

# Spindle ball bearing HY KH 6014 C TA P4+

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## Components

|                              |                            |
|------------------------------|----------------------------|
| Bearing designation:         | HY KH 6014 C TA            |
| Bearing design:              | KH                         |
| Series / size:               | 6014                       |
| Ball material:               | Ceramic                    |
| Cage:                        | TA                         |
| Seal:                        | 2RZ optional (with grease) |
| Precision:                   | P4+                        |
| Main dimensions [d x D x B]: | 70 x 110 x 20 mm           |

## Load data

|                       |                            |
|-----------------------|----------------------------|
| Static load capacity  | $C_{0r}$ : 16600 N         |
| Dynamic load capacity | $C_r$ : 23700 N            |
| Fatigue load limit    | $C_U$ : 629 N              |
| Speed limit           | $n_{grease}$ : 22125 1/min |
| Speed limit           | $n_{oil}$ : 29500 1/min    |
| Light preload         | L: 120 N                   |
| Axial rigidity        | $C_{ax}$ : 75 N/ $\mu$ m   |
| Medium preload        | M: 360 N                   |
| Axial rigidity        | $C_{ax}$ : 114 N/ $\mu$ m  |
| Heavy preload         | S: 720 N                   |
| Axial rigidity        | $C_{ax}$ : 150 N/ $\mu$ m  |
| Spring preload        | Ff: 780 N (for $n_{max}$ ) |

## Geometrical Data

|                                          |                         |                                              |                           |
|------------------------------------------|-------------------------|----------------------------------------------|---------------------------|
| Bore diameter                            | d: 70 mm                | Oiling nozzle position                       | $d_T$ : 85.7 mm           |
| Outer diameter                           | D: 110 mm               | Pitch circle diameter                        | $d_m$ : 88.3 mm           |
| Width of single bearing                  | B: 20 mm                | Inner diameter of outer ring                 | $D_1$ : 94 mm             |
| Ball diameter                            | $D_w$ : 9.525 mm        | Undercut of associated component             | $r_{a \max}$ : 1 mm       |
| Number of balls                          | Z: 24                   | Undercut of associated component (open side) | $r_{b \max}$ : 1 mm       |
| Chamfer (min)                            | $r_{1,2 \min}$ : 1.1 mm | Abutment diameter inner ring                 | $d_{a,b \min}$ : 76.3 mm  |
| Chamfer (min), open side                 | $r_{3,4 \min}$ : 1 mm   | Abutment diameter outer ring                 | $D_{a,b \max}$ : 104.6 mm |
| Outer diameter of inner ring             | $d_1$ : 82.6 mm         | Inner diameter of outer ring (open side)     | $D_2$ : 98 mm             |
| Outer diameter of inner ring (open side) | $d_2$ : 81.1 mm         | Bearing weight                               | m: 0.58 kg                |
|                                          |                         | Contact angle                                | Alpha 0: 17°              |



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.