TIMKEN

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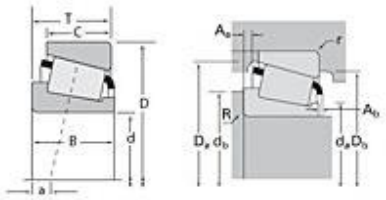
Timken Part Number HM803149 - HM803110, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	HM803100
Cone Part Number	HM803149
Cup Part Number	HM803110
Design Units	Imperial
Bearing Weight	1.90 lb 0.800 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	1.7500 in 44.450 mm
D - Cup Outer Diameter	3.5000 in 88.900 mm

B - Cone Width	1.1563 in 29.370 mm
C - Cup Width	0.9063 in 23.020 mm
T - Bearing Width	1.1875 in 30.163 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.560 mm
r - Cup Backface "To Clear" Radius[2]	0.130 in 3.30 mm
da - Cone Frontface Backing Diameter	2.10 in 53.34 mm
db - Cone Backface Backing Diameter	2.44 in 61.98 mm
Da - Cup Frontface Backing Diameter	3.39 in 85.10 mm
Db - Cup Backface Backing Diameter	2.91 in 73.91 mm
Ab - Cage-Cone Frontface Clearance	0.11 in 2.8 mm
Aa - Cage-Cone Backface Clearance	0.04 in 1 mm
a - Effective Center Location[3]	-0.17 in -4.30 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	6630 lbf 29500 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	25600 lbf 114000 N
C0 - Static Radial Rating	32400 lbf 144000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	6200 lbf 27600 N

Factors

K - Factor[7]	1.07
e - ISO Factor[8]	0.55
Y - ISO Factor[9]	1.1
G1 - Heat Generation Factor (Roller-Raceway)	39.2
G2 - Heat Generation Factor (Rib-Roller End)	13.7
Cg - Geometry Factor	0.0974

[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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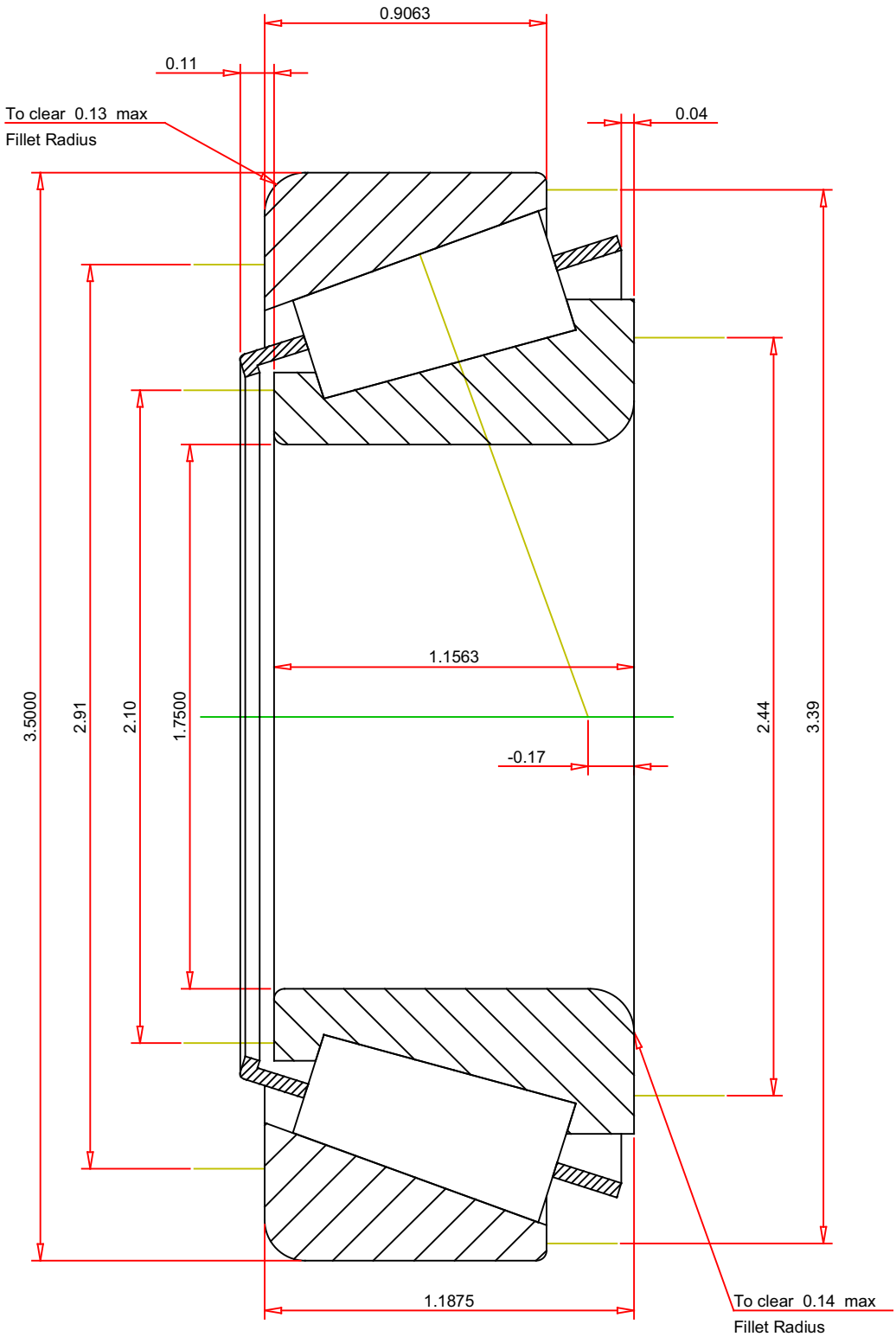

IMPERIAL UNITS

ISO Factor - e	0.55	
ISO Factor - Y	1.1	
Bearing Weight	1.9	lb
Number of Rollers Per Row	18	
Effective Center Location	-0.17	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM803149 - HM803110
TS BEARING ASSEMBLY

K Factor	1.07	
Dynamic Radial Rating - C90	6630	lbf
Dynamic Thrust Rating - Ca90	6200	lbf
Static Radial Rating - C0	32400	lbf
Dynamic Radial Rating - C1	25600	lbf

FOR DISCUSSION ONLY