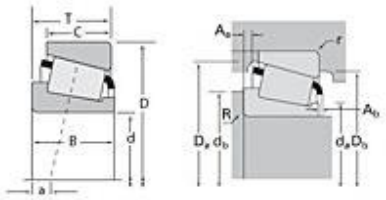
TIMKEN

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Timken Part Number 14131 - 14276, 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.





Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

Specifications

Series	14000
Cone Part Number	14131
Cup Part Number	14276
Design Units	Imperial
Bearing Weight	0.70 lb 0.300 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	1.3125 in 33.338 mm
D - Cup Outer Diameter	2.7170 in 69.012 mm

B - Cone Width	0.7710 in 19.583 mm
C - Cup Width	0.6250 in 15.875 mm
T - Bearing Width	0.7813 in 19.845 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.03 in 0.760 mm
r - Cup Backface "To Clear" Radius[2]	0.050 in 1.27 mm
da - Cone Frontface Backing Diameter	1.56 in 39.62 mm
db - Cone Backface Backing Diameter	1.59 in 40.39 mm
Da - Cup Frontface Backing Diameter	2.52 in 63.00 mm
Db - Cup Backface Backing Diameter	2.36 in 59.94 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 Location[3]	-0.17 in -4.30 mm

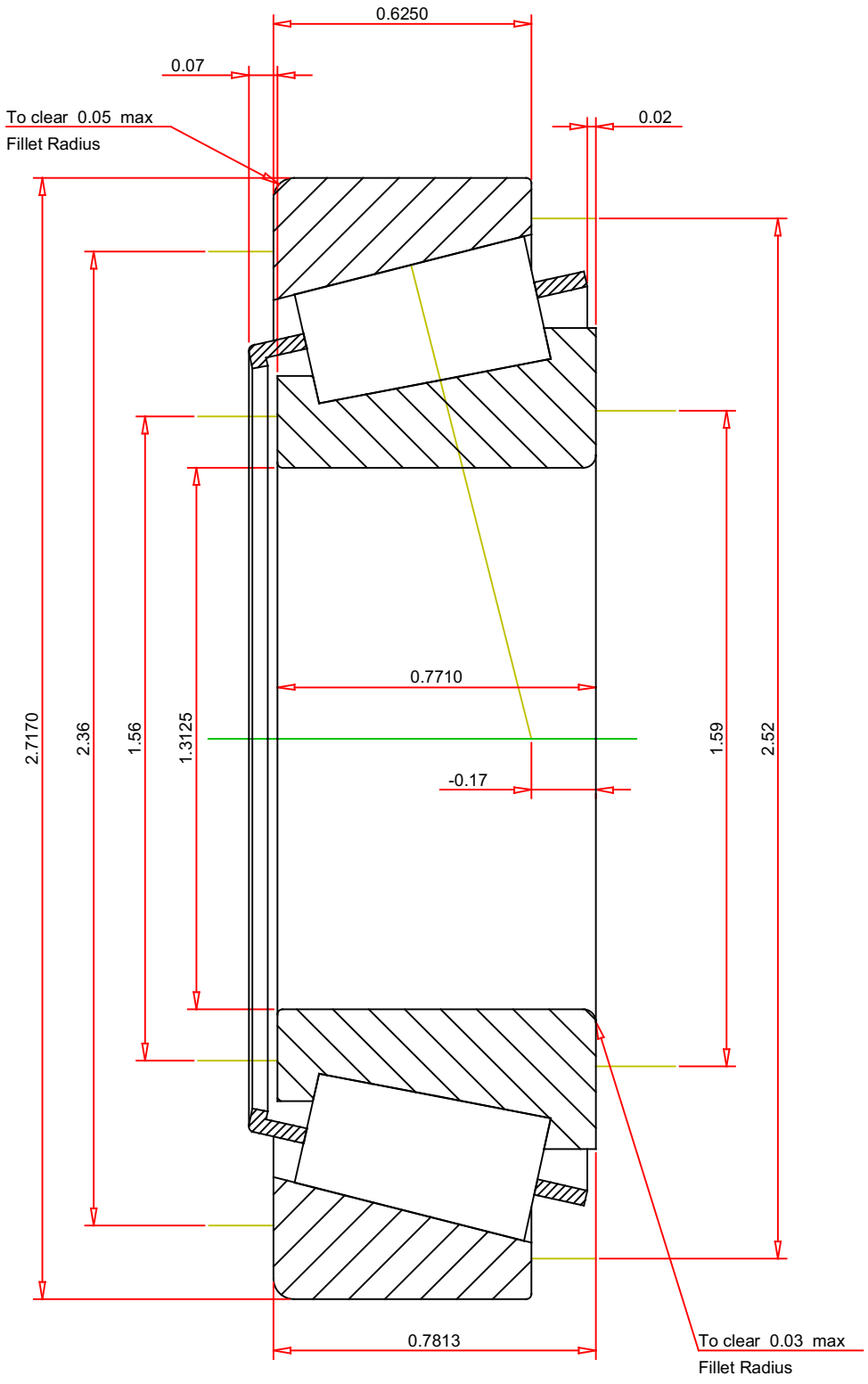
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	3180 lbf 14200 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	12300 lbf 54600 N
C0 - Static Radial Rating	13900 lbf 61700 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	2080 lbf 9260 N

Factors

K - Factor[7]	1.53
e - ISO Factor[8]	0.38
Y - ISO Factor[9]	1.57
G1 - Heat Generation Factor (Roller-Raceway)	18
G2 - Heat Generation Factor (Rib-Roller End)	9.4
Cg - Geometry Factor	0.0668

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



IMPERIAL UNITS

ISO Factor - e	0.38	
ISO Factor - Y	1.57	
Bearing Weight	0.7	lb
Number of Rollers Per Row	17	
Effective Center Location	-0.17	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

14131 - 14276
TS BEARING ASSEMBLY

K Factor	1.53	
Dynamic Radial Rating - C90	3180	lbf
Dynamic Thrust Rating - Ca90	2080	lbf
Static Radial Rating - C0	13900	lbf
Dynamic Radial Rating - C1	12300	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