


The Timken Company

4500 Mt Pleasant St. NW

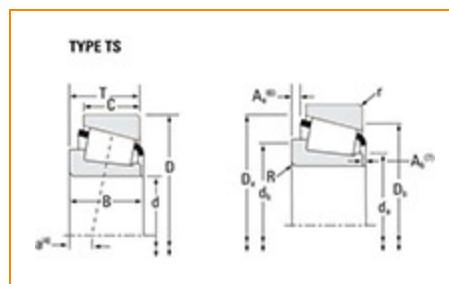
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Part Number 71450 - 71750, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



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Specifications

Series	71000
Cone Part Number	71450
Cup Part Number	71750
Design Unit	Inch
Cage Material	Stamped Steel

Dimensions

d - Bore	4 1/2 in 114.300 mm
 - Cup Outer Diameter	7.5 in 190.5 mm

B - Cone Width	1.9375 in 49.213 mm
C - Cup Width	1.3750 in 34.925 mm
T - Bearing Width	1.8750 in 47.625 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.14 in 3.600 mm
r - Cup Backface "To Clear" Radius²	0.130 in 3.30 mm
da - Cone Frontface Backing Diameter	4.92 in 125 mm
db - Cone Backface Backing Diameter	5.2 in 132 mm
Da - Cup Frontface Backing Diameter	7.17 in 182.12 mm
Db - Cup Backface Backing Diameter	6.73 in 170.94 mm
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm
Aa - Cage-Cone Backface Clearance	0.18 in 4.6 mm
a - Effective Center Location³	-0.26 in -6.6 mm

Basic Load Ratings

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

Factors

K - Factor⁷	1.4
e - ISO Factor⁸	0.42
Y - ISO Factor⁹	1.44
G1 - Heat Generation Factor (Roller-Raceway)	269.2
G2 - Heat Generation Factor (Rib-Roller End)	49.5
Cg - Geometry Factor¹⁰	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 90×10^6 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.

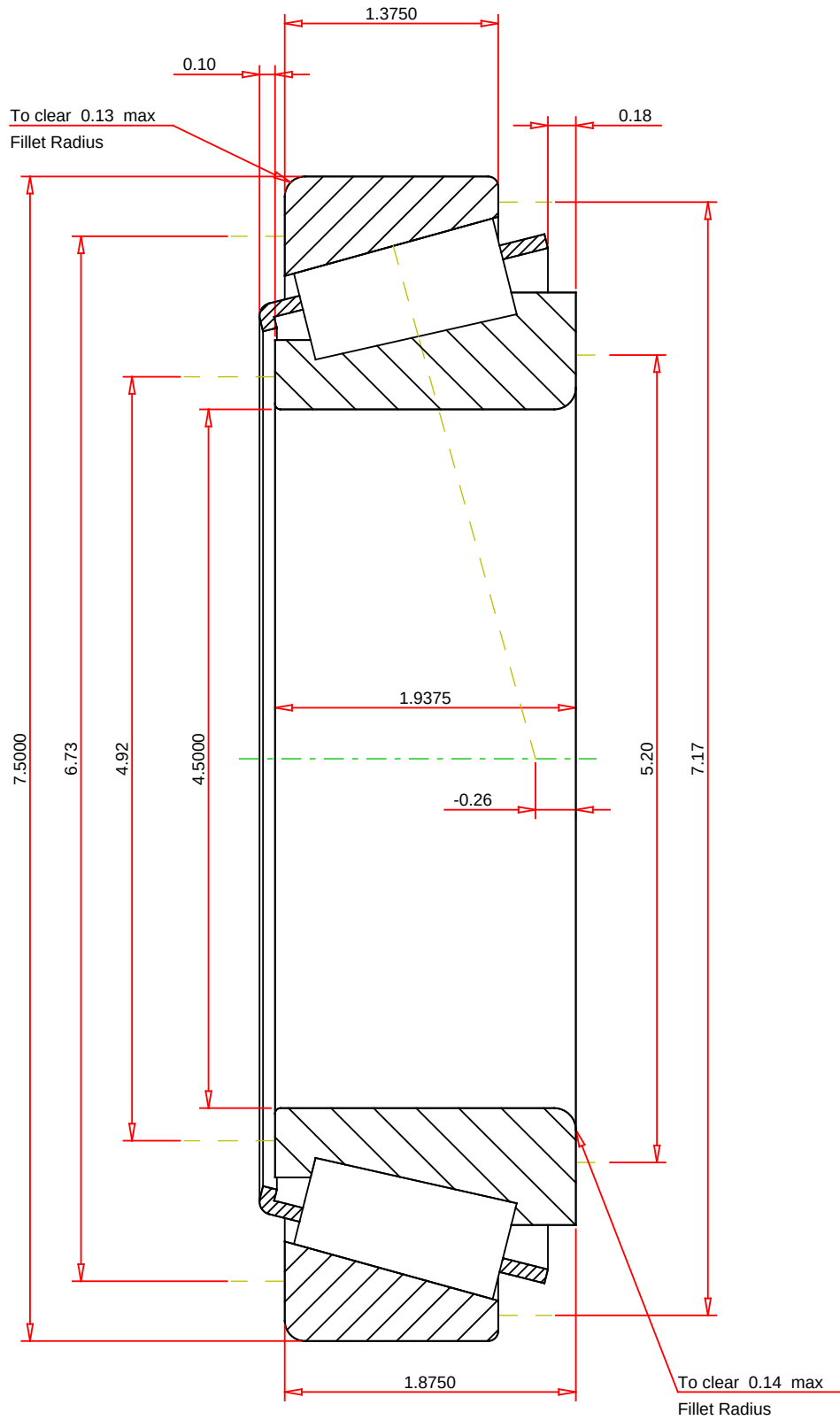
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 a3l.



IMPERIAL UNITS

ISO Factor - e 0.42
ISO Factor - Y 1.44
Bearing Weight 11.4 lbf
Number of Rollers Per Row 23
Effective Center Location -0.26 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

71450 - 71750
Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.4
Dynamic Radial Rating - C90	21200 lbf
Dynamic Thrust Rating - Ca90	15100 lbf
Static Radial Rating - C0	122000 lbf
Dynamic Radial Rating - C1	81700 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