The Timken Company
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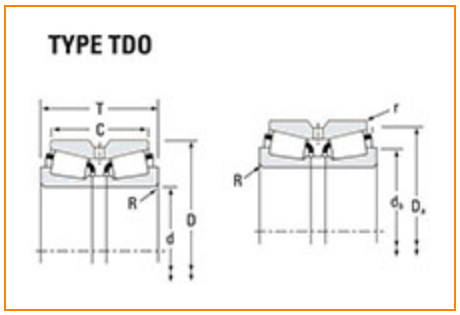
Part Number 766 - 752D, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

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	755
Cone Part Number	766
Cup Part Number	752D
Design Unit	Inch
Cage Material	Stamped Steel
Related Assembly Number(s)	766-902A1 766-902A2

Dimensions

d - Bore	3 1/2 in 88.900 mm
D - Cup Outer Diameter	6-3/8 in 161.925 mm
B - Cone Width	1.9000 in 48.260 mm
C - Double Cup Width	3.3750 in 85.725 mm
T - Bearing Width across Cones	4.1249 in 104.772 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.280 in 7.100 mm
r - Cup Backface "To Clear" Radius[2]	0.06 in 1.5 mm
db - Cone Backface Backing Diameter	4.45 in 113 mm
Da - Cup Frontface Backing Diameter	5.94 in 150.11 mm
Aa - Cage-Cone Backface Clearance	0.11 in 2.8 mm
a - Effective Center Location[3]	-0.47 in -11.9 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[4]	19100 lbf 84800 N

C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[5]	128000 lbf 570000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[6]	33200 lbf 148000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[7]	11100 lbf 49500 N

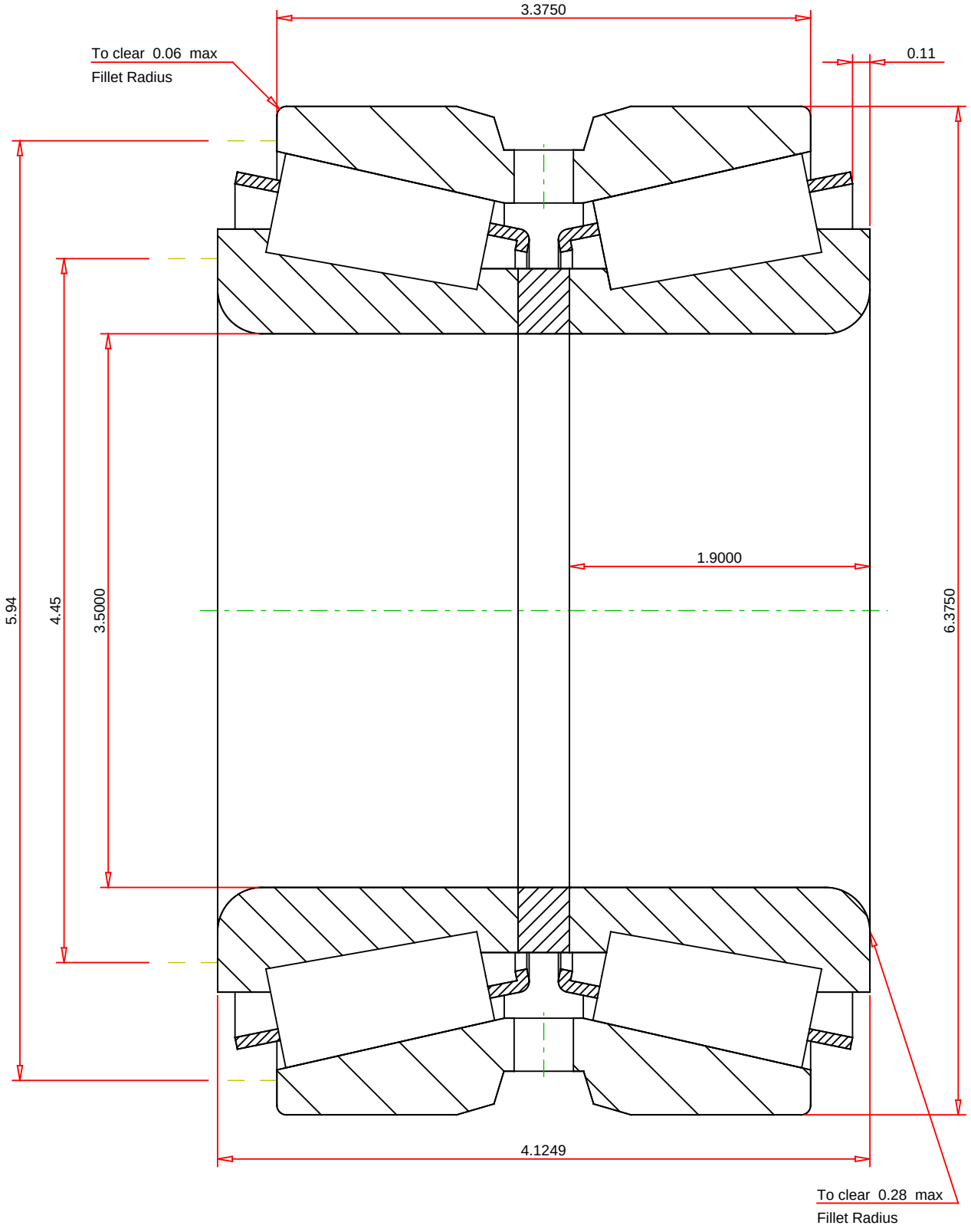
Factors

K - Factor[8]	1.71
e - ISO Factor[9]	0.34
Y1 - ISO Factor[10]	1.98
Y2 - ISO Factor[11]	2.95
Cg - Geometry Factor[12]	0.0945

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

on use.

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



IMPERIAL UNITS

ISO Factor - e	0.34	
ISO Factor - Y1	1.98	
ISO Factor - Y2	2.95	
Bearing Weight	18.8	lb
Number of Rollers Per Row	19	

TIMKEN

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NORTH CANTON, OHIO USA

766 - 752D

Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

K Factor	1.71	
Dynamic Radial Rating - C90	19100	lbf
Dynamic Thrust Rating - Ca90	11100	lbf
Dynamic Radial Rating - C90(2)	33200	lbf
Radial Rating - C1	128000	lbf

FOR DISCUSSION ONLY