

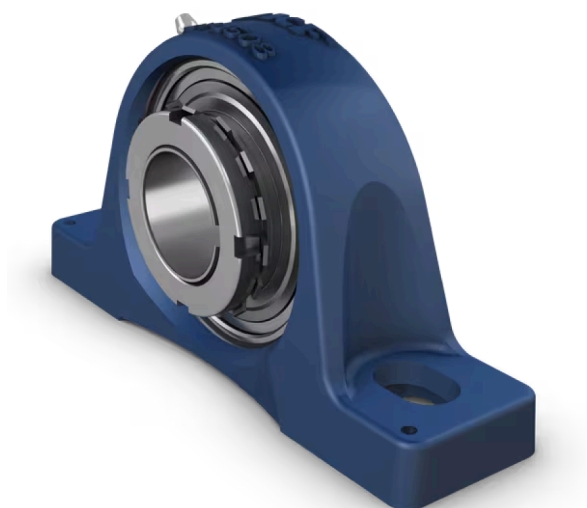


Image may differ from product. See technical specification for details.

SYJ 45 KF

Pillow block ball bearing unit with adapter sleeve locking, cast iron, Japanese standards

Pillow (plummer) block ball bearing units consist of an insert bearing mounted in a cast iron housing that can be bolted to a support surface. This variant is suitable for applications with both constant and alternating directions of rotation. It is locked with an adapter

sleeve, enabling quick and easy mounting onto the shaft. Adapter sleeve needs to be ordered separately.

- Strong
- Ready to mount
- Designed for a constant and alternating rotation
- Lubricated and sealed bearing
- Quick locking onto the shaft
- Cost-effective

Overview

Dimensions

Attachment bolt diameter	14 mm
Shaft diameter	40 mm
Centre height (pillow block)	54 mm
Housing overall width	52 mm
Centre distance between bolt holes	143.5 mm
Bearing width, total	34.9 mm

Performance

Basic dynamic load rating	33.2 kN
Basic static load rating	21.6 kN
Limiting speed	4 300 r/min

Properties

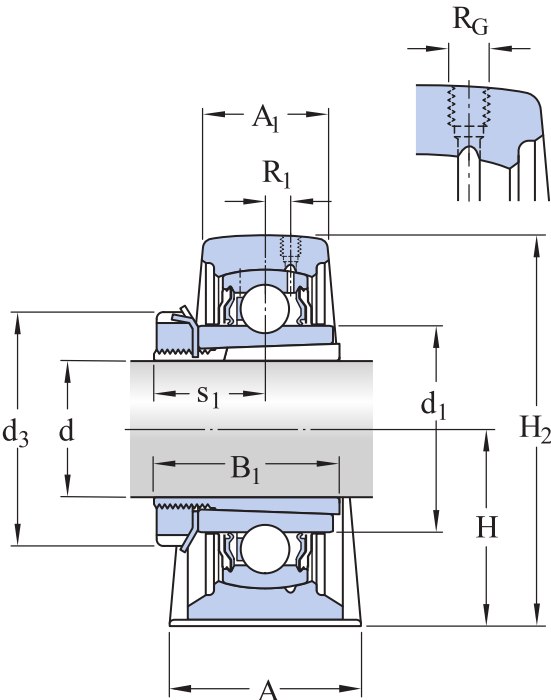
Associated mounting tool	HN 9
Housing type	Pillow block
Number of bolt holes for fasteners	2
Fastening bolt hole type	Plain
Retaining feature, inner ring	Adapter sleeve
Bore type	Tapered
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing	Seal and flinger on both sides
Sealing type	Contact, standard
Sealing, unit	Without
Lubricant	Grease
Relubrication hole	With
Grease fitting	With

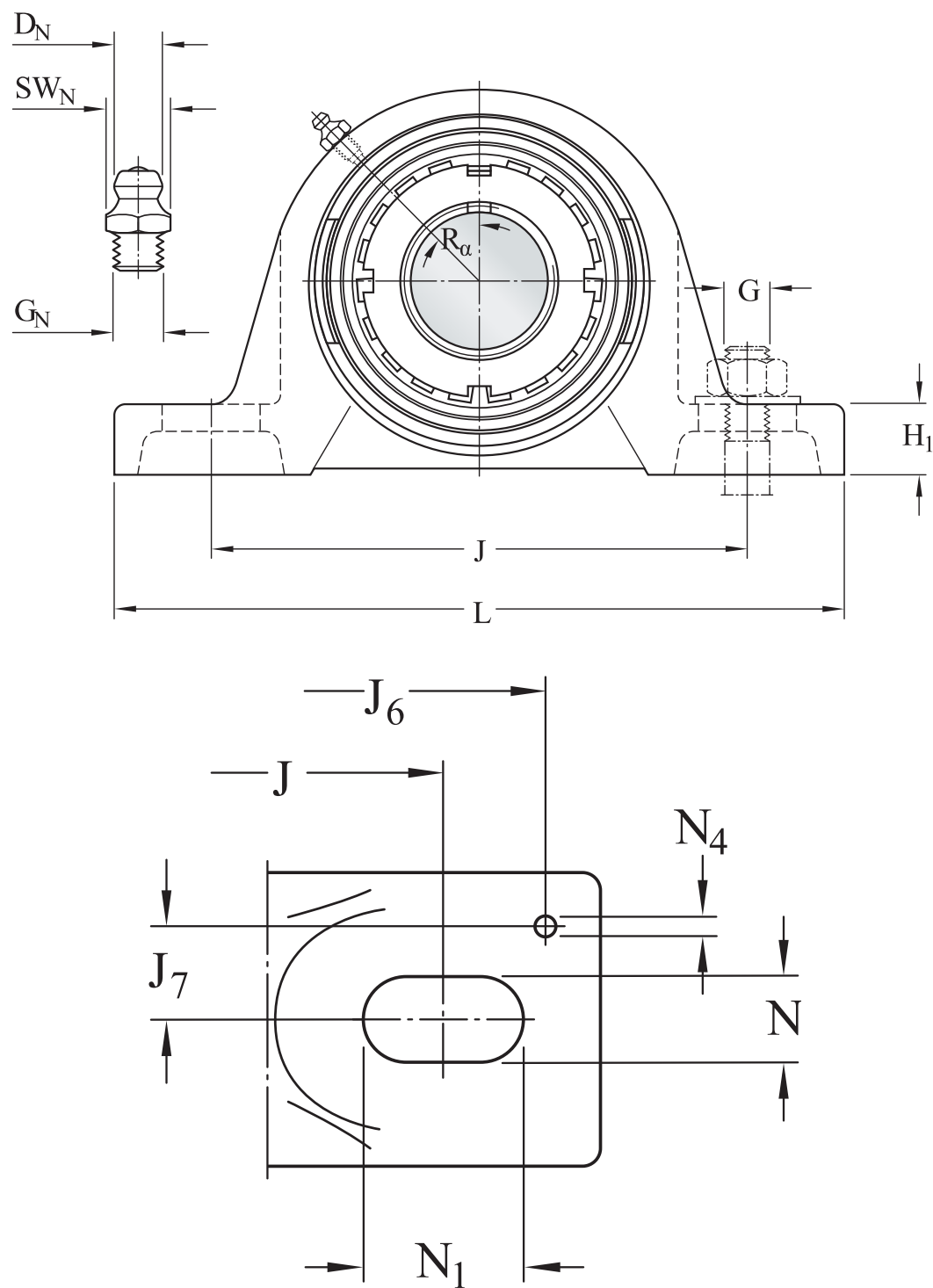
Logistics

Product net weight	2.14 kg
eClass code	23-05-16-02
UNSPSC code	31171536

Technical specification

Note about ordering information	Order adapter sleeve separately
Compliance with standard	JIS
Material, housing	Cast iron
Sealing, bearing	Seal and flinger on both sides
Sealing type, bearing	Contact, standard
Sealing, unit	Without
Coating	Without





Dimensions

d	40 mm	Bore diameter
d ₁	≈ 56.8 mm	Shoulder diameter of inner ring
d ₃	65 mm	Outside diameter of lock nut
A	52 mm	Base width

A ₁	36 mm	Top width
B ₁	34.9 mm	Overall bearing width
B ₁	50 mm	Width of sleeve
H	54 mm	Height of spherical seat centre
H ₁	20 mm	Foot height
H ₂	107.5 mm	Overall height
J	143.5 mm	Distance between attachment bolts
J	max. 151 mm	Maximum distance between attachment bolts
J	min. 136 mm	Minimum distance between attachment bolts
L	190 mm	Overall length
N	17 mm	Diameter of attachment bolt hole
N ₁	24.5 mm	Length of attachment bolt hole
s ₁	28.75 mm	Distance from locking device side face to raceway centre
Value specified for s ₁ is approximate and before the sleeve is driven into the bearing bore (sleeve and inner ring bore at starting position).		Note dimension(s)

GREASE FITTING

D _N	6.5 mm	Diameter of head sphere of grease fitting
SW _N	7 mm	Hexagonal key size for the grease fitting
G _N	1/4-28 SAE-LT	Thread of grease fitting

DOWEL PINS

J ₆	174 mm	Distance of dowel pins
J ₇	18 mm	Axial offset of dowel pins
N ₄	4 mm	Recommended diameter for dowel pins

THREADED HOLE

R_G	1/4-28 UNF	Housing thread for the grease fitting
R_1	4 mm	Axial position of the housing thread
R_a	45 °	Angular position of the housing thread

Calculation data

Basic dynamic load rating	C	33.2 kN
Basic static load rating	C_0	21.6 kN
Fatigue load limit	P_u	0.915 kN
Limiting speed		4 300 r/min

Mounting information

Associated spanner		HN 9
Recommended lock nut tightening angle	α	110 °
Recommended diameter for attachment bolts, mm	G	14 mm
Recommended diameter for attachment bolts, inch	G	0.5625 in

Tolerances and clearances

The values depend on the included bearing:

- Bore diameter tolerance → [table 1](#)
- Radial internal clearance → [table 2](#)
- Recommended fit → [table 3](#)
- Shaft tolerance → [table 4](#)

Compatible products

Component

Pillow block housing for insert bearings, cast iron, Japanese standards	SYJ 509
Insert bearing with tapered bore and adapter sleeve locking	YSA 209-2FK

Recommended product

Adapter sleeve with KM lock nut and MB lock washer, metric dimensions	H 2309
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More Information

 Product details	 Engineering information	 Tools
Pillow block units to ISO standards		SKF Product select
Pillow block units to North American standards	 Principles of ball bearing units selection and application - Download catalogue (4.9 MB)	Bearing Frequency Calculator
Pillow block units to Japanese Industrial Standards (JIS)	Principles of selecting mounted bearing solutions	
Pillow block units, not standardized (incl. SKF Food Line)	Bearing failure and how to prevent it	
Permissible misalignment		
Locating/non-locating support		
Loads		
Temperature limits		
Permissible speed		
Lubrication		
Mounting and dismounting		
Ordering information		
Designation system		



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