

SLIM - SPLIT - BEARING



Type series PBXU

Type series PBXC

Type series PBAC

Type series PFXC

Type series PFAC

Type series HFXD

Type series PBDV

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For reasons of further development, we reserve the right to modify our products.

SUPRA - SLIM - SPLIT - BEARING



Thin ring bearing PBXU



Description of shape

A thorough going further development of the KMF thin ring bearing PBXC let to the SUPRA-SLIM-SPLIT-BEARING of the type series PBXU.

This thin ring bearing has a cross cut of only 4,5 mm x 4,5 mm and is available in diameter ranges starting from 35 mm up to 640 mm and can also be supplied as a hybrid-bearing -with ceramic balls-.

A ball with a diameter of 3,175 mm could be integrated in this small bearing cross cut, using a minimised ball deviation due to a separator strip with guided and contained balls.

The compact four point contact system availables a high strenght figure and service life and enables the integration in the smallest and really cramped surroundings of the construction.

Materials

Bearing rings : X45 Cr13 (Material-No.: 1.3541) corrosion resistant steel, hardened.
alternatively
100 Cr 6 (Material-No.: 1.3505) bearing steel, hardened.

Ball : X40 Cr 13 (Material-No.: 1.4034) corrosion resistant steel, hardened.
alternatively
100 Cr 6 (Material-No.: 1.3505) bearing steel, hardened.

Ball separator : Polyamide PA 12 plastic
alternatively
PVDF plastic

Temperature

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

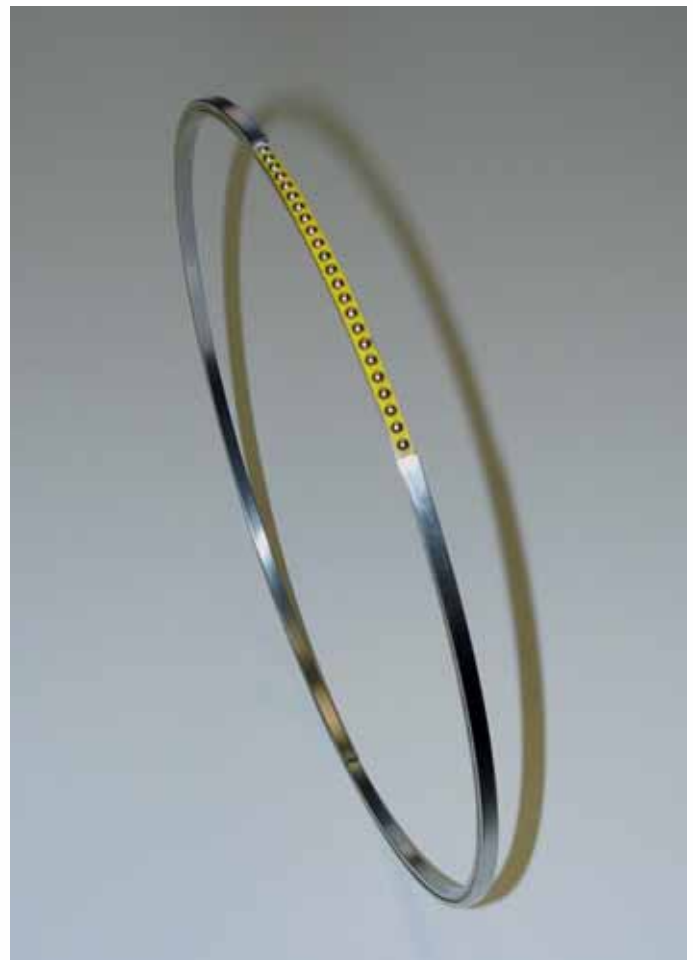
A compatible ball cage made of PVDF is available for higher working temperatures.

Thin ring bearing PBXU



Features

- Free choice of material of adjacent structure
eg: aluminium.
Due to slotted bearing rings, no difficulties
from differential expansion
- Resistance to corrosion
(due to choice of material of the bearing rings)
- Requires little maintenance
- High static and dynamic strength
- Long service life
- Great stiffness (due to several rollers)
- Low bearing weight
- Easy to fit
- Economic fitting and dismantling,
as no devices are required
- Economical,
due to optimum price / performance ratio
- Short delivery periods,
also for intermediate sizes outside
the preferred series



Example of order / inquiry:

Thin ring bearing type PBXU 0140

Designation :

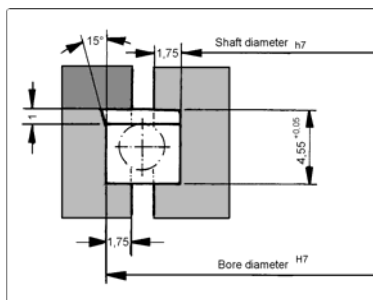
Quantity:

Please add for thin ring bearings made completely of corrosion resistant materials
the sign SS after the designation.

eg:

SUPRA-SLIM-SPLIT-BEARING

Thin ring bearing type series PBXU (preferred series)



Fitted dimensions

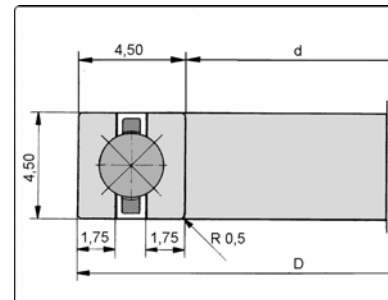


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension		Strength figure		Weight	KMF-type 1)	Bearing dimension		Strength figure		Weight
	d	D	dyn. C [N]	stat. C ₀ [N]			d	D	dyn. C [N]	stat. C ₀ [N]	
PBXU 0035	35	44	2.180	2.280	0,014	PBXU 0310	310	319	4.680	18.740	0,121
PBXU 0040	40	49	2.270	2.570	0,016	PBXU 0320	320	329	4.740	19.340	0,125
PBXU 0045	45	54	2.360	2.850	0,018	PBXU 0330	330	339	4.800	19.930	0,129
PBXU 0050	50	59	2.450	3.140	0,020	PBXU 0340	340	349	4.860	20.530	0,133
PBXU 0055	55	64	2.540	3.420	0,022	PBXU 0350	350	359	4.920	21.120	0,137
PBXU 0060	60	69	2.630	3.710	0,024	PBXU 0360	360	369	4.970	21.720	0,141
PBXU 0065	65	74	2.720	3.990	0,025	PBXU 0370	370	379	5.030	22.310	0,145
PBXU 0070	70	79	2.810	4.310	0,027	PBXU 0380	380	389	5.090	22.910	0,149
PBXU 0075	75	84	2.870	4.600	0,029	PBXU 0390	390	399	5.140	23.500	0,153
PBXU 0080	80	89	2.930	4.890	0,031	PBXU 0400	400	409	5.200	24.100	0,157
PBXU 0085	85	94	2.990	5.180	0,033	PBXU 0410	410	419	5.240	24.700	0,161
PBXU 0090	90	99	3.050	5.500	0,035	PBXU 0420	420	429	5.290	25.290	0,165
PBXU 0095	95	104	3.110	5.790	0,037	PBXU 0430	430	439	5.330	25.900	0,169
PBXU 0100	100	109	3.170	6.080	0,039	PBXU 0440	440	449	5.380	26.480	0,173
PBXU 0110	110	119	3.260	6.660	0,043	PBXU 0450	450	459	5.420	27.070	0,177
PBXU 0120	120	129	3.360	7.240	0,047	PBXU 0460	460	469	5.460	27.670	0,181
PBXU 0130	130	139	3.450	7.910	0,051	PBXU 0470	470	479	5.510	28.260	0,185
PBXU 0140	140	149	3.550	8.500	0,055	PBXU 0480	480	489	5.550	28.860	0,189
PBXU 0150	150	159	3.640	9.080	0,059	PBXU 0490	490	499	5.600	29.450	0,193
PBXU 0160	160	169	3.720	9.670	0,062	PBXU 0500	500	509	5.640	30.050	0,197
PBXU 0170	170	179	3.810	10.260	0,066	PBXU 0510	510	519	5.680	30.900	0,201
PBXU 0180	180	189	3.890	10.920	0,070	PBXU 0520	520	529	5.730	31.500	0,205
PBXU 0190	190	199	3.980	11.500	0,074	PBXU 0530	530	539	5.770	32.100	0,209
PBXU 0200	200	209	4.060	12.100	0,078	PBXU 0540	540	549	5.820	32.700	0,213
PBXU 0210	210	219	4.120	12.690	0,082	PBXU 0550	550	559	5.860	33.300	0,217
PBXU 0220	220	229	4.170	13.280	0,086	PBXU 0560	560	569	5.900	33.900	0,221
PBXU 0230	230	239	4.230	13.870	0,090	PBXU 0570	570	579	5.950	34.500	0,225
PBXU 0240	240	249	4.290	14.580	0,094	PBXU 0580	580	589	5.990	35.100	0,229
PBXU 0250	250	259	4.350	15.170	0,098	PBXU 0590	590	599	6.040	35.700	0,233
PBXU 0260	260	269	4.400	15.770	0,102	PBXU 0600	600	609	6.080	36.300	0,237
PBXU 0270	270	279	4.460	16.360	0,106	PBXU 0610	610	619	6.130	36.900	0,241
PBXU 0280	280	289	4.520	16.960	0,110	PBXU 0620	620	629	6.180	37.500	0,245
PBXU 0290	290	299	4.570	17.550	0,113	PBXU 0630	630	639	6.230	38.100	0,249
PBXU 0300	300	309	4.630	18.150	0,117	PBXU 0640	640	649	6.280	38.700	0,253

1) Other dimensions on request

Description of construction

The KMF slim bearing is a two ring four point ball bearing with a so-called C cross-section size 9,525 x 9,525 mm (3/8" x 3/8").

Due to the splitted bearing rings, a plastic cage strip with guided and contained balls and with more and bigger balls can be integrated. The 90° pressure angle of the bearing makes it possible to take up radial and axial forces, as well as torques from any direction.

The temperature limits of the standard bearing in continuous operation are –40°C to +100°C, and for short periods up to 120°C. A compatible ball cage made of PTFE is available for higher working temperatures.

Features

- Free choice of material for adjoining structure, eg: aluminium.
Due to the splitted bearing rings,
there is no difficulty from differential expansion
- Resistant to corrosion
(due to choice of material of the bearing rings)
- Requires little maintenance
- High static and dynamic strength
- Long service life
- Great stiffness (due to more and bigger balls)
- Low bearing weight
- Easy to fit
- Economic fitting and dismantling,
as no devices are required
- Economical,
due to optimum price / performance ratio
- Short delivery periods,
also for intermediate sizes outside
the preferred series.



Example of order:

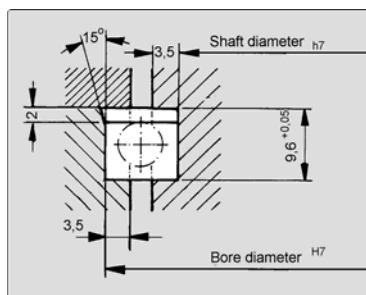
Slim bearing type PBXC 100

Designation : PBXC 100

Quantity : 50 off

SLIM-SPLIT-BEARING

Slim bearing type series PBXC (preferred series)



Fitted dimensions

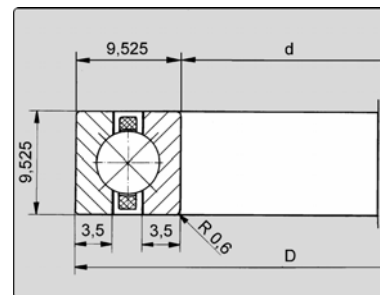


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension			Load capacity		Weight	KMF-type 1)	Bearing dimension			Load capacity		Weight
	d	D		dyn. C _a	stat. C _{0a}			d	D		dyn. C _a	stat. C _{0a}	
	[inch]			[kN]	[kN]	kg		[inch]			[kN]	[kN]	kg
PBXC 040	101,60	4	120,65	13,6	42,2	0,18	PBXC 280	711,20	28	730,25	28,1	274,2	1,10
PBXC 042	107,95	4 ¼	127,00	14,0	44,7	0,19	PBXC 290	736,60	29	755,65	28,6	284,0	1,14
PBXC 045	114,30	4 ½	133,35	14,3	47,0	0,20	PBXC 300	762,00	30	781,05	29,1	293,8	1,18
PBXC 047	120,65	4 ¾	139,70	14,6	49,5	0,21	PBXC 310	787,40	31	806,45	29,6	303,6	1,22
PBXC 050	127,00	5	146,05	15,0	51,9	0,22	PBXC 320	812,80	32	831,85	30,1	313,3	1,26
PBXC 055	139,70	5 ½	158,75	15,4	56,7	0,24	PBXC 330	838,20	33	857,25	30,5	323,1	1,30
PBXC 060	152,40	6	171,45	15,9	61,6	0,26	PBXC 340	863,60	34	882,65	31,0	332,9	1,34
PBXC 065	165,10	6 ½	184,15	16,3	66,3	0,28							
PBXC 070	177,80	7	196,85	16,8	71,2	0,30							
PBXC 075	190,50	7 ½	209,55	17,2	76,0	0,32							
PBXC 080	203,20	8	222,25	17,5	81,2	0,34							
PBXC 085	215,90	8 ½	234,95	17,9	85,7	0,36							
PBXC 090	228,60	9	247,65	18,2	90,5	0,38							
PBXC 095	241,30	9 ½	260,35	18,6	95,3	0,39							
PBXC 100	254,00	10	273,05	19,0	100,1	0,41							
PBXC 105	266,70	10 ½	285,75	19,4	105,0	0,43							
PBXC 110	279,40	11	298,45	19,7	109,8	0,45							
PBXC 115	292,10	11 ½	311,15	20,0	114,6	0,47							
PBXC 120	304,80	12	323,85	20,3	119,4	0,49							
PBXC 130	330,20	13	349,25	20,9	129,1	0,53							
PBXC 140	355,60	14	374,65	21,5	138,7	0,56							
PBXC 150	381,00	15	400,05	22,0	148,4	0,60							
PBXC 160	406,40	16	425,45	22,5	158,0	0,64							
PBXC 170	431,80	17	450,85	23,0	167,7	0,68							
PBXC 180	457,20	18	476,25	23,6	177,3	0,72							
PBXC 190	482,60	19	501,65	24,0	187,0	0,76							
PBXC 200	508,00	20	527,05	24,4	196,7	0,79							
PBXC 210	533,40	21	552,45	24,8	206,3	0,83							
PBXC 220	558,80	22	577,85	25,2	216,0	0,87							
PBXC 230	584,20	23	603,25	25,6	225,6	0,91							
PBXC 240	609,60	24	628,65	26,0	235,3	0,95							
PBXC 250	635,00	25	654,05	26,5	244,9	0,98							
PBXC 260	660,40	26	679,45	27,1	254,6	1,02							
PBXC 270	685,80	27	704,85	27,6	264,4	1,06							

Slim bearing PBXC

Example of calculations for combined load



Static strength

Given:

PBXC 115

Static strength $C_{0a} = 114,6 \text{ kN}$

Bearing loads:

Axial load $F_{OA} = 7,5 \text{ kN}$

Radial load $F_{OR} = 6,0 \text{ kN}$

Tilting torque $M_{OK} = 1,7 \text{ kNm}$

Wanted:

Static safety factor

$$\epsilon = \frac{2 \times M_{OK}}{F_{OA} \times D_L} \times 10^3$$

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

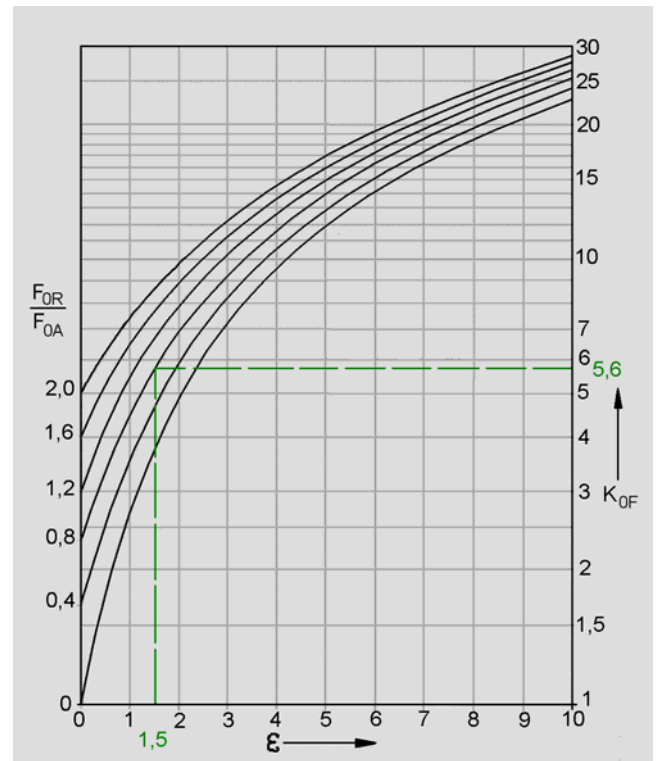
$$\frac{F_{OR}}{F_{OA}} = \frac{6}{7,5} = 0,8$$

$$K_{OF} = 5,6$$

$$P_0 = F_{OA} \times K_{OF} = 7,5 \times 5,6 = 42 \text{ kN}$$

$$\text{Static safety factor } S_0 = \frac{C_{0a}}{P_0}$$

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



Static load factor K_{OF} for four point thin ring bearing

ϵ = Load eccentricity value

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

Slim bearing PBXC

Example of calculations for combined loads



Calculation of service life

Given:

PBXC 115

Dynamic strength figure $C_a = 20 \text{ kN}$

Bearing loads:

Axial load $F_A = 2,50 \text{ kN}$

Radial load $F_R = 1,00 \text{ kN}$

Tilting torque $M_K = 0,38 \text{ kNm}$

Speed $n = 20 \text{ min}^{-1}$

Wanted:

Nominal service life

$$\epsilon = \frac{2 \times M_K}{F_A \times D_L} \times 10^3$$

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

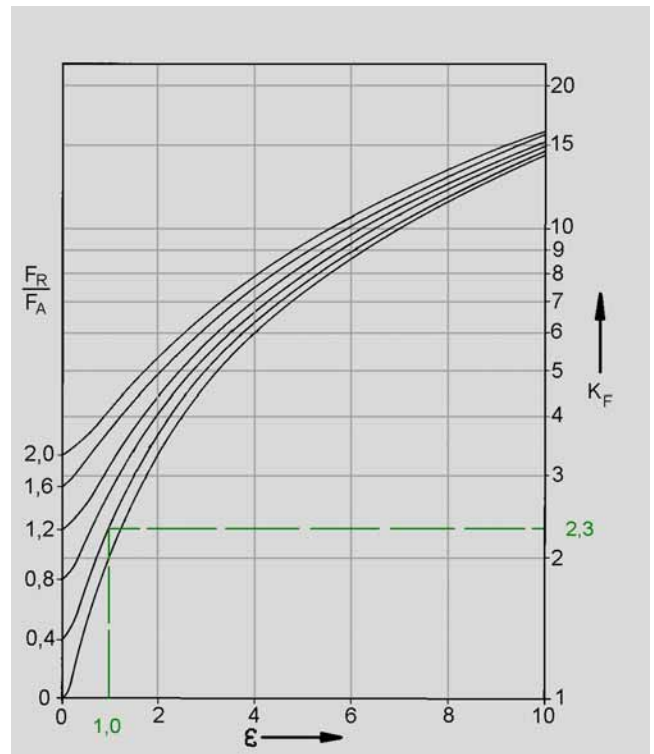
$$\frac{F_R}{F_A} = \frac{1,0}{2,5} = 0,4$$

$$K_F = 2,3$$

$$P = F_A \times K_F = 2,5 \times 2,3 = 5,75 \text{ kN}$$

$$\text{Service life } L_h = \frac{16.666}{n} \times \left(\frac{C_a}{P} \right)^3$$

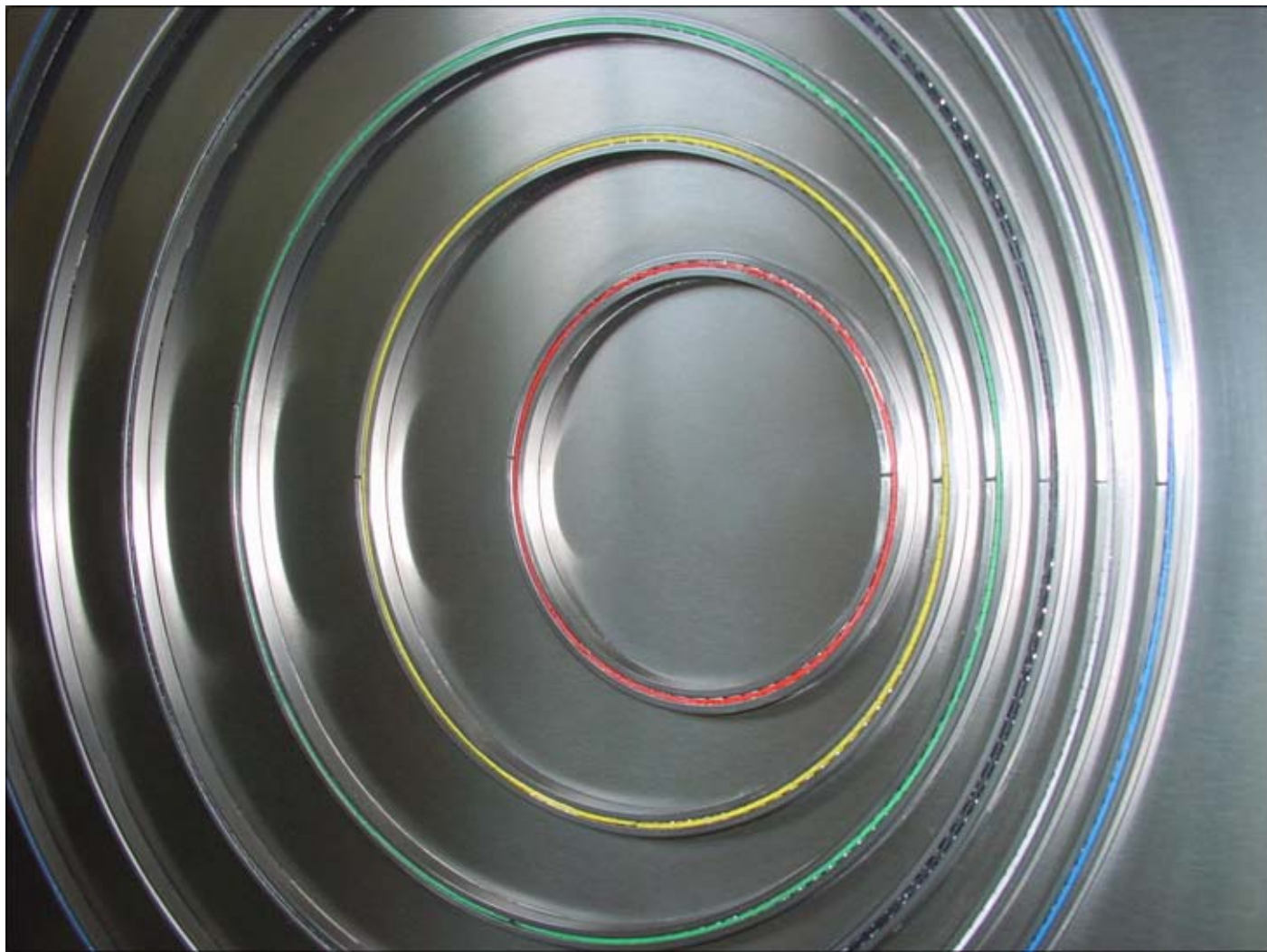
$$L_h = \frac{16.666}{20} \times \left(\frac{20}{5,75} \right)^3 = 35.000 \text{ hours}$$



Dynamic load factor K_F for four point thin ring bearing

ϵ = load eccentricity value

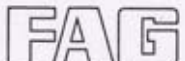
D_L = running circle diameter in mm = $\frac{d + D}{2}$

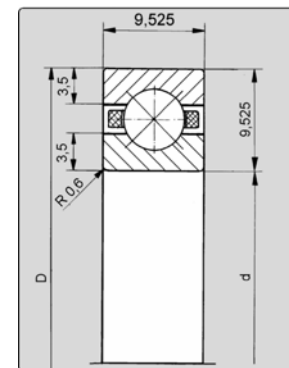


SLIM - SPLIT - BEARING



Slim bearing - comparative list

								
KMF-type	Bearing dimension			KAYDON-type	FAG-type	SKF-type	INA-type	Franke-type
	d	[inch]	D					
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
PBXC 210	533,40	21	552,45	----	----	----	----	----
PBXC 220	558,80	22	577,85	----	----	----	----	----
PBXC 230	584,20	23	603,25	----	----	----	----	----
PBXC 240	609,60	24	628,65	----	----	----	----	----
PBXC 250	635,00	25	654,05	KC250XPO	----	FPXC2500	CSXC250	LFC 25
PBXC 260	660,40	26	679,45	----	----	----	----	----
PBXC 300	762,00	30	781,05	KC300XPO	----	FPXC3000	CSXC300	----



More comparisons are not possible due to absent types.

Ball thrust bearing PBAC



Description of construction

The ball thrust bearing is equal in cross-section to the slim bearing of type series PBXC.

Due to the four contact points (pressure angle 90°), the ball thrust bearing has a very high axial strength compared to the small cross-section.

The ball bearings of the type series PBAC and PBXC are resistant to corrosion, ie: the hardened bearing rings and balls are made of bearing steel 1.4034. The cage is made of polyamide 12 plastic.

The temperature limits of the standard bearing in continuous operation are -40°C and +100°C, and for short periods up to 120°C. A compatible ball cage made of PTFE is available for higher working temperatures.

Features

- Free choice of material for adjoining structure, eg: aluminium.
Due to the splitted bearing rings,
no difficulties from differential expansion
- Resistant to corrosion
(due to choice of material)
- Little maintenance required
- High static and dynamic strength
- Long service life
- Low bearing weight
- Economical,
due to optimum price / performance ratio
- Short delivery period,
also for intermediate sizes
outside the preferred series



Example of order:

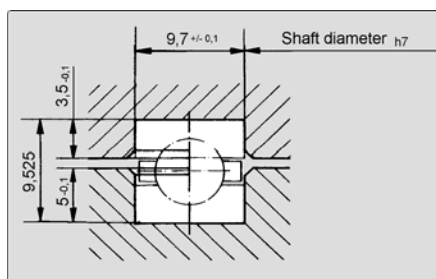
Ball thrust bearing type PBAC 120

Designation :

Quantity :

SLIM-SPLIT-BEARING

Ball thrust bearing type series PBAC (preferred series)



Fitted dimensions

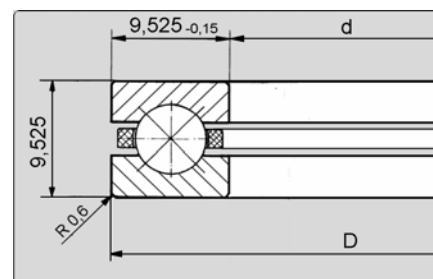


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension			Load capacity		Weight kg
	d	D		dynamic C_a [kN]	static C_{0a} [kN]	
	[inches]					
PBAC 070	177,80	7	196,85	20,4	97,4	0,30
PBAC 075	190,50	7 ½	209,55	20,9	104,0	0,32
PBAC 080	203,20	8	222,25	21,4	110,6	0,34
PBAC 085	215,90	8 ½	234,95	21,9	117,2	0,36
PBAC 090	228,60	9	247,65	22,4	123,8	0,38
PBAC 095	241,30	9 ½	260,35	22,8	132,9	0,39
PBAC 100	254,00	10	273,05	23,2	139,7	0,41
PBAC 105	266,70	10 ½	285,75	23,6	146,4	0,43
PBAC 110	279,40	11	298,45	24,0	153,1	0,45
PBAC 115	292,10	11 ½	311,15	24,3	159,8	0,47
PBAC 120	304,80	12	323,85	24,5	169,7	0,49
PBAC 130	330,20	13	349,25	25,4	183,4	0,53
PBAC 140	355,60	14	374,65	26,2	197,1	0,56
PBAC 150	381,00	15	400,05	26,9	210,9	0,60
PBAC 160	406,40	16	425,45	27,5	224,6	0,64
PBAC 170	431,80	17	450,85	28,2	242,7	0,68
PBAC 180	457,20	18	476,25	28,8	256,7	0,72
PBAC 190	482,60	19	501,65	29,3	270,7	0,76
PBAC 200	508,00	20	527,05	29,8	284,6	0,79
PBAC 210	533,40	21	552,45	30,3	298,6	0,83
PBAC 220	558,80	22	577,85	30,8	312,6	0,87
PBAC 230	584,20	23	603,25	31,2	332,5	0,91
PBAC 240	609,60	24	628,65	31,6	346,7	0,95
PBAC 250	635,00	25	654,05	32,0	360,9	0,98
PBAC 260	660,40	26	679,45	32,4	375,1	1,02
PBAC 270	685,80	27	704,85	33,0	388,8	1,06
PBAC 280	711,20	28	730,25	33,6	403,2	1,10
PBAC 290	736,60	29	755,65	34,2	417,6	1,14
PBAC 300	762,00	30	781,05	34,8	432,0	1,18
PBAC 310	787,40	31	806,45	35,4	446,4	1,22
PBAC 320	812,80	32	831,85	35,9	460,8	1,26
PBAC 330	838,20	33	857,25	36,5	475,2	1,30
PBAC 340	863,60	34	882,65	37,0	489,6	1,34

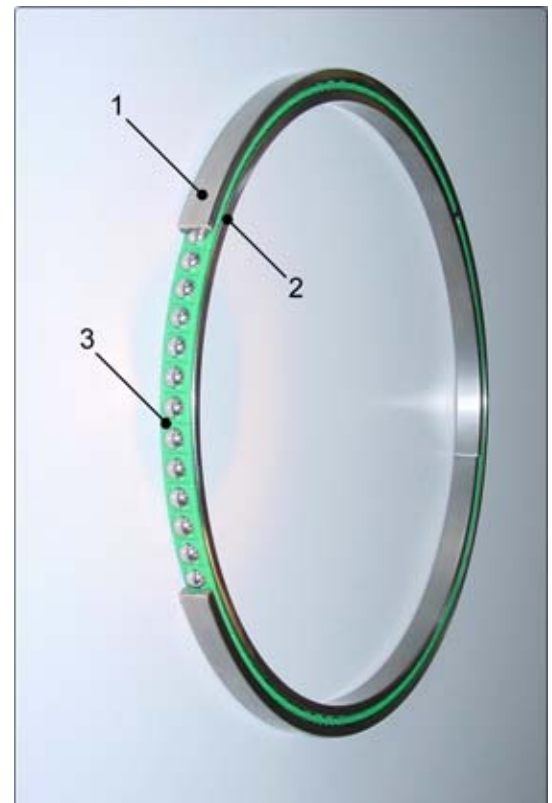
1) Other dimensions on request.

SLIM-SPLIT-BEARING

Components PBXC / PBAC



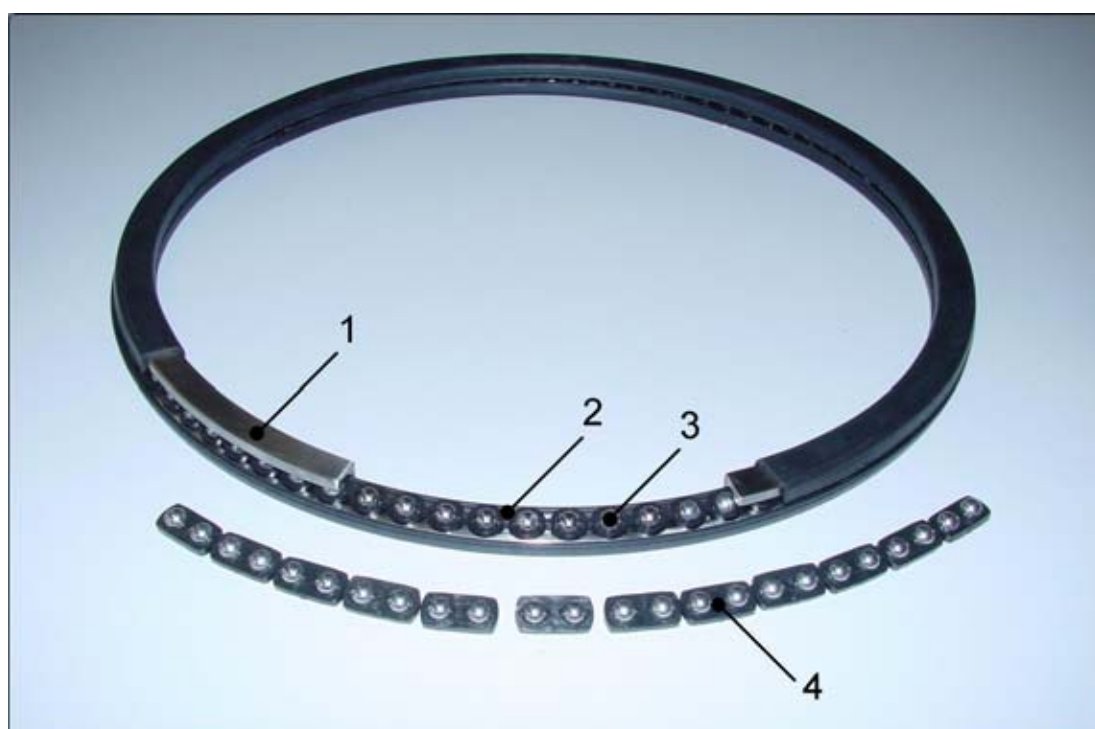
- Item 1 Bearing outer ring**
with conformed raceway
- Item 2 Bearing inner ring**
with conformed raceway
- Item 3 Ball cage strip**
with guided and contained balls



- Item 1 Bearing top washer**
with conformed raceway
- Item 2 Bearing under washer**
with conformed raceway
- Item 3 Ball cage strip**
with guided and contained balls

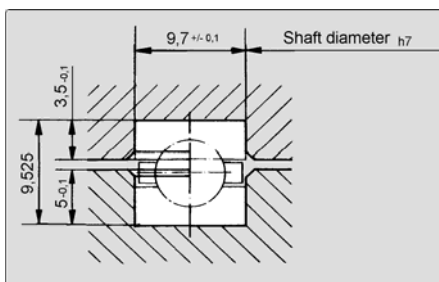
Optional

- Item 4 Ball cage segment**
with guided and contained balls



SLIM-SPLIT-BEARING

Ball thrust bearing type series PBAC (metric preferred series)



Fitted dimensions

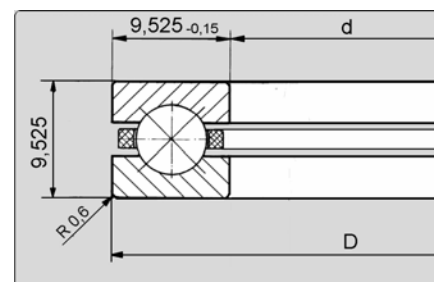


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension			Load capacity		Weight kg
	DL	d	D	dynamic C_a [kN]	static C_{0a} [kN]	
PBAC 0195	195	185,5	204,5	18,8	87,0	0,30
PBAC 0260	260	250,5	269,5	21,3	118,8	0,40
PBAC 0295	295	285,5	304,5	22,1	134,2	0,48
PBAC 0395	395	385,5	404,5	24,8	182,6	0,62
PBAC 0520	520	510,5	529,5	27,8	240,9	0,82
PBAC 0690	690	680,5	699,5	30,3	319,0	1,10
PBAC 0720	720	710,5	729,5	30,8	334,4	1,15
PBAC 0722	722	712,5	731,5	30,8	335,5	1,16
PBAC 0875	875	865,5	884,5	32,8	405,9	1,40
PBAC 0880	880	870,5	889,5	33,0	408,1	1,41
PBAC 1090	1090	1080,5	1099,5	35,8	507,1	1,74
PBAC 1230	1230	1220,5	1239,5	37,4	573,1	1,97
PBAC 1410	1410	1400,5	1419,5	39,6	655,6	2,26
* PBAC 1520	1520	1510,5	1529,5	40,7	708,4	2,44
* PBAC 1770	1770	1760,5	1779,5	42,9	826,1	2,84

1) Other dimensions on request

* Planned types

Description of construction

The whisper bearing consists of a slim bearing of type series PBXC, which is provided on the outer and the inner ring with an elastomer sheath with 70 Shore hardness.

The temperature limits of the bearing in continuous operation are -40°C and $+80^{\circ}\text{C}$.

Apart from the advantages of the slim bearing PBXC, this whisper bearing has further special features.

Features

- Particularly quiet running
- Low body noise
- Insensitive to shock
- Bearing play is easily adjustable due to splitted bearing rings and elastic sheath
- Large installation tolerances on adjoining parts



Example of order:

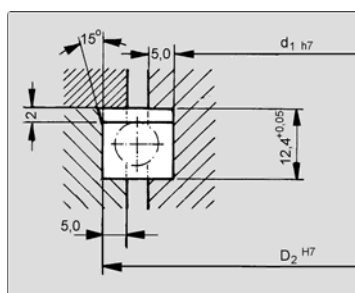
Whisper bearing type PFXC 200

Designation :

Quantity :

SLIM-SPLIT-BEARING

Whisper slim bearing type series PFXC (preferred series)



Fitted dimensions

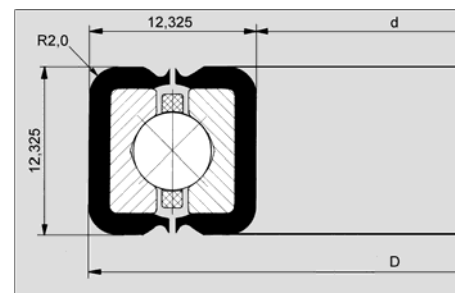


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension		Fitted dimensions		Load capacity		Weight kg
	d	D	d ₁	D ₂	dynamic C _a [kN]	static C _{0a} [kN]	
PFXC 070	175,0	199,65	175,0	199,50	10,9	37,4	0,32
PFXC 075	187,7	212,35	187,7	212,20	11,3	40,4	0,34
PFXC 080	200,4	225,05	200,4	224,90	11,7	42,6	0,36
PFXC 085	213,1	237,75	213,1	237,60	12,0	45,0	0,38
PFXC 090	225,8	250,45	225,8	250,30	12,1	47,6	0,41
PFXC 095	238,5	263,15	238,5	263,00	12,4	50,2	0,43
PFXC 100	251,2	275,85	251,2	275,70	12,6	52,6	0,45
PFXC 105	263,9	288,55	263,9	288,40	12,8	55,2	0,47
PFXC 110	276,6	301,25	276,6	301,10	12,9	57,6	0,50
PFXC 115	289,3	313,95	289,3	313,80	13,0	60,4	0,52
PFXC 120	302,0	326,65	302,0	326,50	13,3	62,8	0,54
PFXC 130	327,4	352,05	327,4	351,90	13,6	67,8	0,59
PFXC 140	352,8	377,45	352,8	377,30	13,9	73,0	0,63
PFXC 150	378,2	402,85	378,2	402,70	14,0	78,0	0,68
PFXC 160	403,6	428,25	403,6	428,10	14,3	83,2	0,72
PFXC 170	429,0	453,65	429,0	453,50	14,5	88,2	0,77
PFXC 180	454,4	479,05	454,4	478,90	14,6	93,2	0,81
PFXC 190	479,8	504,45	479,8	504,30	14,9	98,4	0,86
PFXC 200	505,2	529,85	505,2	529,70	15,2	103,4	0,90
PFXC 210	530,6	555,25	530,6	555,10	15,6	108,4	0,95
PFXC 220	556,0	580,65	556,0	580,50	16,0	113,6	0,99
PFXC 230	581,4	606,05	581,4	605,90	16,1	118,8	1,04
PFXC 240	606,8	631,45	606,8	631,30	16,4	123,8	1,08
PFXC 250	632,2	656,85	632,2	656,7	16,8	129,0	1,13
PFXC 260	657,6	682,25	657,6	682,10	17,1	134,0	1,17
PFXC 270	683,0	707,65	683,0	707,5	17,4	139,2	1,22
PFXC 280	708,4	733,05	708,4	732,9	17,7	144,3	1,26
PFXC 290	733,8	758,45	733,8	758,3	18,1	149,5	1,31
PFXC 300	759,2	783,85	759,2	783,7	18,4	154,6	1,35
PFXC 310	784,6	809,25	784,6	809,1	18,7	159,8	1,40
PFXC 320	810,0	834,65	810,0	834,5	19,0	164,9	1,44
PFXC 330	835,4	860,05	835,4	859,9	19,3	170,1	1,49
PFXC 340	860,8	885,45	860,8	885,3	19,6	175,2	1,53

1) Other dimensions on request

Whisper ball thrust bearing PFAC



Description of construction

The whisper ball thrust bearing consists of an ball thrust bearing of type series PBAC, which is provided on the top and the under washer with an elastomer sheat with 70 Shore hardness.

The temperature limits of the bearing in continuous operation are -40°C and $+80^{\circ}\text{C}$.

Apart from the advantages of the ball thrust bearing PBAC, this whisper bearing has other special features.

Features

- Particularly quiet running
- Low body noise
- Insensitive to shock
- Great installation tolerances on adjoining parts



Example of order:

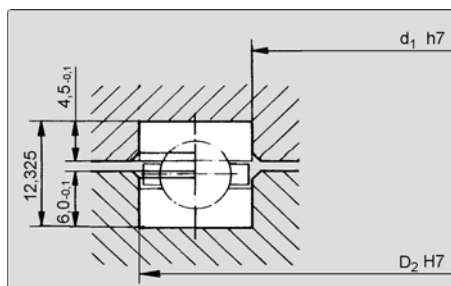
Whisper ball thrust bearing type PFAC 160

Designation :

Quantity :

SLIM-SPLIT-BEARING

Whisper ball thrust bearing type series PFAC (preferred series)



Fitted dimensions

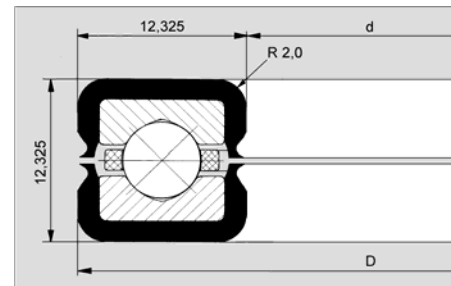


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension		Fitted dimensions		Load capacity		Weight kg
	d	D	d ₁	D ₂	dynamic C _a [kN]	static C _{0a} [kN]	
PFAC 070	175,0	199,65	175,0	200,0	13,3	51,6	0,32
PFAC 075	187,7	212,35	187,7	212,7	13,6	55,1	0,34
PFAC 080	200,4	225,05	200,4	225,4	13,9	58,6	0,36
PFAC 085	213,1	237,75	213,1	238,1	14,2	62,1	0,38
PFAC 090	225,8	250,45	225,8	250,8	14,6	65,6	0,41
PFAC 095	238,5	263,15	238,5	263,5	14,8	70,4	0,43
PFAC 100	251,2	275,85	251,2	276,2	15,1	74,0	0,45
PFAC 105	263,9	288,55	263,9	288,9	15,3	77,6	0,47
PFAC 110	276,6	301,25	276,6	301,6	15,6	81,1	0,50
PFAC 115	289,3	313,95	289,3	314,3	15,8	84,7	0,52
PFAC 120	302,0	326,65	302,0	327,4	15,9	89,9	0,54
PFAC 130	327,4	352,05	327,4	352,4	16,5	97,2	0,59
PFAC 140	352,8	377,45	352,8	377,8	17,0	104,5	0,63
PFAC 150	378,2	402,85	378,2	403,2	17,5	111,8	0,68
PFAC 160	403,6	428,25	403,6	428,6	17,9	119,0	0,72
PFAC 170	429,0	453,65	429,0	454,0	18,3	128,6	0,77
PFAC 180	454,4	479,05	454,4	479,4	18,7	136,0	0,81
PFAC 190	479,8	504,45	479,8	505,2	19,0	143,5	0,86
PFAC 200	505,2	529,85	505,2	530,2	19,4	150,8	0,90
PFAC 210	530,6	555,25	530,6	555,6	19,7	158,2	0,95
PFAC 220	556,0	580,65	556,0	581,0	20,0	165,7	0,99
PFAC 230	581,4	606,05	581,4	606,4	20,3	176,2	1,04
PFAC 240	606,8	631,45	606,8	632,2	20,5	183,7	1,08
PFAC 250	632,2	656,85	632,2	657,2	20,8	191,2	1,13
PFAC 260	657,6	682,25	657,6	682,6	21,1	198,8	1,17
PFAC 270	683,0	707,65	683,0	708,0	21,5	206,4	1,22
PFAC 280	708,4	733,05	708,4	733,4	21,9	214,1	1,26
PFAC 290	733,8	758,45	733,8	758,8	22,3	221,7	1,31
PFAC 300	759,2	783,85	759,2	784,2	22,7	229,4	1,35
PFAC 310	784,6	809,25	784,6	809,6	23,0	237,0	1,40
PFAC 320	810,0	834,65	810,0	835,0	23,4	244,7	1,44
PFAC 330	835,4	860,05	835,4	860,4	23,8	252,3	1,49
PFAC 340	860,8	885,45	860,8	885,8	24,1	260,0	1,53

1) Other dimensions on request

Sleeve whisper bearing



Type series HFXD



Sleeve whisper bearing HFXD



Description of construction

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 crossection of 9,525 x 9,525 mm was enlarged by an elastomer sheath and a sleeve to a bearing crossection of 12,925 x 12,925 mm.

The elastomer inlay has 70 Shore hardness and the thin-walled sleeve is made of steel.

The temperature limits of the bearing in continuous operation are -40°C and $+80^{\circ}\text{C}$.

Features

- Particularly quiet running
- Low body noise
- Insensitive to shock
- Bearing play can be adjusted, due to splitted bearing rings and sleeves and elastic sheath
- Great installation tolerances on adjoining parts
- Free choice of material of adjacent structure, eg: aluminium.
Due to splitted bearing rings, no difficulties from differential expansion.
- Resistant to corrosion (due to choice of bearing ring material)
- Little maintenance required
- High static and dynamic strength
- Long service life
- Low bearing weight



Example of order:

Sleeve whisper bearing type HFXD 150

Designation :

Quantity :

SLIM-SPLIT-BEARING

Sleeve whisper bearing type series HFXD (preferred series)

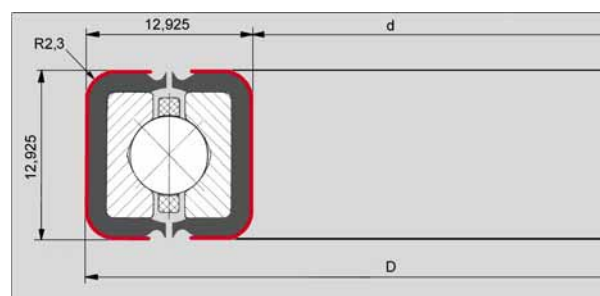
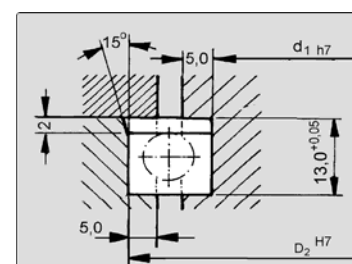


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension		Fitted dimensions		Load capacity		Weight Kg
	d	D	D ₁	D ₂	dynamic C _a [kN]	static C _{0a} [kN]	
HFXD 070	174,4	200,25	174,4	200,10	12,5	43,0	0,35
HFXD 075	187,1	212,95	187,1	212,80	13,0	46,5	0,38
HFXD 080	199,8	225,65	199,8	225,50	13,5	49,0	0,40
HFXD 085	212,5	238,35	212,5	238,20	13,8	51,8	0,43
HFXD 090	225,2	251,05	225,2	249,90	14,0	54,7	0,45
HFXD 095	237,9	263,75	237,9	263,60	14,3	57,7	0,48
HFXD 100	250,6	276,45	250,6	276,30	14,5	60,5	0,50
HFXD 105	263,3	289,15	263,3	289,00	14,7	63,5	0,53
HFXD 110	276,0	301,85	276,0	301,70	14,8	66,2	0,55
HFXD 115	288,7	314,55	288,7	314,40	15,0	69,5	0,58
HFXD 120	301,4	327,25	301,4	327,10	15,3	72,2	0,60
HFXD 130	326,8	352,65	326,8	352,50	15,6	78,0	0,65
HFXD 140	352,2	378,05	352,2	377,90	16,0	84,0	0,70
HFXD 150	377,6	403,45	377,6	403,30	16,1	89,7	0,75
HFXD 160	403,0	428,85	403,0	428,70	16,5	95,7	0,80
HFXD 170	428,4	454,25	428,4	454,10	16,7	101,4	0,85
HFXD 180	453,8	479,65	453,8	479,50	16,8	107,2	0,90
HFXD 190	479,2	505,05	479,2	504,90	17,1	113,2	0,95
HFXD 200	504,6	530,45	504,6	530,30	17,5	118,9	1,00
HFXD 210	530,0	555,85	530,0	555,70	17,9	124,7	1,05
HFXD 220	555,4	581,25	555,4	581,10	18,4	130,6	1,10
HFXD 230	580,8	606,65	580,8	606,50	18,5	136,6	1,15
HFXD 240	606,2	632,05	606,2	631,90	18,9	142,4	1,20
HFXD 250	631,6	657,45	631,6	657,30	19,3	148,3	1,25
HFXD 260	657,0	682,85	657,0	682,70	19,7	154,1	1,30
HFXD 300	758,6	784,45	758,6	784,30	20,7	177,3	1,50

1) Other dimensions on request



Fitted dimensions

Slim bearing - bearing assembly



Type series PBDV



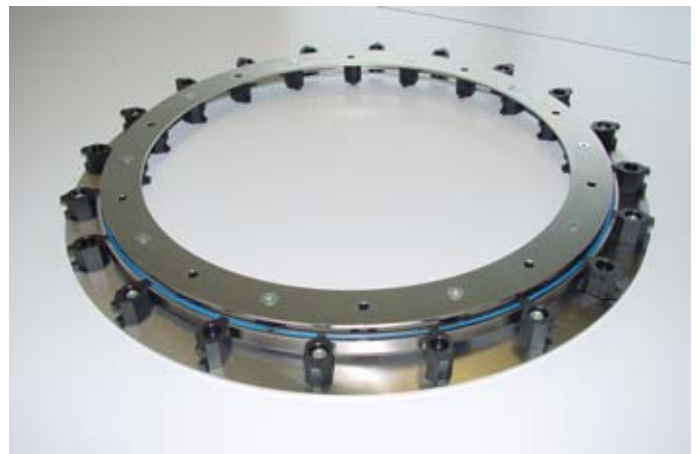
Description of construction

The KMF slim bearing - bearing assembly PBDV is based on an KMF slim bearing series PBXC, a flanged inner ring and a flanged outer ring, which are combined to a bearing assembly by using adjusting elements.

The slim bearing - bearing assembly is completely corrosion resistant.

Features

- Free choice of material for adjoining structure, eg: aluminium.
Due to the splitted bearing rings, no difficulties from differential expansion
- Resistant to corrosion
(due to choice of material of the slewing rim)
- Little maintenance required
- High static and dynamic strength
- Long service life
- Low bearing weight
- Easy to fit
- Economical
due to optimum price / performance ratio
- Short delivery period,
also for intermediate sizes
outside the preferred series



Materials

Slim bearing PBXC	Bearing rings corrosion resistant hardened steel Balls corrosion resistant hardened steel Ball cage of polyamide 12 plastic
Flanged rings (inner and outer)	corrosion resistant steel
Adjusting elements	high-strength plastic

Slim bearing – bearing assembly

Type series PBDV (preferred series)

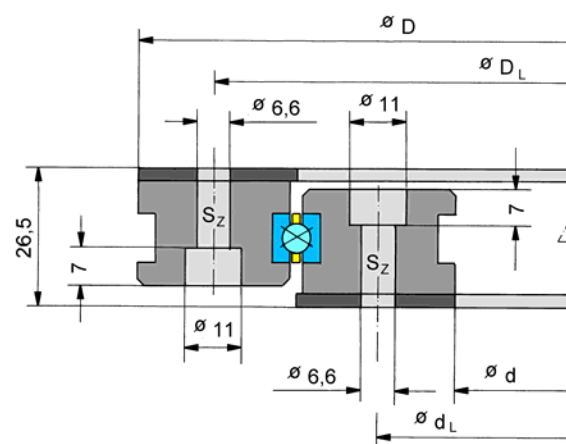


Table of dimensions [Dimensions in mm]

KMF-type 1)	Bearing dimension				Number of bore S_z	Weight kg	Load capacity	
	d	D	d_L	D_L			dyn. C_A [kN]	stat. C_{OA} [kN]
PBDV 100	201	326	231	296	8	1,6	19,0	100,1
PBDV 150	328	453	358	423	10	2,5	22,0	148,4
PBDV 200	455	580	485	550	12	3,4	24,4	196,7
PBDV 250	582	707	612	677	16	4,4	26,5	244,9
PBDV 300	709	834	739	804	20	5,3	28,3	293,2
PBDV 350	836	961	866	931	24	6,4	30,6	341,3

1) Other dimensions on request

Temperature

The temperature limit of the bearing assembly in the standard version in continuous operation are -40°C and $+100^{\circ}\text{C}$, in short-term operation the upper limit is $+120^{\circ}\text{C}$.

For higher operation temperature is a compatible ballcage in PTFE available.

Example of order:

Slim bearing – bearing assembly with outer diameter $D = 580$ mm

Designation: PBDV 200 Quantity: 10 off

Slim-split-bearing

Accessoires sealing profiles



Sealing:

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 **yardgoods** 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 displacement when join the interfaces.

The standard material of the sealing profile is NBR 70 (Shore hardness of 70), which has proved successful due to its resistance to oil and grease and its good resistance to wear. The sealing profiles can be used at working temperatures of -40°C to +80°C.

Sealing profile (selection)							
Profile crossection		Abbr.	Required space (guide)		Diameter range D		Characteristics
axial seal	radial seal		a	b	axial	radial	
		S8	7	17	$\geq \varnothing 400$	$\geq \varnothing 400$	Robust seal increased friction
		S4	5	13	$\geq \varnothing 200$	$\geq \varnothing 200$	Normal seal low friction
		S5	11	9	$\geq \varnothing 400$	$\geq \varnothing 400$	Protected bearing gap seal
		S7	7	5	$\geq \varnothing 200$	$\geq \varnothing 200$	Protected bearing gap seal low space requirement
		S6	9	10		$\geq \varnothing 200$	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	$\geq \varnothing 200$	$\geq \varnothing 200$	Static seal

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