The Timken Company
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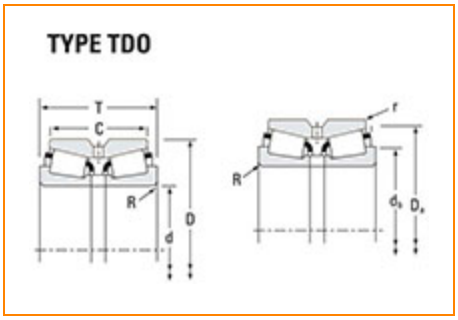
Timken Part Number 749A - 742D, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

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	745
Cone Part Number	749A
Cup Part Number	742D
Design Units	Imperial
Bearing Weight	17.73 lb 8.042 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.08 in 2 mm
Alternate Part Name	749A-742D

Dimensions

d - Bore	3.2500 in 82.550 mm
D - Cup Outer Diameter	6.1250 in 155.575 mm
B - Cone Width	1.8375 in 46.673 mm
C - Double Cup Width	3.3750 in 85.725 mm
T - Bearing Width across Cones	4 in 101.6 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]	0.06 in 1.5 mm
db - Cone Backface Backing Diameter	3.9 in 99.10 mm
Da - Cup Frontface Backing Diameter	5.64 in 143.26 mm
Aa - Cage-Cone Backface Clearance	0.05 in 1.3 mm

Basic Load Ratings

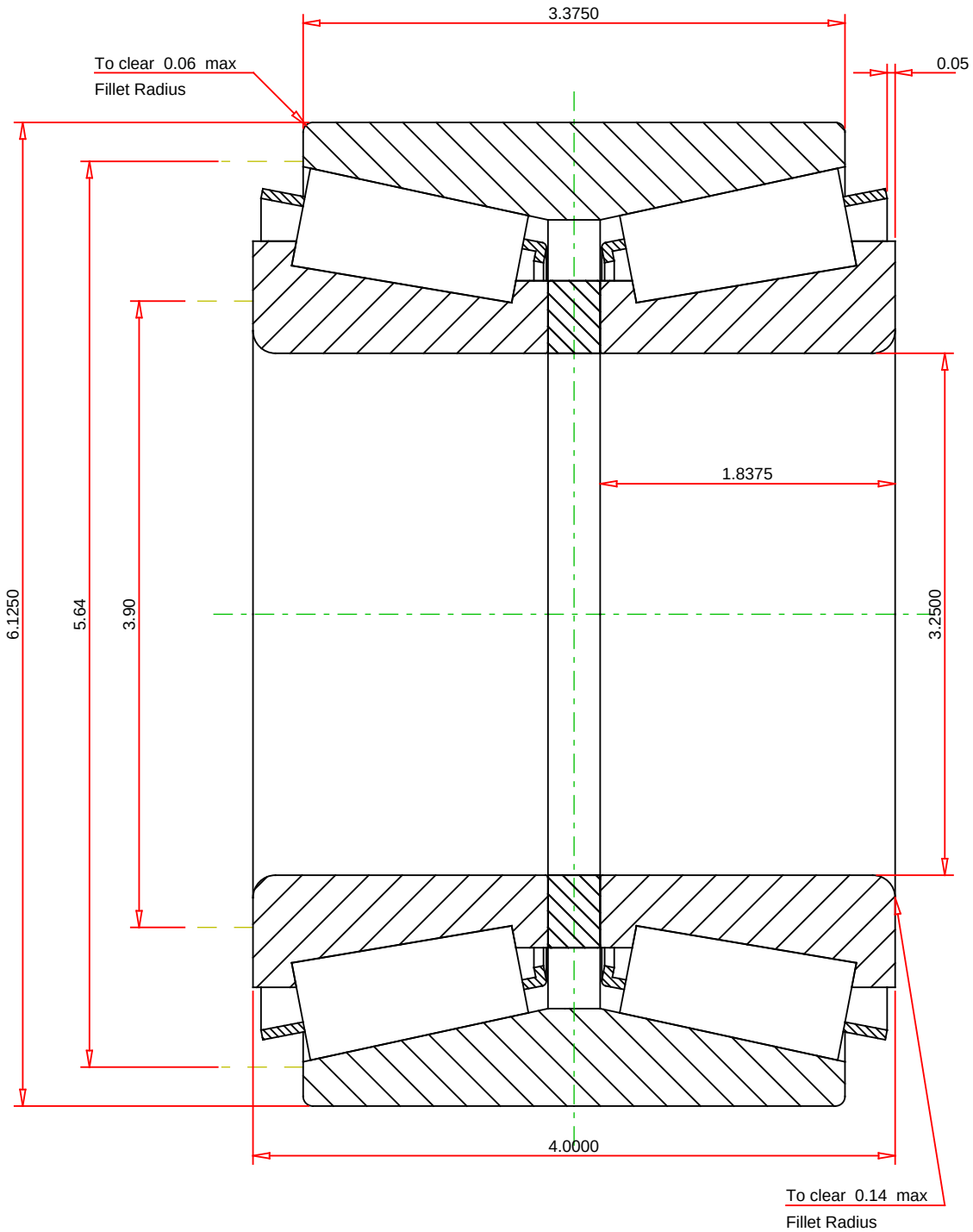
C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	21900 lbf 97600 N

C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	147000 lbf 656000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	38200 lbf 170000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	12200 lbf 54400 N

Factors

K - Factor[7]	1.8
e - ISO Factor[8]	0.33
Y1 - ISO Factor[9]	2.08
Y2 - ISO Factor[10]	3.09
Cg - Geometry Factor[11]	0.0898

[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	0.33	
ISO Factor - Y1	2.08	
ISO Factor - Y2	3.09	
Bearing Weight	17.73	lb
Number of Rollers Per Row	18	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

749A - 742D
TDO BEARING ASSEMBLY

K Factor	1.8	
Dynamic Radial Rating - C90	21900	lbf
Dynamic Thrust Rating - Ca90	12200	lbf
Dynamic Radial Rating - C90(2)	38200	lbf
Radial Rating - C1	147000	lbf

FOR DISCUSSION ONLY