

# Spindle ball bearing S 6203 C TXM P4+

18.04.2024



## Components

|                      |                        |
|----------------------|------------------------|
| Bearing designation: | S 6203 C TXM           |
| Bearing design:      | S                      |
| Series / size:       | 6203                   |
| Ball material:       | Steel 100Cr6           |
| Cage:                | TXM                    |
| Precision:           | P4+ (UP+ Upon request) |

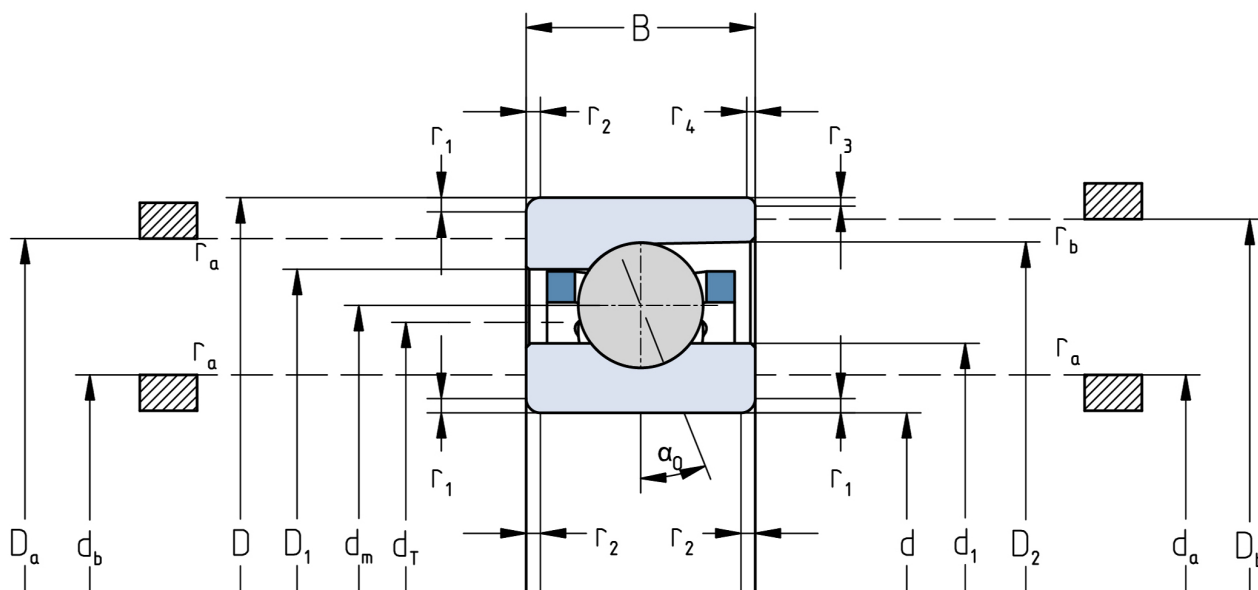
Main dimensions [d x D x B]: 17 x 40 x 12 mm

## Load data

|                       |                            |
|-----------------------|----------------------------|
| Static load capacity  | $C_{0r}$ : 6400 N          |
| Dynamic load capacity | $C_r$ : 11400 N            |
| Fatigue load limit    | $C_U$ : 332 N              |
| Speed limit           | $n_{grease}$ : 45000 1/min |
| Speed limit           | $n_{oil}$ : 60000 1/min    |
| Light preload         | L: 60 N                    |
| Axial rigidity        | $C_{ax}$ : 29 N/ $\mu$ m   |
| Medium preload        | M: 170 N                   |
| Axial rigidity        | $C_{ax}$ : 47 N/ $\mu$ m   |
| Heavy preload         | S: 350 N                   |
| Axial rigidity        | $C_{ax}$ : 68 N/ $\mu$ m   |
| Spring preload        | Ff: 360 N (for $n_{max}$ ) |

## Geometrical Data

|                                          |                         |                                              |                          |
|------------------------------------------|-------------------------|----------------------------------------------|--------------------------|
| Bore diameter                            | d: 17 mm                | Oiling nozzle position                       | $d_T$ : 26.6 mm          |
| Outer diameter                           | D: 40 mm                | Pitch circle diameter                        | $d_m$ : 28.5 mm          |
| Width of single bearing                  | B: 12 mm                | Inner diameter of outer ring                 | $D_1$ : 33 mm            |
| Ball diameter                            | $D_w$ : 6.747 mm        | Undercut of associated component             | $r_{a \max}$ : 0.6 mm    |
| Number of balls                          | Z: 11                   | Undercut of associated component (open side) | $r_{b \max}$ : 0.3 mm    |
| Chamfer (min)                            | $r_{1,2 \min}$ : 0.6 mm | Abutment diameter inner ring                 | $d_{a,b \min}$ : 20.9 mm |
| Chamfer (min), open side                 | $r_{3,4 \min}$ : 0.3 mm | Abutment diameter outer ring                 | $D_{a,b \max}$ : 37.2 mm |
| Outer diameter of inner ring             | $d_1$ : 24.1 mm         | Inner diameter of outer ring (open side)     | $D_2$ : 35.4 mm          |
| Outer diameter of inner ring (open side) | $d_2$ : -               | Bearing weight                               | m: 0.063 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.