


The Timken Company

4500 Mt Pleasant St. NW

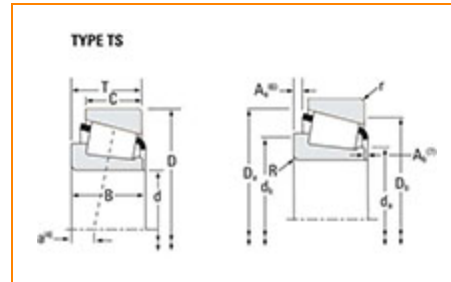
N. Canton, OH 44720

Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Part Number 4A - 6, 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.




[Specifications](#) | [Dimensions](#) | [Abutment and Fillet Dimensions](#) | [Basic Load Ratings](#) | [Factors](#)

Specifications

Series	5C
Cone Part Number	4A
Cup Part Number	6
Design Unit	Inch
Cage Material	Stamped Steel

Dimensions

d - Bore	3/4 in 19.05 mm
 - Cup Outer Diameter	1.7500 in 44.450 mm

B - Cone Width	0.4688 in 11.908 mm
C - Cup Width	0.3750 in 9.525 mm
T - Bearing Width	0.5000 in 12.700 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	0.06 in 1.520 mm
r - Cup Backface "To Clear" Radius²	0.06 in 1.52 mm
da - Cone Frontface Backing Diameter	0.93 in 23.5 mm
db - Cone Backface Backing Diameter	1 in 25.5 mm
Da - Cup Frontface Backing Diameter	1.63 in 41.40 mm
Db - Cup Backface Backing Diameter	1.50 in 38.10 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	-0.07 in -1.8 mm

Basic Load Ratings

C90 - Dynamic Radial Rating (90	1180 lbf
--	----------

million revolutions)⁴	5250 N
C1 - Dynamic Radial Rating (1 million revolutions)⁵	4550 lbf 20300 N
C0 - Static Radial Rating	4640 lbf 20600 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	969 lbf 4310 N

Factors

K - Factor⁷	1.22
e - ISO Factor⁸	0.48
Y - ISO Factor⁹	1.25
G1 - Heat Generation Factor (Roller-Raceway)	4.6
G2 - Heat Generation Factor (Rib-Roller End)	2.6
Cg - Geometry Factor¹⁰	0.0456

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 a_{3l}.

