The Timken Company
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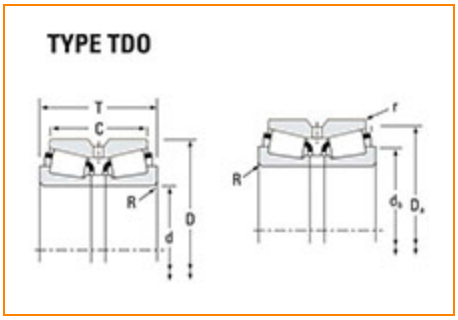
Part Number 46780 - 46720CD, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

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	46700
Cone Part Number	46780
Cup Part Number	46720CD
Design Units	Imperial
Bearing Weight	22.94 lb 10.407 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.12 in 3 mm
Alternate Part Name	46780-46720CD

Dimensions

d - Bore	6.2500 in 158.750 mm
D - Cup Outer Diameter	8.875 in 225.425 mm
B - Cone Width	1.5625 in 39.688 mm
C - Double Cup Width	2.75 in 69.85 mm
T - Bearing Width across Cones	3.3750 in 85.725 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	6.93 in 176 mm
Da - Cup Frontface Backing Diameter	8.62 in 217.93 mm
Aa - Cage-Cone Backface Clearance	0.13 in 3.3 mm

Basic Load Ratings

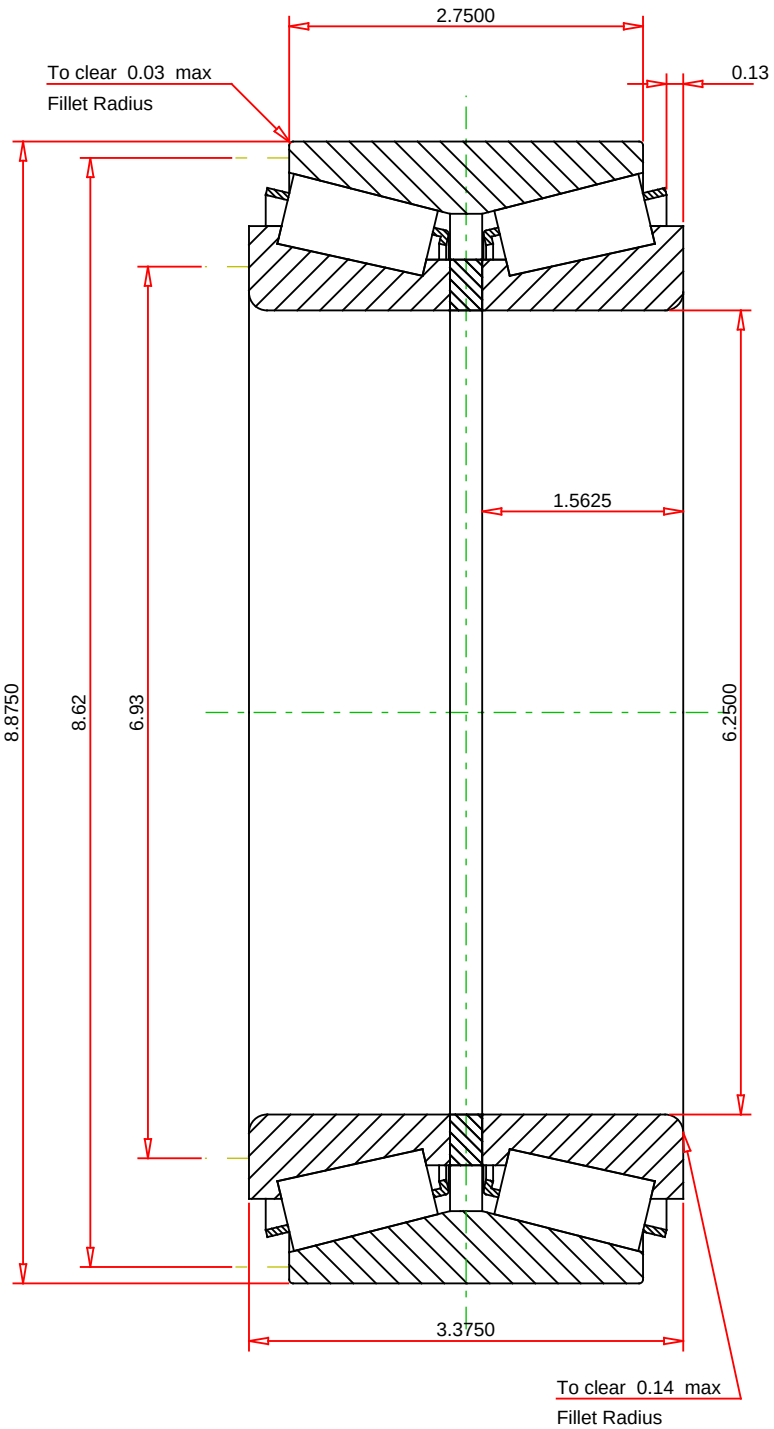
C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	17700 lbf 78600 N

C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	119000 lbf 528000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	30800 lbf 137000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	11600 lbf 51600 N

Factors

K - Factor[7]	1.52
e - ISO Factor[8]	0.38
Y1 - ISO Factor[9]	1.76
Y2 - ISO Factor[10]	2.62
Cg - Geometry Factor[11]	0.143

[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	0.38	
ISO Factor - Y1	1.76	
ISO Factor - Y2	2.62	
Bearing Weight	22.94	lb
Number of Rollers Per Row	42	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

46780 - 46720CD
TDO BEARING ASSEMBLY

K Factor	1.52	
Dynamic Radial Rating - C90	17700	lbf
Dynamic Thrust Rating - Ca90	11600	lbf
Dynamic Radial Rating - C90(2)	30800	lbf
Radial Rating - C1	119000	lbf

FOR DISCUSSION ONLY