

**FAG****VCM7010-E-T-P4S-UL-XL**

## High speed spindle bearing

High speed spindle bearing VCM70..-E, adjusted, in pairs or sets, contact angle  $\alpha = 25^\circ$ , with ceramic balls, rings made from Vacrodur, 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	50 mm	Bore diameter
D	80 mm	Outside diameter
B	16 mm	Width
$C_r$	30.000 N	Basic dynamic load rating, radial
$C_{0r}$	9.400 N	Basic static load rating, radial
$C_{ur}$	480 N	Fatigue load limit, radial
$n_G$ Grease	30.000 1/min	Limiting speed for grease lubrication
$n_G$ Oil	45.000 1/min	Limiting speed for oil lubrication
$\approx m$	258,75 g	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
$E_{tk \min}$	61,2 mm	Minimum diameter injection pitch
$E_{tk \max}$	63 mm	Maximum diameter injection pitch
$E_{tk1 \min}$	58,8 mm	Minimum diameter injection pitch
$E_{tk1 \max}$	63 mm	Maximum diameter injection pitch
$a$	23,2 mm	Distance between the apexes of the pressure cones

### Dimensions

$r_{\min}$	1 mm	Minimum chamfer dimension
$r_{1 \min}$	0,6 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

$F_{VL}$	71 N	Preload force light
$F_{VM}$	185 N	Preload force medium
$F_{VH}$	385 N	Preload force heavy
$K_{aEL}$	202 N	Lift-off force light
$K_{aEM}$	534 N	Lift-off force medium
$K_{aEH}$	1.124 N	Lift-off force heavy
$c_{aL}$	92 N/ $\mu$ m	Axial rigidity light
$c_{aM}$	128 N/ $\mu$ m	Axial rigidity medium
$c_{aH}$	167 N/ $\mu$ m	Axial rigidity heavy

### Characteristics

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