TIMKEN

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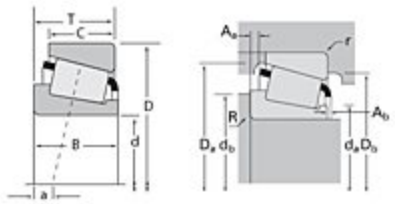
Timken Part Number 25590 - 25523, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	25500
Cone Part Number	25590
Cup Part Number	25523
Design Units	Imperial
Bearing Weight	0.600 Kg 1.30 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	45.618 mm 1.7960 in
D - Cup Outer Diameter	82.931 mm 3.2650 in

B - Cone Width	25.400 mm 1.0000 in
C - Cup Width	22.225 mm 0.8750 in
T - Bearing Width	26.988 mm 1.0625 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]	2.29 mm 0.090 in
da - Cone Frontface Backing Diameter	51.05 mm 2.01 in
db - Cone Backface Backing Diameter	57.91 mm 2.28 in
Da - Cup Frontface Backing Diameter	77.00 mm 3.05 in
Db - Cup Backface Backing Diameter	71.88 mm 2.83 in
Ab - Cage-Cone Frontface Clearance	1.5 mm 0.06 in
Aa - Cage-Cone Backface Clearance	0.3 mm 0.01 in
a - Effective Center Location[3]	-6.40 mm -0.25 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	23500 N 5270 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	90500 N 20300 lbf
C0 - Static Radial Rating	111000 N 24900 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	13500 N 3020 lbf

Factors

K - Factor[7]	1.74
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	1.79
G1 - Heat Generation Factor (Roller-Raceway)	35.2
G2 - Heat Generation Factor (Rib-Roller End)	14.3
Cg - Geometry Factor	0.0801

[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.
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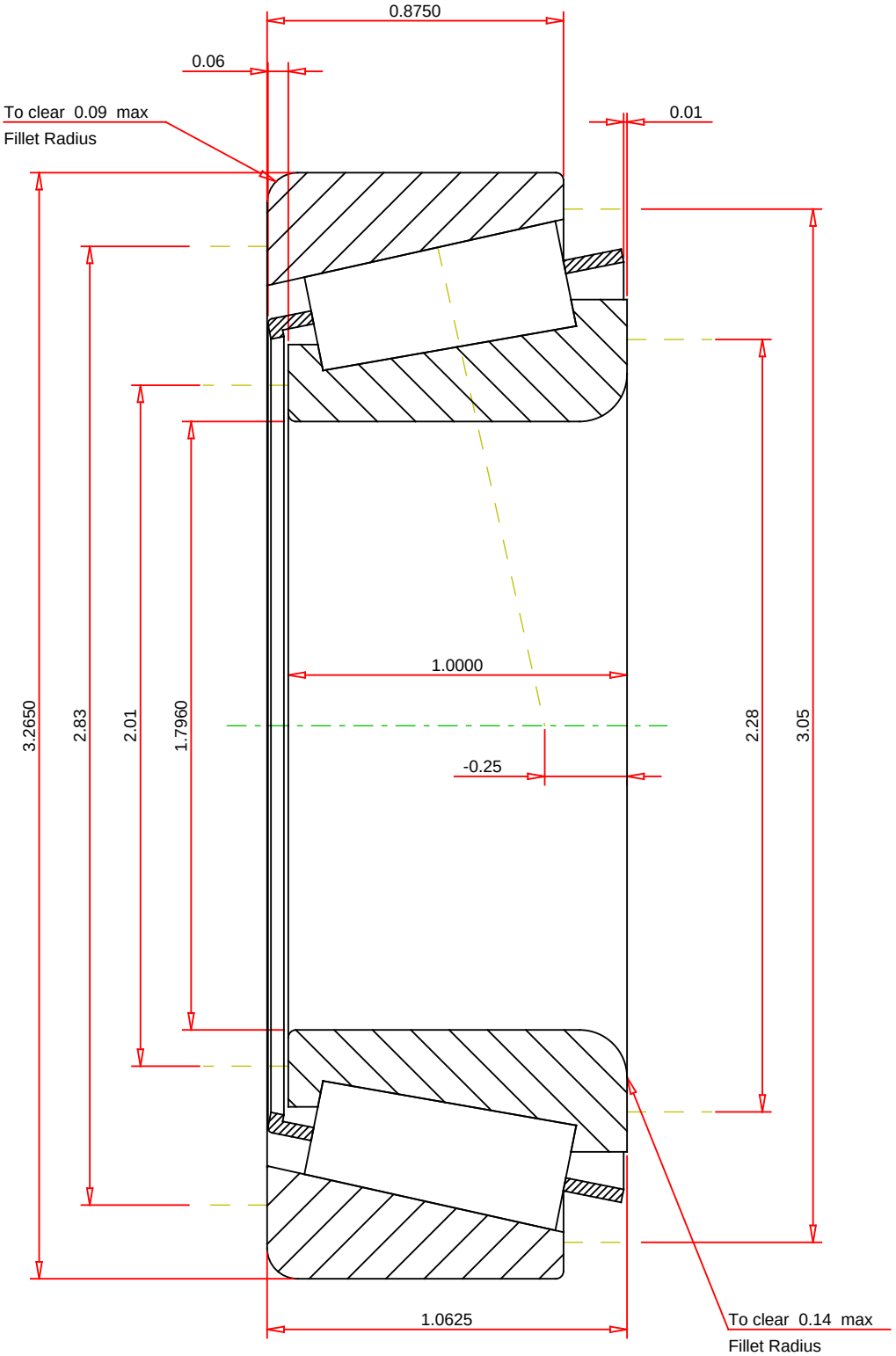

IMPERIAL UNITS

ISO Factor - e	0.33	
ISO Factor - Y	1.79	
Bearing Weight	1.3	lb
Number of Rollers Per Row	18	
Effective Center Location	-0.25	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

25590 - 25523
TS BEARING ASSEMBLY

K Factor	1.74	
Dynamic Radial Rating - C90	23500	lbf
Dynamic Thrust Rating - Ca90	13500	lbf
Static Radial Rating - C0	111000	lbf
Dynamic Radial Rating - C1	90500	lbf

FOR DISCUSSION ONLY