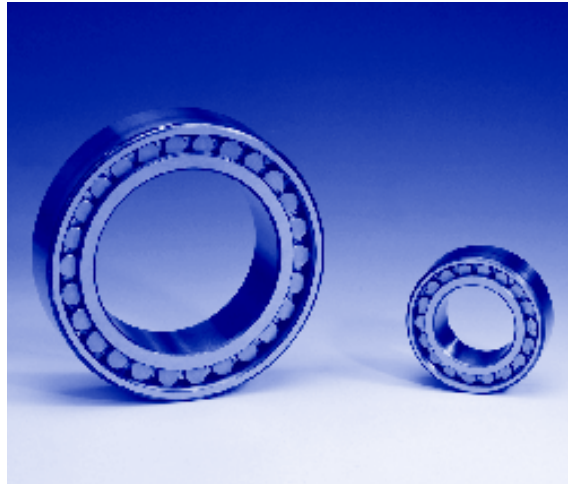


Double Row Cylindrical Roller Bearings



Double row cylindrical roller bearings in NN design have two rows of cylindrical rollers guided by three ribs on inner ring. The outer ring is without ribs, that is why these bearings cannot carry axial forces. Double row cylindrical roller bearings - type NN30K are commonly produced with tapered bore, taper 1:12 (K). These bearings can be also delivered with cylindrical bore (must be agreed in advance). Double row cylindrical roller bearings are significant for their great rigidity and are predominately used for spindle arrangements of machine tools and similar equipment. Double row cylindrical roller bearings - type NNU49 have three guiding ribs on outer ring and smooth inner ring. Bearings can carry only radial loads. Bearings - type NNU4920 and NNU4924 are also delivered matched in pairs according to the technical conditions TPF 11322-80. In this way matched bearing pairs fulfil in the arrangement the role of four-row cylindrical roller bearings and are suitable for arrangement of rolls in rolling mills, etc.

Boundary Dimensions

Boundary dimensions comply with the standard ISO 15 and are shown in the dimension tables of this publication.

Designation

Bearing designation in standard design is in the dimension tables of this publication.

Difference from standard design is designated by additional symbols according to ISO 02 4608 (section 2.2).

Lubrication Groove and Holes on Outer Ring

All sizes of double row cylindrical roller bearings with tapered bore - type NN30K can be delivered with groove and lubrication holes on outer ring (W33). This bearing design allows the introduction of the lubricant directly into the bearing between two cylindrical roller rows. In this way better bearing lubrication and higher operating reliability are reached.

Cages

Cylindrical roller bearings are commonly produced with a machined brass cage which is usually not designated. Bearings type NNU49 are produced with machined brass cage (M) which is designated.

Tolerance

Cylindrical roller bearings with tapered bore are produced only in higher tolerance classes P5 and P4. Limiting values for dimension and operation accuracy for tolerance classes P5 and P4 are in tables 12 and 13.

Bearings NNU49 and NN39 are produced in normal tolerance class. Bearing delivery in tolerance class P6 should be agreed with the supplier in advance.

Radial Clearance

Cylindrical roller bearings with a tapered bore are produced with reduced radial clearance and with mutually non-interchangeable rings C1NA and C2NA. Symbols C1NA and C2NA are connected with tolerance class symbols P5 and P4, e.g. P5 + C1NA is designated P51NA. Values of radial clearance are shown in table 25. Bearings - type NNU49 are produced with normal radial clearance. Bearings delivery with radial clearance greater than C3 should be discussed with the supplier.

Misalignment

Double row cylindrical roller bearings are not suitable for arrangements where alignment of inner and outer bearing rings is not secured.

Radial Equivalent Dynamic Load

$$P_r = F_r \quad [\text{kN}]$$

Radial Equivalent Static Load

$$P_{or} = F_r \quad [\text{kN}]$$



