The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 3780V - 3729D, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

The configuration of the TDO provides a wide effective bearing spread, making it ideal for applications in which overturning moments are a significant load component. TDO bearings can be used in fixed positions or allowed to float in the housing bore.



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

Specifications

Series	3700
Cone Part Number	3780V
Cup Part Number	3729D
Design Units	Imperial
Bearing Weight	3.95 lb 1.794 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.06 in 1.5 mm

Dimensions

d - Bore	2 in 50.8 mm
D - Cup Outer Diameter	3.6718 in 93.264 mm
B - Cone Width	1.1930 in 30.302 mm
C - Double Cup Width	2.0625 in 52.388 mm
T - Bearing Width across Cones	2.5625 in 65.088 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.14 in 3.600 mm
r - Cup Frontface "To Clear" Radius[2]	0.03 in 0.8 mm
db - Cone Backface Backing Diameter	2.52 in 64.00 mm
Da - Cup Frontface Backing Diameter	3.50 in 88.90 mm
Aa - Cage-Cone Backface Clearance	0.06 in 1.5 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	8440 lbf 37500 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	56700 lbf 252000 N

C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	14700 lbf 65300 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	4890 lbf 21700 N

Factors

K - Factor[7]	1.73
e - ISO Factor[8]	0.71
Y1 - ISO Factor[9]	0.95 1.41
Y2 - ISO Factor[10]	1.41
Cg - Geometry Factor[11]	0.0903

[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] 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.

[4] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[5] 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.

[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.

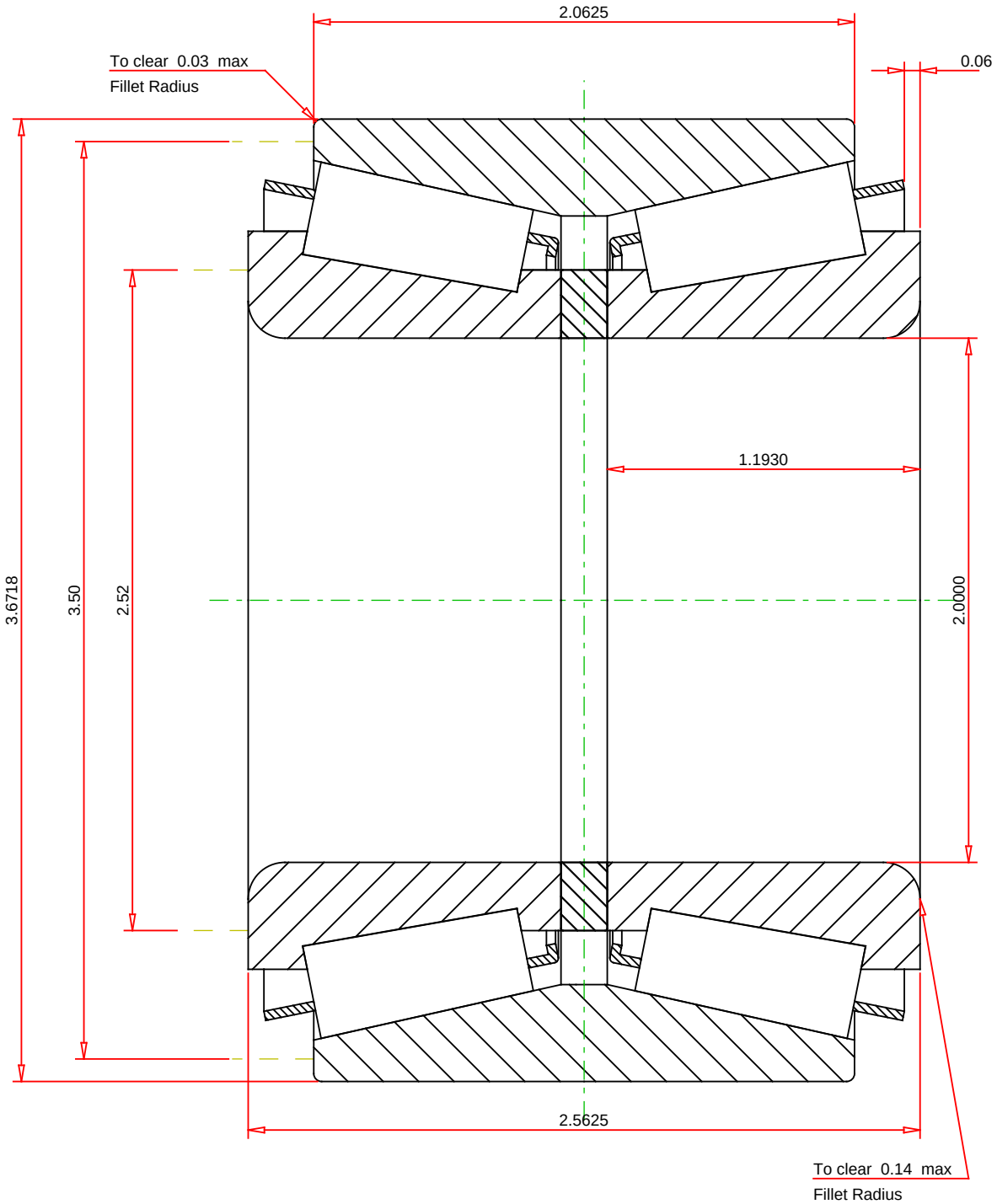
[7] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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.

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

[11] Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.71	
ISO Factor - Y1	0.95	
ISO Factor - Y2	1.41	
Bearing Weight	3.95	lb
Number of Rollers Per Row	18	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

3780V - 3729D
TDO BEARING ASSEMBLY

K Factor	1.73	
Dynamic Radial Rating - C90	8440	lbf
Dynamic Thrust Rating - Ca90	4890	lbf
Dynamic Radial Rating - C90(2)	14700	lbf
Radial Rating - C1	56700	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