

RPNA 35/52Alignment needle roller bearings, without an inner ring

Alignment needle roller bearings, without an inner ring

Alignment needle roller bearings are self-aligning and offer a compact solution in applications where less space is available. Owing to their large number of rollers, they have a high load carrying capacity. Their internal design, where a convex outer ring meets two concave seating rings encased in a drawn sleeve, enables the bearings to accommodate initial static misalignment. Bearings without an inner ring are an excellent choice for compact bearing arrangements, if the shaft can be hardened and ground.

- High radial load carrying capacity
- Accommodate static initial misalignment
- Low cross-sectional height
- Suitable for compact bearing arrangements

Overview

Dimensions

Bore diameter of needle roller complement	35 mm
Outside diameter	52 mm
Width	20 mm

Performance

Basic dynamic load rating	24.6 kN
Basic static load rating	45 kN
Reference speed	11 000 r/min
Limiting speed	13 000 r/min

Properties

Bearing part	Bearing without inner ring
Number of rows	1
Outer ring type	Drawn cup with open ends
Aligning feature	With
Cage	Sheet steel
Number of flanges, outer ring	2
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without
Sealing	Without

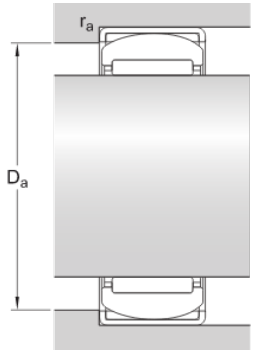
Lubricant	None
Relubrication feature	Without

Technical Specification

NOT FOUND

Dimensions

F_w	35 mm	Diameter under rollers
D	52 mm	Outside diameter
C	20 mm	Width
D_1	47.5 mm	Shoulder diameter sleeve
r	min. 0.8 mm	Chamfer dimension sheet steel sleeve



Abutment dimensions

D_a	min. 46.5 mm	Smallest permissible abutment diameter housing
D_a	max. 47.5 mm	Largest permissible abutment diameter housing
r_a	max. 0.8 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	24.6 kN
Basic static load rating	C_0	45 kN
Fatigue load limit	P_u	5.6 kN
Reference speed		11 000 r/min
Limiting speed		13 000 r/min

Mass

Mass bearing	0.13 kg

Terms and conditions

By accessing and using this website / app owned and published by AB SKF (publ.) (556007-3495 · Gothenburg) (“SKF”), you agree to the following terms and conditions:

Warranty Disclaimer and Limitation of Liability

Although every care has been taken to assure the accuracy of the information on this website / app, SKF provides this information "AS IS" and DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. You acknowledge that your use of this website / app is at your sole risk, that you assume full responsibility for all costs associated with use of this website / app, and that SKF shall not be liable for any direct, incidental, consequential, or indirect damages of any kind arising out of your access to, or use of the information or software made available on this website / app. Any warranties and representations in this website / app for SKF products or services that you purchase or use will be subject to the agreed upon terms and conditions in the contract for such product or service. Further, for non-SKF websites / apps that are referenced in our website / app or where a hyperlink appears, SKF makes no warranties concerning the accuracy or reliability of the information in these websites / apps and assumes no responsibility for material created or published by third parties contained therein. In addition, SKF does not warrant that this website / app or these other linked websites / apps are free from viruses or other harmful elements.

Third Party Services

When viewing YouTube content via the SKF website(s) (i.e. using YouTube API Services), you agree to be bound by the YouTube Terms of Service.

Copyright

Copyright in this website / app copyright of the information and software made available on this website / app rest with SKF or its licensors. All rights are reserved. All licensed material will reference the licensor that has granted SKF the right to use the material. The information and software made available on this website / app may not be reproduced, duplicated, copied, transferred, distributed, stored, modified, downloaded or otherwise exploited for any commercial use without the prior written approval of SKF. However, it may be reproduced, stored and downloaded for use by individuals without prior written approval of SKF. Under no circumstances may this information or software be supplied to third parties.
This website /app includes certain images used under license from Shutterstock, Inc.

Trademarks and Patents

All trademarks, brand names, and corporate logos displayed on the website / app are the property of SKF or its licensors, and may not be used in any way without prior written approval by SKF. All licensed trademarks published on this website / app reference the licensor that has granted SKF the right to use the trademark. Access to this website / app does not grant to the user any license under any patents owned by or licensed to SKF.

Changes

SKF reserves the right to make changes or additions to this website / app at any time.