TIMKEN

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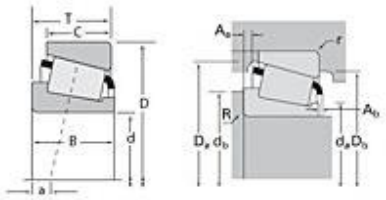
Timken Part Number HM218248 - HM218210, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	HM218200
Cone Part Number	HM218248
Cup Part Number	HM218210
Design Units	Imperial
Bearing Weight	5.60 lb 2.500 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	3.5423 in 89.974 mm
D - Cup Outer Diameter	5.7864 in 146.975 mm

B - Cone Width	1.5748 in 40.000 mm
C - Cup Width	1.2795 in 32.499 mm
T - Bearing Width	1.5748 in 40.000 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]	0.140 in 3.56 mm
da - Cone Frontface Backing Diameter	4.61 in 99.06 mm
db - Cone Backface Backing Diameter	4.41 in 112.01 mm
Da - Cup Frontface Backing Diameter	5.57 in 141.00 mm
Db - Cup Backface Backing Diameter	5.24 in 133.10 mm
Ab - Cage-Cone Frontface Clearance	0.14 in 3.6 mm
Aa - Cage-Cone Backface Clearance	0.04 in 1 mm
a - Effective Center Location[3]	-0.34 in -8.60 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	18900 lbf 84200 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	73000 lbf 325000 N
C0 - Static Radial Rating	87300 lbf 388000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	10800 lbf 47900 N

Factors

K - Factor[7]	1.76
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	1.8
G1 - Heat Generation Factor (Roller-Raceway)	168
G2 - Heat Generation Factor (Rib-Roller End)	34.7
Cg - Geometry Factor	0.0921

[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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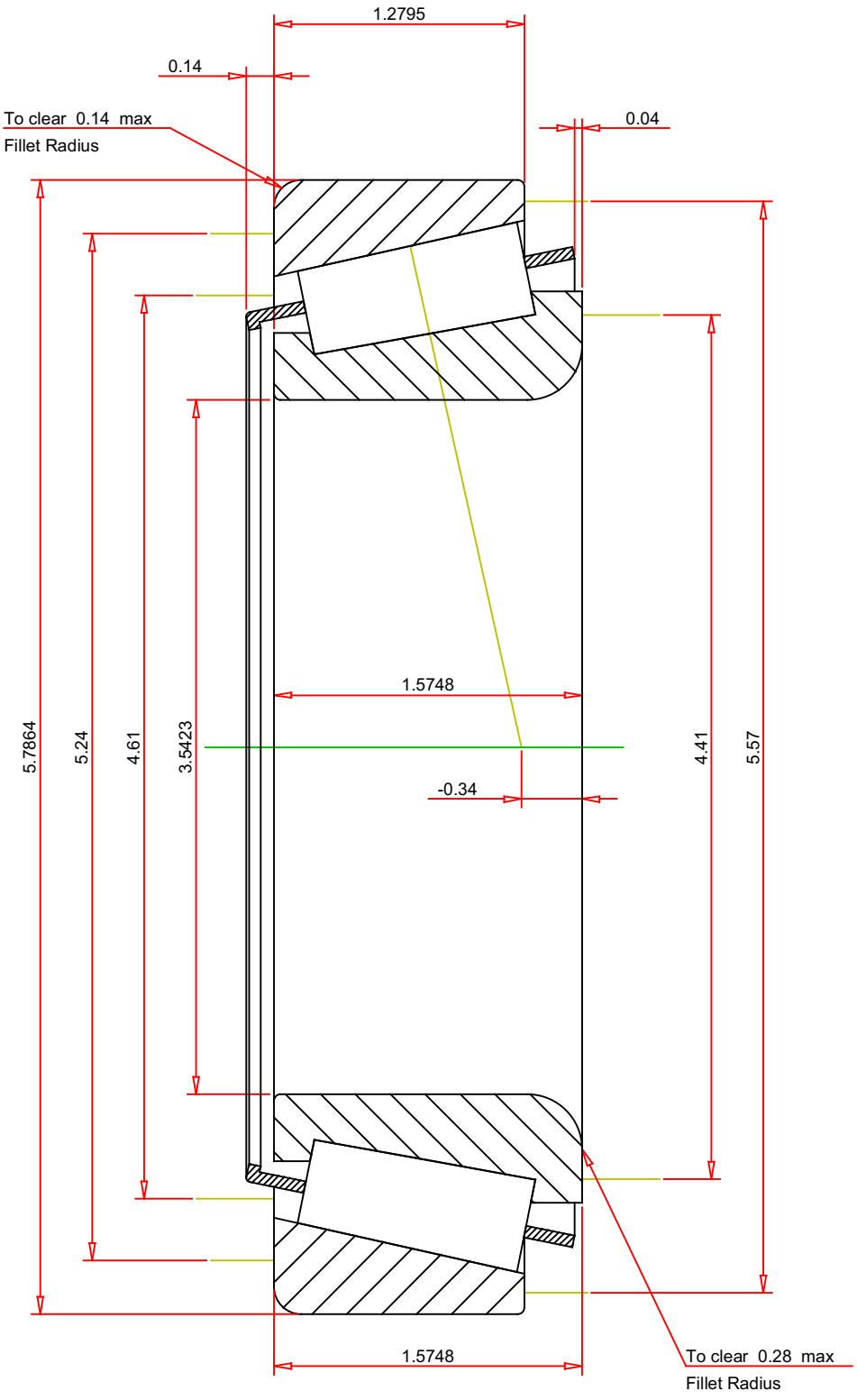

IMPERIAL UNITS

ISO Factor - e	0.33	
ISO Factor - Y	1.8	
Bearing Weight	5.6	lb
Number of Rollers Per Row	21	
Effective Center Location	-0.34	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM218248 - HM218210
TS BEARING ASSEMBLY

K Factor	1.76	
Dynamic Radial Rating - C90	18900	lbf
Dynamic Thrust Rating - Ca90	10800	lbf
Static Radial Rating - C0	87300	lbf
Dynamic Radial Rating - C1	73000	lbf

FOR DISCUSSION ONLY