TIMKEN

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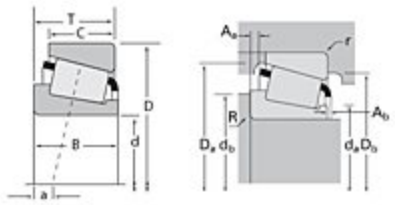
Timken Part Number JM716649 - JM716610, Tapered Roller Bearings - TS (Tapered Single) Metric

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	M716600
Cone Part Number	JM716649
Cup Part Number	JM716610
Design Units	METRIC
Bearing Weight	1.400 Kg 3.00 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	85 mm 3.3465 in
D - Cup Outer Diameter	130.000 mm 5.1181 in

B - Cone Width	29.000 mm 1.1417 in
C - Cup Width	24.000 mm 0.9449 in
T - Bearing Width	30.000 mm 1.1811 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	91.95 mm 3.62 in
db - Cone Backface Backing Diameter	98.04 mm 3.86 in
Da - Cup Frontface Backing Diameter	125.00 mm 4.96 in
Db - Cup Backface Backing Diameter	117.09 mm 4.61 in
Ab - Cage-Cone Frontface Clearance	3 mm 0.12 in
Aa - Cage-Cone Backface Clearance	1.8 mm 0.07 in
a - Effective Center Location[3]	-0.30 mm -0.01 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	41800 N 9400 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	161000 N 36300 lbf
C0 - Static Radial Rating	245000 N 55100 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	31800 N 7150 lbf

Factors

K - Factor[7]	1.31
e - ISO Factor[8]	0.44
Y - ISO Factor[9]	1.35
G1 - Heat Generation Factor (Roller-Raceway)	117
G2 - Heat Generation Factor (Rib-Roller End)	36.6
Cg - Geometry Factor	0.13

[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.
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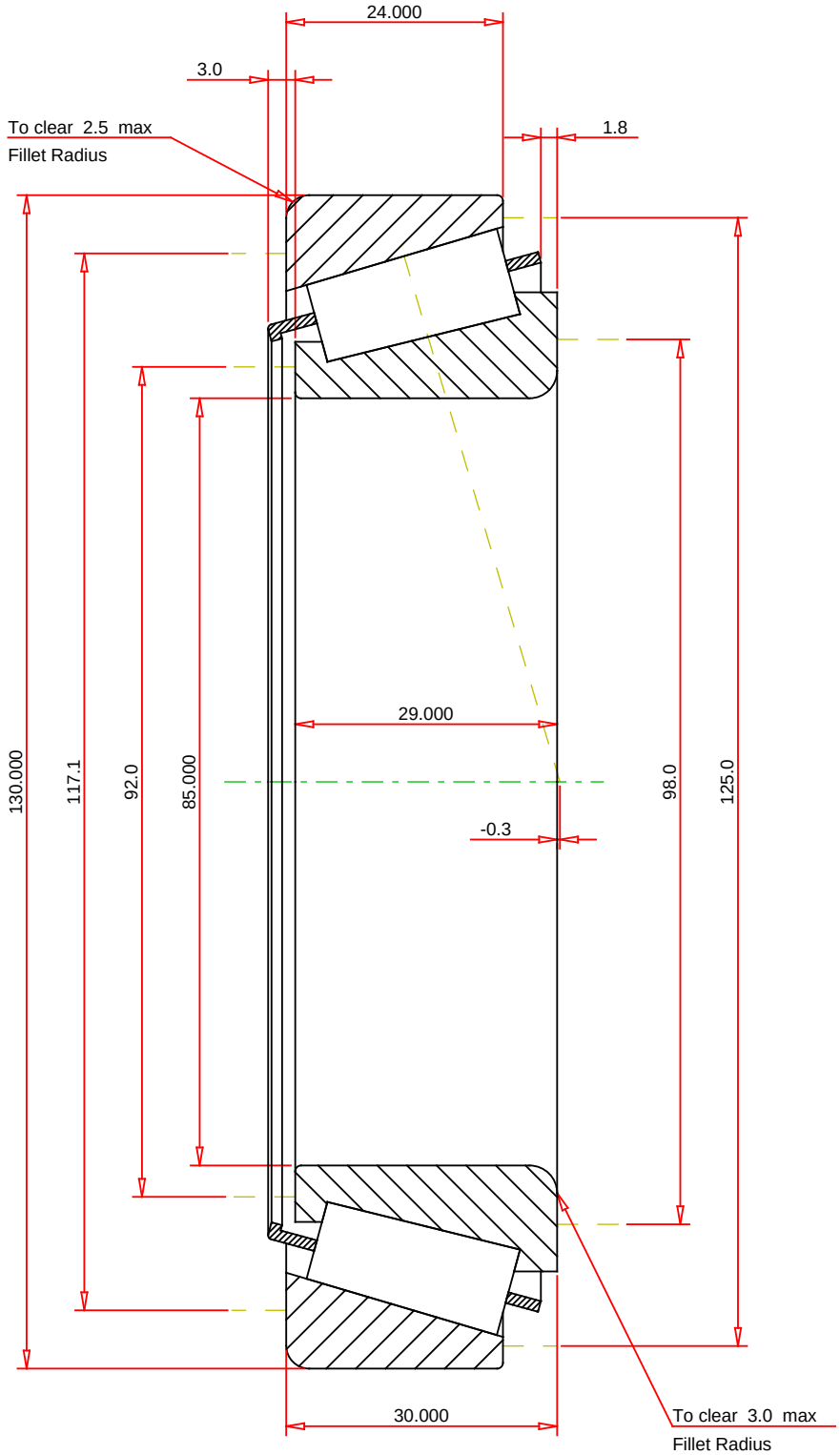

METRIC UNITS

ISO Factor - e	0.44	
ISO Factor - Y	1.35	
Bearing Weight	1.4	kg
Number of Rollers Per Row	26	
Effective Center Location	-0.3	mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JM716649 - JM716610
TS BEARING ASSEMBLY

K Factor	1.31	
Dynamic Radial Rating - C90	41800	N
Dynamic Thrust Rating - Ca90	31800	N
Static Radial Rating - C0	245000	N
Dynamic Radial Rating - C1	161000	N

FOR DISCUSSION ONLY