The Timken Company
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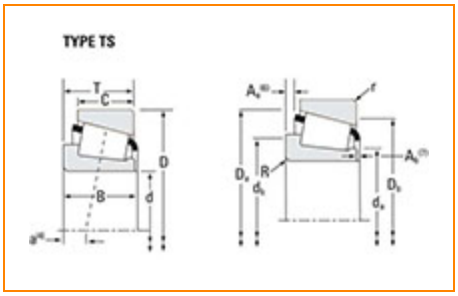
Part Number 47898 - 47820, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	47800
Cone Part Number	47898
Cup Part Number	47820
Design Units	Imperial
Bearing Weight	1.9 Kg 4.100 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	95.250 mm 3.7500 in

D - Cup Outer Diameter	146.050 mm 5.7500 in
B - Cone Width	34.925 mm 1.3750 in
C - Cup Width	26.195 mm 1.0313 in
T - Bearing Width	33.338 mm 1.3125 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	7.110 mm 0.280 in
r - Cup Backface "To Clear" Radius[2]	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	103.12 mm 4.75 in
db - Cone Backface Backing Diameter	117.09 mm 4.61 in
Da - Cup Frontface Backing Diameter	140 mm 5.55 in
Db - Cup Backface Backing Diameter	131.06 mm 5.16 in
Ab - Cage-Cone Frontface Clearance	0.8 mm 0.03 in
Aa - Cage-Cone Backface Clearance	2.3 mm 0.09 in
a - Effective Center Location[3]	-1 mm -0.04 in

Basic Load Ratings

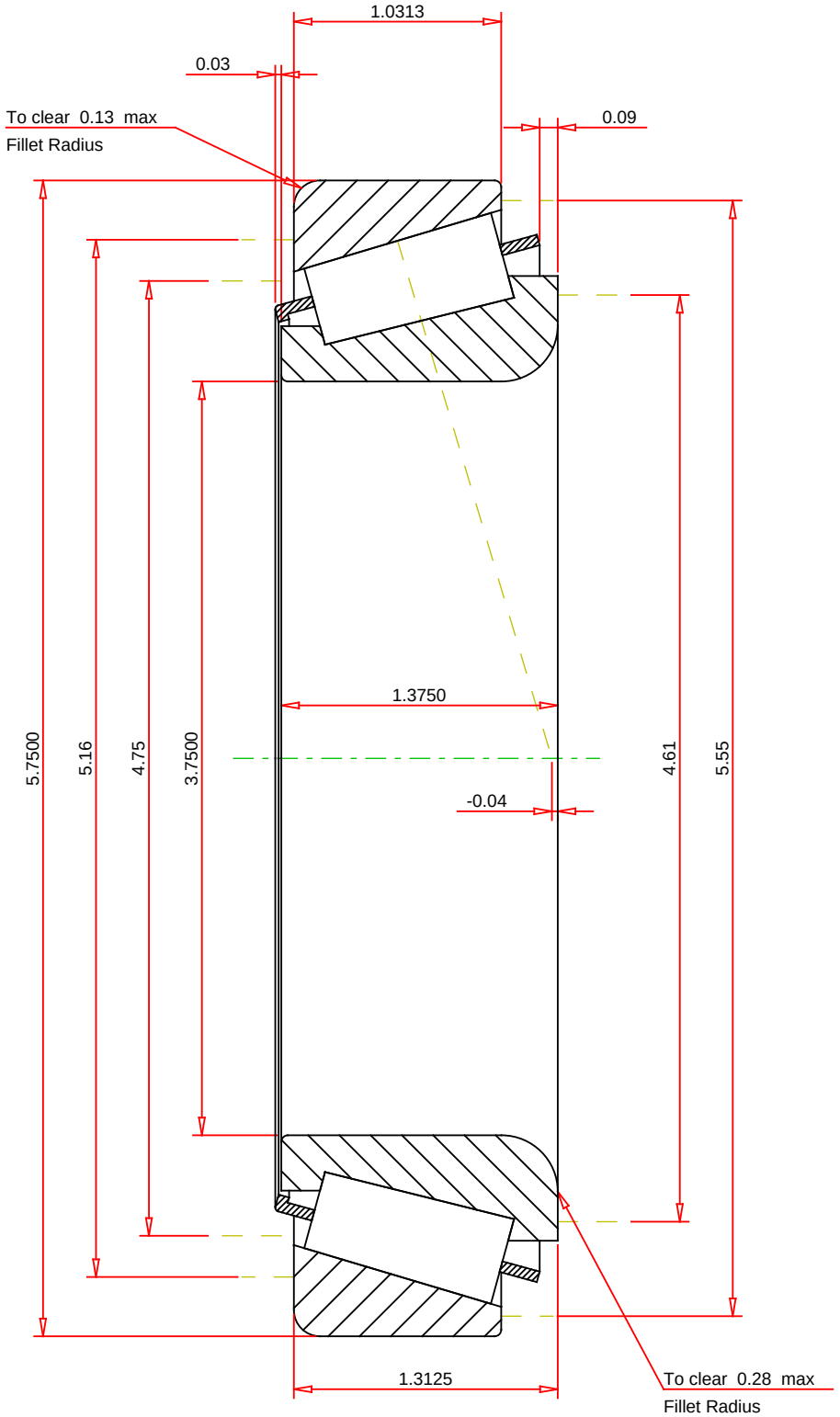
C90 - Dynamic Radial Rating (90 million revolutions)[4]	11500 lbf 51100 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	44300 lbf 197000 N
C0 - Static Radial Rating	69000 lbf 307000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	8810 lbf 39200 N

Factors

K - Factor[7]	1.3
e - ISO Factor[8]	0.45
Y - ISO Factor[9]	1.34
G1 - Heat Generation Factor (Roller-Raceway)	153
G2 - Heat Generation Factor (Rib-Roller End)	38.1
Cg - Geometry Factor[10]	0.143

[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.
[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	0.45	
ISO Factor - Y	1.34	
Bearing Weight	4.1	lb
Number of Rollers Per Row	27	
Effective Center Location	-0.04	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

47898 - 47820
TS BEARING ASSEMBLY

K Factor	1.3	
Dynamic Radial Rating - C90	11500	lbf
Dynamic Thrust Rating - Ca90	8810	lbf
Static Radial Rating - C0	69000	lbf
Dynamic Radial Rating - C1	44300	lbf

FOR DISCUSSION ONLY