TIMKEN

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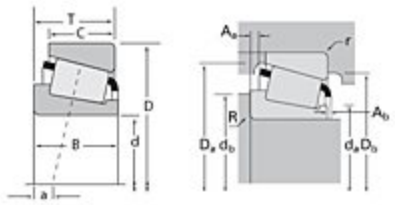
Timken Part Number 1997X - 1922, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



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Specifications

Series	1900
Cone Part Number	1997X
Cup Part Number	1922
Design Units	Imperial
Bearing Weight	0.200 Kg 0.50 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	26.988 mm 1.0625 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" Radius[1]	3.300 mm 0.130 in
r - Cup Backface "To Clear" Radius[2]	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	31.50 mm 1.24 in
db - Cone Backface Backing Diameter	37.59 mm 1.48 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 Location[3]	-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 - Factor[7]	1.77
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	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 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.
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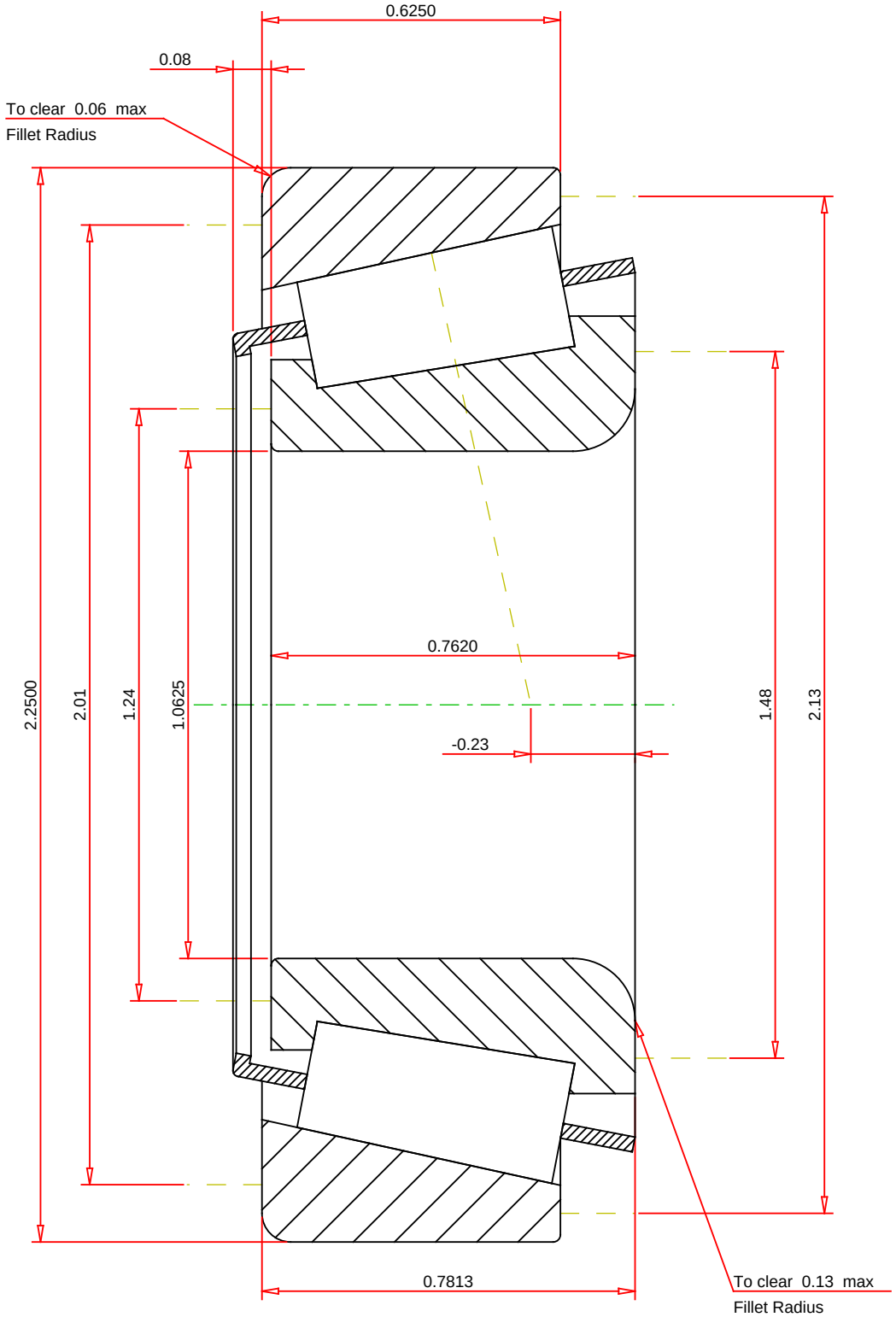

IMPERIAL UNITS

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

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THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

1997X - 1922
TS BEARING ASSEMBLY

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

FOR DISCUSSION ONLY