

# Spindle ball bearing S 61916 C TXM P4+

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## Components

|                              |                  |
|------------------------------|------------------|
| Bearing designation:         | S 61916 C TXM    |
| Bearing design:              | S                |
| Series / size:               | 61916            |
| Ball material:               | Steel 100Cr6     |
| Cage:                        | TXM              |
| Precision:                   | P4+              |
| Main dimensions [d x D x B]: | 80 x 110 x 16 mm |

## Load data

|                       |                             |
|-----------------------|-----------------------------|
| Static load capacity  | $C_{0r}$ : 38500 N          |
| Dynamic load capacity | $C_r$ : 35500 N             |
| Fatigue load limit    | $C_U$ : 2002 N              |
| Speed limit           | $n_{grease}$ : 13500 1/min  |
| Speed limit           | $n_{oil}$ : 18000 1/min     |
| Light preload         | L: 180 N                    |
| Axial rigidity        | $C_{ax}$ : 83 N/ $\mu$ m    |
| Medium preload        | M: 540 N                    |
| Axial rigidity        | $C_{ax}$ : 136 N/ $\mu$ m   |
| Heavy preload         | S: 1080 N                   |
| Axial rigidity        | $C_{ax}$ : 191 N/ $\mu$ m   |
| Spring preload        | Ff: 2180 N (for $n_{max}$ ) |

## Geometrical Data

|  |                        |  |                          |
|--|------------------------|--|--------------------------|
| Bore diameter                            | d: 80 mm               | Oiling nozzle position                       | $d_T$ : 92.3 mm          |
| Outer diameter                           | D: 110 mm              | Pitch circle diameter                        | $d_m$ : 95 mm            |
| Width of single bearing                  | B: 16 mm               | Inner diameter of outer ring                 | $D_1$ : 100.8 mm         |
| Ball diameter                            | $D_w$ : 9.525 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                 | $d_{a,b min}$ : 84.9 mm  |
| Chamfer (min), open side                 | $r_{3,4 min}$ : 0.3 mm | Abutment diameter outer ring                 | $D_{a,b max}$ : 105.7 mm |
| Outer diameter of inner ring             | $d_1$ : 89.4 mm        | Inner diameter of outer ring (open side)     | $D_2$ : 104.6 mm         |
| Outer diameter of inner ring (open side) | $d_2$ : -              | Bearing weight                               | m: 0.365 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.