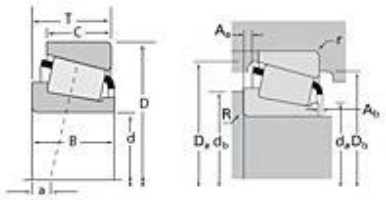
TIMKEN

The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 25877 - 25821, 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	25800
Cone Part Number	25877
Cup Part Number	25821
Design Units	Imperial
Bearing Weight	1.00 lb 0.500 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	1.3750 in 34.925 mm
D - Cup Outer Diameter	2.8750 in 73.025 mm

B - Cone Width	0.9688 in 24.608 mm
C - Cup Width	0.7500 in 19.050 mm
T - Bearing Width	0.9375 in 23.813 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.060 in 1.520 mm
r - Cup Backface "To Clear" Radius[2]	0.030 in 0.76 mm
da - Cone Frontface Backing Diameter	1.59 in 40.39 mm
db - Cone Backface Backing Diameter	1.69 in 42.93 mm
Da - Cup Frontface Backing Diameter	2.72 in 68.10 mm
Db - Cup Backface Backing Diameter	2.56 in 65.02 mm
Ab - Cage-Cone Frontface Clearance	0.09 in 2.3 mm
Aa - Cage-Cone Backface Clearance	0.02 in 0.5 mm
a - Effective Center Location[3]	-0.32 in -8.10 mm

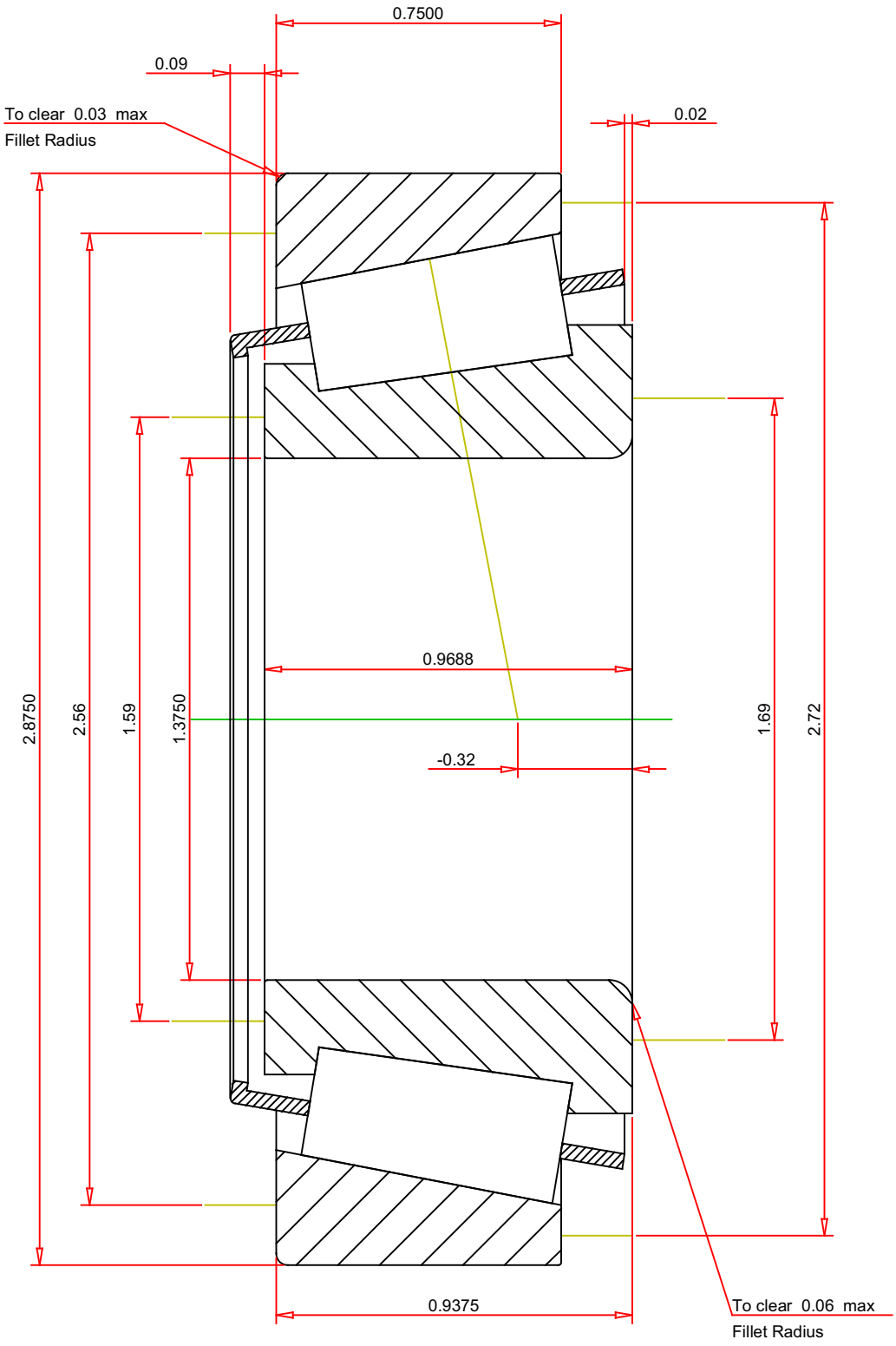
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	4960 lbf 22100 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	19100 lbf 85100 N
C0 - Static Radial Rating	21900 lbf 97400 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	2460 lbf 11000 N

Factors

K - Factor[7]	2.01
e - ISO Factor[8]	0.29
Y - ISO Factor[9]	2.07
G1 - Heat Generation Factor (Roller-Raceway)	26.4
G2 - Heat Generation Factor (Rib-Roller End)	10.9
Cg - Geometry Factor	0.0695

[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.



IMPERIAL UNITS

ISO Factor - e	0.29	
ISO Factor - Y	2.07	
Bearing Weight	1	lb
Number of Rollers Per Row	16	
Effective Center Location	-0.32	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

25877 - 25821
TS BEARING ASSEMBLY

K Factor	2.01	
Dynamic Radial Rating - C90	4960	lbf
Dynamic Thrust Rating - Ca90	2460	lbf
Static Radial Rating - C0	21900	lbf
Dynamic Radial Rating - C1	19100	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