TIMKEN

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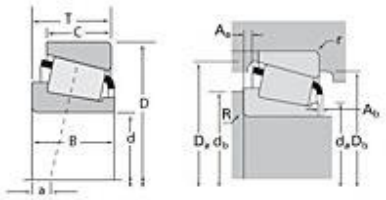
Timken Part Number 03062 - 03162, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	03000
Cone Part Number	03062
Cup Part Number	03162
Design Units	Imperial
Bearing Weight	0.20 lb 0.100 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	0.6250 in 15.875 mm
D - Cup Outer Diameter	1.6250 in 41.275 mm

B - Cone Width	0.5780 in 14.681 mm
C - Cup Width	0.4375 in 11.113 mm
T - Bearing Width	0.5625 in 14.288 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.050 in 1.270 mm
r - Cup Backface "To Clear" Radius[2]	0.080 in 2.03 mm
da - Cone Frontface Backing Diameter	0.79 in 20.07 mm
db - Cone Backface Backing Diameter	0.85 in 21.59 mm
Da - Cup Frontface Backing Diameter	1.50 in 38.10 mm
Db - Cup Backface Backing Diameter	1.34 in 34.04 mm
Ab - Cage-Cone Frontface Clearance	0.08 in 2 mm
Aa - Cage-Cone Backface Clearance	-0.01 in -0.3 mm
a - Effective Center Location[3]	-0.20 in -5.10 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	1400 lbf 6230 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	5400 lbf 24000 N
C0 - Static Radial Rating	4780 lbf 21300 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	745 lbf 3310 N

Factors

K - Factor[7]	1.88
e - ISO Factor[8]	0.31
Y - ISO Factor[9]	1.93
G1 - Heat Generation Factor (Roller-Raceway)	4.2
G2 - Heat Generation Factor (Rib-Roller End)	4.01
Cg - Geometry Factor	0.0384

[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 x 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 x 10^6 revolutions L_{10} life, for the ISO life calculation method.
[6] 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.
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.
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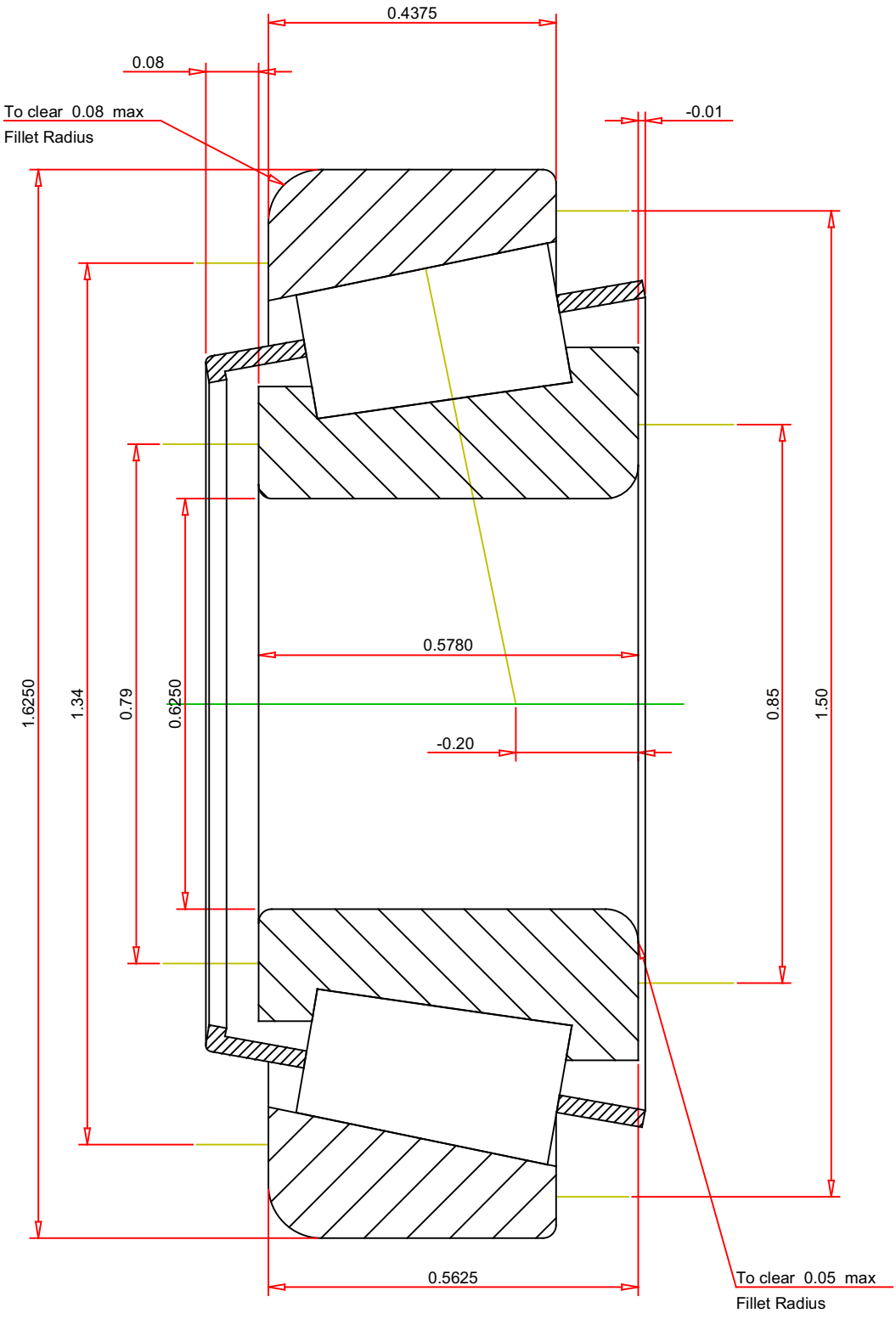

IMPERIAL UNITS

ISO Factor - e	0.31	
ISO Factor - Y	1.93	
Bearing Weight	0.2	lb
Number of Rollers Per Row	12	
Effective Center Location	-0.2	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

03062 - 03162
TS BEARING ASSEMBLY

K Factor	1.88	
Dynamic Radial Rating - C90	1400	lbf
Dynamic Thrust Rating - Ca90	745	lbf
Static Radial Rating - C0	4780	lbf
Dynamic Radial Rating - C1	5400	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.

FOR DISCUSSION ONLY