The Timken Company
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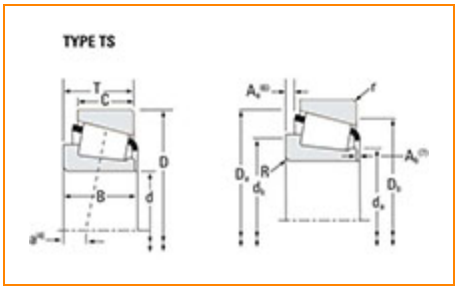
Part Number JM511946 - JM511910, Tapered Roller Bearings - TS (Tapered Single) Metric

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	M511900
Cone Part Number	JM511946
Cup Part Number	JM511910
Design Unit	Metric
Cage Material	Stamped Steel
Related Assembly Number(s)	JM511946-90B01 JM511946-9X041 JM511946-9X150

Dimensions

d - Bore	65 mm 2.5591 in
D - Cup Outer Diameter	110 mm 4.3307 in
B - Cone Width	28.000 mm 1.1024 in
C - Cup Width	22.500 mm 0.8858 in
T - Bearing Width	28.000 mm 1.1024 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.050 mm 0.12 in
r - Cup Backface "To Clear" Radius[2]	2.54 mm 0.1 in
da - Cone Frontface Backing Diameter	72 mm 2.83 in
db - Cone Backface Backing Diameter	78 mm 3.07 in
Da - Cup Frontface Backing Diameter	105.40 mm 4.15 in
Db - Cup Backface Backing Diameter	99.06 mm 3.90 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]	-3.3 mm -0.13 in

Basic Load Ratings

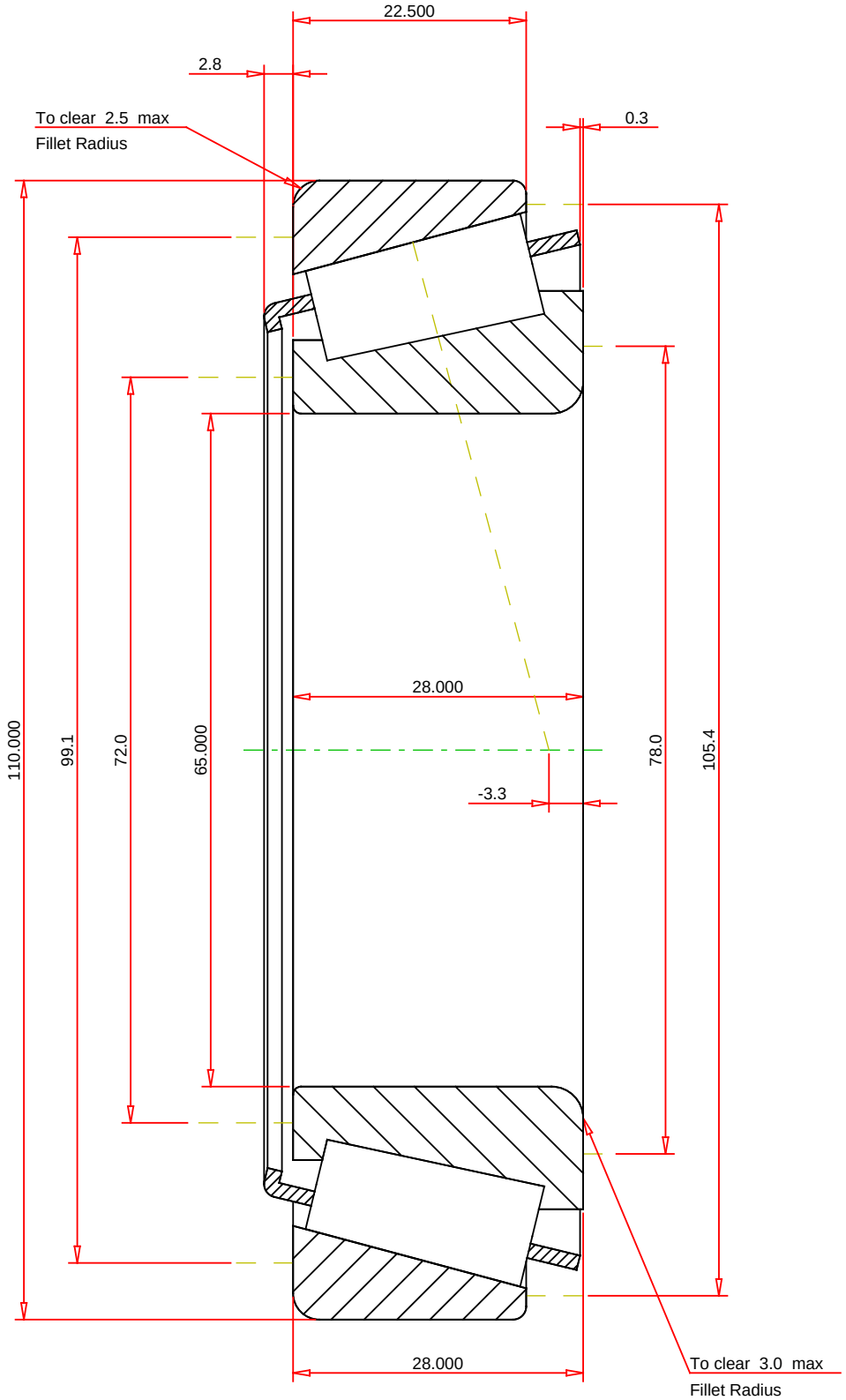
C90 - Dynamic Radial Rating (90 million revolutions)[4]	43300 N 9740 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	167000 N 37600 lbf
C0 - Static Radial Rating	195000 N 43900 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	29800 N 6700 lbf

Factors

K - Factor[7]	1.45
e - ISO Factor[8]	0.4
Y - ISO Factor[9]	1.49
G1 - Heat Generation Factor (Roller-Raceway)	76.3
G2 - Heat Generation Factor (Rib-Roller End)	23.5
Cg - Geometry Factor[10]	0.11

[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.
[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	0.4	
ISO Factor - Y	1.49	
Bearing Weight	1.1	kg
Number of Rollers Per Row	22	
Effective Center Location	-3.3	mm

TIMKEN®

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NORTH CANTON, OHIO USA

JM511946 - JM511910

Tapered Roller Bearings - TS (Tapered Single)
Metric

K Factor	1.45	
Dynamic Radial Rating - C90	43300	N
Dynamic Thrust Rating - Ca90	29800	N
Static Radial Rating - C0	195000	N
Dynamic Radial Rating - C1	167000	N

FOR DISCUSSION ONLY