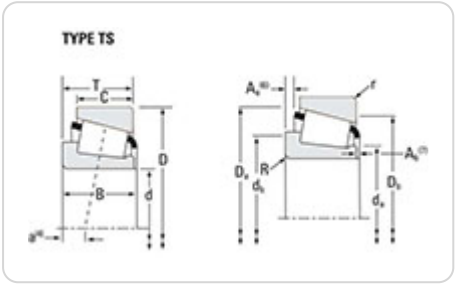
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com (mailto:CustomerCAD@timken.com) • **Web site:** www.timken.com (http://www.timken.com)

Part Number 30312, 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	X30312M
Cup Part Number	Y30312M
Bore (d)	60 mm 2.3622 in
O.D. (D)	130.000 mm 5.1181 in
Width (T)	33.500 mm 1.3189 in
Dynamic Radial Load Rating - 1M Revs (C1) [1]	218000 N 49000 lbf
Dynamic Radial Load Rating - 90M Revs (C90) [2]	56500 N 12700 lbf
e Factor [3]	0.35
K Factor [4]	1.69
Series	30312M
Y Factor [5]	1.74

Other Dimensions

Inner Ring Width (B)	31.000 mm 1.2205 in
Outer Ring Width (C)	26.000 mm 1.0236 in
Effective Center Location[6]	-7.1 mm -0.28 in
Max Shaft Fillet Radius[7]	3.050 mm 0.12 in
Max Housing Fillet Radius[8]	2.54 mm 0.1 in
Shaft Backing Shoulder Diameter - Frontface (da)	69 mm 2.72 in
Shaft Backing Shoulder Diameter - Backface (db)	74 mm 2.91 in
Housing Backing Shoulder Diameter - Frontface (Da)	121.90 mm 4.80 in
Housing Backing Shoulder Diameter - Backface (Db)	116.08 mm 4.57 in
Cage Location Relative to Backface (Aa)	1.8 mm 0.07 in
Cage Location Relative to Frontface (Ab)	4.8 mm 0.19 in
Weight	2 Kg 4.3 lb

Ratings

Dynamic Axial Rating - 90M Revs (Ca90)[9]	33400 N 7510 lbf
Static Radial Load Rating (C0)	221000 N 49800 lbf

Factors

G1 Factor	75.8
G2 Factor	22.2
Geometry Factor (Cg)[10]	0.0668

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

[2] Based on 90 x 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 x 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 a3l.