The Timken Company
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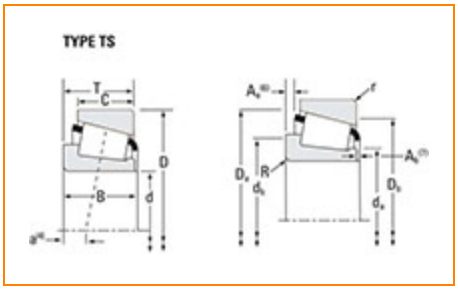
Part Number 22168 - 22325, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	22000
Cone Part Number	22168
Cup Part Number	22325
Design Unit	Inch
Bearing Weight	1 lb 0.4 Kg
Cage Material	Stamped Steel

Dimensions

- Bore	1 11/16 in 42.863 mm

D - Cup Outer Diameter	3.25 in 82.55 mm
B - Cone Width	0.7810 in 19.837 mm
C - Cup Width	0.5937 in 15.080 mm
T - Bearing Width	0.7812 in 19.842 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.09 in 2.3 mm
r - Cup Backface "To Clear" Radius[2]	0.06 in 1.52 mm
da - Cone Frontface Backing Diameter	1.91 in 48.5 mm
db - Cone Backface Backing Diameter	2.05 in 52 mm
Da - Cup Frontface Backing Diameter	3.03 in 76.96 mm
Db - Cup Backface Backing Diameter	2.87 in 72.90 mm
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm
Aa - Cage-Cone Backface Clearance	0.02 in 0.5 mm
a - Effective Center Location[3]	-0.1 in -2.5 mm

Basic Load Ratings

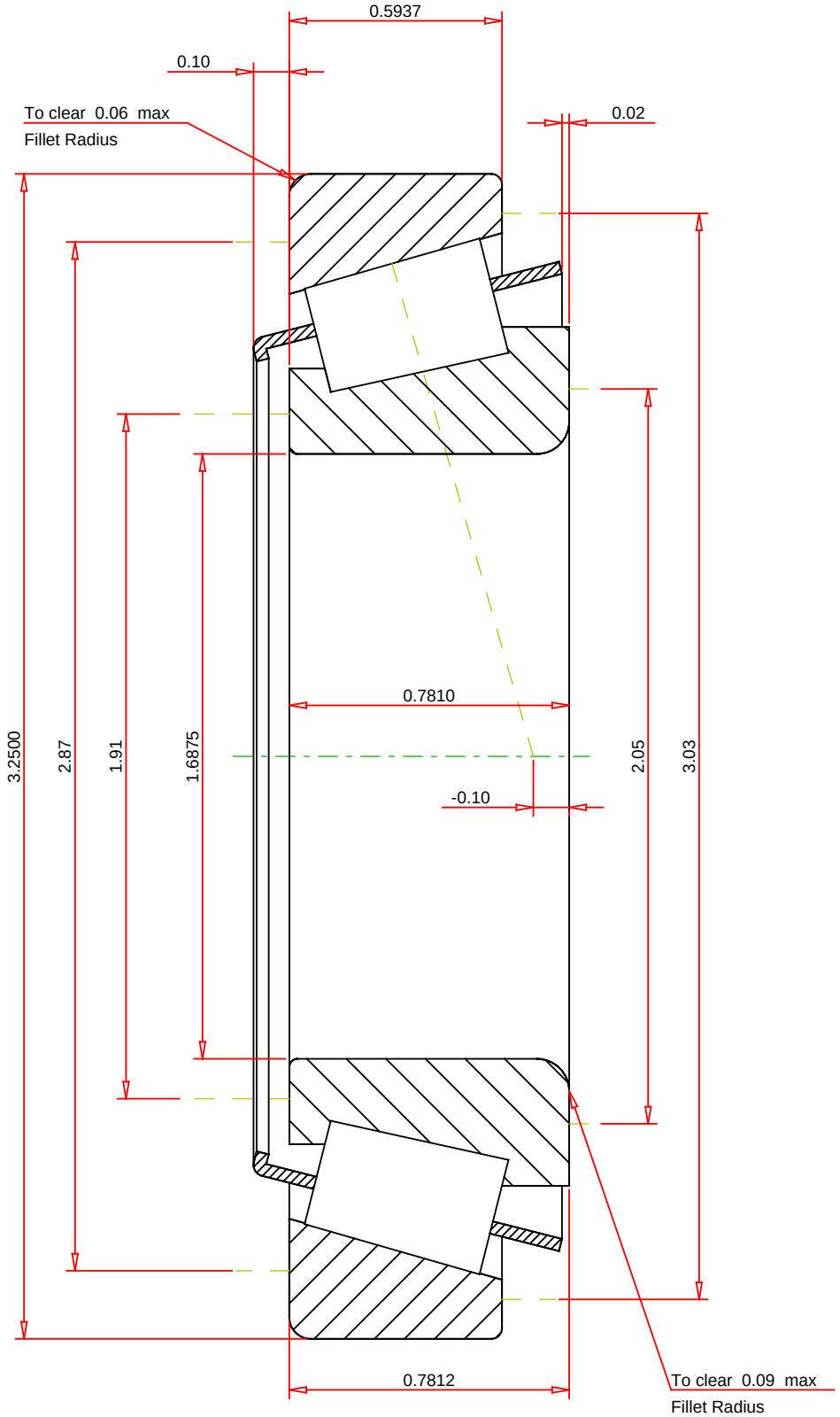
C90 - Dynamic Radial Rating (90 million revolutions)[4]	4510 lbf 20100 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	17400 lbf 77400 N
C0 - Static Radial Rating	16500 lbf 73200 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	3320 lbf 14800 N

Factors

K - Factor[7]	1.36
e - ISO Factor[8]	0.43
Y - ISO Factor[9]	1.39
G1 - Heat Generation Factor (Roller-Raceway)	23.7
G2 - Heat Generation Factor (Rib-Roller End)	14.4
Cg - Geometry Factor[10]	0.0758

[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.



IMPERIAL UNITS

ISO Factor - e	0.43	
ISO Factor - Y	1.39	
Bearing Weight	1	lb
Number of Rollers Per Row	18	
Effective Center Location	-0.1	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

22168 - 22325

Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	1.36	
Dynamic Radial Rating - C90	4510	lbf
Dynamic Thrust Rating - Ca90	3320	lbf
Static Radial Rating - C0	16500	lbf
Dynamic Radial Rating - C1	17400	lbf

FOR DISCUSSION ONLY