


The Timken Company

4500 Mt Pleasant St. NW

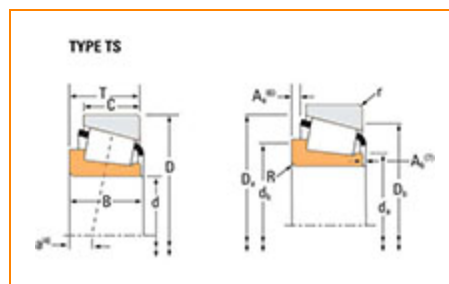
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Part Number 466-S, Tapered Roller Bearings - Single Cones - Imperial

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	455
Cone Part Number	466-S
Design Units	Imperial
Cage Type	Stamped Steel
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)¹	62900 lbf 280000 N
C90(2) - Dynamic Radial Rating (Two-Row, 90 million revolutions)²	16300 lbf 72600 N



Dimensions

d - Cone Bore	2 3/16 in 55.563 mm
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B - Cone Width	1.1542 in 29.317 mm
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Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius³	0.090 in 2.3 mm
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da - Cone Frontface Backing Diameter	2.44 in 62 mm
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db - Cone Backface Backing Diameter	2.6 in 66 mm
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Ab - Cage-Cone Frontface Clearance	0.08 in 2 mm
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Aa - Cage-Cone Backface Clearance	0.07 in 1.8 mm
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a - Effective Center Location⁴	-0.28 in -7.1 mm
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Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁵	9370 lbf 41700 N
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C1 - Dynamic Radial Rating (1 million revolutions)⁶	36100 lbf 161000 N
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C0 - Static Radial Rating	37200 lbf 166000 N
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁷	5380 lbf 23900 N
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Factors

K - Factor⁸	1.74
G1 - Heat Generation Factor (Roller-Raceway)	58.6
G2 - Heat Generation Factor (Rib-Roller End)	17.1
Cg - Geometry Factor⁹	0.0946

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.

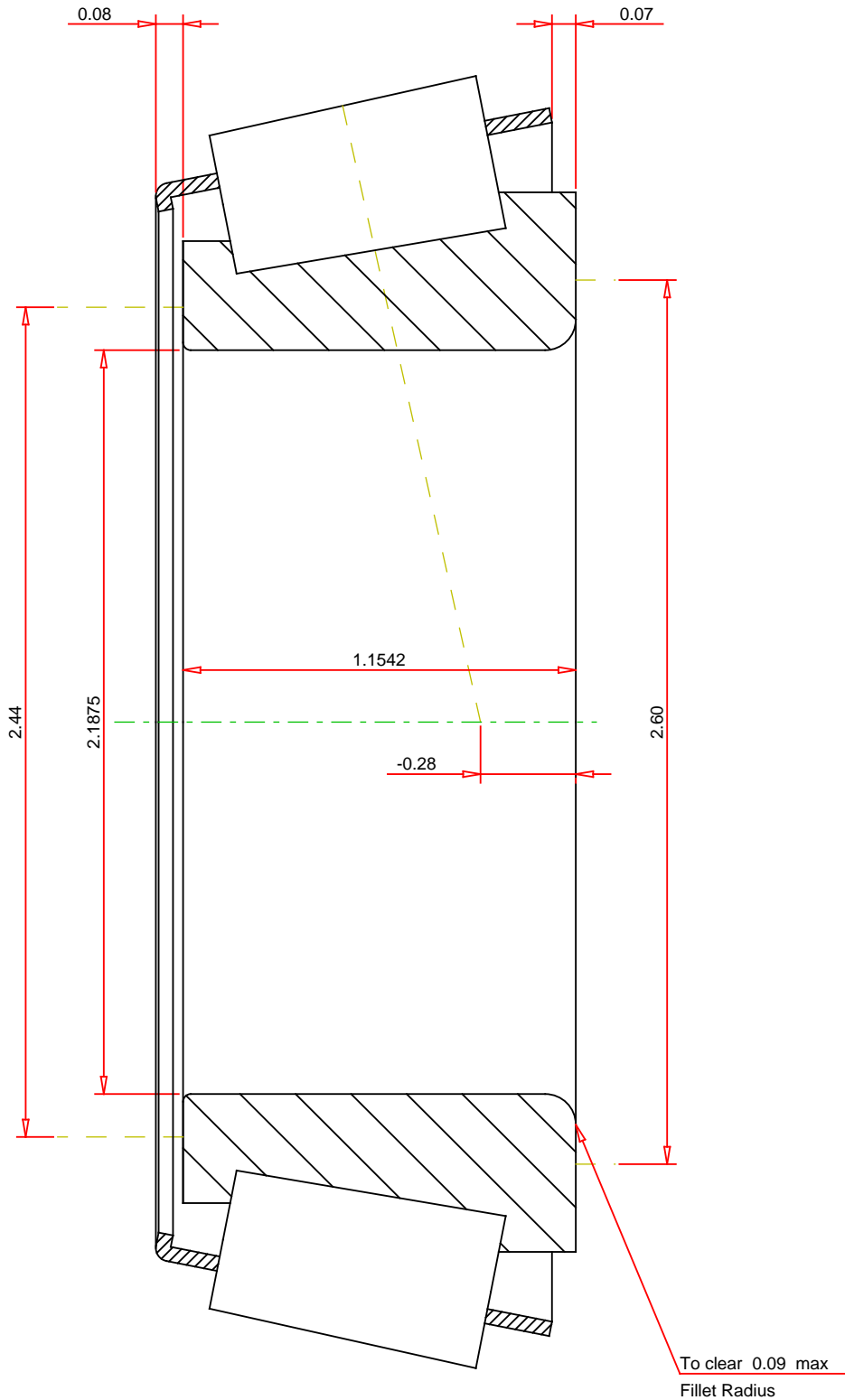
⁵ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

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 Row	18	<div>TIMKEN®</div>	466-S	
		Tapered Roller Bearings - Single Cones - Imperial		
		<div>THE TIMKEN COMPANY</div> <div>NORTH CANTON, OHIO USA</div>	K Factor	1.74
			Dynamic Radial Rating - C90	9370 lbf
			Dynamic Thrust Rating - Ca90	5380 lbf
			Dynamic Radial Rating - C1	36100 lbf