

# Spindle ball bearing HY S 61900 C TA P4+

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## Components

|                              |                 |
|------------------------------|-----------------|
| Bearing designation:         | HY S 61900 C TA |
| Bearing design:              | S               |
| Series / size:               | 61900           |
| Ball material:               | Ceramic         |
| Cage:                        | TA              |
| Precision:                   | P4+             |
| Main dimensions [d x D x B]: | 10 x 22 x 6 mm  |

## Load data

|                       |                             |
|-----------------------|-----------------------------|
| Static load capacity  | $C_{0r}$ : 1310 N           |
| Dynamic load capacity | $C_r$ : 2800 N              |
| Fatigue load limit    | $C_U$ : 50 N                |
| Speed limit           | $n_{grease}$ : 101250 1/min |
| Speed limit           | $n_{oil}$ : 135000 1/min    |
| Light preload         | L: 12 N                     |
| Axial rigidity        | $C_{ax}$ : 14 N/ $\mu$ m    |
| Medium preload        | M: 40 N                     |
| Axial rigidity        | $C_{ax}$ : 23 N/ $\mu$ m    |
| Heavy preload         | S: 75 N                     |
| Axial rigidity        | $C_{ax}$ : 31 N/ $\mu$ m    |
| Spring preload        | Ff: 55 N (for $n_{max}$ )   |

## Geometrical Data

|  |                        |  |                         |
|--|------------------------|--|-------------------------|
| Bore diameter                            | d: 10 mm               | Oiling nozzle position                       | $d_T$ : 14.7 mm         |
| Outer diameter                           | D: 22 mm               | Pitch circle diameter                        | $d_m$ : 15.7 mm         |
| Width of single bearing                  | B: 6 mm                | Inner diameter of outer ring                 | $D_1$ : 17.8 mm         |
| Ball diameter                            | $D_w$ : 3.175 mm       | Undercut of associated component             | $r_{a max}$ : 0.3 mm    |
| Number of balls                          | Z: 11                  | Undercut of associated component (open side) | $r_{b max}$ : 0.3 mm    |
| Chamfer (min)                            | $r_{1,2 min}$ : 0.3 mm | Abutment diameter inner ring                 | $d_{a,b min}$ : 11.8 mm |
| Chamfer (min), open side                 | $r_{3,4 min}$ : 0.3 mm | Abutment diameter outer ring                 | $D_{a,b max}$ : 20.6 mm |
| Outer diameter of inner ring             | $d_1$ : 13.6 mm        | Inner diameter of outer ring (open side)     | $D_2$ : 18.9 mm         |
| Outer diameter of inner ring (open side) | $d_2$ : -              | Bearing weight                               | m: 0.009 kg             |
|  |                        | Contact angle                                | Alpha 0: 15°            |



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