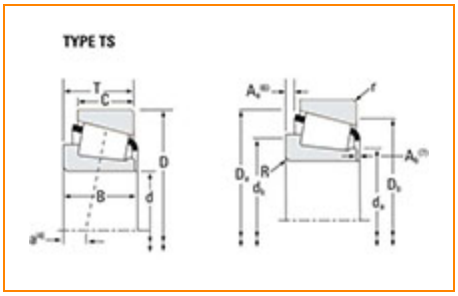
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number JP13049A - JP13010, 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	JP13000
Cone Part Number	JP13049A
Cup Part Number	JP13010
Design Units	METRIC
Bearing Weight	2.1 Kg 4.7 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	130 mm 5.1181 in
D - Cup Outer Diameter	185.000 mm 7.2835 in
B - Cone Width	27.000 mm 1.0630 in
C - Cup Width	21.000 mm 0.8268 in
T - Bearing Width	29.000 mm 1.1417 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	6.100 mm 0.24 in
r - Cup Backface "To Clear" Radius[2]	3.05 mm 0.12 in
da - Cone Frontface Backing Diameter	136.91 mm 5.39 in
db - Cone Backface Backing Diameter	149.10 mm 5.87 in
Da - Cup Frontface Backing Diameter	179.10 mm 7.06 in
Db - Cup Backface Backing Diameter	171.96 mm 6.77 in
Ab - Cage-Cone Frontface Clearance	4.8 mm 0.19 in
Aa - Cage-Cone Backface Clearance	1.5 mm 0.06 in
a - Effective Center Location[3]	8.9 mm 0.35 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	50800 N 11400 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	196000 N 44000 lbf
C0 - Static Radial Rating	283000 N 63600 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	41100 N 9250 lbf

Factors

K - Factor[7]	1.24
e - ISO Factor[8]	0.47
Y - ISO Factor[9]	1.27
G1 - Heat Generation Factor (Roller-Raceway)	192
G2 - Heat Generation Factor (Rib-Roller End)	60.3
Cg - Geometry Factor[10]	0.106

[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

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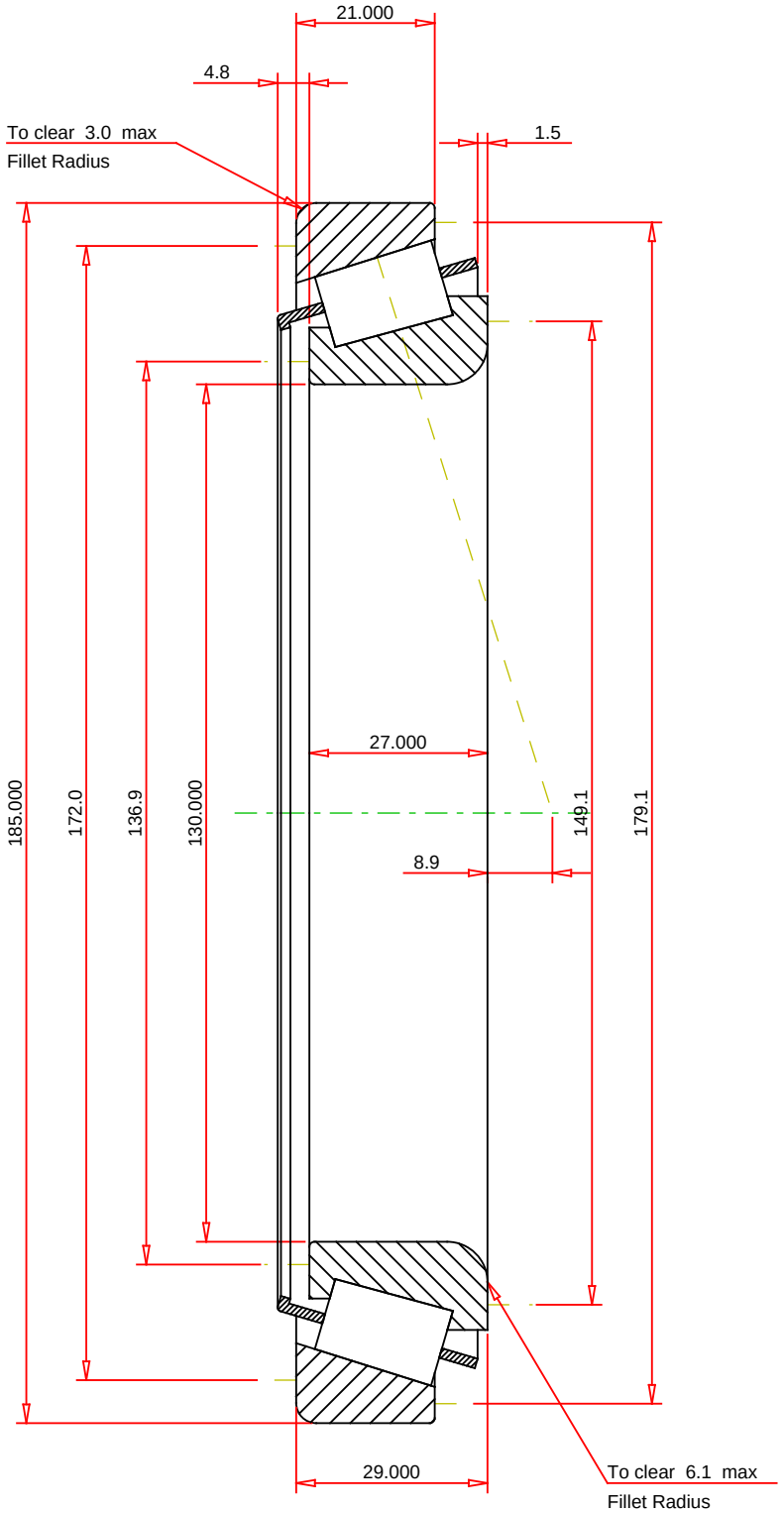
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[10] Geometry constant for Lubrication Life Adjustment Factor a3l.



METRIC UNITS

ISO Factor - e	0.47	
ISO Factor - Y	1.27	
Bearing Weight	2.1	kg
Number of Rollers Per Row	26	
Effective Center Location	8.9	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JP13049A - JP13010
TS BEARING ASSEMBLY

K Factor	1.24	
Dynamic Radial Rating - C90	50800	N
Dynamic Thrust Rating - Ca90	41100	N
Static Radial Rating - C0	283000	N
Dynamic Radial Rating - C1	196000	N

FOR DISCUSSION ONLY