75	0,022	1340
PBXS 047	120,65	4 ¾	127,35	1,87	12,5	1,68	4,98	0,023	1270
PBXS 050	127,00	5	133,35	1,90	13,1	1,71	5,20	0,025	1200
PBXS 055	139,70	5 ½	146,05	1,96	14,4	1,77	5,80	0,057	1090
PBXS 060	152,40	6	158,75	2,02	15,7	1,82	6,30	0,030	1000
PBXS 065	165,10	6 ½	171,45	2,08	17,0	1,88	6,80	0,032	920
PBXS 070	177,80	7	184,15	2,14	18,3	1,93	7,30	0,035	860
PBXS 075	190,50	7 ½	196,85	2,19	19,6	1,98	7,80	0,037	800
PBXS 080	203,20	8	209,55	2,25	20,9	2,03	8,40	0,040	750
PBXS 085	215,90	8 ½	222,25	2,30	22,2	2,07	8,90	0,042	710
PBXS 090	228,60	9	234,95	2,34	23,5	2,11	9,40	0,045	670

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXS 095	241,30	9 ½	247,65	2,39	24,8	2,16	9,90	0,047	630
PBXS 100	254,00	10	260,35	2,44	26,0	2,20	10,40	0,050	600
PBXS 105	266,70	10 ½	273,05	2,48	27,5	2,24	11,00	0,052	570
PBXS 110	279,40	11	285,75	2,50	28,5	2,27	11,50	0,055	550
PBXS 115	292,10	11 ½	298,45	2,55	30,0	2,31	12,00	0,057	520
PBXS 120	304,80	12	311,15	2,60	31,5	2,35	12,50	0,060	500
PBXS 125	317,50	12 ½	323,85	2,65	32,5	2,38	13,00	0,062	480
PBXS 130	330,20	13	336,55	2,70	34,0	2,42	13,60	0,065	460
PBXS 135	342,90	13 ½	349,25	2,70	35,0	2,45	14,10	0,067	450
PBXS 140	355,60	14	361,95	2,75	36,5	2,48	14,60	0,070	430
PBXS 145	368,30	14 ½	374,65	2,80	38,0	2,50	15,10	0,072	410
PBXS 150	381,00	15	387,35	2,80	39,0	2,55	15,70	0,075	400
PBXS 155	393,70	15 ½	400,05	2,85	40,5	2,60	16,20	0,077	390
PBXS 160	406,40	16	412,75	2,90	41,5	2,60	16,70	0,080	380
PBXS 165	419,10	16 ½	425,45	2,90	43,0	2,65	17,20	0,082	360
PBXS 170	431,80	17	438,15	2,95	44,5	2,65	17,70	0,085	350
PBXS 175	444,50	17 ½	450,85	3,00	45,5	2,70	18,20	0,087	340
PBXS 180	457,20	18	463,55	3,00	47,0	2,70	18,20	0,090	330
PBXS 185	469,90	18 ½	476,25	3,05	48,0	2,75	19,30	0,092	320
PBXS 190	482,60	19	488,95	3,10	49,5	2,75	19,80	0,095	320
PBXS 195	495,30	19 ½	501,65	3,10	51,0	2,80	20.30	0,097	310
PBXS 200	508,00	20	514,35	3,15	52,0	2,85	20,90	0,100	300
PBXS 210	533,40	21	539,75	3,20	55,0	2,90	21,90	0,105	290
PBXS 220	558,80	22	565,15	3,25	57,0	2,95	22,90	0,110	270
PBXS 230	584,20	23	590,55	3,30	60,0	3,00	24,00	0,115	260
PBXS 240	609,60	24	615,95	3,35	63,0	3,00	25,00	0,120	250
PBXS 250	635,00	25	641,35	3,40	65,0	3,05	26,00	0,125	240
PBXS 260	660,40	26	666,75	3,45	68,0	3,10	27,00	0,130	230
PBXS 270	685,80	27	692,15	3,50	70,0	3,15	28,00	0,135	220
PBXS 280	711,20	28	717,55	3,55	73,0	3,20	29,00	0,140	210
PBXS 290	736,60	29	742,95	3,60	76,0	3,25	30,00	0,145	210
PBXS 300	762,00	30	768,35	3,65	78,0	3,30	31,50	0,150	200

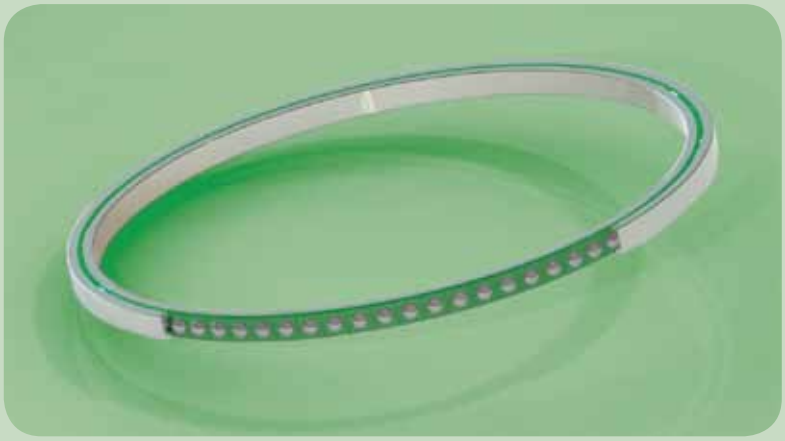
1) Other dimensions on request

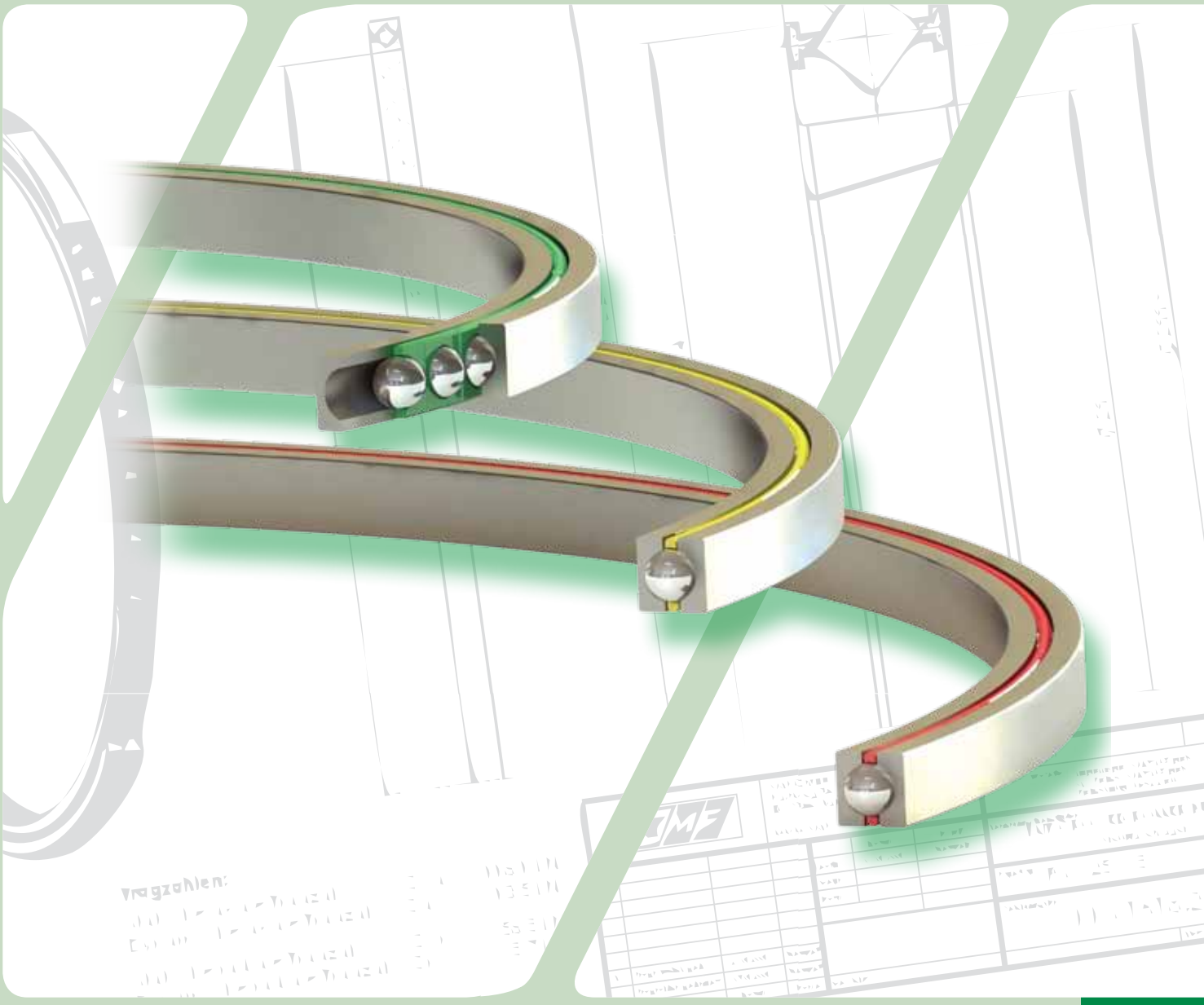


Exclusively with KMF:

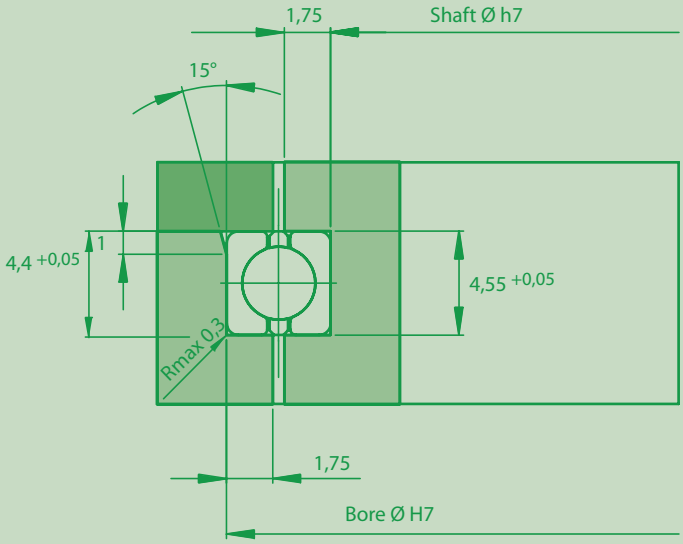
With the type series PBXS and PBXU we can offer our customer thin ring bearings with minimum bearing cross-cuts and large diameters.

Thin ring bearing PBXU





Fitted dimensions



Bearing dimensions

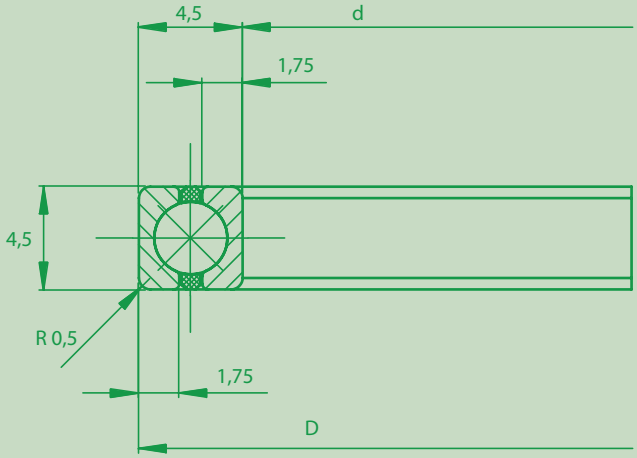


Table of dimensions (Type series PBXU)

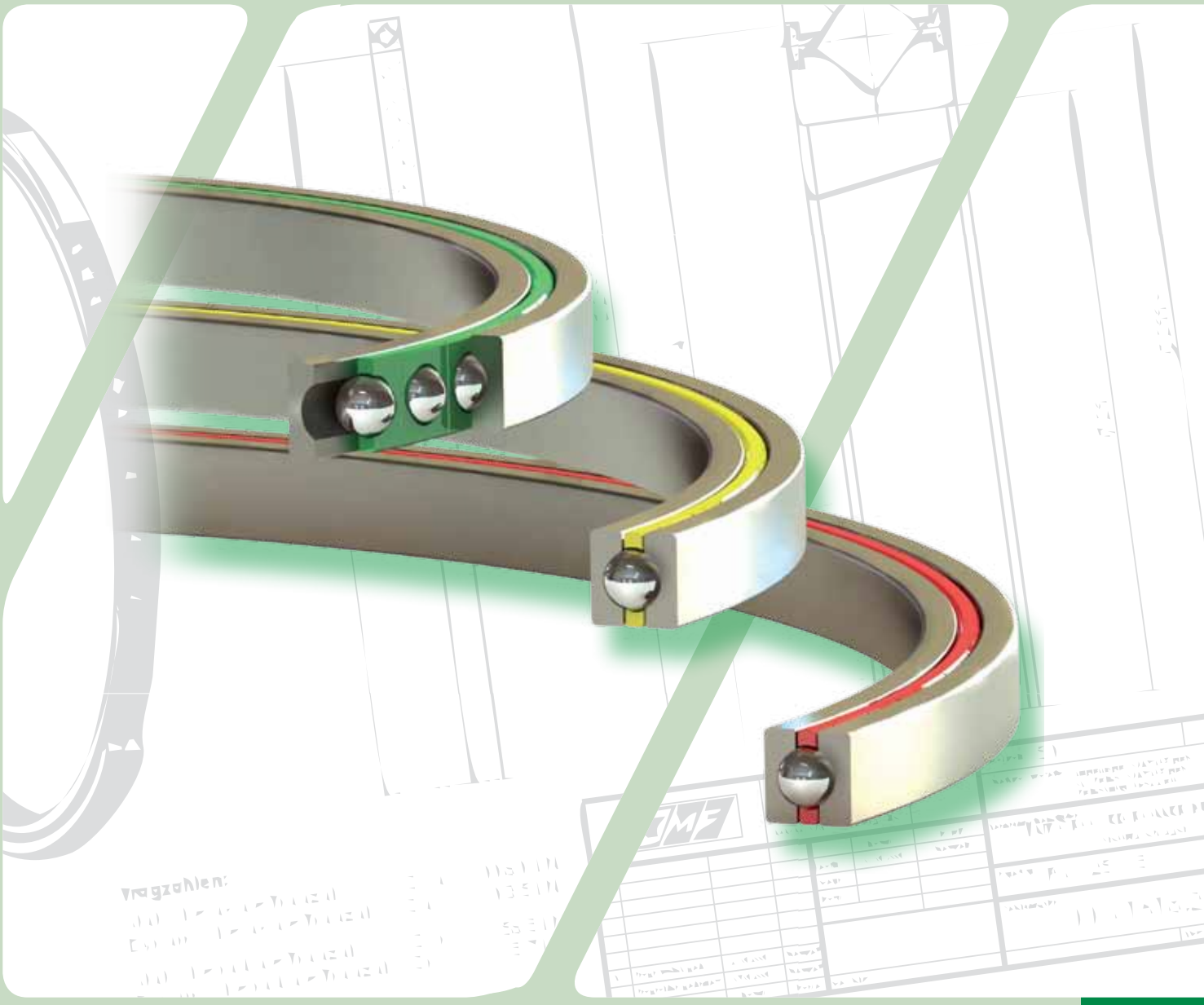
KMF-type [1]	Bearing dimension		Basic load ratings				Mass	Limiting speeds
	d	D	Axial		Radial			
			Dyn.	Stat.	Dyn.	Stat.		
			C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	kN	kN	kN	kN	kg	min^{-1}
PBXU 0035	35	44	2,50	6,6	2,28	2,65	0,014	4360
PBXU 0040	40	49	2,65	7,6	2,41	3,05	0,016	3820
PBXU 0045	45	54	2,80	8,6	2,50	3,45	0,018	3390
PBXU 0050	50	59	2,85	9,3	2,60	3,75	0,020	3050
PBXU 0055	55	64	2,90	10,3	2,70	4,10	0,022	2780
PBXU 0060	60	69	3,00	11,3	2,80	4,50	0,024	2550
PBXU 0065	65	74	3,10	12,0	2,85	4,80	0,025	2350
PBXU 0070	70	79	3,20	13,0	2,90	5,20	0,027	2180
PBXU 0075	75	84	3,30	14,0	3,00	5,60	0,029	2040
PBXU 0080	80	89	3,40	15,0	3,10	6,00	0,031	1910
PBXU 0085	85	94	3,45	15,7	3,10	6,30	0,033	1800
PBXU 0090	90	99	3,55	16,7	3,20	6,70	0,035	1700
PBXU 0095	95	104	3,60	17,7	3,25	7,10	0,037	1610
PBXU 0100	100	109	3,70	18,7	3,35	7,50	0,039	1530
PBXU 0110	110	119	3,80	20,4	3,45	8,20	0,043	1390
PBXU 0120	120	129	3,90	22,4	3,55	9,00	0,047	1270
PBXU 0130	130	139	4,00	24,1	3,65	9,60	0,051	1170
PBXU 0140	140	149	4,15	26,0	3,75	10,40	0,055	1090
PBXU 0150	150	159	4,25	28,0	3,85	11,10	0,059	1020

KMF-type [1]	Bearing dimension		Basic load ratings				Mass	Limiting speeds
	d	D	Axial		Radial			
			Dyn.	Stat.	Dyn.	Stat.		
			C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	kN	kN	kN	kN	kg	min^{-1}
PBXU 0160	160	169	4,35	30,0	3,95	11,90	0,062	950
PBXU 0170	170	179	4,45	31,5	4,00	12,60	0,066	900
PBXU 0180	180	189	4,55	33,5	4,10	13,40	0,070	850
PBXU 0190	190	199	4,65	35,0	4,25	14,10	0,074	800
PBXU 0200	200	209	4,65	37,0	4,25	14,80	0,078	760
PBXU 0210	210	219	4,80	39,0	4,35	15,20	0,082	730
PBXU 0220	220	229	4,85	40,5	4,40	16,20	0,086	690
PBXU 0230	230	239	4,95	42,5	4,50	17,00	0,090	660
PBXU 0240	240	249	5,00	44,5	4,55	17,70	0,094	640
PBXU 0250	250	259	5,10	46,5	4,65	18,50	0,098	610
PBXU 0260	260	269	5,20	48,0	4,70	19,20	0,102	590
PBXU 0270	270	279	5,30	50,0	4,75	20,00	0,106	570
PBXU 0280	280	289	5,30	52,0	4,80	20,70	0,110	550
PBXU 0290	290	299	5,40	54,0	4,90	21,50	0,113	530
PBXU 0300	300	309	5,50	55,0	4,95	22,20	0,117	510
PBXU 0310	310	319	5,50	57,0	5,00	23,00	0,121	490
PBXU 0320	320	329	5,60	59,0	5,10	23,60	0,125	480
PBXU 0330	330	339	5,70	61,0	5,10	24,40	0,129	460
PBXU 0340	340	349	5,70	63,0	5,20	25,00	0,133	450
PBXU 0350	350	359	5,80	65,0	5,20	26,00	0,137	440
PBXU 0360	360	369	5,80	67,0	5,30	26,50	0,141	420
PBXU 0370	370	379	5,90	68,0	5,30	27,50	0,145	410
PBXU 0380	380	389	6,00	70,0	5,40	28,00	0,149	400
PBXU 0390	390	399	6,00	72,0	5,40	29,00	0,153	390
PBXU 0400	400	409	6,10	74,0	5,50	29,50	0,157	380
PBXU 0410	410	419	6,10	76,0	5,50	30,50	0,161	370
PBXU 0420	420	429	6,20	78,0	5,60	31,00	0,165	360
PBXU 0430	430	439	6,20	80,0	5,60	32,00	0,169	360
PBXU 0440	440	449	6,30	81,0	5,70	32,50	0,173	350
PBXU 0450	450	459	6,30	83,0	5,70	33,00	0,177	340
PBXU 0460	460	469	6,40	85,0	5,80	34,00	0,181	330
PBXU 0470	470	479	6,40	87,0	5,80	34,50	0,185	320
PBXU 0480	480	489	6,50	89,0	5,90	35,50	0,189	320

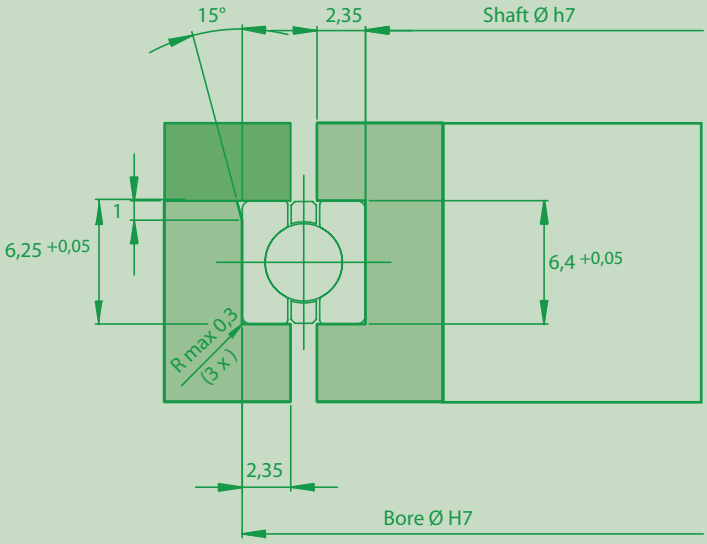
KMF-type 1)	Bearing dimension		Basic load ratings				Mass	Limiting speeds
	d	D	Axial		Radial			
			Dyn.	Stat.	Dyn.	Stat.		
			C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	kN	kN	kN	kN	kg	min^{-1}
PBXU 0490	490	499	6,50	90,0	5,90	36,00	0,193	310
PBXU 0500	500	509	6,60	92,0	5,90	37,00	0,197	310
PBXU 0510	510	519	6,60	94,0	6,00	37,50	0,201	300
PBXU 0520	520	529	6,70	96,0	6,00	38,50	0,205	290
PBXU 0530	530	539	6,70	98,0	6,10	39,00	0,209	290
PBXU 0540	540	549	6,80	100,0	6,10	40,00	0,213	280
PBXU 0550	550	559	6,80	102,0	6,20	40,50	0,217	280
PBXU 0560	560	569	6,90	103,0	6,20	41,50	0,221	270
PBXU 0570	570	579	6,90	105,0	6,20	42,00	0,225	270
PBXU 0580	580	589	6,90	107,0	6,30	43,00	0,229	260
PBXU 0590	590	599	7,00	109,0	6,30	43,50	0,233	260
PBXU 0600	600	609	7,00	111,0	6,40	44,50	0,237	250
PBXU 0610	610	619	7,10	113,0	6,40	45,00	0,241	250
PBXU 0620	620	629	7,10	115,0	6,40	46,00	0,245	250
PBXU 0630	630	639	7,20	116,0	6,50	46,50	0,249	240
PBXU 0640	640	649	7,20	118,0	6,50	47,50	0,253	240
PBXU 0650	650	659	7,30	120,0	6,6	48,20	0,257	235
PBXU 0660	660	669	7,30	122,0	6,60	49,00	0,261	230
PBXU 0670	670	679	7,40	124,0	6,70	49,70	0,265	230
PBXU 0680	680	689	7,40	125,0	6,70	50,50	0,269	225
PBXU 0690	690	699	7,50	127,0	6,80	51,20	0,273	220
PBXU 0700	700	709	7,50	129,0	6,80	51,90	0,277	220
PBXU 0710	710	719	7,60	131,0	6,80	52,70	0,281	215
PBXU 0720	720	729	7,60	133,0	6,90	53,40	0,285	215
PBXU 0730	730	739	7,70	135,0	6,90	54,20	0,289	210
PBXU 0740	740	749	7,70	137,0	7,00	54,90	0,293	210
PBXU 0750	750	759	7,80	138,0	7,00	55,70	0,296	205
PBXU 0760	760	769	7,80	140,0	7,10	56,40	0,300	205
PBXU 0770	770	779	7,90	142,0	7,10	57,10	0,304	200
PBXU 0780	780	789	7,90	144,0	7,20	57,90	0,308	200
PBXU 0790	790	799	8,00	146,0	7,20	58,60	0,312	195
PBXU 0800	800	809	8,00	148,0	7,30	59,40	0,316	195

1) Other dimensions on request

Thin ring bearing PBXA



Fitted dimensions



Bearing dimensions

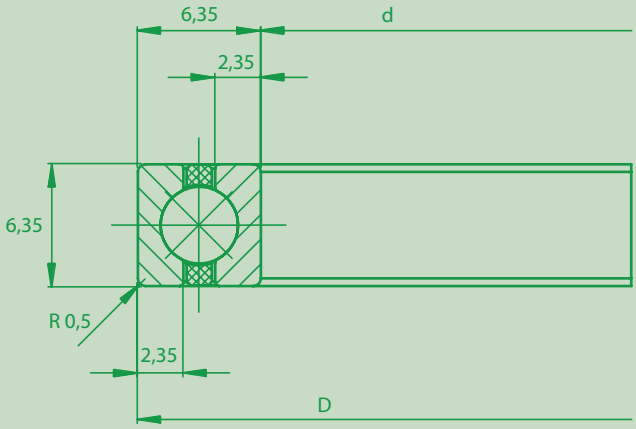


Table of dimensions (Type series PBXA)

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXA 020	50,80	2	63,50	3,75	11,0	3,40	4,4	0,04	3010
PBXA 025	63,50	2 ½	76,20	4,10	13,7	3,70	5,5	0,05	2400
PBXA 030	76,20	3	88,90	4,35	16,4	4,00	6,6	0,06	2000
PBXA 035	88,90	3 ½	101,60	4,60	19,2	4,20	7,7	0,07	1720
PBXA 040	101,60	4	114,30	4,85	21,9	4,40	8,8	0,08	1500
PBXA 042	107,95	4 ¼	120,65	4,95	23,1	4,50	9,2	0,09	1410
PBXA 045	114,30	4 ½	127,00	5,10	24,6	4,60	9,9	0,09	1340
PBXA 047	120,65	4 ¾	133,35	5,10	26,0	4,65	10,3	0,10	1270
PBXA 050	127,00	5	139,70	5,30	27,5	4,75	11,0	0,11	1200
PBXA 055	139,70	5 ½	152,40	5,50	30,0	4,95	12,0	0,11	1090
PBXA 060	152,40	6	165,10	5,60	32,5	5,10	13,0	0,12	1000
PBXA 065	165,10	6 ½	177,80	5,80	35,0	5,20	14,1	0,13	920
PBXA 070	177,80	7	190,50	5,90	38,0	5,40	15,2	0,14	860
PBXA 075	190,50	7 ½	203,20	6,10	40,5	5,50	16,3	0,15	800
PBXA 080	203,20	8	215,90	6,20	43,5	5,60	17,4	0,16	750
PBXA 085	215,90	8 ½	228,60	6,40	46,0	5,80	18,5	0,17	710
PBXA 090	228,60	9	241,30	6,50	49,0	5,90	19,6	0,18	670
PBXA 095	241,30	9 ½	254,00	6,60	52,0	6,00	20,7	0,19	630

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXA 100	254,00	10	266,70	6,80	54,0	6,10	21,8	0,20	600
PBXA 105	266,70	10 ½	279,40	6,90	57,0	6,20	22,7	0,21	570
PBXA 110	279,40	11	292,10	7,00	59,0	6,30	23,8	0,22	550
PBXA 115	292,10	11 ½	304,80	7,10	62,0	6,40	24,9	0,23	520
PBXA 120	304,80	12	317,50	7,20	65,0	6,50	26,0	0,24	500
PBXA 125	317,50	12 ½	330,20	7,20	66,0	6,60	26,5	0,25	480
PBXA 130	330,20	13	342,90	7,40	70,0	6,70	28,0	0,26	460
PBXA 135	342,90	13 ½	355,60	7,50	73,0	6,80	29,5	0,27	450
PBXA 140	355,60	14	368,30	7,40	76,0	6,90	30,5	0,28	430
PBXA 145	368,30	14 ½	381,00	7,70	78,0	7,00	31,5	0,29	410
PBXA 150	381,00	15	393,70	7,80	81,0	7,10	32,5	0,30	400
PBXA 155	393,70	15 ½	406,40	7,90	84,0	7,10	33,5	0,31	390
PBXA 160	406,40	16	419,10	8,00	86,0	7,20	34,5	0,32	380
PBXA 165	419,10	16 ½	431,80	8,10	89,0	7,30	35,5	0,33	360
PBXA 170	431,80	17	444,50	8,20	92,0	7,40	37,0	0,34	350
PBXA 175	444,50	17 ½	457,20	8,30	95,0	7,50	38,0	0,35	340
PBXA 180	457,20	18	469,90	8,40	97,0	7,60	39,0	0,36	330
PBXA 185	469,90	18 ½	482,60	8,40	100,0	7,60	40,0	0,37	320
PBXA 190	482,60	19	495,30	8,50	103,0	7,70	41,0	0,38	320
PBXA 195	495,30	19 ½	508,00	8,60	105,0	7,80	42,0	0,39	310
PBXA 200	508,00	20	520,70	8,70	108,0	7,80	43,0	0,40	300
PBXA 210	533,40	21	546,10	8,80	113,0	8,00	45,5	0,41	290
PBXA 220	558,80	22	571,50	9,00	119,0	8,10	47,5	0,43	270
PBXA 230	584,20	23	596,90	9,10	124,0	8,20	49,5	0,45	260
PBXA 240	609,60	24	622,30	9,30	130,0	8,40	52,0	0,47	250
PBXA 250	635,00	25	647,70	9,40	135,0	8,50	54,0	0,49	240
PBXA 260	660,40	26	673,10	9,50	140,0	8,60	56,0	0,51	230
PBXA 270	685,80	27	698,50	9,70	146,0	8,70	58,0	0,53	220
PBXA 280	711,20	28	723,90	9,80	151,0	8,70	60,0	0,55	210
PBXA 290	736,60	29	749,30	9,90	156,0	9,00	63,0	0,57	210
PBXA 300	762,00	30	774,70	10,10	162,0	9,10	65,0	0,59	200

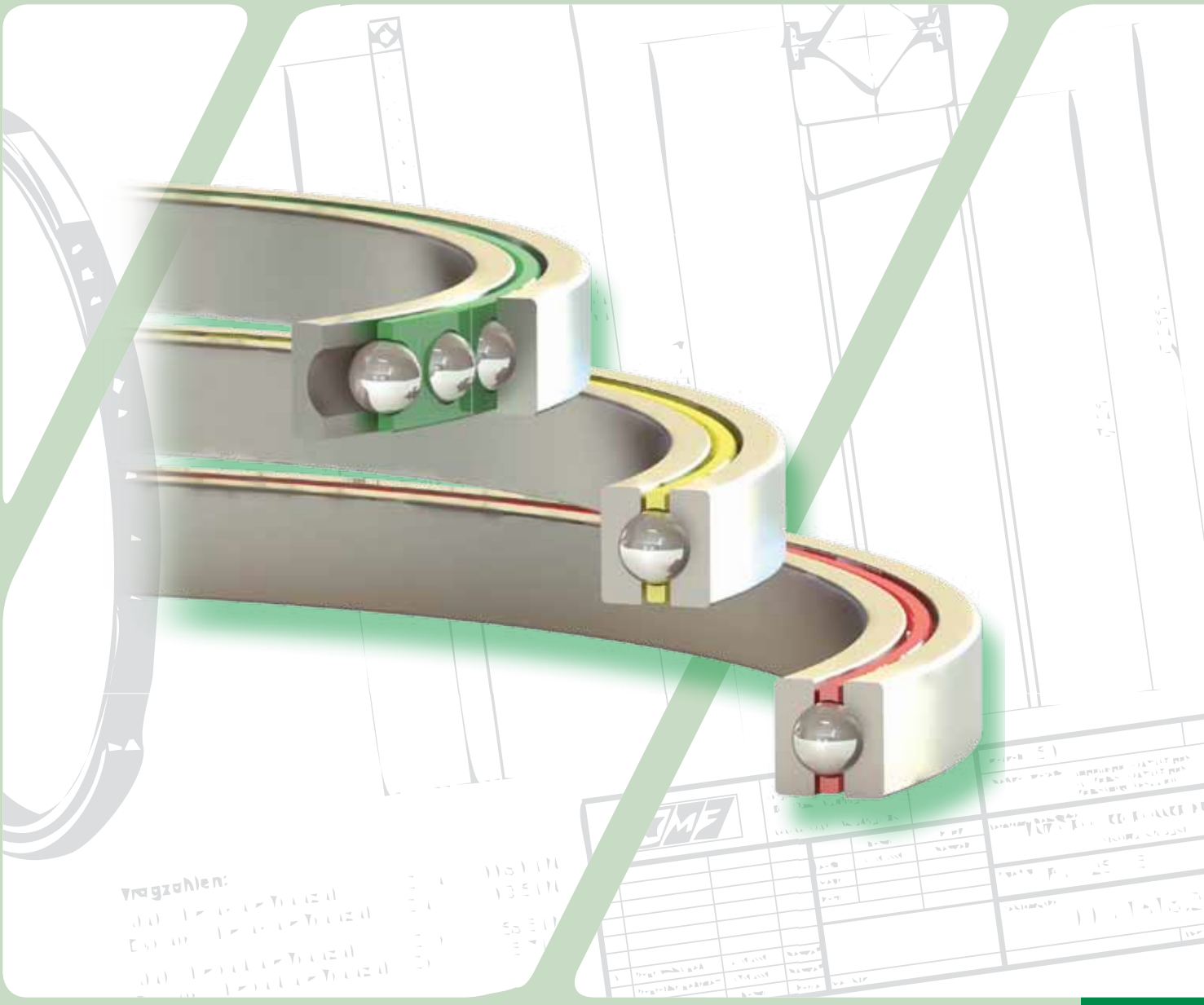
1) Other dimensions on request

Manufacturer comparative list

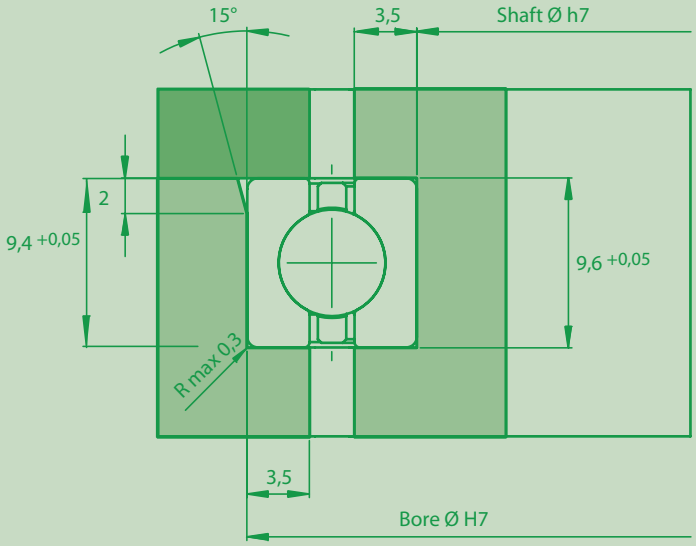
KMF	Bearing dimension			KAYDON	FAG	SKF	INA	Franke
KMF-type	d		D	KAYDON-type	FAG-type	SKF-type	INA-type	Franke-type
	mm	inch	mm					
PBXA 020	50,80	2	63,50	KA 020 XPO	L18QA200T	FPXA 200	CSXA 020	----
PBXA 025	63,50	2 ½	76,20	KA 025 XPO	L18QA208T	FPXA 208	CSXA 025	----
PBXA 030	76,20	3	88,90	KA 030 XPO	L18QA300T	FPXA 300	CSXA 030	----
PBXA 035	88,90	3 ½	101,60	KA 035 XPO	L18QA308YH	FPXA 308	CSXA 035	----
PBXA 040	101,60	4	114,30	KA 040 XPO	L18QA400T	FPXA 400	CSXA 040	----
PBXA 042	107,95	4 ¼	120,65	KA 042 XPO	L18QA404YH	FPXA 404	CSXA 042	----
PBXA 045	114,30	4 ½	127,00	KA 045 XPO	L18QA408YH	FPXA 408	CSXA 045	----
PBXA 047	120,65	4 ¾	133,35	KA 047 XPO	L18QA412YH	FPXA 412	CSXA 047	----
PBXA 050	127,00	5	139,70	KA 050 XPO	L18QA500YH	FPXA 500	CSXA 050	----
PBXA 055	139,70	5 ½	152,40	KA 055 XPO	L18QA508YH	FPXA 508	CSXA 055	----
PBXA 060	152,40	6	165,10	KA 060 XPO	L18QA600YH	FPXA 600	CSXA 060	----
PBXA 065	165,10	6 ½	177,80	KA 065 XPO	L18QA608YH	FPXA 608	CSXA 065	----
PBXA 070	177,80	7	190,50	KA 070 XPO	L18QA700YH	FPXA 700	CSXA 070	----
PBXA 075	190,50	7 ½	203,20	KA 075 XPO	L18QA708YH	FPXA 708	CSXA 075	----
PBXA 080	203,20	8	215,90	KA 080 XPO	L18QA800YH	FPXA 800	CSXA 080	----
PBXA 085	215,90	8 ½	228,60	----	----	----	----	----
PBXA 090	228,60	9	241,30	KA 090 XPO	L18QA900YH	FPXA 900	CSXA 090	----
PBXA 095	241,30	9 ½	254,00	----	----	----	----	----
PBXA 100	254,00	10	266,70	KA100 XPO	L18QA1000YH	FPXA 1000	CSXA 100	----
PBXA 105	266,70	10 ½	279,40	----	----	----	----	----
PBXA 110	279,40	11	292,10	KA 110 XPO	L18QA1100YH	FPXA 1100	CSXA 110	----
PBXA 115	292,10	11 ½	304,80	----	----	----	----	----
PBXA 120	304,80	12	317,50	KA 120 XPO	L18QA1200YH	FPXA 1200	CSXA 120	----
PBXA 125	317,50	12 ½	330,20	----	----	----	----	----
PBXA 130	330,20	13	342,90	----	----	----	----	----
PBXA 135	342,90	13 ½	355,60	----	----	----	----	----
PBXA 140	355,60	14	368,30	----	----	----	----	----
PBXA 145	368,30	14 ½	381,00	----	----	----	----	----
PBXA 150	381,00	15	393,70	----	----	----	----	----
➥ 300	762,00	30	774,70	----	----	----	----	----

➥) *For this KMF-type series (Steps of 5) no types of other manufacturers do exist*

Thin ring bearing PBXC



Fitted dimensions



Bearing dimensions

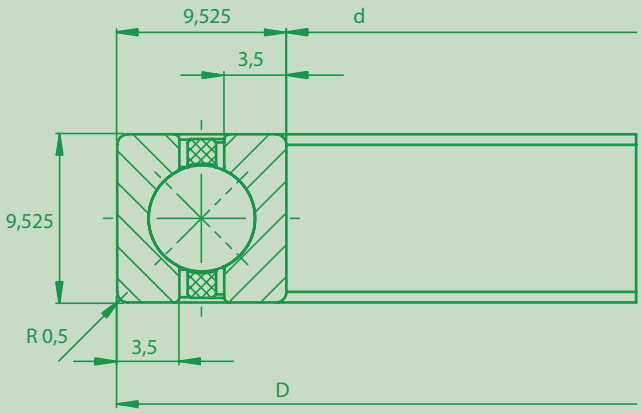


Table of dimensions (Type series PBXC)

KMF-type 1)	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXC 040	101,60	4	120,65	9,30	37,0	8,50	14,7	0,18	1500
PBXC 042	107,95	4 ¼	127,00	9,60	39,5	8,70	15,8	0,19	1410
PBXC 045	114,30	4 ½	133,35	9,70	41,0	8,80	16,5	0,20	1340
PBXC 047	120,65	4 ¾	139,70	10,00	44,0	9,00	17,5	0,21	1270
PBXC 050	127,00	5	146,05	10,10	45,5	9,10	18,2	0,22	1200
PBXC 055	139,70	5 ½	158,75	10,60	51,0	9,60	20,3	0,24	1090
PBXC 060	152,40	6	171,45	10,90	55,0	9,80	22,1	0,26	1000
PBXC 065	165,10	6 ½	184,15	11,20	60,0	10,10	23,9	0,28	920
PBXC 070	177,80	7	196,85	11,50	64,0	10,40	25,5	0,30	860
PBXC 075	190,50	7 ½	209,55	11,70	68,0	10,60	27,5	0,32	800
PBXC 080	203,20	8	222,25	12,00	73,0	10,90	29,0	0,34	750
PBXC 085	215,90	8 ½	234,95	12,20	77,0	11,10	31,0	0,36	710
PBXC 090	228,60	9	247,65	12,50	82,0	11,30	32,5	0,38	670
PBXC 095	241,30	9 ½	260,35	12,80	87,0	11,60	35,0	0,39	630
PBXC 100	254,00	10	273,05	13,00	91,0	11,80	36,5	0,41	600
PBXC 105	266,70	10 ½	285,75	13,30	96,0	12,00	38,5	0,43	570
PBXC 110	279,40	11	298,45	13,50	100,0	12,20	40,0	0,45	550
PBXC 115	292,10	11 ½	311,15	13,70	105,0	12,40	42,0	0,47	520

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXC 120	304,80	12	323,85	13,90	109,0	12,60	43,5	0,49	500
PBXC 130	330,20	13	349,25	14,30	118,0	12,90	47,0	0,53	460
PBXC 140	355,60	14	374,65	14,70	127,0	13,30	51,0	0,56	430
PBXC 150	381,00	15	400,05	15,10	136,0	13,60	54,0	0,60	400
PBXC 160	406,40	16	425,45	15,40	145,0	13,90	58,0	0,64	380
PBXC 170	431,80	17	450,85	15,70	154,0	14,20	62,0	0,68	350
PBXC 180	457,20	18	476,25	16,10	163,0	14,50	65,0	0,72	330
PBXC 190	482,60	19	501,65	16,40	172,0	14,80	69,0	0,76	320
PBXC 200	508,00	20	527,05	16,70	181,0	15,10	72,0	0,79	300
PBXC 210	533,40	21	552,45	17,00	190,0	15,40	76,0	0,83	290
PBXC 220	558,80	22	577,85	17,30	199,0	15,60	79,0	0,87	270
PBXC 230	584,20	23	603,25	17,60	208,0	15,90	83,0	0,91	260
PBXC 240	609,60	24	628,65	17,90	217,0	16,10	87,0	0,95	250
PBXC 250	635,00	25	654,05	18,10	226,0	16,40	90,0	0,98	240
PBXC 260	660,40	26	679,45	18,40	235,0	16,60	94,0	1,02	230
PBXC 270	685,80	27	704,85	18,70	245,0	16,90	98,0	1,06	220
PBXC 280	711,20	28	730,25	18,90	255,0	17,10	101,0	1,10	210
PBXC 290	736,60	29	755,65	19,10	260,0	17,30	105,0	1,14	210
PBXC 300	762,00	30	781,05	19,30	270,0	17,50	108,0	1,18	200
PBXC 310	787,40	31	806,45	19,60	280,0	17,70	112,0	1,22	190
PBXC 320	812,80	32	831,85	19,80	290,0	17,90	116,0	1,26	190
PBXC 330	838,20	33	857,25	20,00	300,0	18,10	119,0	1,30	180
PBXC 340	863,60	34	882,65	20,30	305,0	18,50	123,0	1,34	180

1) Other dimensions on request

Component parts PBXC

(1) Bearing outer ring

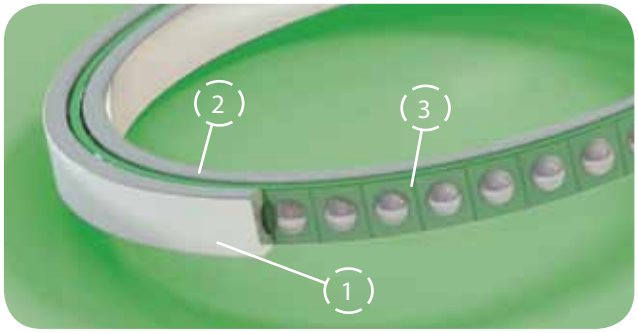
Conformed Raceway

(2) Bearing inner ring

Conformed Raceway

(3) Cage strip with balls

Balls holded and guided

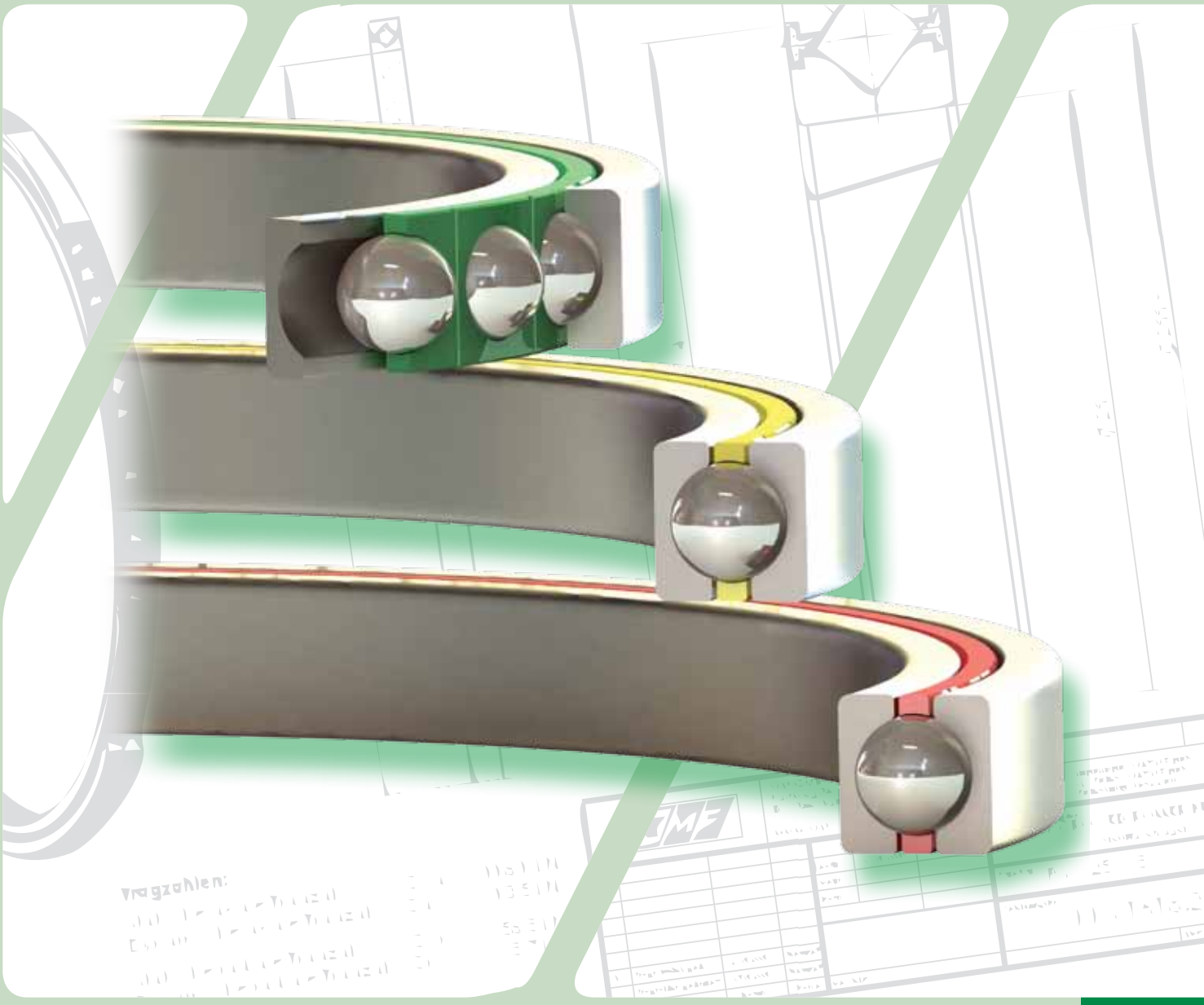


Manufacturer comparative list

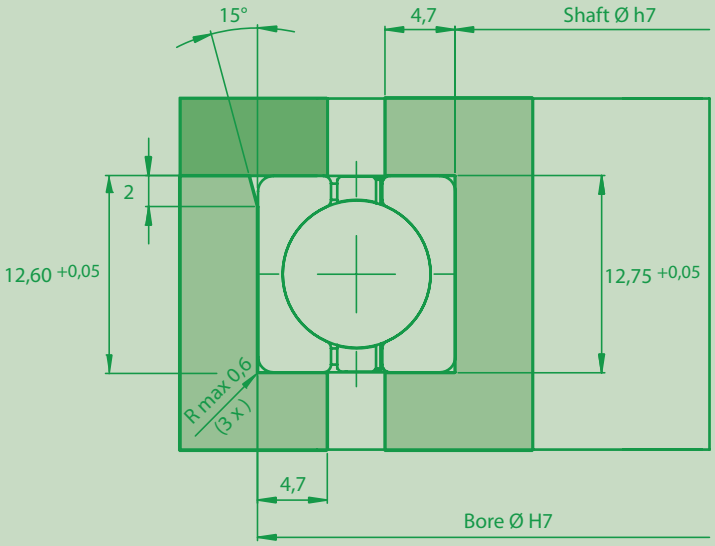
KMF	Bearing dimension			KAYDON	FAG	SKF	INA	Franke
KMF-type	d		D	KAYDON-type	FAG-type	SKF-type	INA-type	Franke-type
	mm	inch	mm					
PBXC 040	101,60	4	120,65	KC040XPO	L18SA400T	FPXC400	CSXC040	---
PBXC 042	107,95	4 ¼	127,00	KC042XPO	L18SA404T	FPXC404	CSXC042	---
PBXC 045	114,30	4 ½	133,35	KC045XPO	L18SA408T	FPXC408	CSXC045	---
PBXC 047	120,65	4 ¾	139,70	KC047XPO	L18SA412T	FPXC412	CSXC047	LFC 4,75
PBXC 050	127,00	5	146,05	KC050XPO	L18SA500T	FPXC500	CSXC050	LFC 5
PBXC 055	139,70	5 ½	158,75	KC055XPO	L18SA508YH	FPXC508	CSXC055	LFC 5,5
PBXC 060	152,40	6	171,45	KC060XPO	L18SA600YH	FPXC600	CSXC060	LFC 6
PBXC 065	165,10	6 ½	184,15	KC065XPO	L18SA608YH	FPXC608	CSXC065	LFC 6,5
PBXC 070	177,80	7	196,85	KC070XPO	L18SA700YH	FPXC700	CSXC070	LFC 7
PBXC 075	190,50	7 ½	209,55	KC075XPO	L18SA708YH	FPXC708	CSXC075	LFC 7,5
PBXC 080	203,20	8	222,25	KC080XPO	L18SA800YH	FPXC800	CSXC080	LFC 8
PBXC 085	215,90	8 ½	234,95	----	----	----	----	----
PBXC 090	228,60	9	247,65	KC090XPO	L18SA900YH	FPXC900	CSXC090	LFC 9
PBXC 095	241,30	9 ½	260,35	----	----	----	----	----
PBXC 100	254,00	10	273,05	KC100XPO	L18SA1000YH	FPXC1000	CSXC100	LFC 10
PBXC 105	266,70	10 ½	285,75	----	----	----	----	----
PBXC 110	279,40	11	298,45	KC110XPO	L18SA1100YH	FPXC1100	CSXC110	LFC 11
PBXC 115	292,10	11 ½	311,15	----	----	----	----	----
PBXC 120	304,80	12	323,85	KC120XPO	L18SA1200YH	FPXC1200	CSXC120	LFC 12
PBXC 130	330,20	13	349,25	----	----	----	----	----
PBXC 140	355,60	14	374,65	KC140XPO	----	FPXC1400	CSXC140	LFC 14
PBXC 150	381,00	15	400,05	----	----	----	----	----
PBXC 160	406,40	16	425,45	KC160XPO	----	FPXC1600	CSXC160	LFC 16
PBXC 170	431,80	17	450,85	----	----	----	----	----
PBXC 180	457,20	18	476,25	KC180XPO	----	FPXC1800	CSXC180	LFC 18
PBXC 190	482,60	19	501,65	----	----	----	----	----
PBXC 200	508,00	20	527,05	KC200XPO	----	FPXC2000	CSXC200	LFC 20
➥ 250	635,00	25	654,05	KC250XPO	----	FPXC2500	CSXC250	LFC 25
➥ 300	762,00	30	781,05	KC300XPO	----	FPXC3000	CSXC300	----
➥ 250	863,60	34	882,65	----	----	----	----	----

➥) *For this KMF-type series (Steps of 10) no types of other manufacturers do exist*

Thin ring bearing PBXD



Fitted dimensions



Bearing dimensions

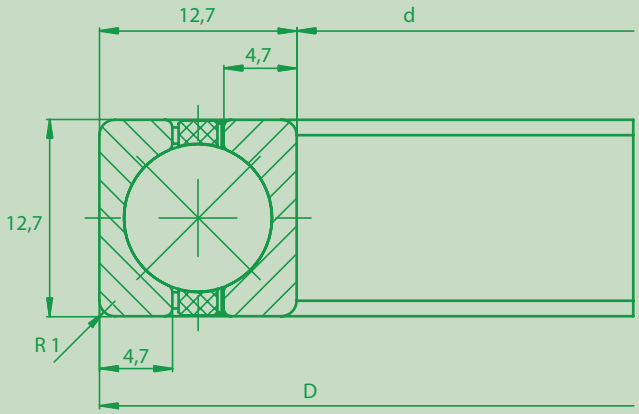


Table of dimensions (Type series PBXD)

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXD 040	101,60	4	127,00	18,3	59,0	16,6	23,7	0,334	1500
PBXD 042	107,95	4 ¼	133,35	18,9	64,0	17,2	25,5	0,353	1410
PBXD 045	114,30	4 ½	139,70	19,4	68,0	17,6	27,0	0,371	1340
PBXD 047	120,65	4 ¾	146,05	19,5	70,0	17,7	28,0	0,390	1270
PBXD 050	127,00	5	152,40	20,0	75,0	18,2	30,0	0,408	1200
PBXD 055	139,70	5 ½	165,10	20,6	81,0	18,7	32,5	0,445	1090
PBXD 060	152,40	6	177,80	21,5	90,0	19,5	36,0	0,482	1000
PBXD 065	165,10	6 ½	190,50	22,1	97,0	20,0	39,0	0,519	920
PBXD 070	177,80	7	203,20	22,6	104,0	20,5	41,5	0,557	860
PBXD 075	190,50	7 ½	215,90	23,3	112,0	21,2	45,0	0,594	800
PBXD 080	203,20	8	228,60	23,8	119,0	21,6	47,5	0,631	750
PBXD 085	215,90	8 ½	241,30	24,2	126,0	22,0	50,0	0,668	710
PBXD 090	228,60	9	254,00	24,9	135,0	22,6	54,0	0,705	670
PBXD 095	241,30	9 ½	266,70	25,5	141,0	22,9	57,0	0,742	630
PBXD 100	254,00	10	279,40	25,5	148,0	23,3	59,0	0,779	600
PBXD 105	266,70	10 ½	292,10	26,5	157,0	23,9	63,0	0,816	570

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXD 110	279,40	11	304,80	26,5	163,0	24,2	65,0	0,853	550
PBXD 115	292,10	11 ½	317,50	27,0	170,0	24,5	68,0	0,891	520
PBXD 120	304,80	12	330,20	27,5	179,0	25,0	72,0	0,928	500
PBXD 130	330,20	13	355,60	28,5	192,0	25,2	77,0	1,002	460
PBXD 140	355,60	14	381,00	29,0	208,0	26,5	83,0	1,076	430
PBXD 150	381,00	15	406,40	30,0	223,0	27,0	89,0	1,150	400
PBXD 160	406,40	16	431,80	30,5	237,0	27,0	95,0	1,225	380
PBXD 170	431,80	17	457,20	31,5	250,0	28,5	101,0	1,299	350
PBXD 180	457,20	18	482,60	32,0	270,0	29,0	107,0	1,373	330
PBXD 190	482,60	19	508,00	32,5	280,0	29,5	112,0	1,447	320
PBXD 200	508,00	20	533,40	33,0	295,0	30,0	119,0	1,521	300
PBXD 210	533,40	21	558,80	33,5	310,0	30,5	124,0	1,596	290
PBXD 220	558,80	22	584,20	34,5	325,0	31,0	130,0	1,670	270
PBXD 230	584,20	23	609,60	34,5	340,0	31,5	136,0	1,744	260
PBXD 240	609,60	24	635,00	35,5	355,0	32,0	142,0	1,818	250
PBXD 250	635,00	25	660,40	36,0	370,0	32,5	148,0	1,892	240
PBXD 260	660,40	26	685,80	36,5	385,0	33,0	154,0	1,967	230
PBXD 270	685,80	27	711,20	37,0	400,0	33,5	159,0	2,041	220
PBXD 280	711,20	28	736,60	37,5	415,0	34,0	166,0	2,115	210
PBXD 290	736,60	29	762,00	38,0	430,0	34,5	172,0	2,189	210
PBXD 300	762,00	30	787,40	38,5	445,0	34,5	177,0	2,264	200
PBXD 310	787,40	31	812,80	39,0	460,0	35,0	183,0	2,338	190
PBXD 320	812,80	32	838,20	39,5	475,0	35,5	190,0	2,412	190
PBXD 330	838,20	33	863,60	39,5	485,0	36,0	195,0	2,486	180
PBXD 340	863,60	34	889,00	40,0	500,0	36,5	201,0	2,560	180
PBXD 400	1016,00	40	1041,40	43,4	588,0	39,6	237,0	3,012	155
PBXD 405	1028,70	40 ½	1054,10	43,7	596,0	39,8	240,0	3,049	150
PBXD 417	1060,45	41 ¾	1085,85	44,3	614,0	40,5	247,0	3,143	145
PBXD 420	1066,80	42	1092,20	44,5	618,0	40,6	249,0	3,162	140

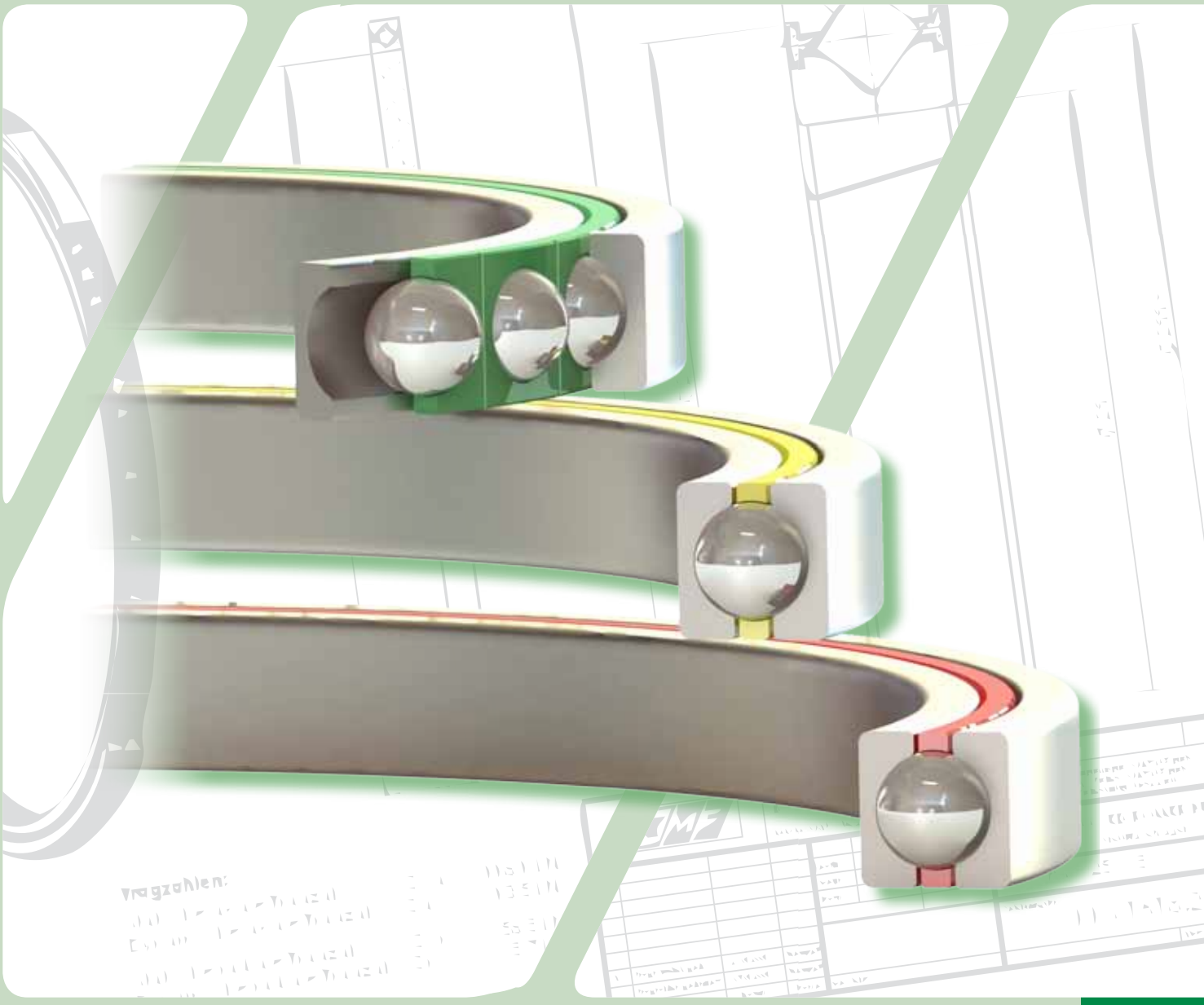
1) Other dimensions on request

Manufacturer comparative list

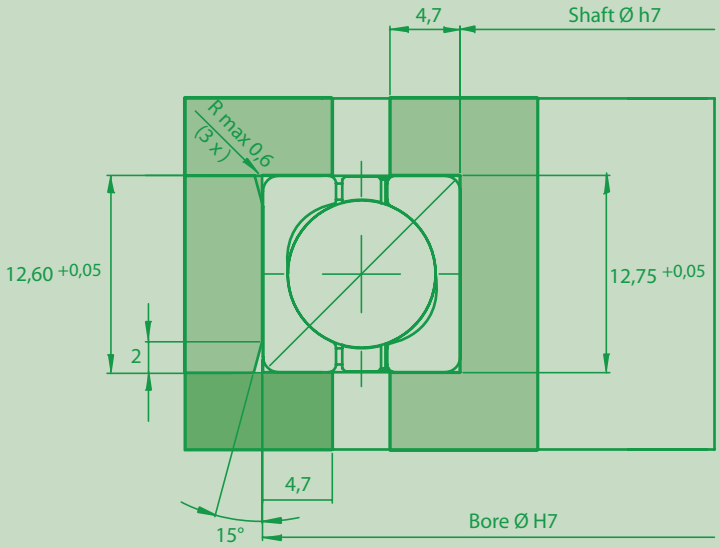
KMF	Bearing dimension			KAYDON	FAG	SKF	INA	Franke
KMF-type	d		D	KAYDON-type	FAG-type	SKF-type	INA-type	Franke-type
	mm	inch	mm					
PBXD 040	101,60	4	127,00	KD 040 XPO	L18TA 400T	FPXD 400	CSXD 040	----
PBXD 042	107,95	4 ¼	133,35	KD 042 XPO	L18TA 404T	FPXD 404	CSXD 042	----
PBXD 045	114,30	4 ½	139,70	KD 045 XPO	L18TA 408T	FPXD 408	CSXD 045	----
PBXD 047	120,65	4 ¾	146,05	KD 047 XPO	L18TA 412T	FPXD 412	CSXD 047	----
PBXD 050	127,00	5	152,40	KD 050 XPO	L18TA 500T	FPXD 500	CSXD 050	----
PBXD 055	139,70	5 ½	165,10	KD 055 XPO	L18TA 508T	FPXD 508	CSXD 055	----
PBXD 060	152,40	6	177,80	KD 060 XPO	L18TA 600T	FPXD 600	CSXD 060	LFD 6
PBXD 065	165,10	6 ½	190,50	KD 065 XPO	L18TA 608T	FPXD 608	CSXD 065	LFD 6,5
PBXD 070	177,80	7	203,20	KD 070 XPO	L18TA 700T	FPXD 700	CSXD 070	LFD 7
PBXD 075	190,50	7 ½	215,90	KD 075 XPO	L18TA 708T	FPXD 708	CSXD 075	LFD 7,5
PBXD 080	203,20	8	228,60	KD 080 XPO	L18TA 800T	FPXD 800	CSXD 080	LFD 8
PBXD 085	215,90	8 ½	241,30	----	----	----	----	----
PBXD 090	228,60	9	254,00	KD 090 XPO	L18TA 900T	FPXD 900	CSXD 090	LFD 9
PBXD 095	241,30	9 ½	266,70	----	----	----	----	----
PBXD 100	254,00	10	279,40	KD 100 XPO	L18TA 1000T	FPXD 1000	CSXD 100	LFD 10
PBXD 105	266,70	10 ½	292,10	----	----	----	----	----
PBXD 110	279,40	11	304,80	KD 110 XPO	L18TA 1100T	FPXD 1100	CSXD 110	LFD 11
PBXD 115	292,10	11 ½	317,50	----	----	----	----	----
PBXD 120	304,80	12	330,20	KD 120 XPO	L18TA 1200T	FPXD 1200	CSXD 120	LFD 12
PBXD 130	330,20	13	355,60	----	----	----	----	----
PBXD 140	355,60	14	381,00	KD 140 XPO	L18TA 1400T	FPXD 1400	CSXD 140	LFD 14
PBXD 150	381,00	15	406,40	----	----	----	----	----
PBXD 160	406,40	16	431,80	KD 160 XPO	L18TA 1600T	FPXD 1600	CSXD 160	LFD 16
PBXD 170	431,80	17	457,20	----	----	----	----	----
PBXD 180	457,20	18	482,60	KD 180 XPO	L18TA 1800T	FPXD 1800	CSXD 180	LFD 18
PBXD 190	482,60	19	508,00	----	----	----	----	----
PBXD 200	508,00	20	533,40	KD 200 XPO	----	FPXD 2000	CSXD 200	LFD 20
➥ 250	635,00	25	660,40	KD 250 XPO	----	FPXD 2500	CSXD 250	LFD 25
➥ 300	762,00	30	787,40	KD 300 XPO	----	FPXD 3000	CSXD 300	----
➥ 340	863,60	34	889,00	----	----	----	----	----

➥) *For this KMF-type series (Steps of 10) no types of other manufacturers do exist*

Thin ring bearing PBSD



Fitted dimensions



Bearing dimensions

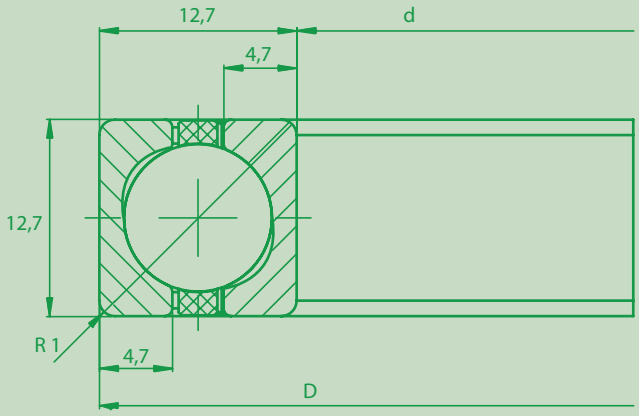


Table of dimensions (Type series PBSD)

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r [2]	C_{or} [2]		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBSD 040	101,60	4	127,00	19,3	59,0	10,2	11,9	0,334	3300
PBSD 042	107,95	4 ¼	133,35	19,9	64,0	10,5	12,7	0,353	3100
PBSD 045	114,30	4 ½	139,70	20,5	68,0	10,8	13,6	0,371	2930
PBSD 047	120,65	4 ¾	146,05	20,6	70,0	10,9	14,1	0,390	2780
PBSD 050	127,00	5	152,40	21,2	75,0	11,2	15,0	0,408	2640
PBSD 055	139,70	5 ½	165,10	21,8	81,0	11,5	16,3	0,445	2400
PBSD 060	152,40	6	177,80	22,7	90,0	12,0	18,1	0,482	2200
PBSD 065	165,10	6 ½	190,50	23,3	97,0	12,3	19,4	0,519	2030
PBSD 070	177,80	7	203,20	23,8	104,0	12,6	20,7	0,557	1880
PBSD 075	190,50	7 ½	215,90	24,6	112,0	13,0	22,5	0,594	1760
PBSD 080	203,20	8	228,60	25,0	119,0	13,2	23,8	0,631	1650
PBSD 085	215,90	8 ½	241,30	25,5	126,0	13,5	25,0	0,668	1550
PBSD 090	228,60	9	254,00	26,5	135,0	13,9	27,0	0,705	1470
PBSD 095	241,30	9 ½	266,70	26,5	141,0	14,1	28,5	0,742	1390
PBSD 100	254,00	10	279,40	27,0	148,0	14,3	29,5	0,779	1320
PBSD 105	266,70	10 ½	292,10	28,0	157,0	14,7	31,5	0,816	1260

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBSD 110	279,40	11	304,80	28,0	163,0	14,9	32,5	0,853	1200
PBSD 115	292,10	11 ½	317,50	28,5	170,0	15,1	34,0	0,891	1150
PBSD 120	304,80	12	330,20	29,0	179,0	15,4	36,0	0,928	1100
PBSD 130	330,20	13	355,60	30,0	192,0	15,7	38,5	1,002	1010
PBSD 140	355,60	14	381,00	30,5	208,0	16,2	41,5	1,076	940
PBSD 150	381,00	15	406,40	31,5	223,0	16,6	44,5	1,150	880
PBSD 160	406,40	16	431,80	32,0	237,0	17,0	47,5	1,225	820
PBSD 170	431,80	17	457,20	33,0	250,0	17,4	50,0	1,299	780
PBSD 180	457,20	18	482,60	33,5	270,0	17,8	54,0	1,373	730
PBSD 190	482,60	19	508,00	34,5	280,0	18,1	56,0	1,447	690
PBSD 200	508,00	20	533,40	35,0	295,0	18,4	59,0	1,521	660
PBSD 210	533,40	21	558,80	35,5	310,0	18,7	62,0	1,596	630
PBSD 220	558,80	22	584,20	36,0	325,0	19,0	65,0	1,670	600
PBSD 230	584,20	23	609,60	37,0	340,0	19,4	68,0	1,744	570
PBSD 240	609,60	24	635,00	37,5	355,0	19,6	71,0	1,818	550
PBSD 250	635,00	25	660,40	38,0	370,0	19,9	74,0	1,892	530
PBSD 260	660,40	26	685,80	38,5	385,0	20,3	77,0	1,967	510
PBSD 270	685,80	27	711,20	39,0	400,0	20,5	80,0	2,041	490
PBSD 280	711,20	28	736,60	39,5	415,0	20,8	83,0	2,115	470
PBSD 290	736,60	29	762,00	40,0	430,0	21,1	86,0	2,189	450
PBSD 300	762,00	30	787,40	40,5	445,0	21,3	89,0	2,264	440
PBSD 310	787,40	31	812,80	41,0	460,0	21,6	92,0	2,338	430
PBSD 320	812,80	32	838,20	41,5	475,0	21,8	95,0	2,412	410
PBSD 330	838,20	33	863,60	42,0	485,0	22,0	97,0	2,486	400
PBSD 340	863,60	34	889,00	42,5	500,0	22,3	101,0	2,560	390
PBSD 400	1016,00	40	1041,40	46,1	588,0	24,2	119,0	3,012	330
PBSD 405	1028,70	40 ½	1054,10	46,4	596,0	24,3	120,5	3,049	330
PBSD 417	1060,45	41 ¾	1085,85	47,1	614,0	24,7	124,0	3,143	320
PBSD 420	1066,80	42	1092,20	47,3	618,0	24,8	125,0	3,162	315

1) Other dimensions on request

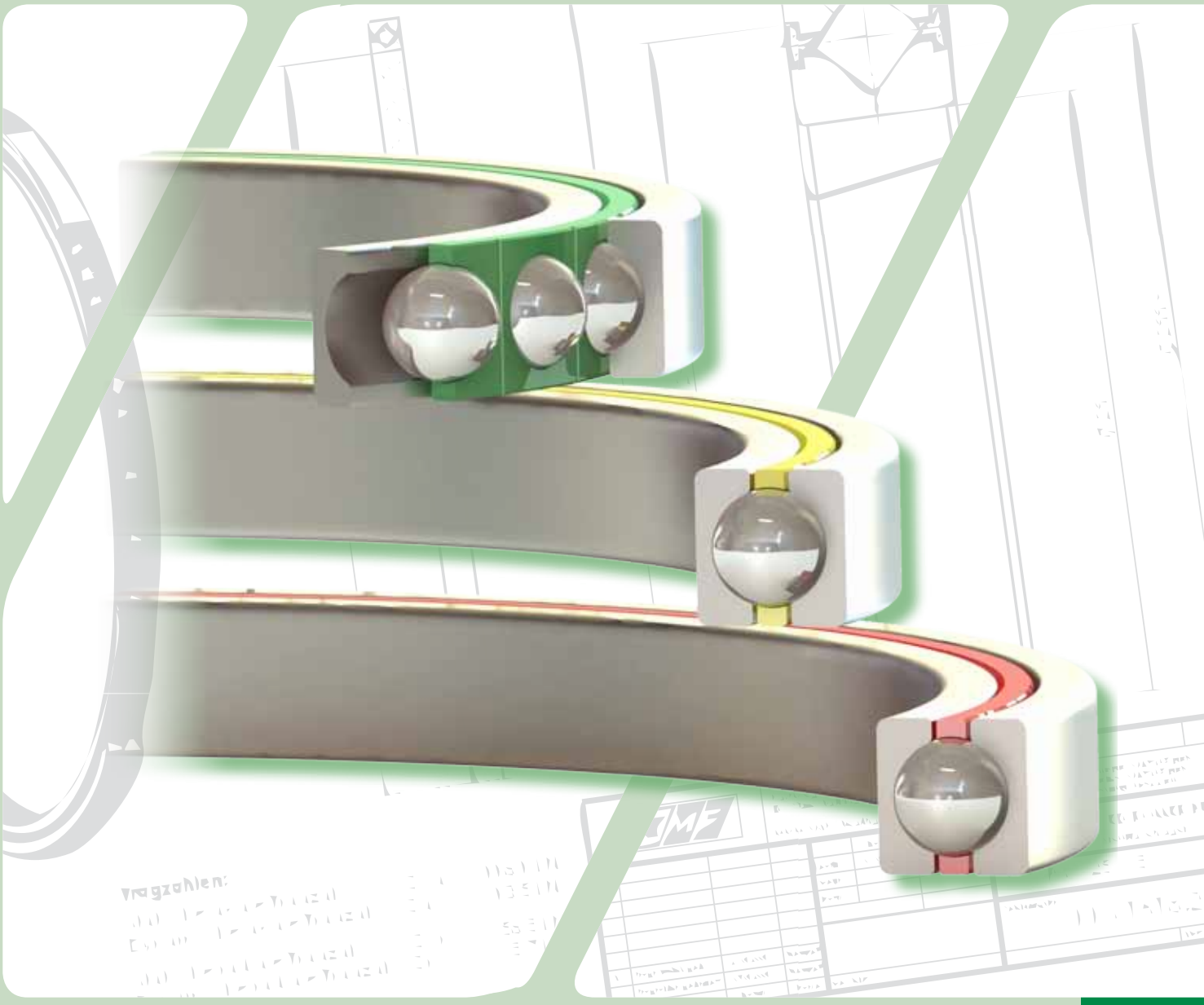
2) With in pairs arranged camps is valid: C_{or} x 2 und C_r x 1,625

Manufacturer comparative list

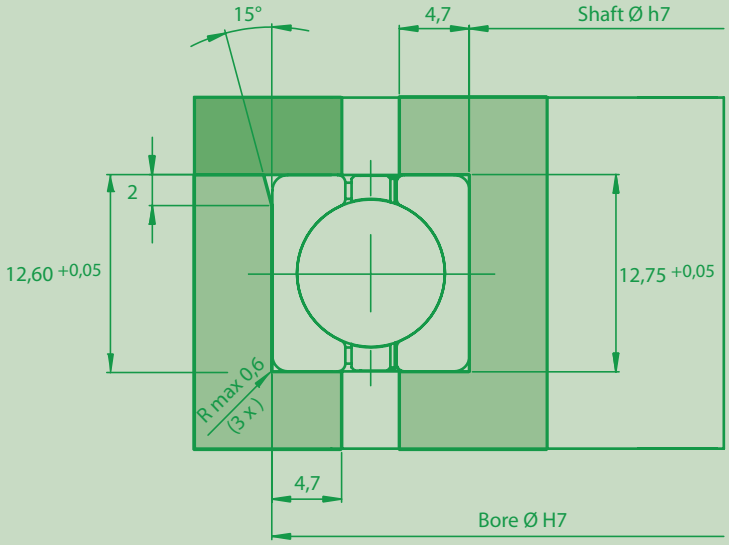
KMF	Bearing dimension			KAYDON	FAG	SKF	INA	Franke
KMF-type	d		D	KAYDON-type	FAG-type	SKF-type	INA-type	Franke-type
	mm	inch	mm					
PBSD 040	101,60	4	127,00	KD 040 AR0	L15TA 400YP	FPAD 400	CSAD 040	----
PBSD 042	107,95	4 ¼	133,35	KD 042 AR0	L15TA 404YP	FPAD 404	CSAD 042	----
PBSD 045	114,30	4 ½	139,70	KD 045 AR0	L15TA 408YP	FPAD 408	CSAD 045	----
PBSD 047	120,65	4 ¾	146,05	KD 047 AR0	L15TA 412YP	FPAD 412	CSAD 047	----
PBSD 050	127,00	5	152,40	KD 050 AR0	L15TA 500YP	FPAD 500	CSAD 050	----
PBSD 055	139,70	5 ½	165,10	KD 055 AR0	L15TA 508YP	FPAD 508	CSAD 055	----
PBSD 060	152,40	6	177,80	KD 060 AR0	L15TA 600YP	FPAD 600	CSAD 060	----
PBSD 065	165,10	6 ½	190,50	KD 065 AR0	L15TA 608YP	FPAD 608	CSAD 065	----
PBSD 070	177,80	7	203,20	KD 070 AR0	L15TA 700YP	FPAD 700	CSAD 070	----
PBSD 075	190,50	7 ½	215,90	KD 075 AR0	L15TA 708YP	FPAD 708	CSAD 075	----
PBSD 080	203,20	8	228,60	KD 080 AR0	L15TA 800YP	FPAD 800	CSAD 080	----
PBSD 085	215,90	8 ½	241,30	----	----	----	----	----
PBSD 090	228,60	9	254,00	KD 090 AR0	L15TA 900YP	FPAD 900	CSAD 090	----
PBSD 095	241,30	9 ½	266,70	----	----	----	----	----
PBSD 100	254,00	10	279,40	KD 100 AR0	----	FPAD 1000	CSAD 100	----
PBSD 105	266,70	10 ½	292,10	----	----	----	----	----
PBSD 110	279,40	11	304,80	KD 110 AR0	----	FPAD 1100	CSAD 110	----
PBSD 115	292,10	11 ½	317,50	----	----	----	----	----
PBSD 120	304,80	12	330,20	KD 120 AR0	----	FPAD 1200	CSAD 120	----
PBSD 130	330,20	13	355,60	----	----	----	----	----
PBSD 140	355,60	14	381,00	KD 140 AR0	----	FPAD 1400	CSAD 140	----
PBSD 150	381,00	15	406,40	----	----	----	----	----
PBSD 160	406,40	16	431,80	KD 160 AR0	----	FPAD 1600	CSAD 160	----
PBSD 170	431,80	17	457,20	----	----	----	----	----
PBSD 180	457,20	18	482,60	KD 180 AR0	----	FPAD 1800	CSAD 180	----
PBSD 190	482,60	19	508,00	----	----	----	----	----
PBSD 200	508,00	20	533,40	KD 200 AR0	----	FPAD 2000	CSAD 200	----
➥ 250	635,00	25	660,40	KD 250 AR0	----	FPAD 2500	CSAD 250	----
➥ 300	762,00	30	787,40	KD 300 AR0	----	FPAD 3000	CSAD 300	----
➥ 340	863,60	34	889,00	----	----	----	----	----

➥) *For this KMF-type series (Steps of 10) no types of other manufacturers do exist*

Thin ring bearing PBCD



Fitted dimensions



Bearing dimensions

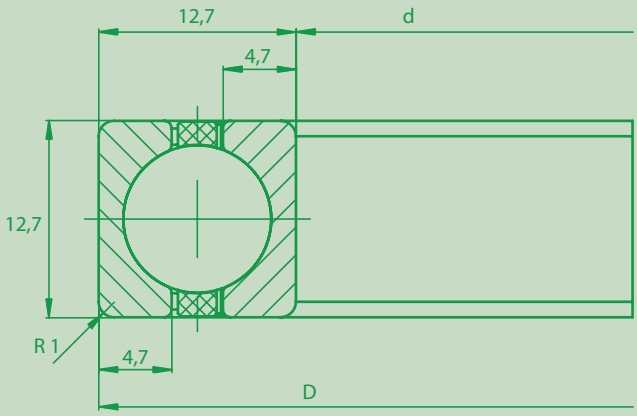


Table of dimensions (Type series PBCD)

KMF-type 1)	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBCD 040	101,60	4	127,00	----	----	14,2	16,2	0,334	3300
PBCD 042	107,95	4 ¼	133,35	----	----	14,7	17,4	0,353	3100
PBCD 045	114,30	4 ½	139,70	----	----	15,1	18,7	0,371	2930
PBCD 047	120,65	4 ¾	146,05	----	----	15,2	19,3	0,390	2780
PBCD 050	127,00	5	152,40	----	----	15,7	20,6	0,408	2640
PBCD 055	139,70	5 ½	165,10	----	----	16,1	22,5	0,445	2400
PBCD 060	152,40	6	177,80	----	----	16,9	24,9	0,482	2200
PBCD 065	165,10	6 ½	190,50	----	----	17,3	27,0	0,519	2030
PBCD 070	177,80	7	203,20	----	----	17,7	28,5	0,557	1880
PBCD 075	190,50	7 ½	215,90	----	----	18,3	31,0	0,594	1760
PBCD 080	203,20	8	228,60	----	----	18,7	33,0	0,631	1650
PBCD 085	215,90	8 ½	241,30	----	----	19,0	35,0	0,668	1550
PBCD 090	228,60	9	254,00	----	----	19,6	37,5	0,705	1470
PBCD 095	241,30	9 ½	266,70	----	----	19,9	39,5	0,742	1390
PBCD 100	254,00	10	279,40	----	----	20,2	41,5	0,779	1320
PBCD 105	266,70	10 ½	292,10	----	----	20,7	44,0	0,816	1260

KMF-type 1)	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBCD 110	279,40	11	304,80	----	----	21,0	45,5	0,853	1200
PBCD 115	292,10	11 ½	317,50	----	----	21,3	47,5	0,891	1150
PBCD 120	304,80	12	330,20	----	----	21,7	50,0	0,928	1100
PBCD 130	330,20	13	355,60	----	----	22,2	54,0	1,002	1010
PBCD 140	355,60	14	381,00	----	----	22,9	58,0	1,076	940
PBCD 150	381,00	15	406,40	----	----	23,5	63,0	1,150	880
PBCD 160	406,40	16	431,80	----	----	24,0	66,0	1,225	820
PBCD 170	431,80	17	457,20	----	----	24,6	71,0	1,299	780
PBCD 180	457,20	18	482,60	----	----	25,0	75,0	1,373	730
PBCD 190	482,60	19	508,00	----	----	25,5	79,0	1,447	690
PBCD 200	508,00	20	533,40	----	----	26,0	83,0	1,521	660
PBCD 210	533,40	21	558,80	----	----	26,5	87,0	1,596	630
PBCD 220	558,80	22	584,20	----	----	27,0	91,0	1,670	600
PBCD 230	584,20	23	609,60	----	----	27,5	96,0	1,744	570
PBCD 240	609,60	24	635,00	----	----	28,0	100,0	1,818	550
PBCD 250	635,00	25	660,40	----	----	28,0	104,0	1,892	530
PBCD 260	660,40	26	685,80	----	----	28,5	108,0	1,967	510
PBCD 270	685,80	27	711,20	----	----	29,0	112,0	2,041	490
PBCD 280	711,20	28	736,60	----	----	29,5	117,0	2,115	470
PBCD 290	736,60	29	762,00	----	----	30,0	121,0	2,189	450
PBCD 300	762,00	30	787,40	----	----	30,0	125,0	2,264	440
PBCD 310	787,40	31	812,80	----	----	30,5	129,0	2,338	430
PBCD 320	812,80	32	838,20	----	----	31,0	133,0	2,412	410
PBCD 330	838,20	33	863,60	----	----	31,0	137,0	2,486	400
PBCD 340	863,60	34	889,00	----	----	31,5	142,0	2,560	390
PBCD 400	1016,00	40	1041,40	----	----	34,2	167,0	3,012	330
PBCD 405	1028,70	40 ½	1054,10	----	----	34,4	169,0	3,049	330
PBCD 417	1060,45	41 ¾	1085,85	----	----	34,9	174,0	3,143	320
PBCD 420	1066,80	42	1092,20	----	----	35,0	175,5	3,162	315

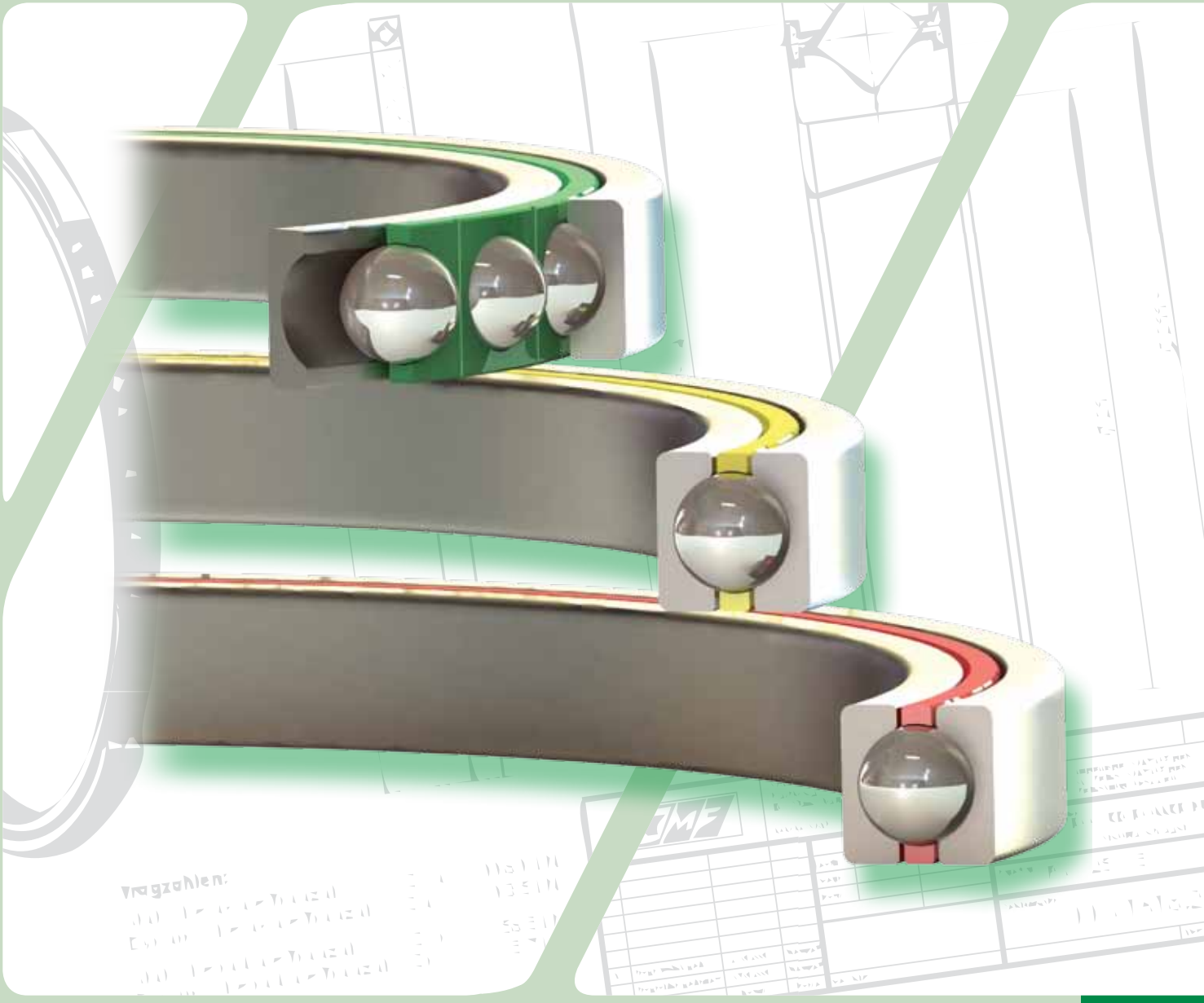
1) Other dimensions on request

Manufacturer comparative list

KMF	Bearing dimension			KAYDON	FAG	SKF	INA	Franke
KMF-type	d		D	KAYDON-type	FAG-type	SKF-type	INA-type	Franke-type
	mm	inch	mm					
PBCD 040	101,60	4	127,00	KD 040 CPO	L10TA 400T	FPCD 400	CSCD 040	----
PBCD 042	107,95	4 ¼	133,35	KD 042 CPO	L10TA 404T	FPCD 404	CSCD 042	----
PBCD 045	114,30	4 ½	139,70	KD 045 CPO	L10TA 408T	FPCD 408	CSCD 045	----
PBCD 047	120,65	4 ¾	146,05	KD 047 CPO	L10TA 412T	FPCD 412	CSCD 047	----
PBCD 050	127,00	5	152,40	KD 050 CPO	L10TA 500T	FPCD 500	CSCD 050	----
PBCD 055	139,70	5 ½	165,10	KD 055 CPO	L10TA 508T	FPCD 508	CSCD 055	----
PBCD 060	152,40	6	177,80	KD 060 CPO	L10TA 600T	FPCD 600	CSCD 060	----
PBCD 065	165,10	6 ½	190,50	KD 065 CPO	L10TA 608T	FPCD 608	CSCD 065	----
PBCD 070	177,80	7	203,20	KD 070 CPO	L10TA 700T	FPCD 700	CSCD 070	----
PBCD 075	190,50	7 ½	215,90	KD 075 CPO	L10TA 708T	FPCD 708	CSCD 075	----
PBCD 080	203,20	8	228,60	KD 080 CPO	L10TA 800T	FPCD 800	CSCD 080	----
PBCD 085	215,90	8 ½	241,30	----	----	----	----	----
PBCD 090	228,60	9	254,00	KD 090 CPO	L10TA 900YH	FPCD 900	CSCD 090	----
PBCD 095	241,30	9 ½	266,70	----	----	----	----	----
PBCD 100	254,00	10	279,40	KD 100 CPO	L10TA 1000YH	FPCD 1000	CSCD 100	----
PBCD 105	266,70	10 ½	292,10	----	----	----	----	----
PBCD 110	279,40	11	304,80	KD 110 CPO	L10TA 1100YH	FPCD 1100	CSCD 110	----
PBCD 115	292,10	11 ½	317,50	----	----	----	----	----
PBCD 120	304,80	12	330,20	KD 120 CPO	L10TA 1200YH	FPCD 1200	CSCD 120	----
PBCD 130	330,20	13	355,60	----	----	----	----	----
PBCD 140	355,60	14	381,00	KD 140 CPO	----	FPCD 1400	CSCD 140	----
PBCD 150	381,00	15	406,40	----	----	----	----	----
PBCD 160	406,40	16	431,80	KD 160 CPO	----	FPCD 1600	CSCD 160	----
PBCD 170	431,80	17	457,20	----	----	----	----	----
PBCD 180	457,20	18	482,60	KD 180 CPO	----	FPCD 1800	CSCD 180	----
PBCD 190	482,60	19	508,00	----	----	----	----	----
PBCD 200	508,00	20	533,40	KD 200 CPO	----	FPCD 2000	CSCD 200	----
➥ 250	635,00	25	660,40	KD 250 CPO	----	FPCD 2500	CSCD 250	----
➥ 300	762,00	30	787,40	KD 300 CPO	----	FPCD 3000	CSCD 300	----
➥ 340	863,60	34	889,00	----	----	----	----	----

➥) *For this KMF-type series (Steps of 10) no types of other manufacturers do exist*

Thin ring bearing PBXCD & PBCXD



Fitted dimensions

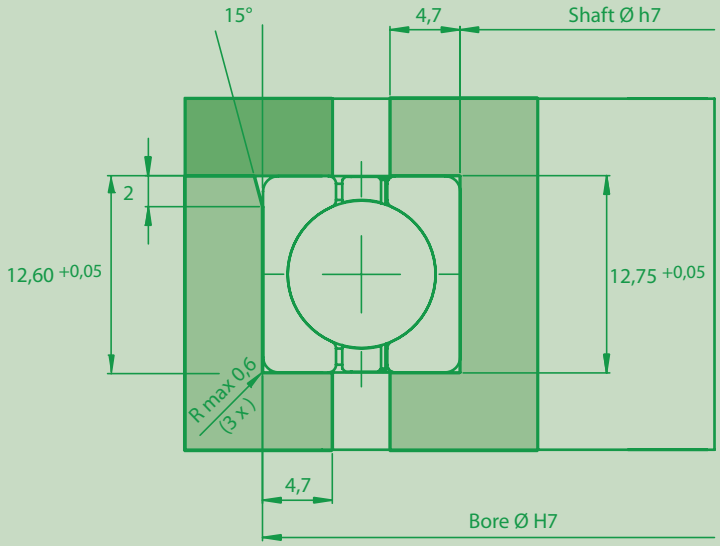
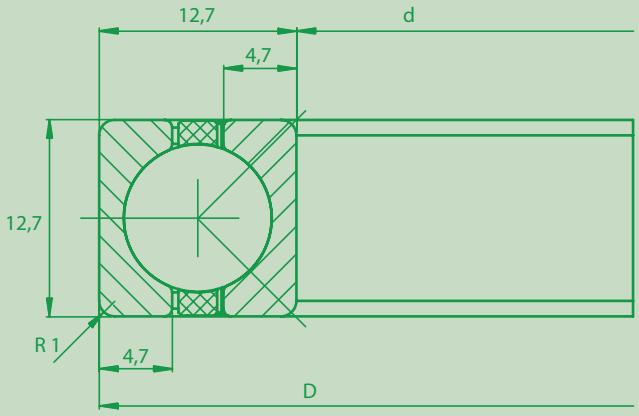


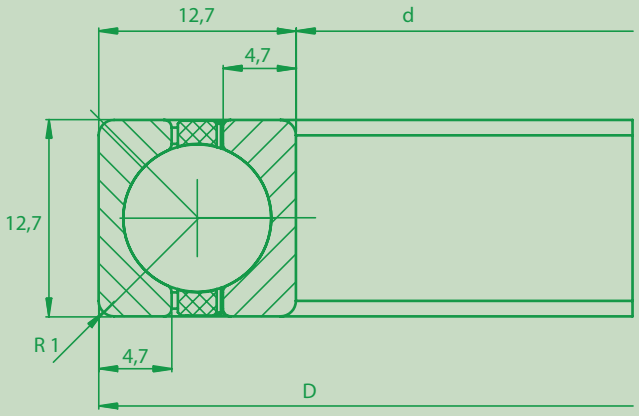
Table of dimensions (Type series PBXCD & PBCXD)

KMF-type 1)	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXCD PBCXD 040	101,60	4	127,00	----	----	14,2	16,2	0,334	3300
PBXCD PBCXD 042	107,95	4 ¼	133,35	----	----	14,7	17,4	0,353	3100
PBXCD PBCXD 045	114,30	4 ½	139,70	----	----	15,1	18,7	0,371	2930
PBXCD PBCXD 047	120,65	4 ¾	146,05	----	----	15,2	19,3	0,390	2780
PBXCD PBCXD 050	127,00	5	152,40	----	----	15,7	20,6	0,408	2640
PBXCD PBCXD 055	139,70	5 ½	165,10	----	----	16,1	22,5	0,445	2400
PBXCD PBCXD 060	152,40	6	177,80	----	----	16,9	24,9	0,482	2200
PBXCD PBCXD 065	165,10	6 ½	190,50	----	----	17,3	27,0	0,519	2030
PBXCD PBCXD 070	177,80	7	203,20	----	----	17,7	28,5	0,557	1880
PBXCD PBCXD 075	190,50	7 ½	215,90	----	----	18,3	31,0	0,594	1760
PBXCD PBCXD 080	203,20	8	228,60	----	----	18,7	33,0	0,631	1650
PBXCD PBCXD 085	215,90	8 ½	241,30	----	----	19,0	35,0	0,668	1550
PBXCD PBCXD 090	228,60	9	254,00	----	----	19,6	37,5	0,705	1470
PBXCD PBCXD 095	241,30	9 ½	266,70	----	----	19,9	39,5	0,742	1390
PBXCD PBCXD 100	254,00	10	279,40	----	----	20,2	41,5	0,779	1320
PBXCD PBCXD 105	266,70	10 ½	292,10	----	----	20,7	44,0	0,816	1260
PBXCD PBCXD 110	279,40	11	304,80	----	----	21,0	45,5	0,853	1200

Bearing dimensions PBXCD



Bearing dimensions PBCXD



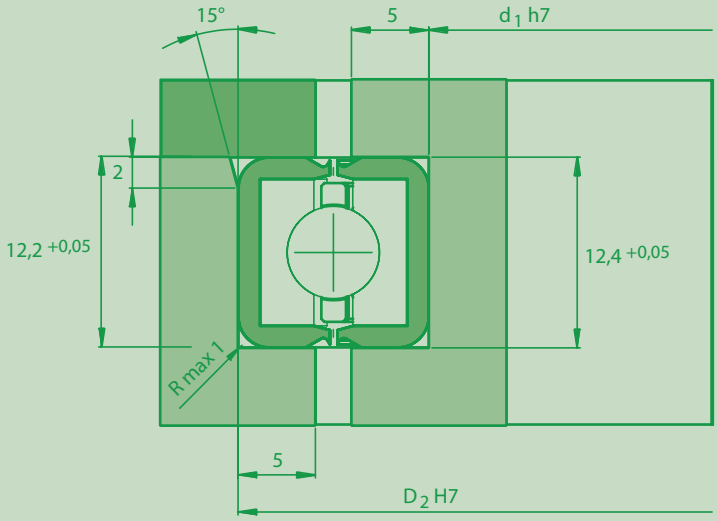
KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXCD PBCXD 115	292,10	11 ½	317,50	----	----	21,3	47,5	0,891	1150
PBXCD PBCXD 120	304,80	12	330,20	----	----	21,7	50,0	0,928	1100
PBXCD PBCXD 130	330,20	13	355,60	----	----	22,2	54,0	1,002	1010
PBXCD PBCXD 140	355,60	14	381,00	----	----	22,9	58,0	1,076	940
PBXCD PBCXD 150	381,00	15	406,40	----	----	23,5	63,0	1,150	880
PBXCD PBCXD 160	406,40	16	431,80	----	----	24,0	66,0	1,225	820
PBXCD PBCXD 170	431,80	17	457,20	----	----	24,6	71,0	1,299	780
PBXCD PBCXD 180	457,20	18	482,60	----	----	25,0	75,0	1,373	730
PBXCD PBCXD 190	482,60	19	508,00	----	----	25,5	79,0	1,447	690
PBXCD PBCXD 200	508,00	20	533,40	----	----	26,0	83,0	1,521	660
PBXCD PBCXD 210	533,40	21	558,80	----	----	26,5	87,0	1,596	630
PBXCD PBCXD 220	558,80	22	584,20	----	----	27,0	91,0	1,670	600
PBXCD PBCXD 230	584,20	23	609,60	----	----	27,5	96,0	1,744	570
PBXCD PBCXD 240	609,60	24	635,00	----	----	28,0	100,0	1,818	550
PBXCD PBCXD 250	635,00	25	660,40	----	----	28,0	104,0	1,892	530
PBXCD PBCXD 260	660,40	26	685,80	----	----	28,5	108,0	1,967	510
PBXCD PBCXD 270	685,80	27	711,20	----	----	29,0	112,0	2,041	490

KMF-type [1]	Bearing dimension			Basic load ratings				Mass	Limiting speeds
				Axial		Radial			
	d		D	Dyn.	Stat.	Dyn.	Stat.		
				C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kN	kN	kg	min^{-1}
PBXCD PBCXD 280	711,20	28	736,60	----	----	29,5	117,0	2,115	470
PBXCD PBCXD 290	736,60	29	762,00	----	----	30,0	121,0	2,189	450
PBXCD PBCXD 300	762,00	30	787,40	----	----	30,0	125,0	2,264	440
PBXCD PBCXD 310	787,40	31	812,80	----	----	30,5	129,0	2,338	430
PBXCD PBCXD 320	812,80	32	838,20	----	----	31,0	133,0	2,412	410
PBXCD PBCXD 330	838,20	33	863,60	----	----	31,0	137,0	2,486	400
PBXCD PBCXD 340	863,60	34	889,00	----	----	31,5	142,0	2,560	390
PBXCD PBCXD 400	1016,00	40	1041,40	----	----	34,2	167,0	3,012	330
PBXCD PBCXD 405	1028,70	40 ½	1054,10	----	----	34,4	169,0	3,049	330
PBXCD PBCXD 417	1060,45	41 ¾	1085,85	----	----	34,9	174,0	3,143	320
PBXCD PBCXD 420	1066,80	42	1092,20	----	----	35,0	175,5	3,162	315

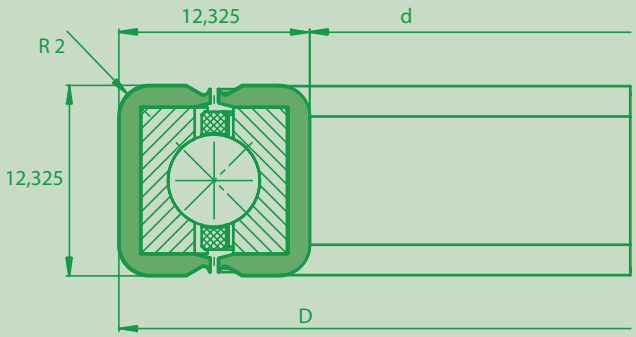
1) Other dimensions on request

Whisper thin ring bearing
PFXC

Fitted dimensions



Bearing dimensions



Description of shape

The Whisper-Thin ring bearing consists of a thin ring bearing type series PBXC, which is covered on the outer and inner ring with an sheath with a hardness of 70 Shore.

Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +80°C. This Whisper-Thin ring bearing has more outstanding features.

Features

- Low operating noise
- Low impact sound
- Insusceptible to shock
- Bearing clearance adjustable, due to the splitted bearing rings and elastomer sheath
- Large installation tolerances on the connecting parts
- The raceway system is protected from rough contamination due to reduction of the bearing gap

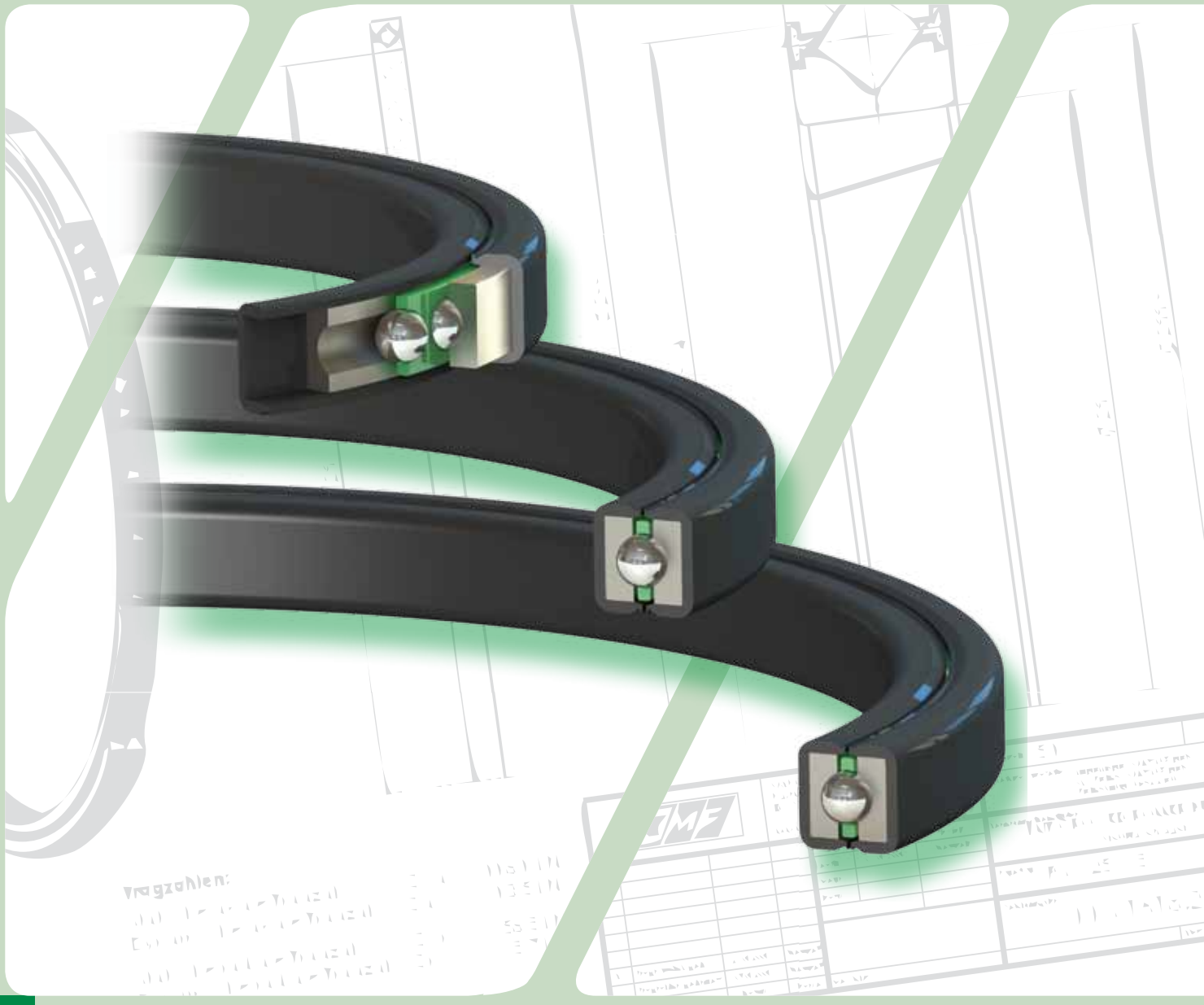
Table of dimensions (Type series PFXC)

KMF-type [1)]	Bearing-dimension		Fitted dimensions		Basic load ratings				Mass	Limiting speeds
					Axial		Radial			
	d	D	d_1	D_2	Dyn.	Stat.	Dyn.	Stat.		
					C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kN	kN	kg	min^{-1}
PFXC 070	175,0	199,65	175,0	199,5	10,4	57,6	9,4	23,0	0,32	870
PFXC 075	187,7	212,35	187,7	212,2	10,5	61,2	9,5	24,8	0,34	810
PFXC 080	200,4	225,05	200,4	224,9	10,8	65,7	9,8	26,1	0,36	760
PFXC 085	213,1	237,75	213,1	237,6	11,0	69,3	10,0	27,9	0,38	720

KMF-type [1]	Bearing-dimension		Fitted dimensions		Basic load ratings				Mass	Limiting speeds
					Axial		Radial			
	d	D	d_1	D_2	Dyn.	Stat.	Dyn.	Stat.		
					C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kN	kN	kg	min^{-1}
PFXC 090	225,8	250,45	225,8	250,3	11,3	73,8	10,2	29,3	0,41	680
PFXC 095	238,5	263,15	238,5	263,0	11,5	78,3	10,4	31,5	0,43	640
PFXC 100	251,2	275,85	251,2	275,7	11,7	81,9	10,6	32,9	0,45	610
PFXC 105	263,9	288,55	263,9	288,4	12,0	86,4	10,8	34,7	0,47	580
PFXC 110	276,6	301,25	276,6	301,1	12,2	90,0	11,0	36,0	0,50	550
PFXC 115	289,3	313,95	289,3	313,8	12,3	94,5	11,2	37,8	0,52	530
PFXC 120	302,0	326,65	302,0	326,5	12,5	98,1	11,3	39,2	0,54	510
PFXC 130	327,4	352,05	327,4	351,9	12,9	106,2	11,6	42,3	0,59	470
PFXC 140	352,8	377,45	352,8	377,3	13,2	114,3	12,0	45,9	0,63	430
PFXC 150	378,2	402,85	378,2	402,7	13,6	122,4	12,2	48,6	0,68	400
PFXC 160	403,6	428,25	403,6	428,1	13,9	130,5	12,5	52,2	0,72	380
PFXC 170	429,0	453,65	429,0	453,5	14,1	138,6	12,8	55,8	0,77	360
PFXC 180	454,4	479,05	454,4	478,9	14,5	146,7	13,0	58,5	0,81	340
PFXC 190	479,8	504,45	479,8	504,3	14,8	154,8	13,3	62,1	0,86	320
PFXC 200	505,2	529,85	505,2	529,7	15,0	162,9	13,6	64,8	0,90	300
PFXC 210	530,6	555,25	530,6	555,1	15,3	171,0	13,9	68,4	0,95	290
PFXC 220	556,0	580,65	556,0	580,5	15,6	179,1	14,0	71,1	0,99	270
PFXC 230	581,4	606,05	581,4	605,9	15,8	187,2	14,3	74,7	1,04	260
PFXC 240	606,8	631,45	606,8	631,3	16,1	195,3	14,5	78,3	1,08	250
PFXC 250	632,2	656,85	632,2	656,7	16,3	203,4	14,8	81,0	1,13	240
PFXC 260	657,6	682,25	657,6	682,1	16,6	211,5	14,9	84,6	1,17	230
PFXC 270	683,0	707,65	683,0	707,5	16,8	220,5	15,2	88,2	1,22	220
PFXC 280	708,4	733,05	708,4	732,9	17,0	229,5	15,4	90,9	1,26	220
PFXC 290	733,8	758,45	733,8	758,3	17,2	234,0	15,6	94,5	1,31	210
PFXC 300	759,2	783,85	759,2	783,7	17,4	243,0	15,8	97,2	1,35	200
PFXC 310	784,6	809,25	784,6	809,1	17,6	252,0	15,9	100,8	1,40	190
PFXC 320	810,0	834,65	810,0	834,5	17,8	261,0	16,1	104,4	1,44	190
PFXC 330	835,4	860,05	835,4	859,9	18,0	270,0	16,3	107,1	1,49	180
PFXC 340	860,8	885,45	860,8	885,3	18,3	274,5	16,7	110,7	1,53	180

1) Other dimensions on request

Whisper thin ring bearing
PFXD



Description of shape

The Whisper-Thin ring bearing consists of a thin ring bearing type series PBXD, which is covered on the outer and inner ring with an sheath with a hardness of 70 Shore.

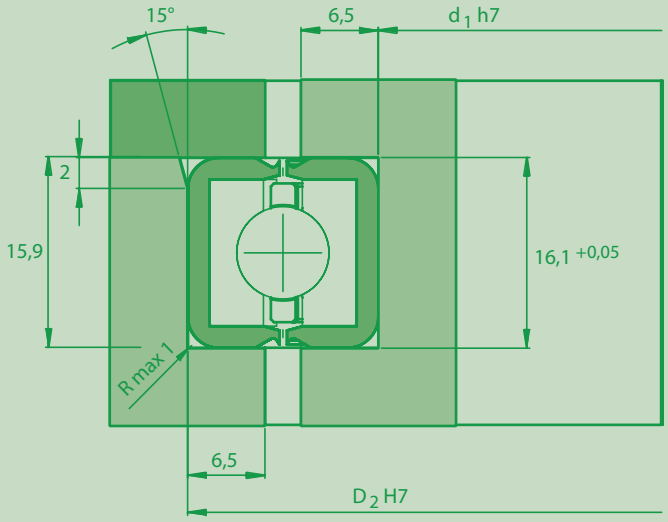
Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +80°C. This Whisper-Thin ring bearing has more outstanding features.

Features

- Low operating noise
- Low impact sound
- Insusceptible to shock
- Bearing clearance adjustable, due to the splitted bearing rings and elastomer sheath
- Large installation tolerances on the connecting parts
- The raceway system is protected from rough contamination due to reduction of the bearing gap

Fitted dimensions



Bearing dimensions

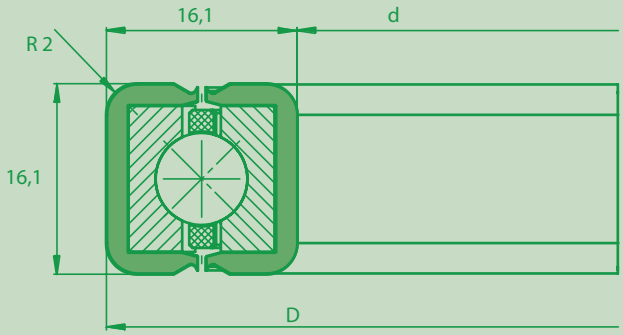


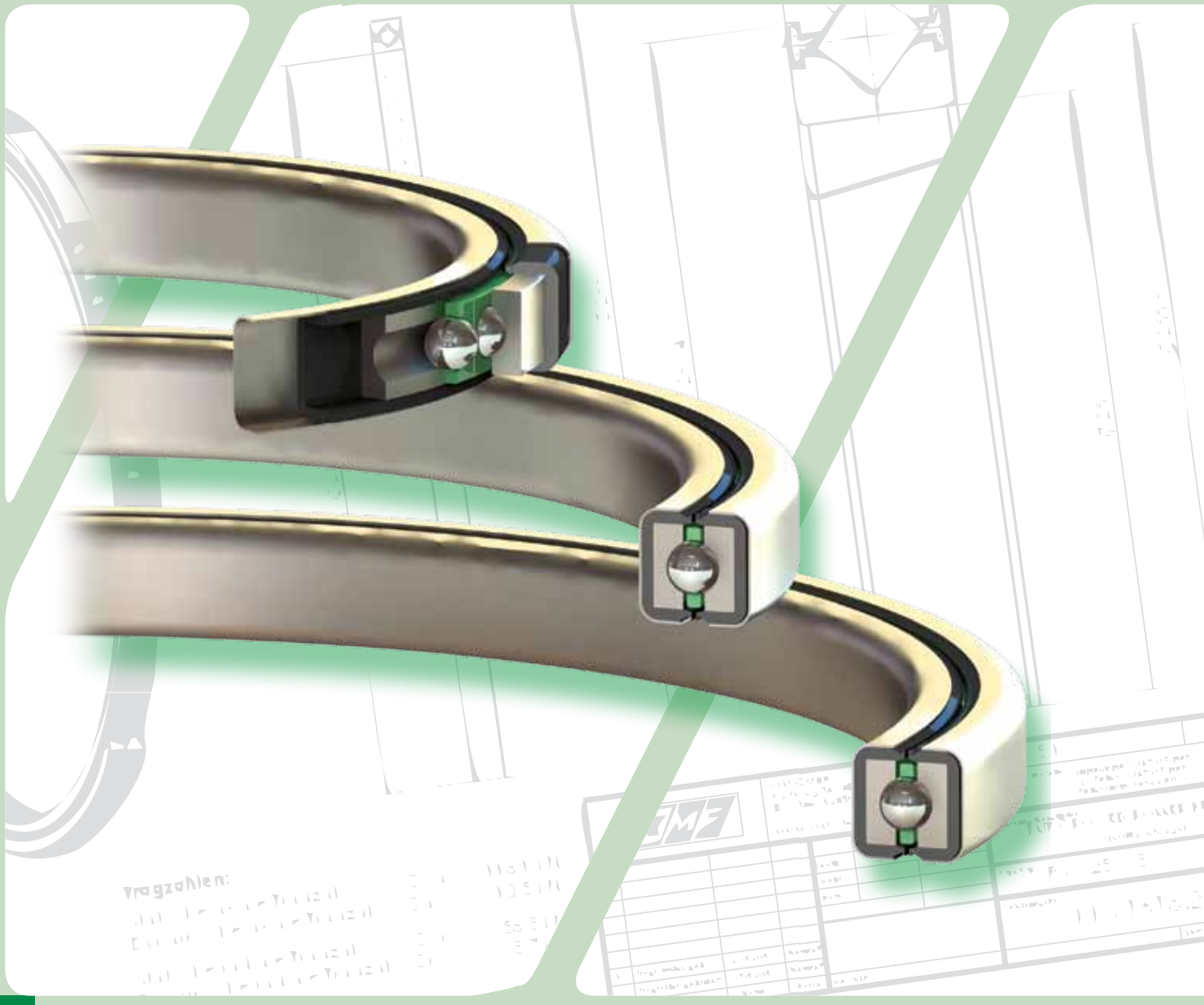
Table of dimensions (Type series PFXD)

KMF-type 1)	Bearing-dimension		Fitted dimensions		Basic load ratings				Mass	Limiting speeds
					Axial		Radial			
	d	D	d_1	D_2	Dyn.	Stat.	Dyn.	Stat.		
					C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kN	kN	kg	min^{-1}
PFXD 070	174,40	206,60	174,4	205,8	20,4	93,6	18,5	37,4	0,623	860
PFXD 075	187,10	219,30	187,1	218,5	21,0	100,8	19,1	40,5	0,668	800
PFXD 080	199,80	232,00	199,8	231,2	21,4	107,1	19,4	42,8	0,714	750
PFXD 085	212,50	244,70	212,5	243,9	21,8	113,4	19,8	45,0	0,759	710
PFXD 090	225,20	257,40	225,2	256,6	22,4	121,5	20,3	48,6	0,804	670
PFXD 095	237,90	270,10	237,9	269,3	23,0	126,9	20,6	51,3	0,850	630
PFXD 100	250,60	282,80	250,6	282,0	23,0	133,2	21,0	53,1	0,895	**600**
PFXD 105	263,30	295,50	263,3	294,7	23,9	141,3	21,5	56,7	0,940	**570**
PFXD 110	276,00	308,20	276,0	307,4	23,9	146,7	21,8	58,5	0,985	550
PFXD 115	288,70	320,90	288,7	320,1	24,3	153,0	22,1	61,2	1,030	520

KMF-type [1]	Bearing-dimension		Fitted dimensions		Basic load ratings				Mass	Limiting speeds
					Axial		Radial			
	d	D	d_1	D_2	Dyn.	Stat.	Dyn.	Stat.		
					C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kN	kN	kg	min^{-1}
PFXD 120	301,40	333,60	301,40	332,80	24,8	161,1	22,5	64,8	1,075	500
PFXD 130	326,80	359,00	326,80	358,20	25,7	172,8	22,7	69,3	1,164	460
PFXD 140	352,20	384,40	352,20	383,60	26,1	187,2	23,9	74,7	1,253	430
PFXD 150	377,60	409,80	377,60	409,00	27,0	200,7	24,3	80,1	1,343	400
PFXD 160	403,00	435,20	403,00	434,40	27,5	213,3	24,3	85,5	1,433	380
PFXD 170	428,40	460,60	428,40	459,80	28,4	225,0	25,7	90,9	1,522	350
PFXD 180	453,80	486,00	453,80	485,20	28,8	243,0	26,1	96,3	1,612	330
PFXD 190	479,20	511,40	479,20	510,60	29,3	252,0	26,6	100,8	1,702	320
PFXD 200	504,60	536,80	504,60	536,00	29,7	265,5	27,0	107,1	1,791	300
PFXD 210	530,00	562,20	530,00	561,40	30,2	279,0	27,5	111,6	1,881	290
PFXD 220	555,40	587,60	555,40	586,80	31,1	292,5	27,9	117,0	1,970	270
PFXD 230	580,80	613,00	580,80	612,20	31,1	306,0	28,4	122,4	2,060	260
PFXD 240	606,20	638,40	606,20	637,60	32,0	319,5	28,8	127,8	2,150	250
PFXD 250	631,60	663,80	631,60	663,00	32,4	333,0	29,3	133,2	2,239	240
PFXD 260	657,00	689,20	657,00	688,40	32,9	346,5	29,7	138,6	2,329	230
PFXD 270	682,40	714,60	682,40	713,80	33,3	360,0	30,2	143,1	2,418	220
PFXD 280	707,80	740,00	707,80	739,20	33,8	373,5	30,6	149,4	2,508	210
PFXD 290	733,20	765,40	733,20	764,60	34,2	387,0	31,1	154,8	2,597	210
PFXD 300	758,60	790,80	758,60	790,00	34,7	400,5	31,1	159,3	2,687	200
PFXD 310	784,00	816,20	784,00	815,40	35,1	414,0	31,5	164,7	2,776	190
PFXD 320	809,40	841,60	809,40	840,80	35,6	427,5	32,0	171,0	2,866	190
PFXD 330	834,80	867,00	834,80	866,20	35,6	436,5	32,4	175,5	2,956	180
PFXD 340	860,20	892,40	860,20	891,60	36,0	450,0	32,9	180,9	3,045	180
PFXD 400	1012,60	1044,80	1012,60	1044,00	39,0	529,5	35,7	213,4	3,596	155
PFXD 405	1025,30	1057,50	1025,30	1056,70	39,3	536,0	35,9	216,0	3,641	150
PFXD 417	1057,05	1089,25	1057,05	1088,45	39,9	552,5	36,5	222,7	3,754	145
PFXD 420	1063,40	1095,60	1063,40	1094,80	40,0	556,0	36,6	224,0	3,776	140

1) Other dimensions on request

Sleeve whisper
thin ring bearing HFXD



Description of shape

A thorough going further development of the KMF-Slim bearing PBXC led, via the whisper bearing PFXC, to the Sleeve-Whisper bearing HFXD. The well-known "C" cross-section of 9,525 x 9,525 mm was enlarged by an elastomer housing and a sleeve to a bearing cross-section of 12,925 x 12,925 mm.

The thin-walled sleeve is made of steel, the hardness of the elastomer housing is 70 Shore.

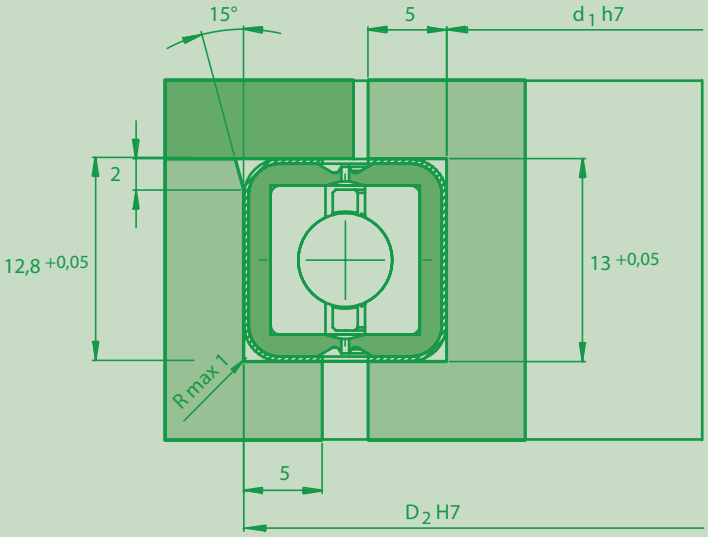
Operating conditions

Operating temperature from –40°C to +80°C.

Features

- Low operating noise
- Low impact sound
- Insusceptible to shock
- Bearing clearance adjustable, due to the splitted bearing rings, sleeves and elastic sheath
- Large installation tolerances on the connecting parts
- The splitted bearing rings eliminates functional difficulties resulting through different material expansions, e. g. different material combinations as light metal steel and cast iron
- Corrosion resistant
- Low maintenance
- High static and dynamic load capacities
- High durability
- Low Mass
- The raceway system is protected from rough contamination due to reduction of the bearing gap

Fitted dimensions



Bearing dimensions

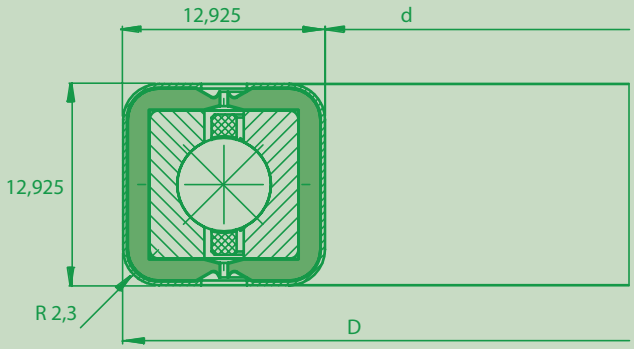


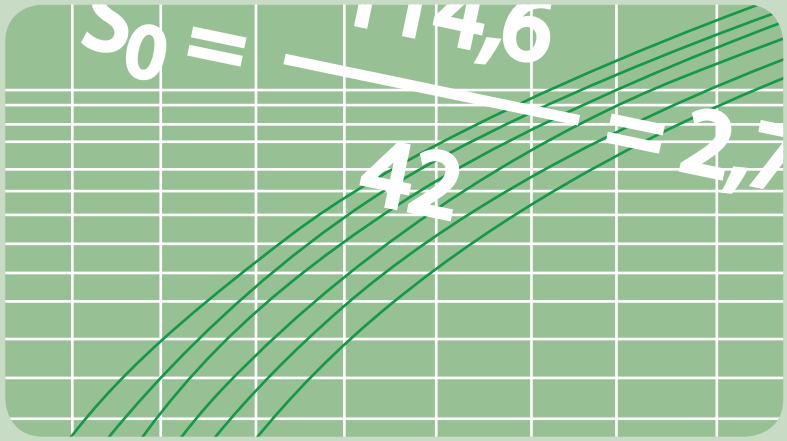
Table of dimensions (Type series HFXD)

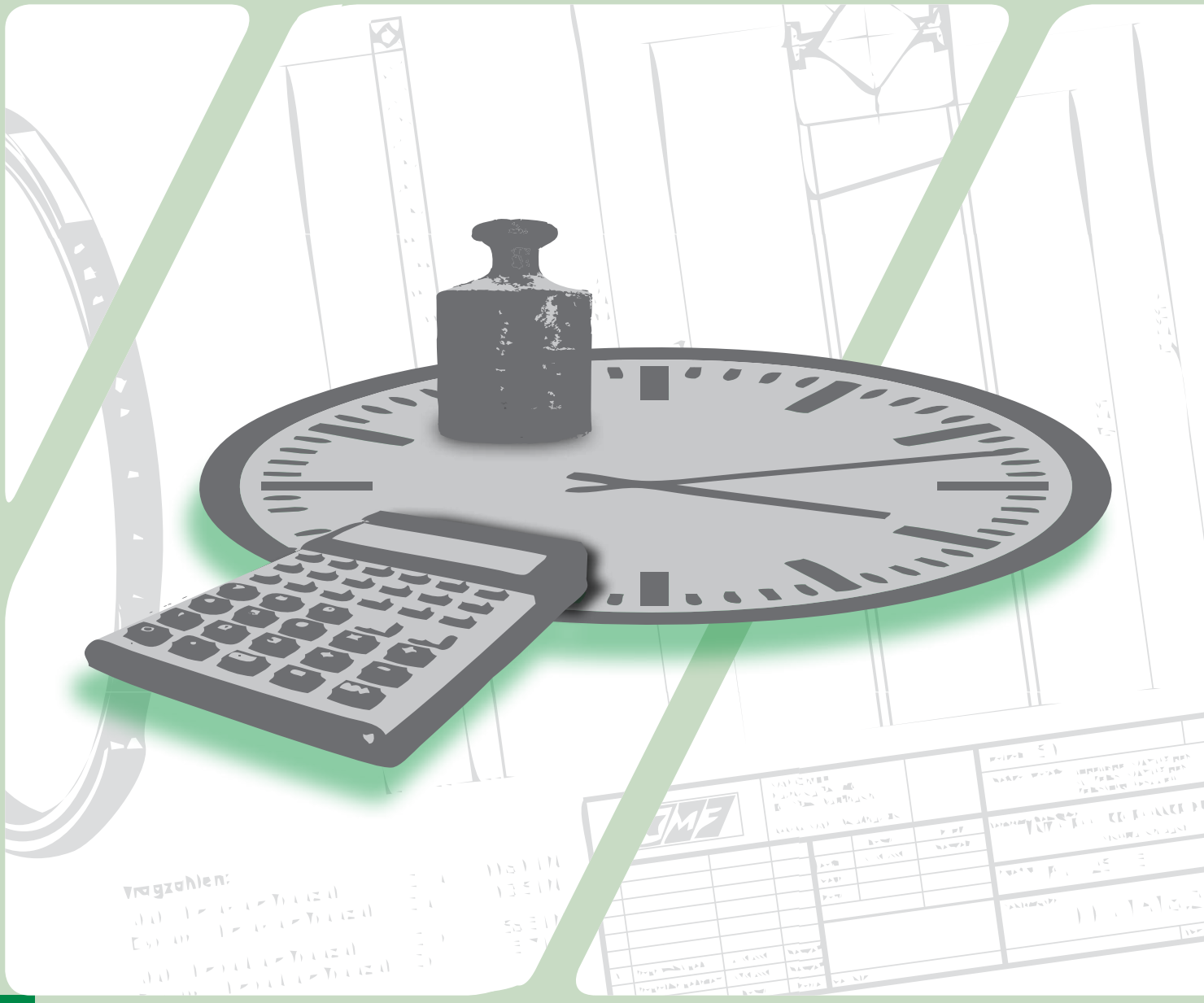
KMF-type 1)	Bearing-dimension		Fitted dimensions		Basic load ratings				Mass	Limiting speeds
					Axial		Radial			
	d	D	d_1	D_2	Dyn.	Stat.	Dyn.	Stat.		
					C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kN	kN	kg	min^{-1}
HFXD 070	174,4	200,25	174,4	200,1	10,9	60,8	9,9	24,2	0,35	880
HFXD 075	187,1	212,95	187,1	212,8	11,1	64,6	10,1	26,1	0,38	820
HFXD 080	199,8	225,65	199,8	225,5	11,4	69,4	10,4	27,6	0,40	760
HFXD 085	212,5	238,35	212,5	238,2	11,6	73,2	10,6	29,5	0,43	720
HFXD 090	225,2	251,05	225,2	249,9	11,9	77,9	10,7	30,9	0,45	680
HFXD 095	237,9	263,75	237,9	263,6	12,2	82,7	11,0	33,3	0,48	640
HFXD 100	250,6	276,45	250,6	276,3	12,4	86,5	11,2	34,7	0,50	610
HFXD 105	263,3	289,15	263,3	289,0	12,6	91,2	11,4	36,6	0,53	580
HFXD 110	276,0	301,85	276,0	301,7	12,8	95,0	11,6	38,0	0,55	550
HFXD 115	288,7	314,55	288,7	314,4	13,0	99,8	11,8	39,9	0,58	530
HFXD 120	301,4	327,25	301,4	327,1	13,2	103,6	12,0	41,3	0,60	510
HFXD 130	326,8	352,65	326,8	352,5	13,6	112,1	12,3	44,7	0,65	470
HFXD 140	352,2	378,05	352,2	377,9	14,0	120,7	12,6	48,5	0,70	430

KMF-type [1]	Bearing-dimension		Fitted dimensions		Basic load ratings				Mass	Limiting speeds
					Axial		Radial			
	d	D	d_1	D_2	Dyn.	Stat.	Dyn.	Stat.		
					C_a	C_{oa}	C_r	C_{or}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kN	kN	kg	min^{-1}
HFXD 150	377,6	403,45	377,6	403,3	14,3	129,2	12,9	51,3	0,75	400
HFXD 160	403,0	428,85	403,0	428,7	14,6	137,8	13,2	55,1	0,80	380
HFXD 170	428,4	454,25	428,4	454,1	14,9	146,3	13,5	58,9	0,85	360
HFXD 180	453,8	479,65	453,8	479,5	15,3	154,9	13,8	61,8	0,90	340
HFXD 190	479,2	505,05	479,2	504,9	15,6	163,4	14,1	65,6	0,95	320
HFXD 200	504,6	530,45	504,6	530,3	15,9	172,0	14,3	68,4	1,00	300
HFXD 210	530,0	555,85	530,0	555,7	16,2	180,5	14,6	72,2	1,05	290
HFXD 220	555,4	581,25	555,4	581,1	16,4	189,1	14,8	75,1	1,10	270
HFXD 230	580,8	606,65	580,8	606,5	16,7	197,6	15,1	78,9	1,15	260
HFXD 240	606,2	632,05	606,2	631,9	17,0	206,2	15,3	82,7	1,20	250
HFXD 250	631,6	657,45	631,6	657,3	17,2	214,7	14,6	85,5	1,25	240
HFXD 260	657,0	682,85	657,0	682,7	17,5	223,3	15,8	89,3	1,30	230
HFXD 300	758,6	784,45	758,6	784,3	18,3	256,5	16,6	102,6	1,50	200

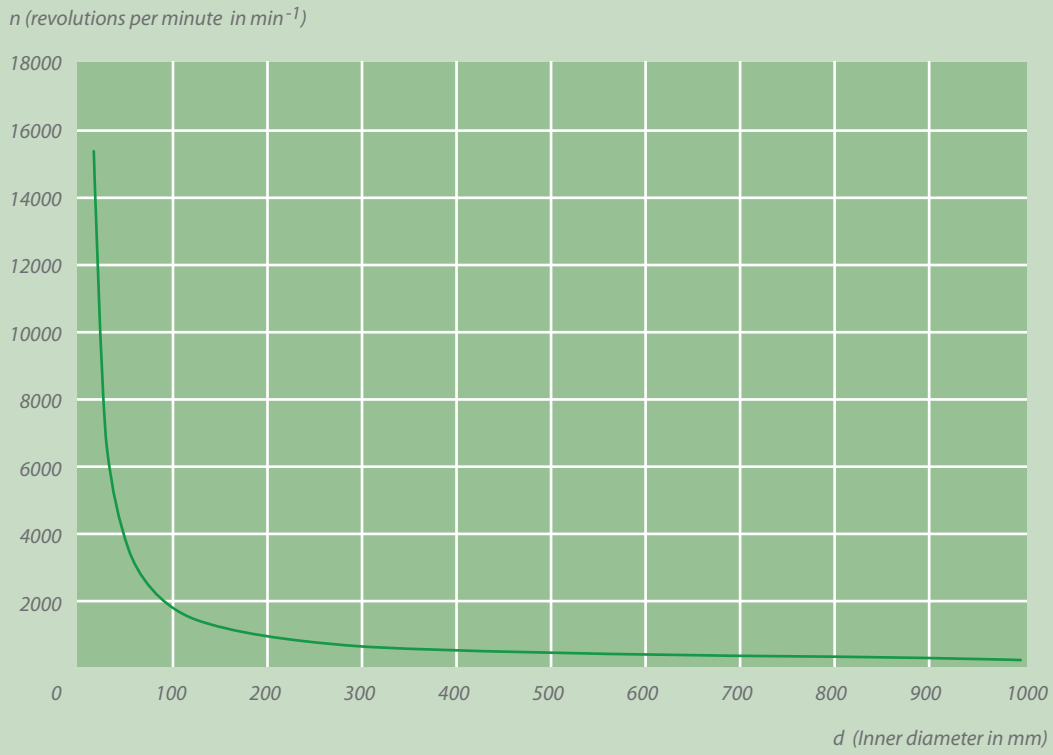
1) Other dimensions on request

Example of calculations for combined static strength and nominal service life





Characteristics of the limiting speeds



Calculation of Static Strength

Given:

PBXC 115

Static Basic load ratings $C_{oa} = 114{,}6$ kN

Bearing Loads:

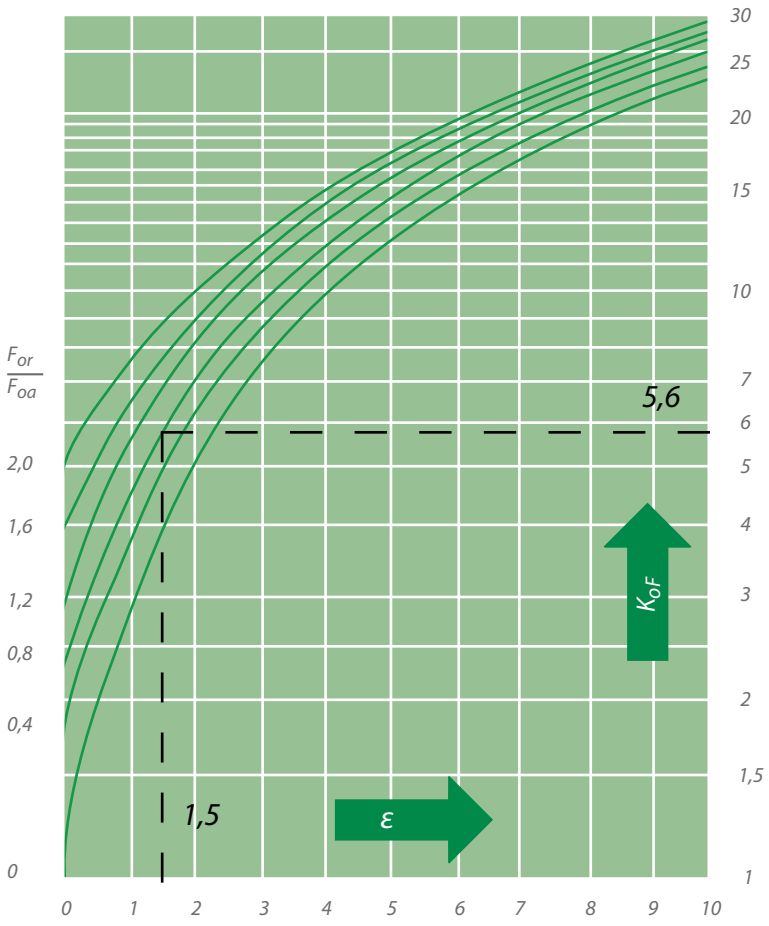
Axial Load $F_{oa} = 7{,}5$ kN

Radial Load $F_{or} = 6{,}0$ kN

Tilting Torque $M_{ok} = 1{,}7$ kNm

Wanted:

Static Safety Factor



Static Load Factor K_{oF} for four point thin ring bearing

ε = Load eccentricity value

D_L = Pitch circle diameter Ø in mm = $\frac{d + D}{2}$

$$\varepsilon = \frac{2 \cdot M_{ok}}{F_{oa} \cdot D_L} \cdot 10^3$$

$$\varepsilon = \frac{2 \cdot 1{,}7}{7{,}5 \cdot 301{,}6} \cdot 10^3 = 1{,}5$$

$$\frac{F_{or}}{F_{oa}} = \frac{6}{7{,}5} = 0{,}8 \qquad K_{oF} = 5{,}6$$

$$P_o = F_{oa} \cdot K_{oF} = 7{,}5 \cdot 5{,}6 = 42 \text{ kN}$$

$$\text{Static Safety Factor } S_0 = \frac{C_{oa}}{P_0}$$

$$S_0 = \frac{114{,}6}{42} = 2{,}73$$

Calculation of Service Life

Given:

PBXC 115

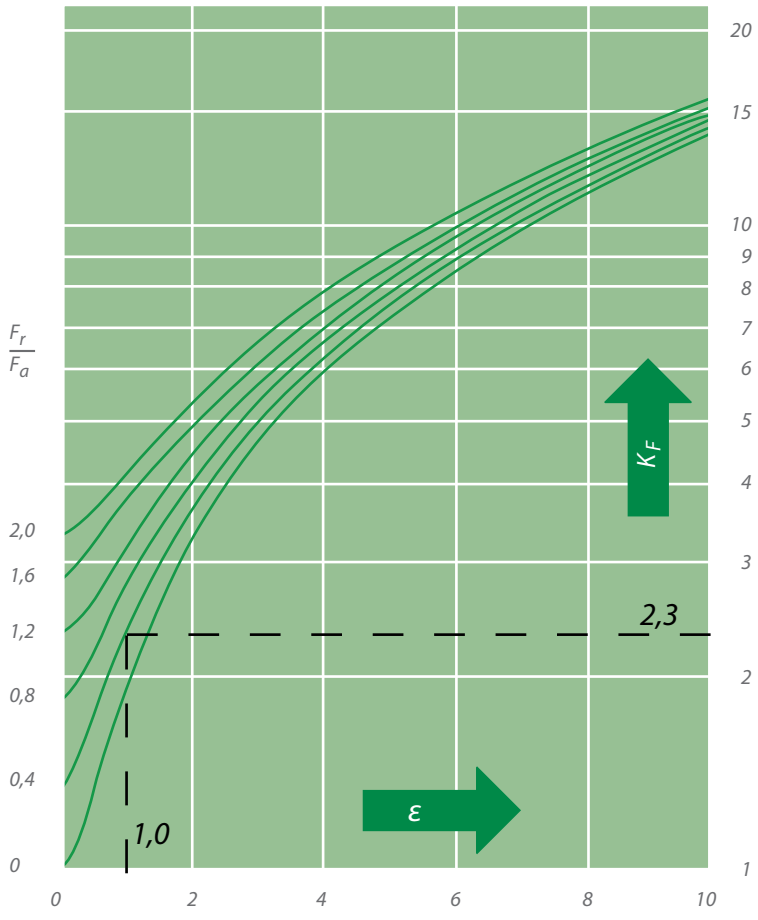
Dynamic Basic load ratings $C_a = 20$ kN

Bearing Loads:

Axial Load	$F_a = 2{,}50$ kN
Radial Load	$F_r = 1{,}00$ kN
Tilting Torque	$M_k = 0{,}38$ kNm
Speed	$n = 20\ min^{-1}$

Wanted:

Nominal Service Life



Dynamic Load Factor K_F for four point thin ring bearing

ε = Load eccentricity value

$$D_L = \text{Pitch circle diameter Ø in mm} = \frac{d + D}{2}$$

$$\varepsilon = \frac{2 \cdot M_k}{F_a \cdot D_L} \cdot 10^3$$

$$\varepsilon = \frac{2 \cdot 0{,}38}{2{,}5 \cdot 301{,}6} \cdot 10^3 = 1{,}0$$

$$\frac{F_r}{F_a} = \frac{1{,}0}{2{,}5} = 0{,}4 \qquad K_F = 2{,}3$$

$$P = F_a \cdot K_F = 2{,}5 \cdot 2{,}3 = 5{,}75 \text{ kN}$$

$$\text{Service Life } L_h = \frac{16666}{n} \cdot \left(\frac{C_a}{P}\right)^3$$

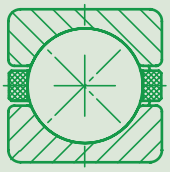
$$L_h = \frac{16666}{20} \cdot \left(\frac{20}{5{,}75}\right)^3 = 35000 \text{ h}$$

Axial-Ball thrust bearing
PBAU 4,5 x 4,5

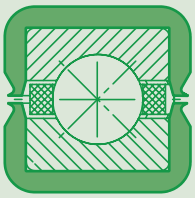
Axial-Ball thrust bearing
PBAA 6,35 x 6,35

Axial-Ball thrust bearing
PBAC 9,525 x 9,525

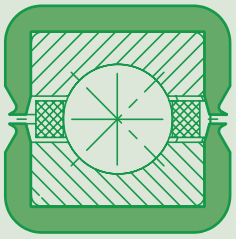
Axial-Ball thrust bearing
PBAD 12,7 x 12,7



Axial-Whisper-ball thrust bearing PFAC 12,325 x 12,325



Axial-Whisper-ball thrust bearing PFAD 16,1 x 16,1



Ball thrust bearing	*PBAU*
	PBAA
	PBAC
	PBAD
Whisper ball thrust bearing	*PFAC*

Technical Description

Description of shape

The KMF-Ball thrust bearing – AXIAL-SLIM-SPLIT-BEARING uses a four point geometry. Due to these four contact points (presure angle 90°) this axial thrust ball bearing has an extremely high axial Basic load ratings in relation to the small bearing cross-cut. Axial thrust ball bearings are mostly so called vertical bearings (turning axes vertical) and can not transmit any radial loads.

These bearings are no self holding units. The assembly of the bearing parts (bearing rings, balls and cage) can be done separately and is for bigger diameters more easy.

Materials

The ball thrust bearings of the type series PBAU, PBAA, PBAC and PBAD are corrosion resistant. Axial bearing rings are made of stainless steel X46Cr13 (material code 1.4034). The cage is made of plastic.

Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +100°C, temporary up to +120°C.

Bearing Cross-Cuts

The KMF-AXIAL-SLIM-SPLIT-BEARING can be offered in the following cross-cuts:

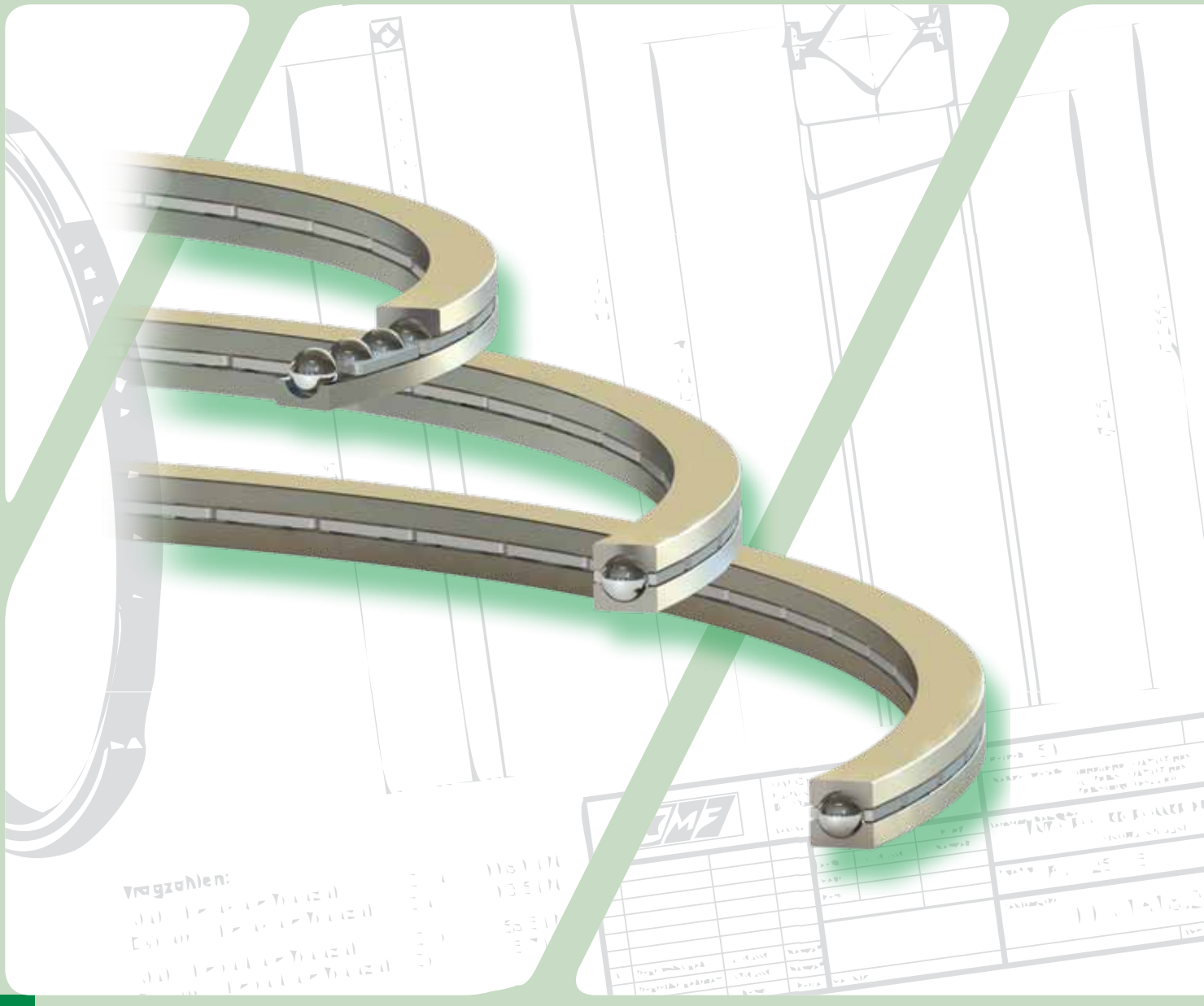
Diameter		KMF-type
Abburation	Dimensions	
U	4,5 x 4,5 mm	PBAU
A	6,35 x 6,35 mm	PBAA
C	9,525 x 9,525 mm	PBAC
D	12,7 x 12,7 mm	PBAD

KMF can supply all bearing types of the complete diameter range of each type series within short terms. Also all other dimensions beneath the preferred series can be suplied within short terms as well.

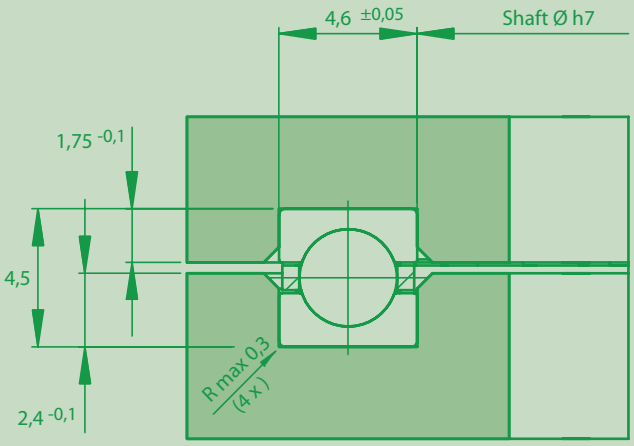
Features

- Free choice of material of the connecting parts, e. g. aluminium
- The splitted bearing rings eliminate functional difficulties resulting through different material expansions, e. g. different material combinations as light metal steel and cast iron
- Corrosion resistant and low maintenance
- High static and dynamic Basic load ratings
- High durability
- High rigidity
- Low Mass
- Easy to install and economical mounting and dismounting, as special fixtures are not necessary
- Dimensions beneath preferred series can be supplied within short terms

Axial-Ball thrust bearing PBAU



Fitted dimensions



Bearing dimensions

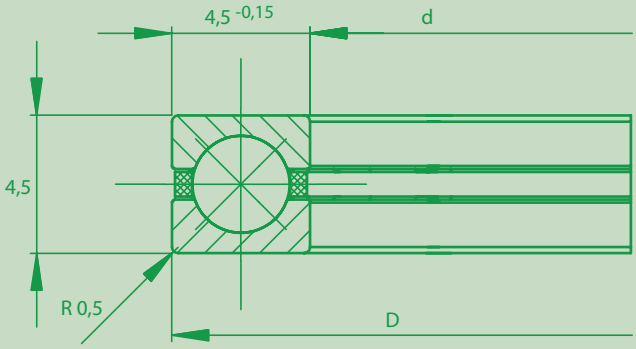


Table of dimensions (Type series PBAU)

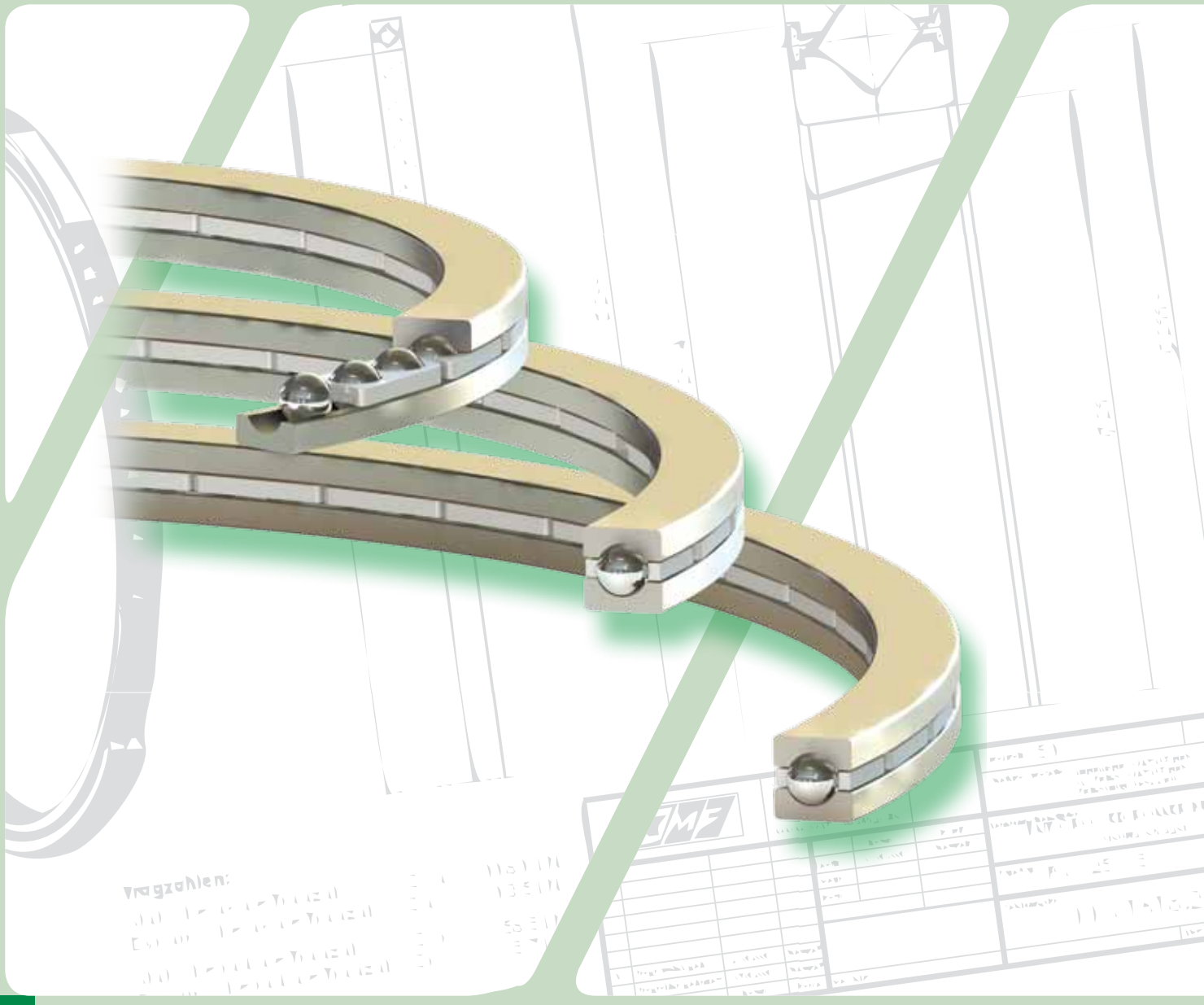
KMF-type [1]	Bearing dimension		Basic load ratings		Mass	Limiting speeds
			Axial			
	d	D	Dyn.	Stat.		
			C_a	C_{oa}		$n_{G\ grease}$
	mm	mm	kN	kN	kg	min^{-1}
PBAU 0090	90	99	5,80	33,4	0,035	1700
PBAU 0095	95	104	5,85	35,4	0,037	1610
PBAU 0100	100	109	6,00	37,4	0,039	1530
PBAU 0110	110	119	6,20	40,8	0,043	1390
PBAU 0120	120	129	6,30	44,8	0,047	1270
PBAU 0130	130	139	6,50	48,2	0,051	1170
PBAU 0140	140	149	6,70	52,0	0,055	1090
PBAU 0150	150	159	6,90	56,0	0,059	1020
PBAU 0160	160	169	7,10	60,0	0,062	950
PBAU 0170	170	179	7,20	63,0	0,066	900
PBAU 0180	180	189	7,40	67,0	0,070	850
PBAU 0190	190	199	7,60	70,0	0,074	800
PBAU 0200	200	209	7,60	74,0	0,078	760
PBAU 0210	210	219	7,80	78,0	0,082	730
PBAU 0220	220	229	7,90	81,0	0,086	690
PBAU 0230	230	239	8,00	85,0	0,090	660
PBAU 0240	240	249	8,10	89,0	0,094	640
PBAU 0250	250	259	8,30	93,0	0,098	610

KMF-type 1)	Bearing dimension		Basic load ratings		Mass	Limiting speeds
			Axial			
	d	D	Dyn.	Stat.		
			C_a	C_{oa}		$n_{G\ grease}$
	mm	mm	kN	kN	kg	min^{-1}
PBAU 0260	260	269	8,45	96,0	0,102	590
PBAU 0270	270	279	8,60	100,0	0,106	570
PBAU 0280	280	289	8,60	104,0	0,110	550
PBAU 0290	290	299	8,80	108,0	0,113	530
PBAU 0300	300	309	9,00	110,0	0,117	510
PBAU 0310	310	319	9,00	114,0	0,121	490
PBAU 0320	320	329	9,10	118,0	0,125	480
PBAU 0330	330	339	9,30	122,0	0,129	460
PBAU 0340	340	349	9,30	126,0	0,133	450
PBAU 0350	350	359	9,40	130,0	0,137	440
PBAU 0360	360	369	9,40	134,0	0,141	420
PBAU 0370	370	379	9,60	136,0	0,145	410
PBAU 0380	380	389	9,75	140,0	0,149	400
PBAU 0390	390	399	9,75	144,0	0,153	390
PBAU 0400	400	409	9,90	148,0	0,157	380
PBAU 0410	410	419	9,90	152,0	0,161	370
PBAU 0420	420	429	10,10	156,0	0,165	360
PBAU 0430	430	439	10,10	160,0	0,169	360
PBAU 0440	440	449	10,20	162,0	0,173	350
PBAU 0450	450	459	10,20	166,0	0,177	340

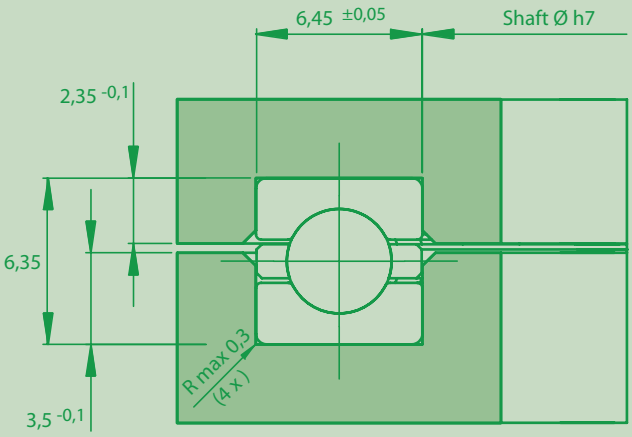
KMF-type 1)	Bearing dimension		Basic load ratings		Mass	Limiting speeds
			Axial			
	d	D	Dyn.	Stat.		
			C_a	C_{oa}		$n_{G\ grease}$
	mm	mm	kN	kN	kg	min^{-1}
PBAU 0460	460	469	10,40	170,0	0,181	330
PBAU 0470	470	479	10,40	174,0	0,185	320
PBAU 0480	480	489	10,60	178,0	0,189	320
PBAU 0490	490	499	10,60	180,0	0,193	310
PBAU 0500	500	509	10,70	184,0	0,197	310
PBAU 0510	510	519	10,70	188,0	0,201	300
PBAU 0520	520	529	10,90	192,0	0,205	290
PBAU 0530	530	539	10,90	196,0	0,209	290
PBAU 0540	540	549	11,05	200,0	0,213	280
PBAU 0550	550	559	11,05	204,0	0,217	280
PBAU 0560	560	569	11,20	206,0	0,221	270
PBAU 0570	570	579	11,20	210,0	0,225	270
PBAU 0580	580	589	11,20	214,0	0,229	260
PBAU 0590	590	599	11,40	218,0	0,233	260
PBAU 0600	600	609	11,40	222,0	0,237	250
PBAU 0610	610	619	11,50	226,0	0,241	250
PBAU 0620	620	629	11,50	230,0	0,245	250
PBAU 0630	630	639	11,70	232,0	0,249	240
PBAU 0640	640	649	11,70	236,0	0,253	240

1) Other dimensions on request

Axial-Ball thrust bearing PBAA



Fitted dimensions



Bearing dimensions

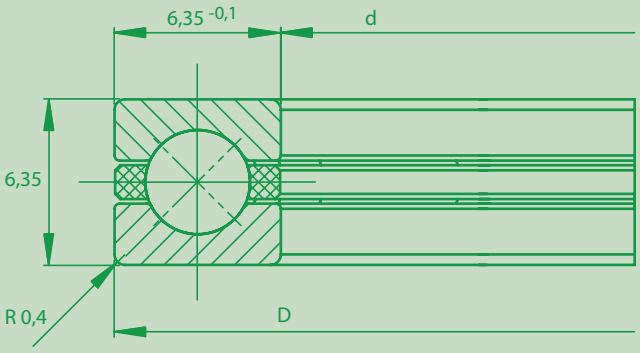


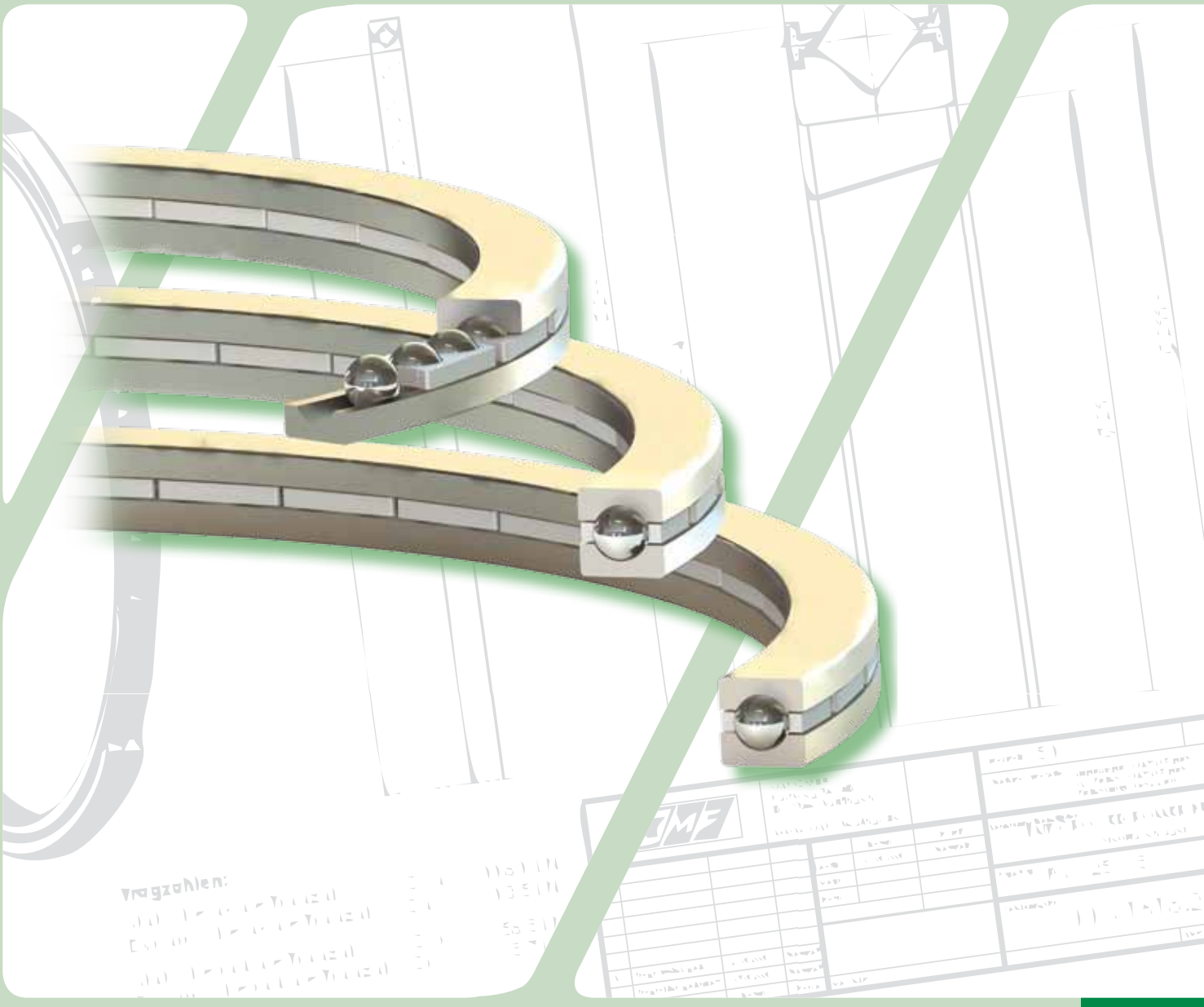
Table of dimensions (Type series PBAA)

KMF-type 1)	Bearing dimension			Basic load ratings		Mass	Limiting speeds
				Axial			
	d		D	Dyn.	Stat.		
				C_a	C_{oa}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kg	min^{-1}
PBAA 040	101,60	4	114,30	7,9	43,8	0,08	1500
PBAA 042	107,95	4 ¼	120,65	8,0	46,2	0,09	1410
PBAA 045	114,30	4 ½	127,00	8,3	49,2	0,09	1340
PBAA 047	120,65	4 ¾	133,35	8,3	52,0	0,10	1270
PBAA 050	127,00	5	139,70	8,6	55,0	0,11	1200
PBAA 055	139,70	5 ½	152,40	8,9	60,0	0,11	1090
PBAA 060	152,40	6	165,10	9,1	65,0	0,12	1000
PBAA 065	165,10	6 ½	177,80	9,4	70,0	0,13	920
PBAA 070	177,80	7	190,50	9,6	76,0	0,14	860
PBAA 075	190,50	7 ½	203,20	9,9	81,0	0,15	800
PBAA 080	203,20	8	215,90	10,1	87,0	0,16	750
PBAA 085	215,90	8 ½	228,60	10,4	92,0	0,17	710
PBAA 090	228,60	9	241,30	10,6	98,0	0,18	670
PBAA 095	241,30	9 ½	254,00	10,7	104,0	0,19	630
PBAA 100	254,00	10	266,70	11,1	108,0	0,20	600
PBAA 105	266,70	10 ½	279,40	11,2	114,0	0,21	570

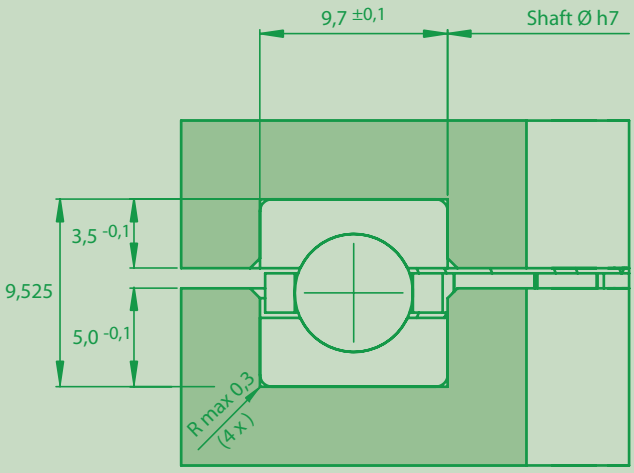
KMF-type 1)	Bearing dimension			Basic load ratings		Mass	Limiting speeds
				Axial			
	d		D	Dyn.	Stat.		
				C_a	C_{oa}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kg	min^{-1}
PBAA 110	279,40	11	292,10	11,4	118,0	0,22	550
PBAA 115	292,10	11 ½	304,80	11,5	124,0	0,23	520
PBAA 120	304,80	12	317,50	11,7	130,0	0,24	500
PBAA 125	317,50	12 ½	330,20	11,7	132,0	0,25	480
PBAA 130	330,20	13	342,90	12,0	140,0	0,26	460
PBAA 135	342,90	13 ½	355,60	12,2	146,0	0,27	450
PBAA 140	355,60	14	368,30	12,4	152,0	0,28	430
PBAA 145	368,30	14 ½	381,00	12,5	158,0	0,29	410
PBAA 150	381,00	15	393,70	12,7	162,0	0,30	400
PBAA 155	393,70	15 ½	406,40	12,8	168,0	0,31	390
PBAA 160	406,40	16	419,10	13,0	172,0	0,32	380
PBAA 165	419,10	16 ½	431,80	13,2	178,0	0,33	360
PBAA 170	431,80	17	444,50	13,3	184,0	0,34	350
PBAA 175	444,50	17 ½	457,20	13,5	190,0	0,35	340
PBAA 180	457,20	18	469,90	13,7	194,0	0,36	330
PBAA 185	469,90	18 ½	482,60	13,7	200,0	0,37	320
PBAA 190	482,60	19	495,30	13,8	206,0	0,38	320
PBAA 195	495,30	19 ½	508,00	14,0	210,0	0,39	310
PBAA 200	508,00	20	520,70	14,1	216,0	0,40	300
PBAA 210	533,40	21	546,10	14,3	226,0	0,41	290
PBAA 220	558,80	22	571,50	14,6	238,0	0,43	270
PBAA 230	584,20	23	596,90	14,8	248,0	0,45	260
PBAA 240	609,60	24	622,30	15,1	260,0	0,47	250
PBAA 250	635,00	25	647,70	15,3	270,0	0,49	240
PBAA 260	660,40	26	673,10	15,4	280,0	0,51	230
PBAA 270	685,80	27	698,50	15,8	292,0	0,53	220
PBAA 280	711,20	28	723,90	15,9	302,0	0,55	210
PBAA 290	736,60	29	749,30	16,1	312,0	0,57	210
PBAA 300	762,00	30	774,70	16,4	324,0	0,59	200

1) Other dimensions on request

Axial-Ball thrust bearing PBAC



Fitted dimensions



Bearing dimensions

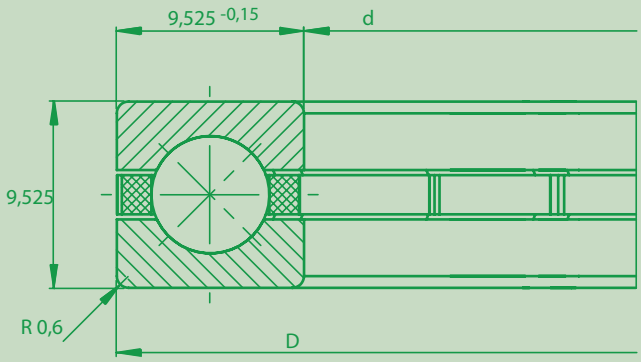


Table of dimensions (Type series PBAC)

KMF-type [1]	Bearing dimension			Basic load ratings		Mass	Limiting speeds
				Axial			
	d		D	Dyn.	Stat.		
				C_a	C_{oa}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kg	min^{-1}
PBAC 070	177,80	7	196,85	18,7	128,0	0,30	860
PBAC 075	190,50	7 ½	209,55	19,0	136,0	0,32	800
PBAC 080	203,20	8	222,25	19,5	146,0	0,34	750
PBAC 085	215,90	8 ½	234,95	19,8	154,0	0,36	710
PBAC 090	228,60	9	247,65	20,3	164,0	0,38	670
PBAC 095	241,30	9 ½	260,35	20,8	174,0	0,39	630
PBAC 100	254,00	10	273,05	21,1	182,0	0,41	600
PBAC 105	266,70	10 ½	285,75	21,6	192,0	0,43	570
PBAC 110	279,40	11	298,45	21,9	200,0	0,45	550
PBAC 115	292,10	11 ½	311,15	22,3	210,0	0,47	520
PBAC 120	304,80	12	323,85	22,6	218,0	0,49	500
PBAC 130	330,20	13	349,25	23,2	236,0	0,53	460
PBAC 140	355,60	14	374,65	23,9	254,0	0,56	430
PBAC 150	381,00	15	400,05	24,5	272,0	0,60	400
PBAC 160	406,40	16	425,45	25,0	290,0	0,64	380
PBAC 170	431,80	17	450,85	25,5	308,0	0,68	350
PBAC 180	457,20	18	476,25	26,2	326,0	0,72	330
PBAC 190	482,60	19	501,65	26,7	344,0	0,76	320

KMF-type [1]	Bearing dimension			Basic load ratings		Mass	Limiting speeds
				Axial			
	d		D	Dyn.	Stat.		
				C_a	C_{oa}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kg	min^{-1}
PBAC 200	508,00	20	527,05	27,1	362,0	0,79	300
PBAC 210	533,40	21	552,45	27,6	380,0	0,83	290
PBAC 220	558,80	22	577,85	28,1	398,0	0,87	270
PBAC 230	584,20	23	603,25	28,6	416,0	0,91	260
PBAC 240	609,60	24	628,65	29,1	434,0	0,95	250
PBAC 250	635,00	25	654,05	29,4	452,0	0,98	240
PBAC 260	660,40	26	679,45	29,9	470,0	1,02	230
PBAC 270	685,80	27	704,85	30,4	490,0	1,06	220
PBAC 280	711,20	28	730,25	30,7	510,0	1,10	210
PBAC 290	736,60	29	755,65	31,0	520,0	1,14	210
PBAC 300	762,00	30	781,05	31,4	540,0	1,18	200
PBAC 310	787,40	31	806,45	31,9	560,0	1,22	190
PBAC 320	812,80	32	831,85	32,2	580,0	1,26	190
PBAC 330	838,20	33	857,25	32,5	600,0	1,30	180
PBAC 340	863,60	34	882,65	33,0	610,0	1,34	180

1) Other dimensions on request

Component parts PBAC

(1) Bearing top ring

Conformed raceway

(2) Bearing under ring

Conformed raceway

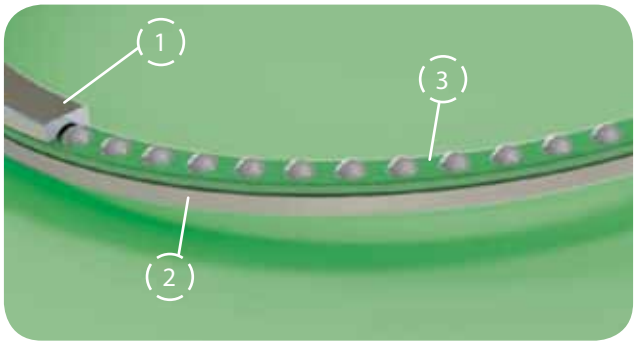
(3) Cage strip with balls

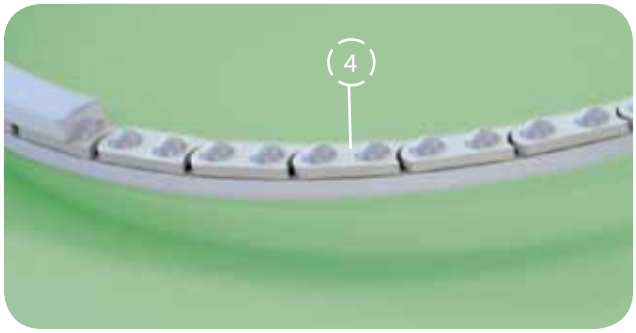
Balls holded and guided

Optional

(4) Cage segments with balls

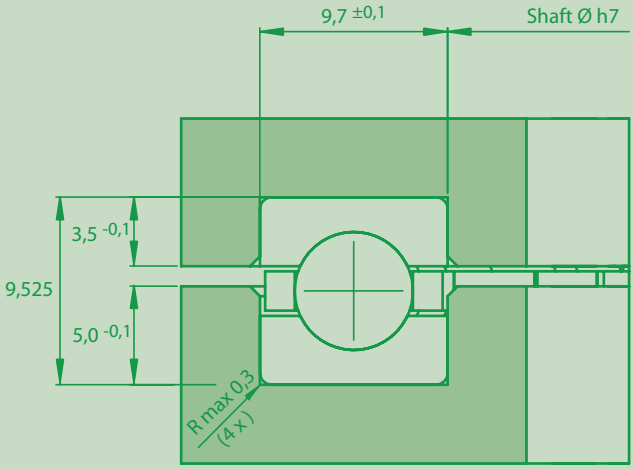
Balls holded and guided





Axial-Ball thrust bearing PBAC – metric

Fitted dimensions



Bearing dimensions

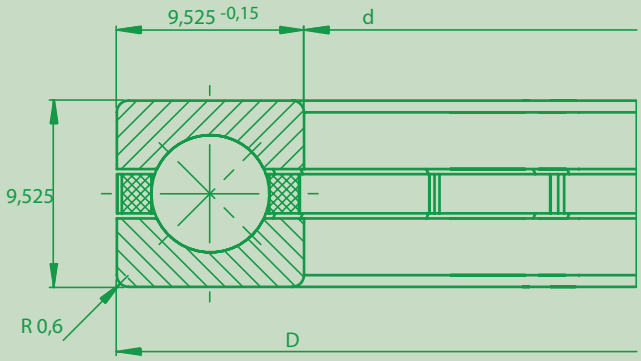


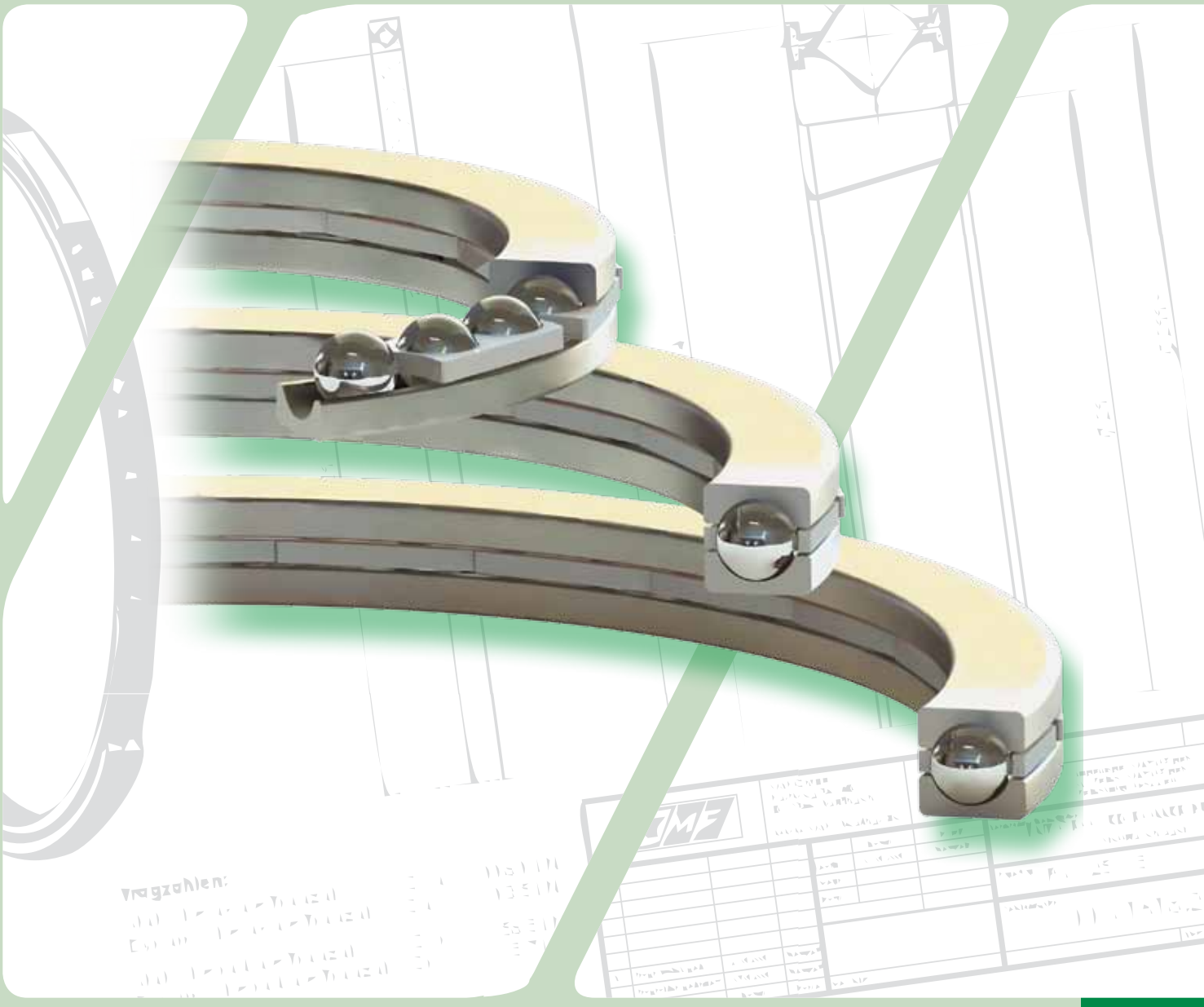
Table of dimensions (Type series PBAC metric)

KMF-type [1]	Bearing dimension			Basic load ratings		Mass	Limiting speeds
				Axial			
	D_L [2]	d	D	Dyn.	Stat.		
				C_a	C_{oa}		$n_{G\ grease}$
	mm	mm	mm	kN	kN	kg	min^{-1}
PBAC 0195	195	185,5	204,5	18,8	131,7	0,30	820
PBAC 0260	260	250,5	269,5	21,8	177,8	0,40	610
PBAC 0295	295	285,5	304,5	23,3	202,7	0,48	530
PBAC 0395	395	385,5	404,5	27,0	273,9	0,62	400
PBAC 0520	520	510,5	529,5	31,2	362,4	0,82	300
PBAC 0690	690	680,5	699,5	36,0	483,1	1,10	220
PBAC 0720	720	710,5	729,5	36,8	504,4	1,15	210
PBAC 0722	722	712,5	731,5	36,9	505,8	1,16	210
PBAC 0875	875	865,5	884,5	40,6	614,5	1,40	180
PBAC 0880	880	870,5	889,5	40,7	618,0	1,41	180
PBAC 1090	1090	1080,5	1099,5	45,4	767,0	1,74	140
PBAC 1230	1230	1220,5	1239,5	48,2	866,0	1,97	130
PBAC 1410	1410	1400,5	1419,5	51,6	994,0	2,26	110

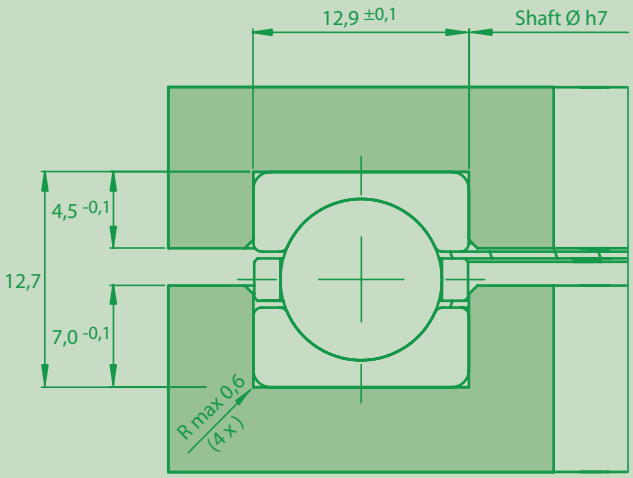
1) Other dimensions on request

2) Running circle diameter

Axial-Ball thrust bearing PBAD



Fitted dimensions



Bearing dimensions

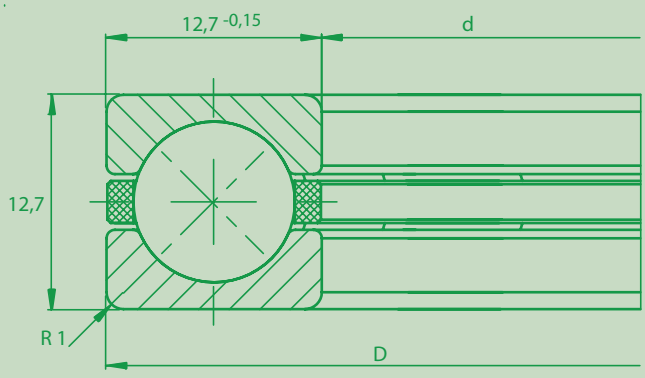


Table of dimensions (Type series PBAD)

KMF-type [1]	Bearing dimension			Basic load ratings		Mass	Limiting speeds
				Axial			
	d		D	Dyn.	Stat.		
				C_a	C_{oa}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kg	min^{-1}
PBAD 070	177,80	7	203,2	36,7	208,0	0,557	860
PBAD 075	190,50	7 ½	215,9	37,9	224,0	0,594	800
PBAD 080	203,20	8	228,6	38,7	238,0	0,631	750
PBAD 085	215,90	8 ½	241,3	39,3	252,0	0,668	710
PBAD 090	228,60	9	254,0	40,5	270,0	0,705	670
PBAD 095	241,30	9 ½	266,7	41,4	282,0	0,742	630
PBAD 100	254,00	10	279,4	41,4	296,0	0,779	600
PBAD 105	266,70	10 ½	292,1	43,1	314,0	0,816	570
PBAD 110	279,40	11	304,8	43,1	326,0	0,853	550
PBAD 115	292,10	11 ½	317,5	43,9	340,0	0,891	520
PBAD 120	304,80	12	330,2	44,7	358,0	0,928	500
PBAD 130	330,20	13	355,6	46,3	384,0	1,002	460

KMF-type [1]	Bearing dimension			Basic load ratings		Mass	Limiting speeds
				Axial			
	d		D	Dyn.	Stat.		
				C_a	C_{oa}		$n_{G\ grease}$
	mm	inch	mm	kN	kN	kg	min^{-1}
PBAD 140	355,60	14	381,00	47,1	416,0	1,076	430
PBAD 150	381,00	15	406,40	48,8	446,0	1,150	400
PBAD 160	406,40	16	431,80	49,6	474,0	1,225	380
PBAD 170	431,80	17	457,20	51,2	500,0	1,299	350
PBAD 180	457,20	18	482,60	52,0	540,0	1,373	330
PBAD 190	482,60	19	508,00	52,8	560,0	1,447	320
PBAD 200	508,00	20	533,40	53,6	590,0	1,521	300
PBAD 210	533,40	21	558,80	54,4	620,0	1,596	290
PBAD 220	558,80	22	584,20	56,1	650,0	1,670	270
PBAD 230	584,20	23	609,60	56,1	680,0	1,744	260
PBAD 240	609,60	24	635,00	57,7	710,0	1,818	250
PBAD 250	635,00	25	660,40	58,5	740,0	1,892	240
PBAD 260	660,40	26	685,80	59,3	770,0	1,967	230
PBAD 270	685,80	27	711,20	60,1	800,0	2,041	220
PBAD 280	711,20	28	736,60	60,9	830,0	2,115	210
PBAD 290	736,60	29	762,00	61,8	860,0	2,189	210
PBAD 300	762,00	30	787,40	62,6	890,0	2,264	200
PBAD 310	787,40	31	812,80	63,4	920,0	2,338	190
PBAD 320	812,80	32	838,20	64,2	950,0	2,412	190
PBAD 330	838,20	33	863,60	64,2	970,0	2,486	180
PBAD 340	863,60	34	889,00	65,0	1000,0	2,560	180
PBAD 400	1016,00	40	1041,40	70,5	1175,0	3,012	155
PBAD 405	1028,70	40 ½	1054,10	71,0	1190,0	3,049	150
PBAD 417	1060,45	41 ¾	1085,85	72,0	1230,0	3,143	145
PBAD 420	1066,80	42	1092,20	72,2	1235,0	3,162	140

1) Other dimensions on request

Axial-Whisper-ball thrust bearing PFAC

Description of shape

The Whisper-Thin ring bearing consists of a thin ring bearing type series PBAC, which is covered on the top and under ring with an elastomer sheath with a hardness of 70 Shore.

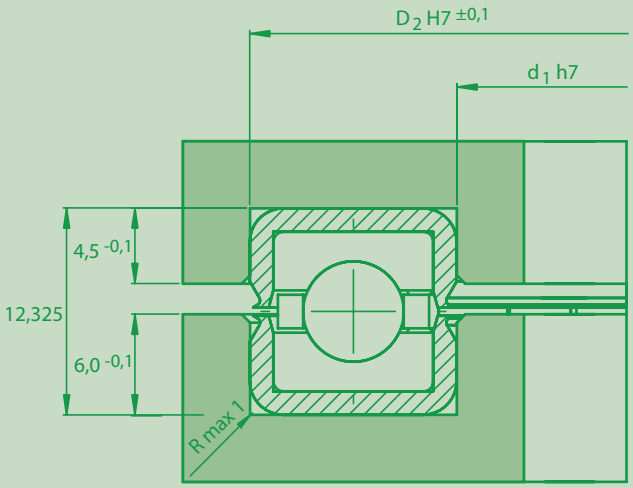
Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +80°C. This whisper thin ring bearing has additionally to the PBAC more outstanding features.

Features

- Low operating noise
- Low impact sound
- Insusceptible to shock
- Large installation tolerances on the connecting parts
- The raceway system is protected from rough contamination due to reduction of the bearing gap

Fitted dimensions



Bearing dimensions

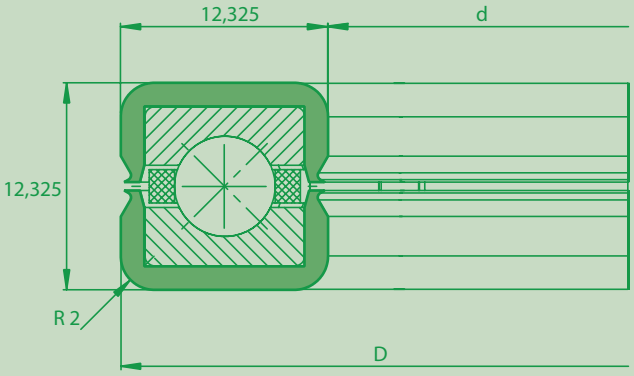


Table of dimensions (Type series PFAC)

KMF-type 1)	Bearing-dimension		Fitted dimensions		Basic load ratings Axial		Mass	Limiting speeds
	d	D	d_1	D_2	Dyn. C_a	Stat. C_{oa}		n_G grease
	mm	mm	mm	mm	kN	kN	kg	min^{-1}
PFAC 070	175,0	199,65	175,0	200,0	16,8	115,2	0,32	870
PFAC 075	187,7	212,35	187,7	212,7	17,1	122,4	0,34	810
PFAC 080	200,4	225,05	200,4	225,4	17,6	131,4	0,36	760
PFAC 085	213,1	237,75	213,1	238,1	17,8	138,6	0,38	720
PFAC 090	225,8	250,45	225,8	250,8	18,3	147,6	0,41	680
PFAC 095	238,5	263,15	238,5	263,5	18,7	156,6	0,43	640
PFAC 100	251,2	275,85	251,2	276,2	19,0	163,8	0,45	610
PFAC 105	263,9	288,55	263,9	288,9	19,4	172,8	0,47	580
PFAC 110	276,6	301,25	276,6	301,6	19,7	180,0	0,50	550

KMF-type [1]	Bearing-dimension		Fitted dimensions		Basic load ratings Axial		Mass	Limiting speeds
	d	D	d_1	D_2	Dyn. C_a	Stat. C_{oa}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kg	min^{-1}
PFAC 115	289,3	313,95	289,3	314,3	20,0	189,0	0,52	530
PFAC 120	302,0	326,65	302,0	327,0	20,3	196,2	0,54	510
PFAC 130	327,4	352,05	327,4	352,4	20,9	212,4	0,59	470
PFAC 140	352,8	377,45	352,8	377,8	21,5	228,6	0,63	430
PFAC 150	378,2	402,85	378,2	403,2	22,1	244,8	0,68	400
PFAC 160	403,6	428,25	403,6	428,6	22,5	261,0	0,72	380
PFAC 170	429,0	453,65	429,0	454,0	23,0	277,2	0,77	360
PFAC 180	454,4	479,05	454,4	479,4	23,6	293,4	0,81	340
PFAC 190	479,8	504,45	479,8	504,8	24,0	309,6	0,86	320
PFAC 200	505,2	529,85	505,2	530,2	24,1	325,8	0,90	300
PFAC 210	530,6	555,25	530,6	555,6	24,8	342,0	0,95	290
PFAC 220	556,0	580,65	556,0	581,0	25,3	358,2	0,99	270
PFAC 230	581,4	606,05	581,4	606,4	25,7	374,4	1,04	260
PFAC 240	606,8	631,45	606,8	631,8	26,2	390,6	1,08	250
PFAC 250	632,2	656,85	632,2	657,2	26,5	406,8	1,13	240
PFAC 260	657,6	682,25	657,6	682,6	26,9	423,0	1,17	230
PFAC 270	683,0	707,65	683,0	708,0	27,4	441,0	1,22	220
PFAC 280	708,4	733,05	708,4	733,4	27,6	459,0	1,26	220
PFAC 290	733,8	758,45	733,8	758,8	27,9	468,0	1,31	210
PFAC 300	759,2	783,85	759,2	784,2	28,3	486,0	1,35	200
PFAC 310	784,6	809,25	784,6	809,6	28,7	504,0	1,40	190
PFAC 320	810,0	834,65	810,0	835,0	29,0	522,0	1,44	190
PFAC 330	835,4	860,05	835,4	860,4	29,3	540,0	1,49	180
PFAC 340	860,8	885,45	860,8	885,8	29,7	549,0	1,53	180

1) Other dimensions on request

Axial-Whisper-ball thrust bearing PFAD

Description of shape

The Whisper-Thin ring bearing consists of a thin ring bearing type series PBAD, which is covered on the top and under ring with an elastomer sheath with a hardness of 70 Shore.

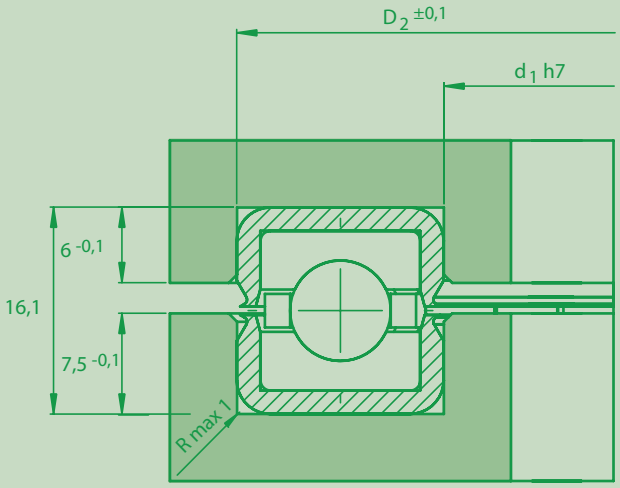
Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +80°C. This whisper thin ring bearing has additionally to the PBAD more outstanding features.

Features

- Low operating noise
- Low impact sound
- Insusceptible to shock
- Large installation tolerances on the connecting parts
- The raceway system is protected from rough contamination due to reduction of the bearing gap

Fitted dimensions



Bearing dimensions

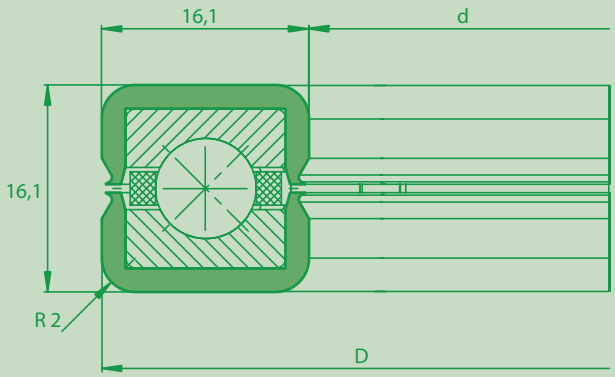


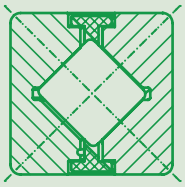
Table of dimensions (Type series PFAD)

KMF-type 1)	Bearing-dimension		Fitted dimensions		Basic load ratings Axial		Mass	Limiting speeds
	d	D	d_1	D_2	Dyn. C_a	Stat. C_{oa}		n_G grease
	mm	mm	mm	mm	kN	kN	kg	min^{-1}
PFAD 070	174,4	206,6	174,4	207,0	33,0	187,2	0,623	860
PFAD 075	187,1	219,3	187,1	219,7	34,1	201,6	0,668	800
PFAD 080	199,8	232,0	199,8	232,4	34,8	214,2	0,714	750
PFAD 085	212,5	244,7	212,5	245,1	35,4	226,8	0,759	710
PFAD 090	225,2	257,4	225,2	257,8	36,5	243,0	0,804	670
PFAD 095	237,9	270,1	237,9	270,5	37,3	253,8	0,850	630
PFAD 100	250,6	282,8	250,6	283,2	37,3	266,4	0,895	600
PFAD 105	263,3	295,5	263,3	295,9	38,8	282,6	0,940	570
PFAD 110	276,0	308,2	276,0	308,6	38,8	293,4	0,985	550
PFAD 115	288,7	320,9	288,7	321,3	39,5	306,0	1,030	520
PFAD 120	301,4	333,6	301,4	334,0	40,2	322,2	1,075	500

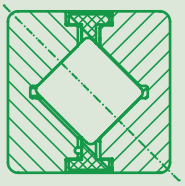
KMF-type [1]	Bearing-dimension		Fitted dimensions		Basic load ratings Axial		Mass	Limiting speeds
	d	D	d_1	D_2	Dyn. C_a	Stat. C_{oa}		$n_{G\ grease}$
	mm	mm	mm	mm	kN	kN	kg	min^{-1}
PFAD 130	326,80	359,00	326,80	359,40	41,7	345,6	1,164	460
PFAD 140	352,20	384,40	352,20	384,80	42,4	374,4	1,253	430
PFAD 150	377,60	409,80	377,60	410,20	43,9	401,4	1,343	400
PFAD 160	403,00	435,20	403,00	435,60	44,6	426,6	1,433	380
PFAD 170	428,40	460,60	428,40	461,00	46,1	450,0	1,522	350
PFAD 180	453,80	486,00	453,80	486,40	46,8	486,0	1,612	330
PFAD 190	479,20	511,40	479,20	511,80	47,5	504,0	1,702	320
PFAD 200	504,60	536,80	504,60	537,20	48,2	531,0	1,791	300
PFAD 210	530,00	562,20	530,00	562,60	49,0	558,0	1,881	290
PFAD 220	555,40	587,60	555,40	588,00	50,5	585,0	1,970	270
PFAD 230	580,80	613,00	580,80	613,40	50,5	612,0	2,060	260
PFAD 240	606,20	638,40	606,20	638,80	51,9	639,0	2,150	250
PFAD 250	631,60	663,80	631,60	664,20	52,7	666,0	2,239	240
PFAD 260	657,00	689,20	657,00	689,60	53,4	693,0	2,329	230
PFAD 270	682,40	714,60	682,40	715,00	54,1	720,0	2,418	220
PFAD 280	707,80	740,00	707,80	740,40	54,8	747,0	2,508	210
PFAD 290	733,20	765,40	733,20	765,80	55,6	774,0	2,597	210
PFAD 300	758,60	790,80	758,60	791,20	56,3	801,0	2,687	200
PFAD 310	784,00	816,20	784,00	817,60	57,1	828,0	2,776	190
PFAD 320	809,40	841,60	809,40	842,00	57,8	855,0	2,866	190
PFAD 330	834,80	867,00	834,80	867,40	57,8	873,0	2,956	180
PFAD 340	860,20	892,40	860,20	892,80	58,5	900,0	3,045	180
PFAD 400	1012,60	1044,80	1012,60	1045,20	63,5	1060,0	3,596	155
PFAD 405	1025,30	1057,50	1025,30	1057,90	63,9	1070,0	3,641	150
PFAD 417	1057,05	1089,25	1057,05	1089,65	64,8	1100,0	3,754	145
PFAD 420	1063,40	1095,60	1063,40	1096,00	65,0	1110,0	3,776	140

1) Other dimensions on request

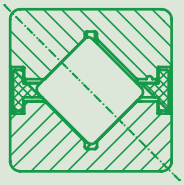
Crossed roller bearing
PSX-08
8 x 8 mm



Angular roller bearing
PSR-08
8 x 8 mm



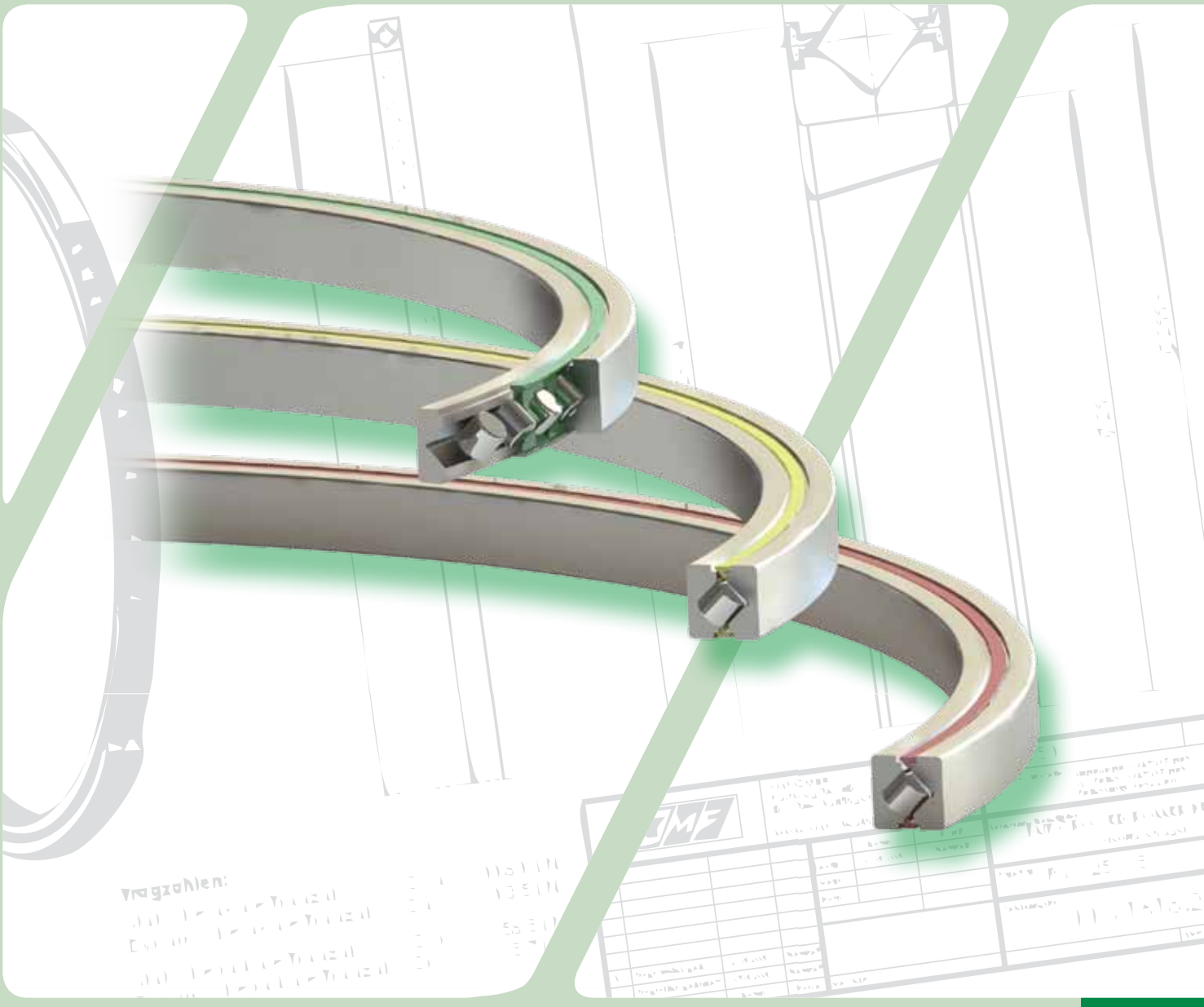
Axial-angular
roller bearing PSA-08
8 x 8 mm



PSA-08, PSR-08, PSX-08

Crossed roller bearing PSX-08

Crossed roller bearing PSX-08



Description of shape

Crossed roller bearings are single row cylindrical roller bearings and can take radial loads, double sided acting axial loads as well as moment loads.

The raceway system consists of cylinder rollers, which are alternately arranged by 90°.

The KMF-CROSSED-ROLLER-SLIM-SPLIT-BEARING uses splitted bearing rings as the KMF-SLIM-SPLIT-BEARING, so that the biggest possible cylindrical rollers could be integrated in this special bearing shape with the smallest bearing cross-cut. A crossed roller cage with holded and guided rollers causes less friction in the raceway system and enables therefore higher speeds. Furthermore the special shape of the cage guarantees a labyrinth sealing of the bearing gap, and therefor protects the raceway system, similar to a sealing system, of leaving the bearing grease and the entry of rough contamination.

The KMF-CROSSED-ROLLER-SLIM-SPLIT-BEARING is offered with a bearing cross-cut of 8,0 x 8,0 mm, named PSX series. Due to this small bearing cross-cut the connecting parts can be designed very simple. So, the KMF-Crossed roller bearing offers many advantages regarding design and function.

Because of the maximum possible amount of rollers, the integration of the cage the given line contact between the rollers and the raceway, the elastic deformation of crossed roller bearings is small. So this bearings have an extremely high stiffness, especially in axial direction, which can be increased by setting the preload higher. So, the function can be fitted to the requirements of each application individually.

KMF can supply all bearing types of the complete diameter range of each type series within short terms. Also all other dimensions beneath the preferred series can be suplied within short terms as well.

Materials

The bearings are made of stainless steel X46Cr13 (material code 1.4034). The seperator is made of Polyamide 12.

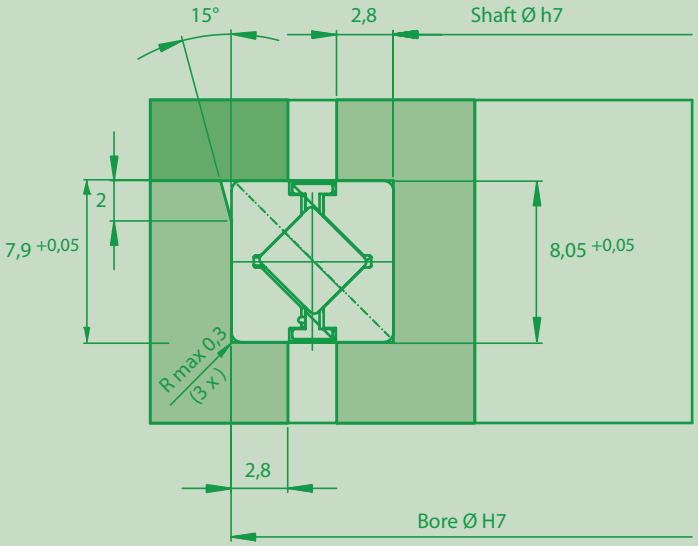
Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +100°C, for short periods up to +120°C.

Features

- Considerably simplification of constructions with crossed roller bearings and their connecting parts (economic construction of the connecting parts)
- Free choice of material for the connecting parts, e. g. aluminium
- Corrosion resistant and low maintenance
- High static and dynamic Basic load ratings at maximal stiffnes (low deformation)
- Low Mass
- Easy to install
- Dimensions beneath preferred series can be supplied within short terms

Fitted dimensions



Bearing dimensions

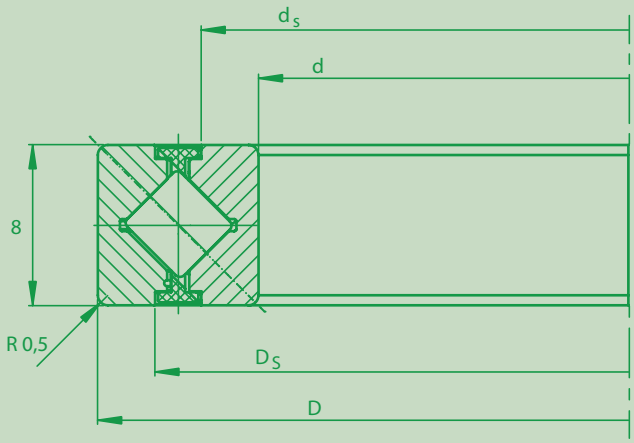


Table of dimensions (Type series PSX-08)

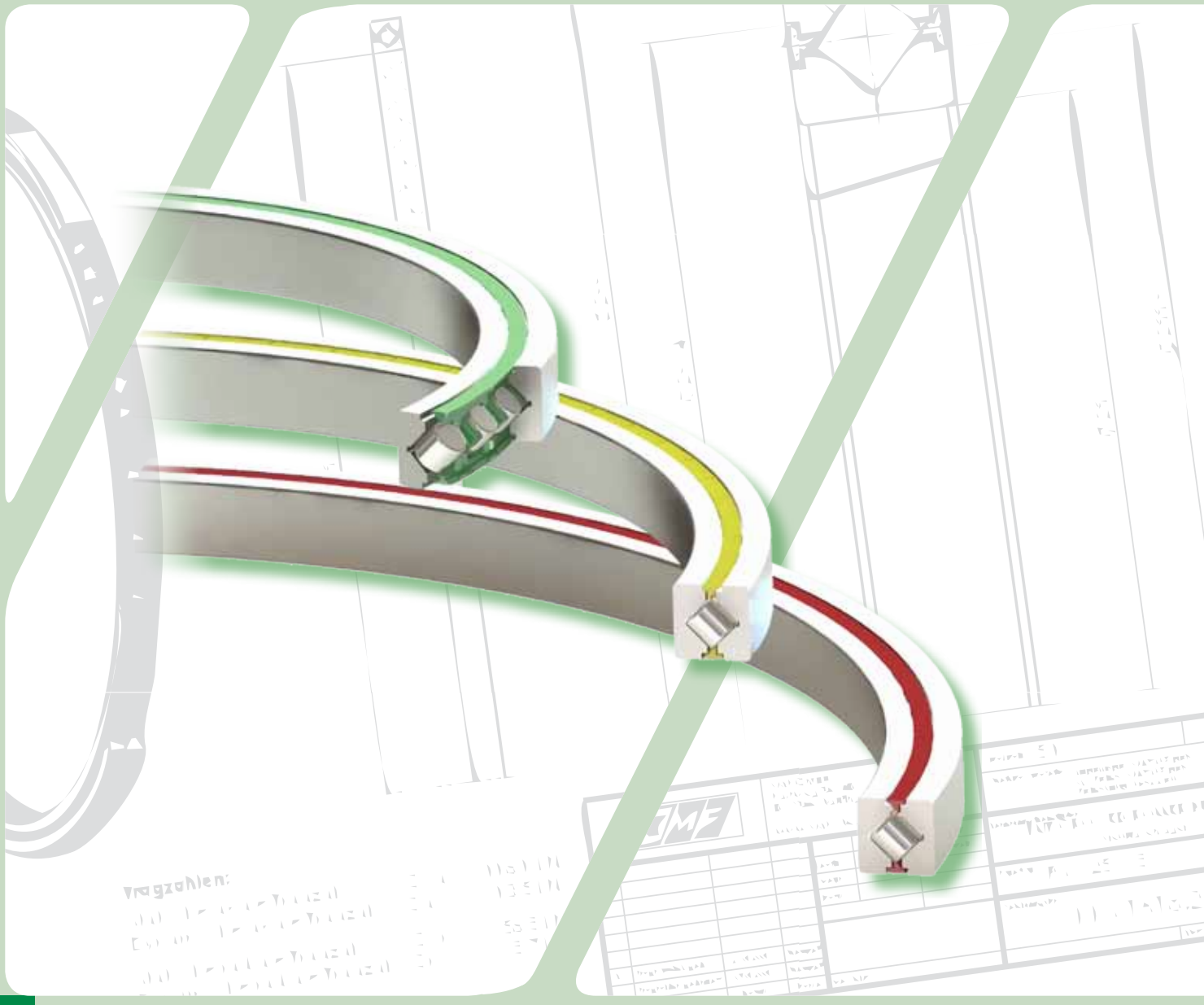
KMF-Type 1)	Bearing dimension				Mass	Basic load ratings				Limiting speeds	
						Axial		Radial		Bearing play	Pre-load
	d	D	d_s	D_S		Dyn.	Stat.	Dyn.	Stat.		
						C_a	C_{oa}	C_r 2)	C_{or} 2)	$n_{G fett}$	$n_{G grease}$
	mm	mm	mm	mm	kg	kN	kN	kN	kN	min^{-1}	min^{-1}
PSX 080 08	80	96	85,6	90,4	0,11	6,00	30,0	4,3	12,0	890	445
PSX 090 08	90	106	95,6	100,4	0,12	6,40	33,0	4,5	13,3	780	390
PSX 100 08	100	116	105,6	110,4	0,13	6,90	38,0	4,9	15,1	710	355
PSX 110 08	110	126	115,6	120,4	0,14	7,20	41,0	5,1	16,4	650	325
PSX 120 08	120	136	125,6	130,4	0,16	7,60	45,5	5,4	18,2	600	300
PSX 130 08	130	146	135,6	140,4	0,17	7,90	48,5	5,6	19,5	560	280
PSX 140 08	140	156	145,6	150,4	0,18	8,10	52,0	5,8	20,7	520	260
PSX 150 08	150	166	155,6	160,4	0,20	8,50	56,0	6,1	22,6	490	245
PSX 160 08	160	176	165,6	170,4	0,21	8,70	60,0	6,2	23,8	460	230
PSX 170 08	170	186	175,6	180,4	0,22	9,00	63,0	6,4	25,0	430	215
PSX 180 08	180	196	185,6	190,4	0,23	9,30	67,0	6,6	27,0	410	205
PSX 190 08	190	206	195,6	200,4	0,25	9,50	70,0	6,8	28,0	390	195
PSX 200 08	200	216	205,6	210,4	0,26	9,70	74,0	6,8	29,5	370	185
PSX 210 08	210	226	215,6	220,4	0,27	10,10	78,0	7,2	31,5	350	175
PSX 220 08	220	236	225,6	230,4	0,29	10,30	81,0	7,3	32,5	340	170
PSX 230 08	230	246	235,6	240,4	0,30	10,50	84,0	7,4	34,0	320	160

KMF-Type 1)	Bearing dimension				Mass	Basic load ratings				Limiting speeds	
						Axial		Radial		Bearing play	Pre-load
	d	D	d_s	D_S		Dyn.	Stat.	Dyn.	Stat.		
						C_a	C_{oa}	C_r 2)	C_{or} 2)	$n_{G\,fett}$	$n_{G\,grease}$
	mm	mm	mm	mm	kg	kN	kN	kN	kN	min^{-1}	min^{-1}
PSX 240 08	240	256	245,6	250,4	0,31	10,80	89,0	7,7	35,5	310	155
PSX 250 08	250	266	255,6	260,4	0,33	11,00	92,0	7,8	37,0	300	150
PSX 260 08	260	276	265,6	270,4	0,35	11,20	95,0	7,9	38,0	290	145
PSX 270 08	270	286	275,6	280,4	0,37	11,50	100,0	8,1	40,0	280	140
PSX 280 08	280	296	285,6	290,4	0,39	11,60	103,0	8,3	41,0	270	135
PSX 290 08	290	306	295,6	300,4	0,41	11,80	106,0	8,4	42,5	260	130
PSX 300 08	300	316	305,6	310,4	0,43	12,10	111,0	8,6	44,5	250	125
PSX 310 08	310	326	315,6	320,4	0,45	12,30	114,0	8,7	45,5	240	120
PSX 320 08	320	336	325,6	330,4	0,47	12,40	117,0	8,8	47,0	230	115
PSX 330 08	330	346	335,6	340,4	0,49	12,70	122,0	9,0	48,5	220	110
PSX 340 08	340	356	345,6	350,4	0,50	12,90	125,0	9,1	50,0	210	105
PSX 350 08	350	366	355,6	360,4	0,52	13,00	128,0	9,2	51,0	200	100
PSX 360 08	360	376	365,6	370,4	0,53	13,20	133,0	9,4	53,0	196	98
PSX 370 08	370	386	375,6	380,4	0,55	13,40	136,0	9,5	54,0	190	95
PSX 380 08	380	396	385,6	390,4	0,56	13,50	139,0	9,6	56,0	186	93
PSX 390 08	390	406	395,6	400,4	0,58	13,90	144,0	9,8	57,0	184	92
PSX 400 08	400	416	405,6	410,4	0,59	14,00	147,0	9,9	59,0	180	90
PSX 410 08	410	426	415,6	420,4	0,61	14,10	150,0	10,0	60,0	176	88
PSX 420 08	420	436	425,6	430,4	0,62	14,40	154,0	10,2	62,0	172	86
PSX 430 08	430	446	435,6	440,4	0,64	14,50	157,0	10,3	63,0	170	85
PSX 440 08	440	456	445,6	450,4	0,65	14,80	162,0	10,5	65,0	166	83
PSX 450 08	450	466	455,6	460,4	0,67	14,90	165,0	10,6	66,0	162	81
PSX 460 08	460	476	465,6	470,4	0,68	15,10	168,0	10,7	67,0	158	79
PSX 470 08	470	486	475,6	480,4	0,70	15,30	173,0	10,9	69,0	154	77
PSX 480 08	480	496	485,6	490,4	0,71	15,40	176,0	10,9	70,0	150	75
PSX 490 08	490	506	495,6	500,4	0,73	15,60	179,0	11,0	72,0	148	74
PSX 500 08	500	516	505,6	510,4	0,74	15,80	184,0	11,2	74,0	146	73

1) Other dimensions on request

2) Load capacities only for absolut radial loads

Angular roller bearing PSR-08



Description of shape

Anguler roller bearings are generally in it's foundation engineering form single-row roller bearings. Constructing a new design using this type of bearings, the angular roller bearing can't be used alone however, but as a combined bearing pair with a second bearing. For the transmission of axial-, radial-, and moment loads, the angular roller bearing can just be used in a combined version.

Most commonly this bearing is used in a comnined version as a bearing pair (two angular roller systems) in a face-to-face or back-to-back-arrangment. The choose of the arrangment depands on the conditions of the construction and the load positions.

KMF-ANGULAR-ROLLER-BEARINGS are made as all KMF-SLIM-SPLIT-BEARINGS and constist therefore of two non-cutting manufactured and opened bearing rings, which are completed with a separator strip filled with cylinder rollers.

All rolling elements are arranged in one running direction, the pressure angle is 45°.

The separator strip with holden and guided rolling elements causes due to its special shape a cover of the bearing gap and protects therefore the raceway sytem for entering of rough dirt and on the other side, it makes it more difficult for the bearing grease to get out of the raceway system.

KMF-ANGULAR-ROLLER-BEARINGS can be supplied in two different types. The type series PSR-08 with radial manufactured bearing rings and the type series PSA-08 with axial manufactured bearing rings. Both have in commen the same bearing cross cut of 8 x 8 mm.

The type series PSR-08 is the prefered type series in this bearing range, as it offers a more simple and easier to manufacture construction. This high stiffness bearing solution with its high load capacities is integrated espacially in applications which require higher accuracy and a smooth running wthout heavier noise development. The need for specially paired bearings, as it is common at conventional bearings is not given. KMF can supply all bearing types of the complete diameter range within the prefered series and above in short terms. Also all sizes in between the prefered series can be realized whithin short terms.

Materials

The bearings are made of stainless steel X46Cr13 (material code 1.4034). The seperator is made of Polyamide 12.

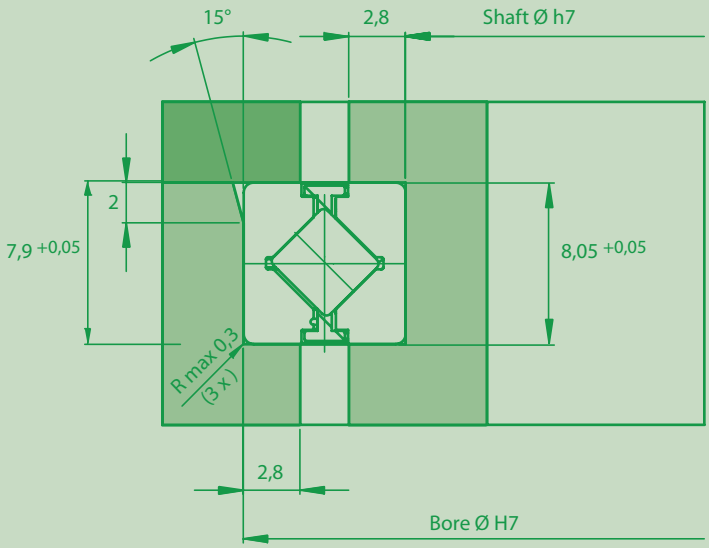
Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +100°C, for short periods up to +120°C.

Features

- Considerably simplification of constructions with angular roller bearings and their connecting parts (economic construction of the connecting parts)
- Free choice of material for the connecting parts, e. g. aluminium
- Corrosion resistant and low maintenance
- High static and dynamic Basic load ratings at maximal stiffnes (low deformation)
- Low Mass
- Easy to install
- Dimensions beneath preferred series can be supplied within short terms

Fitted dimensions



Bearing dimensions

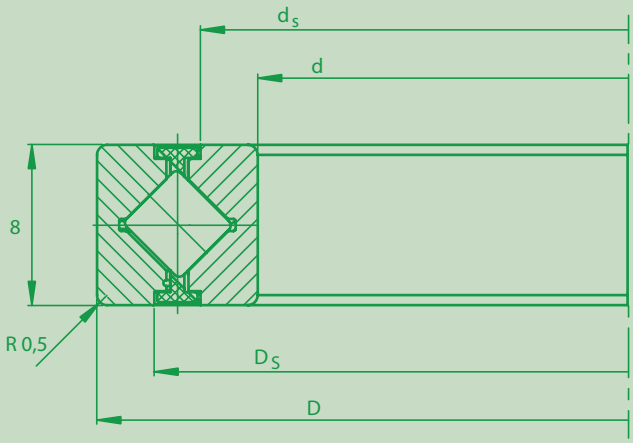


Table of dimensions (Type series PSR-08)

KMF-type [1]	Bearing dimension				Mass	Basic load ratings				Limiting speeds	
						Axial		Radial		Bearing play	Pre-load
	d	D	d_s	D_S		Dyn.	Stat.	Dyn.	Stat.		
						C_a	C_{oa}	C_r [2]	C_{or} [2]	n_G	$n_{G\,grease}$
	mm	mm	mm	mm	kg	kN	kN	kN	kN	min^{-1}	min^{-1}
PSR 080 08	80	96	85,6	90,4	0,11	10,10	60,0	4,3	12,0	1070	535
PSR 090 08	90	106	95,6	100,4	0,12	10,80	66,0	4,5	13,3	950	475
PSR 100 08	100	116	105,6	110,4	0,13	11,70	76,0	4,9	15,1	860	430
PSR 110 08	110	126	115,6	120,4	0,14	12,20	82,0	5,1	16,4	780	390
PSR 120 08	120	136	125,6	130,4	0,16	12,80	91,0	5,4	18,2	720	360
PSR 130 08	130	146	135,6	140,4	0,17	13,40	97,0	5,6	19,5	660	330
PSR 140 08	140	156	145,6	150,4	0,18	13,70	104,0	5,8	20,7	610	305
PSR 150 08	150	166	155,6	160,4	0,20	14,40	112,0	6,1	22,6	570	285
PSR 160 08	160	176	165,6	170,4	0,21	14,70	120,0	6,2	23,8	540	270
PSR 170 08	170	186	175,6	180,4	0,22	15,20	126,0	6,4	25,0	510	255
PSR 180 08	180	196	185,6	190,4	0,23	15,70	134,0	6,6	27,0	480	240
PSR 190 08	190	206	195,6	200,4	0,25	16,10	140,0	6,8	28,0	450	225
PSR 200 08	200	216	205,6	210,4	0,26	16,40	148,0	6,8	29,5	430	215
PSR 210 08	210	226	215,6	220,4	0,27	17,10	156,0	7,2	31,5	410	205
PSR 220 08	220	236	225,6	230,4	0,29	17,40	162,0	7,3	32,5	390	195
PSR 230 08	230	246	235,6	240,4	0,30	17,70	168,0	7,4	34,0	380	190

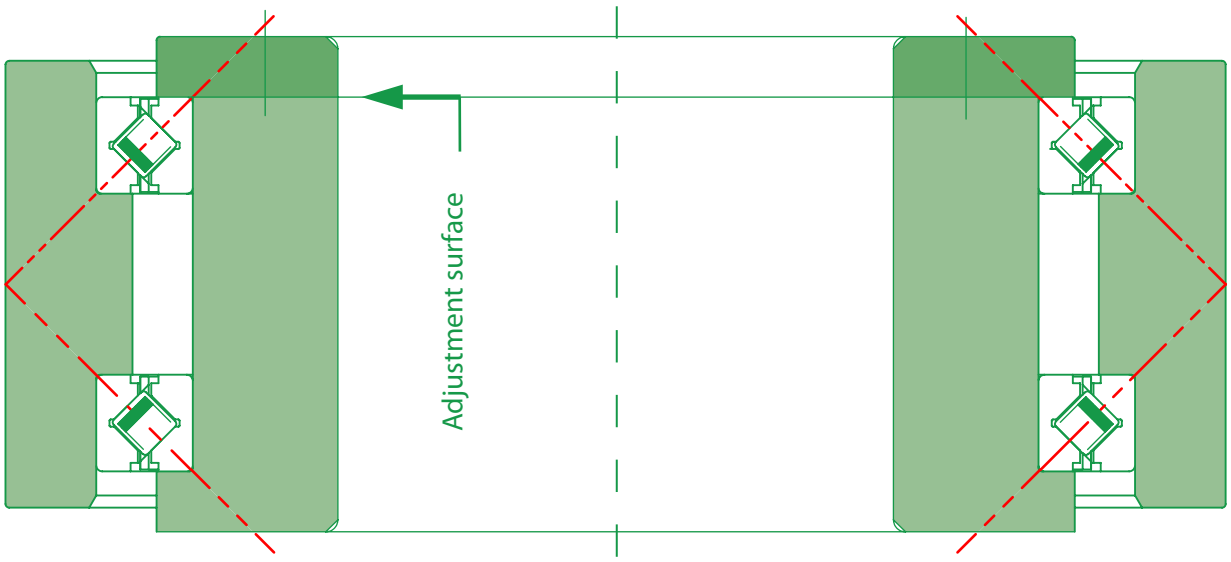
KMF-type 1)	Bearing dimension				Mass	Basic load ratings				Limiting speeds	
						Axial		Radial		Bearing play	Pre-load
	d	D	d_s	D_S		Dyn.	Stat.	Dyn.	Stat.		
						C_a	C_{oa}	C_r 2)	C_{or} 2)	$n_{G\,fett}$	$n_{G\,grease}$
	mm	mm	mm	mm	kg	kN	kN	kN	kN	min^{-1}	min^{-1}
PSR 240 08	240	256	245,6	250,4	0,31	18,30	178,0	7,7	35,5	360	180
PSR 250 08	250	266	255,6	260,4	0,33	18,60	184,0	7,8	37,0	350	175
PSR 260 08	260	276	265,6	270,4	0,35	18,90	190,0	7,9	38,0	330	165
PSR 270 08	270	286	275,6	280,4	0,37	19,40	200,0	8,1	40,0	320	160
PSR 280 08	280	296	285,6	290,4	0,39	19,60	206,0	8,3	41,0	310	155
PSR 290 08	290	306	295,6	300,4	0,41	19,90	212,0	8,4	42,5	300	150
PSR 300 08	300	316	305,6	310,4	0,43	20,40	222,0	8,6	44,5	290	145
PSR 310 08	310	326	315,6	320,4	0,45	20,80	228,0	8,7	45,5	280	140
PSR 320 08	320	336	325,6	330,4	0,47	21,00	234,0	8,8	47,0	270	135
PSR 330 08	330	346	335,6	340,4	0,49	21,50	244,0	9,0	48,5	260	130
PSR 340 08	340	356	345,6	350,4	0,50	21,80	250,0	9,1	50,0	250	125
PSR 350 08	350	366	355,6	360,4	0,52	22,00	256,0	9,2	51,0	250	125
PSR 360 08	360	376	365,6	370,4	0,53	22,20	266,0	9,4	53,0	240	120
PSR 370 08	370	386	375,6	380,4	0,55	22,60	272,0	9,5	54,0	230	115
PSR 380 08	380	396	385,6	390,4	0,56	22,80	278,0	9,6	56,0	230	115
PSR 390 08	390	406	395,6	400,4	0,58	23,50	288,0	9,8	57,0	220	110
PSR 400 08	400	416	405,6	410,4	0,59	23,70	294,0	9,9	59,0	220	110
PSR 410 08	410	426	415,6	420,4	0,61	23,80	300,0	10,0	60,0	210	105
PSR 420 08	420	436	425,6	430,4	0,62	24,30	308,0	10,2	62,0	210	105
PSR 430 08	430	446	435,6	440,4	0,64	24,50	314,0	10,3	63,0	220	100
PSR 440 08	440	456	445,6	450,4	0,65	25,00	324,0	10,5	65,0	194	97
PSR 450 08	450	466	455,6	460,4	0,67	25,20	330,0	10,6	66,0	190	95
PSR 460 08	460	476	465,6	470,4	0,68	25,50	336,0	10,7	67,0	186	93
PSR 470 08	470	486	475,6	480,4	0,70	25,90	346,0	10,9	69,0	182	91
PSR 480 08	480	496	485,6	490,4	0,71	26,00	352,0	10,9	70,0	178	89
PSR 490 08	490	506	495,6	500,4	0,73	26,40	358,0	11,0	72,0	174	87
PSR 500 08	500	516	505,6	510,4	0,74	26,70	368,0	11,2	74,0	172	86

1) Other dimensions on request

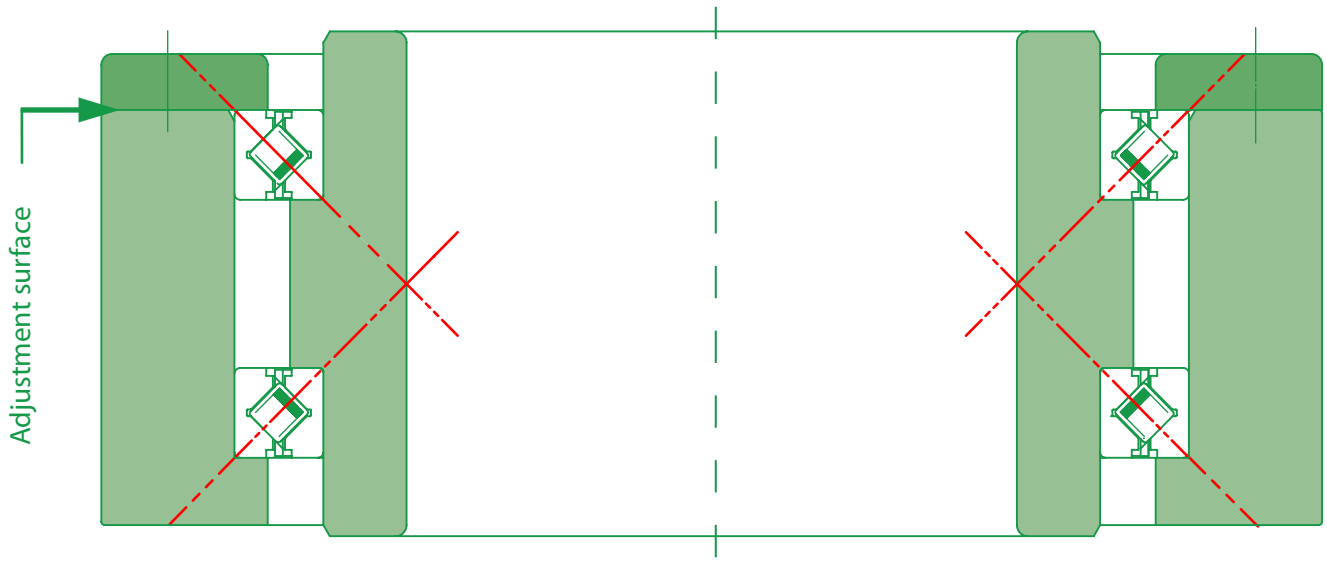
2) Load capacities only for absolut radial loads
With in pairs arranged camps is valid: C_{or} x 2 und C_r x 1,625

Construction examples

Angular roller bearing PSR in back-to-back mounting[1)]

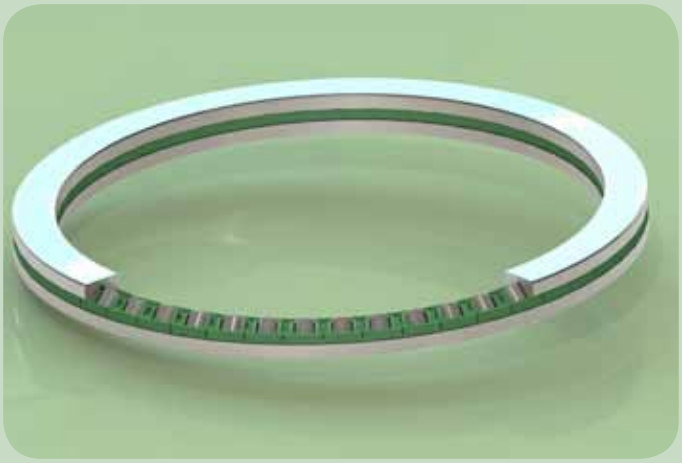


Angular roller bearing Typ PSR in face-to-face mounting[1)]

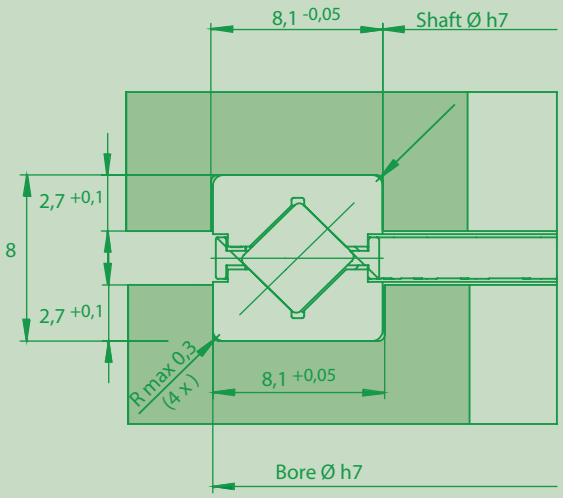


1) face-to-face and/or back-to-back mounting embodies the situation of the pressure angles to each other

Axial-Angular roller bearing PSA-08



Fitted dimensions



Bearing dimensions

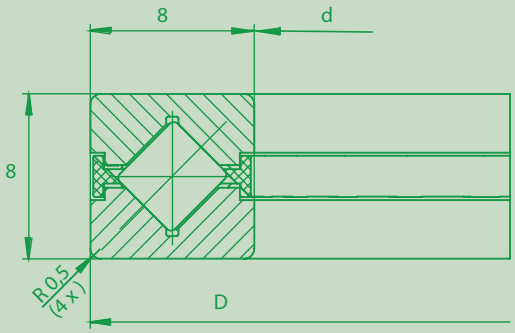


Table of dimensions (Type series PSA-08)

KMF-type 1)	Bearing dimension				Mass	Basic load ratings				Limiting speeds	
						Axial		Radial		Bearing play	Pre-load
	d	D	d_s	D_S		Dyn.	Stat.	Dyn.	Stat.		
						C_a	C_{oa}	C_r 2)	C_{or} 2)	n_G	$n_{G\ grease}$
	mm	mm	mm	mm	kg	kN	kN	kN	kN	min^{-1}	min^{-1}
PSA 150 08	150	166	155,6	160,4	0,20	14,40	112,0	6,1	22,6	570	285
PSA 160 08	160	176	165,6	170,4	0,21	14,70	120,0	6,2	23,8	540	270
PSA 170 08	170	186	175,6	180,4	0,22	15,20	126,0	6,4	25,0	510	255
PSA 180 08	180	196	185,6	190,4	0,23	15,70	134,0	6,6	27,0	480	240
PSA 190 08	190	206	195,6	200,4	0,25	16,10	140,0	6,8	28,0	450	225
PSA 200 08	200	216	205,6	210,4	0,26	16,40	148,0	6,8	29,5	430	215
PSA 210 08	210	226	215,6	220,4	0,27	17,10	156,0	7,2	31,5	410	205
PSA 220 08	220	236	225,6	230,4	0,29	17,40	162,0	7,3	32,5	390	195
PSA 230 08	230	246	235,6	240,4	0,30	17,70	168,0	7,4	34,0	380	190
PSA 240 08	240	256	245,6	250,4	0,31	18,30	178,0	7,7	35,5	360	180
PSA 250 08	250	266	255,6	260,4	0,33	18,60	184,0	7,8	37,0	350	175
PSA 260 08	260	276	265,6	270,4	0,35	18,90	190,0	7,9	38,0	330	165

KMF-type 1)	Bearing dimension				Mass	Basic load ratings				Limiting speeds	
						Axial		Radial		Bearing play	Pre-load
	d	D	d_s	D_S		Dyn.	Stat.	Dyn.	Stat.		
						C_a	C_{oa}	C_r 2)	C_{or} 2)	$n_{G\,fett}$	$n_{G\,grease}$
	mm	mm	mm	mm	kg	kN	kN	kN	kN	min^{-1}	min^{-1}
PSA 270 08	270	286	275,6	280,4	0,37	19,40	200,0	8,1	40,0	320	160
PSA 280 08	280	296	285,6	290,4	0,39	19,60	206,0	8,3	41,0	310	155
PSA 290 08	290	306	295,6	300,4	0,41	19,90	212,0	8,4	42,5	300	150
PSA 300 08	300	316	305,6	310,4	0,43	20,40	222,0	8,6	44,5	290	145
PSA 310 08	310	326	315,6	320,4	0,45	20,80	228,0	8,7	45,5	280	140
PSA 320 08	320	336	325,6	330,4	0,47	21,00	234,0	8,8	47,0	270	135
PSA 330 08	330	346	335,6	340,4	0,49	21,50	244,0	9,0	48,5	260	130
PSA 340 08	340	356	345,6	350,4	0,50	21,80	250,0	9,1	50,0	250	125
PSA 350 08	350	366	355,6	360,4	0,52	22,00	256,0	9,2	51,0	250	125
PSA 360 08	360	376	365,6	370,4	0,53	22,20	266,0	9,4	53,0	240	120
PSA 370 08	370	386	375,6	380,4	0,55	22,60	272,0	9,5	54,0	230	115
PSA 380 08	380	396	385,6	390,4	0,56	22,80	278,0	9,6	56,0	230	115
PSA 390 08	390	406	395,6	400,4	0,58	23,50	288,0	9,8	57,0	220	110
PSA 400 08	400	416	405,6	410,4	0,59	23,70	294,0	9,9	59,0	220	110
PSA 410 08	410	426	415,6	420,4	0,61	23,80	300,0	10,0	60,0	210	105
PSA 420 08	420	436	425,6	430,4	0,62	24,30	308,0	10,2	62,0	210	105
PSA 430 08	430	446	435,6	440,4	0,64	24,50	314,0	10,3	63,0	220	100
PSA 440 08	440	456	445,6	450,4	0,65	25,00	324,0	10,5	65,0	194	97
PSA 450 08	450	466	455,6	460,4	0,67	25,20	330,0	10,6	66,0	190	95
PSA 460 08	460	476	465,6	470,4	0,68	25,50	336,0	10,7	67,0	186	93
PSA 470 08	470	486	475,6	480,4	0,70	25,90	346,0	10,9	69,0	182	91
PSA 480 08	480	496	485,6	490,4	0,71	26,00	352,0	10,9	70,0	178	89
PSA 490 08	490	506	495,6	500,4	0,73	26,40	358,0	11,0	72,0	174	87
PSA 500 08	500	516	505,6	510,4	0,74	26,70	368,0	11,2	74,0	172	86

1) Other dimensions on request

2) Load capacities only for absolut radial loads

With in pairs arranged camps is valid: C_{or} x 2 und C_r x 1,625

Initial operation and maintenance

Important notices for all types of bearings

Mounting and dismounting of bearings

Due to its opened bearing rings and the cage with holded and guided rolling elements, the fitting of the SLIM-SPLIT-BEARING is simple. Compared to common massive bearings it is not neccessary to press fit slimsplit bearings. Due to the structural shape of this bearing. It easily can be mounted and dismounted. It also does not require certain tools or thermal support. So, turned bearing fits with H- or h7-fits for shaft and bore tolerances (see fitted dimensions) suffice to contain a bearing.

Precision

The bearing rings of the type series SLIM-SPLIT-BEARING are very accurate in shape. The difference of the even-thickness between raceway and inside or outside diameter is really small.

That´s why the axial radial precision of the bearings is greatly influenced by the precision of the connecting parts. The connecting parts should be constructed in a way that all diameters and faces that stay in relation to each other are machined in one spanning operation, if possible. So, the customer is able to define and manufacture the demands on precision on his own.

Bearing clearance

The SLIM-SPLIT-BEARING has no fixed clearance in the bearing and the preload of the bearing is not defined. Either this can be adjusted by the customer directly by determining the shaft and bore tolerances of the bearing fits.

In the standard version and with given fitted tolerances, the SLIM-SPLIT-BEARING is slightly preloaded in the raceway system. This means that even if tolerances are used to the maximum, no clearance in the bearing is given. Depending on the application and the specific demands, a clearance can be given by adjusting the shaft and bore tolerances in order to reduce the starting torques. Also the tolerances can be adjusted in order to increase the preload, which increases the starting torque of the bearings drastically. If insert rooms should be given e. g. a competitive products shall be replaced, and therefore can´t be adjusted, the clearance in the bearing can be adjusted. This adjustment is achieved by using slightly bigger or smaller rolling elements.

For different demands on a bearing type, differently colored cage strips with different sorts of rolling elements can be used.

These diffrent colors make it easy to find the most suitable bearing version.

Lubrication

In order to increase the nominal service life, Lubrication is an important criteria.

For 90 % of all bearing applications in standard operations, grease is sufficient.

Grease of the consistency-class 2 and 3 (acc. to DIN 51818) is preferred. The grease prevents the direct contact between rolling element, raceway and cage and minimises therefore the friction. This minimises the abrasion and increases lifetime.

As the lubricant for KMF-SLIM-SPLIT-BEARING has not the function to protect the bearing from corrosion, relatively small amounts of grease is sufficient for a reliable function.

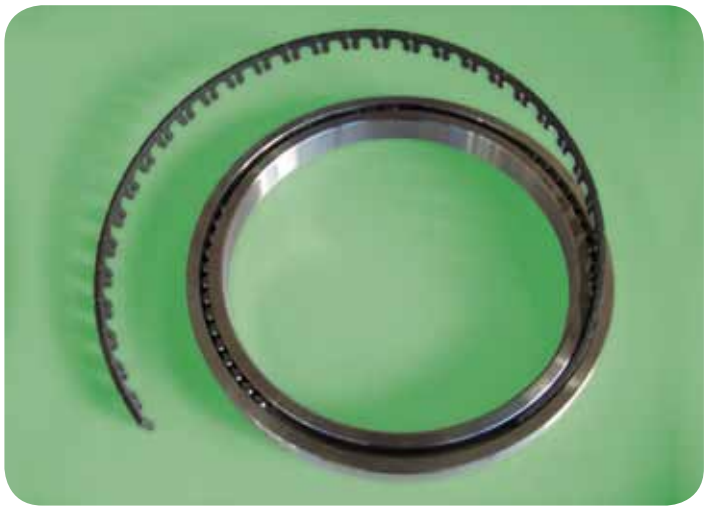
The KMF-SLIM-SPLIT-BEARING is equipped standardly with a pregreasing using ALVANIA EP2 (Shell), which functions as a permanent lubrication at normal operating conditions. That´s why no targets for lubricating intervals or lubricating amounts are given. KMF-bearings require low maintenance and can be considered for normal slewing operations as maintenance free.

For special applications, the KMF-SLIM-SPLIT-BEARING can be equipped with special greases according to customers demands.

In order to differ these versions from the standard bearings, a short sign is added to the KMF-type. Some examples at the right side:

Short sign	Lubricant
G04	Solid lubrication with MOS2
G22	High temperature grease +260°C
G23	Dynamic light bearing grease for low torques
G24	For applications in high vacuum
G25	Radiation resistant grease for medical applications

Filling of the bearing



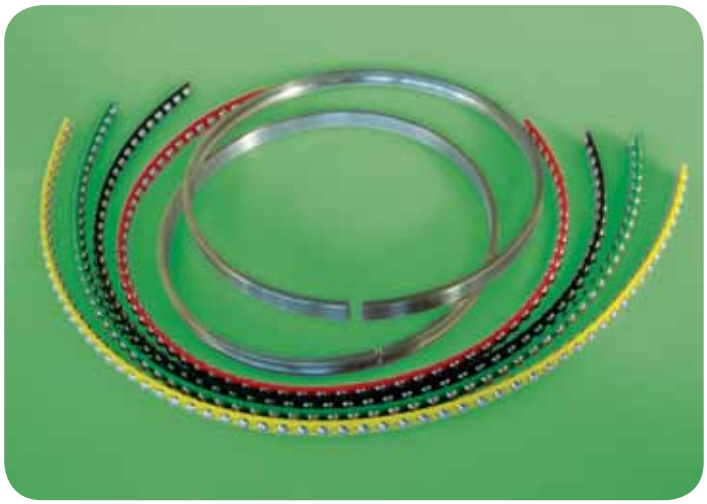
Integration of the snap-over separator strip

The Conrad-Filling-Method

The picture on the left side shows how conventional bearings have to be assembled; this way is also known as the Conrad-Filling-Method. The bearing inner ring is placed excentrically in order to cause a bigger bearing gap on the opposite side. Using this bigger bearing gap, the balls are integrated into the raceway system. This bearing gap determines and fixes the maximum amount and the maximum diameter of the balls that can be integrated into the bearing.

After that a snap-over cage strip with large ball divisions is integrated in order to place the balls equally in the raceway system and prevent them of touching and running against each other.

Due to this only possibility of assembling a conventional bearing, only a few, and compared to the bearing cross-cut, relatively small balls can be integrated. This fact influences the static dynamic load capacities negatively.



The cage strips are filled with different ball diameters.
Different colors helps differing the individual diameters.

End assembly

The KMF- Method

The SLIM-SPLIT-BEARING is only manufactured with splitted bearing rings. Beneath the adjustability of the bearing clearance and the bearing preload, there are additional advantages: The bearing can be fittted more easily in the connecting parts and great advantages are given during the assembly.

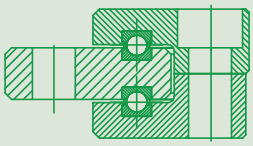
Besides the quality advantages that are offered by our products, they also offer price advantages due to our manufacturing technology and easy assembly.

An automatically filled cage strip is placed on the inner ring, the outer ring is placed in assembly condition and has just to be pressed slightly over the inner ring and the separator. Due to this filling method, KMF is able to integrate much more and much bigger balls in the same cross-cut of the bearing.

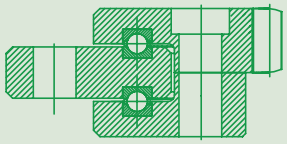
This greatly influences our static and dynamic load capacities compared to the equivalent competition bearings.

Slewing bearing – SLIM-SPLIT-BEARING

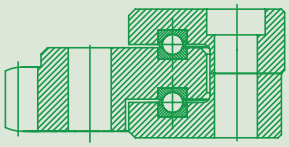
Slewing Bearing YKT



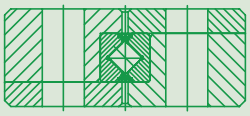
Slewing Bearing YKTI



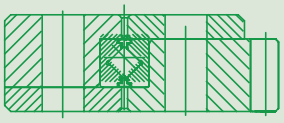
Slewing Bearing YKTA



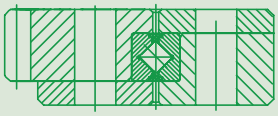
Slewing Bearing PXU

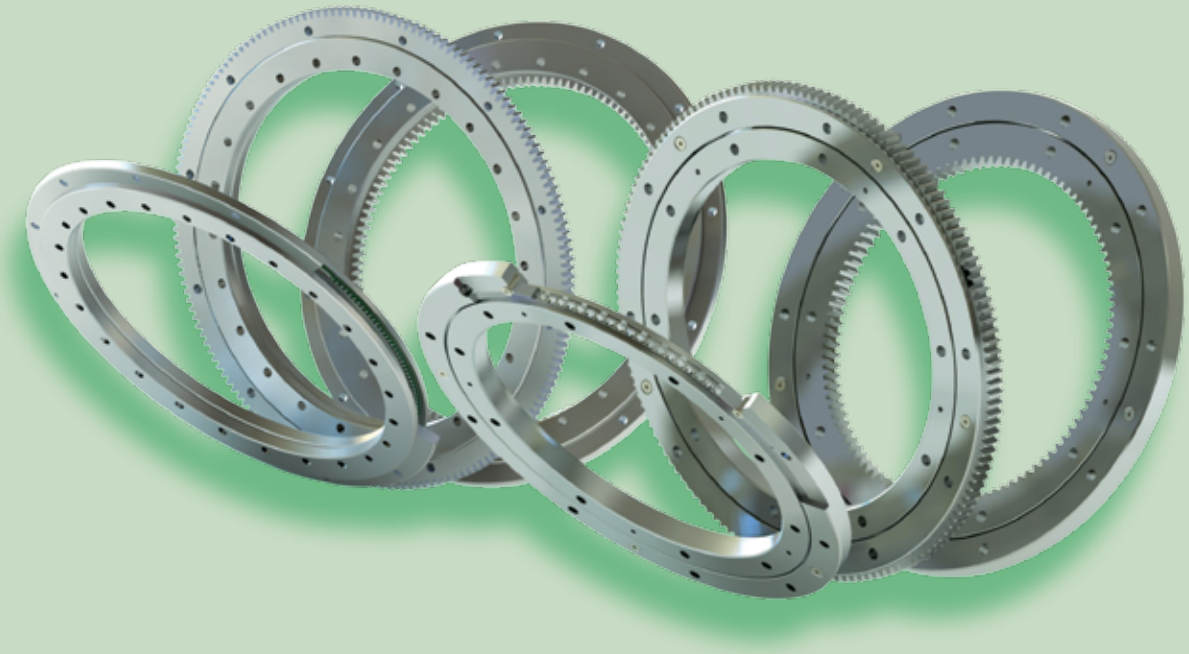


Slewing Bearing PXI



Slewing Bearing PXA





KMF-Thin Ring Bearing-Slewing bearing

Light silent and combined loadable

Due to increasing automating in many industries, e. g. the semiconductor industry more space saving insert elements or thin ring bearings are required. From direct driven rotary tables to simple handling tools space and Mass saving as well as precised bearing units are requested.

In order to fulfill these market needs, KMF offers a large variety of bearing elements like wire ball bearings, SLIM-SPLIT-BEARINGs, axial bearing washers and axial roller and cage assemblies as insert elements for direct integration in customers con-structions.

Actually this delivery programm is increased by the slewing bearing assembly YKT, which are complete ready to assemble and pregreased bearing units.

The raceway system consists of two axial thrust ball bearings type PBAU with four point geometry. This bearing design is able to take loads from all directions (axial and radial), as well as moment loads.

Typically for insert elements is the relatively small bearing hight of 14 mm of the YKT bearing series. The both axial thrust ball bearing, which are forming the raceway system, are undependant of the diameter; this guarantees a stable bearing cross-cut of only 37,5 x 20 mm, which is valid for the complete preferred series from bore diameter 100 to 450 mm.

Furthermore this system offers the possibility of manufacturing types between preferred series as well as slight changes to bearing shape.

KMF-Slewing bearing – SLIM-SPLIT-BEARING with it´s extremely hight integrated in constructions, which have not sufficient space for conventional catalogue bearings.

The ready to assemble easy mounting and easy to maintain bearing units type series YKT are fixed and screwed with the connecting parts via the bearing centering (see tabl of dimensions).

The play and the preload in the bearing is adjustable. The shape of the bearing with its two raceway systems guarantees a stable running culture with small starting torques and small noise developement. The starting torque depends on the axial preload; increasing the preload increases threfore the torque.

Slewing bearing – SLIM-SPLIT-BEARING

Despite of the filigree construction of the KMF slewing bearings, they are nevertheless constructed according to the principle of economy. Different special option increase the application spectrum and assist individual construction demands without changing basic pricings considerably.

Bearing units of the type series YKT are offered in different versions, using bearing rings made of steel or completely corrosion resistant. This completely corrosion resistant version has the short sign „SS“ for stainless steel, the eloxated light metal version the short sign „AL“ for aluminium.

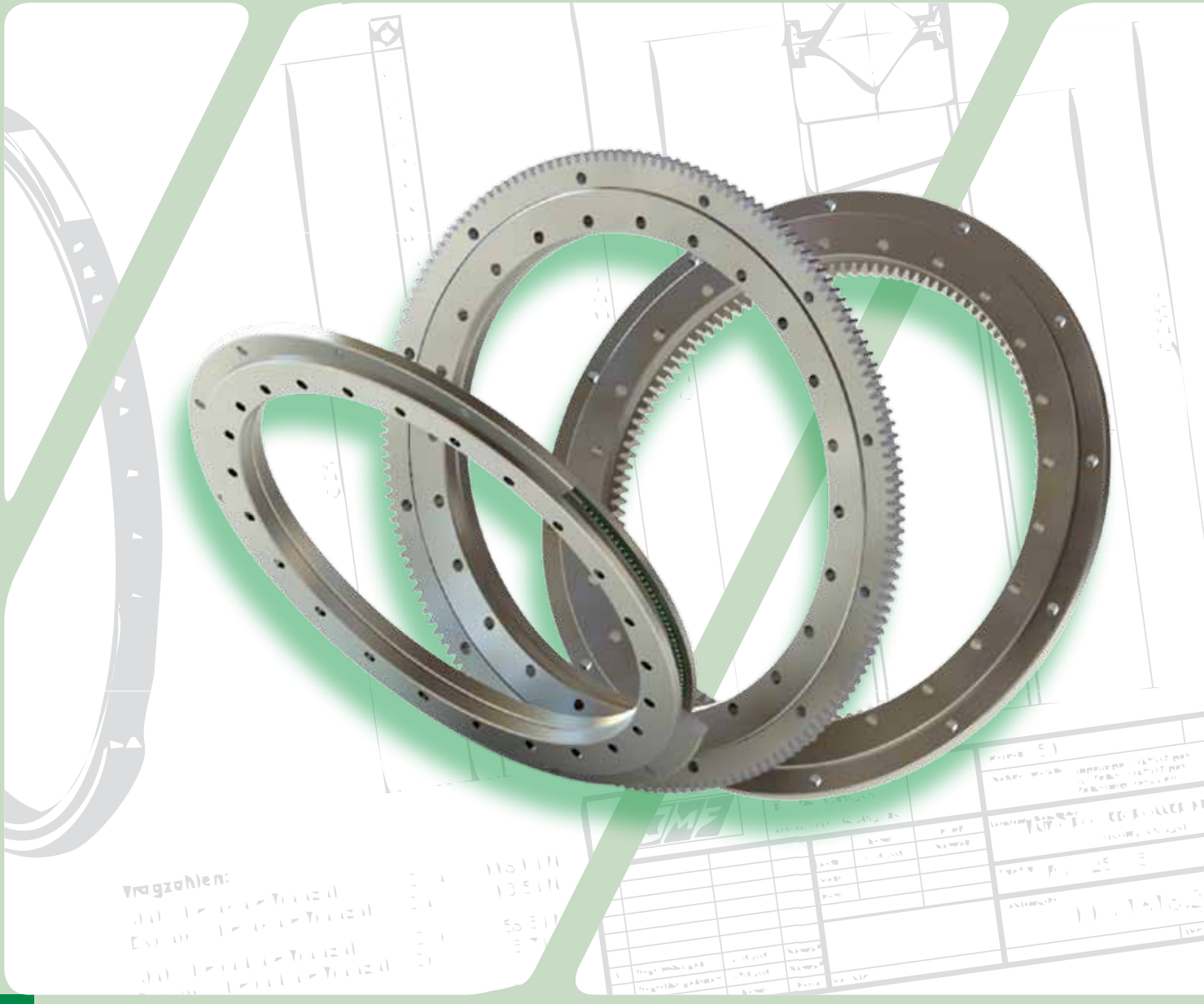
Furthermore offers the light metal version naturally the advantage of the Mass decrease of up to 66 % compared with the steel version.

Additionally, changes to the bore plan can be realised as well as lubrication bores.

Spur-toothed bearing inner and outer rings belong to the enhanced standard version as well as worm gear toothing for direct drives. Additionally externally flanged or integrated slip ring solutions for power transmission from the static to the dynamic bearing ring is possible.

The KMF-Slewing bearing – SLIM-SPLIT-BEARING is suitable for many application areas, e. g. clean room, medicine- and food industry due to special material combinations (corrosion resistant steel, light metal, ceramic, plastics).

Thin ring bearing-Slewing bearing YKT, YKTI, YKTA



Dimensions YKT (without toothing)

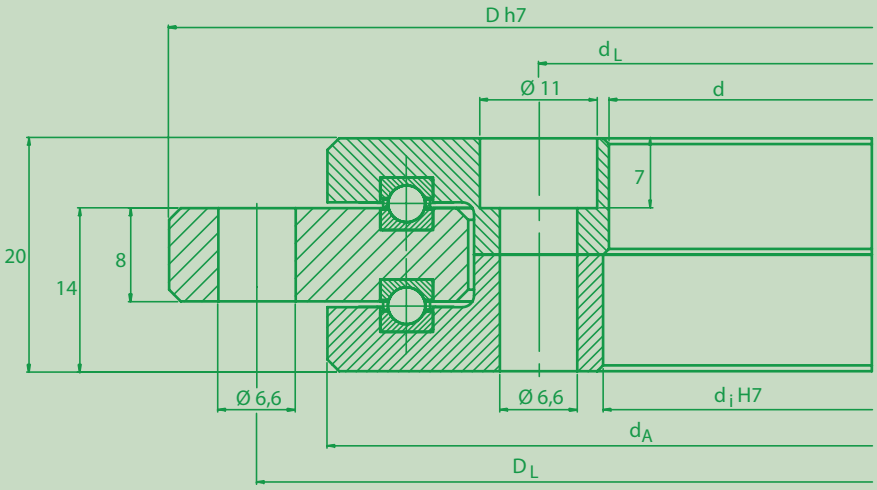


Table of dimensions YKT (without toothing)

KMF-type [1]	Bearing dimension						Number of bores	Mass		Basic load ratings				Limiting speeds
										Axial		Radial		
	d	d_i H7	d_A	d_L	D h7	D_L	S_Z	Steel	Al	Dyn. C_a	Stat. C_{oa}	Dyn. C_r	Stat. C_{or}	$n_{G\ grease}$
	mm	mm	mm	mm	mm	mm	Pieces	kg	kg	kN	kN	kN	kN	min^{-1}
YKT 100	100	101	148	115	175	160	6	1,7	0,7	6,5	48,2	5,9	19,2	1090
YKT 150	150	151	198	165	225	210	8	2,3	1,0	7,4	67,0	6,7	26,8	800
YKT 200	200	201	248	215	275	260	10	3,0	1,2	8,0	85,0	7,3	34,0	640
YKT 250	250	251	298	265	325	310	12	3,6	1,5	8,6	104,0	7,8	41,4	530
YKT 300	300	301	348	315	375	360	16	4,2	1,8	9,3	122,0	8,3	48,8	450
YKT 350	350	351	398	365	425	410	18	4,9	2,1	9,8	140,0	8,8	56,0	390
YKT 400	400	401	448	415	475	460	20	5,5	2,3	10,1	160,0	9,1	64,0	350
YKT 450	450	451	498	465	525	510	24	6,1	2,6	10,6	178,0	9,6	71,0	310

1) Other dimensions on request

Dimensions YKT (without toothing)

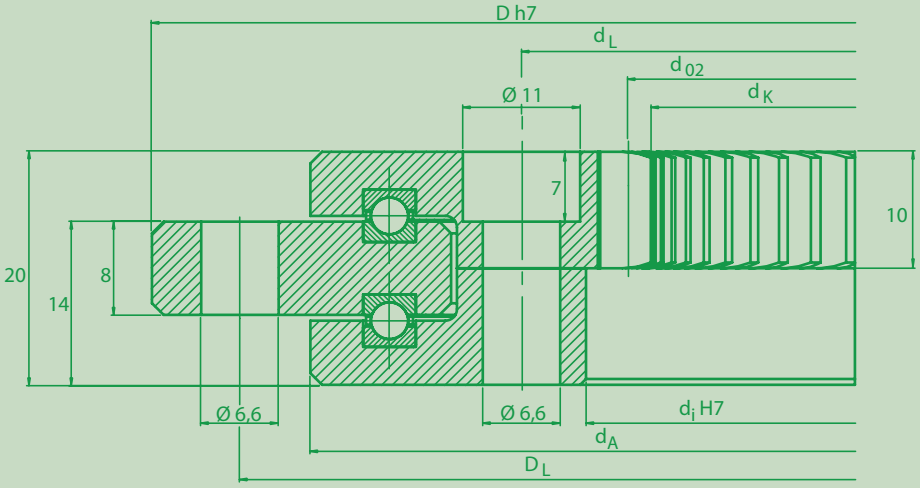


Table of dimensions, Toothing information YKTI (inner geared)

Inner toothing											
KMF-type [1]	Pitch-circle-Ø	Module	Number of teeth	Tip-circle-Ø	Mass		Limiting speeds	Maximum permissible tooth force			
								Steel		AL	
	d_{02}	m	Z	d_k	Stahl	AL	$n_{G\ grease}$	$F_{Z\ norm.}$	$F_{Z\ max.}$	$F_{Z\ norm.}$	$F_{Z\ max.}$
	mm	mm	Pieces	mm	kg	kg	min^{-1}	N	N	N	N
YKTI 100	94	2	47	90	1,8	0,8	1090	935	2040	680	1885
YKTI 150	144	2	72	140	2,4	1,1	800	950	2080	695	1915
YKTI 200	194	2	97	190	3,1	1,3	640	970	2115	705	1950
YKTI 250	244	2	122	240	3,7	1,6	530	985	2140	715	1980
YKTI 300	294	2	147	290	4,3	1,9	450	1000	2180	730	2015
YKTI 350	344	2	172	340	5,0	2,2	390	1020	2220	740	2050
YKTI 400	394	2	197	390	5,6	2,4	350	1040	2260	755	2090
YKTI 450	444	2	222	440	6,2	2,7	310	1055	2300	765	2120

1) Other dimensions on request

Toothing acc. to DIN 3967
Quality 8e25
Reference DIN 867
For the basic dimensions of the Slewing bearing please take a look at the table of dimensions YKT

Dimensions YKTA (outer toothing)

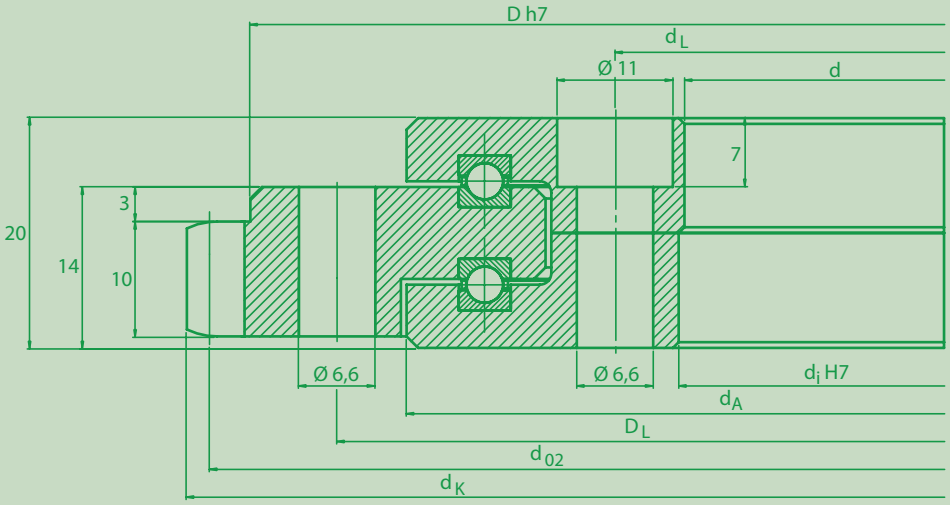
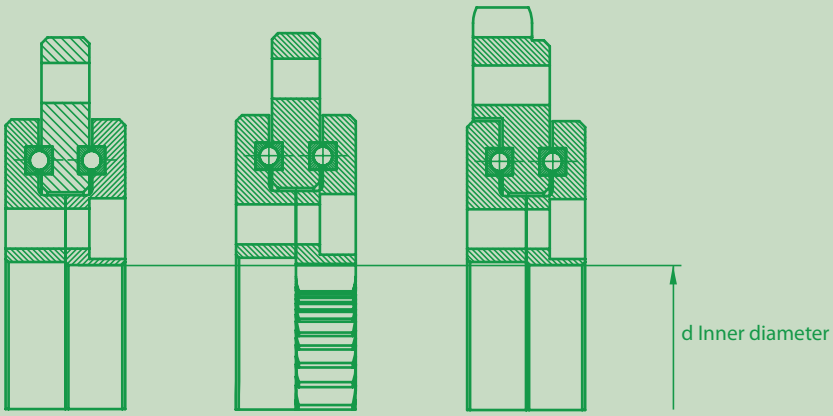


Table of dimensions, Toothing information YKTA (outer geared)

Outer toothing											
KMF-type [1]	Pitch-circle-Ø	Module	Number of teeth	Tip-circle-Ø	Mass		Limiting speeds	Maximum permissible tooth force			
								Steel		AL	
	d_{02}	m	Z	d_k	Stahl	AL	$n_{G\ grease}$	$F_{Z\ norm.}$	$F_{Z\ max.}$	$F_{Z\ norm.}$	$F_{Z\ max.}$
	mm	mm	Pieces	mm	kg	kg	min^{-1}	N	N	N	N
YKTA 100	182	2	91	186	2,3	0,9	1090	1000	2180	730	2015
YKTA 150	232	2	116	236	2,9	1,2	800	1010	2200	735	2030
YKTA 200	282	2	141	286	3,6	1,4	640	1015	2210	740	2040
YKTA 250	332	2	166	336	4,2	1,7	530	1025	2230	745	2060
YKTA 300	382	2	191	386	4,8	2,0	450	1035	2255	750	2080
YKTA 350	432	2	216	436	5,5	2,3	390	1045	2275	760	2100
YKTA 400	482	2	241	486	6,1	2,5	350	1050	2285	765	2110
YKTA 450	532	2	266	536	6,7	2,8	310	1060	2310	770	2130

1) Other dimensions on request

Toothing acc. to DIN 3967
Quality 8e25
Reference DIN 867
For the basic dimensions of the Slewing bearing please take a look at the table of dimensions YKT



Example of order YKT

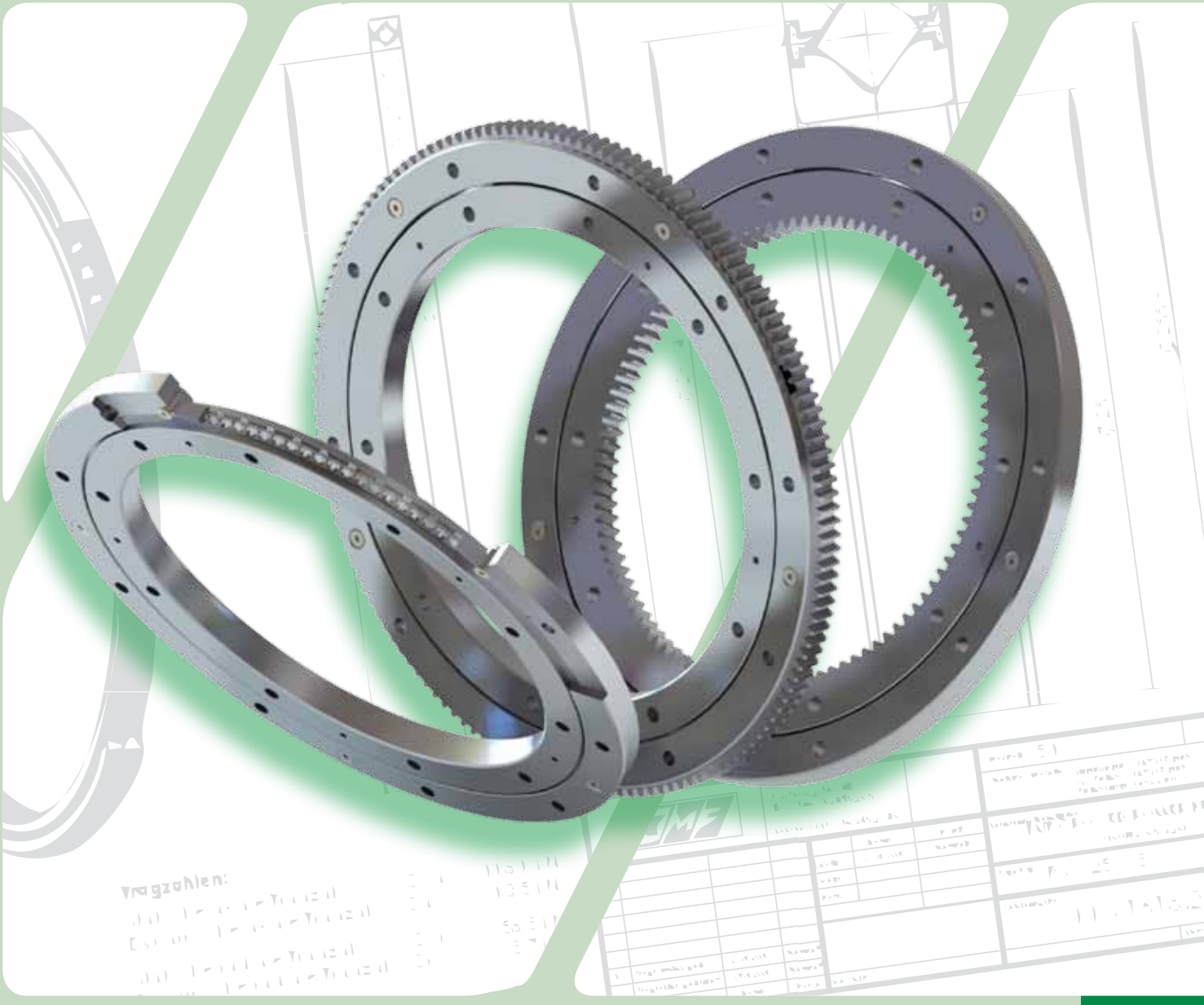
YKT	250 ◯	
		SS
		AL

YKTI	250 ◯	
		SS
		AL

YKTA	250 ◯	
		SS
		AL

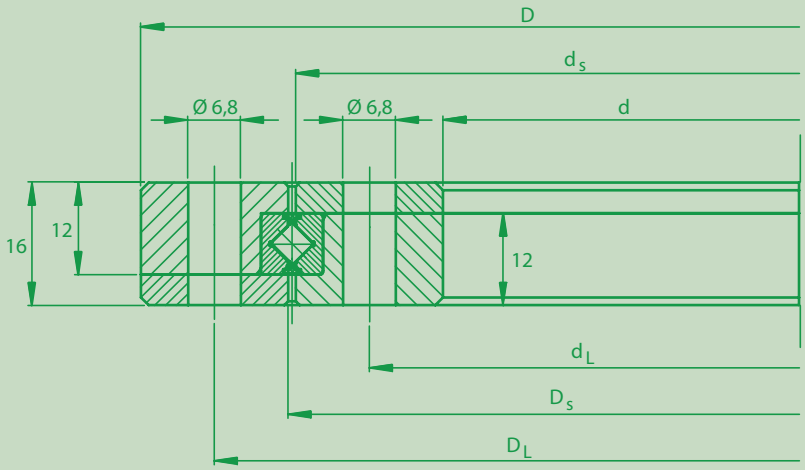
YKT	Without geared	250	d Inner diameter	empty ◯	Bearing rings – Steel
I	With inner geared			SS	Bearing rings – Stainless steel
A	With outer geared			AL	Bearing rings – Light metal

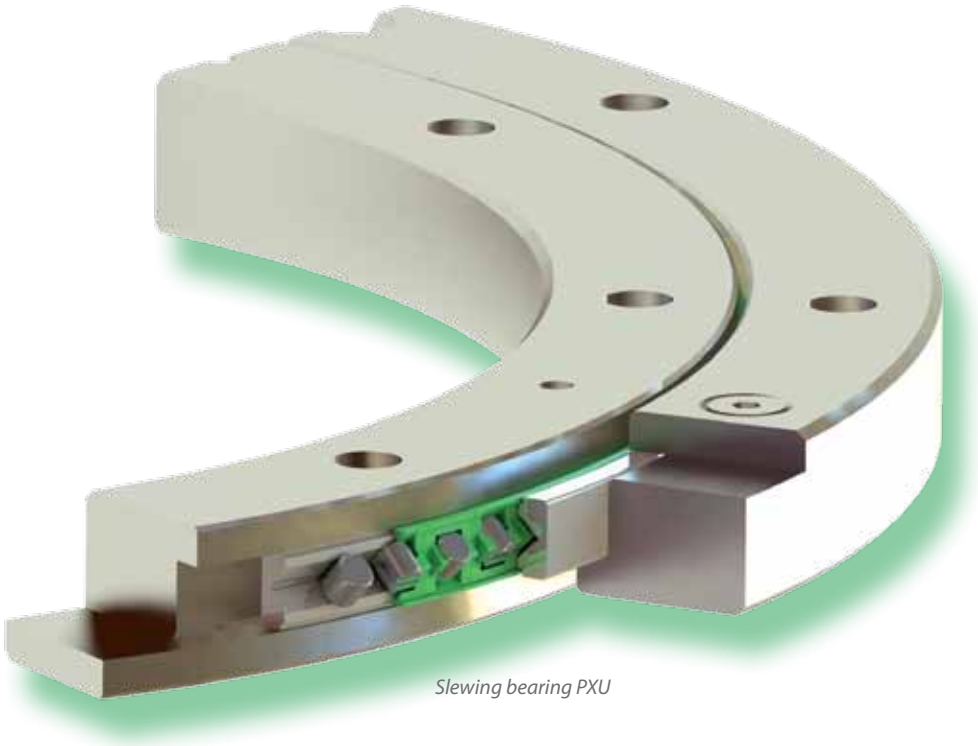
Crossed roller bearing - Slewing bearing PXU, PXI, PXA



Slewing bearing – SLIM-SPLIT-BEARING

Dimensions PXU (without toothing)





Slewing bearing PXU

Table of dimensions PXU (without toothing)

KMF-type [1]	Bearing dimension						Mass
	d	D	d_s	D_S	d_L	D_L	
	mm	mm	mm	mm	mm	mm	kg
PXU 04 090	51	129	89	91	70	110	1,35
PXU 04 100	61	139	99	101	80	120	1,50
PXU 04 110	71	149	109	111	90	130	1,65
PXU 04 120	81	159	119	121	100	140	1,80
PXU 04 130	91	169	129	131	110	150	1,95
PXU 04 140	101	179	139	141	120	160	2,10
PXU 04 150	111	189	149	151	130	170	2,25
PXU 04 160	121	199	159	161	140	180	2,40
PXU 04 170	131	209	169	171	150	190	2,55
PXU 04 180	141	219	179	181	160	200	2,70
PXU 04 190	151	229	189	191	170	210	2,85
PXU 04 200	161	239	199	201	180	220	3,00
PXU 04 210	171	249	209	211	190	230	3,15
PXU 04 220	181	259	219	221	200	240	3,30
PXU 04 230	191	269	229	231	210	250	3,45
PXU 04 240	201	279	239	241	220	260	3,60
PXU 04 250	211	289	249	251	230	270	3,75
PXU 04 260	221	299	259	261	240	280	3,90
PXU 04 270	231	309	269	271	250	290	4,05
PXU 04 280	241	319	279	281	260	300	4,20
PXU 04 290	251	329	289	291	270	310	4,35
PXU 04 300	261	339	299	301	280	320	4,50
PXU 04 310	271	349	309	311	290	330	4,65
PXU 04 320	281	359	319	321	300	340	4,80
PXU 04 330	291	369	329	331	310	350	4,95

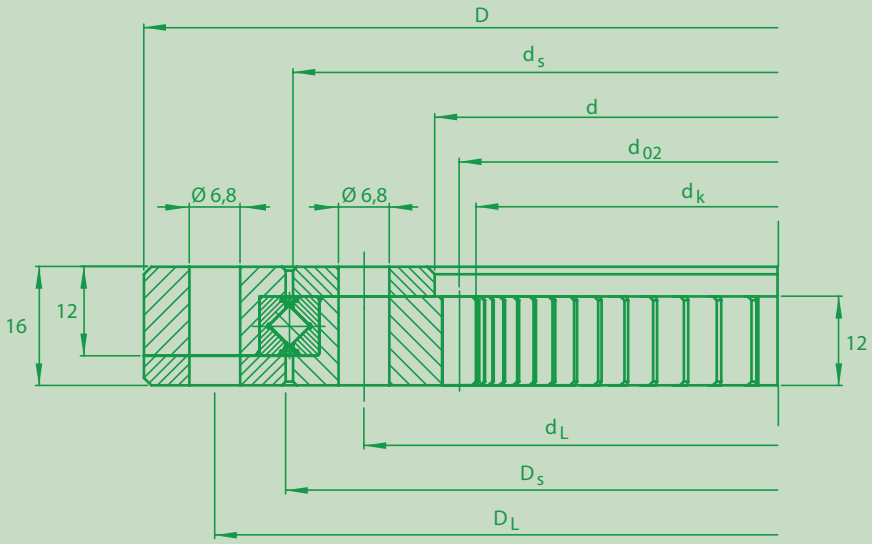
1) Other dimensions on request

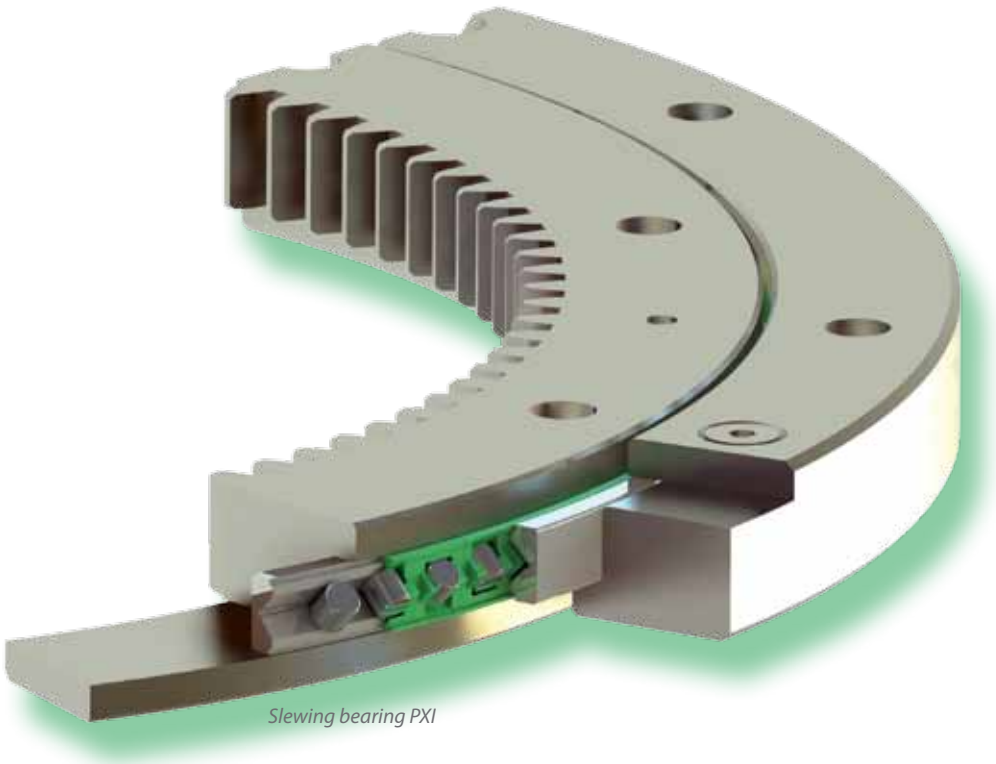
Table, Type series PXU, PXI, PXA (Number of bores, Basic load ratings, Limiting speeds)

KMF-type			Number of bores	
PXU	PXI	PXA	Inner ring	Outer ring
			S_z	S_z
			Pieces	Pieces
PXU 04 090	PXI 04 090	PXA 04 090	8 x 45°	8 x 45°
PXU 04 100	PXI 04 100	PXA 04 100	8 x 45°	8 x 45°
PXU 04 110	PXI 04 110	PXA 04 110	8 x 45°	8 x 45°
PXU 04 120	PXI 04 120	PXA 04 120	8 x 45°	8 x 45°
PXU 04 130	PXI 04 130	PXA 04 130	8 x 45°	8 x 45°
PXU 04 140	PXI 04 140	PXA 04 140	8 x 45°	8 x 45°
PXU 04 150	PXI 04 150	PXA 04 150	8 x 45°	8 x 45°
PXU 04 160	PXI 04 160	PXA 04 160	8 x 45°	8 x 45°
PXU 04 170	PXI 04 170	PXA 04 170	8 x 45°	10 x 36°
PXU 04 180	PXI 04 180	PXA 04 180	8 x 45°	10 x 36°
PXU 04 190	PXI 04 190	PXA 04 190	8 x 45°	10 x 36°
PXU 04 200	PXI 04 200	PXA 04 200	8 x 45°	10 x 36°
PXU 04 210	PXI 04 210	PXA 04 210	10 x 36°	10 x 36°
PXU 04 220	PXI 04 220	PXA 04 220	10 x 36°	10 x 36°
PXU 04 230	PXI 04 230	PXA 04 230	10 x 36°	10 x 36°
PXU 04 240	PXI 04 240	PXA 04 240	10 x 36°	10 x 36°
PXU 04 250	PXI 04 250	PXA 04 250	10 x 36°	10 x 36°
PXU 04 260	PXI 04 260	PXA 04 260	10 x 36°	12 x 30°
PXU 04 270	PXI 04 270	PXA 04 270	10 x 36°	12 x 30°
PXU 04 280	PXI 04 280	PXA 04 280	10 x 36°	12 x 30°
PXU 04 290	PXI 04 290	PXA 04 290	10 x 36°	12 x 30°
PXU 04 300	PXI 04 300	PXA 04 300	12 x 30°	12 x 30°
PXU 04 310	PXI 04 310	PXA 04 310	12 x 30°	12 x 30°
PXU 04 320	PXI 04 320	PXA 04 320	12 x 30°	12 x 30°
PXU 04 330	PXI 04 330	PXA 04 330	12 x 30°	12 x 30°

	Basic load ratings				Limiting speeds	
	Axial		Radial		Bearing play	Preload
	Dyn.	Stat.	Dyn.	Stat.		
	C_a	C_{oa}	C_r	C_{or}	n_G	n_G
	kN	kN	kN	kN	min^{-1}	min^{-1}
	6,1	30,0	4,3	12,0	650	325
	6,4	33,0	4,5	13,3	710	355
	6,9	38,0	4,9	15,1	650	325
	7,2	41,0	5,1	16,4	600	300
	7,6	45,5	5,4	18,2	560	280
	7,9	48,5	5,6	19,5	520	260
	8,1	52,0	5,8	20,7	490	245
	8,5	56,0	6,1	22,6	460	230
	8,7	60,0	6,2	23,8	430	215
	9,0	63,0	6,4	25,0	410	205
	9,3	67,0	6,6	27,0	390	195
	9,5	70,0	6,8	28,0	370	185
	9,7	74,0	6,9	29,5	350	175
	10,1	78,0	7,2	31,5	340	170
	10,3	81,0	7,3	32,5	320	160
	10,5	84,0	7,4	34,0	310	155
	10,8	89,0	7,7	35,5	300	150
	11,0	92,0	7,8	37,0	290	145
	11,2	95,0	7,9	38,0	280	140
	11,5	100,0	8,1	40,0	270	135
	11,6	103,0	8,3	41,0	260	130
	11,8	106,0	8,4	42,5	250	125
	12,1	111,0	8,6	44,5	240	120
	12,3	114,0	8,7	45,5	230	115
	12,4	117,0	8,8	47,0	220	110

Dimensions PXI (inner geared)





Slewing bearing PXI

Table of dimensions, Toothing information PXI (inner geared)

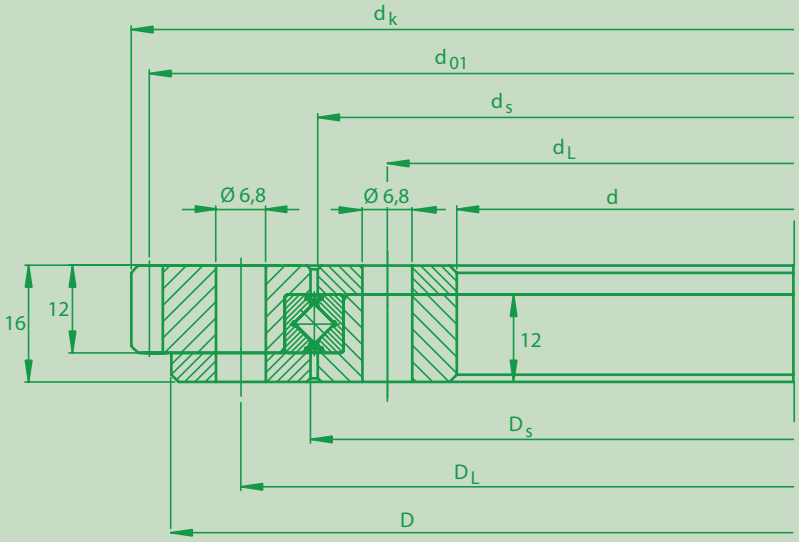
KMF-type [1]	Pitch-circle-Ø	Module	Number of teeth	Tip-circle-Ø	Mass	Maximum permissible tooth force	
	d_{02}	m	Z	d_k		$F_{Z\,norm.}$	$F_{Z\,max.}$
	mm	mm	Pieces	mm	kg	N	N
PXI 04 090	44	2	22	40	1,45	1005	2010
PXI 04 100	54	2	27	50	1,60	1020	2040
PXI 04 110	64	2	32	60	1,75	1035	2070
PXI 04 120	74	2	37	70	1,90	1050	2100
PXI 04 130	84	2	42	80	2,10	1065	2130
PXI 04 140	94	2	47	90	2,25	1080	2160
PXI 04 150	104	2	52	100	2,40	1095	2190
PXI 04 160	114	2	57	110	2,60	1110	2220
PXI 04 170	124	2	62	120	2,75	1125	2250
PXI 04 180	134	2	67	130	2,90	1140	2280
PXI 04 190	144	2	72	140	3,10	1155	2310
PXI 04 200	154	2	77	150	3,25	1170	2340
PXI 04 210	164	2	82	160	3,40	1185	2370
PXI 04 220	174	2	87	170	3,60	1200	2400
PXI 04 230	184	2	92	180	3,75	1215	2430
PXI 04 240	194	2	97	190	3,90	1230	2460
PXI 04 250	204	2	102	200	4,05	1245	2490
PXI 04 260	214	2	107	210	4,20	1260	2520
PXI 04 270	224	2	112	220	4,40	1275	2550
PXI 04 280	234	2	117	230	4,60	1290	2580
PXI 04 290	244	2	122	240	4,75	1305	2610
PXI 04 300	254	2	127	250	4,90	1320	2640
PXI 04 310	264	2	132	260	5,05	1335	2670
PXI 04 320	274	2	137	270	5,20	1350	2700
PXI 04 330	284	2	142	280	5,40	1365	2730

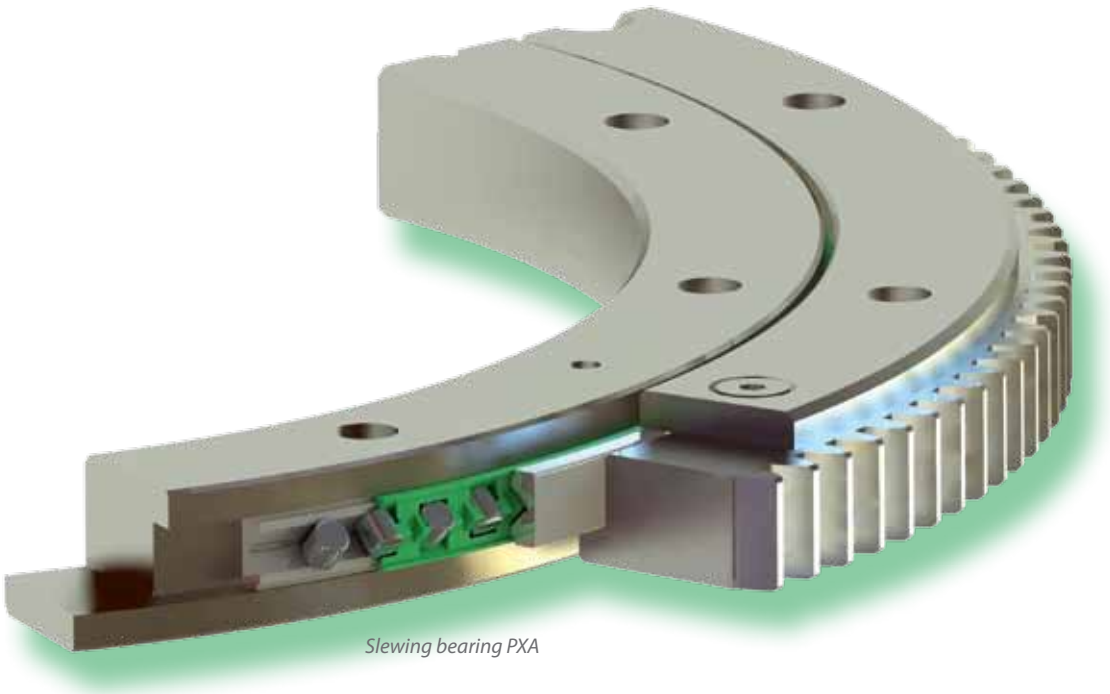
1) Other dimensions on request

Toothing acc. to DIN 3967
Quality 8e25
Reference DIN 867
For the basic dimensions of the Slewing bearing please take a look at the table of dimensions PXU

Slewing bearing – SLIM-SPLIT-BEARING

Dimensions PXA (outer geared)





Slewing bearing PXA

Table of dimensions, Toothing information PXA (outer geared)

KMF-type [1]	Pitch-circle-Ø	Module	Number of teeth	Tip-circle-Ø	Mass	Maximum permissible tooth force	
	d_{01}	m	Z	d_k		$F_{Z\,norm.}$	$F_{Z\,max.}$
	mm	mm	Pieces	mm	kg	N	N
PXA 04 090	136	2	68	140	1,60	1170	2340
PXA 04 100	146	2	73	150	1,75	1175	2350
PXA 04 110	156	2	78	160	1,90	1180	2360
PXA 04 120	166	2	83	170	2,05	1185	2370
PXA 04 130	176	2	88	180	2,25	1190	2380
PXA 04 140	186	2	93	190	2,40	1195	2390
PXA 04 150	196	2	98	200	2,55	1200	2400
PXA 04 160	206	2	103	210	2,75	1205	2410
PXA 04 170	216	2	108	220	2,90	1210	2420
PXA 04 180	226	2	113	230	3,10	1215	2430
PXA 04 190	236	2	118	240	3,25	1220	2440
PXA 04 200	246	2	123	250	3,40	1225	2450
PXA 04 210	256	2	128	260	3,55	1230	2460
PXA 04 220	266	2	133	270	3,75	1235	2470
PXA 04 230	276	2	138	280	3,90	1240	2480
PXA 04 240	286	2	143	290	4,05	1245	2490
PXA 04 250	296	2	148	300	4,25	1250	2500
PXA 04 260	306	2	153	310	4,40	1255	2510
PXA 04 270	316	2	158	320	4,60	1260	2520
PXA 04 280	326	2	163	330	4,75	1265	2530
PXA 04 290	336	2	168	340	4,95	1270	2540
PXA 04 300	346	2	173	350	5,10	1275	2550
PXA 04 310	356	2	178	360	5,30	1280	2560
PXA 04 320	366	2	183	370	5,45	1285	2570
PXA 04 330	376	2	188	380	5,60	1290	2580

1) Other dimensions on request

Toothing acc. to DIN 3967
Quality 8e25
Reference DIN 867
For the basic dimensions of the Slewing bearing please take a look at the table of dimensions PXU

Thin ring bearing-Slewing bearing PBDV

Left picture shows a two-rowed bearing with three bearing rings that can be moved un-dependantly from each other.

Left picture shows a bearing with an additional raceway for combination with a drive wheel.
An extremely small starting torque is guaranteed by an increased play in the bearing, a reduced amount of rolling body elements as well as the usage of special smooth running grease.

Also possible is a solution with integrated slip rings for power or signal tranmission.

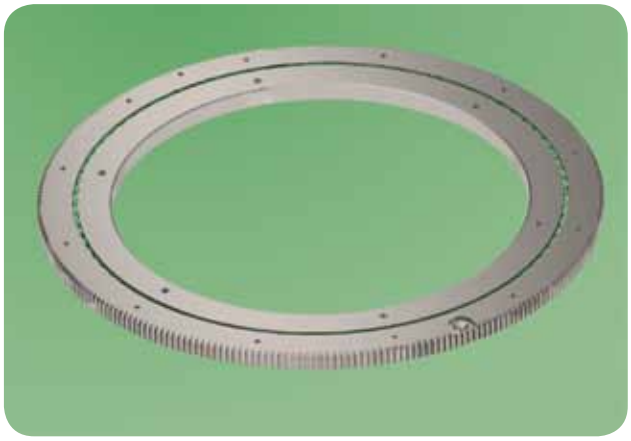
Slewing bearings – special configuration

Without gear teeth

Internal gear teeth

External gear teeth

6,35	A-cross-section
9,525	C-cross-section
12,7	D-cross-section



KMF-Slewing bearings in special configuration can be used as an alternative for Thin ring bearings.

They have the same height as thin ring bearings of the A-, C- or D-cross-section.

Sealing profiles

Description of shape

One can seal to the adjacent structure with KMF sealing profiles, depending on the requirements and the type of pollution.

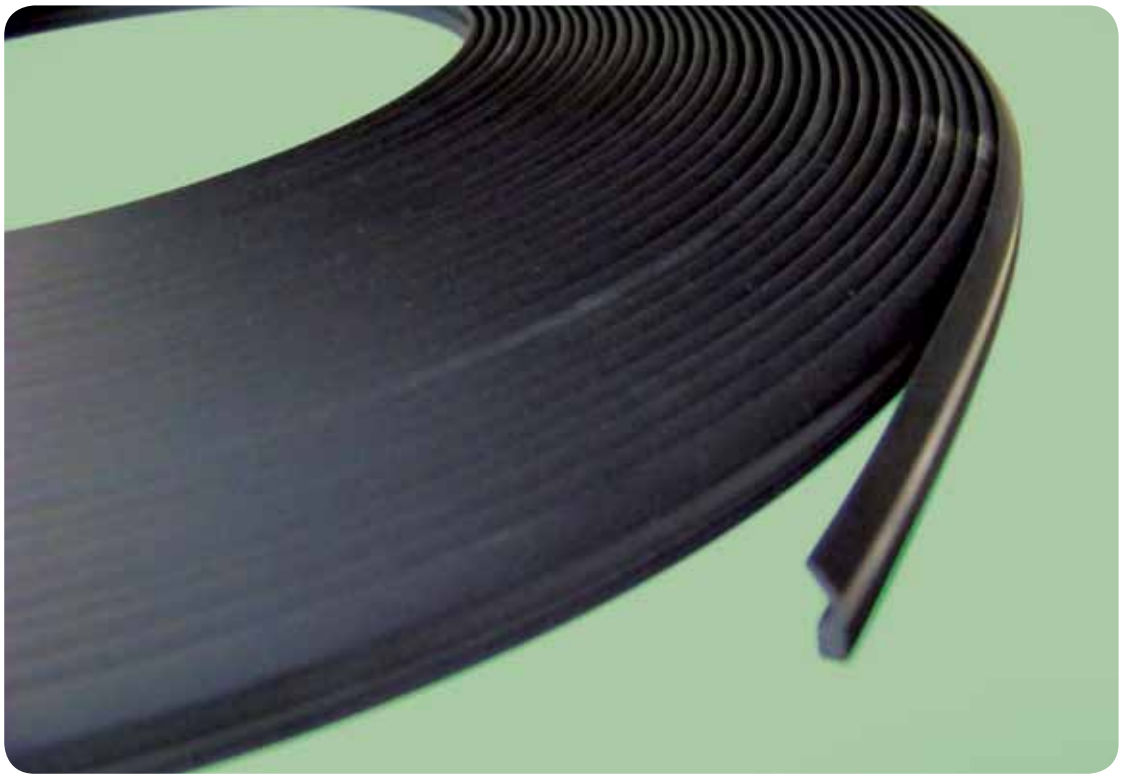
We have developed some sealing profiles as yard-goods for this purpose, which meet different requirements. For infinite purposes, the interfaces must be flat and free of grease. A cyan acrylate glue can be used as the glue. One must take care that there is no spillase when attached to the surfaces.

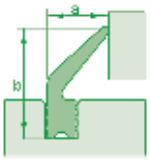
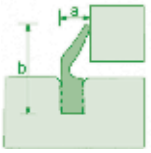
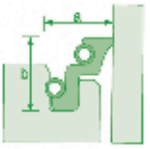
Material

The standard material of the sealing profile is NBR 70 (Shore hardness of 70), which has proved successful due to ist resistance to oil and grease and its good resistance to wear.

Operating conditions

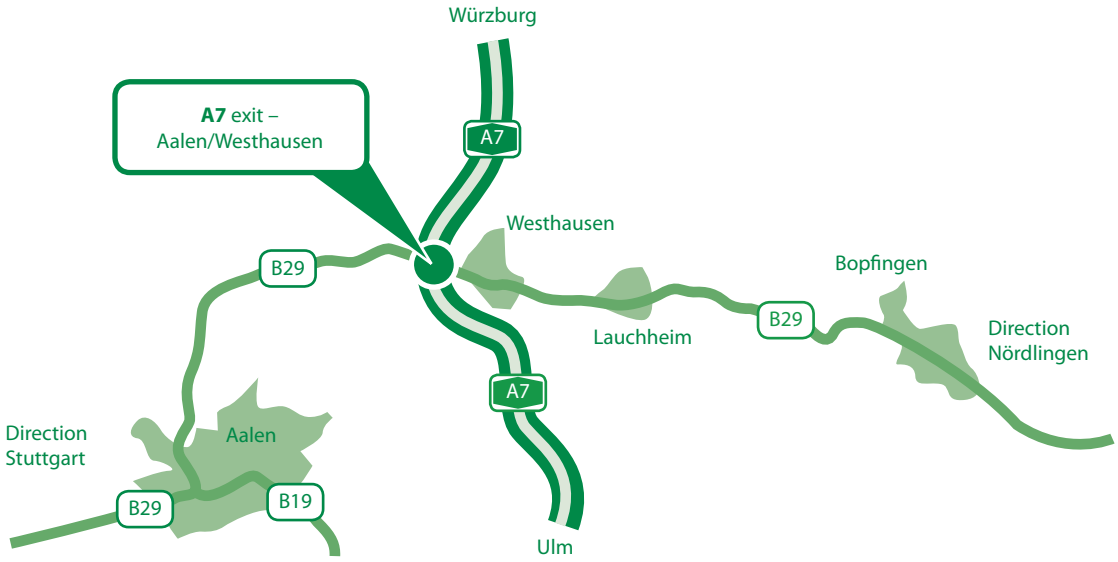
The sealing profiles can be used at working temperatures of -40°C to +80°C.

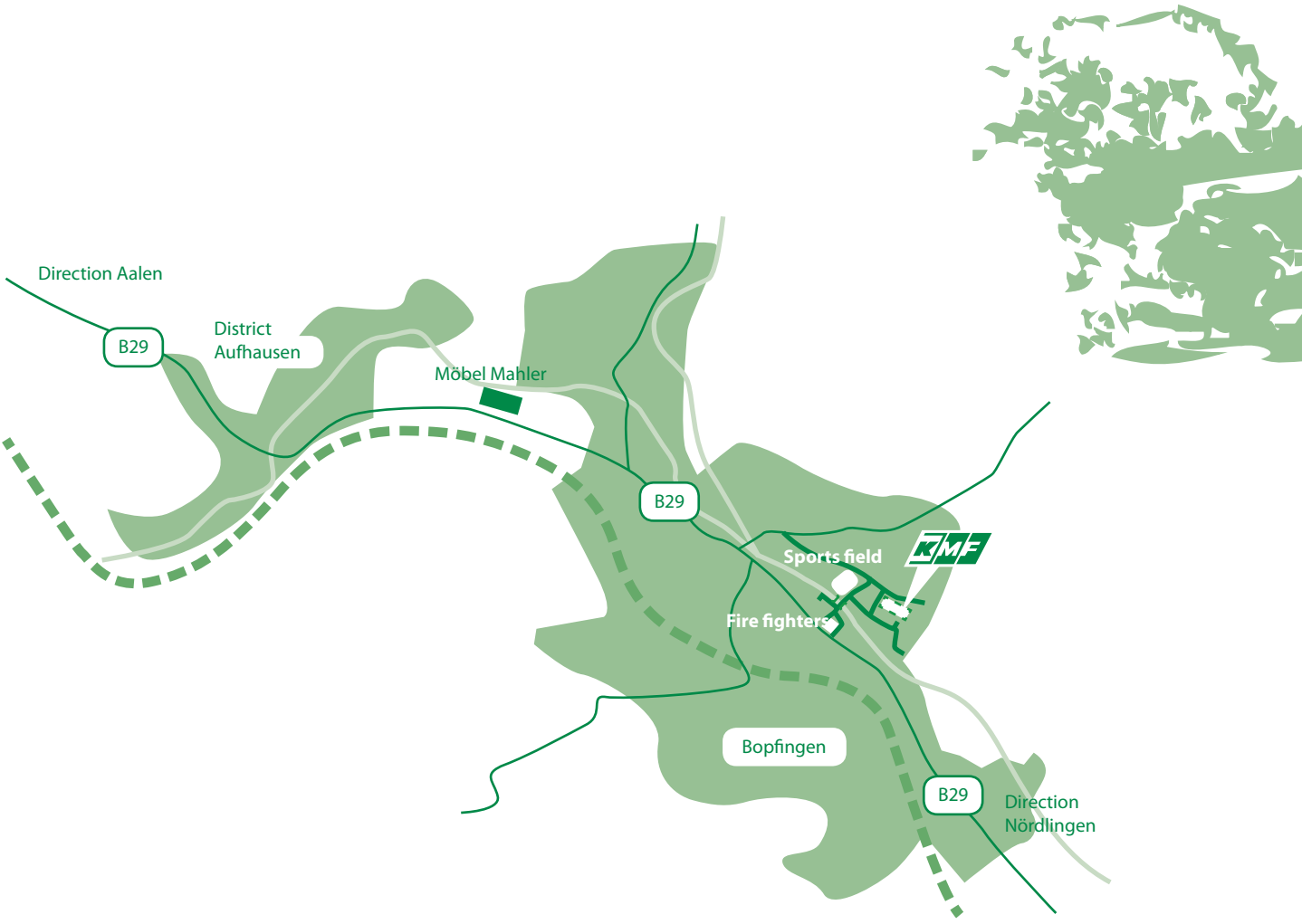


Sealing profiles		Short sign	Required space (guid)		Diameter range		Characteristics
					D		
Axial sealing	Radial sealing		a	b	Axial	Radial	
		S9	7	17	> Ø 400	> Ø 400	Robust seal increased friction
		S4	5	13	> Ø 200	> Ø 200	Normal seal low friction
		S5	11	9	> Ø 400	> Ø 400	Protected bearing gap seal
		S7	7	5	> Ø 200	> Ø 200	Protected bearing gap seal low space requirement
		S6	9	10		> Ø 200	High pressure due to Spring-loaded sealing lip, preferred for oscillating operation
		R2 R3 R4	1,5 2,3 3,1	2,7 4,0 5,4	> Ø 200	> Ø 200	Static seal

Installation drawings are available for the individual seal profiles. Please ask for them.

Directions to the company...





... starting from the B29

in the Nördlingen direction...

shortly after entering the Bopfingen, turn right at
the Fire Station, then after 30 m, turn left again,
follow the street, pass the Sports Stadium,
turn right on the Postweg,
we are located 200 m along the right hand side.

... starting from the A7 exit Aalen/Westhausen ...

take the B29 in the Nördlingen direction.
Shortly before the exit to the Fire Station, turn left,
then after 30 m, turn left again, follow the street,
pass the Sports Stadium, turn right on the Postweg,
we are located 200 m along the right hand side.

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Phone 07362/7001
Fax 07362/7007
E-Mail info@kmf-bearings.de

Notes

KMF

KUNSTSTOFF-METALL-FORMTEILE

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