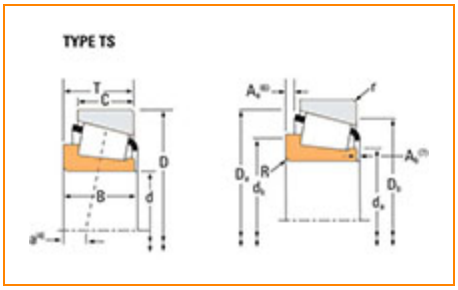
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number 3192, 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	3100
Cone Part Number	3192
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[1]	37100 lbf 165000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[2]	9620 lbf 42800 N

Dimensions

d - Cone Bore	1 1/8 in 28.575 mm
B - Cone Width	1.1810 in 29.997 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[3]	0.140 in 3.6 mm
da - Cone Frontface Backing Diameter	1.46 in 37 mm
db - Cone Backface Backing Diameter	1.71 in 43.5 mm
Ab - Cage-Cone Frontface Clearance	0.06 in 1.5 mm
Aa - Cage-Cone Backface Clearance	0.03 in 0.8 mm
a - Effective Center Location[4]	-0.4 in -10.2 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[5]	5520 lbf 24600 N
C1 - Dynamic Radial Rating (1 million revolutions)[6]	21300 lbf 94800 N
C0 - Static Radial Rating	22800 lbf 102000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[7]	3140 lbf 14000 N

Factors

K - Factor[8]	1.76
G1 - Heat Generation Factor (Roller-Raceway)	23.4
G2 - Heat Generation Factor (Rib-Roller End)	8.76
Cg - Geometry Factor[9]	0.0697

[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.

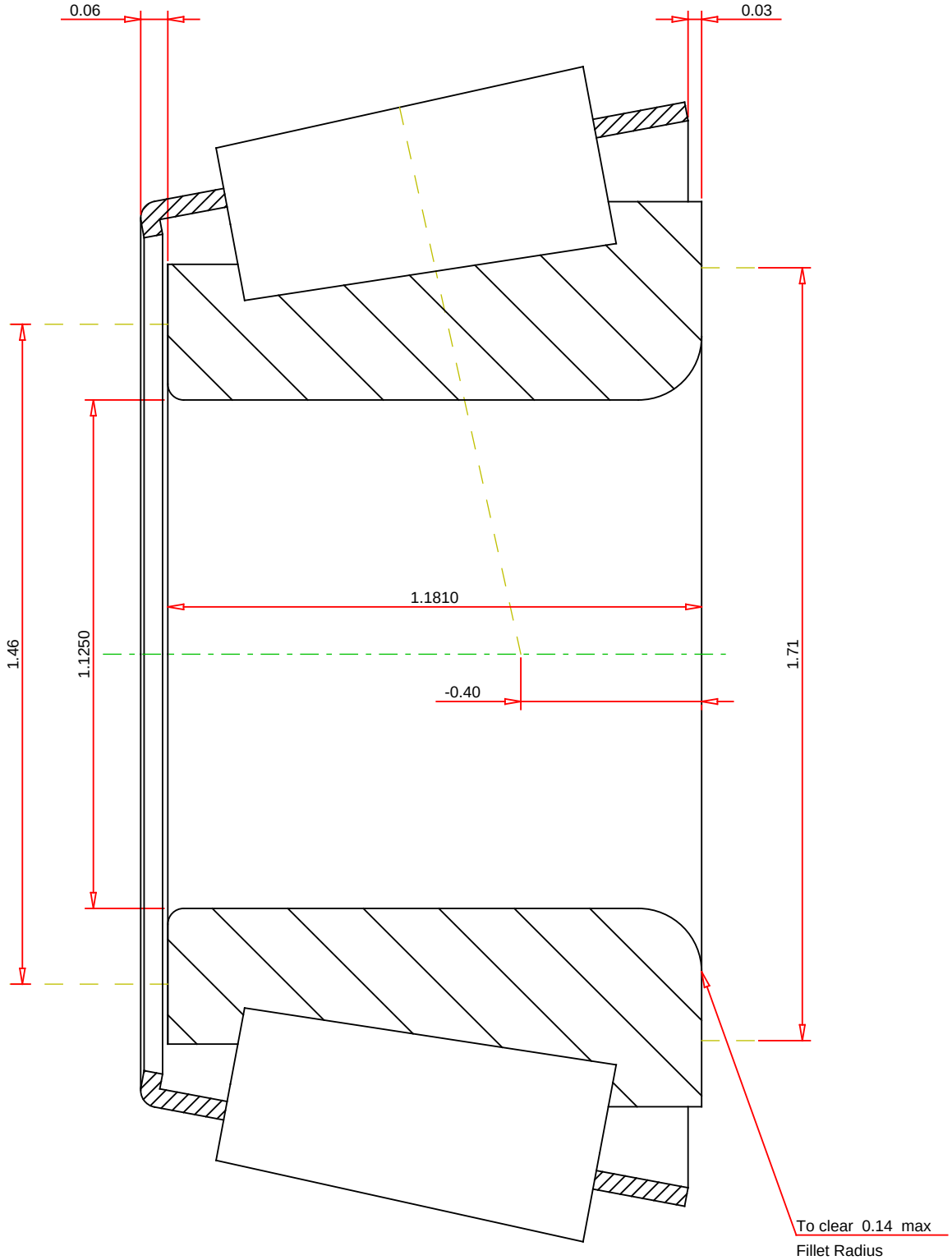
[5] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

[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	13

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

3192
Tapered Roller Bearings - Single Cones - Imperial

K Factor	1.76	
Dynamic Radial Rating - C90	5520	lbf
Dynamic Thrust Rating - Ca90	3140	lbf
Dynamic Radial Rating - C1	21300	lbf

FOR DISCUSSION ONLY