The Timken Company
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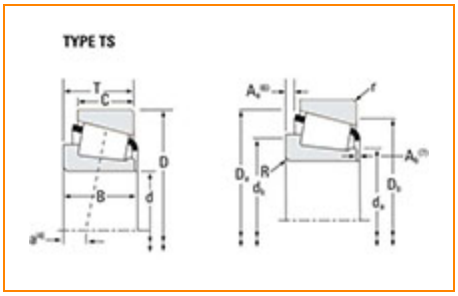
Part Number 6580 - 6536, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	6500
Cone Part Number	6580
Cup Part Number	6536
Design Units	Imperial
Bearing Weight	4.7 Kg 10.4 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	88.900 mm 3.5000 in

D - Cup Outer Diameter	161.925 mm 6.3750 in
B - Cone Width	55.100 mm 2.1693 in
C - Cup Width	42.863 mm 1.6875 in
T - Bearing Width	53.975 mm 2.1250 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]	0.76 mm 0.03 in
da - Cone Frontface Backing Diameter	102.11 mm 4.72 in
db - Cone Backface Backing Diameter	113.03 mm 4.45 in
Da - Cup Frontface Backing Diameter	154.43 mm 6.08 in
Db - Cup Backface Backing Diameter	144.02 mm 5.67 in
Ab - Cage-Cone Frontface Clearance	1.5 mm 0.06 in
Aa - Cage-Cone Backface Clearance	3.8 mm 0.15 in
a - Effective Center Location[3]	-13.2 mm -0.52 in

Basic Load Ratings

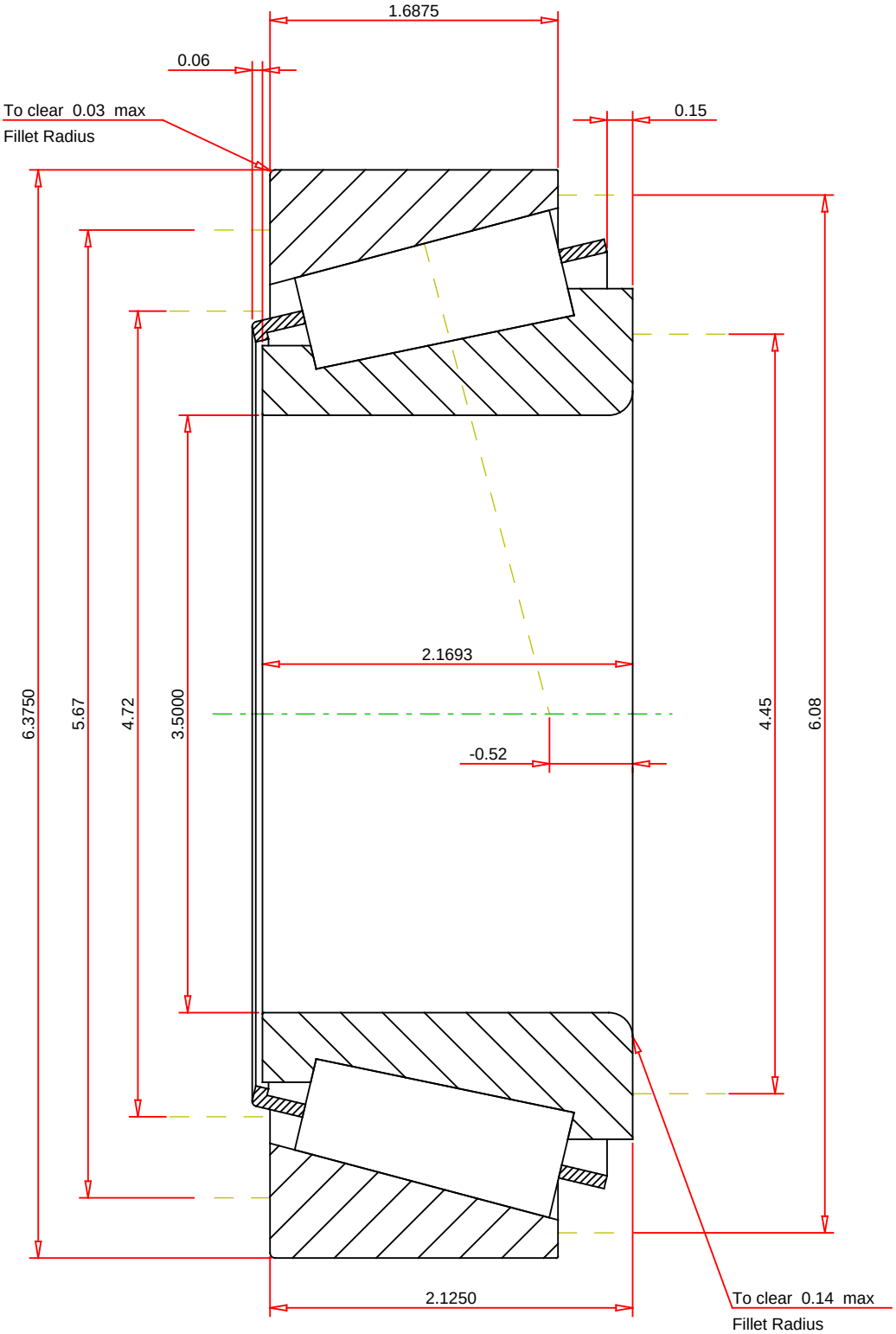
C90 - Dynamic Radial Rating (90 million revolutions)[4]	25600 lbf 114000 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	98800 lbf 439000 N
C0 - Static Radial Rating	118000 lbf 523000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	17600 lbf 78100 N

Factors

K - Factor[7]	1.46
e - ISO Factor[8]	0.4
Y - ISO Factor[9]	1.5
G1 - Heat Generation Factor (Roller-Raceway)	199
G2 - Heat Generation Factor (Rib-Roller End)	33.5
Cg - Geometry Factor[10]	0.104

[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	0.4	
ISO Factor - Y	1.5	
Bearing Weight	10.4	lb
Number of Rollers Per Row	19	
Effective Center Location	-0.52	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

6580 - 6536
TS BEARING ASSEMBLY

K Factor	1.46	
Dynamic Radial Rating - C90	25600	lbf
Dynamic Thrust Rating - Ca90	17600	lbf
Static Radial Rating - C0	118000	lbf
Dynamic Radial Rating - C1	98800	lbf

FOR DISCUSSION ONLY