



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

FY 50 WF

Square flanged ball bearing unit with eccentric 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 eccentric locking, and are intended primarily for use in applications where the direction of rotation is constant. 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	66.1 mm
Centre distance between bolt holes	111 mm
Bearing width, total	62.7 mm

Performance

Basic dynamic load rating	35.1 kN
Basic static load rating	23.2 kN
Limiting speed	4 000 r/min
Note	Limiting speed with shaft tolerance h6

Properties

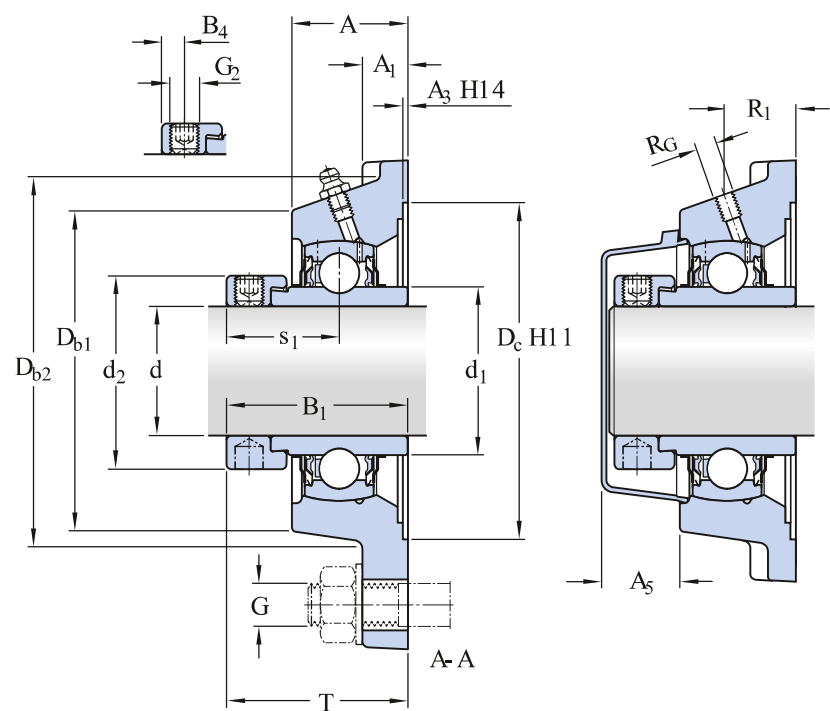
Housing type	Flanged
Flanged housing type	Square
Number of bolt holes for fasteners	4
Fastening bolt hole type	Plain
Retaining feature, inner ring	Eccentric collar
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Cast iron
Material, bearing	Bearing steel
Coating	Without
Sealing, bearing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

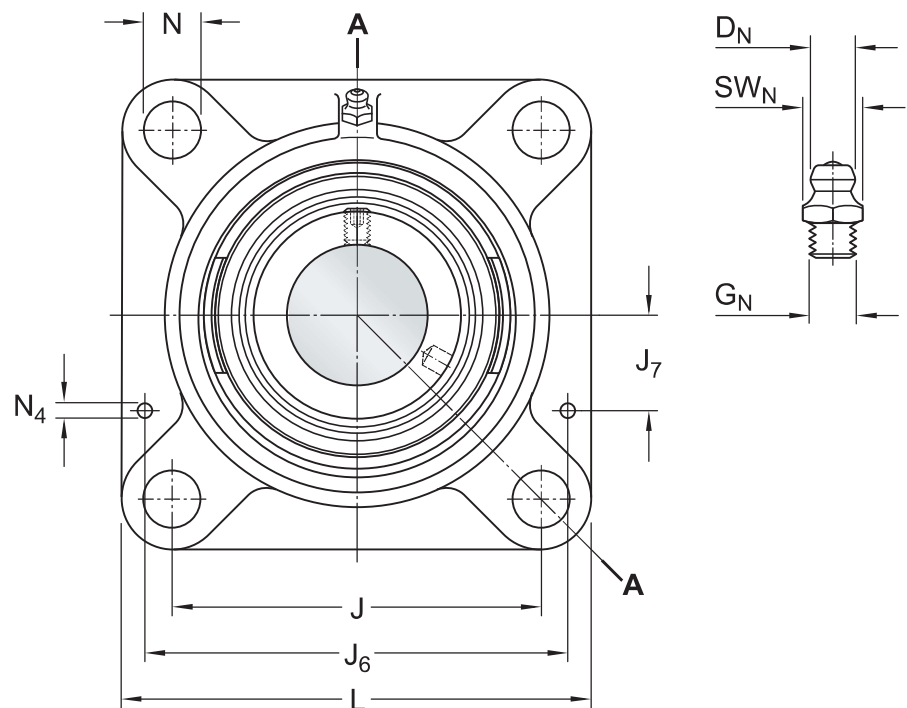
Logistics

Product net weight	2.41 kg
eClass code	23-05-08-02
UNSPSC code	31171536

Technical specification

Compliance with standard	ISO
Purpose specific	For material handling applications; For air handling applications
Material, housing	Cast iron
Sealing, bearing	Seal and flinger on both sides
Sealing type, bearing	Contact, standard
Sealing, unit	Optional end cover
Coating	Without





Dimensions

d	50 mm	Bore diameter
d ₁	≈ 62.51 mm	Outer diameter of inner ring
d ₂	67.2 mm	Outside diameter of locking ring
A	43 mm	Width of housing
A ₁	15 mm	Flange width
A ₃	3.2 mm	Depth of centring recess
A ₅	33 mm	Standout of end cover
B	49.2 mm	Width of inner ring
B ₁	62.7 mm	Overall bearing width
B ₄	6.75 mm	Distance from locking device side face to thread centre
D _{b1}	107 mm	Top external diameter
D _{b2}	118 mm	Base external diameter
D _c	125.4 mm	Diameter of housing centering recess
J	111 mm	Centre distance between bolt holes
L	143 mm	Overall length
N	18 mm	Diameter of attachment bolt hole
s ₁	38.1 mm	Distance from locking device side face to raceway centre

T	66.1 mm	Overall width
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THREADED HOLE

R _G	1/4-28 UNF	Housing thread for grease fitting
R ₁	28.5 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	129 mm	Distance of dowel pins
J ₇	35.5 mm	Axial offset of dowel pins
N ₄	4 mm	Recommended diameter for dowel pins

Calculation data

Basic dynamic load rating	C	35.1 kN
Basic static load rating	C ₀	23.2 kN
Fatigue load limit	P _u	0.98 kN
Limiting speed		4 000 r/min
		Limiting speed with shaft tolerance h6

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
Recommended diameter for attachment bolts, mm	G	16 mm
Recommended diameter for attachment bolts, inch	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

Square flanged housing for insert bearings, cast iron	FY 510 M
Insert bearing with an eccentric locking collar and extended inner ring	YEL 210-2F

Recommended product

End cover for bearing units	ECY 210
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More Information

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