



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

FY 12 TF

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	10 mm
Shaft diameter	12 mm
Housing overall width	26 mm
Width, total	32.9 mm
Centre distance between bolt holes	54 mm
Bearing width, total	27.4 mm

Performance

Basic dynamic load rating	9.56 kN
Basic static load rating	4.75 kN
Limiting speed	9 500 r/min
Note	Limiting speed with shaft tolerance h6

Properties

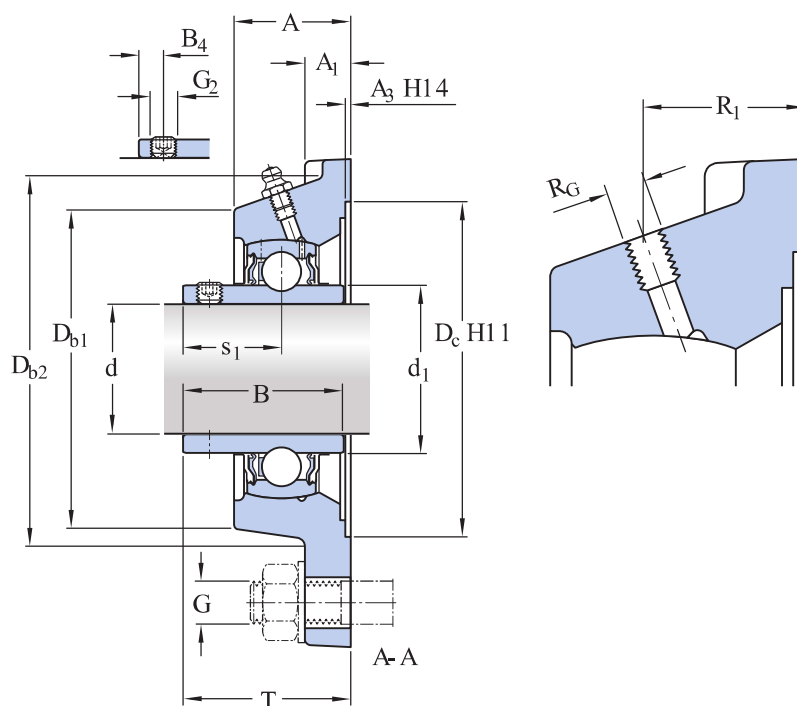
Housing type	Flanged
Flanged housing type	Square
Number of bolt holes for fasteners	4
Fastening bolt hole type	Plain
Retaining feature, inner ring	Set screws
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing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

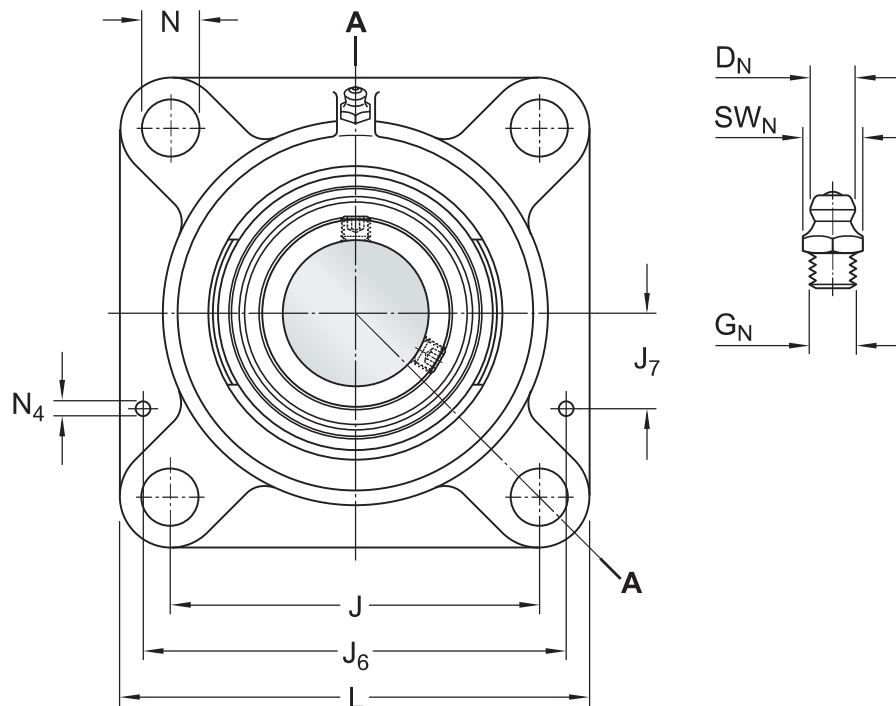
Logistics

Product net weight	0.4 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, standard
Sealing, unit	Without
Coating	Without





Dimensions

d	12 mm	Bore diameter
d ₁	≈ 24.2 mm	Outer diameter of inner ring
A	26 mm	Width of housing
A ₁	11 mm	Flange width
A ₃	3.2 mm	Depth of centring recess
B	27.4 mm	Width of inner ring
B ₁	27.4 mm	Overall bearing width
B ₄	4 mm	Distance from locking device side face to thread centre
D _{b1}	50 mm	Top external diameter
D _{b2}	53 mm	Base external diameter
D _c	55.6 mm	Diameter of housing centering recess
J	54 mm	Centre distance between bolt holes
L	76 mm	Overall length
N	11.5 mm	Diameter of attachment bolt hole
s ₁	15.9 mm	Distance from locking device side face to raceway centre
T	32.9 mm	Overall width

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	66 mm	Distance of dowel pins
J_7	14.5 mm	Axial offset of dowel pins
N_4	4 mm	Recommended diameter for dowel pins

THREADED HOLE

R_G	1/4-28 UNF	Housing thread for grease fitting
R_1	19 mm	Axial position of the housing thread

Calculation data

Basic dynamic load rating	C	9.56 kN
Basic static load rating	C_0	4.75 kN
Fatigue load limit	P_u	0.2 kN
Limiting speed		9 500 r/min
		Limiting speed with shaft tolerance h6

Mounting information

Set screw	G_2	M6x0.75
Hexagonal key size for set screw		3 mm
Recommended tightening torque for set screw		4 N·m
Recommended diameter for attachment bolts, mm	G	10 mm

Recommended diameter for attachment bolts, inch	G	0.375 in
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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	FY 503 M
Insert bearing with set screw locking and extended inner ring	YAR 203/12-2F

More Information

 Product details	 Engineering information	 Tools
Flanged units to ISO standards	 Principles of ball bearing units selection and application - Download catalogue (4.9 MB)	SKF Product select
Flanged units to North American standards	Principles of selecting mounted bearing solutions	Bearing Frequency Calculator
Flanged units to Japanese Industrial Standards (JIS)	Bearing failure and how to prevent it	
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		



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