The Timken Company
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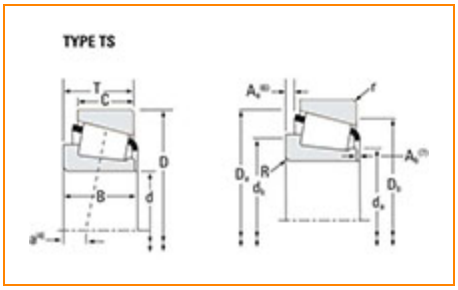
Part Number 25590 - 25522, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	25522
Design Unit	Inch
Cage Material	Stamped Steel

Dimensions

d - Bore	1.7960 in 45.618 mm
D - Cup Outer Diameter	3.2700 in 83.058 mm

B - Cone Width	1.0000 in 25.400 mm
C - Cup Width	0.7525 in 19.114 mm
T - Bearing Width	0.9400 in 23.876 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]	0.08 in 2.03 mm
da - Cone Frontface Backing Diameter	2.01 in 51 mm
db - Cone Backface Backing Diameter	2.28 in 58 mm
Da - Cup Frontface Backing Diameter	3.05 in 77.00 mm
Db - Cup Backface Backing Diameter	2.87 in 72.90 mm
Ab - Cage-Cone Frontface Clearance	0.06 in 1.5 mm
Aa - Cage-Cone Backface Clearance	0.01 in 0.3 mm
a - Effective Center Location[3]	-0.25 in -6.4 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90	5270 lbf

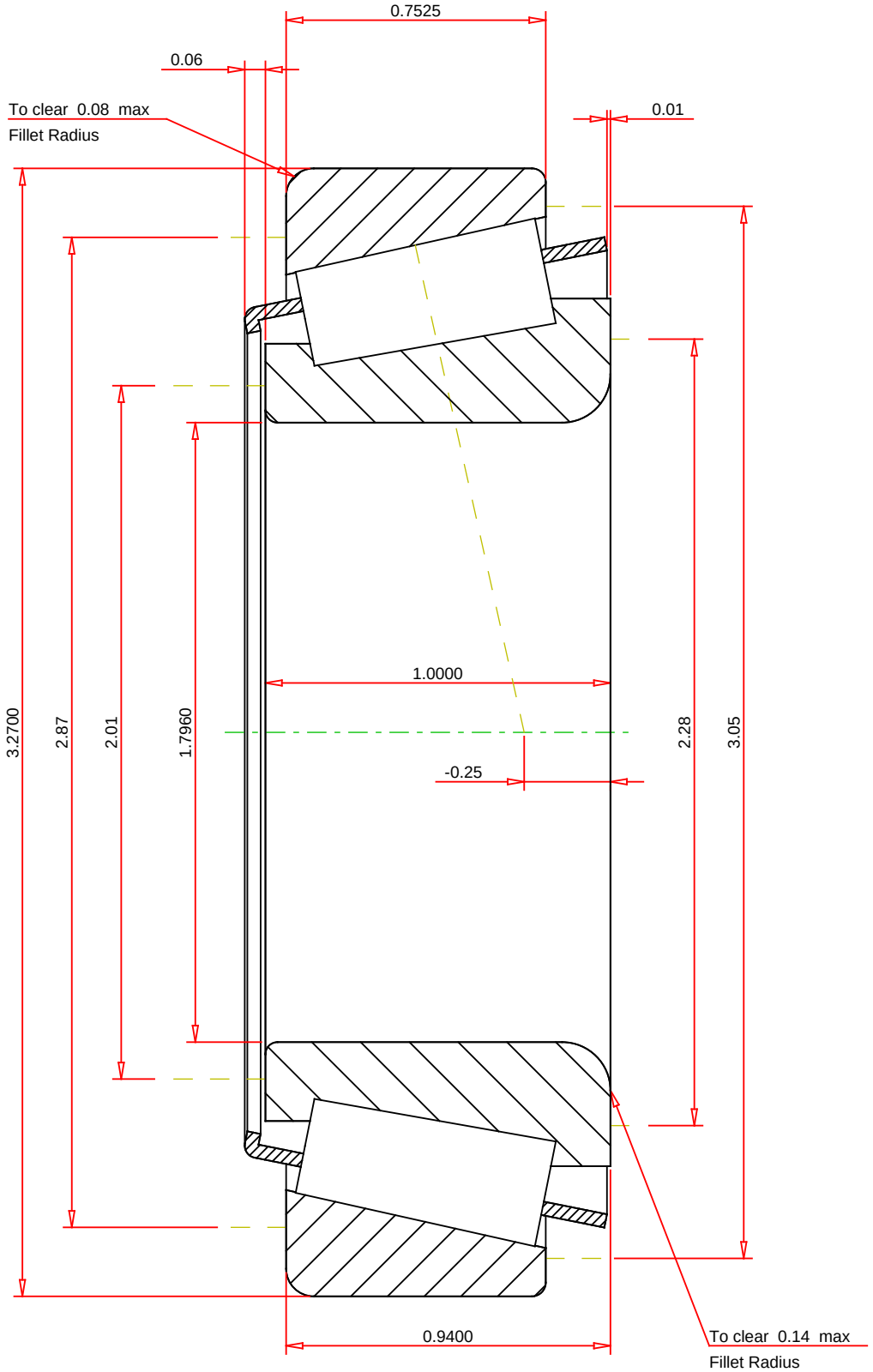
million revolutions)[4]	23500 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	20300 lbf 90500 N
C0 - Static Radial Rating	24900 lbf 111000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	3020 lbf 13500 N

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[10]	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 90×10^6 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	0.33	
ISO Factor - Y	1.79	
Bearing Weight	1.2	lb
Number of Rollers Per Row	18	
Effective Center Location	-0.25	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

25590 - 25522
Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.74	
Dynamic Radial Rating - C90	5270	lbf
Dynamic Thrust Rating - Ca90	3020	lbf
Static Radial Rating - C0	24900	lbf
Dynamic Radial Rating - C1	20300	lbf

FOR DISCUSSION ONLY