

### ZKLF3590-2RS-2AP-XL

Axial angular contact ball bearing

Axial angular contact ball bearings  
ZKLF.-2RS-2AP-XL, matched pair, double  
direction, lip seals on both sides

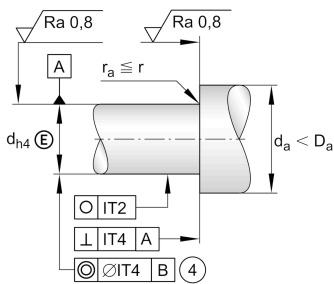
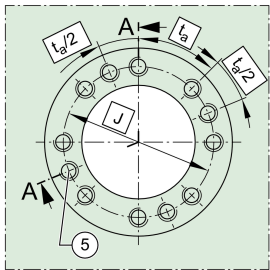
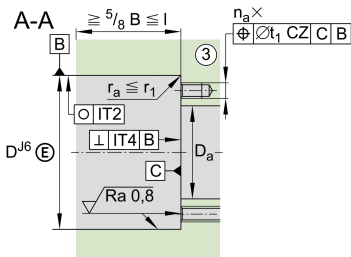
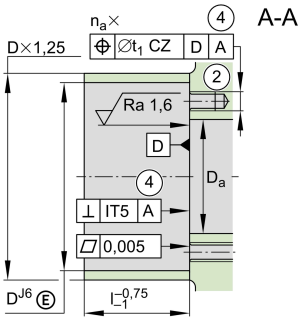
X-life

## Technical information



### Your current product variant

|                    |          |  |
|--------------------|----------|--|
| Number of bearings | 2AP      | Axial angular contact ball bearings,<br>matched pair |
| Sealing            | 2RS      | Contact lip seals on both sides                      |
| Tolerance class    | Standard |  |



### Main Dimensions & Performance Data

|                          |             |                                       |
|--------------------------|-------------|---------------------------------------|
| d                        | 35 mm       | Bore diameter                         |
|                          | 0 mm        | Bore diameter upper tolerance         |
|                          | -0,005 mm   | Bore diameter lower tolerance         |
| D                        | 90 mm       | Outside diameter                      |
|                          | 0 mm        | Outside diameter upper tolerance      |
|                          | -0,01 mm    | Outside diameter lower tolerance      |
| B                        | 68 mm       | Width                                 |
|                          | 0 mm        | Width upper tolerance                 |
|                          | -0,5 mm     | Width lower tolerance                 |
| C <sub>a</sub>           | 73.000 N    | Basic dynamic load rating, axial      |
| C <sub>0a</sub>          | 177.000 N   | Basic static load rating, axial       |
| C <sub>ua</sub>          | 10.800 N    | Fatigue load limit, axial             |
| n <sub>G</sub><br>Grease | 4.400 1/min | Limiting speed for grease lubrication |
| n <sub>g</sub>           | 2.000 1/min | Thermally safe operating speed        |
| M <sub>R</sub>           | 0,9 Nm      | Bearing frictional torque             |
| ≈m                       | 2,243 kg    | Weight                                |

### Mounting dimensions

|                    |        |  |
|--------------------|--------|--|
| D <sub>a max</sub> | 62 mm  | Maximum diameter of housing                              |
| d <sub>a min</sub> | 45 mm  | Minimum diameter shaft                                   |
| t <sub>1</sub>     | 0,2 mm | Position tolerance of bore in the housing                |
|                    | M8X80  | Size of fixing screws                                    |
| n <sub>a</sub>     | 7      | Number of holes in adjacent construction                 |
| t <sub>a</sub>     | 45 °   | Pitch separation angle of holes in adjacent construction |
|                    | M6     | Connection thread for lubrication                        |



## Dimensions

|              |        |  |
|--------------|--------|--|
| $d_1$        | 52 mm  | Rib diameter inner ring                |
| $r_{\min}$   | 0,3 mm | Minimum chamfer dimension              |
| $r_{1 \min}$ | 0,6 mm | Minimum chamfer dimension              |
| J            | 75 mm  | Pitch circle diameter fixing holes     |
| $d_2$        | 8,8 mm | Fixing holes diameter                  |
| b            | 3 mm   | Width of extraction slot               |
| l            | 59 mm  | Distance of extraction slot            |
| n            | 7      | Pitch quantity of fixing holes         |
| t            | 45 °   | Pitch separation angle of fixing holes |
| a            | 60 °   | Contact angle                          |

## Temperature range

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

## Additional information

|          |                         |   |
|----------|-------------------------|---|
| $c_{aL}$ | 1.600 N/ $\mu$ m        | Rigidity axial  |
| $c_{kL}$ | 900 Nm/mrad             | Tilting rigidity  |
| $M_m$    | 3,02 kg*cm <sup>2</sup> | Mass moment of inertia                                      |
|          | 2,5 $\mu$ m             | Axial runout  |
|          | ZMA35/58                | Recommended INA precision locknut for radial locking        |
|          | AM35/58                 | Recommended INA precision locknut for axial locking         |
| $M_A$    | 40 Nm                   | Tightening torque for the recommended INA precision locknut |
|          | 10.770 N                | Required locknut force axial                                |



### Characteristics

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Radial load



Axial load in one direction



Axial load in two directions



Lifetime lubrication, freedom from maintenance



Grease Lubrication



Sealed on both sides