

**FAG****22220-E1-XL-C4**

Spherical Roller Bearing

Spherical roller bearings 222...-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 | C4 (Group 4) | Internal clearance larger than C3 |
| Relubrication facility    | Standard     |                                   |

**Main Dimensions & Performance Data**

|             |             |                                   |
|-------------|-------------|-----------------------------------|
| d           | 100 mm      | Bore diameter                     |
| D           | 180 mm      | Outside diameter                  |
| B           | 46 mm       | Width                             |
| $C_r$       | 430.000 N   | Basic dynamic load rating, radial |
| $C_{0r}$    | 475.000 N   | Basic static load rating, radial  |
| $C_{ur}$    | 53.000 N    | Fatigue load limit, radial        |
| $n_G$       | 4.550 1/min | Limiting speed                    |
| $n_{gr}$    | 3.150 1/min | Reference speed                   |
| $\approx m$ | 4,938 kg    | Weight                            |

**Mounting dimensions**

|              |        |                                      |
|--------------|--------|--------------------------------------|
| $d_{a \min}$ | 112 mm | Minimum diameter shaft shoulder      |
| $D_{a \max}$ | 168 mm | Maximum diameter of housing shoulder |
| $r_{a \max}$ | 2,1 mm | Maximum recess radius                |



## Dimensions

|            |          |                                    |
|------------|----------|------------------------------------|
| $r_{\min}$ | 2,1 mm   | Minimum chamfer dimension          |
| $D_1$      | 161,4 mm | Bore diameter outer ring           |
| $d_2$      | 119 mm   | Raceway diameter of the inner ring |
| $d_s$      | 4,8 mm   | Diameter lubrication hole          |
| $n_s$      | 9,5 mm   | Width of lubricating groove        |

## Temperature range

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

## Calculation factors

|       |      |  |
|-------|------|--|
| $e$   | 0,24 | Limiting value of $F_a/F_r$ for the applicability of diff. Values of factors X and Y |
| $Y_1$ | 2,84 | Dynamic axial load factor  |
| $Y_2$ | 4,23 | Dynamic axial load factor  |
| $Y_0$ | 2,78 | 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