



FAG

23136-E1-XL-K-TVPB-C3

Spherical Roller Bearing

Spherical roller bearings 231...-E1-K, main dimensions to DIN 635-2, with tapered bore, taper 1:12

X-life

Technical information



Your current product variant

| | | |
|---------------------------|--------------|-----------------------------------|
| Design | E1 | Without central rip |
| Bore type | K | Tapered, taper 1:12 |
| Cage | TVPB | Plastic cage |
| Radial internal clearance | C3 (Group 3) | Internal clearance larger than CN |
| Relubrication facility | Standard | |

Main Dimensions & Performance Data

| | | |
|-------------|-------------|-----------------------------------|
| d | 180 mm | Bore diameter |
| D | 300 mm | Outside diameter |
| B | 96 mm | Width |
| C_r | 1.420.000 N | Basic dynamic load rating, radial |
| C_{0r} | 1.950.000 N | Basic static load rating, radial |
| C_{ur} | 199.000 N | Fatigue load limit, radial |
| n_G | 2.230 1/min | Limiting speed |
| n_{gr} | 1.350 1/min | Reference speed |
| $\approx m$ | 25,132 kg | Weight |



Mounting dimensions

| | | |
|--------------|--------|---------------------------------------|
| $d_{a \min}$ | 194 mm | Minimum diameter shaft shoulder |
| $D_{a \max}$ | 286 mm | Maximum diameter of housing shoulder |
| $r_{a \max}$ | 2,5 mm | Maximum recess radius |
| $B_{a \min}$ | 8 mm | Minimum cavity width of the sleeve |
| $d_{a \max}$ | 204 mm | Maximum diameter of shaft shoulder |
| $d_{b \min}$ | 191 mm | Minimum cavity diameter of the sleeve |

Dimensions

| | | |
|------------|----------|------------------------------------|
| r_{\min} | 3 mm | Minimum chamfer dimension |
| D_1 | 264,8 mm | Bore diameter outer ring |
| d_2 | 204,1 mm | Raceway diameter of the inner ring |
| d_s | 8 mm | Diameter lubrication hole |
| n_s | 15 mm | Width of lubricating groove |

Temperature range

| | | |
|------------|--------|----------------------------|
| T_{\min} | -30 °C | Operating temperature min. |
| T_{\max} | 120 °C | Operating temperature max. |

Calculation factors

| | | |
|-------|------|--|
| e | 0,29 | Limiting value of F_a/F_r for the applicability of diff. Values of factors X and Y |
| Y_1 | 2,32 | Dynamic axial load factor |
| Y_2 | 3,45 | Dynamic axial load factor |
| Y_0 | 2,26 | Static axial load factor |

Additional information

| | |
|---------|-------------------|
| H3136 | Adapter sleeve |
| AH3136A | Withdrawal sleeve |



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