The Timken Company
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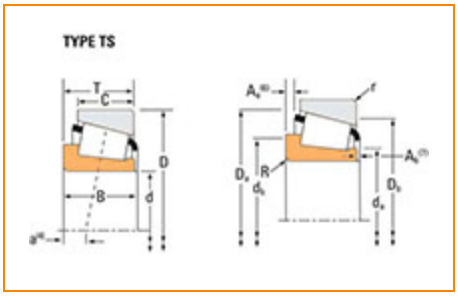
Part Number HH421246C, Tapered Roller Bearings - Single Cones - Imperial

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

Cone Part Number	HH421246C
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[1]	246000 lbf 1090000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[2]	63800 lbf 284000 N

Dimensions

	2.8750 in

d - Bore	3.8750 in 98.425 mm
B - Cone Width	2.5 in 63.5 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[3]	0.25 in 6.35 mm
da - Cone Frontface Backing Diameter	4.53 in 115.1 mm
db - Cone Backface Backing Diameter	5 in 127 mm
Ab - Cage-Cone Frontface Clearance	0.15 in 3.8 mm
Aa - Cage-Cone Backface Clearance	0.1 in 2.5 mm
a - Effective Center Location[4]	-0.66 in -16.8 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[5]	36600 lbf 163000 N
C1 - Dynamic Radial Rating (1 million revolutions)[6]	141000 lbf 628000 N
C0 - Static Radial Rating	174000 lbf 772000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[7]	23500 lbf 104000 N

Factors

K - Factor[8]	1.56
G1 - Heat Generation Factor (Roller-Raceway)	298.2
G2 - Heat Generation Factor (Rib-Roller End)	40.9
Cg - Geometry Factor[9]	0.116

[1] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[2] 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.

[3] These maximum fillet radii will be cleared by the bearing corners.

[4] Negative value indicates effective center inside cone backface.

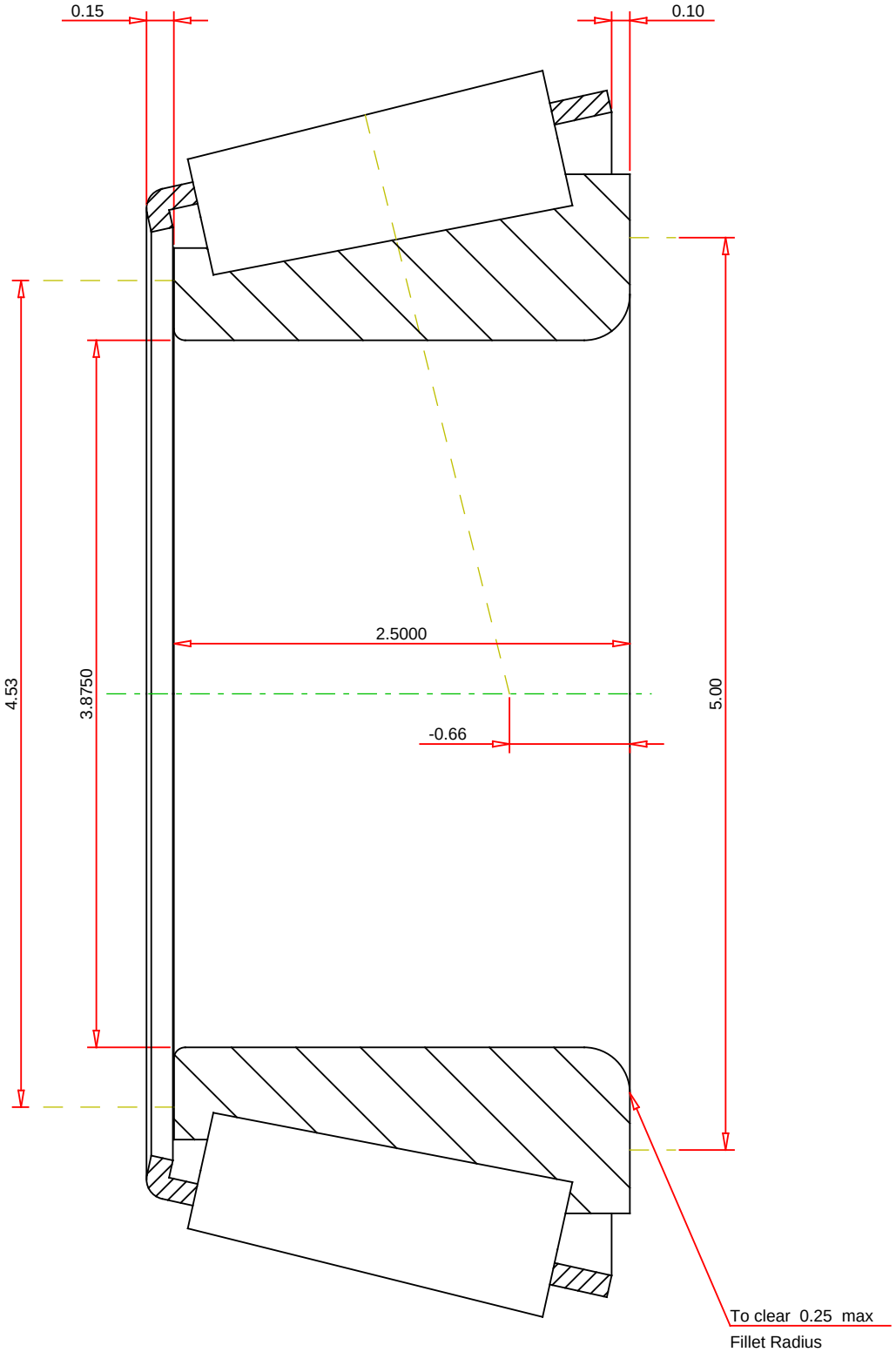
[5] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

[6] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[7] 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.

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

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



IMPERIAL UNITS

Number of Rollers Per Row	19

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HH421246C
SINGLE TAPERED CONE

K Factor	1.56	
Dynamic Radial Rating - C90	36600	lbf
Dynamic Thrust Rating - Ca90	23500	lbf
Dynamic Radial Rating - C1	141000	lbf

FOR DISCUSSION ONLY