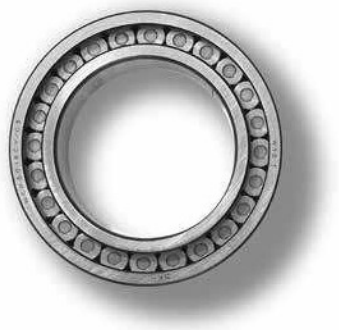


Cylindrical roller bearings

N 310 EC M / C3 V W23B

1 2 3 4 5 6

1. Basic design:

N	Two integral flanges on inner ring, flangeless outer ring
NU	Two integral flanges on outer ring, flangeless inner ring
NJ	One flange on inner ring, two flanges on outer ring
NUP	Two integral flanges on outer ring, one integral flange on inner ring and one loose flange on inner ring
NCF	Full complement, two flanges on inner ring, one flange on outer ring, with snap ring
NJG	Full complement with one flange on inner ring, and two flanges on outer ring
NNCF	Two-row, full complement, three flanges on inner ring, one flange on outer ring, with snap ring
NNF	Two-row, full complement
NNCL	Double row CRB with no outer ring integral flanges, only one centrally located snap ring
NNC	Double row CRB with one outer ring integral flange and one flange ring
HJ	Angle ring
L	Separate inner or outer ring of a separable bearing
R	Inner or outer ring with roller and cage assembly of a separable bearing

2. Internal design:

EC	Increased capacity plus improved roller end to flange contact
CV	Modified internal design, full complement roller set

3. Cage designs:

M	Two piece machined brass cage, rolling element guided
MA	Two piece machined brass cage, outer ring flange guided
MB	Machined brass cage, inner ring flange guided
ML/MP	One piece window-type brass cage, inner or outer ring centered
M2	Solid brass drilled cage, roller guided for traction motor bearings
HB1	Bainite hardened inner and outer ring
J	Pressed steel cage, rolling element guided
P	Molded glass fiber reinforced polyamide 6.6 cage, roller centered
PHA	Injection molded cage of polyetheretherketone (PEEK), outer ring centered

4. Radial internal clearance:

C1	Clearance < C2
C2	Clearance < Normal
(C0)*	Normal internal clearance
C3	Clearance > Normal
C4	Clearance > C3

* Not marked on bearing or package

5. Variations:

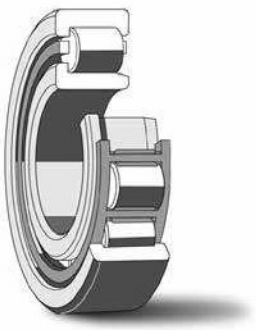
C	Surface treated rollers
CV	V + surface treated rollers
V	Full complement bearing without cage
VH	Full complement rollers (no cage), self-retaining
2LS	Two land riding contact seals

6. Special features:

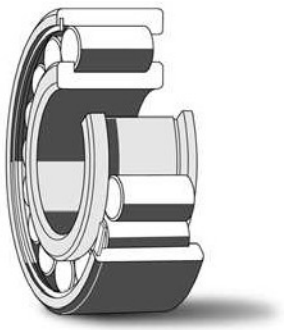
W23B	Special features for traction motor bearings
VA301	Special bearing specifications for traction motors
VL0241	INSOCOAT® coating on outer ring for electrical insulation
W64	Solid Oil lubricants

Technical features

Boundary dimensions	In accordance with ISO 15
Tolerances	ABMA RBEC 3, ISO P6 running accuracy ABMA RBEC 1, ISO Normal dimensional
Heat stabilization	302° F (150° C)
Misalignment	4 minutes of arc for series N200, 300, 400, 1000 and 1800 3 minutes of arc for series N2200, 2300, 2900 and 3000
Cage material	
Standard	Molded glass fiber reinforced polyamide (P)
Optional	Machined brass (M) and pressed steel (J)
Axial load – max	Contact SKF Applications Engineering
Seals	2LS seals on NNF series only



Single row cylindrical roller bearing
(data tables on page 138)



Full complement, single row cylindrical roller bearing
(data tables on page 146)