

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

FY 50 TF/VA201

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

These square flanged ball bearing units are designed for high temperature applications and are compliant with ISO standards. They consist of a high temperature 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	16 mm
Shaft diameter	50 mm
Housing overall width	43 mm
Width, total	60.6 mm
Centre distance between bolt holes	111 mm
Bearing width, total	51.6 mm

Performance

Basic dynamic load rating	35.1 kN
Basic static load rating	23.2 kN
Limiting speed	60 r/min
Maximum operating temperature	250 °C

Properties

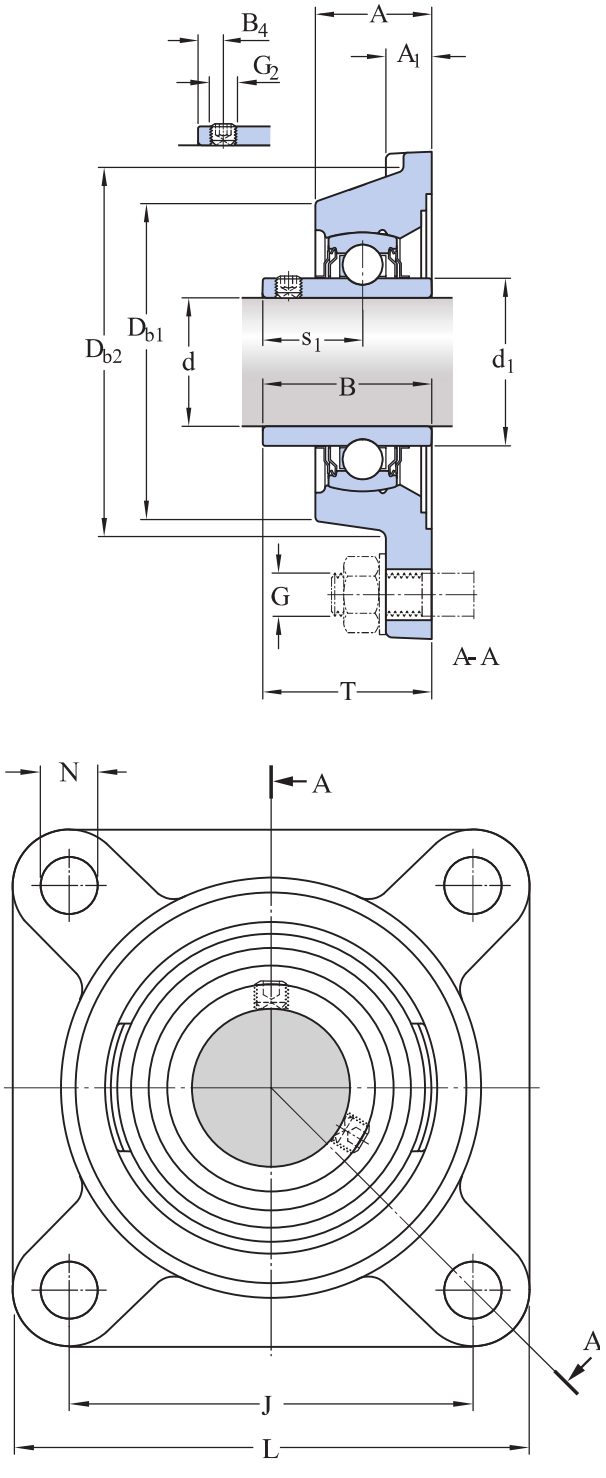
Housing type	Flanged
Flanged housing type	Square
Number of bolt holes for fasteners	4
Fastening bolt hole type	Plain
Retaining feature, inner ring	Set screws
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	High temperature steel
Coating	Zinc-coated housing and manganese phosphate coated bearing
Sealing, bearing	Shield and flinger on both sides
Sealing type	Non-contact
Sealing, unit	Without
Lubricant	Solid lubricant
Relubrication hole	Without
Grease fitting	Without

Logistics

Product net weight	2.36 kg
eClass code	23-05-90-90
UNSPSC code	31171536

Technical specification

Running in required	Yes



Dimensions

d	50 mm	Shaft diameter
d_1	≈ 62.51 mm	Shoulder diameter inner ring
A	43 mm	Height housing
A_1	15 mm	Step height
B	51.6 mm	Width inner ring
B_4	9 mm	Distance from locking device side face to thread centre
D_{b1}	107 mm	Top external diameter
D_{b2}	118 mm	Base external diameter
J	111 mm	Distance between attachment bolts
L	143 mm	Overall width
N	18 mm	Hole diameter
s_1	32.6 mm	Distance from locking device side face to raceway centre
T	60.6 mm	Overall height

Calculation data

Basic dynamic load rating	C	35.1 kN
Basic static load rating	C_0	23.2 kN
Limiting speed		60 r/min
Operating temperature	T	max. 250 °C

Mounting information

Set screw	G_2	M10x1
Hexagonal key size for set screw		5 mm
Recommended tightening torque for set screw		16.5 N·m
Attachment bolts, recommended metric size	G	16 mm
Attachment bolts, recommended inch size	G	0.625 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

High temperature insert bearing with set screws and extended inner ring	YAR 210-2F/VA201

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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