

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

FY 20 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	10 mm
Shaft diameter	20 mm
Housing overall width	29.5 mm
Width, total	37.3 mm
Centre distance between bolt holes	63.5 mm
Bearing width, total	31 mm

Performance

Basic dynamic load rating	12.7 kN
Basic static load rating	6.55 kN
Limiting speed	5 000 r/min
Note	Limiting speed with shaft tolerance h6

Properties

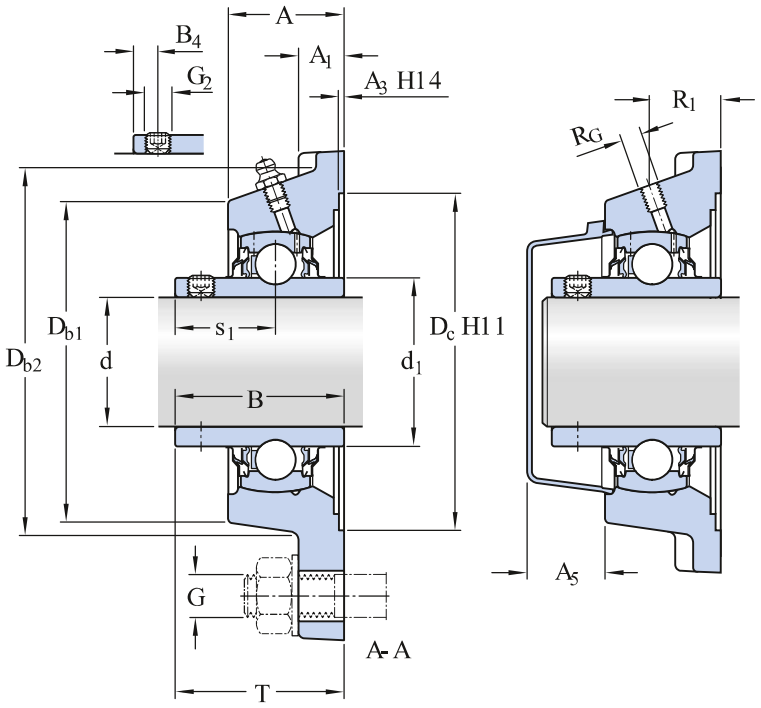
Housing type	Flanged
Flanged housing type	Square
Number of bolt holes for fasteners	4
Fastening bolt hole type	Plain
Retaining feature, inner ring	Set screws
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing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

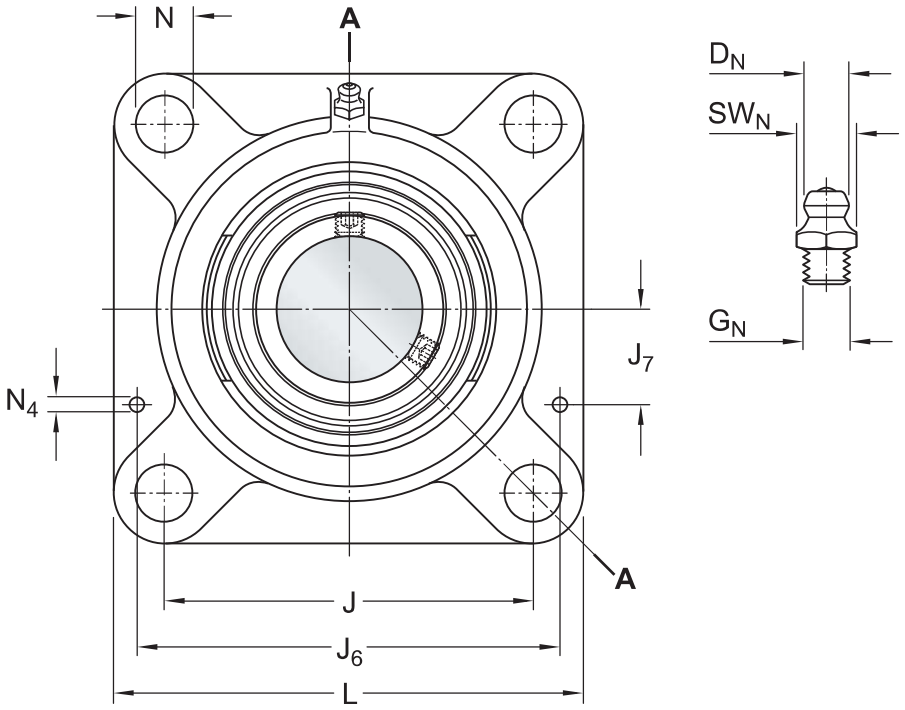
Logistics

Product net weight	0.559 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	20 mm	Bore diameter
d_1	≈ 28.2 mm	Outer diameter of inner ring
A	29.5 mm	Width of housing
A_1	11 mm	Flange width
A_3	3.2 mm	Depth of centring recess
A_5	20.5 mm	Standout of end cover
B	31 mm	Width of inner ring
B_1	31 mm	Overall bearing width
B_4	4.5 mm	Distance from locking device side face to thread centre
D_{b1}	57 mm	Top external diameter
D_{b2}	63 mm	Base external diameter
D_c	68.3 mm	Diameter of housing centering recess
J	63.5 mm	Centre distance between bolt holes
L	86 mm	Overall length
N	11.5 mm	Diameter of attachment bolt hole
s_1	18.3 mm	Distance from locking device side face to raceway centre
T	37.3 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	74 mm	Distance of dowel pins
J_7	16 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	20.5 mm	Axial position of the housing thread

Calculation data

Basic dynamic load rating	C	12.7 kN
Basic static load rating	C_0	6.55 kN
Fatigue load limit	P_u	0.28 kN
Limiting speed		5 000 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

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 504 M
Insert bearing with set screw locking and extended inner ring	YAR 204-2RF

Recommended product

End cover for bearing units	ECY 204

More Information

Product details

- Flanged units to ISO standards
- Flanged units to North American standards
- Flanged units to Japanese Industrial Standards (JIS)
- 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

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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