



# FYJ 75 TFSquare flanged ball bearing unit with set screw locking, cast iron housing, JIS

## Square flanged ball bearing unit with set screw locking, cast iron housing, JIS

These square flanged ball bearing units are compliant with Japanese Industrial Standards (JIS). 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

|                                    |         |
|------------------------------------|---------|
| Shaft diameter                     | 75 mm   |
| Housing overall width              | 53.5 mm |
| Width, total                       | 80.3 mm |
| Centre distance between bolt holes | 159 mm  |
| Bearing width, total               | 73.3 mm |

## Performance

|                           |  |
|---------------------------|--|
| Basic dynamic load rating | 66.3 kN                                |
| Basic static load rating  | 49 kN                                  |
| Limiting speed            | 2 600 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, standard              |
| Sealing, unit      | Without                        |
| Lubricant          | Grease                         |
| Relubrication hole | With                           |
| Grease fitting     | With                           |

# Technical Specification

|                          |                                    |
|--------------------------|------------------------------------|
| Compliance with standard | JIS                                |
| Purpose specific         | For material handling applications |
| Material, housing        | Cast iron                          |
| Sealing, bearing         | Seal and flinger on both sides     |
| Sealing type, bearing    | Contact, standard                  |
| Sealing, unit            | Without                            |
| Coating                  | Without                            |

## Dimensions

|          |                    |   |
|----------|--------------------|---|
| d        | 75 mm              | Bore diameter   |
| $d_1$    | $\approx 92.05$ mm | Outer diameter of inner ring                            |
| A        | 53.5 mm            | Overall width   |
| $A_1$    | 22 mm              | Flange width  |
| $A_3$    | 3.2 mm             | Depth of centring recess                                |
| B        | 73.3 mm            | Width of inner ring                                     |
| $B_1$    | 73.3 mm            | Overall bearing width                                   |
| $B_4$    | 12 mm              | Distance from locking device side face to thread centre |
| $D_{b1}$ | 154 mm             | Top external diameter                                   |
| $D_{b2}$ | 166 mm             | Base external diameter                                  |
| $D_c$    | 179.4 mm           | Diameter of housing centering recess                    |
| J        | 159 mm             | Distance between attachment bolts                       |
| L        | 200 mm             | Overall length  |
| N        | 19 mm              | Diameter of attachment bolt hole                        |



|       |         |  |
|-------|---------|--|
| $s_1$ | 46.3 mm | Distance from locking device side face to raceway centre |
| T     | 80.3 mm | Overall unit width                                       |

#### Threaded hole

|       |            |                                      |
|-------|------------|--------------------------------------|
| $R_G$ | 1/4-28 UNF | Housing thread for grease fitting    |
| $R_1$ | 35 mm      | Axial position of the housing thread |

#### Grease fitting

|       |               |   |
|-------|---------------|---|
| $D_N$ | 6.5 mm        | Diameter of head sphere of grease fitting |
| SW    | 7 mm          | Hexagonal key size for the grease fitting |
| $G_N$ | 1/4-28 SAE-LT | Thread of grease fitting                  |

#### Dowel pins

|       |         |                                     |
|-------|---------|-------------------------------------|
| $J_6$ | 176 mm  | Distance of dowel pins              |
| $J_7$ | 51.5 mm | Axial offset of dowel pins          |
| $N_4$ | 4 mm    | Recommended diameter for dowel pins |

## Calculation data

|                           |       |  |
|---------------------------|-------|--|
| Basic dynamic load rating | C     | 66.3 kN                                |
| Basic static load rating  | $C_0$ | 49 kN                                  |
| Fatigue load limit        | $P_u$ | 2.04 kN                                |
| Limiting speed            |       | 2 600 r/min                            |
|                           |       | Limiting speed with shaft tolerance h6 |

## Mass

|                   |        |
|-------------------|--------|
| Mass bearing unit | 6.2 kg |
|-------------------|--------|

## Mounting information

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

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