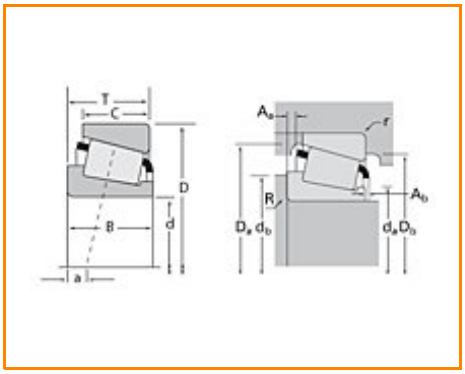
The Timken Company
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Timken Part Number JLM506849 - JLM506810, Tapered Roller Bearings - TS (Tapered Single) Metric

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	LM506800
Cone Part Number	JLM506849
Cup Part Number	JLM506810
Design Units	METRIC
Bearing Weight	0.500 Kg 1.20 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	55.000 mm 2.1654 in
D - Cup Outer Diameter	90.000 mm 3.5433 in
B - Cone Width	23.000 mm 0.9055 in
C - Cup Width	18.500 mm 0.7283 in
T - Bearing Width	23.000 mm 0.9055 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius[2]	0.51 mm 0.020 in
da - Cone Frontface Backing Diameter	60.96 mm 2.40 in
db - Cone Backface Backing Diameter	62.99 mm 2.48 in
Da - Cup Frontface Backing Diameter	86.40 mm 3.40 in
Db - Cup Backface Backing Diameter	82.04 mm 3.23 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	0.5 mm 0.02 in
a - Effective Center Location[3]	-2.8 mm -0.11 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	23800 N 5350 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	91800 N 20600 lbf
C0 - Static Radial Rating	123000 N 27600 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	16400 N 3680 lbf

Factors

K - Factor[7]	1.45
e - ISO Factor[8]	0.40
Y - ISO Factor[9]	1.49
G1 - Heat Generation Factor (Roller-Raceway)	45.6
G2 - Heat Generation Factor (Rib-Roller End)	20.4
Cg - Geometry Factor	0.0925

[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.

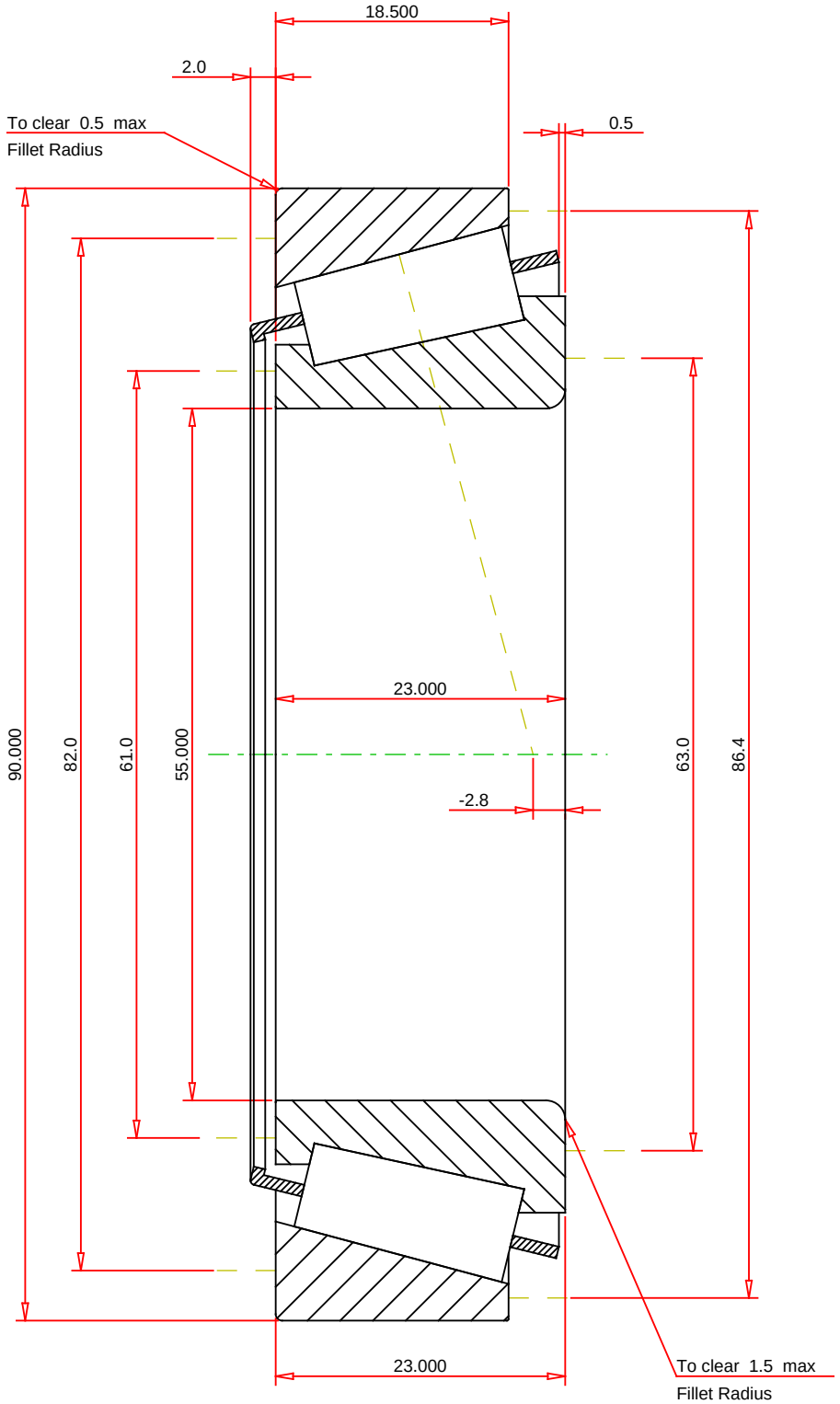
[6] Based on 90 x 10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

[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.

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



METRIC UNITS

ISO Factor - e	0.4	
ISO Factor - Y	1.49	
Bearing Weight	0.5	kg
Number of Rollers Per Row	22	
Effective Center Location	-2.8	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JLM506849 - JLM506810
TS BEARING ASSEMBLY

K Factor	1.45	
Dynamic Radial Rating - C90	23800	N
Dynamic Thrust Rating - Ca90	16400	N
Static Radial Rating - C0	123000	N
Dynamic Radial Rating - C1	91800	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