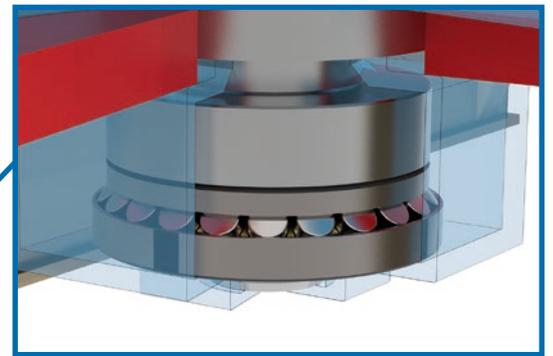
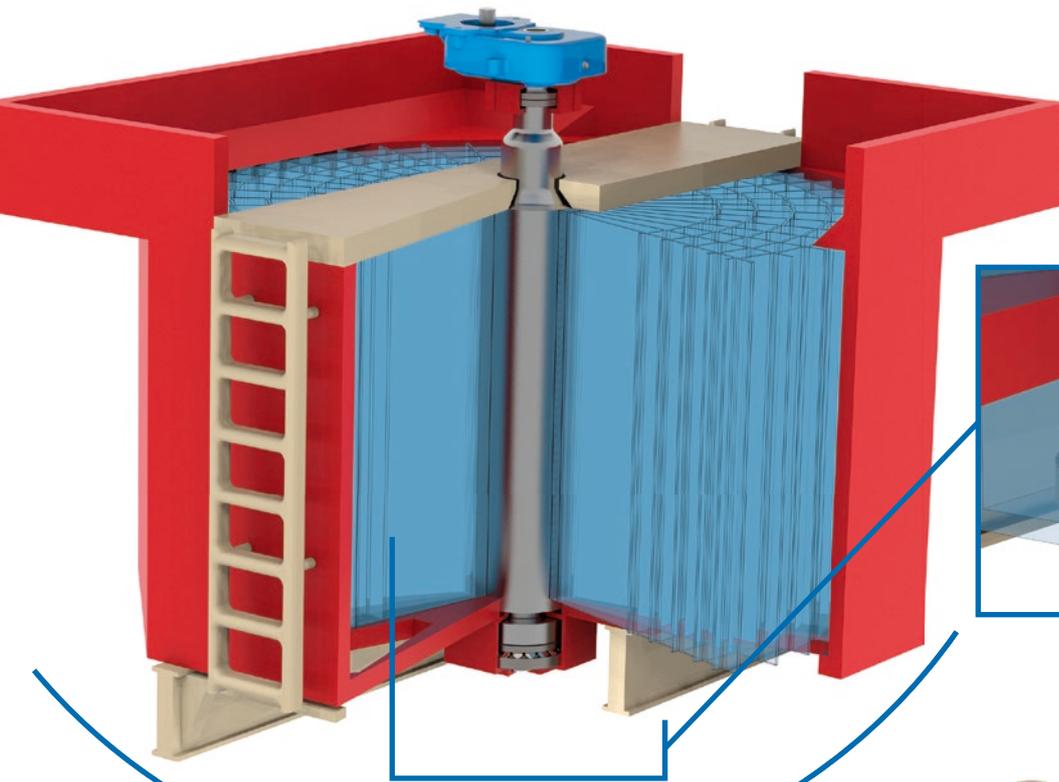


ZKL bearings for air pre-heaters



ZKL GROUP

Air pre-heaters are very often used in thermal power stations for heating the air coming from the waste heat. Thanks to the air pre-heaters these electrical stations have a better efficiency and can achieve higher performances. The working conditions of air-preheaters are very demanding and therefore the installed bearings may be exposed to various types of wearing such as corrosion or abrasion. In addition, the pre-heaters work with a high temperature fluctuation which also increases the bearing's technical requirements. ZKL produces large-size thrust spherical roller bearings for the rotors of air pre-heaters which can bear both high thrust as well as radial loads.



Thrust spherical roller bearings

Thrust spherical roller bearings are specific types of bearings that can bear both very high thrust (one way) as well as radial loads. ZKL produces thrust spherical roller bearings in the New Force standard which means the bearings have an optimized internal geometry. The benefits for the customers are increased bearing performances (especially dynamic and static load rates) which lead to a longer bearing's life.

One of the biggest advantages of all spherical bearings is their capacity to work even with a certain misalignment. ZKL thrust spherical roller bearings of the 294 series can handle an angle of misalignment up to 3 °. This gives the shafts enough freedom to balance any inaccuracies in the machine assembly and to ensure a correct operation of the application for all load modes. Another benefit for the customers is the bearing's thermal stability. All thrust spherical roller bearings can be exposed to the temperatures reaching up to 200 °C for a long period of time. ZKL produces large size thrust spherical roller bearings, as well as smaller ones. Typical applications for the use of this type of bearings are e.g. hooks, air-preheaters, conveying screws.

Thrust spherical roller bearings for air-preheaters	Bearing dimensions				Load ratings		Reference speed for oil lubrication
	Inner diameter	Outer diameter	Width	Mass	Dynamic	Static	
	d [mm]	D [mm]	B [mm]	m [kg]	C _r [kN]	C _{0r} [kN]	n [min ⁻¹]
29488EM NF	440	780	206	402	8 550	30 800	380
294/560EM NF	560	980	250	756	13 000	48 800	300
294/670EM NF	670	1 150	290	1 200	16 500	65 000	240
294/800EM NF	800	1 360	335	1 920	22 000	90 200	190
294/850EM NF	850	1 440	354	2 260	25 500	107 000	170
294/900EM NF	900	1 520	372	2 650	28 000	119 000	160
294/950EM NF	950	1 600	390	3 030	28 900	132 000	140

Bearings listed above are the most commonly used ones in such application. Other ZKL thrust spherical roller bearings are listed in on-line catalogue on our website www.zkl.eu.

