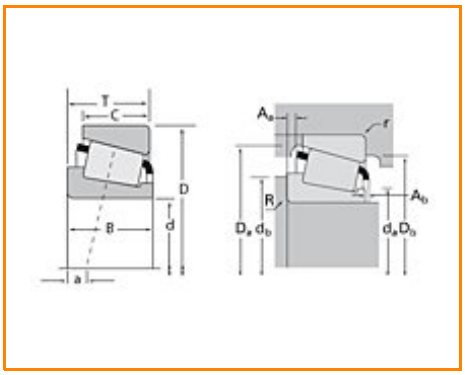
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 71412 - 71750, 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	71000
Cone Part Number	71412
Cup Part Number	71750
Design Units	Imperial
Bearing Weight	5.80 Kg 12.700 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	104.775 mm 4.1250 in

D - Cup Outer Diameter	190.5 mm 7.5 in
B - Cone Width	49.213 mm 1.9375 in
C - Cup Width	34.925 mm 1.3750 in
T - Bearing Width	47.625 mm 1.8750 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	118.11 mm 5.59 in
db - Cone Backface Backing Diameter	123.95 mm 4.88 in
Da - Cup Frontface Backing Diameter	182.12 mm 7.17 in
Db - Cup Backface Backing Diameter	170.94 mm 6.73 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	4.6 mm 0.18 in
a - Effective Center Location[3]	-6.6 mm -0.26 in

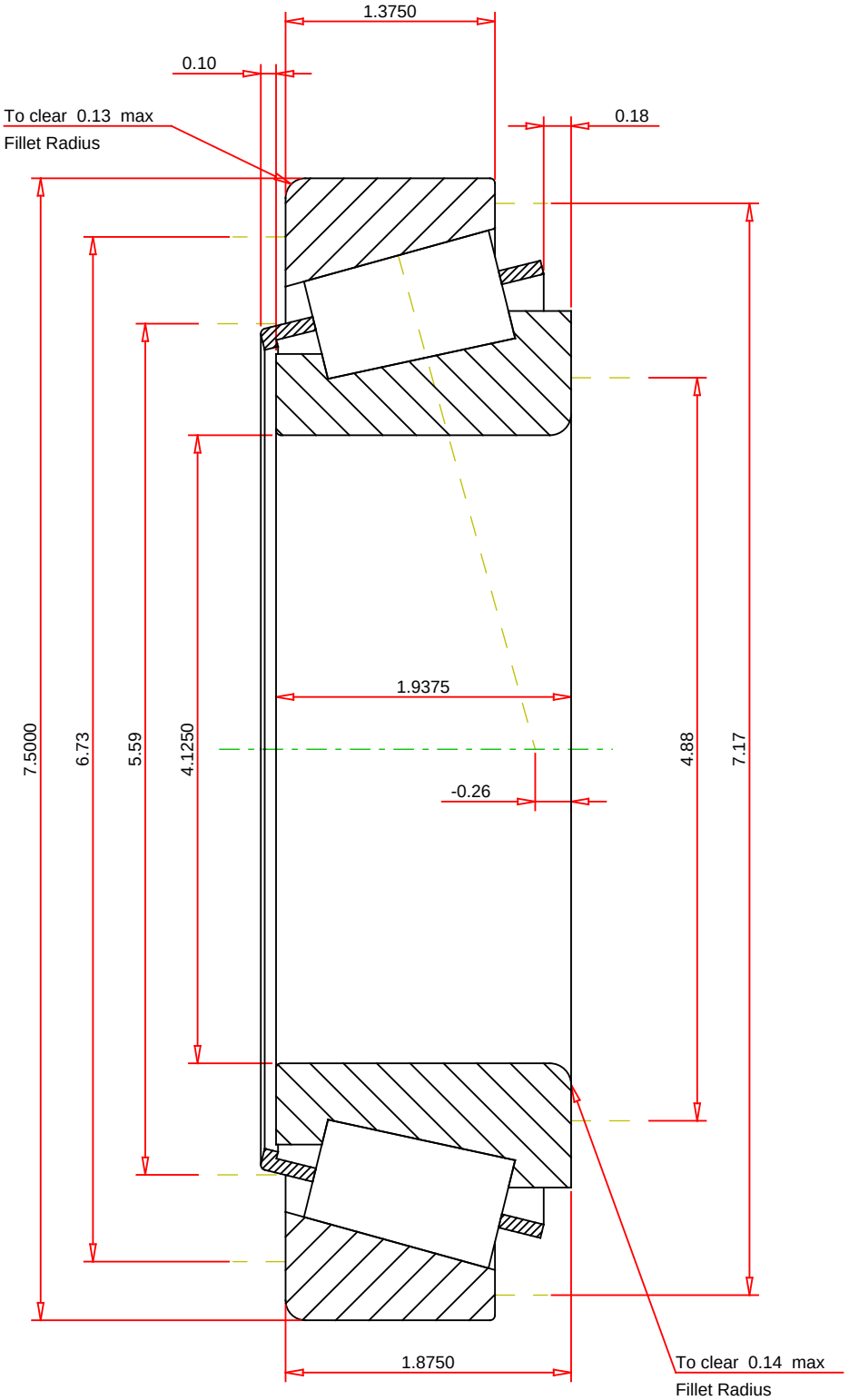
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	94300 N 21200 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	364000 N 81700 lbf
C0 - Static Radial Rating	543000 N 122000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	67100 N 15100 lbf

Factors

K - Factor[7]	1.4
e - ISO Factor[8]	0.42
Y - ISO Factor[9]	1.44
G1 - Heat Generation Factor (Roller-Raceway)	269
G2 - Heat Generation Factor (Rib-Roller End)	45.7
Cg - Geometry Factor	0.116

[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	0.42	
ISO Factor - Y	1.44	
Bearing Weight	12.7	lb
Number of Rollers Per Row	23	
Effective Center Location	-0.26	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

71412 - 71750
TS BEARING ASSEMBLY

K Factor	1.4	
Dynamic Radial Rating - C90	94300	lbf
Dynamic Thrust Rating - Ca90	67100	lbf
Static Radial Rating - C0	543000	lbf
Dynamic Radial Rating - C1	364000	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