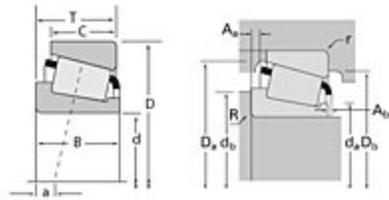


TIMKEN

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Timken Part Number JLM813049 - JLM813010, 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.



[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

Specifications

Series	LM813000
Cone Part Number	JLM813049
Cup Part Number	JLM813010
Design Units	METRIC
Bearing Weight	0.900 Kg 1.90 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	70 mm 2.7559 in
D - Cup Outer Diameter	110.000 mm 4.3307 in

B - Cone Width	25.000 mm 0.9843 in
C - Cup Width	20.500 mm 0.8071 in
T - Bearing Width	26.000 mm 1.0236 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	1.020 mm 0.04 in
r - Cup Backface "To Clear" Radius²	2.54 mm 0.1 in
da - Cone Frontface Backing Diameter	76.96 mm 3.03 in
db - Cone Backface Backing Diameter	77.98 mm 3.07 in
Da - Cup Frontface Backing Diameter	105.40 mm 4.15 in
Db - Cup Backface Backing Diameter	98.04 mm 3.86 in
Ab - Cage-Cone Frontface Clearance	3.3 mm 0.13 in
Aa - Cage-Cone Backface Clearance	1.3 mm 0.05 in
a - Effective Center Location³	0.30 mm 0.01 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	29700 N 6680 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	115000 N 25700 lbf
C0 - Static Radial Rating	168000 N 37800 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	24800 N 5570 lbf

Factors

K - Factor⁷	1.2
e - ISO Factor⁸	0.49
Y - ISO Factor⁹	1.23
G1 - Heat Generation Factor (Roller-Raceway)	73.5
G2 - Heat Generation Factor (Rib-Roller End)	26.3
Cg - Geometry Factor	0.115

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.

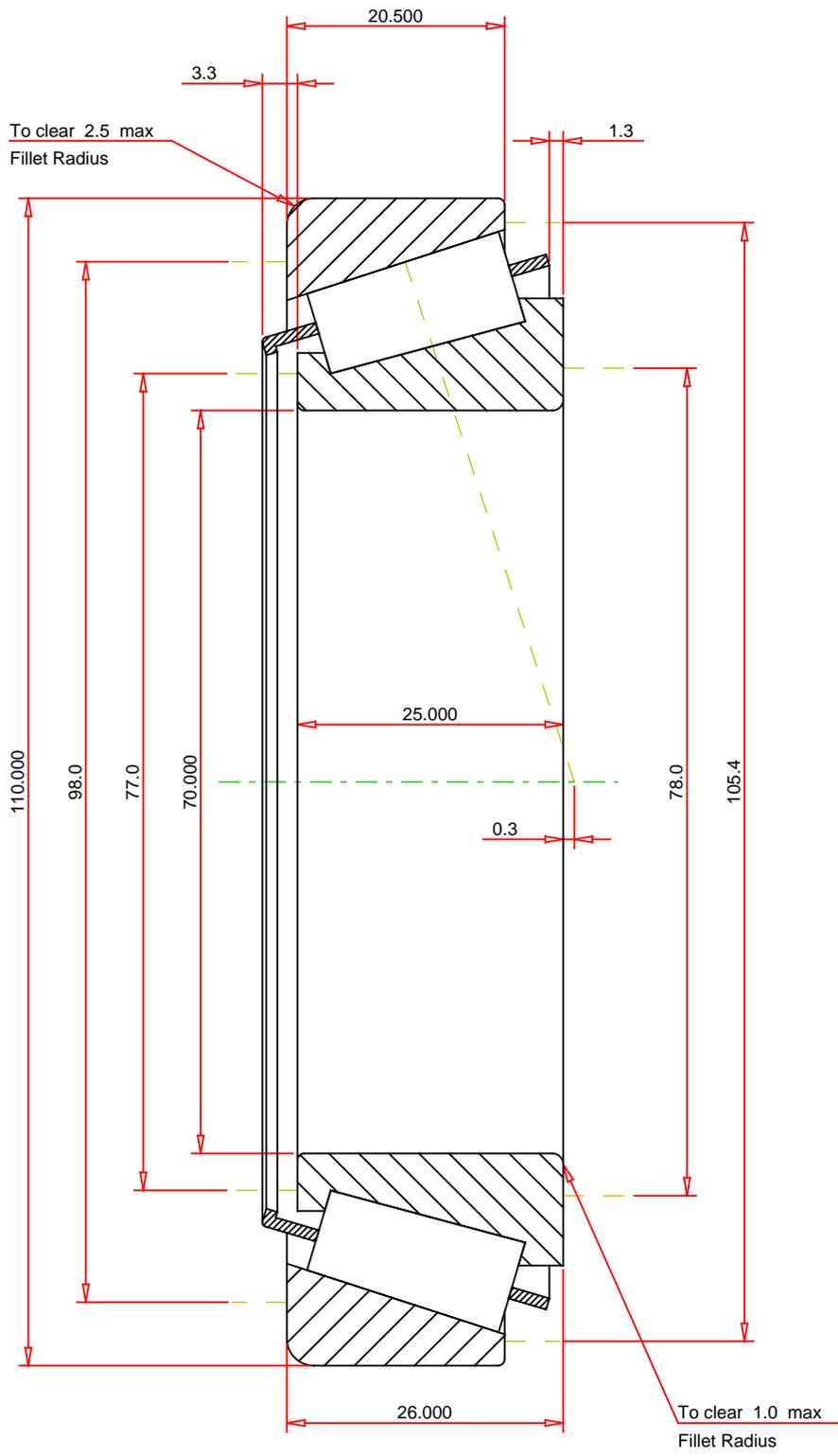
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

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.

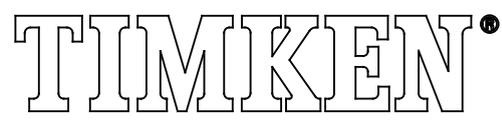
⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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



METRIC UNITS

ISO Factor - e	0.49
ISO Factor - Y	1.23
Bearing Weight	0.9 kg
Number of Rollers Per Row	25
Effective Center Location	0.3 mm



JLM813049 - JLM813010
TS BEARING ASSEMBLY

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

K Factor	1.2
Dynamic Radial Rating - C90	29700 N
Dynamic Thrust Rating - Ca90	24800 N
Static Radial Rating - C0	168000 N
Dynamic Radial Rating - C1	115000 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