TIMKEN

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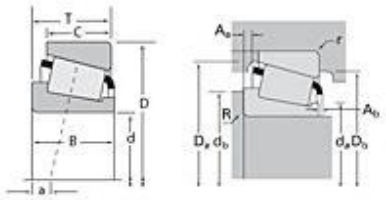
Timken Part Number JL819349 - JL819310, Tapered Roller Bearings - TS (Tapered Single) Metric

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.





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Specifications

Series	L819300
Cone Part Number	JL819349
Cup Part Number	JL819310
Design Units	Metric
Bearing Weight	0.900 Kg 1.90 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	95.000 mm 3.7402 in
D - Cup Outer Diameter	135.000 mm 5.3150 in

B - Cone Width	20.000 mm 0.7874 in
C - Cup Width	14.000 mm 0.5512 in
T - Bearing Width	20.000 mm 0.7874 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	5.080 mm 0.200 in
r - Cup Backface "To Clear" Radius[2]	2.54 mm 0.100 in
da - Cone Frontface Backing Diameter	102.11 mm 4.02 in
db - Cone Backface Backing Diameter	111.00 mm 4.37 in
Da - Cup Frontface Backing Diameter	130.00 mm 5.12 in
Db - Cup Backface Backing Diameter	122.94 mm 4.84 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	2 mm 0.08 in
a - Effective Center Location[3]	10.90 mm 0.43 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	25500 N 5740 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	98400 N 22100 lbf
C0 - Static Radial Rating	133000 N 29900 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	25500 N 5730 lbf

Factors

K - Factor[7]	1
e - ISO Factor[8]	0.58
Y - ISO Factor[9]	1.03
G1 - Heat Generation Factor (Roller-Raceway)	93.3
G2 - Heat Generation Factor (Rib-Roller End)	70.5
Cg - Geometry Factor	0.13

[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 on use.
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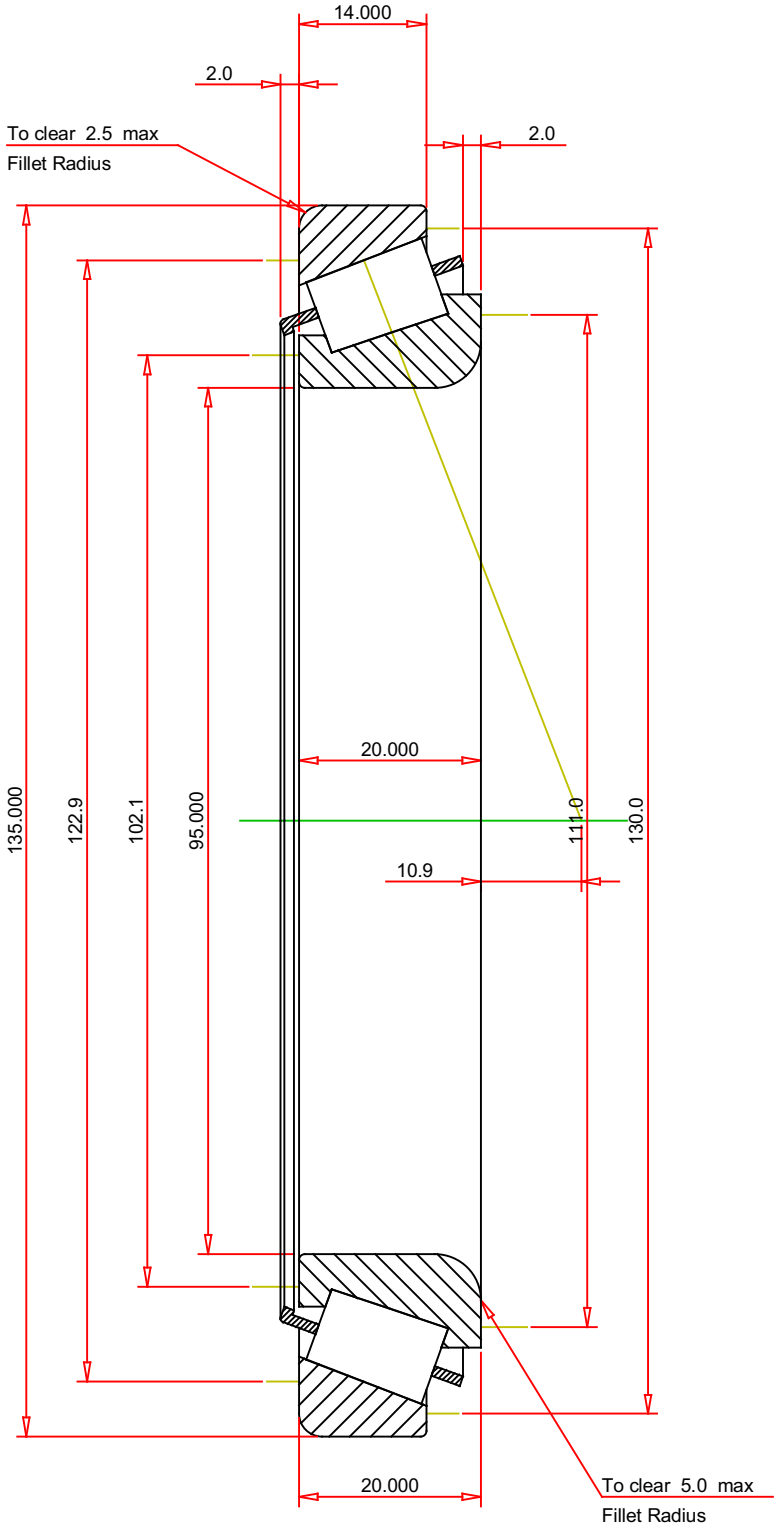

METRIC UNITS

ISO Factor - e	0.58	
ISO Factor - Y	1.03	
Bearing Weight	0.9	kg
Number of Rollers Per Row	35	
Effective Center Location	10.9	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JL819349 - JL819310
TS BEARING ASSEMBLY

K Factor	1	
Dynamic Radial Rating - C90	25500	N
Dynamic Thrust Rating - Ca90	25500	N
Static Radial Rating - C0	133000	N
Dynamic Radial Rating - C1	98400	N

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