The Timken Company
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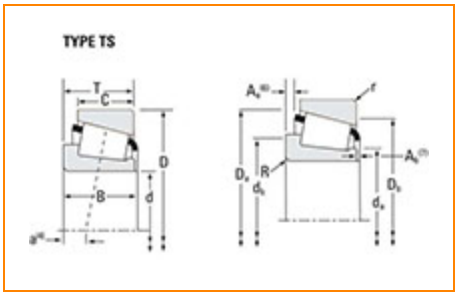
Part Number HM903245 - HM903210, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	HM903200
Cone Part Number	HM903245
Cup Part Number	HM903210
Design Units	Imperial
Bearing Weight	1.00 Kg 2.3 lb
Cage Type	Stamped Steel

Dimensions

	41.275 mm

d - Bore	41.275 mm 1.6250 in
D - Cup Outer Diameter	95.250 mm 3.7500 in
B - Cone Width	28.575 mm 1.1250 in
C - Cup Width	22.225 mm 0.8750 in
T - Bearing Width	30.958 mm 1.2188 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]	0.76 mm 0.03 in
da - Cone Frontface Backing Diameter	54.10 mm 2.13 in
db - Cone Backface Backing Diameter	62.99 mm 2.48 in
Da - Cup Frontface Backing Diameter	91.90 mm 3.62 in
Db - Cup Backface Backing Diameter	81.03 mm 3.19 in
Ab - Cage-Cone Frontface Clearance	2.8 mm 0.11 in
Aa - Cage-Cone Backface Clearance	3 mm 0.12 in
a - Effective Center Location[3]	0.5 mm 0.02 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	7950 lbf 35400 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	30700 lbf 136000 N
C0 - Static Radial Rating	29700 lbf 132000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	10100 lbf 44800 N

Factors

K - Factor[7]	0.79
e - ISO Factor[8]	0.74
Y - ISO Factor[9]	0.81
G1 - Heat Generation Factor (Roller-Raceway)	33.7
G2 - Heat Generation Factor (Rib-Roller End)	9.91
Cg - Geometry Factor[10]	0.101

[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

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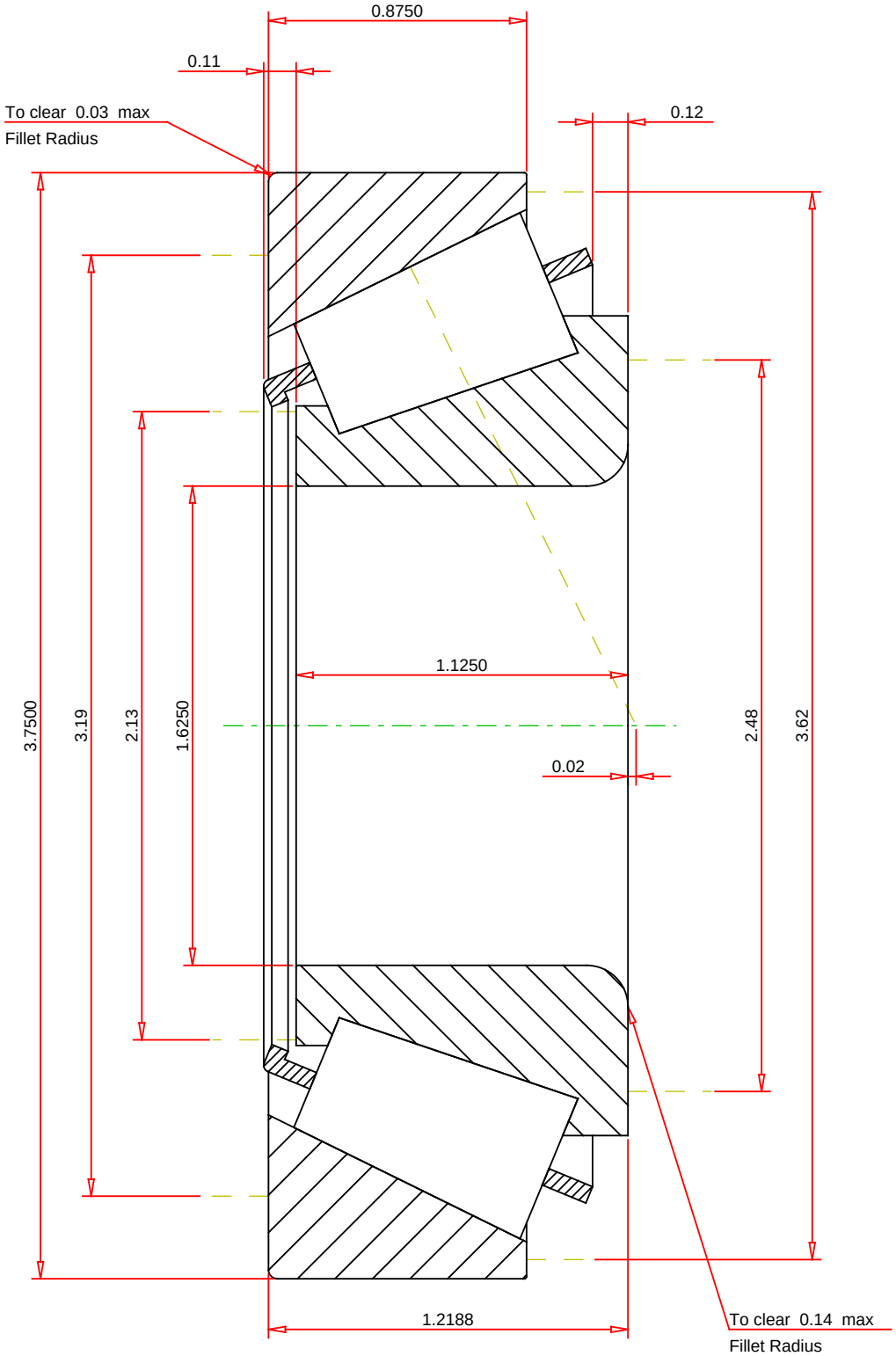
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

[10] Geometry constant for Lubrication Life Adjustment Factor a3l.



IMPERIAL UNITS

ISO Factor - e	0.74	
ISO Factor - Y	0.81	
Bearing Weight	2.3	lb
Number of Rollers Per Row	16	
Effective Center Location	0.02	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

HM903245 - HM903210
TS BEARING ASSEMBLY

K Factor	0.79	
Dynamic Radial Rating - C90	7950	lbf
Dynamic Thrust Rating - Ca90	10100	lbf
Static Radial Rating - C0	29700	lbf
Dynamic Radial Rating - C1	30700	lbf

FOR DISCUSSION ONLY