



FAG

**21308-E1-XL**

## Spherical Roller Bearing

Spherical roller bearings 213...-E1, main dimensions to DIN 635-2

X-life

## Technical information



## Your current product variant

|                           |              |                           |
|---------------------------|--------------|---------------------------|
| Design                    | E1           | Without central rip       |
| Bore type                 | Z            | Cylindrical               |
| Cage                      | JPA          | Sheet metal cage          |
| Radial internal clearance | CN (Group N) | Normal internal clearance |
| Relubrication facility    | Standard     |                           |

## Main Dimensions &amp; Performance Data

|             |             |                                   |
|-------------|-------------|-----------------------------------|
| d           | 40 mm       | Bore diameter                     |
| D           | 90 mm       | Outside diameter                  |
| B           | 23 mm       | Width                             |
| $C_r$       | 109.000 N   | Basic dynamic load rating, radial |
| $C_{0r}$    | 107.000 N   | Basic static load rating, radial  |
| $C_{ur}$    | 14.600 N    | Fatigue load limit, radial        |
| $n_G$       | 9.800 1/min | Limiting speed                    |
| $n_{gr}$    | 5.200 1/min | Reference speed                   |
| $\approx m$ | 0,722 kg    | Weight                            |

## Mounting dimensions

|              |        |                                      |
|--------------|--------|--------------------------------------|
| $d_{a \min}$ | 49 mm  | Minimum diameter shaft shoulder      |
| $D_{a \max}$ | 81 mm  | Maximum diameter of housing shoulder |
| $r_{a \max}$ | 1,5 mm | Maximum recess radius                |



## Dimensions

|            |         |                                    |
|------------|---------|------------------------------------|
| $r_{\min}$ | 1,5 mm  | Minimum chamfer dimension          |
| $D_1$      | 80,8 mm | Bore diameter outer ring           |
| $d_2$      | 59,9 mm | Raceway diameter of the inner ring |
| $d_s$      | 3,2 mm  | Diameter lubrication hole          |
| $n_s$      | 4,8 mm  | Width of lubricating groove        |

## Temperature range

|            |        |                            |
|------------|--------|----------------------------|
| $T_{\min}$ | -30 °C | Operating temperature min. |
| $T_{\max}$ | 200 °C | Operating temperature max. |

## Calculation factors

|       |      |  |
|-------|------|--|
| $e$   | 0,23 | Limiting value of $F_a/F_r$ for the applicability of diff. Values of factors X and Y |
| $Y_1$ | 2,95 | Dynamic axial load factor  |
| $Y_2$ | 4,4  | Dynamic axial load factor  |
| $Y_0$ | 2,89 | Static axial load factor   |

## Characteristics



Radial load



Axial load in one direction



Axial load in two directions



Grease Lubrication



Oil Lubrication



Not sealed



Static angular error and misalignment



Dynamic angular error and misalignment