



FAG

**231/530-BEA-XL-MB1-C3**

Spherical Roller Bearing

Spherical roller bearing 231..-BEA-XL-MB1, symmetric 2 outer ribs with rib washer

X-life

## Technical information



## Your current product variant

|                           |              |                                   |
|---------------------------|--------------|-----------------------------------|
| Design                    | BEA          | With lose center lip ring         |
| Bore type                 | Z            | Cylindrical                       |
| Cage                      | MB1          | Solid brass cage                  |
| Radial internal clearance | C3 (Group 3) | Internal clearance larger than CN |
| Relubrication facility    | Standard     |                                   |

## Main Dimensions &amp; Performance Data

|             |              |                                   |
|-------------|--------------|-----------------------------------|
| d           | 530 mm       | Bore diameter                     |
| D           | 870 mm       | Outside diameter                  |
| B           | 272 mm       | Width                             |
| $C_r$       | 8.900.000 N  | Basic dynamic load rating, radial |
| $C_{0r}$    | 15.000.000 N | Basic static load rating, radial  |
| $C_{ur}$    | 960.000 N    | Fatigue load limit, radial        |
| $n_G$       | 660 1/min    | Limiting speed                    |
| $n_{gr}$    | 325 1/min    | Reference speed                   |
| $\approx m$ | 639 kg       | Weight                            |

## Mounting dimensions

|              |        |                                      |
|--------------|--------|--------------------------------------|
| $d_{a \min}$ | 562 mm | Minimum diameter shaft shoulder      |
| $D_{a \max}$ | 838 mm | Maximum diameter of housing shoulder |
| $r_{a \max}$ | 6 mm   | Maximum recess radius                |



## Dimensions

|            |          |                             |
|------------|----------|-----------------------------|
| $r_{\min}$ | 7,5 mm   | Minimum chamfer dimension   |
| $D_1$      | 760,5 mm | Bore diameter outer ring    |
| $d_s$      | 12,5 mm  | Diameter lubrication hole   |
| $n_s$      | 23,5 mm  | Width of lubricating groove |

## Temperature range

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

## Calculation factors

|       |      |  |
|-------|------|--|
| $e$   | 0,3  | Limiting value of $F_a/F_r$ for the applicability of diff. Values of factors X and Y |
| $Y_1$ | 2,25 | Dynamic axial load factor  |
| $Y_2$ | 3,34 | Dynamic axial load factor  |
| $Y_0$ | 2,2  | Static axial load factor   |

## Characteristics

|   |  |
|---|--|
|  | Radial load                            |
|  | Axial load in one direction            |
|  | Axial load in two directions           |
|  | Grease Lubrication                     |
|  | Oil Lubrication                        |
|  | Not sealed                             |
|  | Large bearing                          |
|  | Static angular error and misalignment  |
|  | Dynamic angular error and misalignment |