

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

## SY 45 FM

**Pillow block ball bearing unit with narrow 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 a narrow inner ring 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	12 mm
Shaft diameter	45 mm
Centre height (pillow block)	54 mm
Housing overall width	48 mm
Centre distance between bolt holes	143.5 mm
Bearing width, total	43.7 mm

Performance

Basic dynamic load rating	33.2 kN
Basic static load rating	21.6 kN
Limiting speed	4 300 r/min
Note	Limiting speed with shaft tolerance h6

Properties

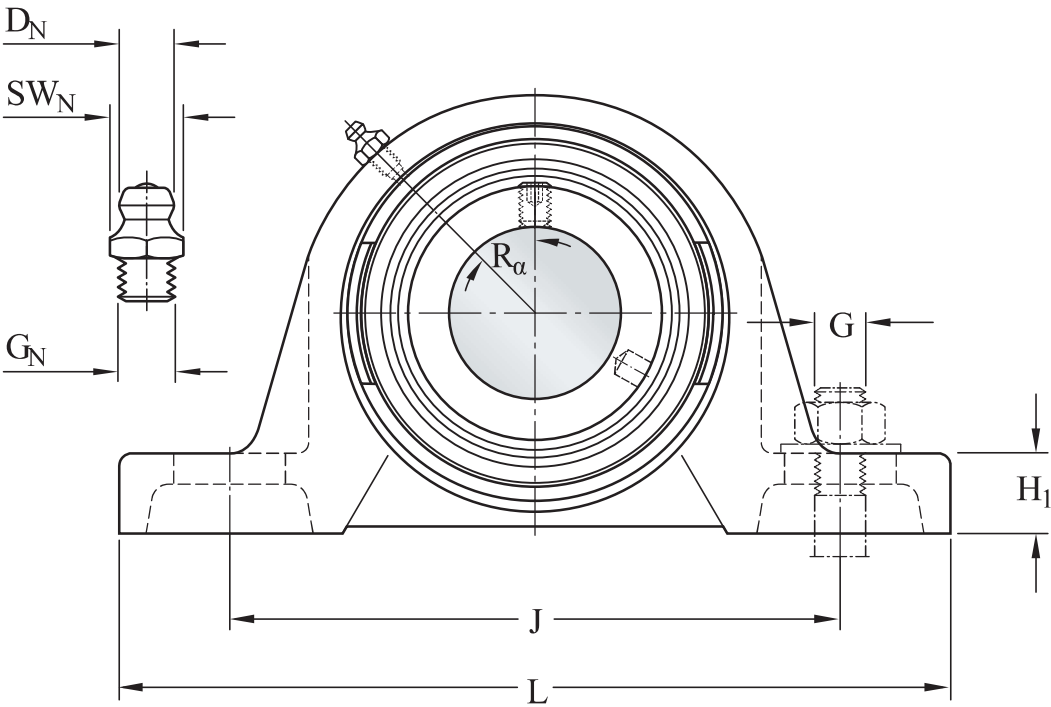
Housing type	Pillow block
Number of bolt holes for fasteners	2
Fastening bolt hole type	Plain
Retaining feature, inner ring	Eccentric collar
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing	Seal on both sides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

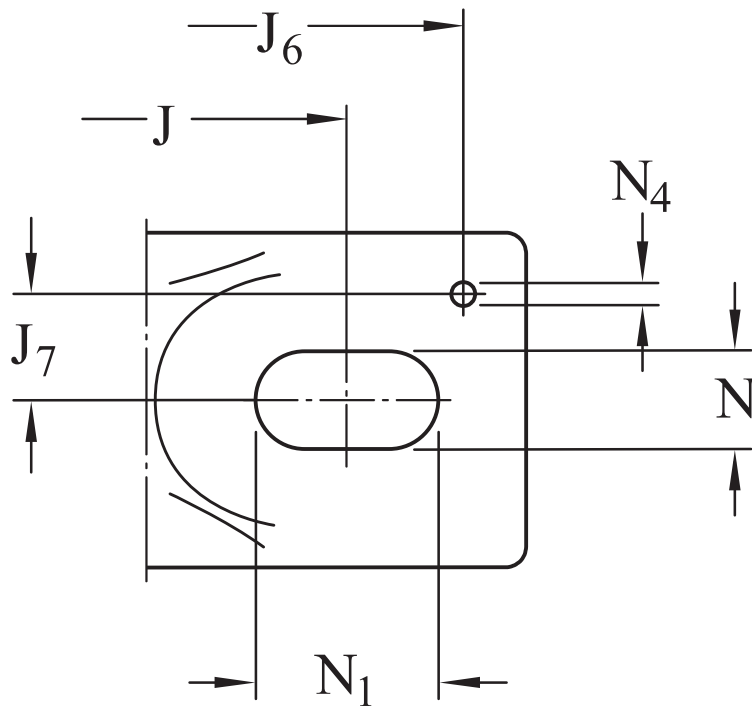
Logistics

Product net weight	2.1 kg
eClass code	23-05-08-02
UNSPSC code	31171536

Technical specification

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





Dimensions

d	45 mm	Bore diameter
d <sub>1</sub>	≈ 56.8 mm	Shoulder diameter of inner ring
d <sub>2</sub>	62 mm	Outside diameter of locking ring
A	48 mm	Base width
A <sub>1</sub>	32 mm	Top width
A <sub>5</sub>	26.5 mm	Standout of end cover
B	30.2 mm	Width of inner ring
B <sub>1</sub>	43.7 mm	Overall bearing width
B <sub>4</sub>	6.75 mm	Distance from locking device side face to thread centre
H	54 mm	Height of spherical seat centre
H <sub>1</sub>	21 mm	Foot height
H <sub>2</sub>	107 mm	Overall height
J	143.5 mm	Distance between attachment bolts
J	max. 152 mm	Maximum distance between attachment bolts
J	min. 135 mm	Minimum distance between attachment bolts
L	187 mm	Overall length

N	14 mm	Diameter of attachment bolt hole
N <sub>1</sub>	22.5 mm	Length of attachment bolt hole
s <sub>1</sub>	32.7 mm	Distance from locking device side face to raceway centre

## GREASE FITTING

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

## DOWEL PINS

J <sub>6</sub>	173 mm	Distance of dowel pins
J <sub>7</sub>	17 mm	Axial offset of dowel pins
N <sub>4</sub>	4 mm	Recommended diameter for dowel pins

## THREADED HOLE

R <sub>G</sub>	1/4-28 UNF	Housing thread for the grease fitting
R <sub>1</sub>	4 mm	Axial position of the housing thread
R <sub>α</sub>	45 °	Angular position of the housing thread

## Calculation data

Basic dynamic load rating	C	33.2 kN
Basic static load rating	C <sub>0</sub>	21.6 kN
Fatigue load limit	P <sub>u</sub>	0.915 kN
Limiting speed		4 300 r/min
		Limiting speed with shaft tolerance h6

## Mounting information

Set screw	G <sub>2</sub>	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	12 mm
Recommended diameter for attachment bolts, inch	G	0.5 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

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Pillow block housing for insert bearings, cast iron, ISO standards	<a href="#">SY 509 M</a>
Insert bearing with an eccentric locking collar and narrow inner ring	<a href="#">YET 209</a>

### Recommended product

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End cover for bearing units	<a href="#">ECY 209</a>
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More Information

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<div><a href="#">Pillow block units to North American standards</a></div>	<div><div> <a href="#">Principles of ball bearing units selection and application - Download catalogue (4.9 MB)</a></div></div>	<div><a href="#">Bearing Frequency Calculator</a></div>
<div><a href="#">Pillow block units to Japanese Industrial Standards (JIS)</a></div>	<div><a href="#">Principles of selecting mounted bearing solutions</a></div>	
<div><a href="#">Pillow block units, not standardized (incl. SKF Food Line)</a></div>	<div><a href="#">Bearing failure and how to prevent it</a></div>	
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