


The Timken Company

4500 Mt Pleasant St. NW

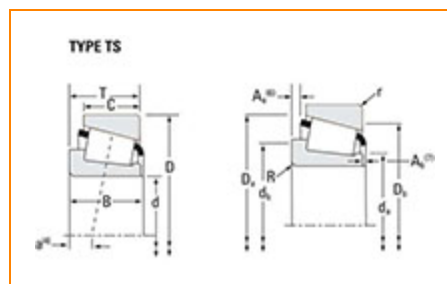
N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number 32032X, Tapered Roller Bearings - TS (Tapered Single) Metric

This is the most basic and most widely used type of tapered roller bearing. It consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft.



[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

Specifications

Series	32032XM
Cone Part Number	X32032XM
Cup Part Number	Y32032XM
Design Unit	Metric
Cage Material	Stamped Steel
Related Assembly Number(s)	32032X-90KM2 32032XM-90KM1 32032XM-90KM4 32032XM-90NM2

Dimensions



d - Bore	160 mm 6.2992 in
D - Cup Outer Diameter	240 mm 9.4488 in
B - Cone Width	51 mm 2.0079 in
C - Cup Width	38 mm 1.4961 in
T - Bearing Width	51 mm 2.0079 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.050 mm 0.12 in
r - Cup Backface "To Clear" Radius²	2.54 mm 0.1 in
da - Cone Frontface Backing Diameter	174 mm 6.85 in
db - Cone Backface Backing Diameter	181 mm 7.13 in
Da - Cup Frontface Backing Diameter	235.97 mm 9.29 in
Db - Cup Backface Backing Diameter	220.98 mm 8.70 in
Ab - Cage-Cone Frontface Clearance	3.8 mm 0.15 in
Aa - Cage-Cone Backface Clearance	3 mm 0.12 in
a - Effective Center Location³	1.8 mm 0.07 in

Basic Load Ratings

C₉₀ - Dynamic Radial Rating (90 million revolutions)⁴	158000 N 35600 lbf
C₁ - Dynamic Radial Rating (1 million revolutions)⁵	611000 N 137000 lbf
C₀ - Static Radial Rating	867000 N 195000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	124000 N 28000 lbf

Factors

K - Factor⁷	1.27
e - ISO Factor⁸	0.46
Y - ISO Factor⁹	1.31
G₁ - Heat Generation Factor (Roller-Raceway)	521.7
G₂ - Heat Generation Factor (Rib-Roller End)	133.9
C_g - Geometry Factor¹⁰	0.117

¹ These maximum fillet radii will be cleared by the bearing corners.

² These maximum fillet radii will be cleared by the bearing corners.

³ Negative value indicates effective center inside cone backface.

⁴ 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.

⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁶ 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.

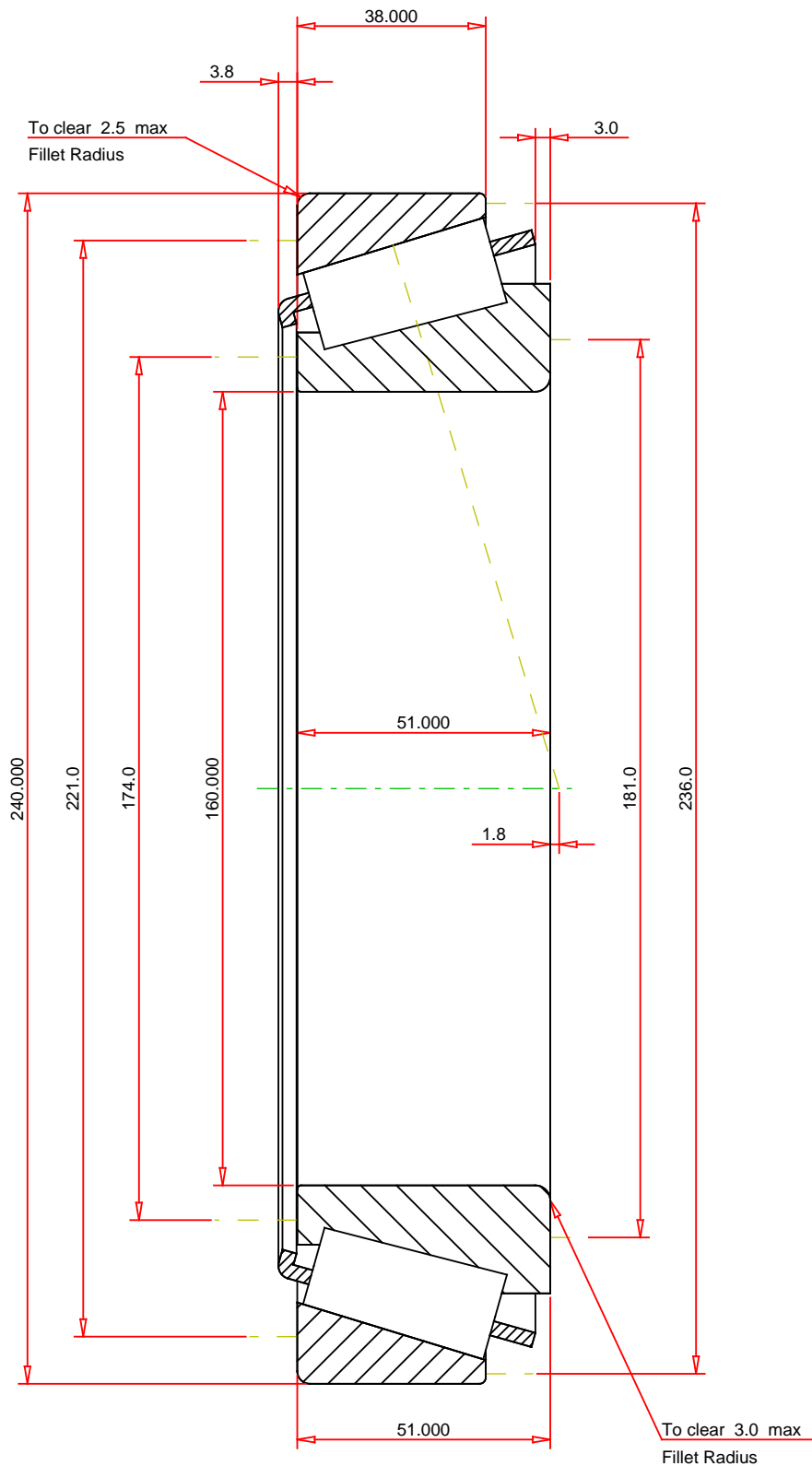
⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction

on use.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .



METRIC UNITS

ISO Factor - e	0.46
ISO Factor - Y	1.31
Bearing Weight	7.9 kg
Number of Rollers Per Row	29
Effective Center Location	1.8 mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

X32032XM - Y32032XM
Tapered Roller Bearings - TS (Tapered Single)
Metric

K Factor	1.27	
Dynamic Radial Rating - C90	158000	N
Dynamic Thrust Rating - Ca90	124000	N
Static Radial Rating - C0	867000	N
Dynamic Radial Rating - C1	611000	N

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

FOR DISCUSSION ONLY