



The Timken Company

4500 Mt Pleasant St. NW

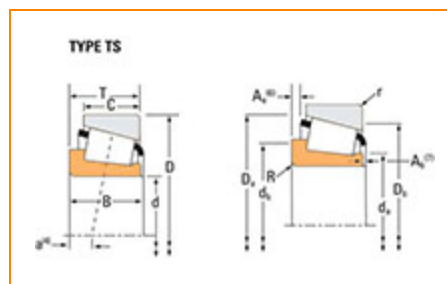
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Part Number 67890H, Tapered Roller Bearings - Single Cones - Imperial

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	67800
Cone Part Number	67890H
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	151000 lbf 672000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	39200 lbf 174000 N



Dimensions

d - Cone Bore 7.5 in
190.5 mm

B - Cone Width 1.9685 in
50 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³ 0.14 in
3.600 mm

da - Cone Frontface Backing Diameter 7.99 in
203 mm

db - Cone Backface Backing Diameter 8.19 in
208 mm

Ab - Cage-Cone Frontface Clearance 0.07 in
1.8 mm

Aa - Cage-Cone Backface Clearance 0.12 in
3 mm

a - Effective Center Location⁴ 0.4 in
10.2 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵ 22500 lbf
100000 N

C1 - Dynamic Radial Rating (1 million revolutions)⁶ 86800 lbf
386000 N

C0 - Static Radial Rating 168000 lbf
749000 N

C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷ 18400 lbf
81800 N

Factors

K - Factor⁸	1.22
G1 - Heat Generation Factor (Roller-Raceway)	674.8
G2 - Heat Generation Factor (Rib-Roller End)	136.4
Cg - Geometry Factor⁹	0.128

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.

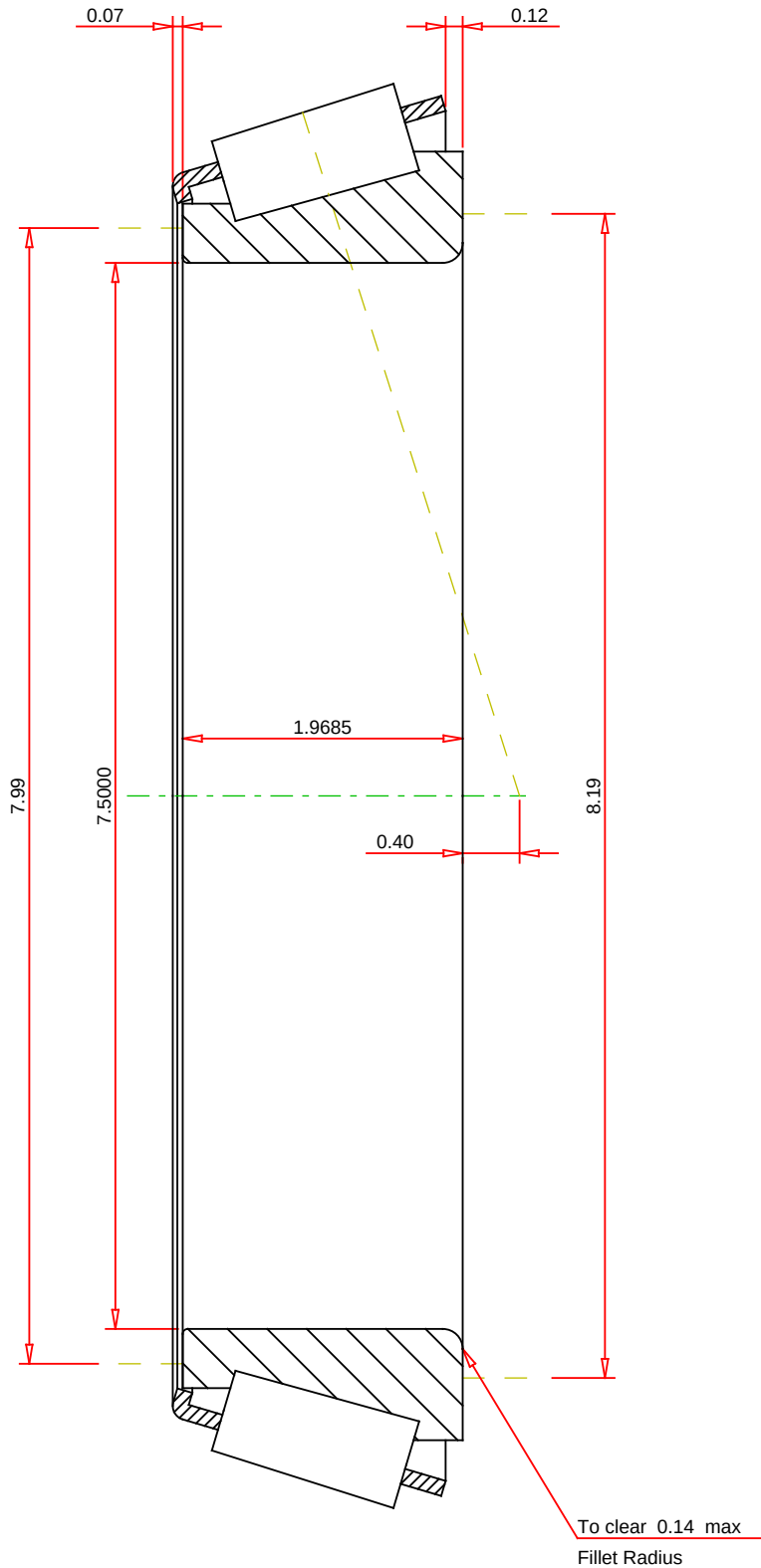
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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 .



IMPERIAL UNITS

Number of Rollers Per Row35	TIMKEN® THE TIMKEN COMPANY NORTH CANTON, OHIO USA	67890H Tapered Roller Bearings - Single Cones - Imperial K Factor Dynamic Radial Rating - C90 Dynamic Thrust Rating - Ca90 Dynamic Radial Rating - C1 1.22 100000 81800 386000 lbf lbf lbf lbf
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