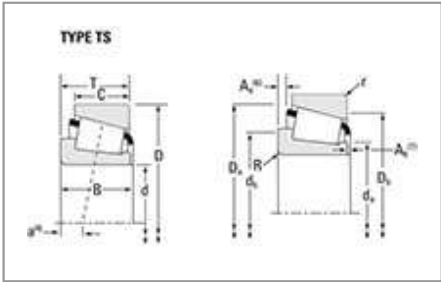




The Timken Company
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Part Number 32036X, Tapered Roller Bearings - TS (Tapered Single) Metric

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	32036XM
Cone Part Number	X32036XM
Cup Part Number	Y32036XM
Design Unit	Metric
Bearing Weight	14.000 Kg 30.8 lb
Cage Material	Stamped Steel
Full Timken Part Number	32036X

Dimensions



100 mm

d - Bore	180 mm 7.0866 in
D - Cup Outer Diameter	280 mm 11.0236 in
B - Cone Width	64.000 mm 2.5197 in
C - Cup Width	48 mm 1.8898 in
T - Bearing Width	64.000 mm 2.5197 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	197 mm 7.76 in
db - Cone Backface Backing Diameter	203 mm 7.99 in
Da - Cup Frontface Backing Diameter	271.00 mm 10.67 in
Db - Cup Backface Backing Diameter	256.03 mm 10.08 in
Ab - Cage-Cone Frontface Clearance	4.3 mm 0.17 in
Aa - Cage-Cone Backface Clearance	6.6 mm 0.26 in
a - Effective Center Location³	-3.6 mm -0.14 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	183000 N 41200 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	707000 N 159000 lbf
C0 - Static Radial Rating	1240000 N 280000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	133000 N 29800 lbf

Factors

K - Factor⁷	1.38
e - ISO Factor⁸	0.42
Y - ISO Factor⁹	1.42
G1 - Heat Generation Factor (Roller-Raceway)	760.6
G2 - Heat Generation Factor (Rib-Roller End)	147.5
Cg - Geometry Factor¹⁰	0.129

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.

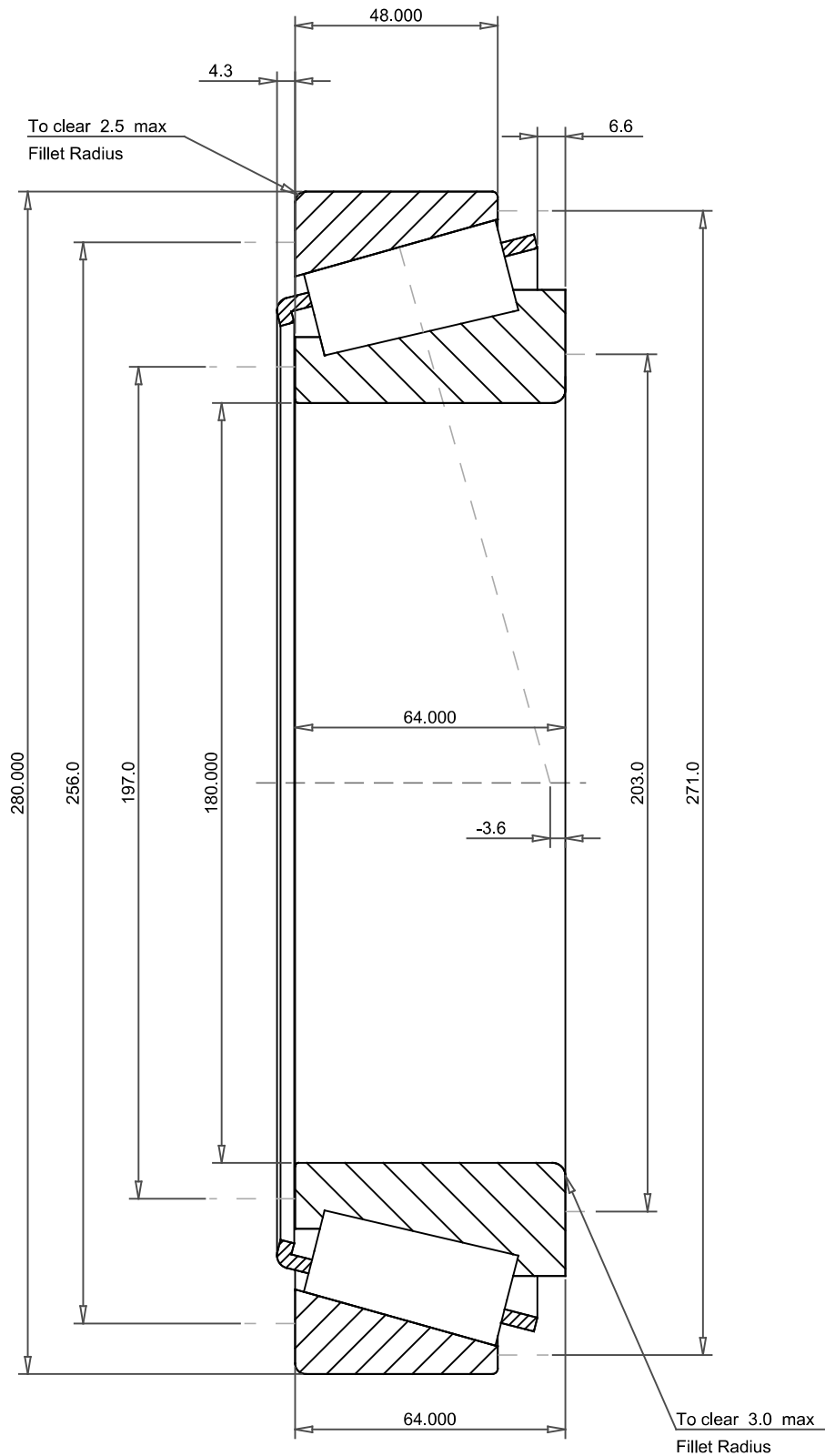
⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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	0.42
ISO Factor - Y	1.42
Bearing Weight	14 kg
Number of Rollers Per Row	27
Effective Center Location	-3.6 mm

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

X32036XM - Y32036XM
Tapered Roller Bearings - TS (Tapered Single)
Metric

K Factor	1.38	
Dynamic Radial Rating - C90	183000	N
Dynamic Thrust Rating - Ca90	133000	N
Static Radial Rating - C0	1240000	N
Dynamic Radial Rating - C1	707000	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