

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

F4BC 20M-TPSS

Square flanged ball bearing unit with set screw locking extended inner ring, composite housing, SKF Food Line

These square flanged ball bearing units are designed especially for the food and beverage industries. They are chemical resistant, lightweight and strong. The unit consists of an

insert bearing, with an extended inner ring and set screw locking, and is suitable for applications where the direction of rotation is constant or alternating. The bearing is mounted in a composite 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.

- Chemical resistant
- Lubricated for life with a non-toxic food grade grease
- Lightweight
- Strong

Overview

Dimensions

Attachment bolt diameter	10 mm
Shaft diameter	20 mm
Housing overall width	27 mm
Centre distance between bolt holes	63.5 mm
Bearing width, total	31 mm

Performance

Basic dynamic load rating	10.8 kN
Basic static load rating	6.55 kN
Limiting speed	5 000 r/min
Note	Limiting speed with shaft tolerance h6

Properties

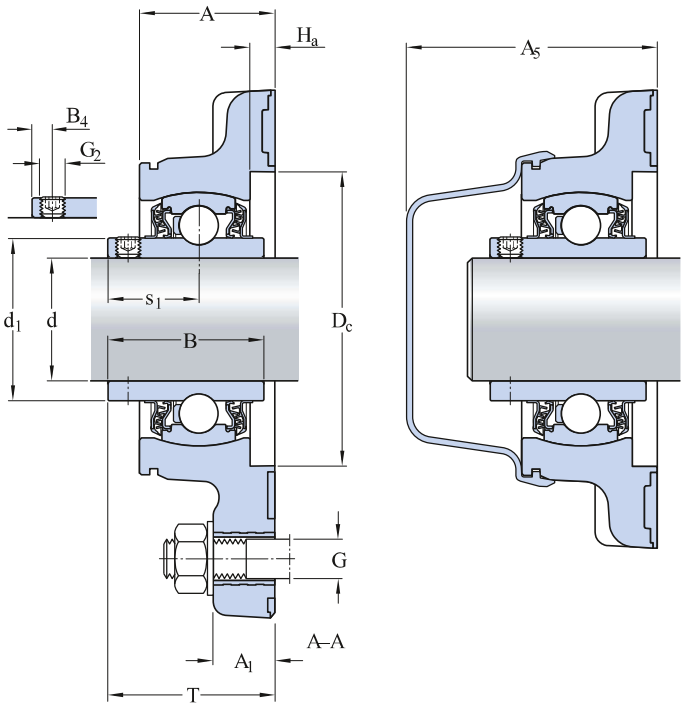
Housing type	Flanged
Flanged housing type	Square
Number of bolt holes for fasteners	4
Fastening bolt hole type	Plain
Retaining feature, inner ring	Set screws
Bore type	Cylindrical
Rubber seating ring	Without
Material, housing	Composite for the SKF Food Line
Material, bearing	Stainless steel
Coating	Without
Sealing, bearing	Seal and flinger on both sides
Sealing type	Contact, gutter
Sealing, unit	Optional end cover
Lubricant	Grease
Relubrication hole	Without
Grease fitting	Without

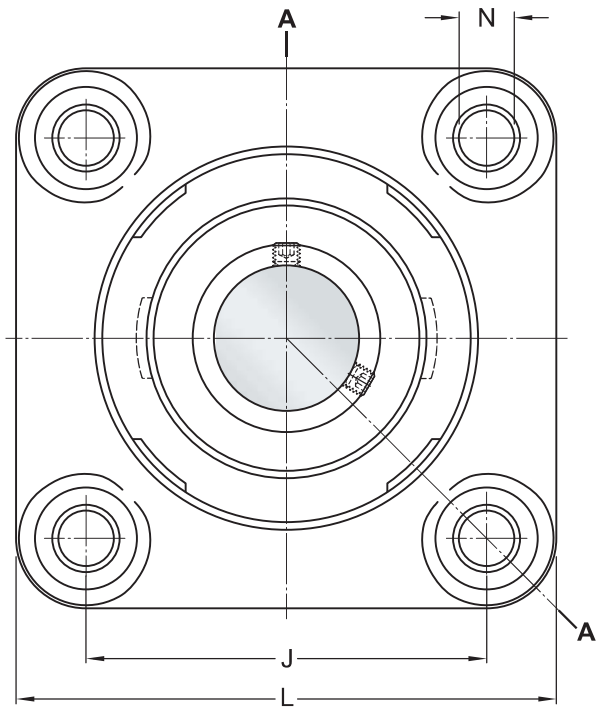
Logistics

Product net weight	0.261 kg
eClass code	23-05-08-02
UNSPSC code	31171536

Technical specification

Compliance with standard	Not standardized
Purpose specific	For food and beverage applications
Material, housing	Composite for the SKF Food Line
Sealing, bearing	Seal and flinger on both sides
Sealing type, bearing	Contact, gutter
Sealing, unit	Optional end cover
Coating	Without





Dimensions

d	20 mm	Bore diameter
d_1	≈ 28.2 mm	Outer diameter of inner ring
A	27 mm	Width of housing
A_1	15 mm	Flange width
A_5	54.1 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_b	59 mm	Top external diameter
D_c	52 mm	Diameter of housing centering recess
H_a	6 mm	Depth of housing centering recess
J	63.5 mm	Centre distance between bolt holes
L	92 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	34.8 mm	Overall width

Calculation data

Basic dynamic load rating	C	10.8 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

Insert bearing with set screw locking and extended inner ring	YAR 204-2LPW/SS

Recommended product

End cover for bearing units	ECB 504

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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