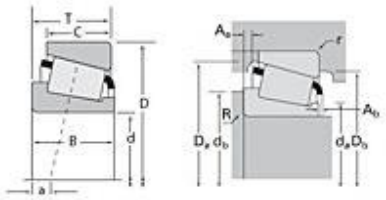
TIMKEN

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Timken Part Number 09067 - 09195, 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	09000
Cone Part Number	09067
Cup Part Number	09195
Design Units	Imperial
Bearing Weight	0.4 lb 0.200 Kg
Cage Type	Stamped Steel

Dimensions

d - Bore	0.7500 in 19.050 mm
D - Cup Outer Diameter	1.9380 in 49.225 mm

B - Cone Width	0.7500 in 19.050 mm
C - Cup Width	0.5625 in 14.288 mm
T - Bearing Width	0.7100 in 18.034 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.050 in 1.270 mm
r - Cup Backface "To Clear" Radius[2]	0.050 in 1.27 mm
da - Cone Frontface Backing Diameter	0.94 in 23.88 mm
db - Cone Backface Backing Diameter	1.00 in 25.40 mm
Da - Cup Frontface Backing Diameter	1.79 in 44.50 mm
Db - Cup Backface Backing Diameter	1.65 in 41.91 mm
Ab - Cage-Cone Frontface Clearance	0.08 in 2 mm
Aa - Cage-Cone Backface Clearance	-0.01 in -0.3 mm
a - Effective Center Location[3]	-0.29 in -7.40 mm

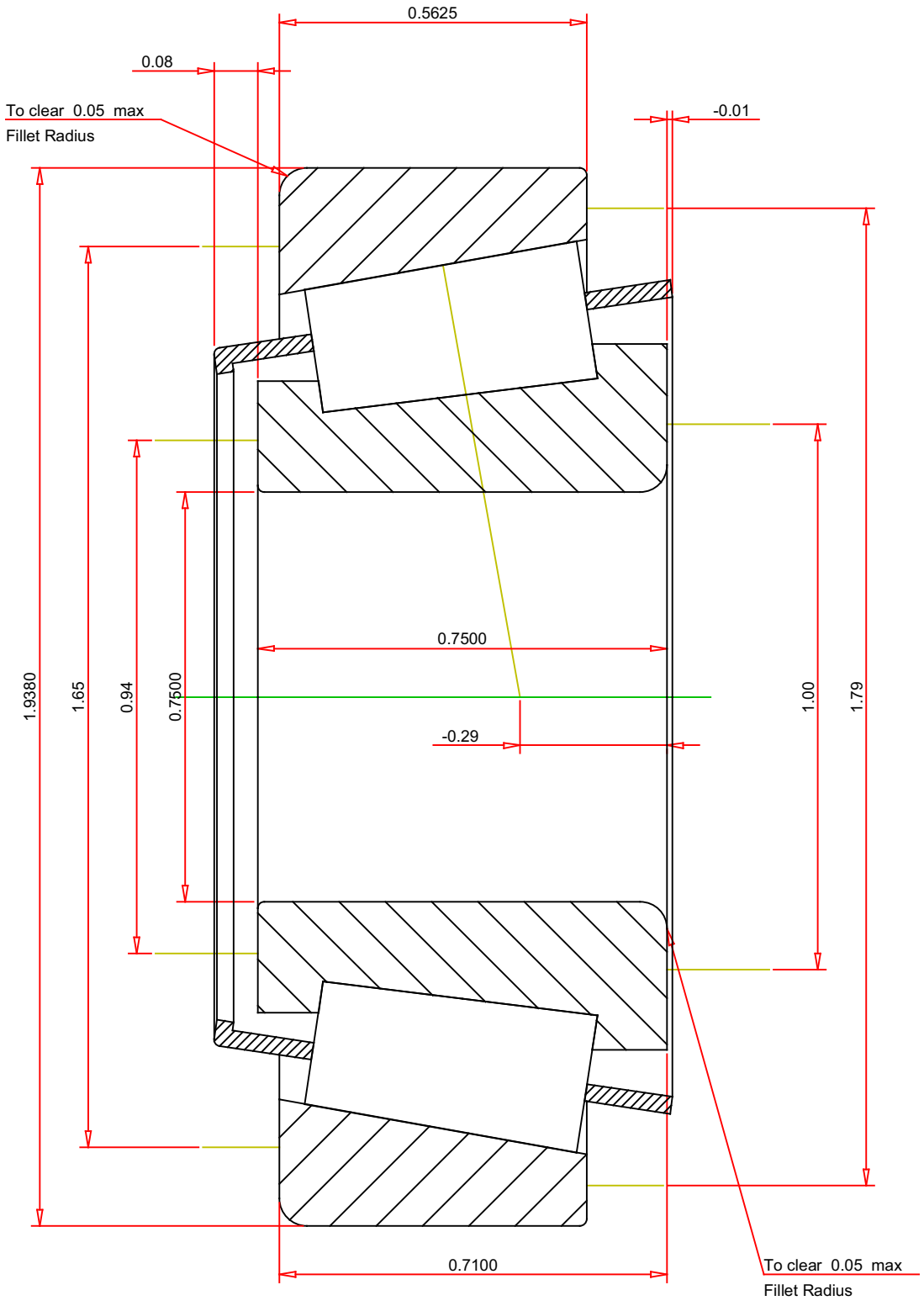
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	2500 lbf 11100 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	9630 lbf 42800 N
C0 - Static Radial Rating	9100 lbf 40500 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	1140 lbf 5050 N

Factors

K - Factor[7]	2.2
e - ISO Factor[8]	0.27
Y - ISO Factor[9]	2.26
G1 - Heat Generation Factor (Roller-Raceway)	8
G2 - Heat Generation Factor (Rib-Roller End)	4.05
Cg - Geometry Factor	0.0452

[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	0.27	
ISO Factor - Y	2.26	
Bearing Weight	0.4	lb
Number of Rollers Per Row	12	
Effective Center Location	-0.29	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

09067 - 09195
TS BEARING ASSEMBLY

K Factor	2.2	
Dynamic Radial Rating - C90	2500	lbf
Dynamic Thrust Rating - Ca90	1140	lbf
Static Radial Rating - C0	9100	lbf
Dynamic Radial Rating - C1	9630	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