TIMKEN

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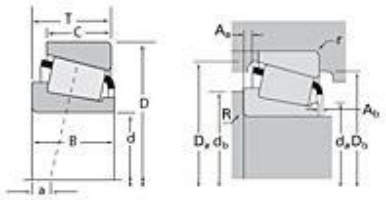
Timken Part Number HM212047 - HM212011, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	HM212000
Cone Part Number	HM212047
Cup Part Number	HM212011
Design Units	Imperial
Bearing Weight	4.30 lb 1.900 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	2.5000 in 63.500 mm
D - Cup Outer Diameter	4.8125 in 122.238 mm

B - Cone Width	1.5100 in 38.354 mm
C - Cup Width	1.1700 in 29.718 mm
T - Bearing Width	1.5000 in 38.100 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.280 in 7.110 mm
r - Cup Backface "To Clear" Radius[2]	0.130 in 3.30 mm
da - Cone Frontface Backing Diameter	3.52 in 72.90 mm
db - Cone Backface Backing Diameter	3.43 in 87.12 mm
Da - Cup Frontface Backing Diameter	4.60 in 116.10 mm
Db - Cup Backface Backing Diameter	4.25 in 107.95 mm
Ab - Cage-Cone Frontface Clearance	0.15 in 3.8 mm
Aa - Cage-Cone Backface Clearance	0.07 in 1.8 mm
a - Effective Center Location[3]	-0.43 in -10.90 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	15600 lbf 69200 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	60000 lbf 267000 N
C0 - Static Radial Rating	62700 lbf 279000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	8990 lbf 40000 N

Factors

K - Factor[7]	1.73
e - ISO Factor[8]	0.34
Y - ISO Factor[9]	1.78
G1 - Heat Generation Factor (Roller-Raceway)	92.2
G2 - Heat Generation Factor (Rib-Roller End)	18.1
Cg - Geometry Factor	0.0759

[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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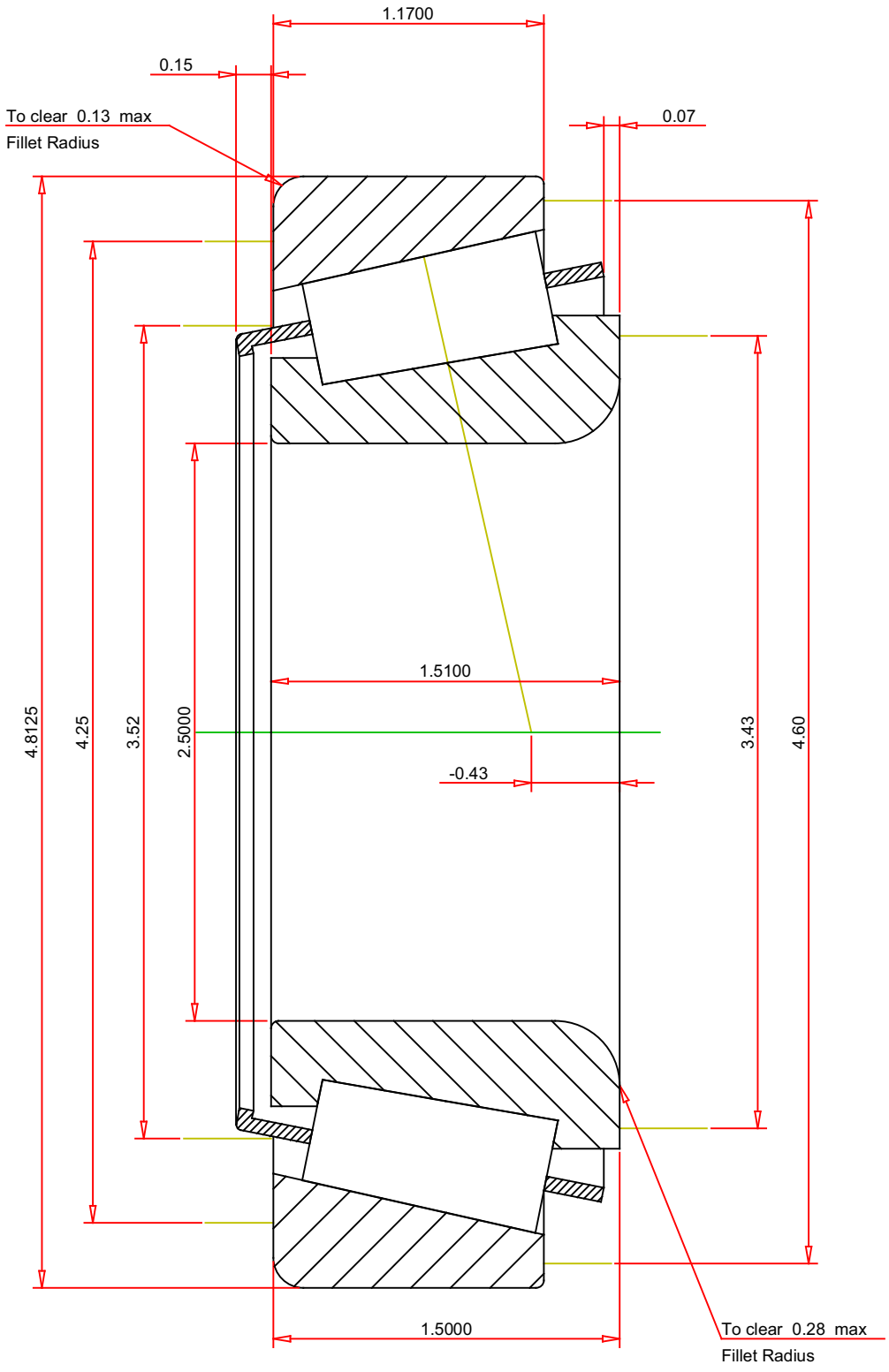

IMPERIAL UNITS

ISO Factor - e	0.34	
ISO Factor - Y	1.78	
Bearing Weight	4.3	lb
Number of Rollers Per Row	17	
Effective Center Location	-0.43	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM212047 - HM212011
TS BEARING ASSEMBLY

K Factor	1.73	
Dynamic Radial Rating - C90	15600	lbf
Dynamic Thrust Rating - Ca90	8990	lbf
Static Radial Rating - C0	62700	lbf
Dynamic Radial Rating - C1	60000	lbf

FOR DISCUSSION ONLY