The Timken Company
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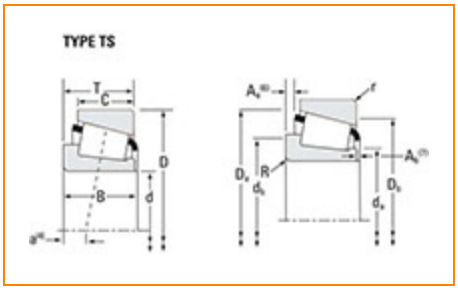
Part Number 529X - 522, Tapered Roller Bearings - TS (Tapered Single) Imperial

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.



Specifications | Dimensions | Abutment and Fillet Dimensions | Basic Load Ratings | Factors

Specifications

Series	525
Cone Part Number	529X
Cup Part Number	522
Design Unit	Inch
Bearing Weight	2.70 lb 1.2 Kg
Cage Material	Stamped Steel

Dimensions

- Bore	2 in 50.8 mm

D - Cup Outer Diameter	4 in 101.6 mm
B - Cone Width	1.4200 in 36.068 mm
C - Cup Width	1.0625 in 26.988 mm
T - Bearing Width	1.375 in 34.925 mm

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	0.140 in 3.6 mm
r - Cup Backface "To Clear" Radius[2]	0.130 in 3.3 mm
da - Cone Frontface Backing Diameter	2.28 in 58 mm
db - Cone Backface Backing Diameter	2.56 in 65 mm
Da - Cup Frontface Backing Diameter	3.76 in 95.5 mm
Db - Cup Backface Backing Diameter	3.50 in 88.90 mm
Ab - Cage-Cone Frontface Clearance	0.1 in 2.5 mm
Aa - Cage-Cone Backface Clearance	0.09 in 2.3 mm
a - Effective Center Location[3]	-0.5 in -12.7 mm

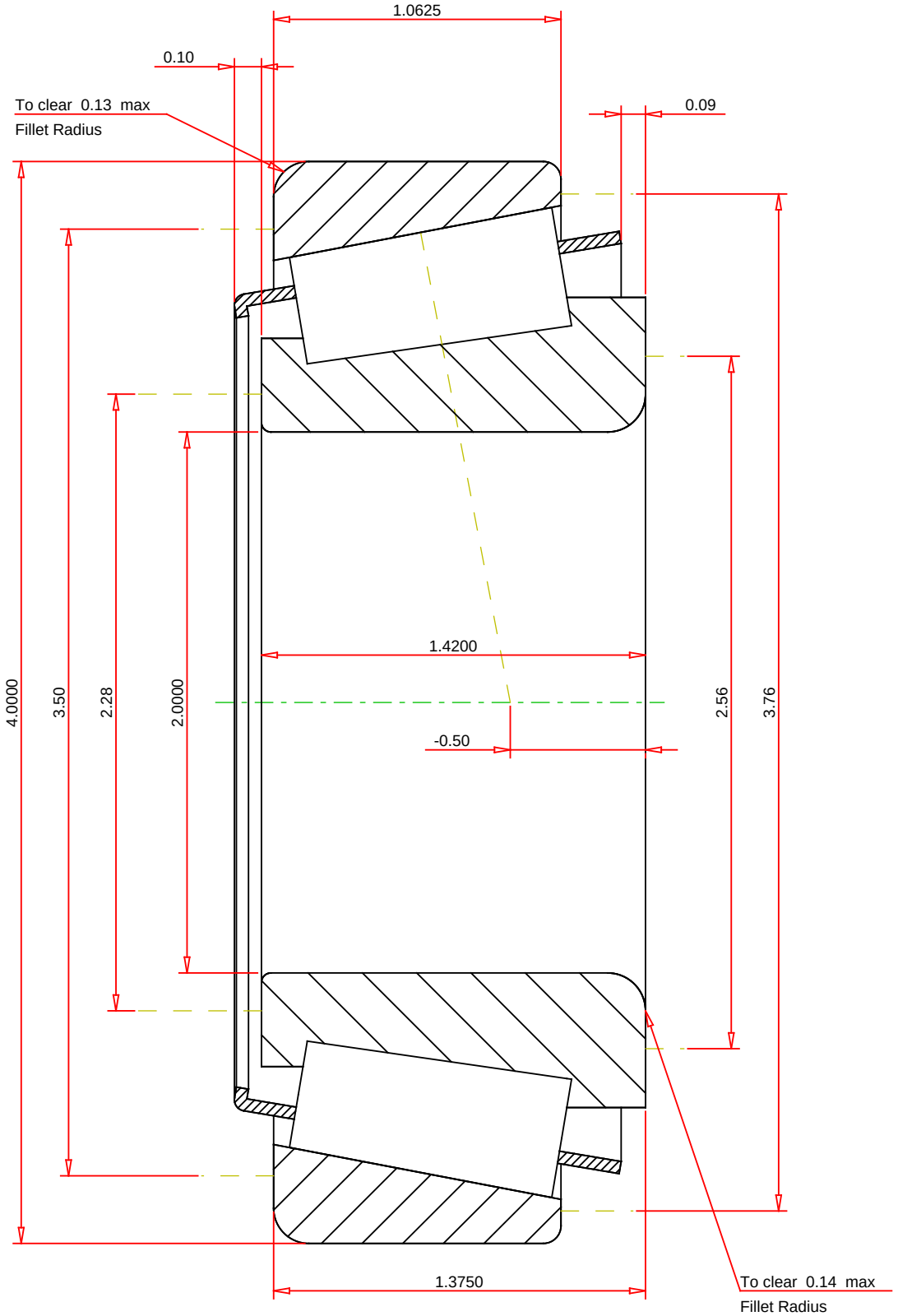
Basic Load Ratings

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

Factors

K - Factor[7]	2.05
e - ISO Factor[8]	0.29
Y - ISO Factor[9]	2.1
Cg - Geometry Factor[10]	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.
[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	0.29	
ISO Factor - Y	2.1	
Bearing Weight	2.7	lb
Number of Rollers Per Row	15	
Effective Center Location	-0.5	inch

TIMKEN

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

529X - 522

Tapered Roller Bearings - TS (Tapered Single)
Imperial

K Factor	2.05	
Dynamic Radial Rating - C90	9600	lbf
Dynamic Thrust Rating - Ca90	4690	lbf
Static Radial Rating - C0	43000	lbf
Dynamic Radial Rating - C1	37000	lbf

FOR DISCUSSION ONLY