The Timken Company
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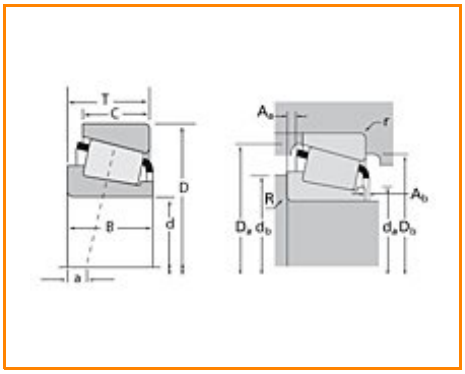
Timken Part Number L163149 - L163110, Tapered Roller Bearings - TS (Tapered Single) Imperial

This is the most basic and most widely used type of tapered roller bearing. It consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft.



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

Specifications

Series	L163100
Cone Part Number	L163149
Cup Part Number	L163110
Design Units	Imperial
Bearing Weight	20.60 Kg 45.50 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	355.6 mm 14 in
D - Cup Outer Diameter	444.5 mm 17.5 in
B - Cone Width	60.325 mm 2.3750 in
C - Cup Width	47.625 mm 1.8750 in
T - Bearing Width	60.325 mm 2.3750 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	370.08 mm 16.10 in
db - Cone Backface Backing Diameter	373.89 mm 14.72 in
Da - Cup Frontface Backing Diameter	432.80 mm 17.04 in
Db - Cup Backface Backing Diameter	421.89 mm 16.61 in
Ab - Cage-Cone Frontface Clearance	3.6 mm 0.14 in
Aa - Cage-Cone Backface Clearance	4.3 mm 0.17 in
a - Effective Center Location[3]	7.1 mm 0.28 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	190000 N 42700 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	733000 N 165000 lbf
C0 - Static Radial Rating	1970000 N 444000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	100000 N 22500 lbf

Factors

K - Factor[7]	1.9
e - ISO Factor[8]	0.31
Y - ISO Factor[9]	1.95
G1 - Heat Generation Factor (Roller-Raceway)	3210
G2 - Heat Generation Factor (Rib-Roller End)	621
Cg - Geometry Factor	0.184

[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] 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

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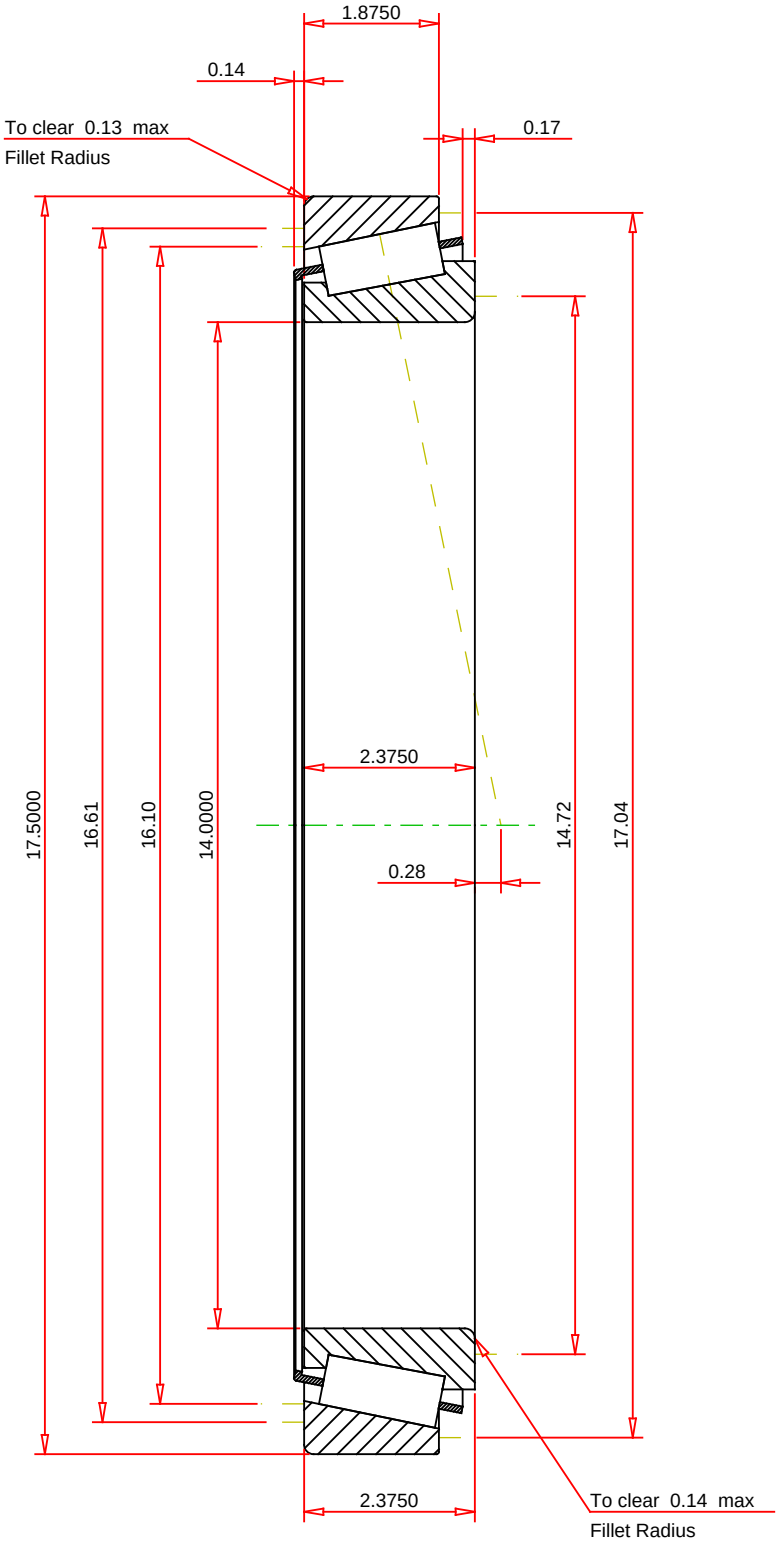
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



IMPERIAL UNITS

ISO Factor - e	0.31	
ISO Factor - Y	1.95	
Bearing Weight	45.5	lb
Number of Rollers Per Row	55	
Effective Center Location	0.28	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

L163149 - L163110
TS BEARING ASSEMBLY

K Factor	1.9	
Dynamic Radial Rating - C90	190000	lbf
Dynamic Thrust Rating - Ca90	100000	lbf
Static Radial Rating - C0	1970000	lbf
Dynamic Radial Rating - C1	733000	lbf

FOR DISCUSSION ONLY