TIMKEN

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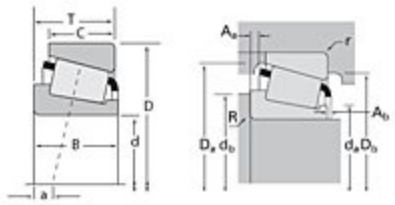
Timken Part Number A5069 - A5144, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.





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Specifications

Series	A5000
Cone Part Number	A5069
Cup Part Number	A5144
Design Units	Imperial
Bearing Weight	0.100 Kg 0.10 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	17.455 mm 0.6872 in
D - Cup Outer Diameter	36.525 mm 1.4380 in

B - Cone Width	11.113 mm 0.4375 in
C - Cup Width	7.938 mm 0.3125 in
T - Bearing Width	11.113 mm 0.4375 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius[2]	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	21.34 mm 0.84 in
db - Cone Backface Backing Diameter	23.62 mm 0.93 in
Da - Cup Frontface Backing Diameter	34.00 mm 1.34 in
Db - Cup Backface Backing Diameter	29.97 mm 1.18 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	-0.5 mm -0.02 in
a - Effective Center Location[3]	-2.00 mm -0.08 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	3380 N 760 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	13000 N 2930 lbf
C0 - Static Radial Rating	11600 N 2600 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	2820 N 634 lbf

Factors

K - Factor[7]	1.2
e - ISO Factor[8]	0.49
Y - ISO Factor[9]	1.23
G1 - Heat Generation Factor (Roller-Raceway)	2.5
G2 - Heat Generation Factor (Rib-Roller End)	4.61
Cg - Geometry Factor	0.0376

[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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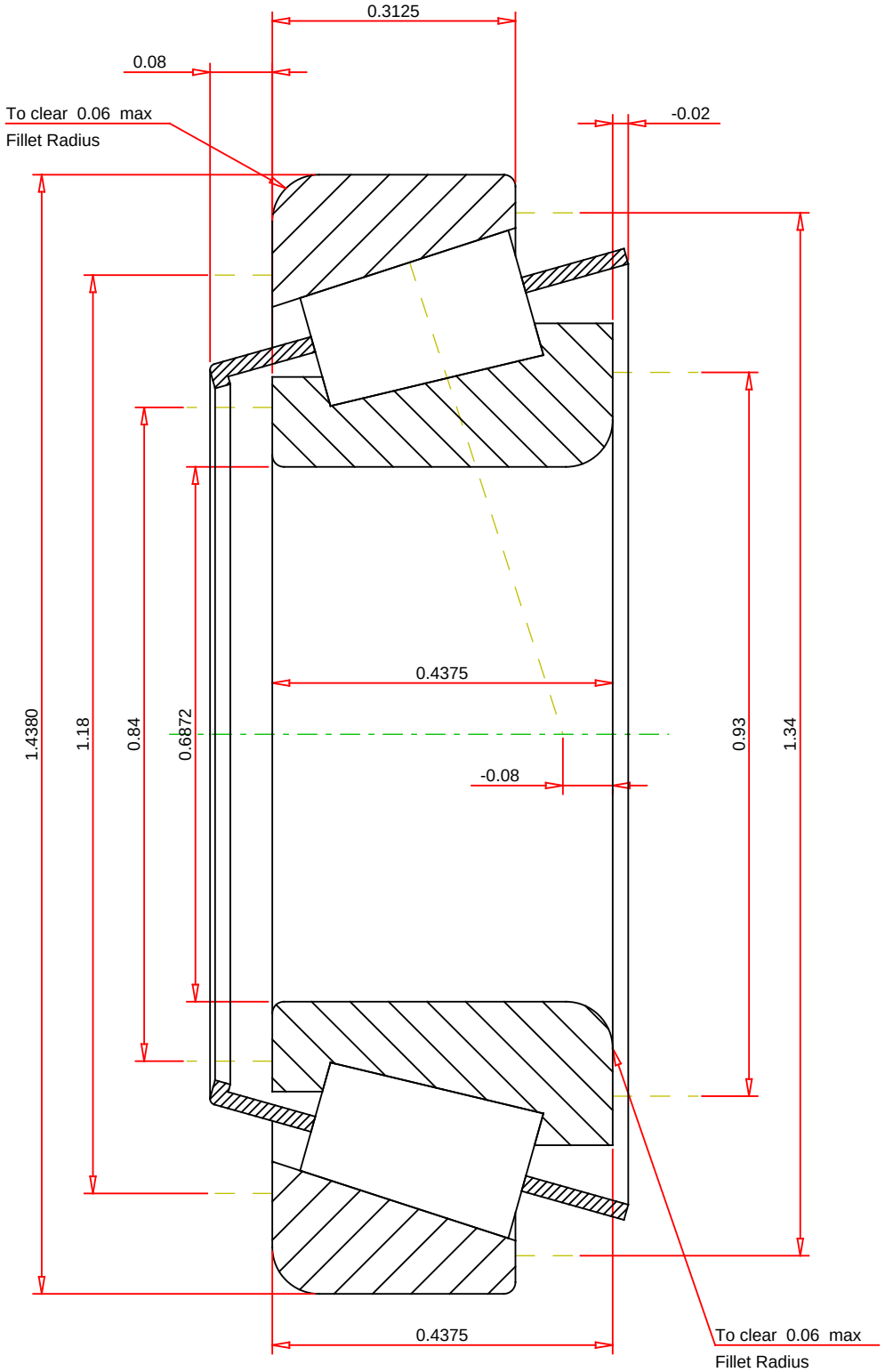

IMPERIAL UNITS

ISO Factor - e	0.49	
ISO Factor - Y	1.23	
Bearing Weight	0.1	lb
Number of Rollers Per Row	12	
Effective Center Location	-0.08	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

A5069 - A5144
TS BEARING ASSEMBLY

K Factor	1.2	
Dynamic Radial Rating - C90	3380	lbf
Dynamic Thrust Rating - Ca90	2820	lbf
Static Radial Rating - C0	11600	lbf
Dynamic Radial Rating - C1	13000	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