TIMKEN

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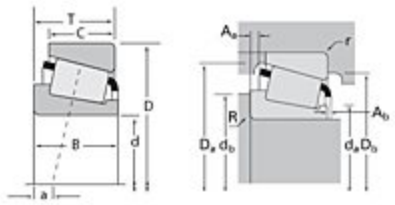
Timken Part Number 527 - 522, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	525
Cone Part Number	527
Cup Part Number	522
Design Units	Imperial
Bearing Weight	1.400 Kg 3.00 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	44.450 mm 1.7500 in
D - Cup Outer Diameter	101.600 mm 4.0000 in

B - Cone Width	36.068 mm 1.4200 in
C - Cup Width	26.988 mm 1.0625 in
T - Bearing Width	34.925 mm 1.3750 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]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	53.09 mm 2.09 in
db - Cone Backface Backing Diameter	58.93 mm 2.32 in
Da - Cup Frontface Backing Diameter	95.5 mm 3.76 in
Db - Cup Backface Backing Diameter	88.90 mm 3.50 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	2.3 mm 0.09 in
a - Effective Center Location[3]	-12.70 mm -0.50 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	42700 N 9600 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	165000 N 37000 lbf
C0 - Static Radial Rating	191000 N 43000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	20800 N 4690 lbf

Factors

K - Factor[7]	2.05
e - ISO Factor[8]	0.29
Y - ISO Factor[9]	2.1
G1 - Heat Generation Factor (Roller-Raceway)	57.9
G2 - Heat Generation Factor (Rib-Roller End)	13.4
Cg - Geometry Factor	0.0894

[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.
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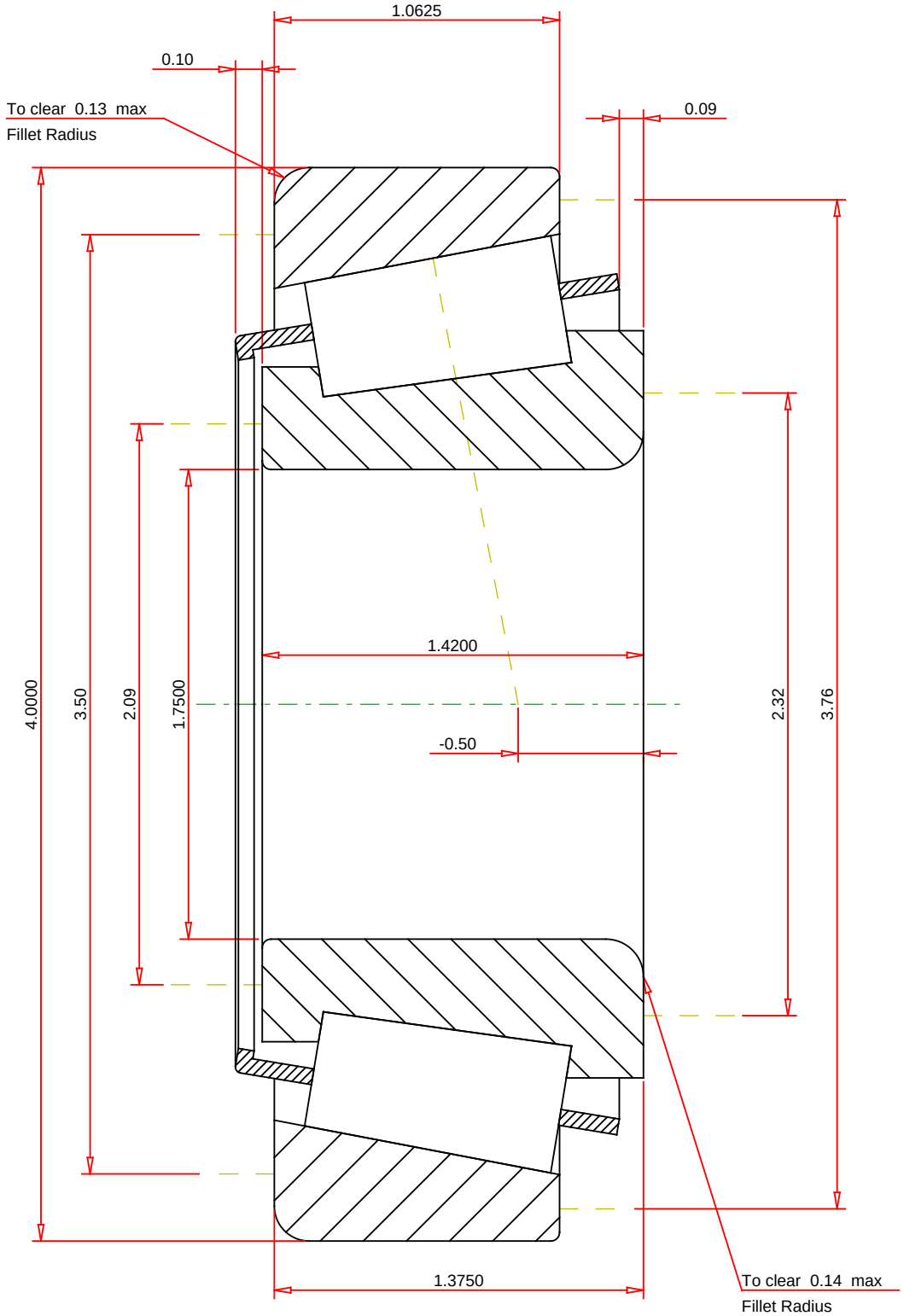

IMPERIAL UNITS

ISO Factor - e	0.29	
ISO Factor - Y	2.1	
Bearing Weight	3	lb
Number of Rollers Per Row	15	
Effective Center Location	-0.5	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

527 - 522
TS BEARING ASSEMBLY

K Factor	2.05	
Dynamic Radial Rating - C90	42700	lbf
Dynamic Thrust Rating - Ca90	20800	lbf
Static Radial Rating - C0	191000	lbf
Dynamic Radial Rating - C1	165000	lbf

FOR DISCUSSION ONLY