

Title (en)

RADIAL ANTI FRICTION BEARING, IN PARTICULAR A SINGLE-ROW SPHERICAL ROLLER BEARING

Title (de)

RADIALWÄLZLAGER, INSBESONDERE EINREIHIGES KUGELROLLENLAGER

Title (fr)

PALIER À ROULEMENT RADIAL, EN PARTICULIER ROULEMENT À ROULEAUX SPHÉRIQUE À RANGÉE SIMPLE

Publication

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Application

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Abstract (en)

[origin: WO2007121710A1] The invention relates to a radial anti friction bearing (1) which is configured as a single-row spherical roller bearing, which comprises an outer bearing ring (2), an inner bearing ring (3) and a plurality of spherical rollers (5) that are arranged between said bearing rings (2, 3). Said spherical rollers have respectively two side faces (6, 7) which are flattened symmetrically from a spherical base shape, are retained with uniform spacing to each other by means of a bearing cage (4) and roll with their running faces (8) in two groove-shaped raceways (11, 12) which are defined, respectively, by two axial rims (13, 14 and 15, 16). The width ( $b_{SUB>?</SUB>}$ ) of the spherical rollers (5) between their side faces (6, 7) is smaller than the distance ( $a_{SUB>B</SUB>}$ ) between the radially opposite axial rims (13, 15 and 14, 16), such that the spherical rollers (5) can be used at said distance ( $a_{SUB>?</SUB>}$ ) in the axial mounting method in the radial anti friction bearing. According to the invention, the radial anti friction bearing (1) has an increased axial load capacity suitable for variable axial loads at a operational pressure angle ( $\alpha$ ) of up to 20° on both sides of the bearing longitudinal axis (17), in which the raceways (11, 12) in both bearing grooves (2, 3) are formed with an increased depth ( $t_{SUB>LA</SUB>}$ ,  $t_{SUB>L?</SUB>}$ ) and width ( $b_{SUB>LA</SUB>}$ ,  $b_{SUB>L?</SUB>}$ ) and the spherical rollers (5) have a width ( $b_{SUB>?</SUB>}$ ) between their side surfaces (6, 7) which is harmonised to the operational pressure angle ( $\alpha$ ) at 20°.

IPC 8 full level

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