


The Timken Company

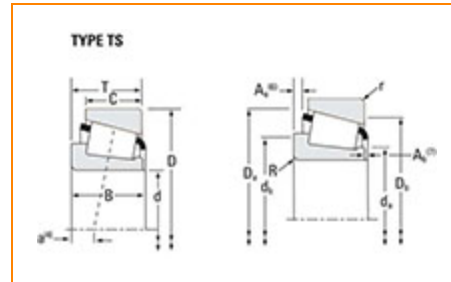
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Part Number LM114848 - LM114811, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	LM114800
Cone Part Number	LM114848
Cup Part Number	LM114811
Design Unit	Inch
Cage Material	Stamped Steel

Dimensions

d - Bore	3 in 76.2 mm
 - Cup Outer Diameter	4.5625 in 115.888 mm

B - Cone Width	1.0625 in 26.988 mm
C - Cup Width	0.9375 in 23.813 mm
T - Bearing Width	1.0626 in 26.990 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.060 in 1.5 mm
r - Cup Backface "To Clear" Radius²	0.06 in 1.52 mm
da - Cone Frontface Backing Diameter	3.27 in 83 mm
db - Cone Backface Backing Diameter	3.31 in 84 mm
Da - Cup Frontface Backing Diameter	4.35 in 110.00 mm
Db - Cup Backface Backing Diameter	4.21 in 106.93 mm
Ab - Cage-Cone Frontface Clearance	0.07 in 1.8 mm
Aa - Cage-Cone Backface Clearance	0.02 in 0.5 mm
a - Effective Center Location³	-0.22 in -5.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90	7260 lbf
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million revolutions) ⁴	32300 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	28000 lbf 125000 N
C0 - Static Radial Rating	41800 lbf 186000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	3380 lbf 15100 N

Factors

K - Factor⁷	2.15
e - ISO Factor⁸	0.27
Y - ISO Factor⁹	2.2
G1 - Heat Generation Factor (Roller-Raceway)	98.9
G2 - Heat Generation Factor (Rib-Roller End)	47.1
Cg - Geometry Factor¹⁰	0.105

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 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

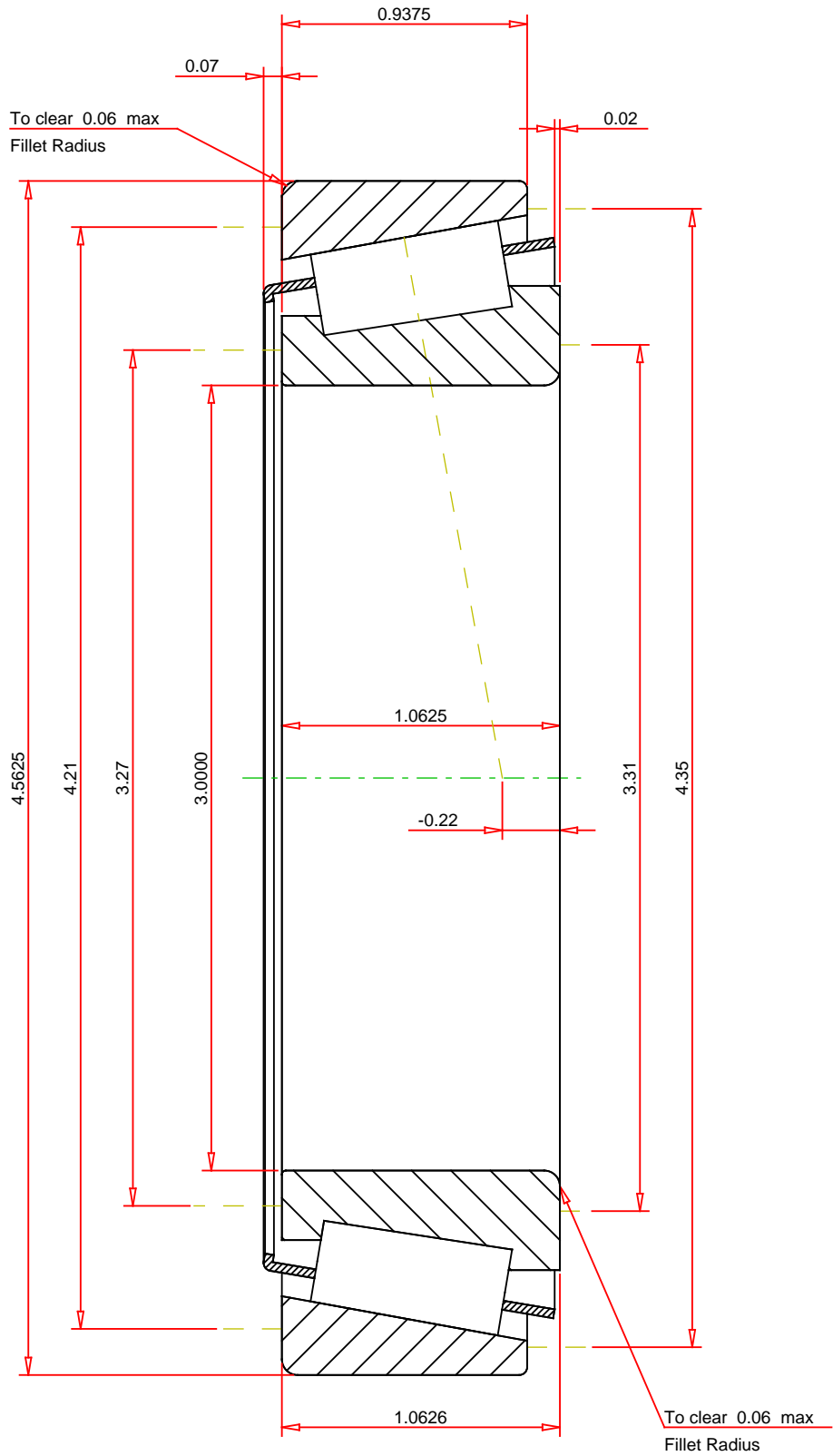
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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 instruction on use.

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	0.27
ISO Factor - Y	2.2
Bearing Weight	2.2 lb
Number of Rollers Per Row	26
Effective Center Location	-0.22 inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

LM114848 - LM114811
Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	2.15
Dynamic Radial Rating - C90	7260 lbf
Dynamic Thrust Rating - Ca90	3380 lbf
Static Radial Rating - C0	41800 lbf
Dynamic Radial Rating - C1	28000 lbf

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

FOR DISCUSSION ONLY