The Timken Company
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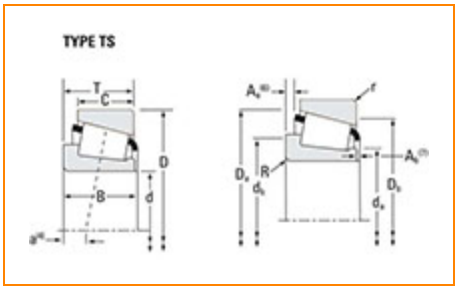
Part Number 3474 - 3431, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	3400
Cone Part Number	3474
Cup Part Number	3431
Design Unit	Inch
Cage Material	Stamped Steel

Dimensions

d - Bore	1 3/16 in 30.163 mm
D - Cup Outer Diameter	3.2500 in 82.550 mm

B - Cone Width	1.1721 in 29.771 mm
C - Cup Width	0.9375 in 23.813 mm
T - Bearing Width	1.1563 in 29.370 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.03 in 0.800 mm
r - Cup Backface "To Clear" Radius[2]	0.130 in 3.30 mm
da - Cone Frontface Backing Diameter	1.57 in 40 mm
db - Cone Backface Backing Diameter	1.61 in 41.0 mm
Da - Cup Frontface Backing Diameter	2.99 in 75.90 mm
Db - Cup Backface Backing Diameter	2.72 in 69.09 mm
Ab - Cage-Cone Frontface Clearance	0.05 in 1.3 mm
Aa - Cage-Cone Backface Clearance	0.04 in 1 mm
a - Effective Center Location[3]	-0.34 in -8.6 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90	6100 lbf

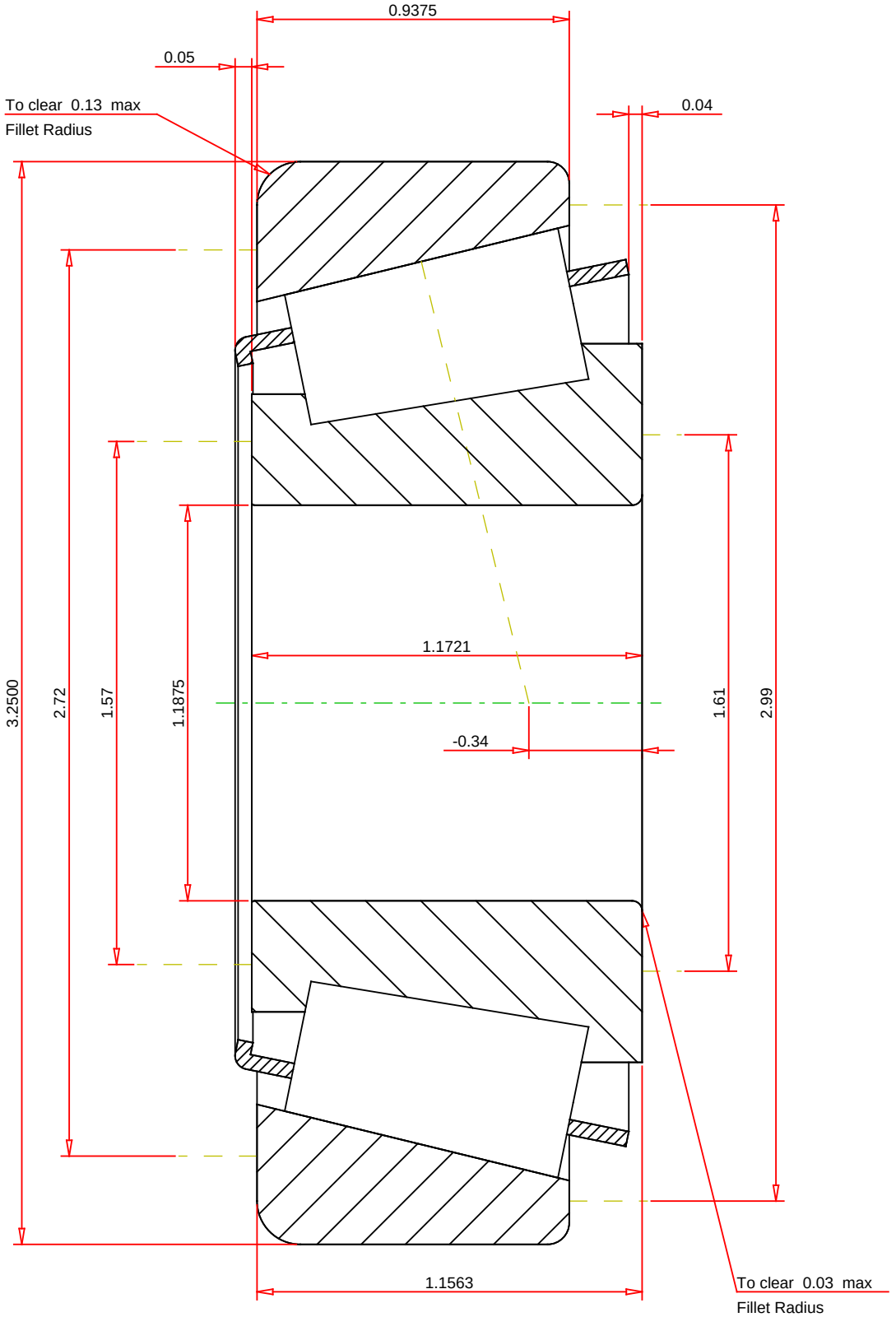
million revolutions)[4]	27100 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	23500 lbf 105000 N
C0 - Static Radial Rating	26800 lbf 119000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	3820 lbf 17000 N

Factors

K - Factor[7]	1.6
e - ISO Factor[8]	0.37
Y - ISO Factor[9]	1.64
G1 - Heat Generation Factor (Roller-Raceway)	29.9
G2 - Heat Generation Factor (Rib-Roller End)	11.2
Cg - Geometry Factor[10]	0.0781

[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	0.37	
ISO Factor - Y	1.64	
Bearing Weight	1.8	lb
Number of Rollers Per Row	15	
Effective Center Location	-0.34	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

3474 - 3431
Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.6	
Dynamic Radial Rating - C90	6100	lbf
Dynamic Thrust Rating - Ca90	3820	lbf
Static Radial Rating - C0	26800	lbf
Dynamic Radial Rating - C1	23500	lbf

FOR DISCUSSION ONLY