



Image may differ from product. See technical specification for details.

N 220 ECP

Single row cylindrical roller bearing, N design

Single row cylindrical roller bearings are designed to accommodate high radial loads in combination with high speeds. Having two integral flanges on the inner ring and no flanges on the outer ring, N design bearings can accommodate axial displacement in both

directions. An important feature is the separable design, which facilitates mounting and enables the bearing components to be interchanged.

- High radial load carrying capacity
- Low friction
- Long service life
- Accommodate axial displacement in both directions
- Separable design

Overview

Dimensions

Bore diameter	100 mm
Outside diameter	180 mm
Width	34 mm

Performance

Basic dynamic load rating	285 kN
Basic static load rating	305 kN
Reference speed	4 000 r/min
Limiting speed	4 500 r/min
SKF performance class	SKF Explorer

Properties

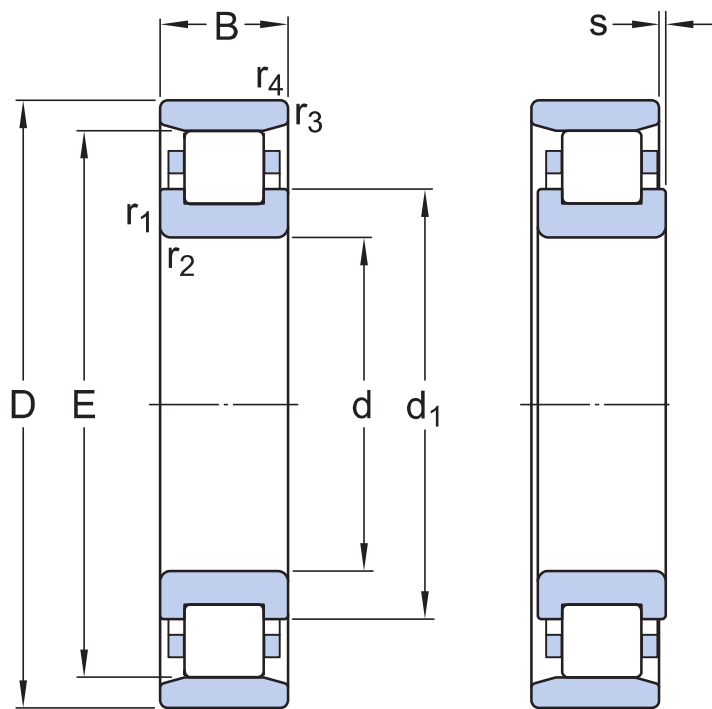
Bearing part	Complete bearing
Axial displacement capability	In both directions
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Cage	Non-metallic
Number of flanges, outer ring	0
Number of flanges, inner ring	2
Loose flange	None
Radial internal clearance	CN
Tolerance class	Normal
Coating	Without
Sealing	Without
Lubricant	None
Relubrication feature	Without

Logistics

Product net weight	3.44 kg
eClass code	23-05-09-01

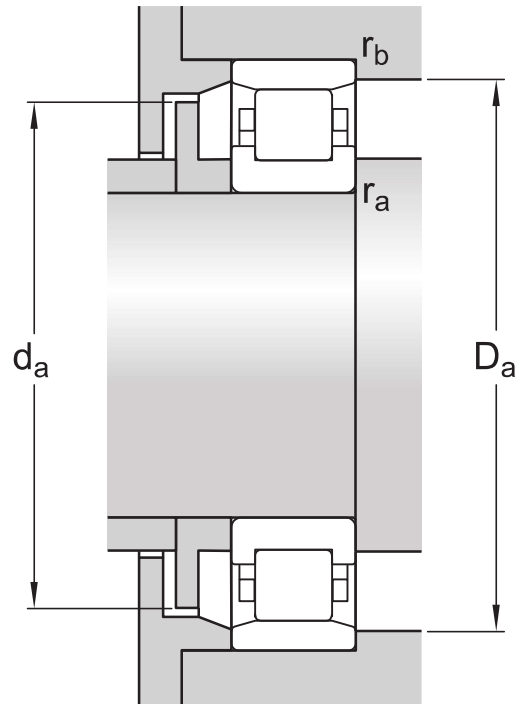
UNSPSC code	31171505
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Technical specification



Dimensions

d	100 mm	Bore diameter
D	180 mm	Outside diameter
B	34 mm	Width
d ₁	≈ 127 mm	Shoulder diameter of inner ring
E	163 mm	Raceway diameter of outer ring
r _{1,2}	min. 2.1 mm	Chamfer dimension
r _{3,4}	min. 2.1 mm	Chamfer dimension
s	max. 1.7 mm	Permissible axial displacement



Abutment dimensions

d _a	min. 113 mm	Diameter of spacer sleeve
d _a	max. 160 mm	Diameter of spacer sleeve
D _a	min. 166 mm	Diameter of housing abutment
D _a	max. 168 mm	Diameter of housing abutment
r _a	max. 2 mm	Radius of fillet
r _b	max. 2 mm	Radius of fillet

Calculation data

SKF performance class		SKF Explorer
Basic dynamic load rating	C	285 kN
Basic static load rating	C ₀	305 kN
Fatigue load limit	P _u	36.5 kN
Reference speed		4 000 r/min
Limiting speed		4 500 r/min
Minimum load factor	k _r	0.12
Limiting value	e	0.2
Calculation factor	Y	0.6

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal (metric), P6, Normal (inch)
- Radial internal clearance: cylindrical bore, tapered bore
- Axial internal clearance: NUP, NJ + HJ

BEARING INTERFACES

- [Seat tolerances for standard conditions](#)
- [Tolerances and resultant fit](#)

More Information

 Product details Designs and variants General bearing specifications Loads Temperature limits Permissible speed Design considerations Designation system	 Engineering information Principles of rolling bearing selection General bearing knowledge Bearing selection process Bearing failure and how to prevent it	 Tools SimPro Quick SKF Product select Bearing Frequency Calculator LubeSelect for SKF greases Heater selection tool Oil Injection Method Program
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