

The Timken Company

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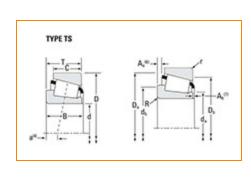
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Part Number 4A - 6, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.





<u>Specifications</u> | <u>Dimensions</u> | <u>Abutment and Fillet Dimensions</u> | <u>Basic Load Ratings</u> | <u>Factors</u>

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

Dir	nensions		-
	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

Abı	Abutment and Fillet Dimensions –			
	R - Cone Backface "To Clear" Radius ¹	0.06 in 1.520 mm		
	r - Cup Backface "To Clear" Radius ²	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 Location ³	-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 - Factor ⁷	1.22	
	e - ISO Factor ⁸	0.48	
	Y - ISO Factor ⁹	1.25	
	G1 - Heat Generation Factor (Roller-Raceway)	4.6	
	G2 - Heat Generation Factor (Rib-Roller End)	2.6	
	Cg - Geometry Factor ¹⁰	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 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.

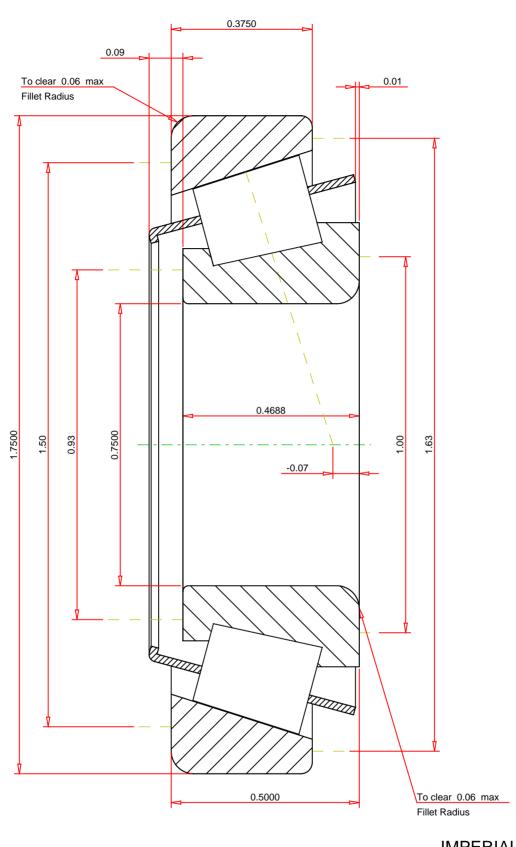
 $^{^6}$ Based on 90 x 10^6 revolutions L $_{10}$ life, for The Timken Company life calculation method. C $_{90}$ and C $_{a90}$ are radial and thrust values for a single-row, C $_{90(2)}$ is the two-row radial value.

⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

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 a3l.



IMPERIAL UNITS

ISO Factor - e ISO Factor - Y Bearing Weight Number of Rollers Per Row Effective Center Location	or - Y 1.25 Weight 0.2 lb of Rollers Per Row 16		4A - 6 Tapered Roller Bearings - TS (Tapered Single) Imperial		
		THE TIMKEN COMPANY NORTH CANTON, OHIO USA	K Factor Dynamic Radial Rating - C90 Dynamic Thrust Rating - Ca90 Static Radial Rating - C0 Dynamic Radial Rating - C1	1.22 1180 969 4640 4550	lbf lbf lbf lbf
Every reasonable effort has been mad	de to ensure the	accuracy of the information contained in this writing, but no	EOD DIOOLIOOION ONLY		

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FOR DISCUSSION ONLY