The Timken Company
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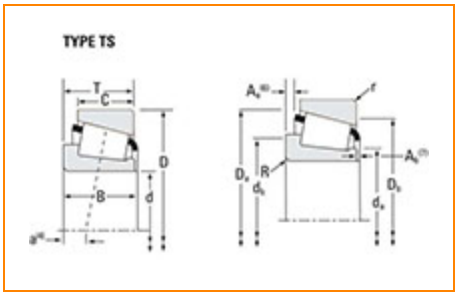
Part Number HH224346 - HH224310, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	HH224300
Cone Part Number	HH224346
Cup Part Number	HH224310
Design Units	Imperial
Bearing Weight	9.9 Kg 21.900 lb
Cage Type	Stamped Steel

Dimensions

	114.300 mm

d - Bore	114.300 mm 4.5000 in
D - Cup Outer Diameter	212.725 mm 8.3750 in
B - Cone Width	66.675 mm 2.6250 in
C - Cup Width	53.975 mm 2.1250 in
T - Bearing Width	66.675 mm 2.6250 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	7.110 mm 0.280 in
r - Cup Backface "To Clear" Radius[2]	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	131.06 mm 6.14 in
db - Cone Backface Backing Diameter	143 mm 5.63 in
Da - Cup Frontface Backing Diameter	201.70 mm 7.95 in
Db - Cup Backface Backing Diameter	192.02 mm 7.56 in
Ab - Cage-Cone Frontface Clearance	3.8 mm 0.15 in
Aa - Cage-Cone Backface Clearance	4.1 mm 0.16 in
a - Effective Center Location[3]	-18.8 mm -0.74 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	39600 lbf 176000 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	153000 lbf 680000 N
C0 - Static Radial Rating	204000 lbf 906000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	22100 lbf 98300 N

Factors

K - Factor[7]	1.79
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	1.84
G1 - Heat Generation Factor (Roller-Raceway)	367
G2 - Heat Generation Factor (Rib-Roller End)	47.8
Cg - Geometry Factor[10]	0.118

[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.
[8] These factors apply for both inch and metric calculations. Consult your Timken representative for

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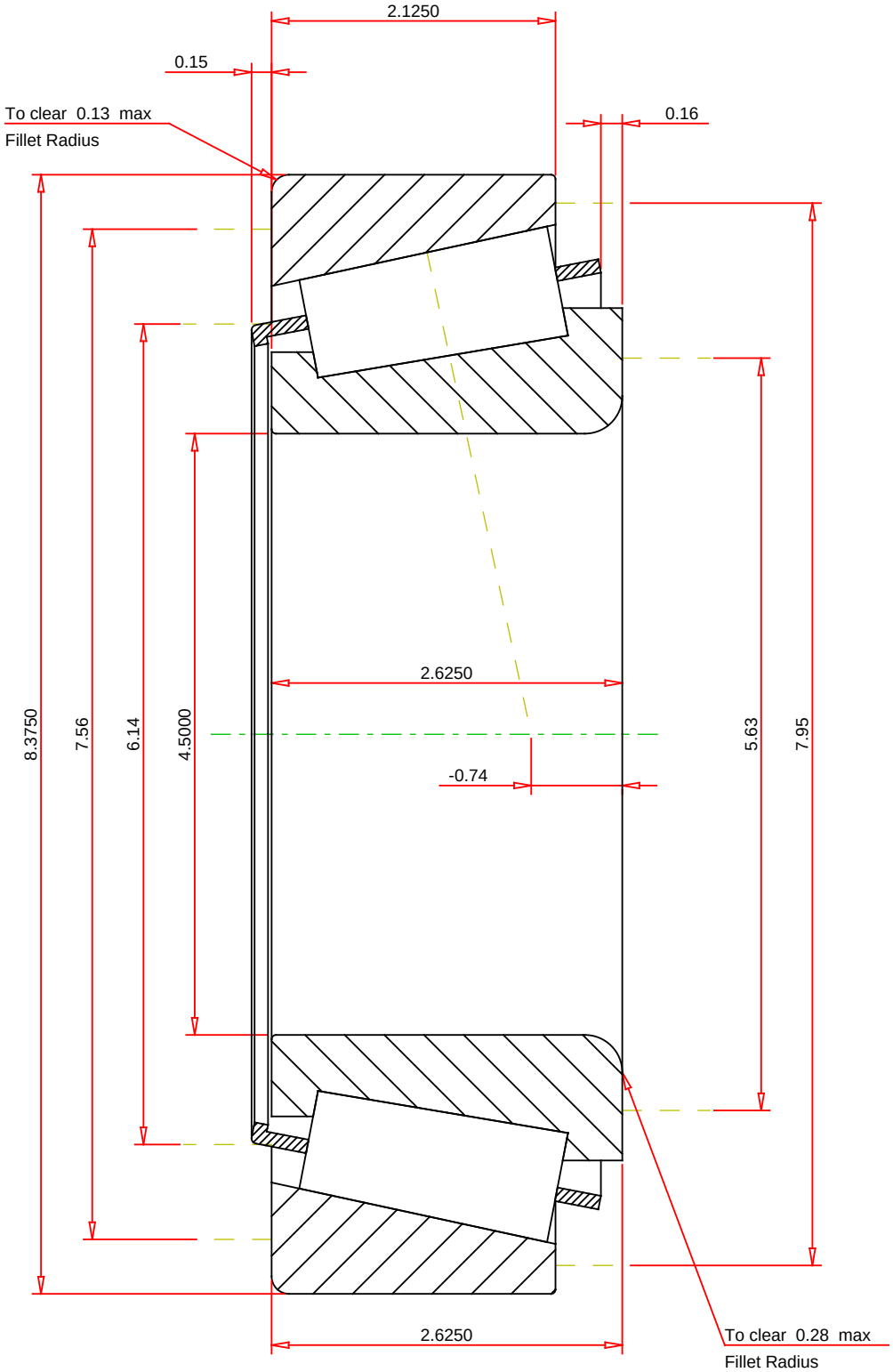
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[10] Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.33	
ISO Factor - Y	1.84	
Bearing Weight	21.9	lb
Number of Rollers Per Row	17	
Effective Center Location	-0.74	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HH224346 - HH224310
TS BEARING ASSEMBLY

K Factor	1.79	
Dynamic Radial Rating - C90	39600	lbf
Dynamic Thrust Rating - Ca90	22100	lbf
Static Radial Rating - C0	204000	lbf
Dynamic Radial Rating - C1	153000	lbf

FOR DISCUSSION ONLY