

# Spindle ball bearing SM 6008 C TXM P4+

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## Components

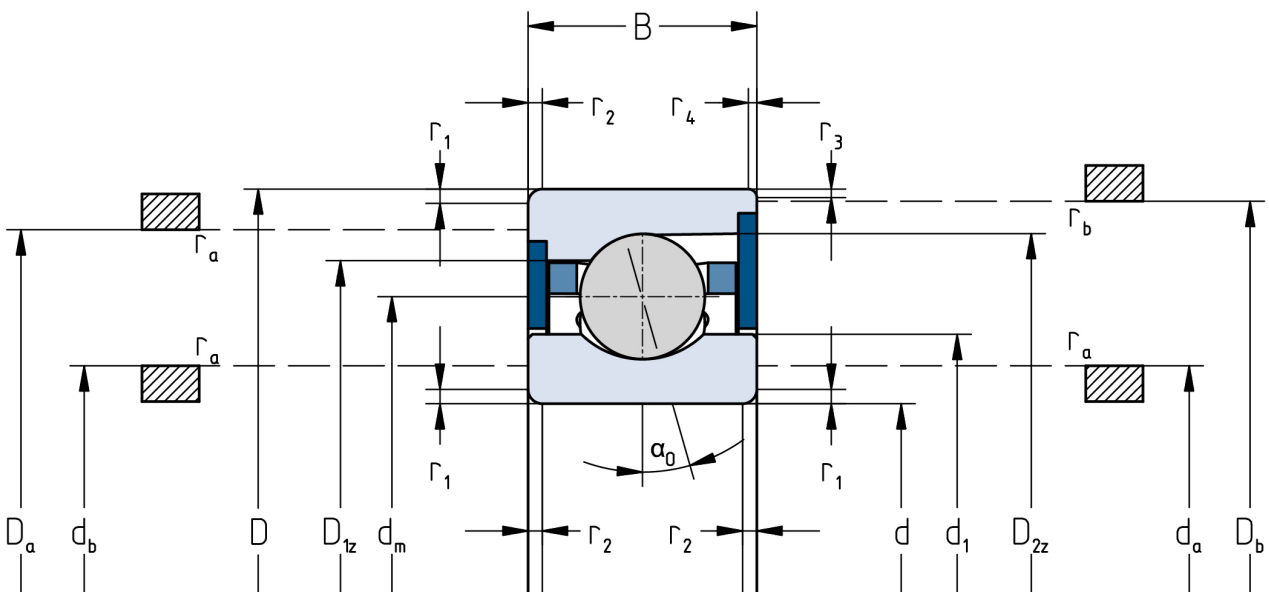
|                              |                            |
|------------------------------|----------------------------|
| Bearing designation:         | SM 6008 C TXM              |
| Bearing design:              | SM                         |
| Series / size:               | 6008                       |
| Ball material:               | Steel 100Cr6               |
| Cage:                        | TXM                        |
| Seal:                        | 2RZ optional (with grease) |
| Precision:                   | P4+ (UP+ Upon request)     |
| Main dimensions [d x D x B]: | 40 x 68 x 15 mm            |

## Load data

|                       |                            |
|-----------------------|----------------------------|
| Static load capacity  | $C_{0r}$ : 9400 N          |
| Dynamic load capacity | $C_r$ : 15400 N            |
| Fatigue load limit    | $C_U$ : 486 N              |
| Speed limit           | $n_{grease}$ : 27750 1/min |
| Speed limit           | $n_{oil}$ : 37000 1/min    |
| Light preload         | L: 80 N                    |
| Axial rigidity        | $C_{ax}$ : 40 N/ $\mu$ m   |
| Medium preload        | M: 230 N                   |
| Axial rigidity        | $C_{ax}$ : 61 N/ $\mu$ m   |
| Heavy preload         | S: 460 N                   |
| Axial rigidity        | $C_{ax}$ : 83 N/ $\mu$ m   |
| Spring preload        | Ff: 530 N (for $n_{max}$ ) |

## Geometrical Data

|  |                        |  |                         |
|--|------------------------|--|-------------------------|
| Bore diameter                            | d: 40 mm               | Oiling nozzle position                       | $d_f$ : 51.8 mm         |
| Outer diameter                           | D: 68 mm               | Pitch circle diameter                        | $d_m$ : 54 mm           |
| Width of single bearing                  | B: 15 mm               | Inner diameter of outer ring                 | $D_1$ : 59 mm           |
| Ball diameter                            | $D_w$ : 7.938 mm       | Undercut of associated component             | $r_{a max}$ : 1 mm      |
| Number of balls                          | Z: 18                  | Undercut of associated component (open side) | $r_{b max}$ : 0.6 mm    |
| Chamfer (min)                            | $r_{1,2 min}$ : 1 mm   | Abutment diameter inner ring                 | $d_{a,b min}$ : 45.2 mm |
| Chamfer (min), open side                 | $r_{3,4 min}$ : 0.6 mm | Abutment diameter outer ring                 | $D_{a,b max}$ : 63.7 mm |
| Outer diameter of inner ring             | $d_1$ : 49.2 mm        | Inner diameter of outer ring (open side)     | $D_2$ : 62.1 mm         |
| Outer diameter of inner ring (open side) | $d_2$ : -              | Bearing weight                               | m: 0.185 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.