The Timken Company
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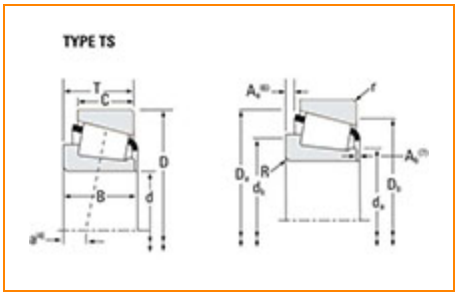
Part Number 46790 - 46720, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	46700
Cone Part Number	46790
Cup Part Number	46720
Design Units	Imperial
Bearing Weight	4.6 Kg 10.2 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	165.1 mm 6.5 in

D - Cup Outer Diameter	225.425 mm 8.875 in
B - Cone Width	39.688 mm 1.5625 in
C - Cup Width	33.338 mm 1.3125 in
T - Bearing Width	41.275 mm 1.6250 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]	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	173.99 mm 7.72 in
db - Cone Backface Backing Diameter	181.1 mm 7.13 in
Da - Cup Frontface Backing Diameter	218.90 mm 8.62 in
Db - Cup Backface Backing Diameter	209.04 mm 8.23 in
Ab - Cage-Cone Frontface Clearance	3 mm 0.12 in
Aa - Cage-Cone Backface Clearance	3.3 mm 0.13 in
a - Effective Center Location[3]	2.5 mm 0.1 in

Basic Load Ratings

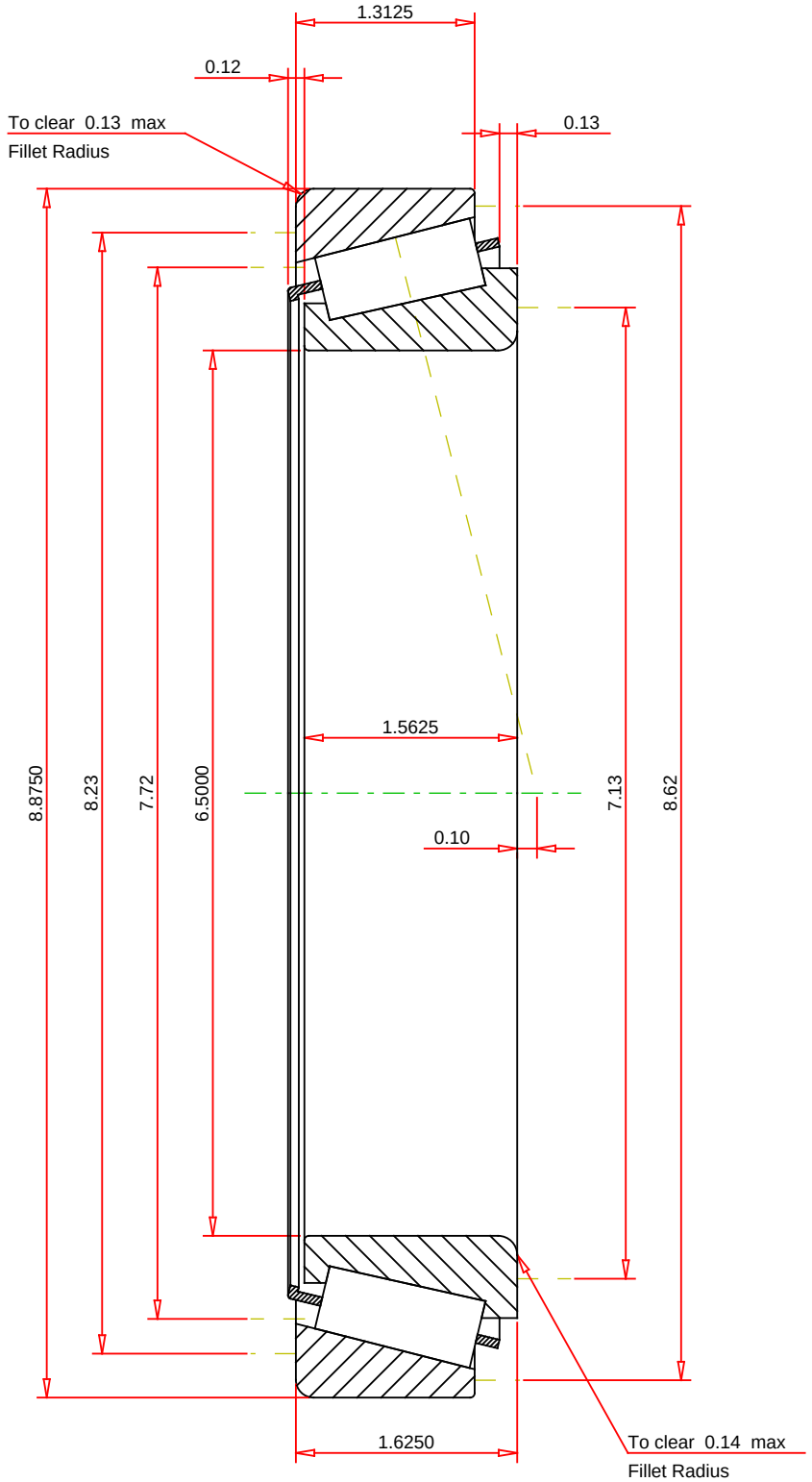
C90 - Dynamic Radial Rating (90 million revolutions)[4]	17700 lbf 78600 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	68200 lbf 303000 N
C0 - Static Radial Rating	143000 lbf 635000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	11600 lbf 51600 N

Factors

K - Factor[7]	1.52
e - ISO Factor[8]	0.38
Y - ISO Factor[9]	1.57
G1 - Heat Generation Factor (Roller-Raceway)	572
G2 - Heat Generation Factor (Rib-Roller End)	175
Cg - Geometry Factor[10]	0.143

[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.

[10] Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.38	
ISO Factor - Y	1.57	
Bearing Weight	10.2	lb
Number of Rollers Per Row	42	
Effective Center Location	0.1	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

46790 - 46720
TS BEARING ASSEMBLY

K Factor	1.52	
Dynamic Radial Rating - C90	17700	lbf
Dynamic Thrust Rating - Ca90	11600	lbf
Static Radial Rating - C0	143000	lbf
Dynamic Radial Rating - C1	68200	lbf

FOR DISCUSSION ONLY