

TIMKEN

The Timken Company

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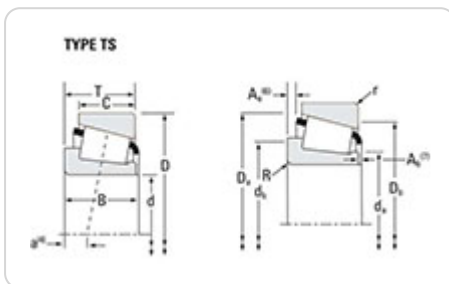
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All Product Types > Bearings > Roller Bearings > Timken® Tapered Roller Bearings > Timken® Single Row Tapered Roller Bearing > Timken® Tapered Roller Bearings - Tapered Single (TS) > Tapered Roller Bearings - TS (Tapered Single) Metric (/viewitems/tapered-roller-bearings-ts-tapered-single-/tapered-roller-bearings-ts-tapered-single-metric)

Part Number 31320X, Tapered Roller Bearings - TS (Tapered Single) Metric



Key Features

- Available in single, double and multi-row configurations, as well as proprietary sizes
- Designed in collaboration with OE engineers to design, engineer and test bearings for premium performance in many applications
- Power dense designs allow for heavier loads and can help extend bearing life
- Optimized internal geometry lowers torque and operating temperatures to extend lubrication system life

- Can be designed to withstand high-corrosive, high-temperature and vacuum or low-lubrication environments with proprietary enhancements

Key Dimensions

Cone Part Number	X31320XM
Cup Part Number	Y31320XM
Bore (d)	100 mm 3.937 in
O.D. (D)	215 mm 8.4646 in
Width (T)	56.5 mm 2.2244 in
Dynamic Radial Load Rating - 1M Revs (C1) ¹	441000 N 99100 lbf
Dynamic Radial Load Rating - 90M Revs (C90) ²	114000 N 25700 lbf
e Factor ³	0.83
K Factor ⁴	0.71
Series	31320X
Y Factor ⁵	0.73

Other Dimensions

Inner Ring Width (B)	51 mm 2.0079 in
Outer Ring Width (C)	35 mm 1.378 in
Effective Center Location ⁶	11.4 mm 0.45 in
Max Shaft Fillet Radius ⁷	4 mm 0.157 in
Max Housing Fillet Radius ⁸	3 mm 0.12 in
Shaft Backing Shoulder Diameter - Frontface (da)	122.9 mm 4.84 in
Shaft Backing Shoulder Diameter - Backface (db)	144 mm 5.67 in
Housing Backing Shoulder Diameter - Frontface (Da)	202 mm 7.95 in
Housing Backing Shoulder Diameter - Backface (Db)	183.9 mm 7.24 in
Cage Location Relative to Backface (Aa)	9.7 mm 0.38 in
Cage Location Relative to Frontface (Ab)	8.6 mm 0.34 in
Weight	8.76 Kg 19.32 lb

Ratings

Dynamic Axial Rating - 90M Revs (Ca90) ⁹	161000 N 36300 lbf
Static Radial Load Rating (C0)	526000 N 118000 lbf

Factors

G1 Factor	196.1
G2 Factor	30.1
Geometry Factor (Cg) ¹⁰	0.12

¹ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

² Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

³ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁴ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁵ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁶ Negative value indicates effective center inside cone backface.

⁷ These maximum fillet radii will be cleared by the bearing corners.

⁸ These maximum fillet radii will be cleared by the bearing corners.

⁹ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .