


The Timken Company

4500 Mt Pleasant St. NW

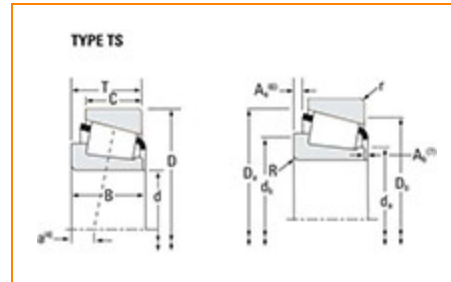
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Part Number 32217, Tapered Roller Bearings - TS (Tapered Single) Metric

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	32217M
Cone Part Number	X32217M
Cup Part Number	Y32217M
Design Unit	Metric
Cage Material	Stamped Steel
Full Timken Part Number	32217

Dimensions


1 - Bore

 85 mm
3.3465 in

D - Cup Outer Diameter	150 mm 5.9055 in
B - Cone Width	36 mm 1.4173 in
C - Cup Width	30.000 mm 1.1811 in
T - Bearing Width	38.500 mm 1.5157 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	2.540 mm 0.100 in
r - Cup Backface "To Clear" Radius²	2.03 mm 0.08 in
da - Cone Frontface Backing Diameter	94 mm 3.7 in
db - Cone Backface Backing Diameter	100 mm 3.94 in
Da - Cup Frontface Backing Diameter	142.00 mm 5.63 in
Db - Cup Backface Backing Diameter	134.11 mm 5.28 in
Ab - Cage-Cone Frontface Clearance	4.1 mm 0.16 in
Aa - Cage-Cone Backface Clearance	3.3 mm 0.13 in
a - Effective Center Location³	-4.6 mm -0.18 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	63600 N 14300 lbf
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C1 - Dynamic Radial Rating (1 million revolutions)⁵	245000 N 55100 lbf
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C0 - Static Radial Rating	305000 N 68700 lbf
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C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	45700 N 10300 lbf
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Factors

K - Factor⁷	1.39
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e - ISO Factor⁸	0.42
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Y - ISO Factor⁹	1.43
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G1 - Heat Generation Factor (Roller-Raceway)	121.4
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G2 - Heat Generation Factor (Rib-Roller End)	32.6
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C_g - Geometry Factor¹⁰	0.0836
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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.

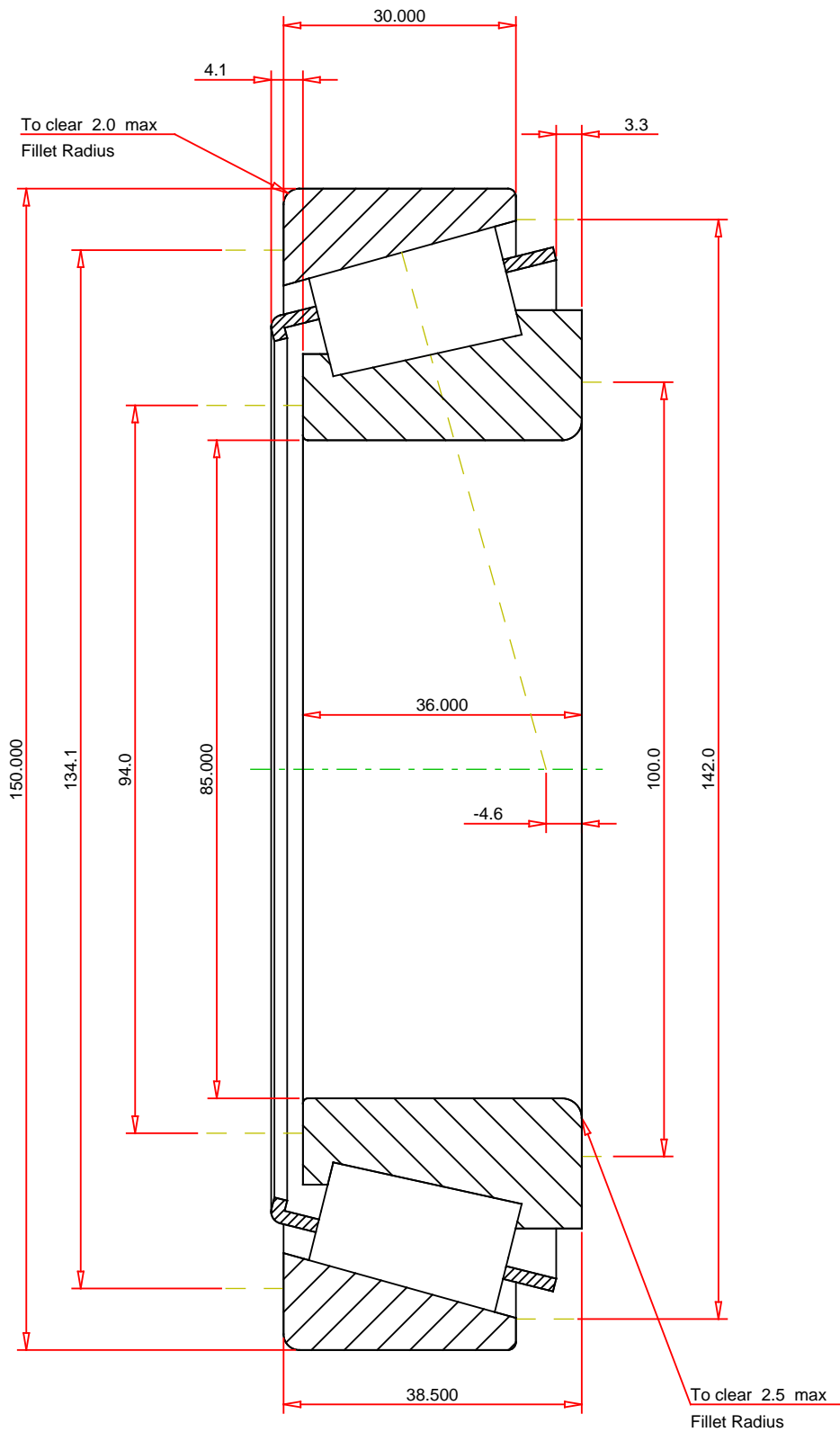
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

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.

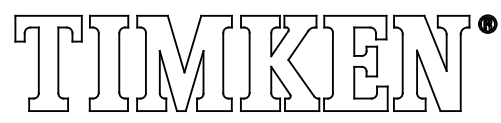
⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

¹⁰ Geometry constant for Lubrication Life Adjustment Factor a3l.



METRIC UNITS

ISO Factor - e	0.42
ISO Factor - Y	1.43
Bearing Weight	2.6 kg
Number of Rollers Per Row	19
Effective Center Location	-4.6 mm



X32217M - Y32217M
Tapered Roller Bearings - TS (Tapered Single)
Metric

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

K Factor	1.39
Dynamic Radial Rating - C90	63600 N
Dynamic Thrust Rating - Ca90	45700 N
Static Radial Rating - C0	305000 N
Dynamic Radial Rating - C1	245000 N

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.

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