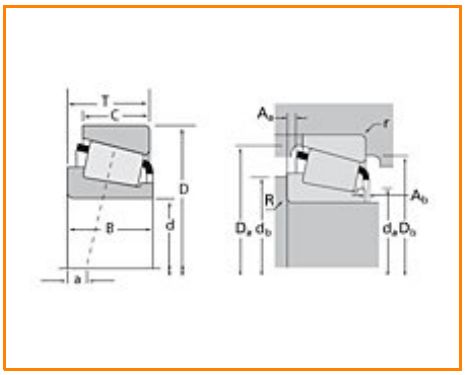
The Timken Company
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N. Canton, OH 44720
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E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 3386 - 3328, 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	3300
Cone Part Number	3386
Cup Part Number	3328
Design Units	Imperial
Bearing Weight	0.700 Kg 1.70 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	39.688 mm 1.5625 in

D - Cup Outer Diameter	84.138 mm 3.3125 in
B - Cone Width	30.391 mm 1.1965 in
C - Cup Width	23.813 mm 0.9375 in
T - Bearing Width	29.370 mm 1.1563 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.760 mm 0.03 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	45.47 mm 1.79 in
db - Cone Backface Backing Diameter	46.48 mm 1.83 in
Da - Cup Frontface Backing Diameter	76.96 mm 3.03 in
Db - Cup Backface Backing Diameter	71.88 mm 2.83 in
Ab - Cage-Cone Frontface Clearance	1.8 mm 0.07 in
Aa - Cage-Cone Backface Clearance	1.5 mm 0.06 in
a - Effective Center Location[3]	-10.9 mm -0.43 in

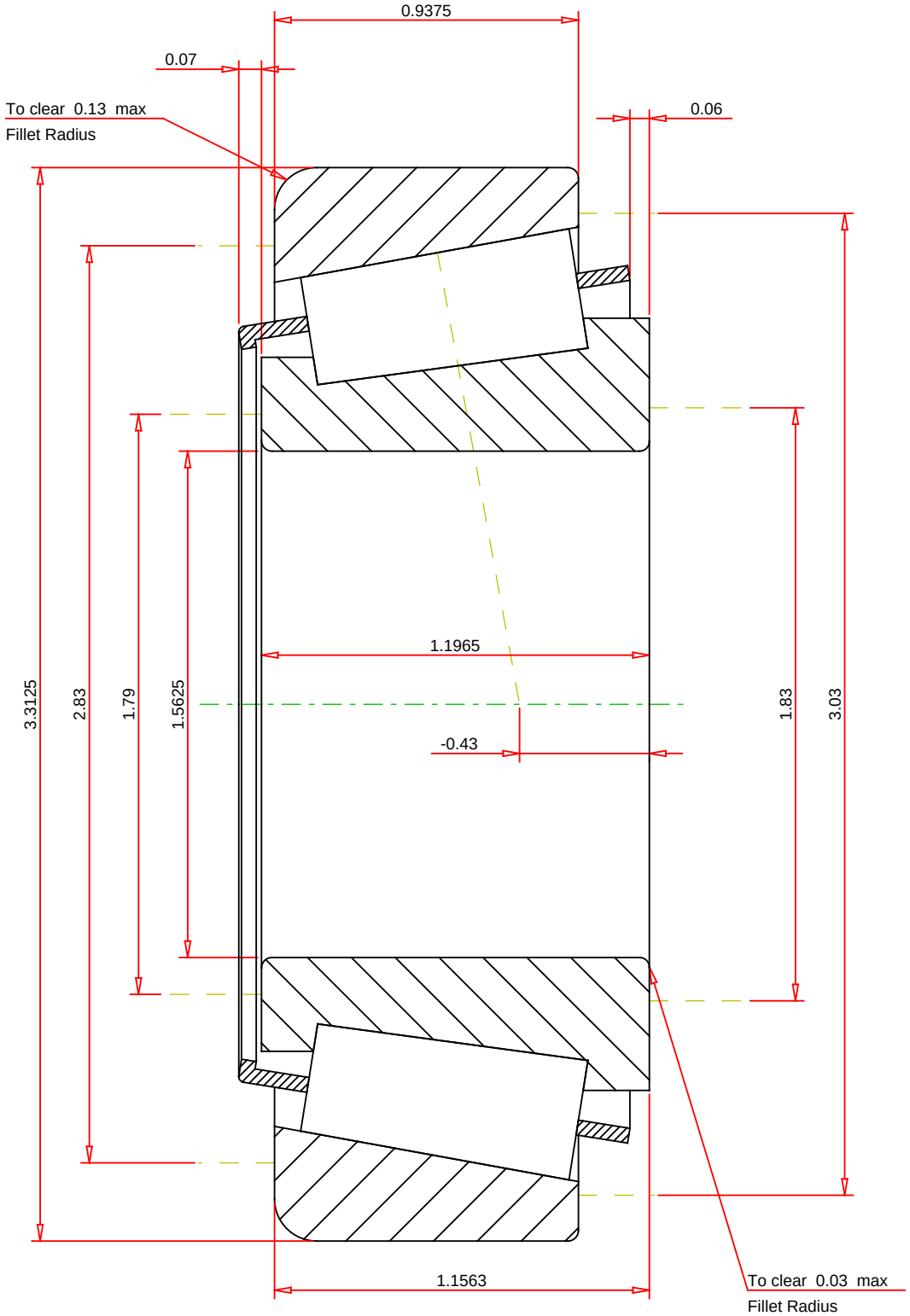
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	29800 N 6700 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	115000 N 25800 lbf
C0 - Static Radial Rating	129000 N 29100 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	13900 N 3130 lbf

Factors

K - Factor[7]	2.14
e - ISO Factor[8]	0.27
Y - ISO Factor[9]	2.2
G1 - Heat Generation Factor (Roller-Raceway)	34.6
G2 - Heat Generation Factor (Rib-Roller End)	12.1
Cg - Geometry Factor	0.0744

[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	2.2	
Bearing Weight	1.7	lb
Number of Rollers Per Row	15	
Effective Center Location	-0.43	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

3386 - 3328
TS BEARING ASSEMBLY

K Factor	2.14	
Dynamic Radial Rating - C90	29800	lbf
Dynamic Thrust Rating - Ca90	13900	lbf
Static Radial Rating - C0	129000	lbf
Dynamic Radial Rating - C1	115000	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