



# 1301 EM Self-aligning ball bearings

## Self-aligning ball bearings

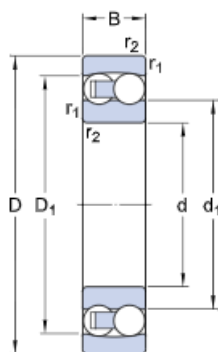
### Bearing data

Tolerances,  
Normal, JS7,  
Radial internal clearance,  
table

### Bearing interfaceS

Seat tolerances for standard  
conditions,  
Tolerances and resultant fits

## Technical specification

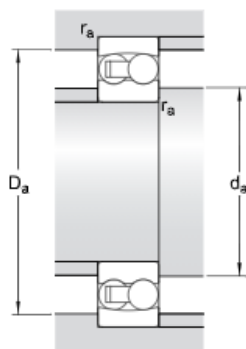


### DIMENSIONS

|                  |           |                              |
|------------------|-----------|------------------------------|
| d                | 12 mm     | Bore diameter                |
| D                | 37 mm     | Outside diameter             |
| B                | 12 mm     | Width                        |
| d <sub>1</sub>   | ≈ 20.2 mm | Shoulder diameter inner ring |
| D <sub>1</sub>   | ≈ 29.5 mm | Shoulder diameter outer ring |
| r <sub>1,2</sub> | min. 1 mm | Chamfer dimension            |

### ABUTMENT DIMENSIONS

|                     |         |                           |
|---------------------|---------|---------------------------|
| d <sub>a</sub> min. | 17.6 mm | Abutment diameter shaft   |
| D <sub>i</sub> max. | 31.4 mm | Abutment diameter housing |
| r <sub>a</sub> max. | 1 mm    | Fillet radius             |



## CALCULATION DATA

|                |              |                                  |
|----------------|--------------|----------------------------------|
| C              | 9.36 kN      | Basic dynamic load rating        |
| C <sub>0</sub> | 2.16 kN      | Basic static load rating         |
| P <sub>u</sub> | 0.112 kN     | Fatigue load limit               |
|                | 40 000 r/min | Reference speed                  |
|                | 28 000 r/min | Limiting speed                   |
| α              | 3 °          | Permissible angular misalignment |
| k <sub>r</sub> | 0.04         | Calculation factor               |
| e              | 0.35         | Calculation factor               |
| Y <sub>0</sub> | 1.8          | Calculation factor               |
| Y <sub>1</sub> | 1.8          | Calculation factor               |
| Y <sub>2</sub> | 2.8          | Calculation factor               |

## MASS

|          |              |
|----------|--------------|
| 0.073 kg | Mass bearing |
|----------|--------------|