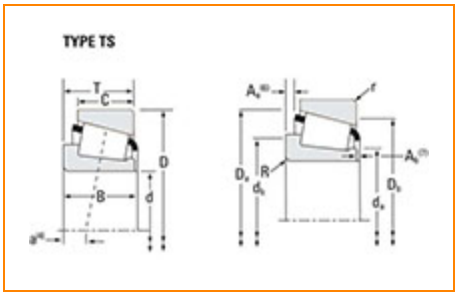
The Timken Company
4500 Mt Pleasant St. NW
N. Canton, OH 44720
Phone: (234) 262-3000
E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number 74550 - 74850, 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	74000
Cone Part Number	74550
Cup Part Number	74850
Design Units	Imperial
Bearing Weight	6 Kg 13.2 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	139.700 mm 5.5000 in

D - Cup Outer Diameter	215.900 mm 8.5000 in
B - Cone Width	47.625 mm 1.875 in
C - Cup Width	34.925 mm 1.3750 in
T - Bearing Width	47.625 mm 1.8750 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	150.88 mm 6.85 in
db - Cone Backface Backing Diameter	157.99 mm 6.22 in
Da - Cup Frontface Backing Diameter	209.00 mm 8.23 in
Db - Cup Backface Backing Diameter	196.09 mm 7.72 in
Ab - Cage-Cone Frontface Clearance	2.8 mm 0.11 in
Aa - Cage-Cone Backface Clearance	4.3 mm 0.17 in
a - Effective Center Location[3]	2.3 mm 0.09 in

Basic Load Ratings

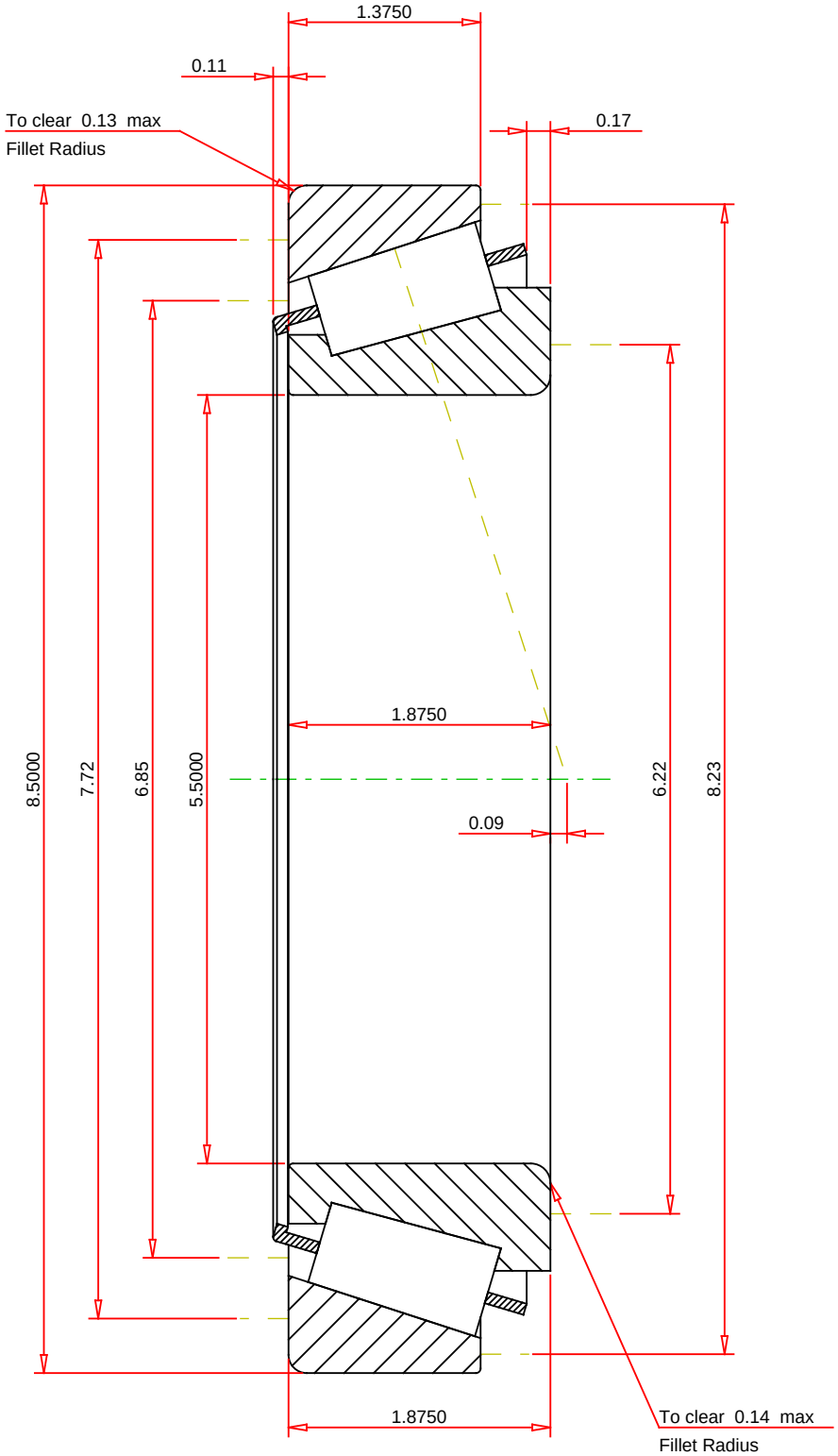
C90 - Dynamic Radial Rating (90 million revolutions)[4]	22300 lbf 99000 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	85900 lbf 382000 N
C0 - Static Radial Rating	138000 lbf 614000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	18600 lbf 82600 N

Factors

K - Factor[7]	1.2
e - ISO Factor[8]	0.49
Y - ISO Factor[9]	1.23
G1 - Heat Generation Factor (Roller-Raceway)	363
G2 - Heat Generation Factor (Rib-Roller End)	63.3
Cg - Geometry Factor[10]	0.134

[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	0.49	
ISO Factor - Y	1.23	
Bearing Weight	13.2	lb
Number of Rollers Per Row	26	
Effective Center Location	0.09	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

74550 - 74850
TS BEARING ASSEMBLY

K Factor	1.2	
Dynamic Radial Rating - C90	22300	lbf
Dynamic Thrust Rating - Ca90	18600	lbf
Static Radial Rating - C0	138000	lbf
Dynamic Radial Rating - C1	85900	lbf

FOR DISCUSSION ONLY