The Timken Company
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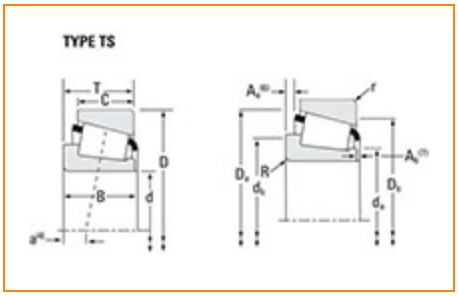
Part Number 2984 - 2924, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	2900
Cone Part Number	2984
Cup Part Number	2924
Design Units	Imperial
Bearing Weight	0.6 Kg 1.3 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	46.038 mm 1.8125 in

D - Cup Outer Diameter	85.001 mm 3.3465 in
B - Cone Width	25.608 mm 1.0082 in
C - Cup Width	20.638 mm 0.8125 in
T - Bearing Width	25.400 mm 1.0000 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]	1.27 mm 0.050 in
da - Cone Frontface Backing Diameter	52.07 mm 2.05 in
db - Cone Backface Backing Diameter	57.91 mm 2.28 in
Da - Cup Frontface Backing Diameter	80.77 mm 3.18 in
Db - Cup Backface Backing Diameter	75.95 mm 2.99 in
Ab - Cage-Cone Frontface Clearance	2 mm 0.08 in
Aa - Cage-Cone Backface Clearance	1.3 mm 0.05 in
a - Effective Center Location[3]	-6.4 mm -0.25 in

Basic Load Ratings

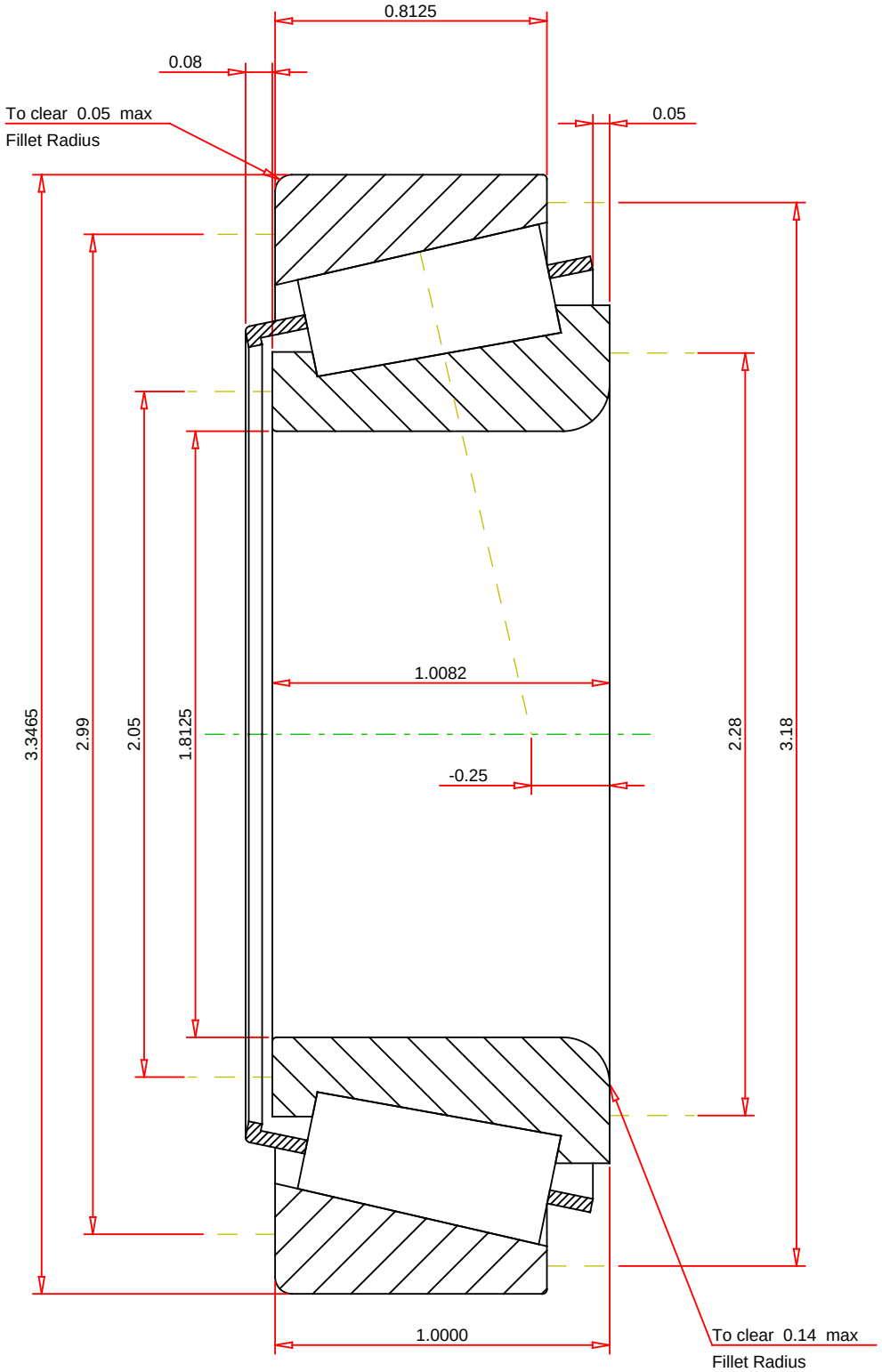
C90 - Dynamic Radial Rating (90 million revolutions)[4]	5440 lbf 24200 N
C1 - Dynamic Radial Rating (1 million revolutions)[5]	21000 lbf 93300 N
C0 - Static Radial Rating	26200 lbf 117000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	3220 lbf 14300 N

Factors

K - Factor[7]	1.69
e - ISO Factor[8]	0.35
Y - ISO Factor[9]	1.73
G1 - Heat Generation Factor (Roller-Raceway)	38.2
G2 - Heat Generation Factor (Rib-Roller End)	15.7
Cg - Geometry Factor[10]	0.0832

[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	0.35	
ISO Factor - Y	1.73	
Bearing Weight	1.3	lb
Number of Rollers Per Row	19	
Effective Center Location	-0.25	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

2984 - 2924
TS BEARING ASSEMBLY

K Factor	1.69	
Dynamic Radial Rating - C90	5440	lbf
Dynamic Thrust Rating - Ca90	3220	lbf
Static Radial Rating - C0	26200	lbf
Dynamic Radial Rating - C1	21000	lbf

FOR DISCUSSION ONLY