



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

## FY 45 TR

**Square flanged ball bearing unit with set screw locking, cast iron housing, ISO**

These square flanged ball bearing units are compliant with ISO standards. They consist of an insert bearing, with an extended inner ring and set screw locking, and are suitable for 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.

- 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	45 mm
Housing overall width	39 mm
Width, total	54.2 mm
Centre distance between bolt holes	105 mm
Bearing width, total	49.2 mm

### Performance

Basic dynamic load rating	33.2 kN
Basic static load rating	21.6 kN
Limiting speed	2 400 r/min
Note	Limiting speed with shaft tolerance h6

### Properties

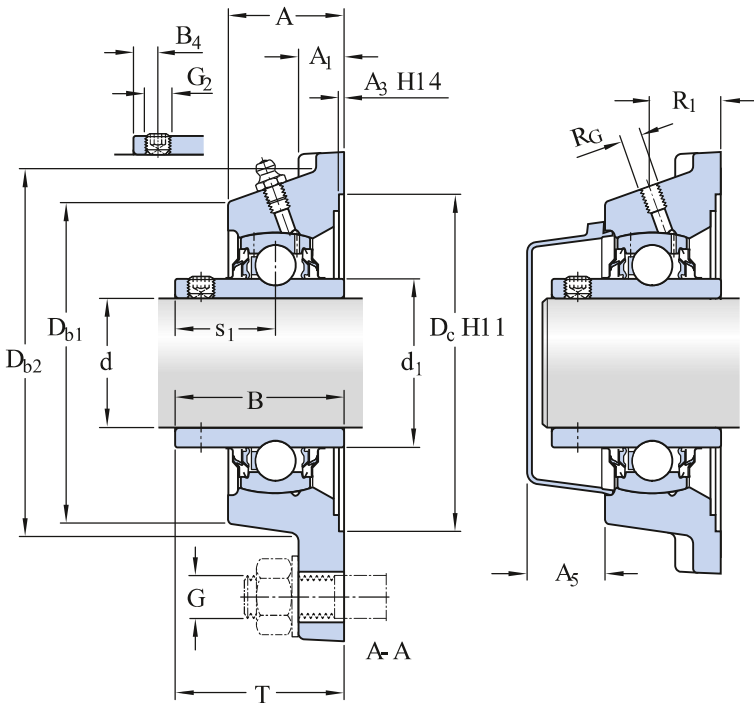
Housing type	Flanged
Flanged housing type	Square
Number of bolt holes for fasteners	4
Fastening bolt hole type	Plain
Retaining feature, inner ring	Set screws
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing	Seal and flinger on both sides
Sealing type	Contact, multiple
Sealing, unit	Optional end cover
Lubricant	Grease
Relubrication hole	With
Grease fitting	With

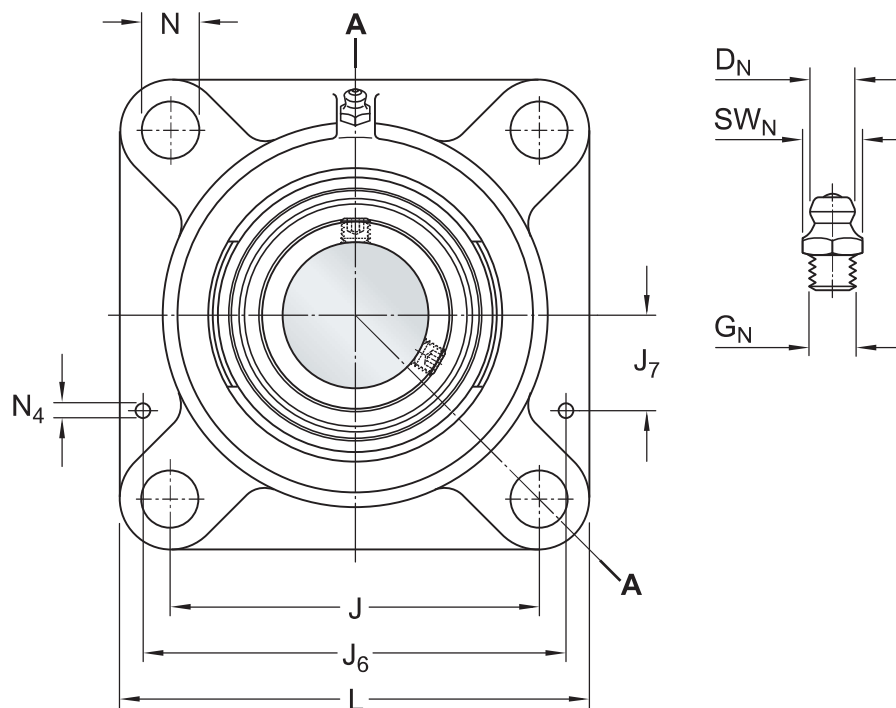
### Logistics

Product net weight	1.98 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 and flinger on both sides
Sealing type, bearing	Contact, multiple
Sealing, unit	Optional end cover
Coating	Without





## Dimensions

d	45 mm	Bore diameter
d <sub>1</sub>	≈ 56.8 mm	Outer diameter of inner ring
A	39 mm	Width of housing
A <sub>1</sub>	14 mm	Flange width
A <sub>3</sub>	3.2 mm	Depth of centring recess
A <sub>5</sub>	26.5 mm	Standout of end cover
B	49.2 mm	Width of inner ring
B <sub>1</sub>	49.2 mm	Overall bearing width
B <sub>4</sub>	8 mm	Distance from locking device side face to thread centre
D <sub>b1</sub>	102 mm	Top external diameter
D <sub>b2</sub>	112 mm	Base external diameter
D <sub>c</sub>	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 <sub>1</sub>	30.2 mm	Distance from locking device side face to raceway centre
T	54.2 mm	Overall width

## THREADED HOLE

$R_G$	1/4-28 UNF	Housing thread for grease fitting
$R_1$	24.5 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		2 400 r/min
		Limiting speed with shaft tolerance h6

## Mounting information

Set screw	$G_2$	M8x1
Hexagonal key size for set screw		4 mm
Recommended tightening torque for set screw		6.5 N·m

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	<a href="#">FY 509 M</a>
Insert bearing with set screw locking and extended inner ring	<a href="#">YAR 209-2RF</a>

Recommended product

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

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