



The Timken Company

4500 Mt Pleasant St. NW

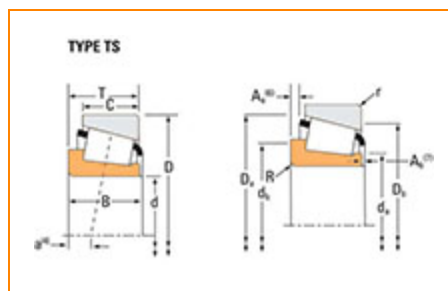
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Part Number 1380, Tapered Roller Bearings - Single Cones - Imperial

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.



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Specifications

Series	1300
Cone Part Number	1380
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	18700 lbf 83300 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	4860 lbf 21600 N

Dimensions

d - Bore	0.8750 in 22.225 mm
B - Cone Width	0.7940 in 20.168 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.06 in 1.5 mm
da - Cone Frontface Backing Diameter	1.06 in 27 mm
db - Cone Backface Backing Diameter	1.16 in 29.5 mm
Ab - Cage-Cone Frontface Clearance	0.07 in 1.8 mm
Aa - Cage-Cone Backface Clearance	0.03 in 0.8 mm
a - Effective Center Location⁴	-0.3 in -7.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	2790 lbf 12400 N
C1 - Dynamic Radial Rating (1 million revolutions)⁶	10800 lbf 47900 N
C0 - Static Radial Rating	10900 lbf 48300 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	1390 lbf 6200 N

Factors

K - Factor⁸	2
G1 - Heat Generation Factor (Roller-Raceway)	10.3
G2 - Heat Generation Factor (Rib-Roller End)	5.21
Cg - Geometry Factor⁹	0.0508

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

² 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.

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

⁴ Negative value indicates effective center inside cone backface.

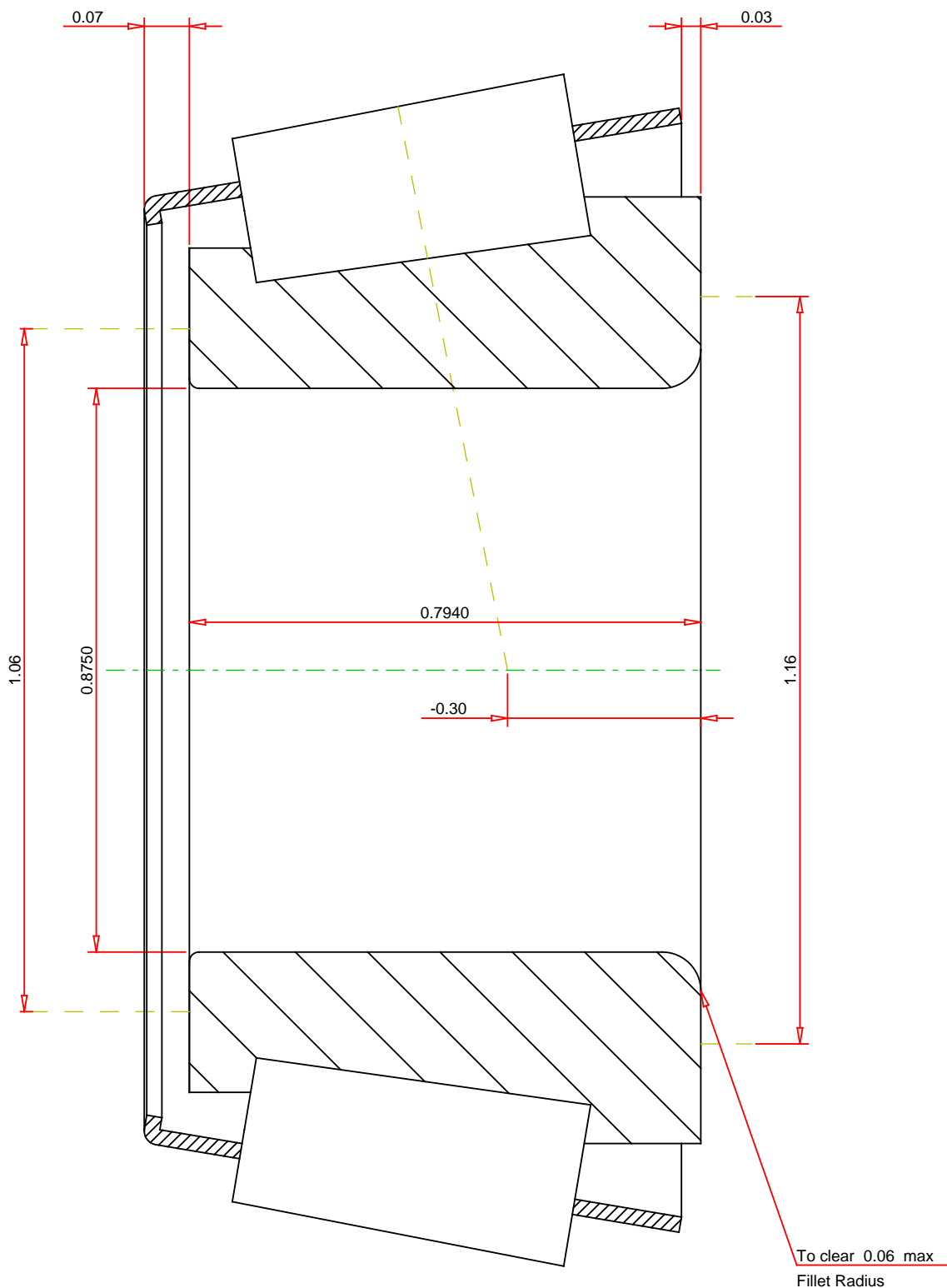
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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

⁷ 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.

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 a_3 .



IMPERIAL UNITS

Number of Rollers Per Row

14

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

1380
SINGLE TAPERED CONE

K Factor	2
Dynamic Radial Rating - C90	2790 lbf
Dynamic Thrust Rating - Ca90	1390 lbf
Dynamic Radial Rating - C1	10800 lbf

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

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