The Timken Company
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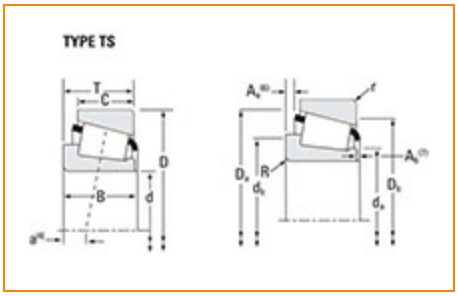
Part Number JF4549 - JF4510, Tapered Roller Bearings - TS (Tapered Single) Metric

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	JF4500
Cone Part Number	JF4549
Cup Part Number	JF4510
Design Units	METRIC
Bearing Weight	1.2 Kg 2.6 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	45.000 mm 1.7717 in

D - Cup Outer Diameter	95.000 mm 3.7402 in
B - Cone Width	35.000 mm 1.3780 in
C - Cup Width	30.000 mm 1.1811 in
T - Bearing Width	36 mm 1.4173 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	2.540 mm 0.1 in
r - Cup Backface "To Clear" Radius[2]	2.54 mm 0.1 in
da - Cone Frontface Backing Diameter	53.09 mm 2.09 in
db - Cone Backface Backing Diameter	60.96 mm 2.4 in
Da - Cup Frontface Backing Diameter	89.90 mm 3.54 in
Db - Cup Backface Backing Diameter	84.07 mm 3.31 in
Ab - Cage-Cone Frontface Clearance	2.54 mm 0.1 in
Aa - Cage-Cone Backface Clearance	1.27 mm 0.05 in
a - Effective Center Location[3]	-11.4 mm -0.45 in

Basic Load Ratings

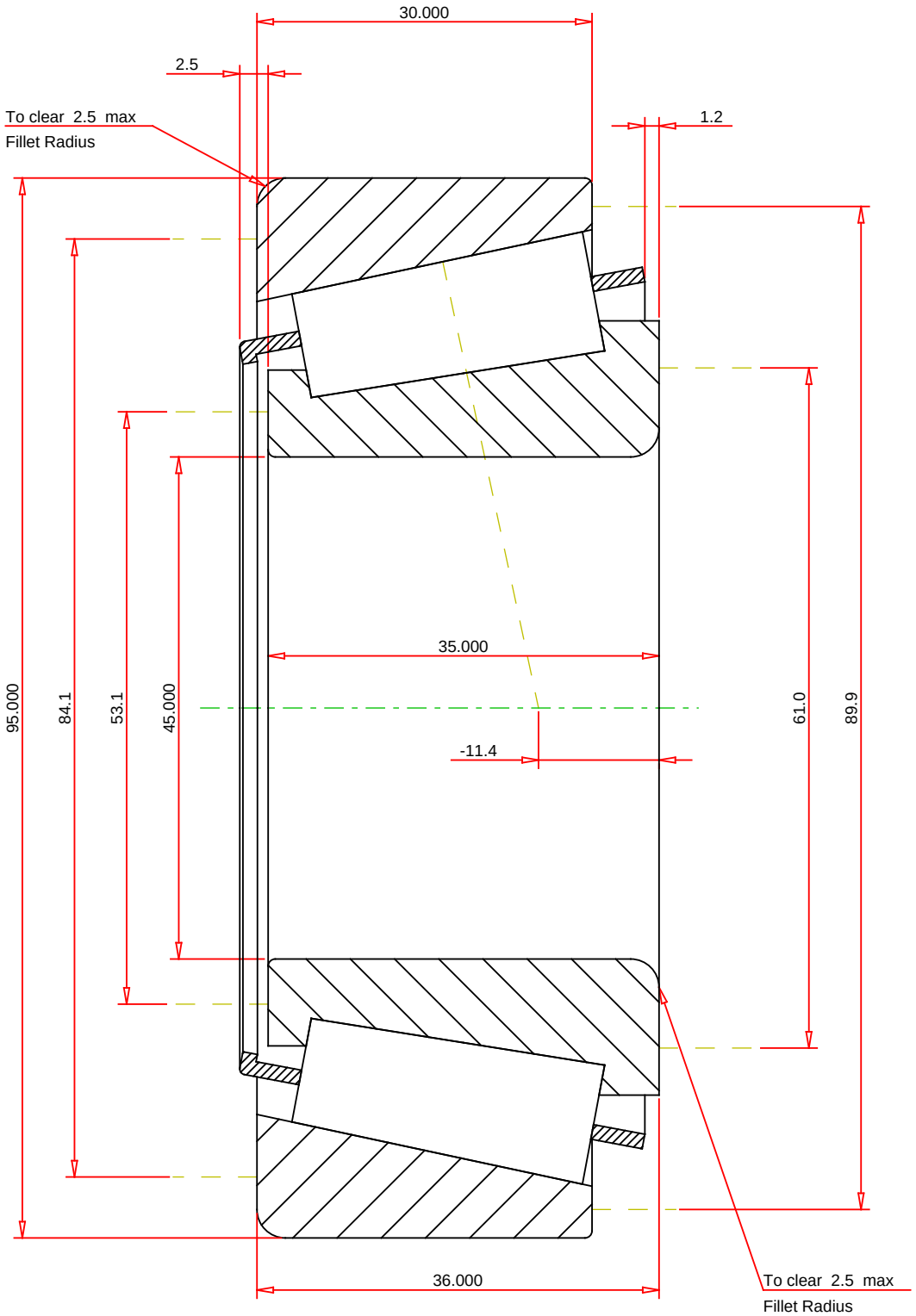
C90 - Dynamic Radial Rating (90 million revolutions)[4]	40800 N 9160 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	157000 N 35300 lbf
C0 - Static Radial Rating	190000 N 42600 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	22500 N 5070 lbf

Factors

K - Factor[7]	1.81
e - ISO Factor[8]	0.32
Y - ISO Factor[9]	1.86
G1 - Heat Generation Factor (Roller-Raceway)	47.9
G2 - Heat Generation Factor (Rib-Roller End)	13.5
Cg - Geometry Factor[10]	0.0874

[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.

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



METRIC UNITS

ISO Factor - e	0.32	
ISO Factor - Y	1.86	
Bearing Weight	1.2	kg
Number of Rollers Per Row	14	
Effective Center Location	-11.4	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JF4549 - JF4510
TS BEARING ASSEMBLY

K Factor	1.81	
Dynamic Radial Rating - C90	40800	N
Dynamic Thrust Rating - Ca90	22500	N
Static Radial Rating - C0	190000	N
Dynamic Radial Rating - C1	157000	N

FOR DISCUSSION ONLY