The Timken Company
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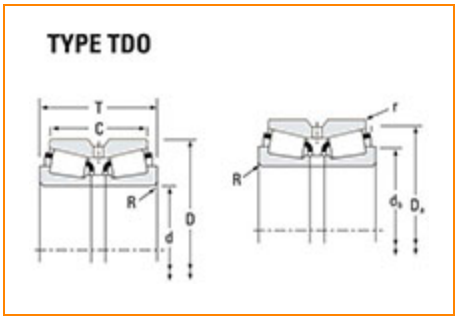
Timken Part Number 861 - 854D, Tapered Roller Bearings - TDO (Tapered Double Outer) Imperial

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	855
Cone Part Number	861
Cup Part Number	854D
Design Units	Imperial
Bearing Weight	32.3 lb 14.649 Kg
Cage Type	Stamped Steel
Ab - Cage-Cone Frontface Clearance	0.06 in 1.5 mm
Alternate Part Name	861-854D

Dimensions

d - Bore	4.0000 in 101.600 mm
D - Cup Outer Diameter	7.5 in 190.5 mm
B - Cone Width	2.2650 in 57.531 mm
C - Double Cup Width	4.0000 in 101.600 mm
T - Bearing Width across Cones	4.9999 in 126.997 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.310 in 7.900 mm
r - Cup Frontface "To Clear" Radius[2]	0.06 in 1.5 mm
db - Cone Backface Backing Diameter	5.08 in 129 mm
Da - Cup Frontface Backing Diameter	6.86 in 174.24 mm
Aa - Cage-Cone Backface Clearance	0.15 in 3.8 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (One-Row, 90 million revolutions)[3]	26700 lbf 119000 N

C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[4]	179000 lbf 797000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)[5]	46400 lbf 207000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	15300 lbf 68000 N

Factors

K - Factor[7]	1.74
e - ISO Factor[8]	0.33
Y1 - ISO Factor[9]	2.02
Y2 - ISO Factor[10]	3
G1 - Heat Generation Factor (Roller-Raceway)[11]	264
G2 - Heat Generation Factor (Rib-Roller End)	44.9
Cg - Geometry Factor[12]	0.107

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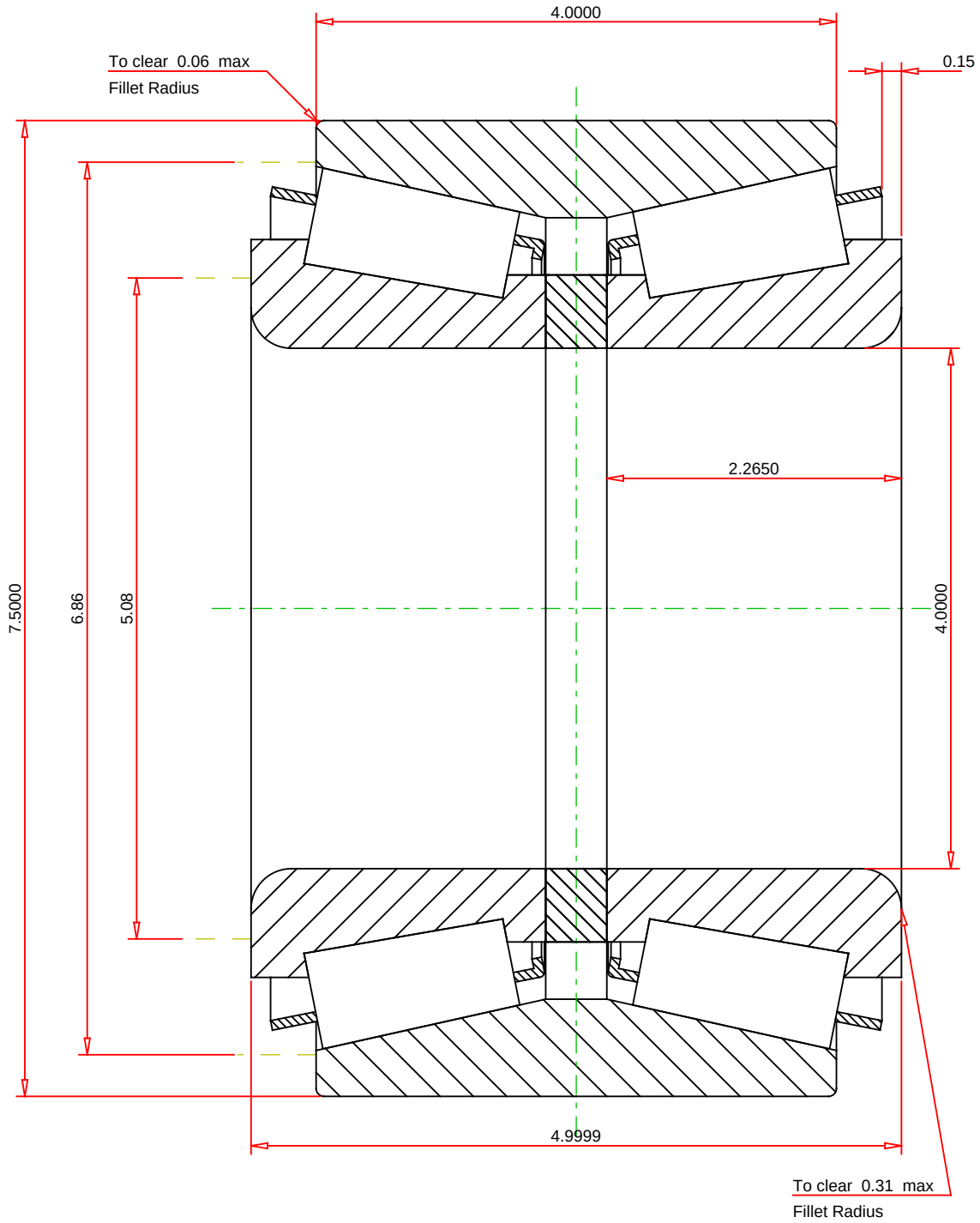
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[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	0.33	
ISO Factor - Y1	2.02	
ISO Factor - Y2	3	
Bearing Weight	32.3	lb
Number of Rollers Per Row	19	

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

861 - 854D
TDO BEARING ASSEMBLY

K Factor	1.74	
Dynamic Radial Rating - C90	26700	lbf
Dynamic Thrust Rating - Ca90	15300	lbf
Dynamic Radial Rating - C90(2)	46400	lbf
Radial Rating - C1	179000	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