The Timken Company
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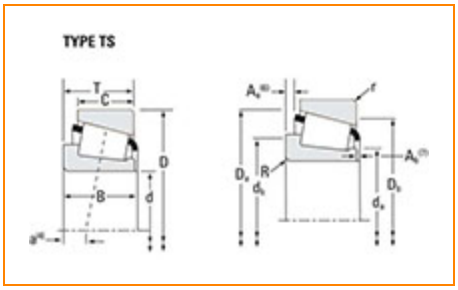
Part Number 67780 - 67720, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	67700
Cone Part Number	67780
Cup Part Number	67720
Design Unit	Inch
Cage Material	Stamped Steel
Related Assembly Number(s)	67780-90209

Dimensions

d - Bore	6 1/2 in 165.1 mm

D - Cup Outer Diameter	9 3/4 in 247.650 mm
B - Cone Width	1.875 in 47.625 mm
C - Cup Width	1.5000 in 38.100 mm
T - Bearing Width	1.8750 in 47.625 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.600 mm
r - Cup Backface "To Clear" Radius[2]	0.130 in 3.30 mm
da - Cone Frontface Backing Diameter	7.05 in 179 mm
db - Cone Backface Backing Diameter	7.28 in 185 mm
Da - Cup Frontface Backing Diameter	9.48 in 240.80 mm
Db - Cup Backface Backing Diameter	9.02 in 229.11 mm
Ab - Cage-Cone Frontface Clearance	0.11 in 2.8 mm
Aa - Cage-Cone Backface Clearance	0.17 in 4.3 mm
a - Effective Center Location[3]	0.19 in 4.8 mm

Basic Load Ratings

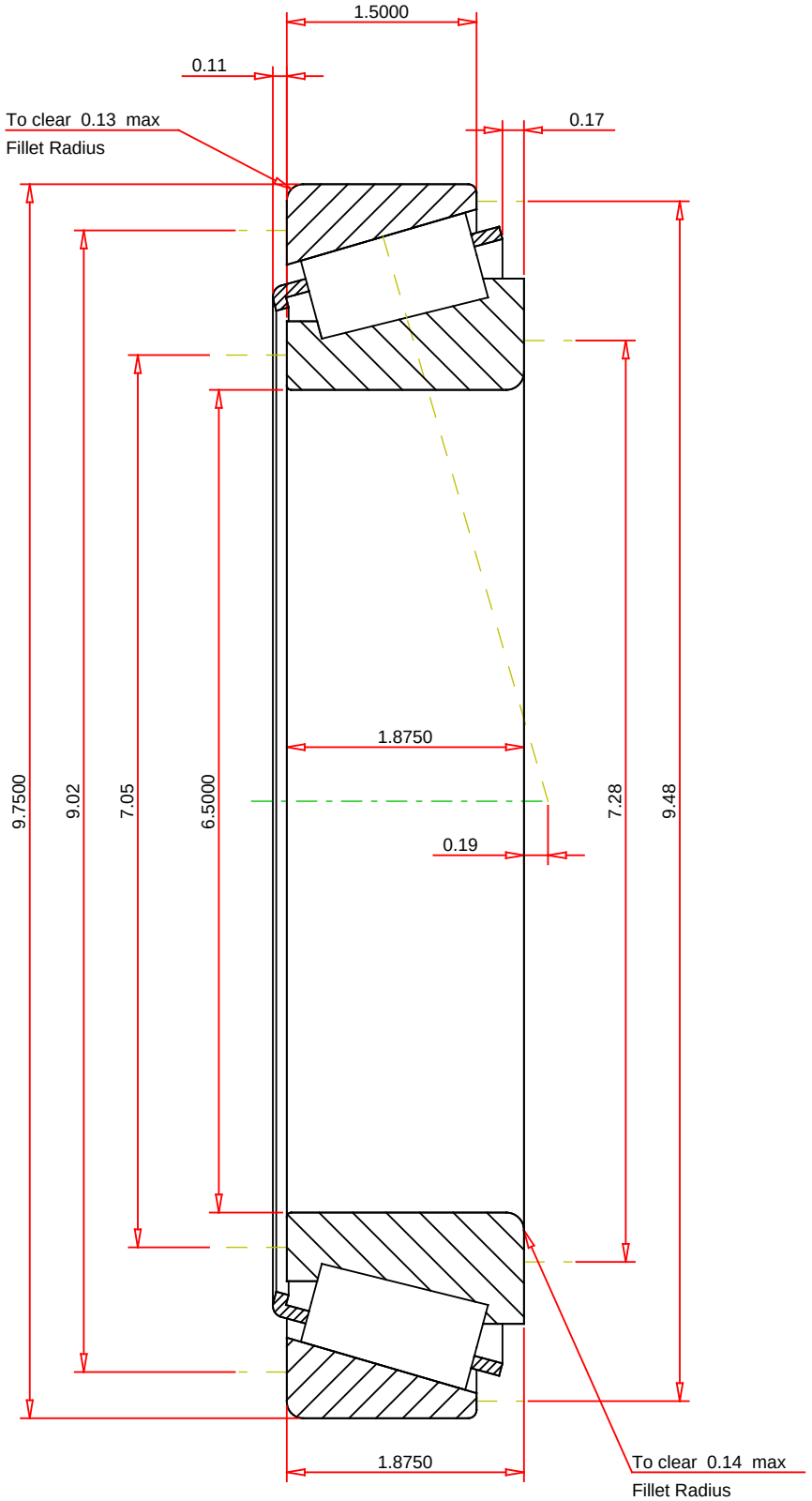
C90 - Dynamic Radial Rating (90 million revolutions)[4]	23600 lbf 105000 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	91100 lbf 405000 N
C0 - Static Radial Rating	175000 lbf 779000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	17800 lbf 79000 N

Factors

K - Factor[7]	1.33
e - ISO Factor[8]	0.44
Y - ISO Factor[9]	1.36
G1 - Heat Generation Factor (Roller-Raceway)	622.3
G2 - Heat Generation Factor (Rib-Roller End)	122.6
Cg - Geometry Factor[10]	0.121

[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	0.44	
ISO Factor - Y	1.36	
Bearing Weight	17.6	lb
Number of Rollers Per Row	36	
Effective Center Location	0.19	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

67780 - 67720

Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.33	
Dynamic Radial Rating - C90	23600	lbf
Dynamic Thrust Rating - Ca90	17800	lbf
Static Radial Rating - C0	175000	lbf
Dynamic Radial Rating - C1	91100	lbf

FOR DISCUSSION ONLY