



The Timken Company

4500 Mt Pleasant St. NW

N. Canton, OH 44720

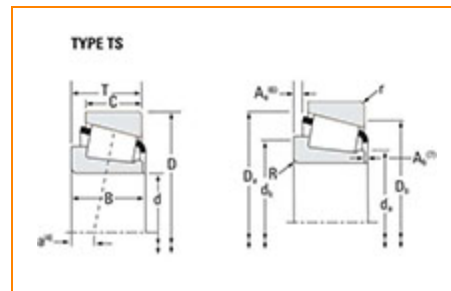
Phone: (234) 262-3000

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

Timken Part Number XAA32017X - Y32017X, 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	32017X
Cone Part Number	XAA32017X
Cup Part Number	Y32017X
Design Units	METRIC
Bearing Weight	1.3 Kg 2.9 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	85 mm 3.3465 in
D - Cup Outer Diameter	130.000 mm 5.1181 in
B - Cone Width	29.000 mm 1.1417 in
C - Cup Width	22.000 mm 0.8661 in
T - Bearing Width	29.000 mm 1.1417 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	6.600 mm 0.260 in
r - Cup Backface "To Clear" Radius²	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	91.95 mm 3.62 in
db - Cone Backface Backing Diameter	105.92 mm 4.17 in
Da - Cup Frontface Backing Diameter	125.00 mm 4.96 in
Db - Cup Backface Backing Diameter	119.13 mm 4.69 in
Ab - Cage-Cone Frontface Clearance	3.3 mm 0.13 in
Aa - Cage-Cone Backface Clearance	1.5 mm 0.06 in
a - Effective Center Location³	-0.5 mm -0.02 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	49900 N 11200 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	193000 N 43300 lbf
C0 - Static Radial Rating	235000 N 52900 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	37800 N 8500 lbf

Factors

K - Factor⁷	1.32
e - ISO Factor⁸	0.44
Y - ISO Factor⁹	1.36
G1 - Heat Generation Factor (Roller-Raceway)	109
G2 - Heat Generation Factor (Rib-Roller End)	36.3
C_g - Geometry Factor¹⁰	0.127

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.

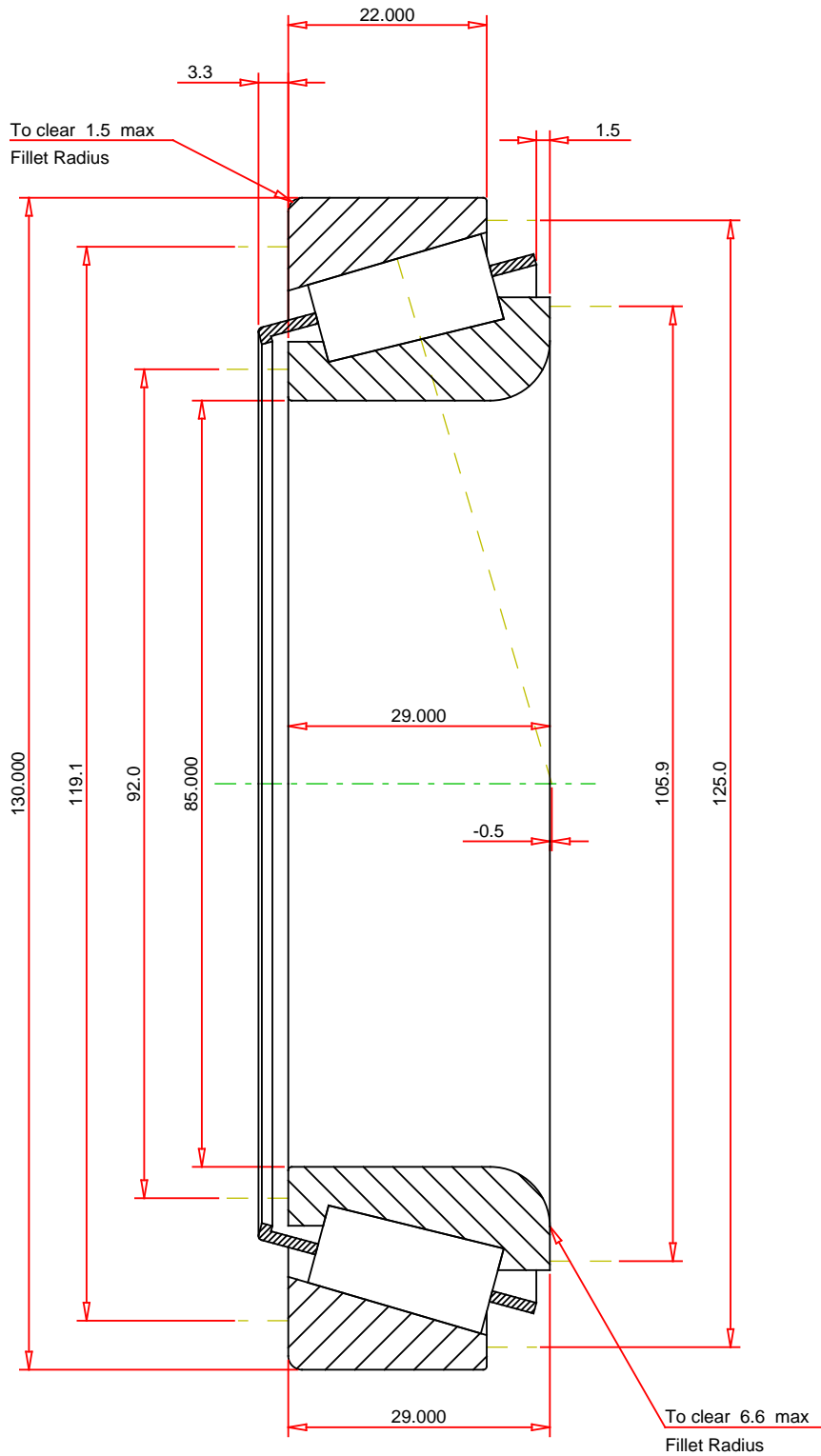
⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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	0.44
ISO Factor - Y	1.36
Bearing Weight	1.3 kg
Number of Rollers Per Row	25
Effective Center Location	-0.5 mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

XAA32017X - Y32017X
TS BEARING ASSEMBLY

K Factor	1.32
Dynamic Radial Rating - C90	49900 N
Dynamic Thrust Rating - Ca90	37800 N
Static Radial Rating - C0	235000 N
Dynamic Radial Rating - C1	193000 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