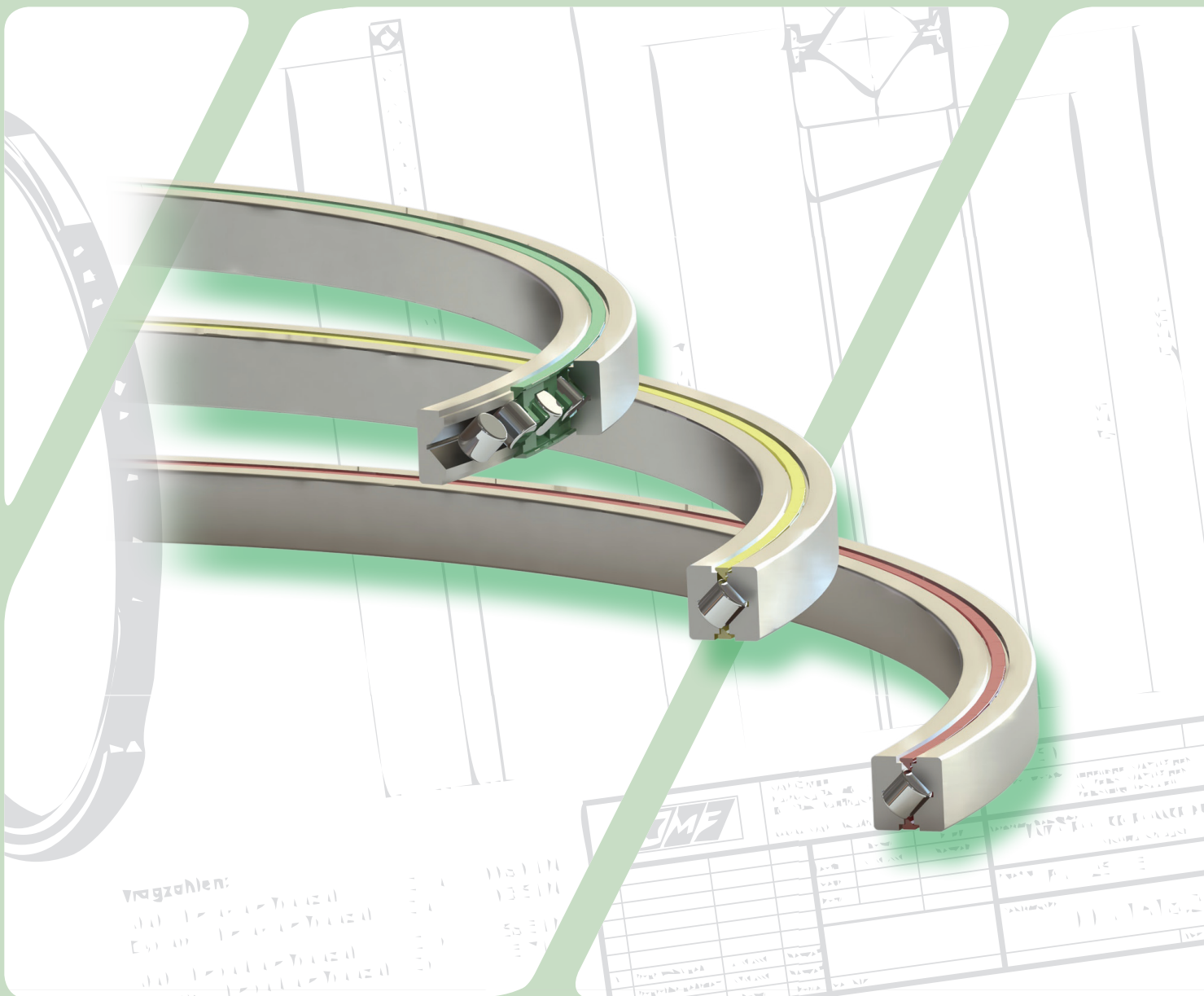


Crossed roller bearing PSX-08



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 supplied within short terms as well.

Materials

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

Operating conditions

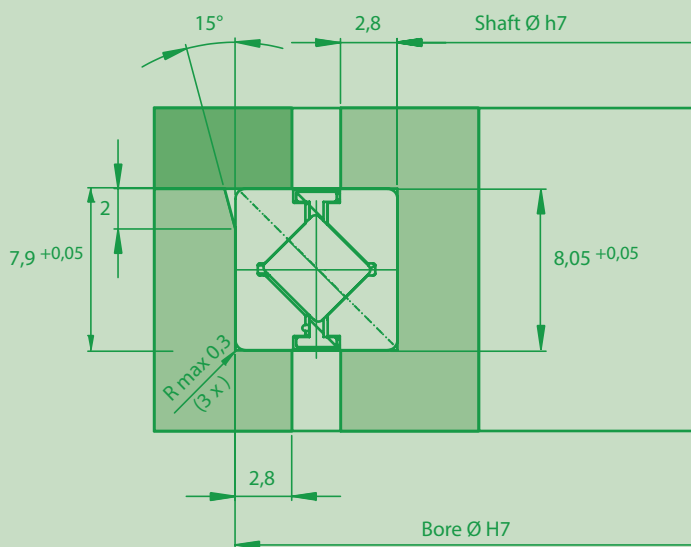
The temperature limits of the standard bearing in continuous operation are -40°C and $+100^{\circ}\text{C}$, for short periods up to $+120^{\circ}\text{C}$.

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 stiffness (low deformation)
- Low Mass
- Easy to install
- Dimensions beneath preferred series can be supplied within short terms

CROSSED-ROLLER-SLIM-SPLIT-BEARING

Fitted dimensions



Bearing dimensions

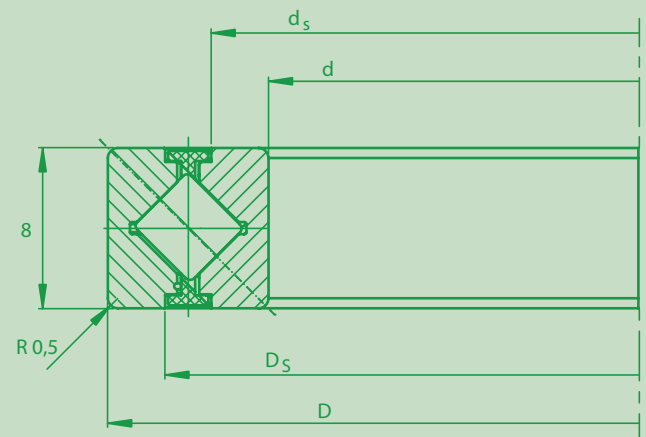


Table of dimensions (Type series PSX-08)

KMF-Type ¹⁾	Bearing dimension				Mass kg	Basic load ratings				Limiting speeds	
	d mm	D mm	d _s mm	D _s mm		Axial		Radial		Bearing play n _{Gfett} min ⁻¹	Pre- load n _{Ggrease} min ⁻¹
						Dyn.	Stat.	Dyn.	Stat.		
						C _a kN	C _{oa} kN	C _r ²⁾ kN	C _{or} ²⁾ kN		
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	
	d	D	d _s	D _s		Axial		Radial		Bearing play	Pre-load
						Dyn.	Stat.	Dyn.	Stat.		
	C _a	C _{oa}	C _r ²⁾	C _{or} ²⁾		n _{Gfett}	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