

### The Timken Company

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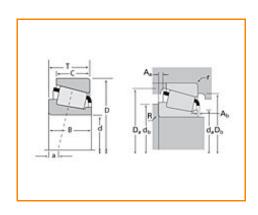
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Timken Part Number L44643 - L44610, Tapered Roller Bearings - TS (Tapered Single)

## 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	L44600	
Cone Part Number	L44643	
Cup Part Number	L44610	
<b>Design Units</b>	Imperial	
Bearing Weight	0.100 Kg 0.30 lb	
Cage Type	Stamped Steel	

Dimensions	-

d - Bore	25.400 mm 1.0000 in
D - Cup Outer Diameter	50.292 mm 1.9800 in
B - Cone Width	14.732 mm 0.5800 in
C - Cup Width	10.668 mm 0.4200 in
T - Bearing Width	14.224 mm 0.5600 in

# Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius <sup>1</sup>	1.270 mm 0.050 in
r - Cup Backface "To Clear"	1.27 mm
Radius <sup>2</sup>	0.050 in
da - Cone Frontface Backing	29.97 mm
Diameter	1.18 in
db - Cone Backface Backing	32.00 mm
Diameter	1.26 in
Da - Cup Frontface Backing	47.50 mm
Diameter	1.87 in
<b>Db - Cup Backface Backing Diameter</b>	44.45 mm 1.75 in
Ab - Cage-Cone Frontface	1.3 mm
Clearance	0.05 in
Aa - Cage-Cone Backface	0.5 mm
Clearance	0.02 in
a - Effective Center Location <sup>3</sup>	-3.3 mm -0.13 in

Basic Load Ratings	
C90 - Dynamic Radial Rating (90 million revolutions) <sup>4</sup>	9230 N 2080 lbf
C1 - Dynamic Radial Rating (1 million revolutions) <sup>5</sup>	35600 N 8010 lbf
C0 - Static Radial Rating	32900 N 7400 lbf
C <sub>a90</sub> - Dynamic Thrust Rating (90 million revolutions) <sup>6</sup>	5910 N 1330 lbf

Factors	_
K - Factor <sup>7</sup>	1.56
e - ISO Factor <sup>8</sup>	0.37
Y - ISO Factor <sup>9</sup>	1.60
G1 - Heat Generation Factor (Roller-Raceway)	8.9
G2 - Heat Generation Factor (Rib-Roller End)	8.93
Cg - Geometry Factor	0.0526

<sup>&</sup>lt;sup>1</sup> These maximum fillet radii will be cleared by the bearing corners.

<sup>&</sup>lt;sup>2</sup> These maximum fillet radii will be cleared by the bearing corners.

<sup>&</sup>lt;sup>3</sup> Negative value indicates effective center inside cone backface.

 $<sup>^4</sup>$  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.

 $<sup>^{5}</sup>$  Based on 1 x  $10^{6}$  revolutions  $L_{10}$  life, for the ISO life calculation method.

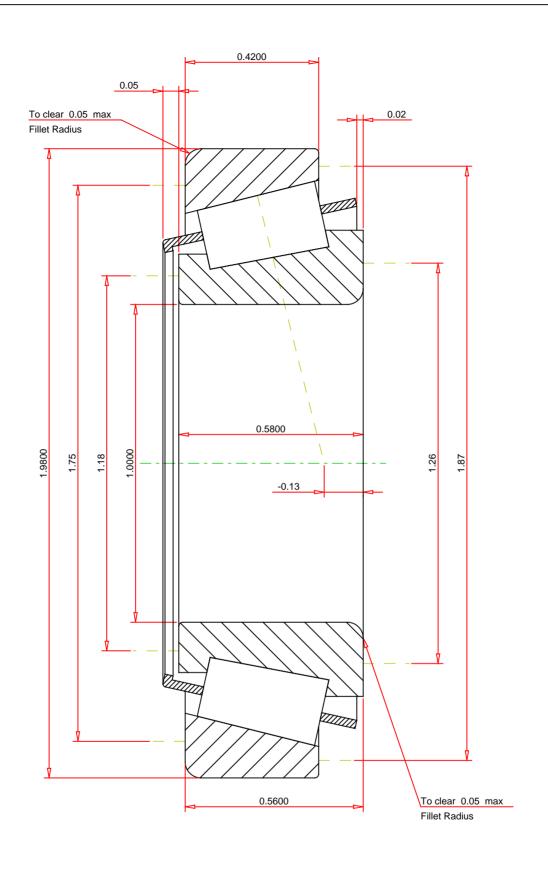
 $<sup>^6</sup>$  Based on 90 x  $10^6$  revolutions  $L_{10}$  life, for The Timken Company life calculation method.  $C_{90}$  and  $C_{a90}$  are radial and thrust values for a single-row,  $C_{90(2)}$  is the two-row radial value.

<sup>&</sup>lt;sup>7</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

<sup>&</sup>lt;sup>8</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction

on use.

<sup>9</sup> These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use



#### **IMPERIAL UNITS**

ISO Factor - e 0.37 ISO Factor - Y 1.6 Bearing Weight 0.3 I Number of Rollers Per Row 19 Effective Center Location -0.13 inc		L44643 - L44610 TS BEARING ASSEMBLY
	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

1.56 9230 5910 lbf 32900 lbf 35600 lbf

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