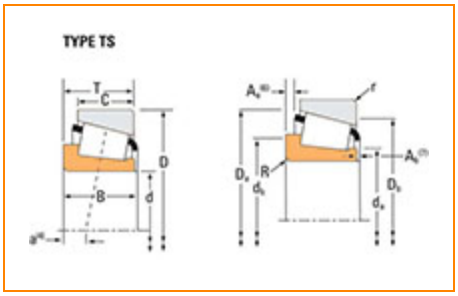
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number 82576, Tapered Roller Bearings - Single Cones - 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	82000
Cone Part Number	82576
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[1]	202000 lbf 897000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[2]	52300 lbf 232000 N

Dimensions

d - Bore	5.7500 in 146.050 mm
B - Cone Width	2.2300 in 56.642 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[3]	0.14 in 3.600 mm
da - Cone Frontface Backing Diameter	6.3 in 160 mm
db - Cone Backface Backing Diameter	6.54 in 166 mm
Ab - Cage-Cone Frontface Clearance	0.12 in 3 mm
Aa - Cage-Cone Backface Clearance	0.15 in 3.8 mm
a - Effective Center Location[4]	-0.14 in -3.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[5]	30000 lbf 134000 N
C1 - Dynamic Radial Rating (1 million revolutions)[6]	116000 lbf 515000 N
C0 - Static Radial Rating	182000 lbf 810000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[7]	22700 lbf 101000 N

Factors

K - Factor[8]	1.32
G1 - Heat Generation Factor (Roller-Raceway)	460.5
G2 - Heat Generation Factor (Rib-Roller End)	81.1
Cg - Geometry Factor[9]	0.141

[1] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[2] 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.

[3] These maximum fillet radii will be cleared by the bearing corners.

[4] Negative value indicates effective center inside cone backface.

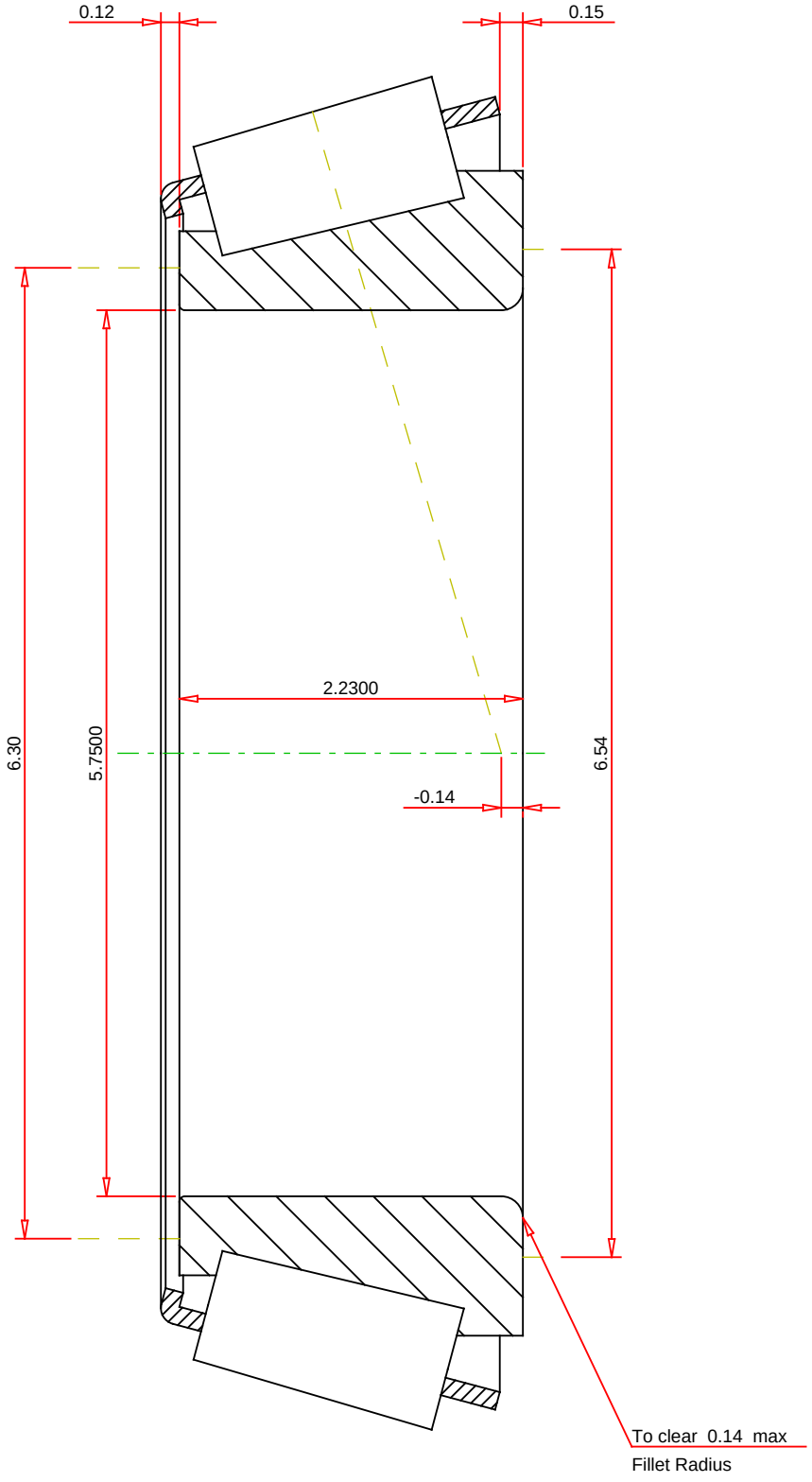
[5] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

[6] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[7] 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.

[8] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[9] Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

Number of Rollers Per Row	24

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

82576
SINGLE TAPERED CONE

K Factor	1.32	
Dynamic Radial Rating - C90	30000	lbf
Dynamic Thrust Rating - Ca90	22700	lbf
Dynamic Radial Rating - C1	116000	lbf

FOR DISCUSSION ONLY