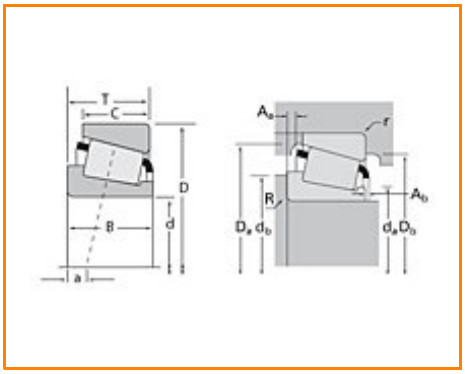
The Timken Company
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Timken Part Number M268730H - M268710, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	M268700
Cone Part Number	M268730H
Cup Part Number	M268710
Design Units	Imperial
Bearing Weight	115.600 Kg 254.80 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	381.000 mm 15.0000 in
D - Cup Outer Diameter	590.550 mm 23.2500 in
B - Cone Width	114.300 mm 4.5000 in
C - Cup Width	88.900 mm 3.5000 in
T - Bearing Width	114.303 mm 4.5001 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	6.35 mm 0.25 in
r - Cup Backface "To Clear" Radius[2]	6.35 mm 0.250 in
da - Cone Frontface Backing Diameter	415.04 mm 17.79 in
db - Cone Backface Backing Diameter	424.94 mm 16.73 in
Da - Cup Frontface Backing Diameter	562.86 mm 22.16 in
Db - Cup Backface Backing Diameter	548.89 mm 21.61 in
Ab - Cage-Cone Frontface Clearance	7.9 mm 0.31 in
Aa - Cage-Cone Backface Clearance	11.4 mm 0.45 in
a - Effective Center Location[3]	-9.4 mm -0.37 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	726000 N 163000 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	2800000 N 629000 lbf
C0 - Static Radial Rating	5400000 N 1210000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	413000 N 92900 lbf

Factors

K - Factor[7]	1.76
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	1.8
G1 - Heat Generation Factor (Roller-Raceway)	5642.5
G2 - Heat Generation Factor (Rib-Roller End)	413
Cg - Geometry Factor	0.23

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

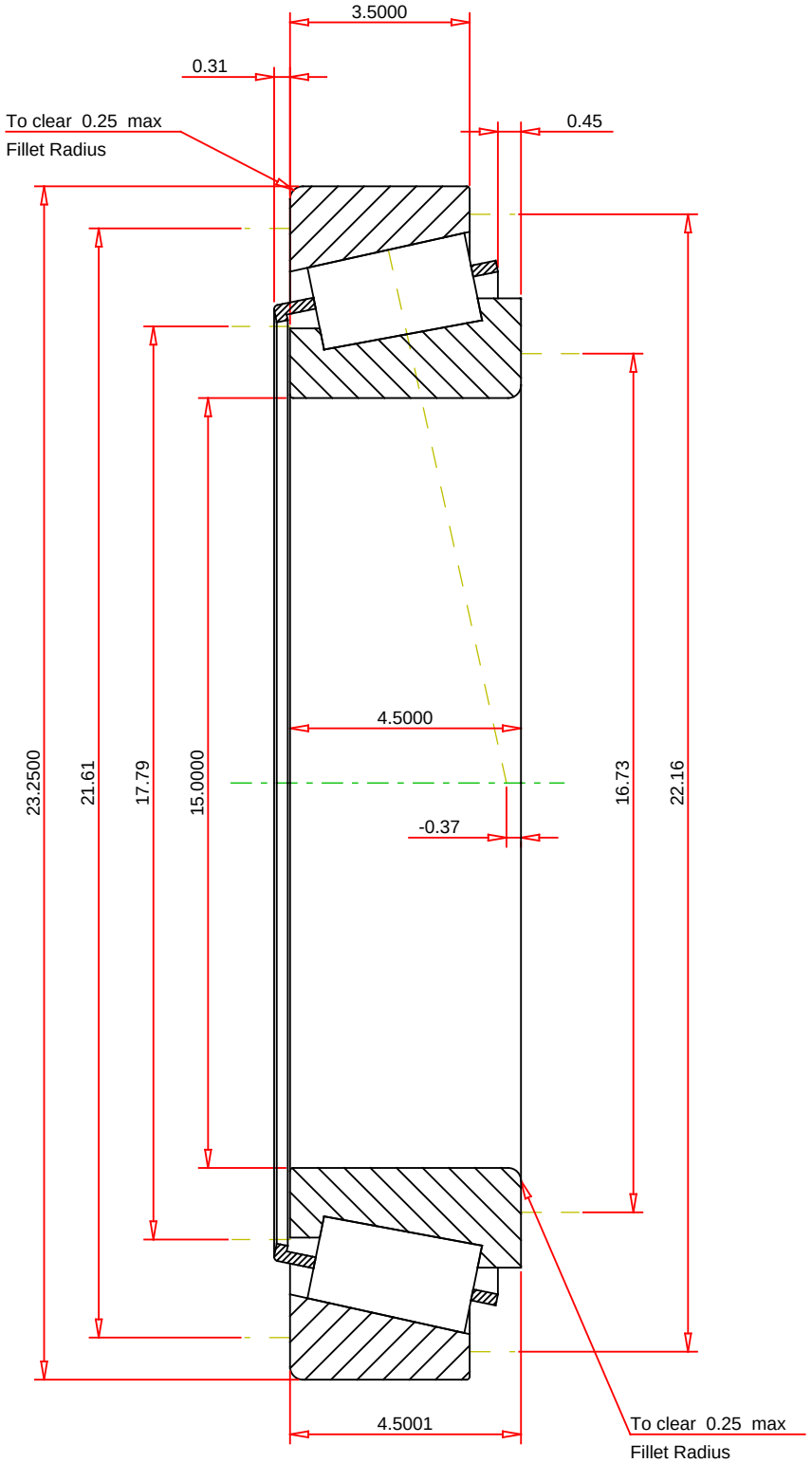
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[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.



IMPERIAL UNITS

ISO Factor - e	0.33	
ISO Factor - Y	1.8	
Bearing Weight	254.8	lb
Number of Rollers Per Row	35	
Effective Center Location	-0.37	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

M268730H - M268710
TS BEARING ASSEMBLY

K Factor	1.76	
Dynamic Radial Rating - C90	726000	lbf
Dynamic Thrust Rating - Ca90	413000	lbf
Static Radial Rating - C0	5400000	lbf
Dynamic Radial Rating - C1	2800000	lbf

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