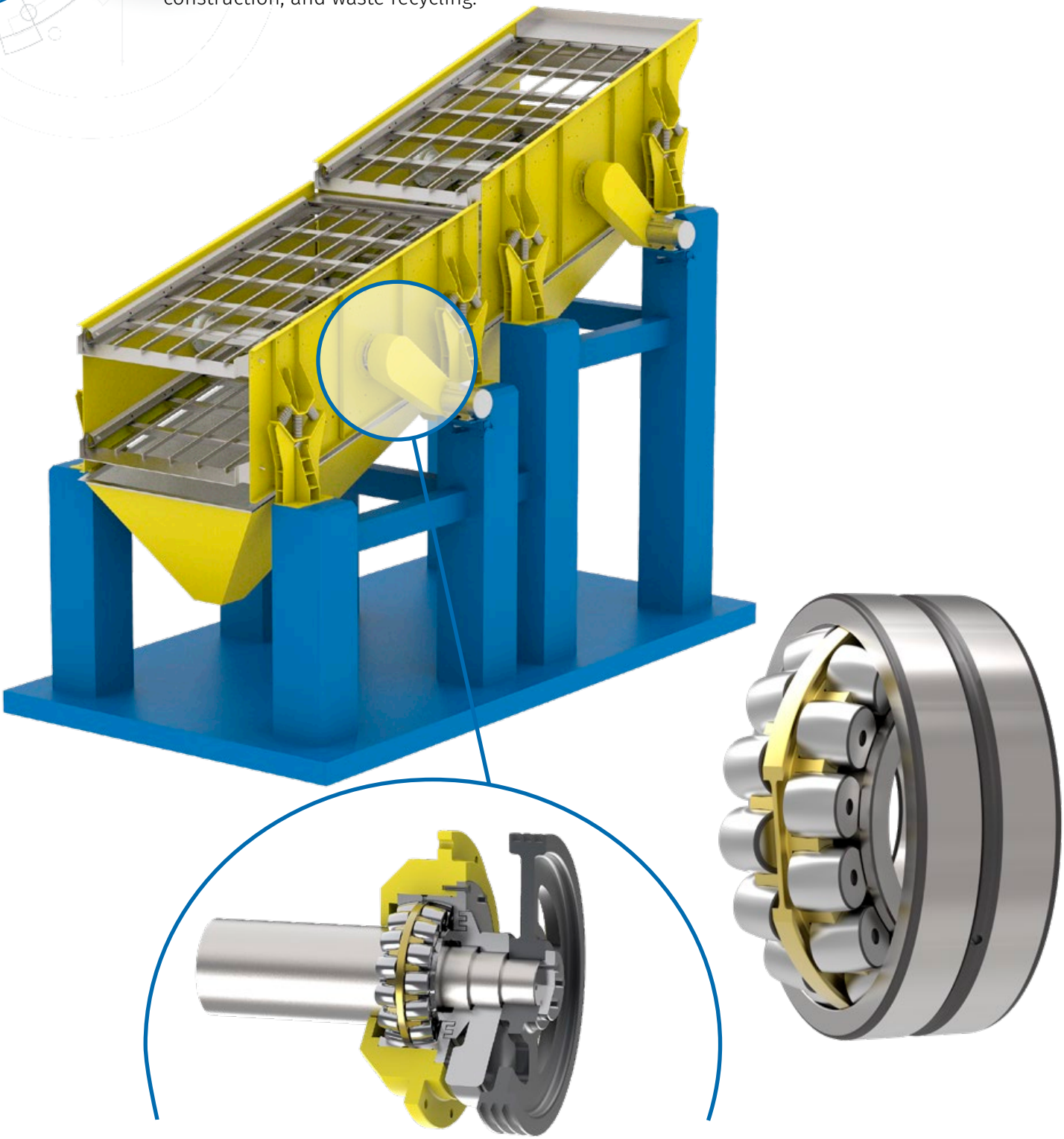
ZKL bearings for vibrating screens

ZKL GROUP

Vibrating screens are devices used for sorting and separating various materials according to their particle size. Using vibrations, the material moves across the screen surface. Finer particles fall through the screen, while coarser particles move down the screen and return, for example, to the crushing phase. Vibrating screens are used in various industrial sectors, such as mining, construction, and waste recycling.



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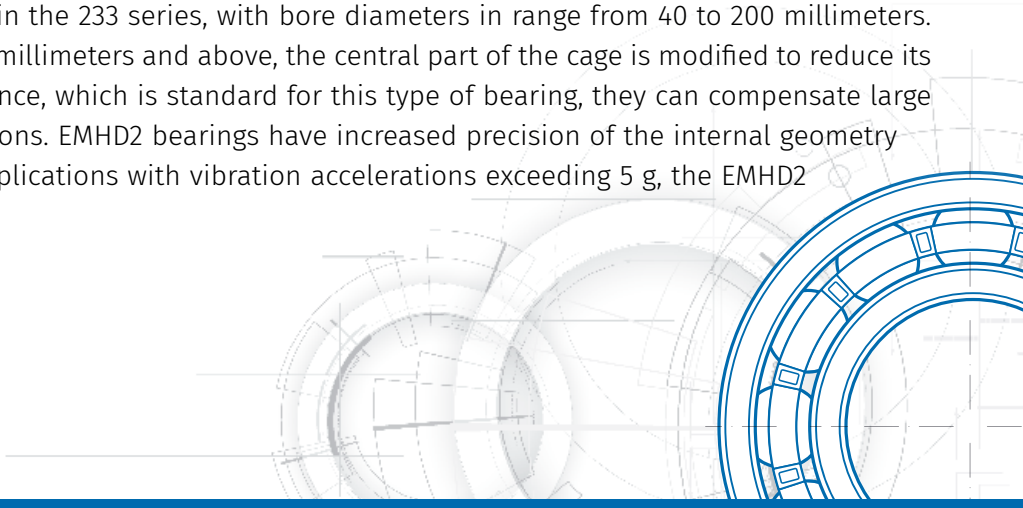
The vibrations are usually generated by an eccentrically unbalanced shaft, which causes a circular or elliptical oscillatory motion of the entire screener. Bearings must therefore withstand rotating loads, high vibrations, elevated temperatures, and typically also dusty environment. These demanding conditions require very high-quality bearings with specific properties. For this reason, ZKL has developed a special type of double-row spherical roller bearings for vibrating applications, designated with the suffix EMHD2.

Spherical roller bearings for vibrating screens

	Bearing dimensions			Load ratings		Mass
	Inner diameter	Outer diameter	Width	Dynamic	Static	
	d [mm]	D [mm]	B [mm]	Cr [kN]	COr [kN]	m [kg]
22309EMHD2 NF	45	100	36	184	194	1,5
22312EMHD2 NF	60	130	46	304	315	3
22314EMHD2 NF	70	150	51	376	402	4,4
22320EMHD2 NF	100	215	73	750	842	12,8
22322EMHD2 NF	110	240	80	868	1000	17,7
22326EMHD2 NF	130	280	93	1180	1380	27,7
22330EMHD2 NF	150	320	108	1520	1850	41,9
22336EMHD2 NF	180	380	126	1950	1530	66,8

The bearings listed above are the most used ones for such application. To get more information regarding the entire production range of ZKL's spherical roller bearings contact your local sales representative.

Double-row spherical roller bearings EMHD2 have all advantages of standard spherical roller bearings. They can bear large radial and axial loads and they are able to eliminate shaft deflection. Unlike conventional spherical roller bearings, they have a single-piece brass cage guided on the outer ring. Almost all EMHD2 bearings are of the 223 series, with some exceptions in the 233 series, with bore diameters in range from 40 to 200 millimeters. For bearings with bore diameters 100 millimeters and above, the central part of the cage is modified to reduce its weight. Thanks to the C4 radial clearance, which is standard for this type of bearing, they can compensate large thermal expansions caused by vibrations. EMHD2 bearings have increased precision of the internal geometry and inner and outer diameters. In applications with vibration accelerations exceeding 5 g, the EMHD2 design is irreplaceable.



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