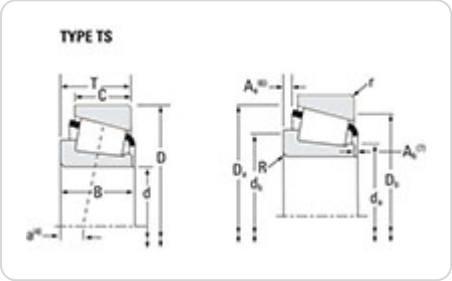
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com (mailto:CustomerCAD@timken.com) • **Web site:** www.timken.com (http://www.timken.com)

Part Number 32221, 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	X32221M
Cup Part Number	Y32221M
Bore (d)	105.000 mm 4.1339 in
O.D. (D)	190 mm 7.4803 in
Width (T)	53.000 mm 2.0866 in
Dynamic Radial Load Rating - 1M Revs (C1) [1]	472000 N 106000 lbf
Dynamic Radial Load Rating - 90M Revs (C90) [2]	122000 N 27500 lbf
e Factor [3]	0.42
K Factor [4]	1.39
Series	32221M
Y Factor [5]	1.43

Other Dimensions

Inner Ring Width (B)	50 mm 1.9685 in
Outer Ring Width (C)	43 mm 1.6929 in
Effective Center Location[6]	-7.9 mm -0.31 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)	118 mm 4.65 in
Shaft Backing Shoulder Diameter - Backface (db)	123 mm 4.84 in
Housing Backing Shoulder Diameter - Frontface (Da)	181.10 mm 7.13 in
Housing Backing Shoulder Diameter - Backface (Db)	170.94 mm 6.73 in
Cage Location Relative to Backface (Aa)	4.3 mm 0.17 in
Cage Location Relative to Frontface (Ab)	3.6 mm 0.14 in
Weight	6 Kg 13.1 lb

Ratings

Dynamic Axial Rating - 90M Revs (Ca90)[9]	88000 N 19800 lbf
Static Radial Load Rating (C0)	516000 N 116000 lbf

Factors

G1 Factor	219.9
G2 Factor	43.5
Geometry Factor (Cg)[10]	0.102

[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.