The Timken Company
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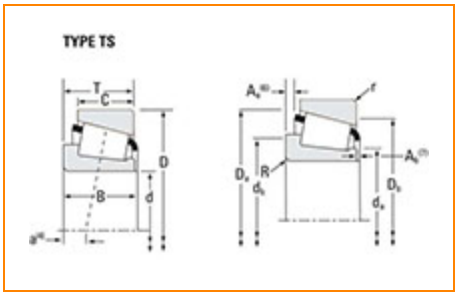
Part Number 37431 - 37625, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	37000
Cone Part Number	37431
Cup Part Number	37625
Design Units	Imperial
Bearing Weight	1.3 Kg 2.9 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	109.538 mm 4.3125 in

D - Cup Outer Diameter	158.750 mm 6.2500 in
B - Cone Width	21.438 mm 0.8440 in
C - Cup Width	15.875 mm 0.6250 in
T - Bearing Width	23.020 mm 0.9063 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.560 mm 0.14 in
r - Cup Backface "To Clear" Radius[2]	3.3 mm 0.130 in
da - Cone Frontface Backing Diameter	116.08 mm 5.43 in
db - Cone Backface Backing Diameter	122.94 mm 4.84 in
Da - Cup Frontface Backing Diameter	151.90 mm 6.00 in
Db - Cup Backface Backing Diameter	143.00 mm 5.63 in
Ab - Cage-Cone Frontface Clearance	3.8 mm 0.15 in
Aa - Cage-Cone Backface Clearance	2 mm 0.08 in
a - Effective Center Location[3]	13.7 mm 0.54 in

Basic Load Ratings

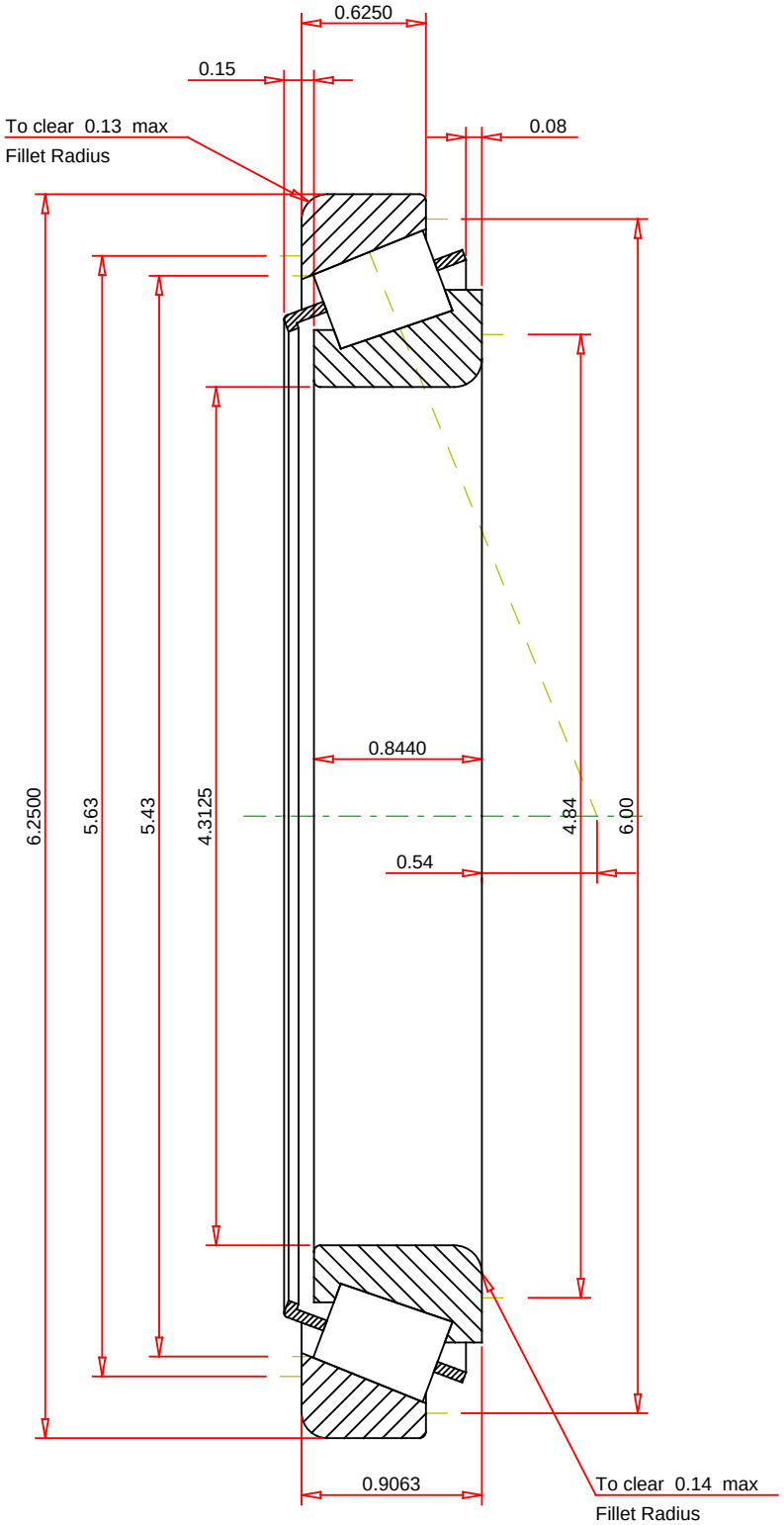
C90 - Dynamic Radial Rating (90 million revolutions)[4]	6710 lbf 29900 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	25900 lbf 115000 N
C0 - Static Radial Rating	40100 lbf 179000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	6960 lbf 31000 N

Factors

K - Factor[7]	0.96
e - ISO Factor[8]	0.61
Y - ISO Factor[9]	0.99
G1 - Heat Generation Factor (Roller-Raceway)	124
G2 - Heat Generation Factor (Rib-Roller End)	48.7
Cg - Geometry Factor[10]	0.144

[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	0.61	
ISO Factor - Y	0.99	
Bearing Weight	2.9	lb
Number of Rollers Per Row	32	
Effective Center Location	0.54	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

37431 - 37625
TS BEARING ASSEMBLY

K Factor	0.96	
Dynamic Radial Rating - C90	6710	lbf
Dynamic Thrust Rating - Ca90	6960	lbf
Static Radial Rating - C0	40100	lbf
Dynamic Radial Rating - C1	25900	lbf

FOR DISCUSSION ONLY