

Spindle ball bearing HY S 6005 E TXM P4+

16.07.2024



Components

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|------------------------------|------------------------|
| Bearing designation: | HY S 6005 E TXM |
| Bearing design: | S |
| Series / size: | 6005 |
| Ball material: | Ceramic |
| Cage: | TXM |
| Precision: | P4+ (UP+ Upon request) |
| Main dimensions [d x D x B]: | 25 x 47 x 12 mm |

Load data

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|-----------------------|----------------------------|
| Static load capacity | C_{0r} : 8500 N |
| Dynamic load capacity | C_r : 12700 N |
| Fatigue load limit | C_U : 322 N |
| Speed limit | n_{grease} : 37500 1/min |
| Speed limit | n_{oil} : 50000 1/min |
| Light preload | L: 110 N |
| Axial rigidity | C_{ax} : 101 N/ μ m |
| Medium preload | M: 320 N |
| Axial rigidity | C_{ax} : 152 N/ μ m |
| Heavy preload | S: 640 N |
| Axial rigidity | C_{ax} : 203 N/ μ m |
| Spring preload | Ff: 610 N (for n_{max}) |

Geometrical Data

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|--|------------------------|--|-------------------------|
| Bore diameter | d: 25 mm | Oiling nozzle position | d_T : 34.3 mm |
| Outer diameter | D: 47 mm | Pitch circle diameter | d_m : 36 mm |
| Width of single bearing | B: 12 mm | Inner diameter of outer ring | D_1 : 40.1 mm |
| Ball diameter | D_w : 6.35 mm | Undercut of associated component | $r_{a max}$: 0.6 mm |
| Number of balls | Z: 15 | 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 | $d_{a,b min}$: 28.8 mm |
| Chamfer (min), open side | $r_{3,4 min}$: 0.3 mm | Abutment diameter outer ring | $D_{a,b max}$: 44.1 mm |
| Outer diameter of inner ring | d_1 : 32.2 mm | Inner diameter of outer ring (open side) | D_2 : 42.5 mm |
| Outer diameter of inner ring (open side) | d_2 : - | Bearing weight | m: 0.068 kg |
| | | Contact angle | Alpha 0: 25° |



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.