

**FAG****HSS7010-E-T-P4S-UL**

High speed spindle bearing

High speed spindle bearing HSS70...-E, adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , lip seals on both sides, non-contact, restricted tolerances

## Technical information



## Your current product variant

|                         |      |  |
|-------------------------|------|--|
| Contact angle           | E    | Contact angle 25°  |
| Sealing                 | 2RSD | Non-contact sealed on both sides and greased "for life"          |
| Cage                    | T    | Laminated fabric cage  |
| Tolerance class         | P4S  | Tolerance class P4S, FAG standard better than P4 to ISO 492:2023 |
| Arrangement bearing set | U    | Single bearing   |
| Preload                 | L    | Preload light  |
| Lubricant               | GA21 | Grease for super precision bearings, standard                    |

## Main Dimensions &amp; Performance Data

|                 |              |                                       |
|-----------------|--------------|---------------------------------------|
| d               | 50 mm        | Bore diameter                         |
| D               | 80 mm        | Outside diameter                      |
| B               | 16 mm        | Width                                 |
| $C_r$           | 12.100 N     | Basic dynamic load rating, radial     |
| $C_{0r}$        | 7.700 N      | Basic static load rating, radial      |
| $C_{ur}$        | 820 N        | Fatigue load limit, radial            |
| $n_G$<br>Grease | 22.000 1/min | Limiting speed for grease lubrication |
| $n_G$           | 34.000 1/min | Limiting speed                        |
| $\approx m$     | 0,279 kg     | Weight                                |



### Mounting dimensions

|               |         |   |
|---------------|---------|---|
| $d_a$         | 56 mm   | Diameter shaft shoulder                           |
| $d_a$         | h12     | Diameter shaft shoulder clearance                 |
| $D_a$         | 74 mm   | Shoulder diameter outer ring                      |
| $D_a$         | H12     | Shoulder diameter outer ring clearance            |
| $r_{a \max}$  | 1 mm    | Maximum recess radius                             |
| $r_{a1 \max}$ | 0,3 mm  | Maximum recess radius                             |
| $a$           | 23,2 mm | Distance between the apexes of the pressure cones |

### Dimensions

|              |      |                           |
|--------------|------|---------------------------|
| $r_{\min}$   | 1 mm | Minimum chamfer dimension |
| $r_{1 \min}$ | 1 mm | Minimum chamfer dimension |
| $\alpha$     | 25 ° | Contact angle             |

### Temperature range

|            |        |                            |
|------------|--------|----------------------------|
| $T_{\min}$ | -30 °C | Operating temperature min. |
| $T_{\max}$ | 80 °C  | Operating temperature max. |

### Additional information

|           |          |                       |
|-----------|----------|-----------------------|
| $F_{VL}$  | 72 N     | Preload force light   |
| $F_{VM}$  | 216 N    | Preload force medium  |
| $F_{VH}$  | 431 N    | Preload force heavy   |
| $K_{aEL}$ | 208 N    | Lift-off force light  |
| $K_{aEM}$ | 635 N    | Lift-off force medium |
| $K_{aEH}$ | 1.297 N  | Lift-off force heavy  |
| $c_{aL}$  | 91 N/μm  | Axial rigidity light  |
| $c_{aM}$  | 135 N/μm | Axial rigidity medium |
| $c_{aH}$  | 176 N/μm | Axial rigidity heavy  |



### Characteristics

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Radial load



Axial load in one direction



Lifetime lubrication, freedom from maintenance



Grease Lubrication



Sealed on both sides