

TIMKEN**The Timken Company**

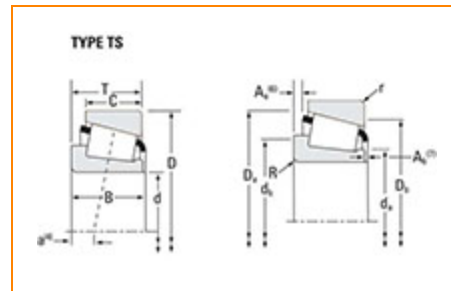
4500 Mt Pleasant St. NW

N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • Web site: www.timken.com**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 Unit	Metric
Bearing Weight	0.9 Kg 1.9 lb
Cage Material	Stamped Steel
Full Timken Part Number	L819300

Dimensions

95 mm

d - Bore	7.5 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 mm 0.5512 in
T - Bearing Width	20.000 mm 0.7874 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	5.080 mm 0.2 in
r - Cup Backface "To Clear" Radius²	2.54 mm 0.1 in
da - Cone Frontface Backing Diameter	102 mm 4.02 in
db - Cone Backface Backing Diameter	111 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 Location³	10.9 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 - Factor⁷	1
e - ISO Factor⁸	0.58
Y - ISO Factor⁹	1.03
G1 - Heat Generation Factor (Roller-Raceway)	93.3
G2 - Heat Generation Factor (Rib-Roller End)	70.5
C_g - Geometry Factor¹⁰	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 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁶ Based on 90×10^6 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.

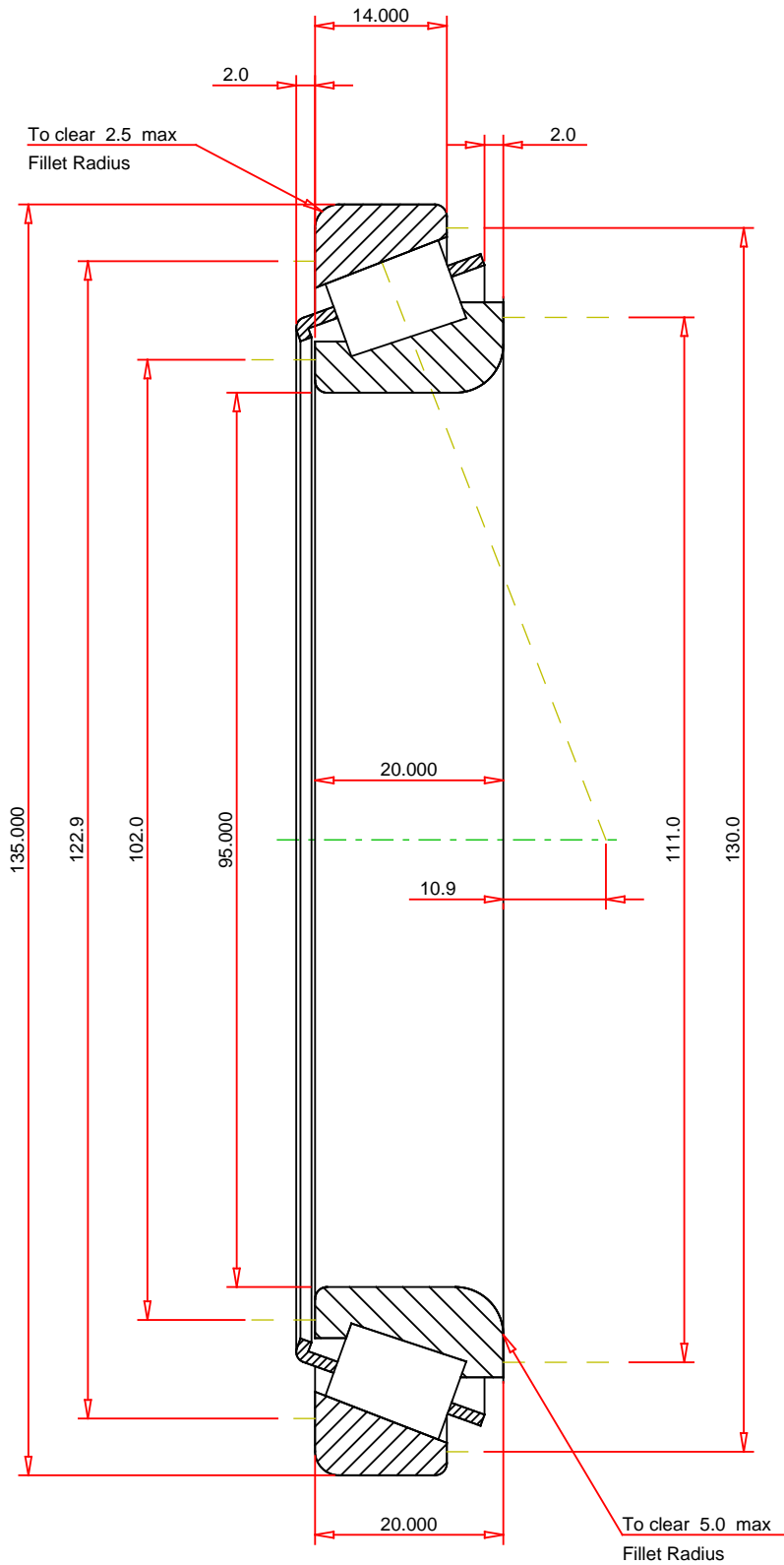
⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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instruction on use.

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

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a3l.



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



JL819349 - JL819310
 Tapered Roller Bearings - TS (Tapered Single)
 Metric

THE TIMKEN COMPANY
 NORTH CANTON, OHIO USA

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.

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