

RPNA 20/35

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	0.787 in
Outside diameter	1.378 in
Width	0.63 in

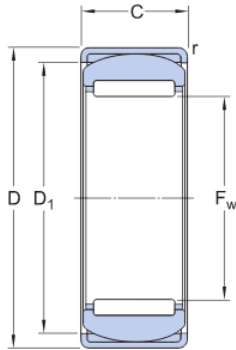
Performance

Basic dynamic load rating	2 967 lbf
Basic static load rating	4 339 lbf
Limiting speed	22 000 r/min
Reference speed	19 000 r/min

Properties

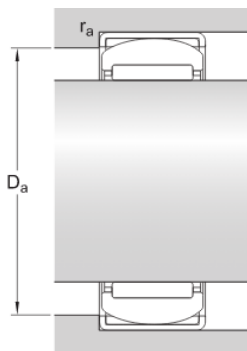
Aligning feature	With
Bearing part	Bearing without inner ring
Cage	Sheet steel
Coating	Without
Lubricant	None
Material, bearing	Bearing steel
Number of flanges, outer ring	2
Number of rows	1
Outer ring type	Drawn cup with open ends
Relubrication feature	Without
Sealing	Without
Tolerance class	Normal

Technical Specification



Dimensions

F_w	0.787 in	Diameter under rollers
D	1.378 in	Outside diameter
C	0.63 in	Width
D_1	1.201 in	Shoulder diameter sleeve
r	min. 0.031 in	Chamfer dimension sheet steel sleeve



Abutment dimensions

D_i min.	1.161 in	Smallest permissible abutment diameter housing
D_i max.	1.201 in	Largest permissible abutment diameter housing
r_a max.	0.031 in	Fillet radius

Calculation data

Basic dynamic load rating	C	2 967 lbf
Basic static load rating	C_0	4 339 lbf
Fatigue load limit	P_u	513 lbf
Reference speed		19 000 r/min
Limiting speed		22 000 r/min

Mass

Mass bearing

0.137 lb

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.

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.