



The Timken Company

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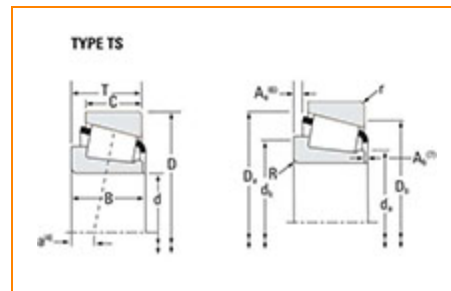
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Timken Part Number JP14049 - JP14010, Tapered Roller Bearings - TS (Tapered Single)

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	JP14000
Cone Part Number	JP14049
Cup Part Number	JP14010
Design Units	METRIC
Bearing Weight	2.3 Kg 5.1 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	140 mm 5.5118 in
D - Cup Outer Diameter	195.000 mm 7.6772 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" Radius¹	3.050 mm 0.12 in
r - Cup Backface "To Clear" Radius²	3.05 mm 0.12 in
da - Cone Frontface Backing Diameter	148.08 mm 5.83 in
db - Cone Backface Backing Diameter	152.91 mm 6.02 in
Da - Cup Frontface Backing Diameter	189.99 mm 7.48 in
Db - Cup Backface Backing Diameter	182.12 mm 7.17 in
Ab - Cage-Cone Frontface Clearance	4.8 mm 0.19 in
Aa - Cage-Cone Backface Clearance	2 mm 0.08 in
a - Effective Center Location³	11.9 mm 0.47 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	52700 N 11800 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	203000 N 45700 lbf
C0 - Static Radial Rating	304000 N 68400 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	45400 N 10200 lbf

Factors

K - Factor⁷	1.16
e - ISO Factor⁸	0.5
Y - ISO Factor⁹	1.19
G1 - Heat Generation Factor (Roller-Raceway)	220
G2 - Heat Generation Factor (Rib-Roller End)	68.1
C_g - Geometry Factor¹⁰	0.113

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.

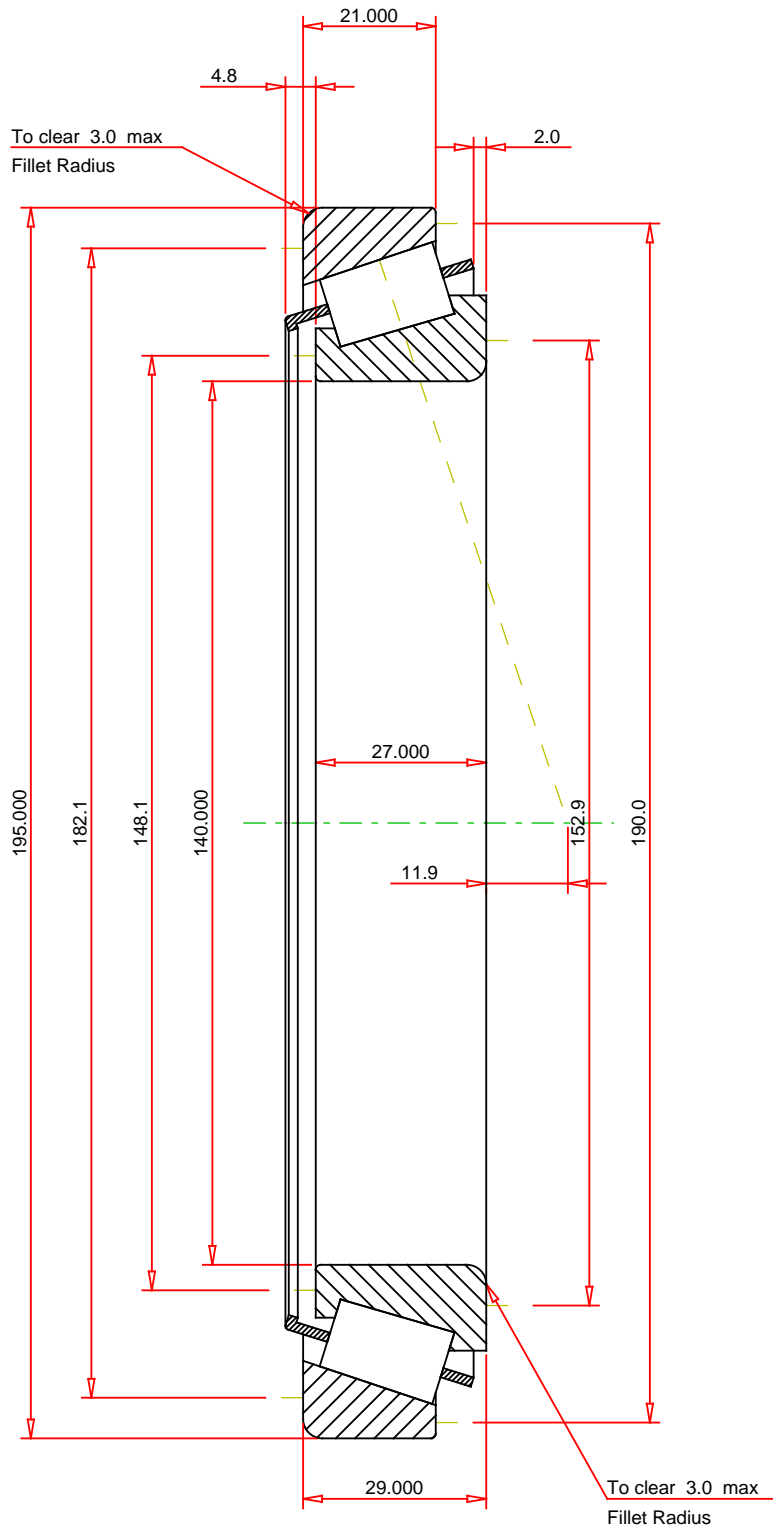
⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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¹⁰ Geometry constant for Lubrication Life Adjustment Factor a_3 .



METRIC UNITS

ISO Factor - e	0.5
ISO Factor - Y	1.19
Bearing Weight	2.3 kg
Number of Rollers Per Row	28
Effective Center Location	11.9 mm

TIMKEN®

**JP14049 - JP14010
TS BEARING ASSEMBLY**

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

K Factor	1.16
Dynamic Radial Rating - C90	52700 N
Dynamic Thrust Rating - Ca90	45400 N
Static Radial Rating - C0	304000 N
Dynamic Radial Rating - C1	203000 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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