



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

## TU 45 FM

**Take-up cast iron unit with insert ball bearing, eccentric locking collar and narrow inner ring, ISO**

Take-up ball bearing units, consisting of an insert bearing based on a sealed deep groove ball bearing mounted in a grey cast iron housing. This variant is intended for use in applications where the direction of rotation is constant. It has an inner ring extended on one side, with an eccentric locking collar, enabling quick and easy mounting onto the shaft.

- Designed for rotation in one direction
- Quick and easy to mount onto the shaft
- Accommodate static initial misalignment
- Long service life
- Reduced noise and vibration levels

## Overview

### Dimensions

Shaft diameter	45 mm
Housing overall width	49 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

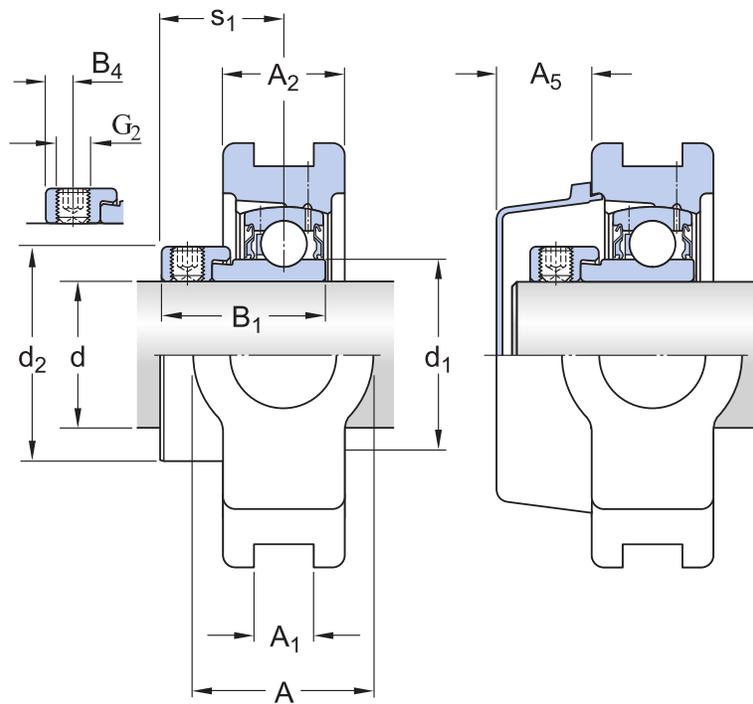
Housing type	Take-up
Retaining feature, inner ring	Eccentric collar
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing	Seal on both sides
Sealing type	Contact, standard
Sealing, unit	Optional end cover
Lubricant	Grease
Relubrication hole	With
Grease fitting	With

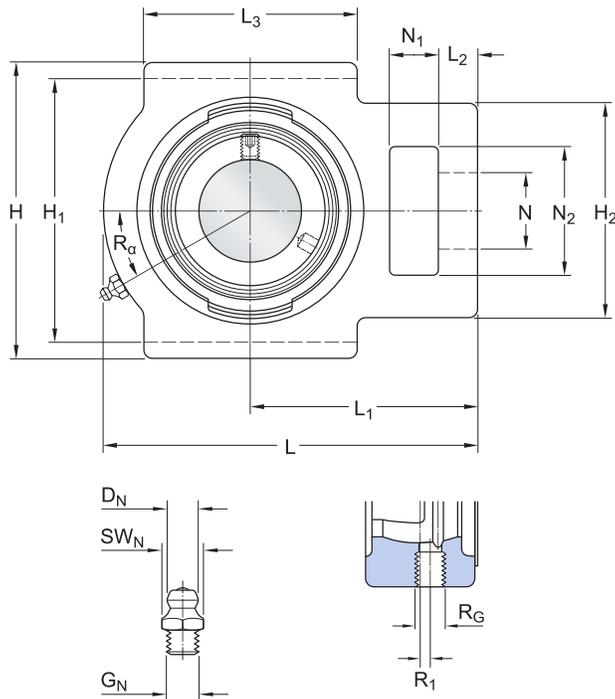
### Logistics

Product net weight	2.43 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	49 mm	Overall width
A <sub>1</sub>	17.5 mm	Width of piloting groove
A <sub>2</sub>	35 mm	Width of flange in which piloting grooves are provided
A <sub>5</sub>	24 mm	Standout of end cover
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	117 mm	Overall height
H <sub>1</sub>	101 mm	Distance between bottoms of piloting grooves
H <sub>2</sub>	83 mm	Height of attachment end
L	144 mm	Overall length
L <sub>1</sub>	87 mm	Distance from attachment end face to centre line of spherical seat diameter
L <sub>2</sub>	15 mm	Length attachment end
L <sub>3</sub>	83 mm	Length of piloting groove

N	29 mm	Diameter of attachment bolt hole
N <sub>1</sub>	19 mm	Length of attachment slot
N <sub>2</sub>	49 mm	Height of attachment slot
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

## THREADED HOLE

R <sub>G</sub>	1/4-28 UNF	Housing thread for the grease fitting
R <sub>1</sub>	4.5 mm	Axial position of the housing thread
R <sub>α</sub>	30 °	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 h <sub>6</sub>

## 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

## Tolerances and clearances

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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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Take-up cast iron housing for insert bearing, ISO

[TU 509 M](#)

Insert bearing with an eccentric locking collar and narrow inner ring

[YET 209](#)

### Recommended product

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End cover for bearing units

[ECY 209](#)

## More Information

### Product details

[Take-up units to ISO standards](#)

[Take-up units to North American standards](#)

[Take-up units to Japanese Industrial Standards \(JIS\)](#)

[Take-up 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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