Super-precision angular contact ball bearings: 718 (*SEA*) series



Enhance performance with the new generation SKF-SNFA compact 718 (*SEA*) series

SKF-SNFA super-precision angular contact ball bearings in the 718 (*SEA*) series provide optimum performance in applications where there is a need for low cross section, high degree of rigidity, speed and superior accuracy. They are particularly suitable for machine tool applications, multi spindle drilling heads, robotic arms, measuring devices, racing car wheels and other precision applications.

The assortment in the 718 (*SEA*) series is available, standard, as all-steel bearings and hybrid bearings.

Applications
- Machine tools
- Robotics
- Printing
- Measuring systems
- Racing car wheels

Requirements
- High positioning accuracy
- Reliable positioning repeatability
- Low energy consumption
- Long service life
- Easy mounting
- Increased machine uptime
- High power density for compact designs



Unique choice of preloads:

To balance the need for rotational speed and system rigidity, bearings in the 718 (*SEA*) series are produced to different preload classes.

In applications where a high degree of system rigidity is more important than high speed, the following preload classes are available:

- class A, light preload
- class B, moderate preload
- class C, heavy preload

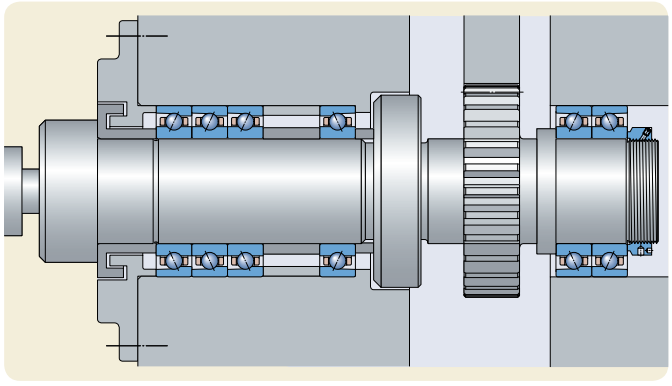
In applications where high speed is more important than a high degree of system rigidity, the following additional preload classes are available:

- class L, reduced light preload for asymmetrical bearing sets
- class M, reduced moderate preload for asymmetrical bearing sets
- class F, reduced heavy preload for asymmetrical bearing sets

These preload classes are only available for matched, asymmetrical bearing sets such as TBT (*TD*), TFT (*TF*), QBT (*3TD*) and QFT (*3TF*) arrangements.

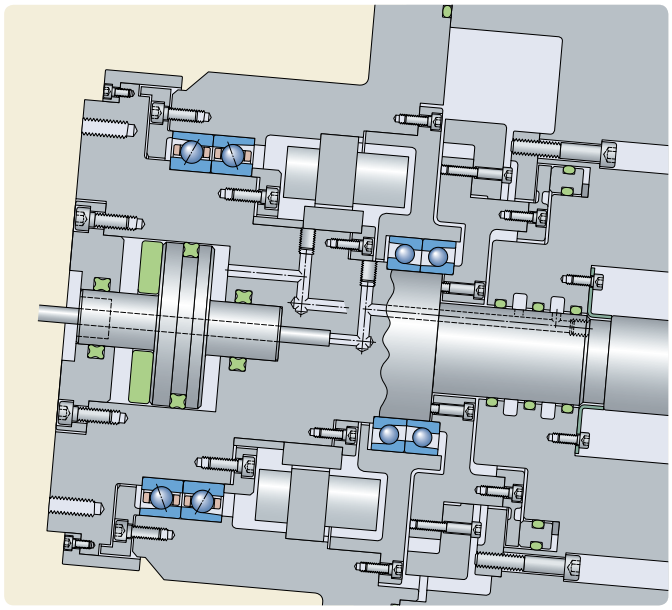
Benefits

- Optimized corner radii of the rings simplifies mounting, improves mounting accuracy and reduces the risk of damage to associated components
- Higher speed capability
- Extended product range
- Unique heat treatment process provides maximum dimensional stability and hardness to reduce wear
- Different preload classes available to match the application requirements for speed and system rigidity

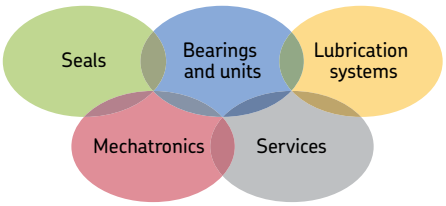


Application example: Multispindle drilling head
For multispindle drilling heads, where radial space is limited and axial rigidity is very important, super-precision angular contact ball bearings matched in a set of four bearings (arranged back-to-back and tandem), e.g. 71802 ACD/P4QBTA (SEA15 7CE3 3TD27,2DaN), incorporating a set of precision-matched spacer rings, can be used.





Application example: Grinding workhead
In a grinding workhead, where rigidity is important and available space limited, a set of two super-precision angular contact ball bearings, e.g. 71824 ACD/P4DBB (SEA120 7CE3 DDM) (left), are suitable.



The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over more than 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide. These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems. A global presence provides SKF customers uniform quality standards and worldwide product availability.

® SKF and SNFA are registered trademarks of the SKF Group.

© SKF Group 2008
The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirectw or consequential arising out of the use of the information contained herein.

Publication **6865 EN** · November 2008

Printed in Sweden on environmentally friendly paper.