



# 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

|                                    |         |
|------------------------------------|---------|
| 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                         |

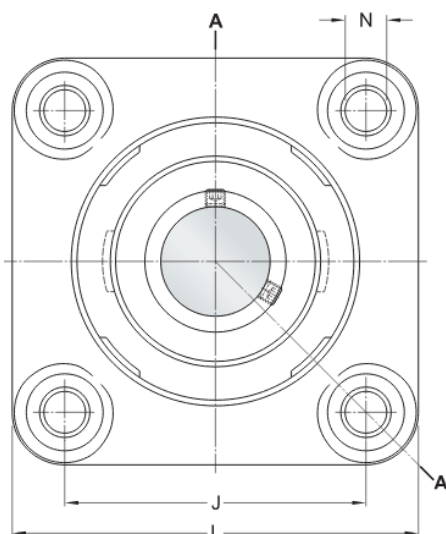
# Technical Specification

|                          |                                    |
|--------------------------|------------------------------------|
| 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  |
| $d_1$ | $\approx 28.2$ 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           | Distance between attachment bolts                        |
| 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              | Overall width  |



mm

## Calculation data

|  |                |             |
|--|----------------|-------------|
| Basic dynamic load rating              | C              | 10.8 kN     |
| Basic static load rating               | C <sub>0</sub> | 6.55 kN     |
| Fatigue load limit                     | P <sub>u</sub> | 0.28 kN     |
| Limiting speed                         |                | 5 000 r/min |
| Limiting speed with shaft tolerance h6 |                |             |

## Mass

|                   |         |
|-------------------|---------|
| Mass bearing unit | 0.29 kg |
|-------------------|---------|

## Mounting information

|   |                |          |
|---|----------------|----------|
| Set screw                                       | G <sub>2</sub> | 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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