

# Spindle ball bearing HY S 619/6 C TA P4+

08.05.2024



## Components

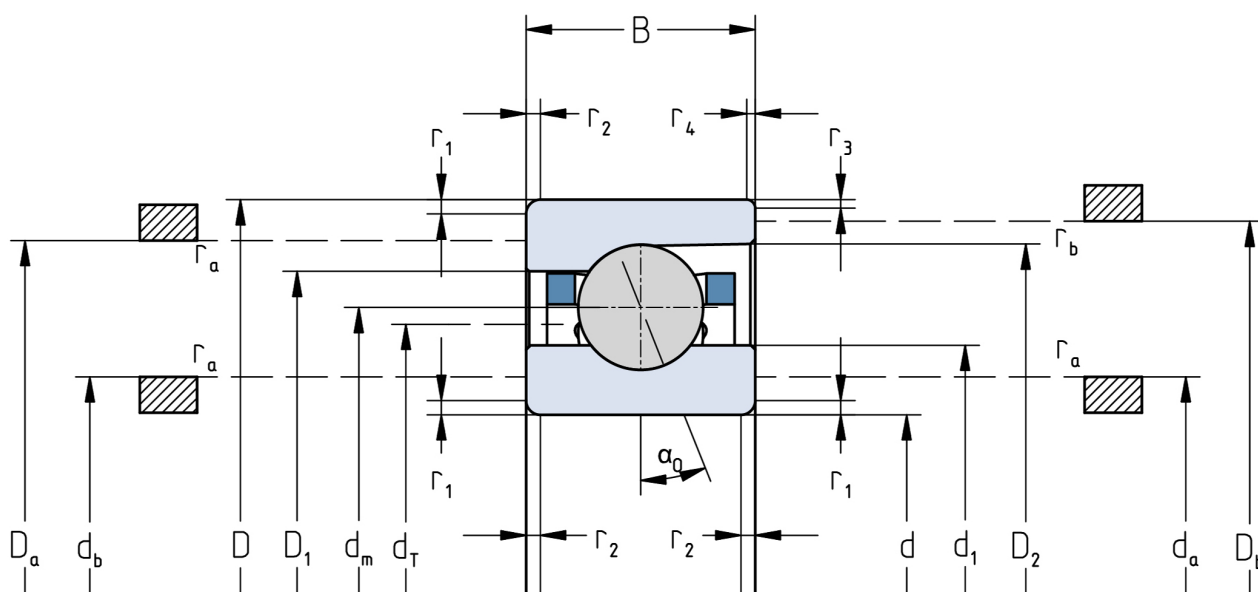
|                              |                 |
|------------------------------|-----------------|
| Bearing designation:         | HY S 619/6 C TA |
| Bearing design:              | S               |
| Series / size:               | 619/6           |
| Ball material:               | Ceramic         |
| Cage:                        | TA              |
| Precision:                   | P4+             |
| Main dimensions [d x D x B]: | 6 x 15 x 5 mm   |

## Load data

|                       |                             |
|-----------------------|-----------------------------|
| Static load capacity  | $C_{0r}$ : 495 N            |
| Dynamic load capacity | $C_r$ : 1320 N              |
| Fatigue load limit    | $C_U$ : 19 N                |
| Speed limit           | $n_{grease}$ : 153750 1/min |
| Speed limit           | $n_{oil}$ : 205000 1/min    |
| Light preload         | L: 7 N                      |
| Axial rigidity        | $C_{ax}$ : 9 N/ $\mu$ m     |
| Medium preload        | M: 20 N                     |
| Axial rigidity        | $C_{ax}$ : 13 N/ $\mu$ m    |
| Heavy preload         | S: 40 N                     |
| Axial rigidity        | $C_{ax}$ : 19 N/ $\mu$ m    |
| Spring preload        | Ff: 20 N (for $n_{max}$ )   |

## Geometrical Data

|                                          |                         |                                              |                         |
|------------------------------------------|-------------------------|----------------------------------------------|-------------------------|
| Bore diameter                            | d: 6 mm                 | Oiling nozzle position                       | $d_T$ : 9.4 mm          |
| Outer diameter                           | D: 15 mm                | Pitch circle diameter                        | $d_m$ : 10.3 mm         |
| Width of single bearing                  | B: 5 mm                 | Inner diameter of outer ring                 | $D_1$ : 12.1 mm         |
| Ball diameter                            | $D_w$ : 2.381 mm        | Undercut of associated component             | $r_{a \max}$ : 0.2 mm   |
| Number of balls                          | Z: 9                    | Undercut of associated component (open side) | $r_{b \max}$ : 0.2 mm   |
| Chamfer (min)                            | $r_{1,2 \min}$ : 0.2 mm | Abutment diameter inner ring                 | $d_{a,b \min}$ : 7.4 mm |
| Chamfer (min), open side                 | $r_{3,4 \min}$ : 0.2 mm | Abutment diameter outer ring                 | $D_{a,b \max}$ : 14 mm  |
| Outer diameter of inner ring             | $d_1$ : 8.5 mm          | Inner diameter of outer ring (open side)     | $D_2$ : 12.7 mm         |
| Outer diameter of inner ring (open side) | $d_2$ : -               | Bearing weight                               | m: 0.003 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.