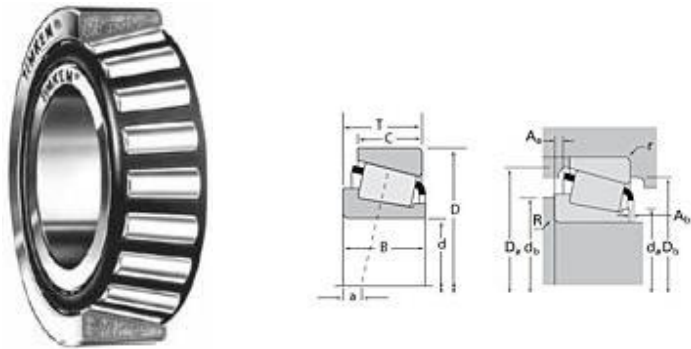




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Timken Part Number 18690 - 18620, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	18600
Cone Part Number	18690
Cup Part Number	18620
Design Units	Imperial
Bearing Weight	0.70 lb 0.300 Kg
Cage Type	Stamped Steel

Dimensions	
d - Bore	1.8125 in 46.038 mm
D - Cup Outer Diameter	3.1250 in 79.375 mm

B - Cone Width	0.6875 in 17.463 mm
C - Cup Width	0.5313 in 13.495 mm
T - Bearing Width	0.6875 in 17.463 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.110 in 2.790 mm
r - Cup Backface "To Clear" Radius²	0.060 in 1.52 mm
da - Cone Frontface Backing Diameter	2.01 in 51.05 mm
db - Cone Backface Backing Diameter	2.20 in 55.88 mm
Da - Cup Frontface Backing Diameter	2.94 in 74.68 mm
Db - Cup Backface Backing Diameter	2.80 in 71.12 mm
Ab - Cage-Cone Frontface Clearance	0.09 in 2.3 mm
Aa - Cage-Cone Backface Clearance	0.01 in 0.3 mm
a - Effective Center Location³	-0.08 in -2.00 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	3030 lbf 13500 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	11700 lbf 52000 N
C0 - Static Radial Rating	13800 lbf 61300 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	1940 lbf 8630 N

Factors



K - Factor⁷	1.56
e - ISO Factor⁸	0.37
Y - ISO Factor⁹	1.6
G1 - Heat Generation Factor (Roller-Raceway)	23.9
G2 - Heat Generation Factor (Rib-Roller End)	17.7
Cg - Geometry Factor	0.0725

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.

