

# Spindle ball bearing HY S 61915 C TA P4+

08.05.2024



## Components

|                              |                  |
|------------------------------|------------------|
| Bearing designation:         | HY S 61915 C TA  |
| Bearing design:              | S                |
| Series / size:               | 61915            |
| Ball material:               | Ceramic          |
| Cage:                        | TA               |
| Seal:                        | 2RZ upon request |
| Precision:                   | P4+              |
| Main dimensions [d x D x B]: | 75 x 105 x 16 mm |

## Load data

|                       |                             |
|-----------------------|-----------------------------|
| Static load capacity  | $C_{0r}$ : 30000 N          |
| Dynamic load capacity | $C_r$ : 29500 N             |
| Fatigue load limit    | $C_U$ : 1127 N              |
| Speed limit           | $n_{grease}$ : 17625 1/min  |
| Speed limit           | $n_{oil}$ : 23500 1/min     |
| Light preload         | L: 150 N                    |
| Axial rigidity        | $C_{ax}$ : 81 N/ $\mu$ m    |
| Medium preload        | M: 440 N                    |
| Axial rigidity        | $C_{ax}$ : 130 N/ $\mu$ m   |
| Heavy preload         | S: 890 N                    |
| Axial rigidity        | $C_{ax}$ : 182 N/ $\mu$ m   |
| Spring preload        | Ff: 1230 N (for $n_{max}$ ) |

## Geometrical Data

|                                          |                         |                                              |                          |
|------------------------------------------|-------------------------|----------------------------------------------|--------------------------|
| Bore diameter                            | d: 75 mm                | Oiling nozzle position                       | $d_T$ : 87.4 mm          |
| Outer diameter                           | D: 105 mm               | Pitch circle diameter                        | $d_m$ : 90 mm            |
| Width of single bearing                  | B: 16 mm                | Inner diameter of outer ring                 | $D_1$ : 95.3 mm          |
| Ball diameter                            | $D_w$ : 8.731 mm        | Undercut of associated component             | $r_{a \max}$ : 0.6 mm    |
| Number of balls                          | Z: 25                   | Undercut of associated component (open side) | $r_{b \max}$ : 0.3 mm    |
| Chamfer (min)                            | $r_{1,2 \min}$ : 0.6 mm | Abutment diameter inner ring                 | $d_{a,b \min}$ : 79.6 mm |
| Chamfer (min), open side                 | $r_{3,4 \min}$ : 0.3 mm | Abutment diameter outer ring                 | $D_{a,b \max}$ : 101 mm  |
| Outer diameter of inner ring             | $d_1$ : 84.7 mm         | Inner diameter of outer ring (open side)     | $D_2$ : 98.9 mm          |
| Outer diameter of inner ring (open side) | $d_2$ : -               | Bearing weight                               | m: 0.31 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.