

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

FYJ 45 KF

Square flanged ball bearing unit with adapter sleeve locking, cast iron housing, JIS

These square flanged ball bearing units are compliant with Japanese Industrial Standards (JIS). They consist of an insert bearing, locked to the shaft with an adapter sleeve, which enables the bearings to operate at higher speeds and run more smoothly in applications where the direction of rotation is constant or alternating. The bearing is mounted in a cast

iron housing, which can be bolted to a machine wall or frame. Ball bearing units can accommodate moderate initial misalignment, but normally do not permit axial displacement. The adapter sleeve is not included in the unit and should be ordered separately.

- Resist high levels of contamination
- Designed for high temperatures and speeds
- Accommodate relatively heavy loads
- Cost-effective

Overview

Dimensions

Attachment bolt diameter	14 mm
Shaft diameter	40 mm
Housing overall width	38 mm
Width, total	50.75 mm
Centre distance between bolt holes	105 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

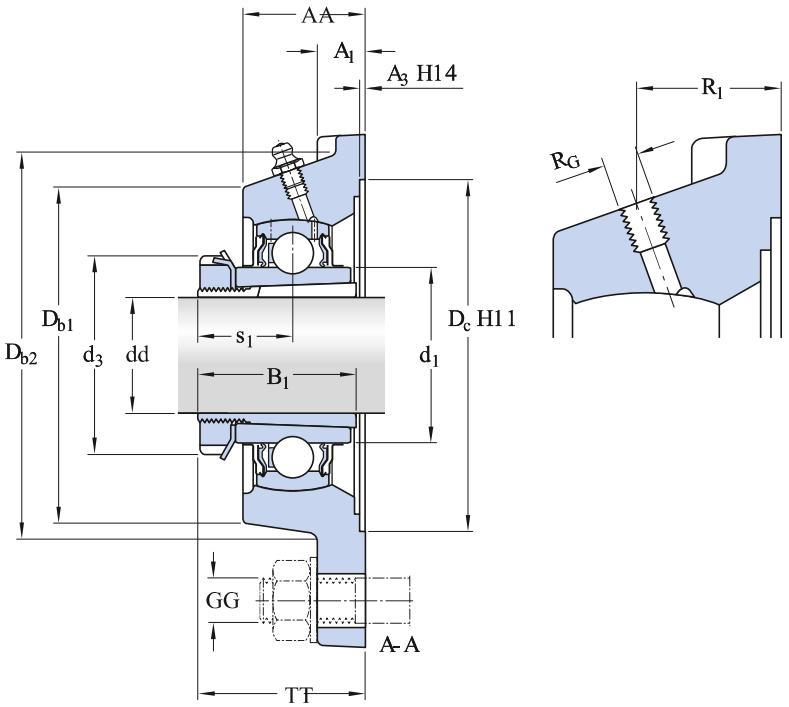
Associated mounting tool	HN 9
Housing type	Flanged
Flanged housing type	Square
Number of bolt holes for fasteners	4
Fastening bolt hole type	Plain
Retaining feature, inner ring	Adapter sleeve
Bore type	Tapered
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing	Seal and flinger on both sides
Sealing type	Contact, standard
Sealing, unit	Without
Lubricant	Grease
Relubrication hole	With
Grease fitting	With

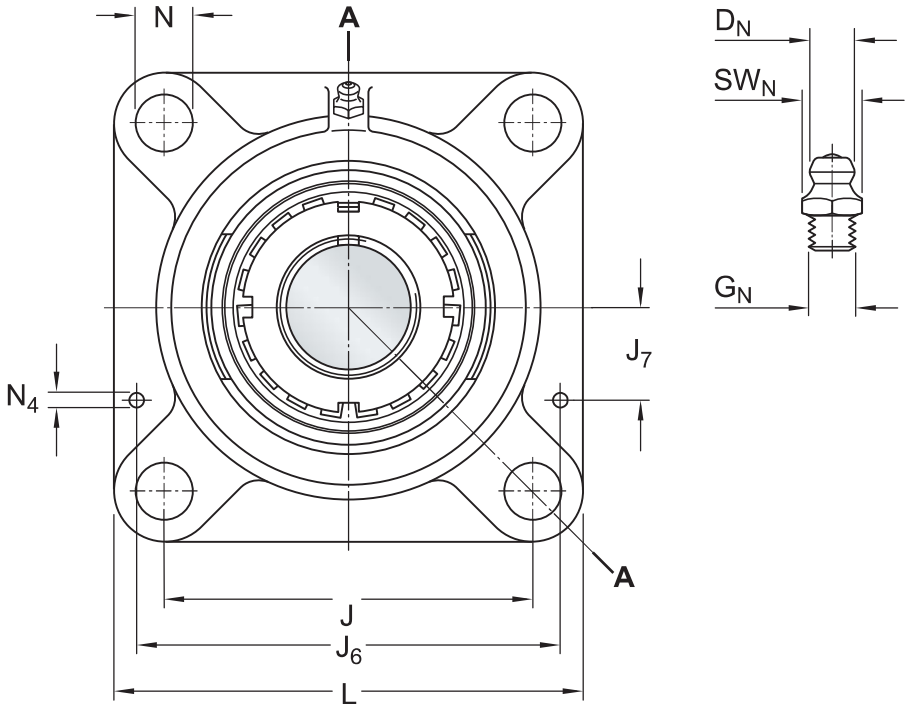
Logistics

Product net weight	2 kg
eClass code	23-05-16-02
UNSPSC code	31171536

Technical specification

Note about ordering information	Order adapter sleeve separately
Compliance with standard	JIS
Purpose specific	For material handling applications
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	Outer diameter of inner ring
d_3	65 mm	Outside diameter of lock nut
A	38 mm	Width of housing
A_1	16 mm	Flange width
A_3	3.2 mm	Depth of centring recess
B_1	50 mm	Width of sleeve
D_{b1}	107 mm	Top external diameter
D_{b2}	108 mm	Base external diameter
D_c	119.1 mm	Diameter of housing centering recess
J	105 mm	Centre distance between bolt holes
L	137 mm	Overall length
N	16 mm	Diameter of attachment bolt hole
s_1	28.75 mm	Distance from locking device side face to raceway centre
T	50.75 mm	Overall width
	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 for B1 and s1

THREADED HOLE

R_G	1/4-28 UNF	Housing thread for grease fitting
R_1	22 mm	Axial position of the housing thread

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	123 mm	Distance of dowel pins
J_7	33.5 mm	Axial offset of dowel pins
N_4	4 mm	Recommended diameter for dowel pins

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

Square flanged housing for insert bearings, cast iron, JIS	FYJ 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

More Information

Product details

- Flanged units to ISO standards
- Flanged units to North American standards
- Flanged units to Japanese Industrial Standards (JIS)
- Flanged units, not standardized (SKF Food Line)
- Permissible misalignment
- Locating/non-locating support
- Loads
- Temperature limits
- Permissible speed
- Lubrication
- Mounting and dismounting
- Ordering information
- Designation system

Engineering information

- Principles of ball bearing units selection and application - Download catalogue (4.9 MB)
- Principles of selecting mounted bearing solutions
- Bearing failure and how to prevent it

Tools

- SKF Product select
- Bearing Frequency Calculator

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