

# Spindle ball bearing S 61907 C TXM P4+

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## Components

|                              |                 |
|------------------------------|-----------------|
| Bearing designation:         | S 61907 C TXM   |
| Bearing design:              | S               |
| Series / size:               | 61907           |
| Ball material:               | Steel 100Cr6    |
| Cage:                        | TXM             |
| Precision:                   | P4+             |
| Main dimensions [d x D x B]: | 35 x 55 x 10 mm |

## Load data

|                       |                            |
|-----------------------|----------------------------|
| Static load capacity  | $C_{0r}$ : 8800 N          |
| Dynamic load capacity | $C_r$ : 10900 N            |
| Fatigue load limit    | $C_U$ : 454 N              |
| Speed limit           | $n_{grease}$ : 28500 1/min |
| Speed limit           | $n_{oil}$ : 38000 1/min    |
| Light preload         | L: 55 N                    |
| Axial rigidity        | $C_{ax}$ : 37 N/ $\mu$ m   |
| Medium preload        | M: 165 N                   |
| Axial rigidity        | $C_{ax}$ : 61 N/ $\mu$ m   |
| Heavy preload         | S: 330 N                   |
| Axial rigidity        | $C_{ax}$ : 86 N/ $\mu$ m   |
| Spring preload        | Ff: 490 N (for $n_{max}$ ) |

## Geometrical Data

|                                          |                         |                                              |                          |
|------------------------------------------|-------------------------|----------------------------------------------|--------------------------|
| Bore diameter                            | d: 35 mm                | Oiling nozzle position                       | $d_T$ : 43.3 mm          |
| Outer diameter                           | D: 55 mm                | Pitch circle diameter                        | $d_m$ : 45 mm            |
| Width of single bearing                  | B: 10 mm                | Inner diameter of outer ring                 | $D_1$ : 48.6 mm          |
| Ball diameter                            | $D_w$ : 5.556 mm        | Undercut of associated component             | $r_{a \max}$ : 0.6 mm    |
| Number of balls                          | Z: 18                   | 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                 | $d_{a,b \min}$ : 38.2 mm |
| Chamfer (min), open side                 | $r_{3,4 \min}$ : 0.3 mm | Abutment diameter outer ring                 | $D_{a,b \max}$ : 52.3 mm |
| Outer diameter of inner ring             | $d_1$ : 41.4 mm         | Inner diameter of outer ring (open side)     | $D_2$ : 50.6 mm          |
| Outer diameter of inner ring (open side) | $d_2$ : -               | Bearing weight                               | m: 0.072 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.