The Timken Company
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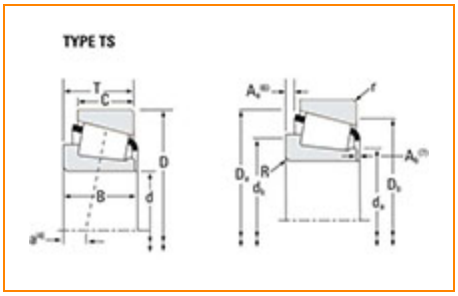
Timken Part Number 08125 - 08231, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	08000
Cone Part Number	08125
Cup Part Number	08231
Design Units	Imperial
Bearing Weight	0.20 Kg 0.4 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	31.750 mm 1.2500 in

D - Cup Outer Diameter	58.738 mm 2.3125 in
B - Cone Width	15.080 mm 0.5937 in
C - Cup Width	10.716 mm 0.4219 in
T - Bearing Width	14.684 mm 0.5781 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	1.020 mm 0.04 in
r - Cup Backface "To Clear" Radius[2]	1.02 mm 0.04 in
da - Cone Frontface Backing Diameter	36.07 mm 1.42 in
db - Cone Backface Backing Diameter	37.59 mm 1.48 in
Da - Cup Frontface Backing Diameter	55.88 mm 2.20 in
Db - Cup Backface Backing Diameter	52.07 mm 2.05 in
Ab - Cage-Cone Frontface Clearance	1.8 mm 0.07 in
Aa - Cage-Cone Backface Clearance	0.5 mm 0.02 in
a - Effective Center Location[3]	-1.3 mm -0.05 in

Basic Load Ratings

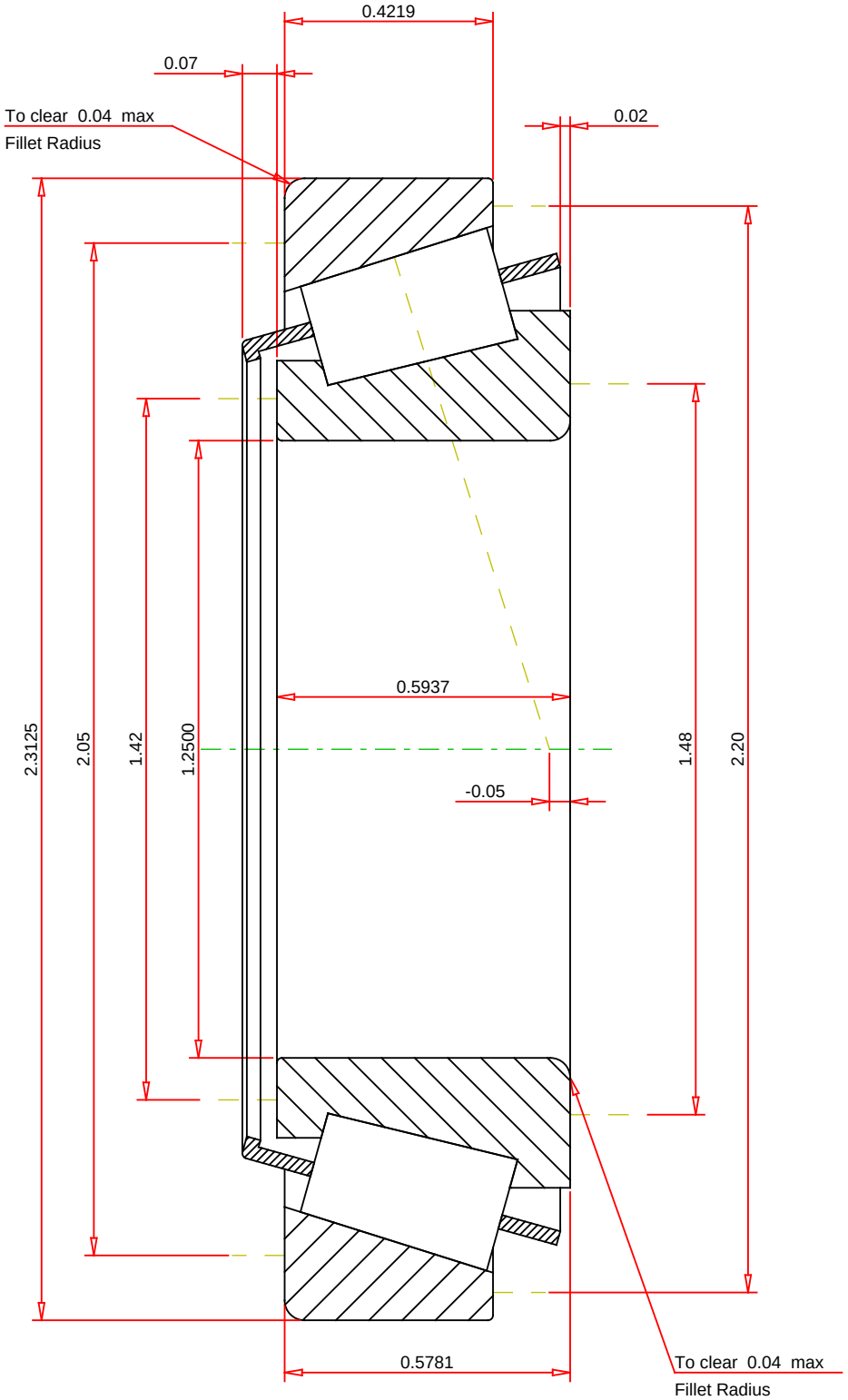
C90 - Dynamic Radial Rating (90 million revolutions)[4]	1850 lbf 8220 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	7130 lbf 31700 N
C0 - Static Radial Rating	7880 lbf 35000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	1500 lbf 6670 N

Factors

K - Factor[7]	1.23
e - ISO Factor[8]	0.47
Y - ISO Factor[9]	1.27
G1 - Heat Generation Factor (Roller-Raceway)	10.7
G2 - Heat Generation Factor (Rib-Roller End)	10.6
Cg - Geometry Factor[10]	0.0601

[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	0.47	
ISO Factor - Y	1.27	
Bearing Weight	0.4	lb
Number of Rollers Per Row	19	
Effective Center Location	-0.05	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

08125 - 08231
TS BEARING ASSEMBLY

K Factor	1.23	
Dynamic Radial Rating - C90	1850	lbf
Dynamic Thrust Rating - Ca90	1500	lbf
Static Radial Rating - C0	7880	lbf
Dynamic Radial Rating - C1	7130	lbf

FOR DISCUSSION ONLY