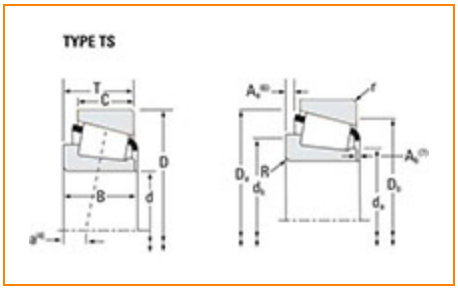
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number 2580A - 2520A, 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	2500
Cone Part Number	2580A
Cup Part Number	2520A
Design Unit	Inch
Cage Material	Stamped Steel

Dimensions

d - Bore	1 1/4 in 31.750 mm
D - Cup Outer Diameter	2.6150 in 66.421 mm

B - Cone Width	0.9983 in 25.357 mm
C - Cup Width	0.8125 in 20.638 mm
T - Bearing Width	1.0000 in 25.400 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.050 in 1.300 mm
r - Cup Backface "To Clear" Radius[2]	0.06 in 1.52 mm
da - Cone Frontface Backing Diameter	1.56 in 39.5 mm
db - Cone Backface Backing Diameter	1.63 in 41.5 mm
Da - Cup Frontface Backing Diameter	2.46 in 62.00 mm
Db - Cup Backface Backing Diameter	2.32 in 58.93 mm
Ab - Cage-Cone Frontface Clearance	0.06 in 1.5 mm
Aa - Cage-Cone Backface Clearance	0.02 in 0.5 mm
a - Effective Center Location[3]	-0.34 in -8.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90	4880 lbf

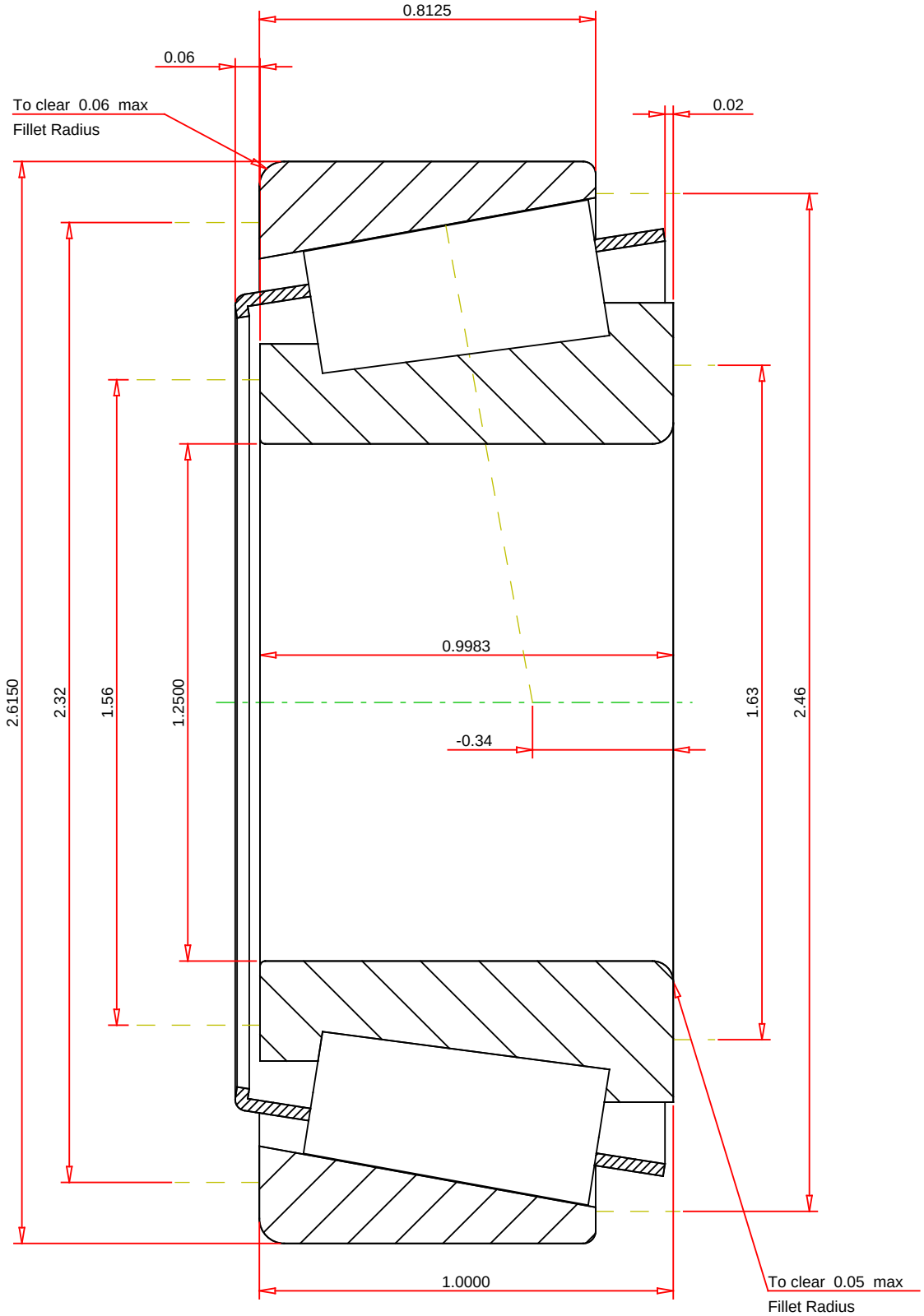
million revolutions)[4]	21700 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	18800 lbf 83700 N
C0 - Static Radial Rating	21200 lbf 94400 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	2280 lbf 10200 N

Factors

K - Factor[7]	2.14
e - ISO Factor[8]	0.27
Y - ISO Factor[9]	2.19
G1 - Heat Generation Factor (Roller-Raceway)	23.6
G2 - Heat Generation Factor (Rib-Roller End)	9.6
Cg - Geometry Factor[10]	0.0656

[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	0.27	
ISO Factor - Y	2.19	
Bearing Weight	0.9	lb
Number of Rollers Per Row	16	
Effective Center Location	-0.34	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

2580A - 2520A

Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	2.14	
Dynamic Radial Rating - C90	4880	lbf
Dynamic Thrust Rating - Ca90	2280	lbf
Static Radial Rating - C0	21200	lbf
Dynamic Radial Rating - C1	18800	lbf

FOR DISCUSSION ONLY