

# GEM 20 ES-2RS Radial spherical plain bearing, requiring maintenance, sealed, metric sizes

## Radial spherical plain bearing, requiring maintenance, sealed, metric sizes

Radial spherical plain bearings are designed to accommodate radial and combined radial and axial loads, and also misalignment. This specific design includes a steel/steel sliding contact surface combination, an extended inner ring and a double-lip contact seal on both sides. The bearings require maintenance and can be relubricated via lubrication holes and an annular groove in both rings.

- Designed for radial and combined radial and axial loads
- Long service life
- Minimal maintenance
- Suitable for heavy static, alternating or impact loads
- Extended inner ring can save spacer rings

## Overview

### Dimensions

Bore diameter	20 mm
Outside diameter	35 mm
Width, inner ring	24 mm
Width, outer ring	12 mm

### Performance

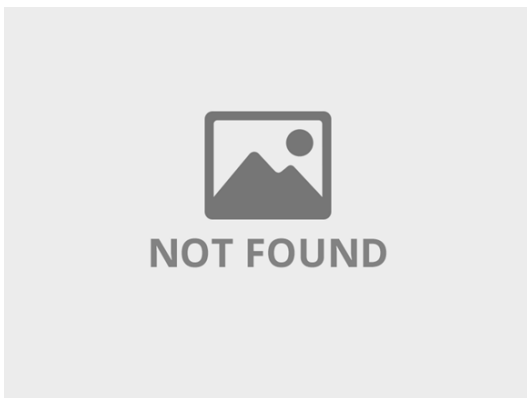
Basic dynamic load rating	30 kN
Basic static load rating	146 kN

### Properties

Sliding contact surface combination	Steel/steel, standard
Material, inner ring	Bearing steel
Material, outer ring	Bearing steel
Maintenance	Relubrication required
Radial internal clearance	CN
Sealing	Seal on both sides
Sealing type	Double-lip
Relubrication feature	With

# Technical Specification

Maintenance	Relubrication required
Sliding contact surface combination	Steel/steel, standard
Material, inner ring	Bearing steel
Material, outer ring	Bearing steel
Sealing	Seal on both sides
Sealing type	Double-lip

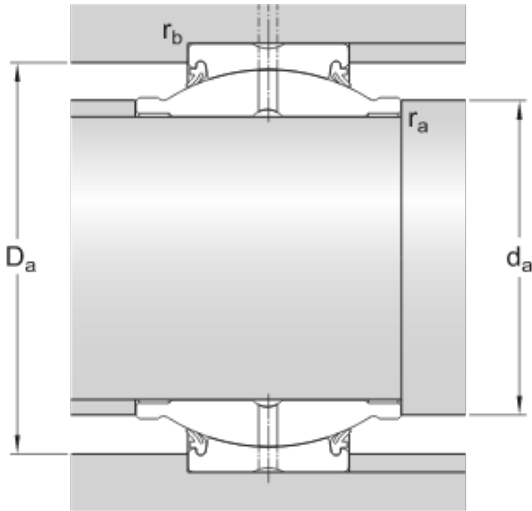


## Dimensions

d	20 mm	Bore diameter
D	35 mm	Outside diameter
B	24 mm	Width
C	12 mm	Width outer ring
$\alpha$	6 °	Angle of tilt
$d_k$	29 mm	Raceway diameter inner ring
$d_1$	≈ 24 mm	Shoulder diameter cylindrical extension inner ring
b	3.1 mm	Width annular lubrication groove at outer ring
$b_1$	3.2 mm	Width annular lubrication groove at inner ring
M	2 mm	Diameter lubrication hole (outer ring)
$r_1$	min. 0.3 mm	Chamfer dimension bore
$r_2$	min. 0.3 mm	Chamfer dimension outer ring

## Abutment dimensions

$d_a$	min. 23 mm	Abutment diameter shaft
$d_a$	max. 24 mm	Abutment diameter shaft



$D_a$ min. 30.9 mm	Abutment diameter housing
$D_a$ max. 33.2 mm	Abutment diameter housing
$r_a$ max. 0.3 mm	Fillet radius shaft
$r_b$ max. 0.3 mm	Fillet radius housing

## Calculation data

Basic dynamic load rating	C	30 kN
Basic static load rating	$C_0$	146 kN
Specific dynamic load factor	K	100 N/mm <sup>2</sup>
Specific static load factor	$K_0$	500 N/mm <sup>2</sup>
Material constant	$K_M$	330

## Mass

Mass plain bearing	0.073 kg
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