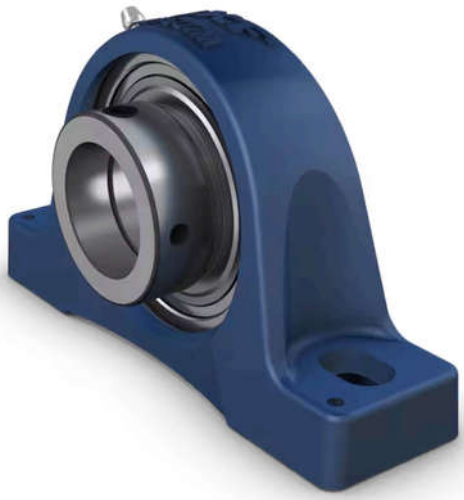


Image may differ from product. See technical specification for details.

SY 50 WF

Pillow block ball bearing unit with extended inner ring and eccentric locking collar, cast iron, ISO 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 intended for use in

applications where the direction of rotation is constant. It has an extended inner ring on both sides and is locked onto the shaft by an eccentric locking collar, making it easy to mount.

- Strong
- Ready to mount
- Lubricated and sealed bearing
- Designed for rotation in one direction
- Accommodate static initial misalignment

Overview

Dimensions

Attachment bolt diameter	16 mm
Shaft diameter	50 mm
Centre height (pillow block)	57.2 mm
Housing overall width	54 mm
Centre distance between bolt holes	157 mm
Bearing width, total	62.7 mm

Performance

Basic dynamic load rating	35.1 kN
Basic static load rating	23.2 kN
Limiting speed	4 000 r/min
Note	Limiting speed with shaft tolerance h6

Properties

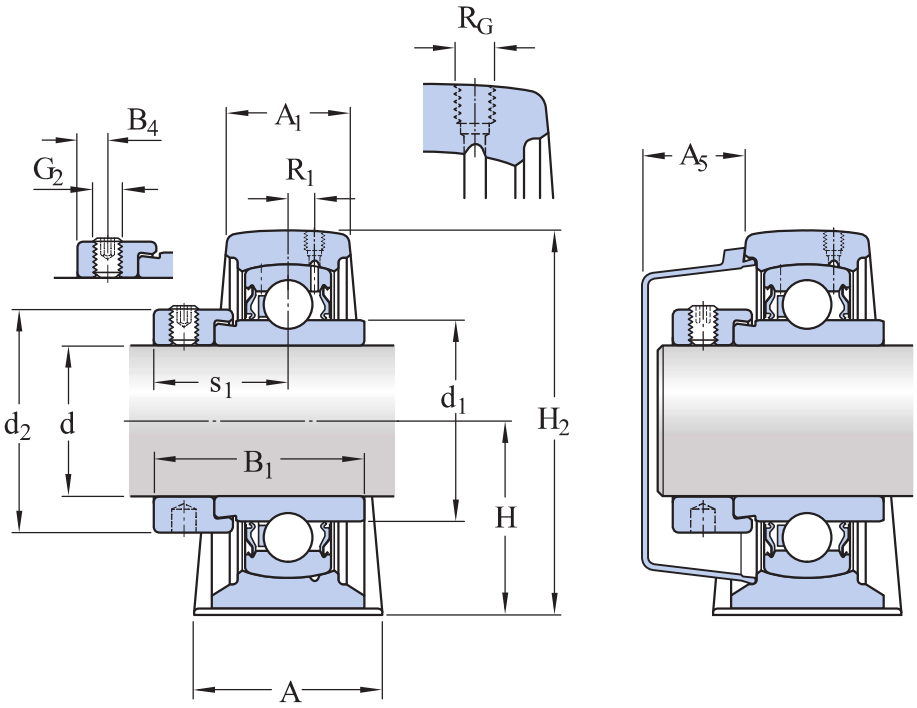
Housing type	Pillow block
Number of bolt holes for fasteners	2
Fastening bolt hole type	Plain
Retaining feature, inner ring	Eccentric collar
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing	Seal and flinger on both sides
Sealing type	Contact, standard
Sealing, unit	Optional end cover
Lubricant	Grease
Relubrication hole	With
Grease fitting	With

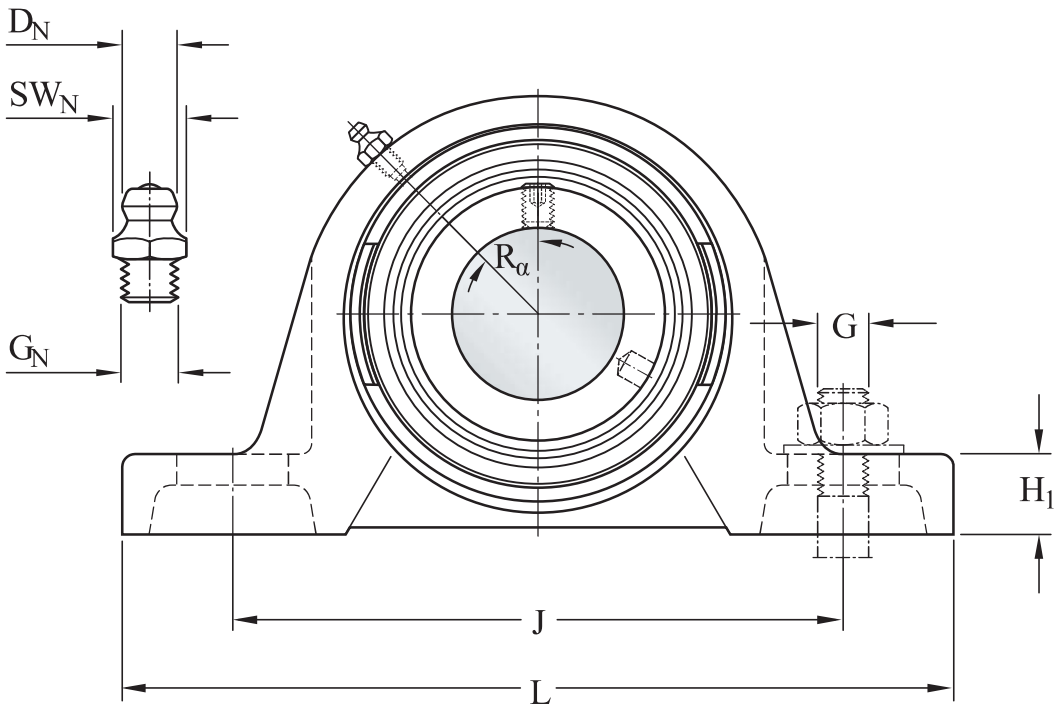
Logistics

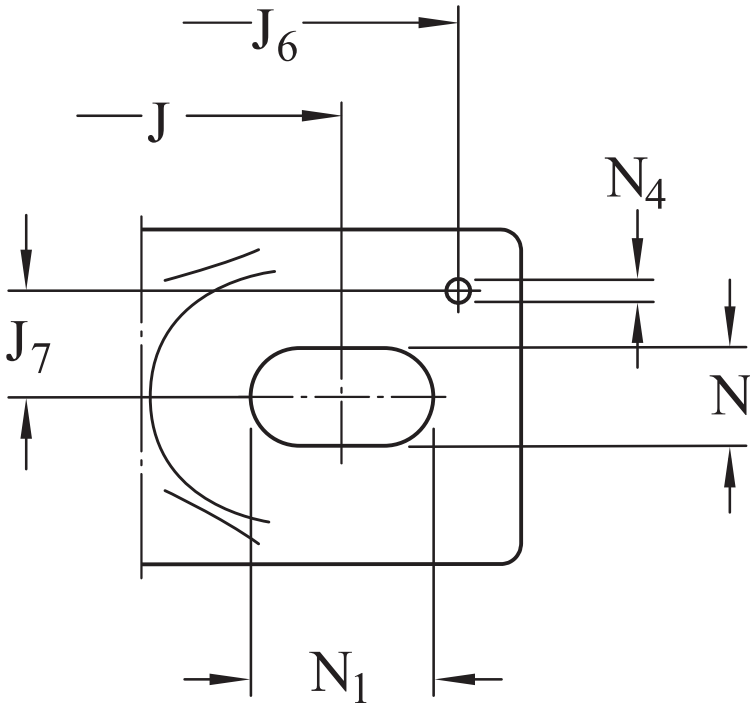
Product net weight	2.78 kg
eClass code	23-05-08-02
UNSPSC code	31171536

Technical specification

Compliance with standard	ISO
Purpose specific	For material handling applications; For air handling applications
Material, housing	Cast iron
Sealing, bearing	Seal and flinger on both sides
Sealing type, bearing	Contact, standard
Sealing, unit	Optional end cover
Coating	Without







Dimensions

d	50 mm	Bore diameter
d_1	≈ 62.51 mm	Shoulder diameter of inner ring
d_2	67.2 mm	Outside diameter of locking ring
A	54 mm	Base width

A_1	34 mm	Top width
A_5	33 mm	Standout of end cover
B	49.2 mm	Width of inner ring
B_1	62.7 mm	Overall bearing width
B_4	6.75 mm	Distance from locking device side face to thread centre
H	57.2 mm	Height of spherical seat centre
H_1	22 mm	Foot height
H_2	114 mm	Overall height
J	157 mm	Distance between attachment bolts
J	max. 165 mm	Maximum distance between attachment bolts
J	min. 149 mm	Minimum distance between attachment bolts
L	203 mm	Overall length
N	18 mm	Diameter of attachment bolt hole
N_1	26 mm	Length of attachment bolt hole
s_1	38.1 mm	Distance from locking device side face to raceway centre

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_α	45 °	Angular 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	187 mm	Distance of dowel pins
J_7	19 mm	Axial offset of dowel pins
N_4	4 mm	Recommended diameter for dowel pins

Calculation data

Basic dynamic load rating	C	35.1 kN
Basic static load rating	C_0	23.2 kN
Fatigue load limit	P_u	0.98 kN
Limiting speed		4 000 r/min
		Limiting speed with shaft tolerance h6

Mounting information

Set screw	G_2	M10x1
Hexagonal key size for set screw		5 mm
Recommended tightening torque for set screw		16.5 N·m
Recommended diameter for attachment bolts, mm	G	16 mm
Recommended diameter for attachment bolts, inch	G	0.625 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, ISO standards	SY 510 M
Insert bearing with an eccentric locking collar and extended inner ring	YEL 210-2F

Recommended product

End cover for bearing units	ECY 210

More Information

Product details

- Pillow block units to ISO standards
- Pillow block units to North American standards
- Pillow block units to Japanese Industrial Standards (JIS)
- Pillow block units, not standardized (incl. 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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