



WK-axial Tilting Pads

Thrust bearings with the proven conventional WK axial tilting pads are used in mechanical engineering where high static and dynamic loads have to be absorbed.

They are alternative of our WD-sliding components with the disk spring support and our WA-sliding components, which are supported by a spherical surface on the back.

The WK-axial tilting pads are burned out from low-carbon steel (such as St 37.2) and lined with white metal. Depending on the application, GTW 89 with high tin content or lead-based GTW V6 are used as the bearing metal. The spherical pressure plate is placed on the back of the axial tilting pad consisting of the highly tempered steel.



The axial tilting segment with the spherical pressure plate is supported directly on the thrust plate. The thrust plate, also made from the highly tempered steel, is attached on the bottom of the thrust bearing too.

The support of the axial tilting pads on the spherical surface guarantees an all-round tilting movement and, therefore, the bearing's perfect hydrodynamic functionality.

The main application for the WK thrust bearings is in vertical roller mill gears and systems with similarly high loads. In practice, specific compressions of up to 5 N/mm^2 occur. Intermittent loads of up to 20 N/mm^2 are permitted.

Upon request, the axial tilting pads can be provided with temperature sensor holes or with connection holes and pockets for the hydrostatic jacking.

Benefits from use of the WK axial tilting pads:

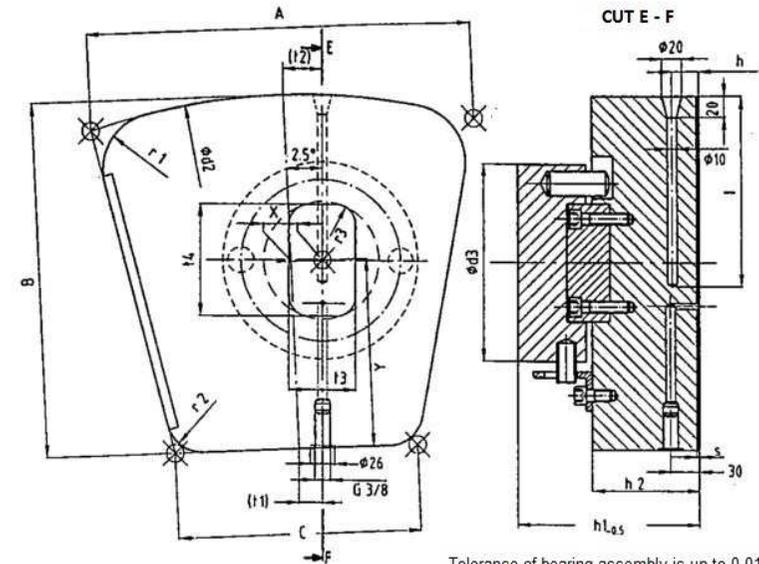
Due to the all-round tiltability, the axial tilting pads can balance of possible taper ratio of the track wheel. The thickness of the tilting pads has been selected so that their deformations are within permissible limits even at maximum loads. The off-centre support of the WK axial tilting pads limits the rotation at only one direction and it results in greater lubrication coating thicknesses and better heat dissipation. A larger lubricating gap on the oil inlet edge allows more oil to flow into it, which also results in an improved heat dissipation.

Considering many parameters, all technically relevant data are determined by the EDP calculations performed at the project stage and are made available to the user. The steel plate to be used in manufacturing is inspected by our quality department at a supplier's location and only then, it is burned into segments. Inspection reports according to EN 10204 can also be provided in case of the steel support body and bearing metal.

Large purchasing quantities of steel and bearing metal for the batch production of these axial tilting segments result in favourable purchasing costs and short lead times.

Uses of new production methods, continuous CNC machining and strict inter-operational and final inspections consistently guarantee the highest quality of our deliveries.

Dimensions of the WK-axial tilting pads



Tolerance of bearing assembly is up to 0,01 mm

Tolerance within a bearing determined and after delivery to the customer

Segment size	A	B	C	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4$	h_1	h_2	r_1	r_2	r_3	I_1	I_5	I_7	I_8
90	99	90	62,5	340	67	6,6	63	32	14	9		10,6	53		
100	110	100	69,5	378	71	6,6	67	35	16	10		11,3	57		
110	121	110	76,5	416	75	6,6	74	40	18	11		12,2	61		
125	137	125	87	472	90	9	79	40	20	12		14,5	72		
140	154	140	97	530	95	9	87	45	22	14		15,6	77		
160	176	160	111,5	605	102	9	92	50	25	16		18,7	84		
180	198	180	126	680	118	11	107	60	28	18		20,3	96		
200	220	200	139	756	127	11	114	65	32	20		22,8	105		
225	247	225	156,5	850	136	11	124	75	36	22		26	114		
250	274	250	175	945	156	14	135	80	40	25		28	128		
280	307	280	195	1060	166	14	149	90	45	28		31,3	138		
320	351	320	223	1210	178	14	166	100	50	32	20	36,5	150	102	60
360	395	360	251,5	1360	201	18	186	110	56	36	20	41,5	165	114	70
400	439	400	278	1512	224	18	208	125	64	40	20	45,2	188	120	80
450	494	450	314	1700	246	24	232	140	70	45	20	51,1	210	136	100
500	549	500	349	1890	266	28	262	160	80	50	20	62,2	230	160	95
560	615	560	390	2120	286	29	293	180	90	56	30	64,33	250	164	112
630	692	630	438	2380	311	25	326	200	100	63	40	78	275	200	125