

**FAG****HC7021-E-T-P4S-UL**

## High speed spindle bearing

High speed spindle bearing HC70..-E, adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , with ceramic balls, restricted tolerances

## Technical information



## Your current product variant

|                         |         |  |
|-------------------------|---------|--|
| Preload                 | L       | Preload light  |
| Contact angle           | E       | Contact angle $25^\circ$   |
| Sealing                 | Without | Not sealed   |
| 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   |

## Main Dimensions &amp; Performance Data

|              |              |                                       |
|--------------|--------------|---------------------------------------|
| d            | 105 mm       | Bore diameter                         |
| D            | 160 mm       | Outside diameter                      |
| B            | 26 mm        | Width                                 |
| $C_r$        | 45.000 N     | Basic dynamic load rating, radial     |
| $C_{0r}$     | 33.000 N     | Basic static load rating, radial      |
| $C_{ur}$     | 2.300 N      | Fatigue load limit, radial            |
| $n_G$ Grease | 14.000 1/min | Limiting speed for grease lubrication |
| $n_G$ Oil    | 22.000 1/min | Limiting speed for oil lubrication    |
| $\approx m$  | 1,52 kg      | Weight                                |





### Mounting dimensions

|                |          |   |
|----------------|----------|---|
| $d_a$          | 116 mm   | Diameter shaft shoulder                           |
| $d_a$          | h12      | Diameter shaft shoulder clearance                 |
| $D_a$          | 150 mm   | Shoulder diameter outer ring                      |
| $D_a$          | H12      | Shoulder diameter outer ring clearance            |
| $r_{a \max}$   | 2 mm     | Maximum recess radius                             |
| $r_{a1 \max}$  | 1 mm     | Maximum recess radius                             |
| $E_{tk \min}$  | 125,8 mm | Minimum diameter injection pitch                  |
| $E_{tk \max}$  | 129 mm   | Maximum diameter injection pitch                  |
| $E_{tk1 \min}$ | 121,7 mm | Minimum diameter injection pitch                  |
| $E_{tk1 \max}$ | 129 mm   | Maximum diameter injection pitch                  |
| $a$            | 43,9 mm  | Distance between the apexes of the pressure cones |

### Dimensions

|              |      |                           |
|--------------|------|---------------------------|
| $r_{\min}$   | 2 mm | Minimum chamfer dimension |
| $r_{1 \min}$ | 2 mm | Minimum chamfer dimension |
| $\alpha$     | 25 ° | Contact angle             |

### Temperature range

|            |        |                            |
|------------|--------|----------------------------|
| $T_{\min}$ | -30 °C | Operating temperature min. |
| $T_{\max}$ | 100 °C | Operating temperature max. |



### Additional information

|           |                |                       |
|-----------|----------------|-----------------------|
| $F_{VL}$  | 184 N          | Preload force light   |
| $F_{VM}$  | 552 N          | Preload force medium  |
| $F_{VH}$  | 1.104 N        | Preload force heavy   |
| $K_{aEL}$ | 527 N          | Lift-off force light  |
| $K_{aEM}$ | 1.602 N        | Lift-off force medium |
| $K_{aEH}$ | 3.250 N        | Lift-off force heavy  |
| $c_{aL}$  | 188 N/ $\mu$ m | Axial rigidity light  |
| $c_{aM}$  | 277 N/ $\mu$ m | Axial rigidity medium |
| $c_{aH}$  | 357 N/ $\mu$ m | Axial rigidity heavy  |

### Characteristics

-  Radial load
-  Axial load in one direction
-  Grease Lubrication
-  Oil Lubrication
-  Not sealed