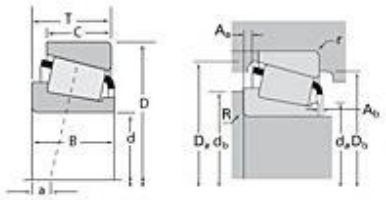
TIMKEN

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

Timken Part Number JLM104948 - JLM104910, 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	LM104900
Cone Part Number	JLM104948
Cup Part Number	JLM104910
Design Units	Metric
Bearing Weight	0.400 Kg 0.90 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	50.000 mm 1.9685 in
D - Cup Outer Diameter	82.000 mm 3.2283 in

B - Cone Width	21.500 mm 0.8465 in
C - Cup Width	17.000 mm 0.6693 in
T - Bearing Width	21.500 mm 0.8465 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.050 mm 0.120 in
r - Cup Backface "To Clear" Radius[2]	0.51 mm 0.020 in
da - Cone Frontface Backing Diameter	55.12 mm 2.17 in
db - Cone Backface Backing Diameter	60.96 mm 2.40 in
Da - Cup Frontface Backing Diameter	78.00 mm 3.11 in
Db - Cup Backface Backing Diameter	75.95 mm 2.99 in
Ab - Cage-Cone Frontface Clearance	2.8 mm 0.11 in
Aa - Cage-Cone Backface Clearance	0.3 mm 0.01 in
a - Effective Center Location[3]	-5.30 mm -0.21 in

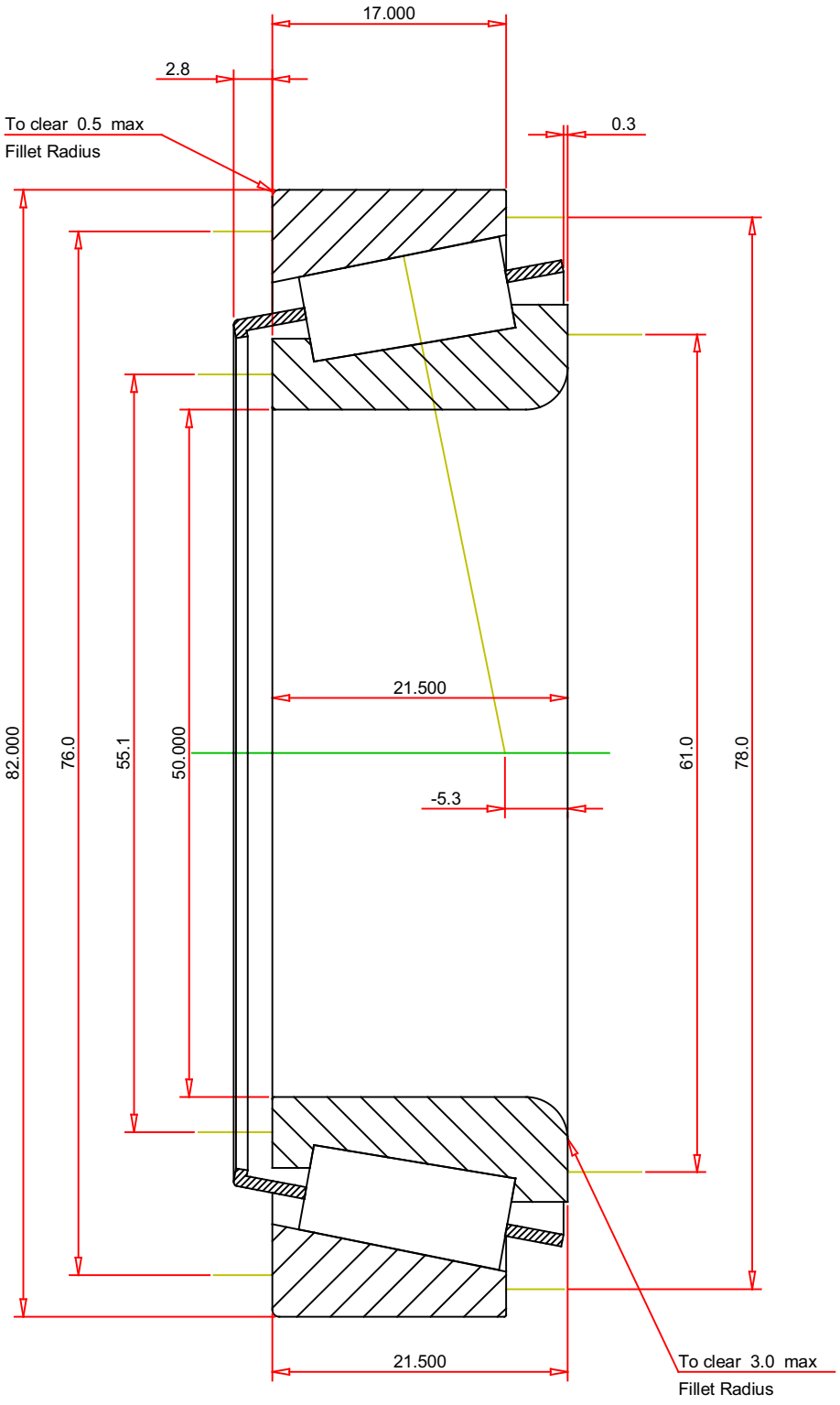
Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	25000 N 5610 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	96300 N 21700 lbf
C0 - Static Radial Rating	104000 N 23400 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	13000 N 2930 lbf

Factors

K - Factor[7]	1.91
e - ISO Factor[8]	0.31
Y - ISO Factor[9]	1.97
G1 - Heat Generation Factor (Roller-Raceway)	38.8
G2 - Heat Generation Factor (Rib-Roller End)	19.3
Cg - Geometry Factor	0.0801

[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	0.31	
ISO Factor - Y	1.97	
Bearing Weight	0.4	kg
Number of Rollers Per Row	21	
Effective Center Location	-5.3	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JLM104948 - JLM104910
TS BEARING ASSEMBLY

K Factor	1.91	
Dynamic Radial Rating - C90	25000	N
Dynamic Thrust Rating - Ca90	13000	N
Static Radial Rating - C0	104000	N
Dynamic Radial Rating - C1	96300	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