



The Timken Company

4500 Mt Pleasant St. NW

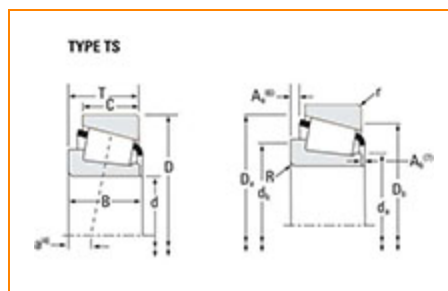
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Part Number 17580 - 17520, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	17500
Cone Part Number	17580
Cup Part Number	17520
Design Units	Imperial
Bearing Weight	0.10 Kg 0.3 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	15.875 mm 0.6250 in
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D - Cup Outer Diameter	42.863 mm 1.6875 in
B - Cone Width	16.670 mm 0.6563 in
C - Cup Width	13.495 mm 0.5313 in
T - Bearing Width	16.670 mm 0.6563 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius²	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	21.08 mm 0.83 in
db - Cone Backface Backing Diameter	23.11 mm 0.91 in
Da - Cup Frontface Backing Diameter	39.62 mm 1.56 in
Db - Cup Backface Backing Diameter	36.58 mm 1.44 in
Ab - Cage-Cone Frontface Clearance	2.8 mm 0.11 in
Aa - Cage-Cone Backface Clearance	-0.3 mm -0.01 in
a - Effective Center Location³	-5.8 mm -0.23 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	1830 lbf 8150 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	7070 lbf 31400 N
C0 - Static Radial Rating	6560 lbf 29200 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	1040 lbf 4620 N

Factors

K - Factor⁷	1.76
e - ISO Factor⁸	0.33
Y - ISO Factor⁹	1.81
G1 - Heat Generation Factor (Roller-Raceway)	5.3
G2 - Heat Generation Factor (Rib-Roller End)	4.53
Cg - Geometry Factor¹⁰	0.0423

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.

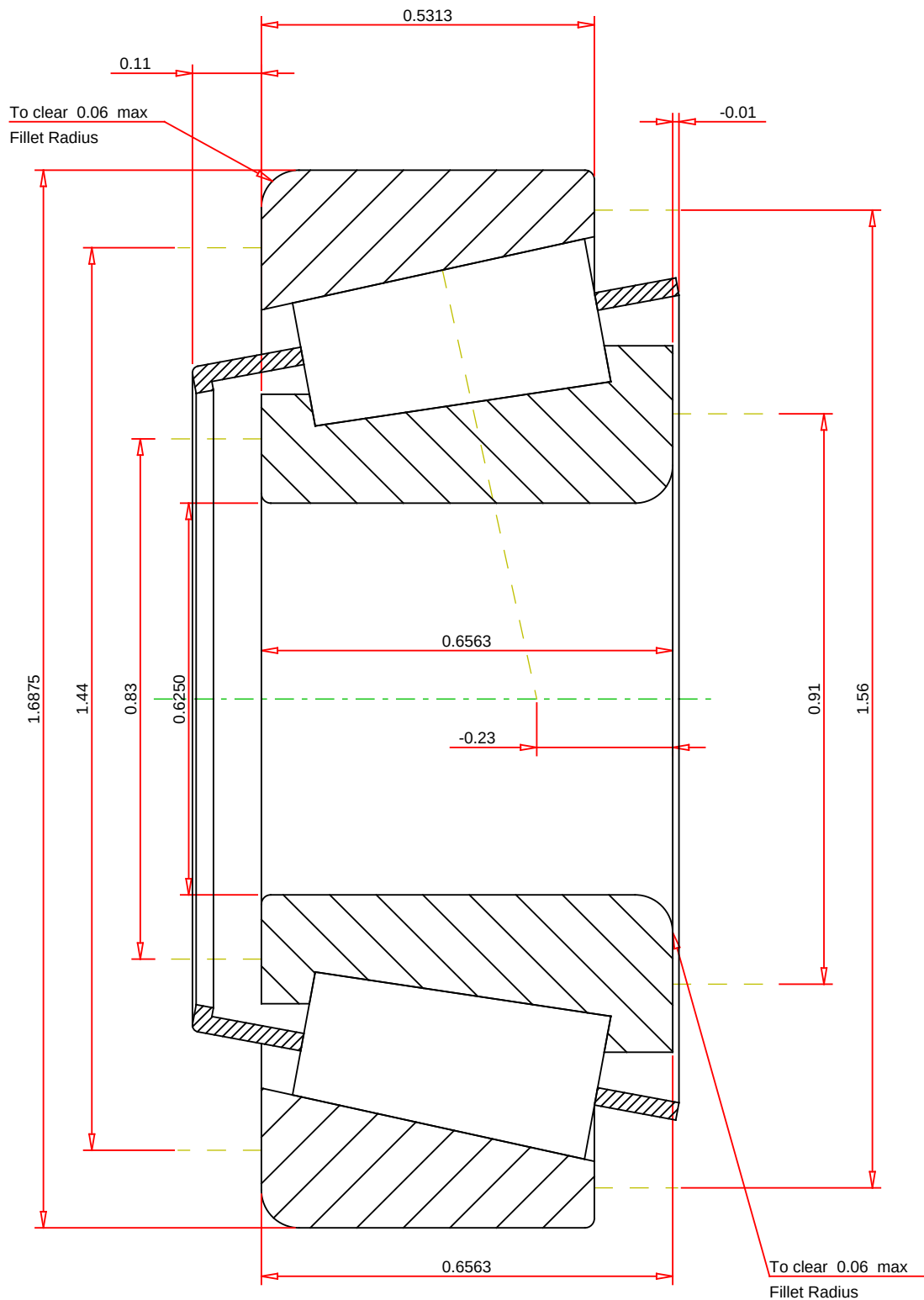
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 a_3 .



IMPERIAL UNITS

ISO Factor - e0.33 ISO Factor - Y1.81 Bearing Weight0.3 lb Number of Rollers Per Row12 Effective Center Location-0.23 inch		TIMKEN® THE TIMKEN COMPANY NORTH CANTON, OHIO USA		17580 - 17520 TS BEARING ASSEMBLY	
				K Factor1.76 Dynamic Radial Rating - C901830 lbf Dynamic Thrust Rating - Ca901040 lbf Static Radial Rating - C06560 lbf Dynamic Radial Rating - C17070 lbf	