

# 22311 E/VA405 Spherical roller bearing for vibratory applications, with relubrication features

Spherical roller bearing for vibratory applications, with relubrication features

Spherical roller bearings can accommodate heavy loads in both directions. They are self-aligning and accommodate misalignment and shaft deflections, with virtually no increase in friction or temperature. This bearing design offers excellent performance in many types of vibrating machinery. The design includes features to facilitate relubrication. The bearings can be used in a modular system, including housings, sleeves and nuts.

- Accommodate misalignment
- High load carrying capacity
- Accommodate very high vibration levels
- Low friction and long service life
- Increased wear resistance

## Overview

### Dimensions

Bore diameter	55 mm
Outside diameter	120 mm
Width	43 mm

### Performance

Basic dynamic load rating	280 kN
Basic static load rating	280 kN
Reference speed	4 300 r/min
Limiting speed	5 600 r/min
SKF performance class	SKF Explorer

### Properties

Number of rows	2
Locating feature, bearing outer ring	Without
Bore type	Cylindrical
Cage	Surface-hardened sheet metal
Radial internal clearance	C4
Tolerance class	Normal
Tolerance class	Normal, bore to P5 and outside

for dimensions	diameter P6
Tolerance class for run-out	Normal
Sealing	Without
Lubricant	None
Relubrication feature	With

# Technical Specification

SKF performance class

SKF Explorer

Bore type

Cylindrical

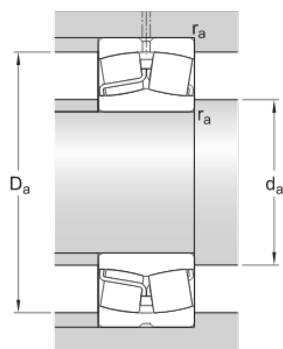


## Dimensions

d	55 mm	Bore diameter
D	120 mm	Outside diameter
B	43 mm	Width
$d_2$	$\approx 70.1$ mm	Shoulder diameter of inner ring
$D_1$	$\approx 102$ mm	Shoulder/recess diameter of outer ring
b	5.5 mm	Width of lubrication groove
K	3 mm	Diameter of lubrication hole
$r_{1,2}$	min. 2 mm	Chamfer dimension

## Abutment dimensions

$d_a$	min. 66 mm	Diameter of shaft abutment
$D_a$	max. 109 mm	Diameter of housing abutment
$r_a$	max. 2 mm	Radius of fillet



## Calculation data

Basic dynamic load rating	C	280 kN
Basic static load rating	$C_0$	280 kN

Fatigue load limit	$P_u$	30 kN
Reference speed		4 300 r/min
Limiting speed		5 600 r/min
Limiting value	$e$	0.35
Calculation factor	$Y_1$	1.9
Calculation factor	$Y_2$	2.9
Calculation factor	$Y_0$	1.8
Permissible rotational acceleration for oil lubrication		765 m/s <sup>2</sup>
Permissible linear acceleration for oil lubrication		255 m/s <sup>2</sup>

## Mass

Mass		2.45 kg
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## Tolerance class

Dimensional tolerances	Normal, bore to P5 and outside diameter P6	
Radial run-out		Normal

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