



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

## 638/8-2Z

### Deep groove ball bearing with seals or shields

Single row deep groove ball bearings with seals or shields are particularly versatile, have low friction and are optimized for low noise and low vibration, which enables high rotational speeds. They accommodate radial and axial loads in both directions, are easy to mount, and require less maintenance than many other bearing types. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out.

- Integral sealing prolongs bearing service life
- Simple, versatile and robust design
- Low friction and high-speed capability
- Accommodate radial and axial loads in both directions
- Require little maintenance

# Overview

## Dimensions

Bore diameter	0.315 in
Outside diameter	0.63 in
Width	0.236 in

## Performance

Basic dynamic load rating	184 lbf
Basic static load rating	67 lbf
Reference speed	90 000 r/min
Limiting speed	45 000 r/min

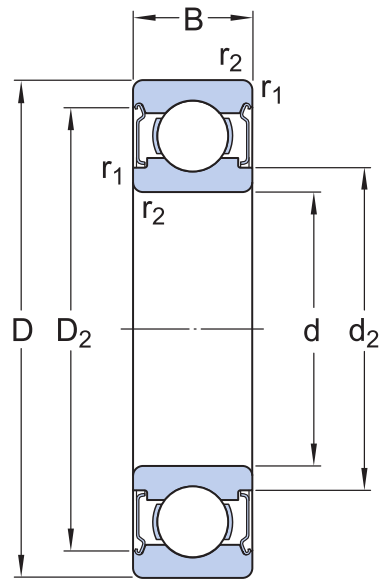
## Properties

Filling slots	Without
Number of rows	1
Locating feature, bearing outer ring	None
Bore type	Cylindrical
Matched arrangement	No
Radial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Shield on both sides
Sealing type	Non-contact
Lubricant	Grease
Relubrication feature	Without

## Logistics

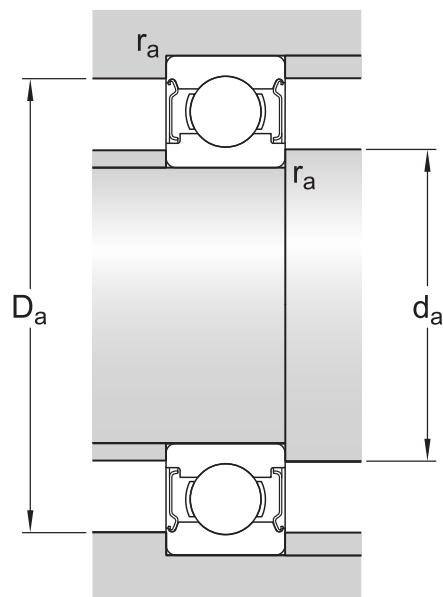
Product net weight	0.0097 lb
eClass code	23-05-08-01
UNSPSC code	31171504

## Technical specification



## Dimensions

$d$	0.315 in	Bore diameter
$D$	0.63 in	Outside diameter
$B$	0.236 in	Width
$d_2$	$\approx 0.38$ in	Recess diameter
$D_2$	$\approx 0.559$ in	Recess diameter
$r_{1,2}$	min. 0.008 in	Chamfer dimension



## Abutment dimensions

$d_a$	min. 0.37 in	Diameter of shaft abutment
$d_a$	max. 0.374 in	Diameter of shaft abutment
$D_a$	max. 0.575 in	Diameter of housing abutment
$r_a$	max. 0.008 in	Radius of shaft or housing fillet

## Calculation data

Basic dynamic load rating	C	184 lbf
Basic static load rating	$C_0$	67 lbf
Fatigue load limit	$P_u$	2.7 lbf
Reference speed		90 000 r/min
Limiting speed		45 000 r/min
Minimum load factor	$k_f$	0.015
Calculation factor	$f_0$	7.5

## Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

## Tolerances and clearances

### GENERAL BEARING SPECIFICATIONS

- **Tolerances:** Normal (metric), P6, P5, Normal (inch)
- **Radial internal clearance:** Classes C2 to C5

## BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fits

## More Information

### Product details

[Single row deep groove ball bearings](#)

[Stainless steel deep groove ball bearings](#)

[Single row deep groove ball bearings with filling slots](#)

[Double row deep groove ball bearings](#)

[General bearing specifications](#)

[Loads](#)

[Temperature limits](#)

[Permissible speed](#)

[Designation system](#)

### Engineering information

[Principles of rolling bearing selection](#)

[General bearing knowledge](#)

[Bearing selection process](#)

[Bearing interfaces](#)

[Seat tolerances for standard conditions](#)

[Selecting internal clearance](#)

[Lubrication](#)

[Sealing, mounting and dismounting](#)

[Bearing failure and how to prevent it](#)

### Tools

[SKF Product select](#)

[SimPro Quick](#)

[Bearing Frequency Calculator](#)

[LubeSelect for SKF greases](#)

[Heater selection tool](#)

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