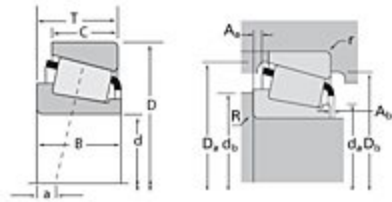


TIMKEN

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Timken Part Number 1994X - 1922, 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	1900
Cone Part Number	1994X
Cup Part Number	1922
Design Units	Imperial
Bearing Weight	0.200 Kg 0.50 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	25.400 mm 1.0000 in
D - Cup Outer Diameter	57.150 mm 2.2500 in

B - Cone Width	19.355 mm 0.7620 in
C - Cup Width	15.875 mm 0.6250 in
T - Bearing Width	19.845 mm 0.7813 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius²	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	30.48 mm 1.20 in
db - Cone Backface Backing Diameter	37.08 mm 1.46 in
Da - Cup Frontface Backing Diameter	54.10 mm 2.13 in
Db - Cup Backface Backing Diameter	51.05 mm 2.01 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	0 mm 0 in
a - Effective Center Location³	-5.80 mm -0.23 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	12500 N 2820 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	48400 N 10900 lbf
C0 - Static Radial Rating	50200 N 11300 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	7080 N 1590 lbf

Factors

K - Factor⁷	1.77
e - ISO Factor⁸	0.33
Y - ISO Factor⁹	1.82
G1 - Heat Generation Factor (Roller-Raceway)	12.5
G2 - Heat Generation Factor (Rib-Roller End)	6.33
Cg - Geometry Factor	0.0565

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.

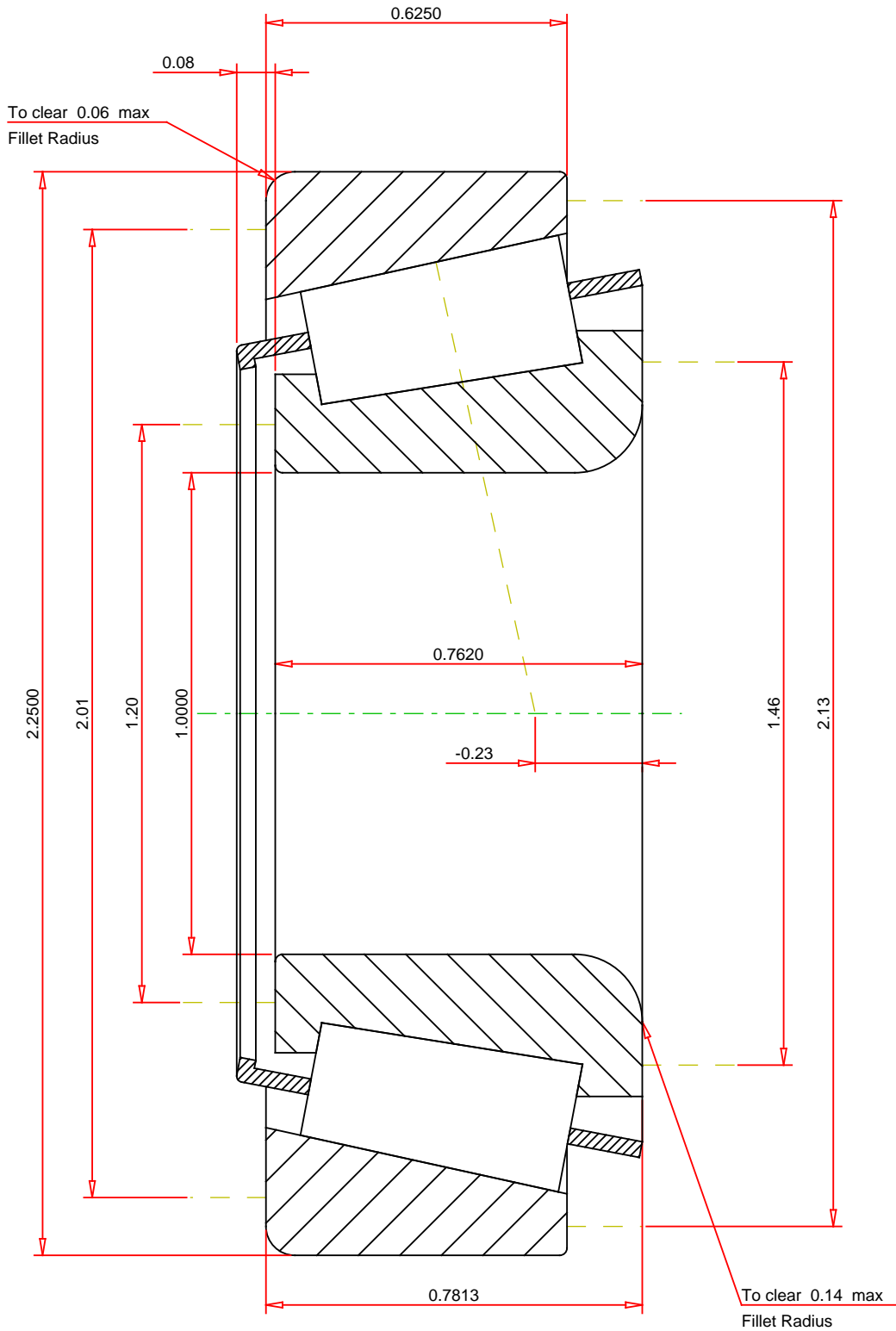
⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

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.



IMPERIAL UNITS

ISO Factor - e	0.33
ISO Factor - Y	1.82
Bearing Weight	0.5 lb
Number of Rollers Per Row	14
Effective Center Location	-0.23 inch

TIMKEN®

**1994X - 1922
TS BEARING ASSEMBLY**

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

K Factor	1.77
Dynamic Radial Rating - C90	12500 lbf
Dynamic Thrust Rating - Ca90	7080 lbf
Static Radial Rating - C0	50200 lbf
Dynamic Radial Rating - C1	48400 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