The Timken Company
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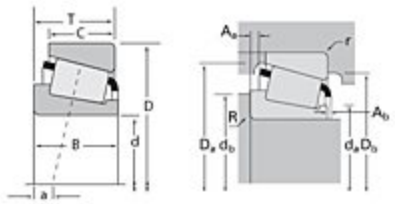
Timken Part Number H414249 - H414210, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	H414200
Cone Part Number	H414249
Cup Part Number	H414210
Design Units	Imperial
Bearing Weight	2.500 Kg 5.60 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	71.438 mm 2.8125 in
D - Cup Outer Diameter	136.525 mm 5.3750 in

B - Cone Width	41.275 mm 1.6250 in
C - Cup Width	31.750 mm 1.2500 in
T - Bearing Width	41.275 mm 1.6250 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	83.06 mm 4.02 in
db - Cone Backface Backing Diameter	88.90 mm 3.50 in
Da - Cup Frontface Backing Diameter	130.00 mm 5.12 in
Db - Cup Backface Backing Diameter	120.90 mm 4.76 in
Ab - Cage-Cone Frontface Clearance	3.6 mm 0.14 in
Aa - Cage-Cone Backface Clearance	3.3 mm 0.13 in
a - Effective Center Location[3]	-10.9 mm -0.43 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	83700 N 18800 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	323000 N 72600 lbf
C0 - Static Radial Rating	335000 N 75400 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	51600 N 11600 lbf

Factors

K - Factor[7]	1.62
e - ISO Factor[8]	0.36
Y - ISO Factor[9]	1.67
G1 - Heat Generation Factor (Roller-Raceway)	113
G2 - Heat Generation Factor (Rib-Roller End)	22.8
Cg - Geometry Factor	0.0827

[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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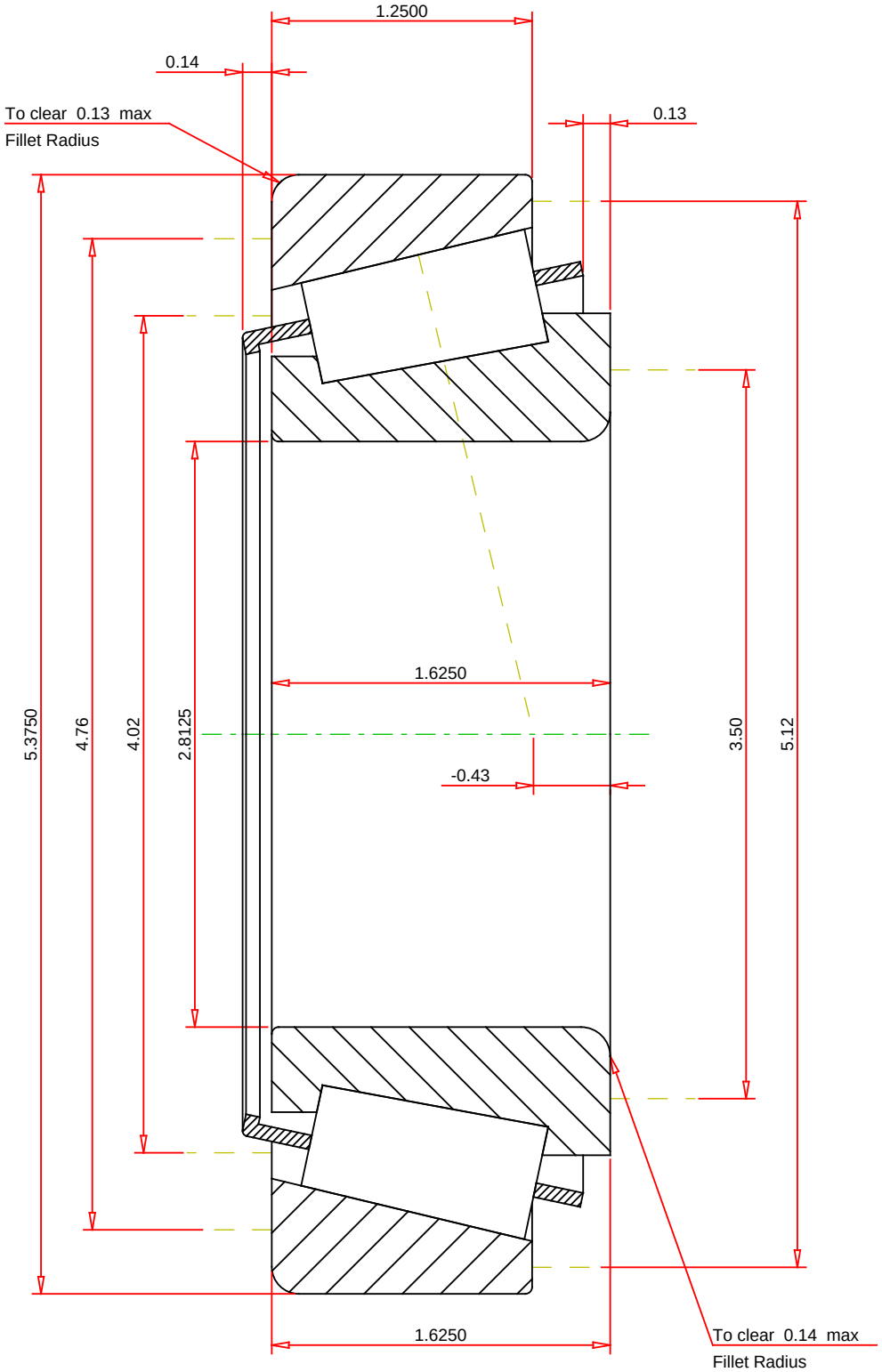

IMPERIAL UNITS

ISO Factor - e	0.36	
ISO Factor - Y	1.67	
Bearing Weight	5.6	lb
Number of Rollers Per Row	17	
Effective Center Location	-0.43	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

H414249 - H414210
TS BEARING ASSEMBLY

K Factor	1.62	
Dynamic Radial Rating - C90	83700	lbf
Dynamic Thrust Rating - Ca90	51600	lbf
Static Radial Rating - C0	335000	lbf
Dynamic Radial Rating - C1	323000	lbf

FOR DISCUSSION ONLY