


The Timken Company

4500 Mt Pleasant St. NW

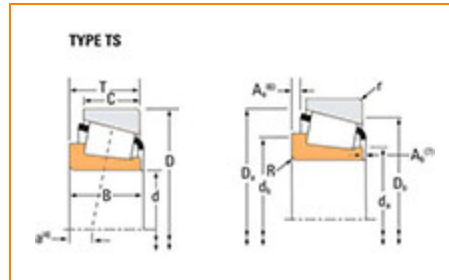
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Part Number JM716649, Tapered Roller Bearings - Single Cones - Metric

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	M716600
Cone Part Number	JM716649
Design Units	METRIC
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	281000 N 63100 lbf
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	72800 N 16400 lbf
Full Timken Part Number	M716600



Dimensions

d - Cone Bore	85 mm 3.3465 in
B - Cone Width	29.000 mm 1.1417 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	3.05 mm 0.12 in
da - Cone Frontface Backing Diameter	92 mm 3.62 in
db - Cone Backface Backing Diameter	98 mm 3.86 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 Location⁴	-0.3 mm -0.01 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	41800 N 9400 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁶	161000 N 36300 lbf
C0 - Static Radial Rating	245000 N 55100 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	31800 N 7150 lbf

Factors

K - Factor⁸	1.31
G1 - Heat Generation Factor (Roller-Raceway)	117.1
G2 - Heat Generation Factor (Rib-Roller End)	38.4
Cg - Geometry Factor⁹	0.13

¹ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

² 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.

³ These maximum fillet radii will be cleared by the bearing corners.

⁴ Negative value indicates effective center inside cone backface.

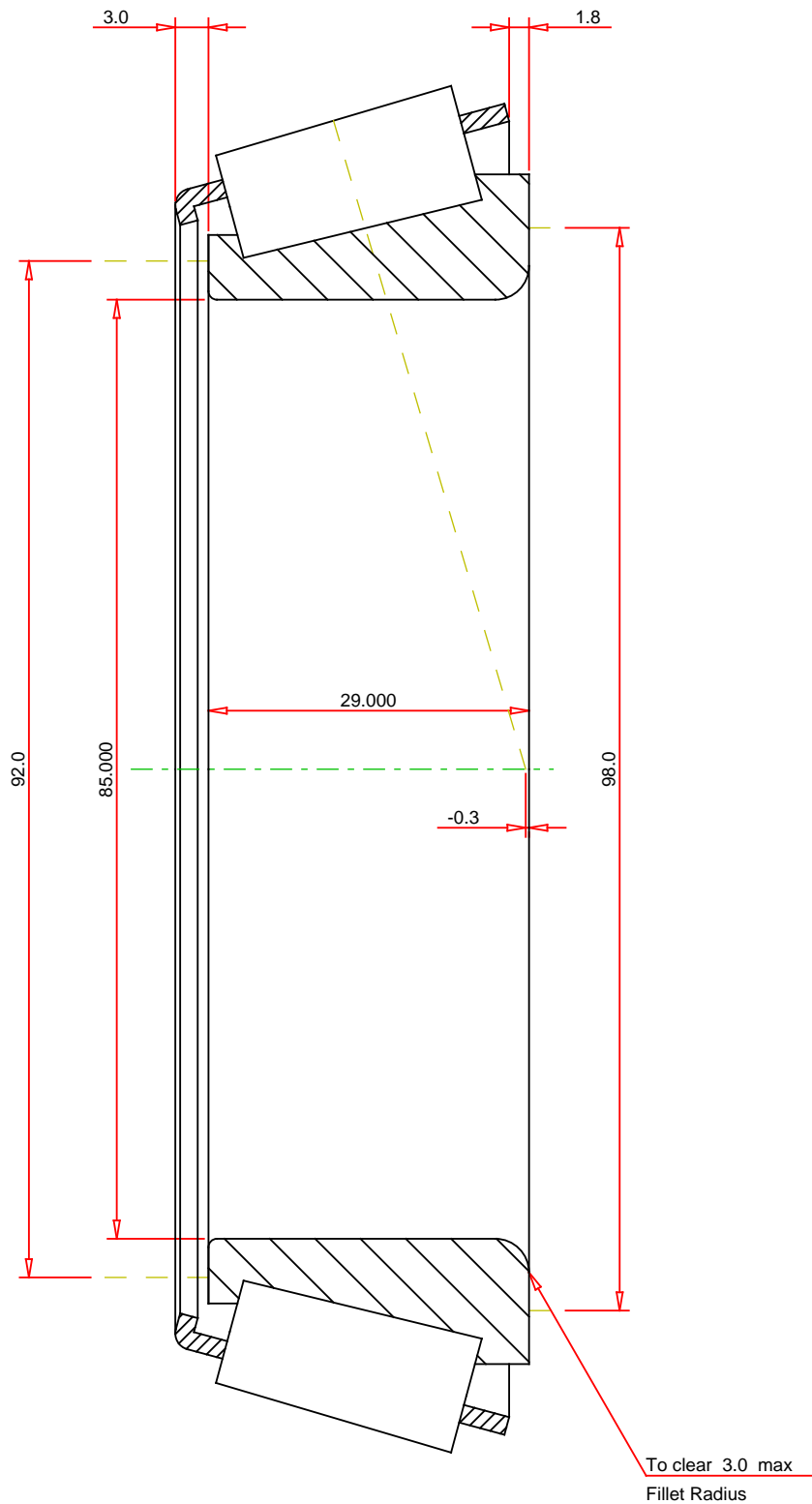
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁶ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

⁷ 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.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁹ Geometry constant for Lubrication Life Adjustment Factor a_3 .



METRIC UNITS

Number of Rollers Per Row 26

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

JM716649
Tapered Roller Bearings - Single Cones - Metric

K Factor	1.31	
Dynamic Radial Rating - C90	41800	N
Dynamic Thrust Rating - Ca90	31800	N
Dynamic Radial Rating - C1	161000	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.

FOR DISCUSSION ONLY