The Timken Company
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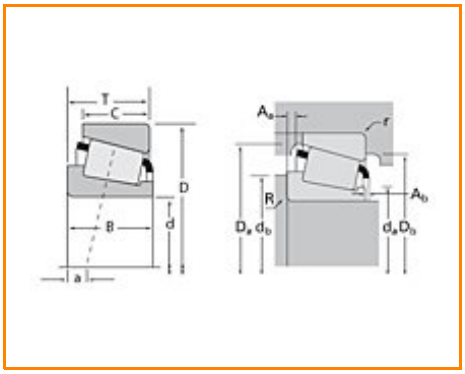
Timken Part Number L269143 - L269110, Tapered Roller Bearings - TS (Tapered Single) Imperial

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	L269100
Cone Part Number	L269143
Cup Part Number	L269110
Design Units	Imperial
Bearing Weight	22.80 Kg 50.30 lb
Cage Type	Pin-Type

Dimensions

d - Bore	431.800 mm 17.0000 in
D - Cup Outer Diameter	533.400 mm 21.0000 in
B - Cone Width	50.8 mm 2 in
C - Cup Width	36.513 mm 1.4375 in
T - Bearing Width	50.800 mm 2.0000 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius[1]	3.300 mm 0.130 in
r - Cup Backface "To Clear" Radius[2]	3.30 mm 0.130 in
da - Cone Frontface Backing Diameter	445.01 mm 19.02 in
db - Cone Backface Backing Diameter	450.09 mm 17.72 in
Da - Cup Frontface Backing Diameter	525.02 mm 20.67 in
Db - Cup Backface Backing Diameter	515.87 mm 20.31 in
Ab - Cage-Cone Frontface Clearance	3.6 mm 0.14 in
Aa - Cage-Cone Backface Clearance	1.8 mm 0.07 in
a - Effective Center Location[3]	25.9 mm 1.02 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)[4]	205000 N 46200 lbf
C1 - Dynamic Radial Rating (1 million revolutions)[5]	792000 N 178000 lbf
C0 - Static Radial Rating	1760000 N 396000 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[6]	117000 N 26300 lbf

Factors

K - Factor[7]	1.76
e - ISO Factor[8]	0.33
Y - ISO Factor[9]	1.8
G1 - Heat Generation Factor (Roller-Raceway)	3088.3
G2 - Heat Generation Factor (Rib-Roller End)	671.4
Cg - Geometry Factor	0.185

[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

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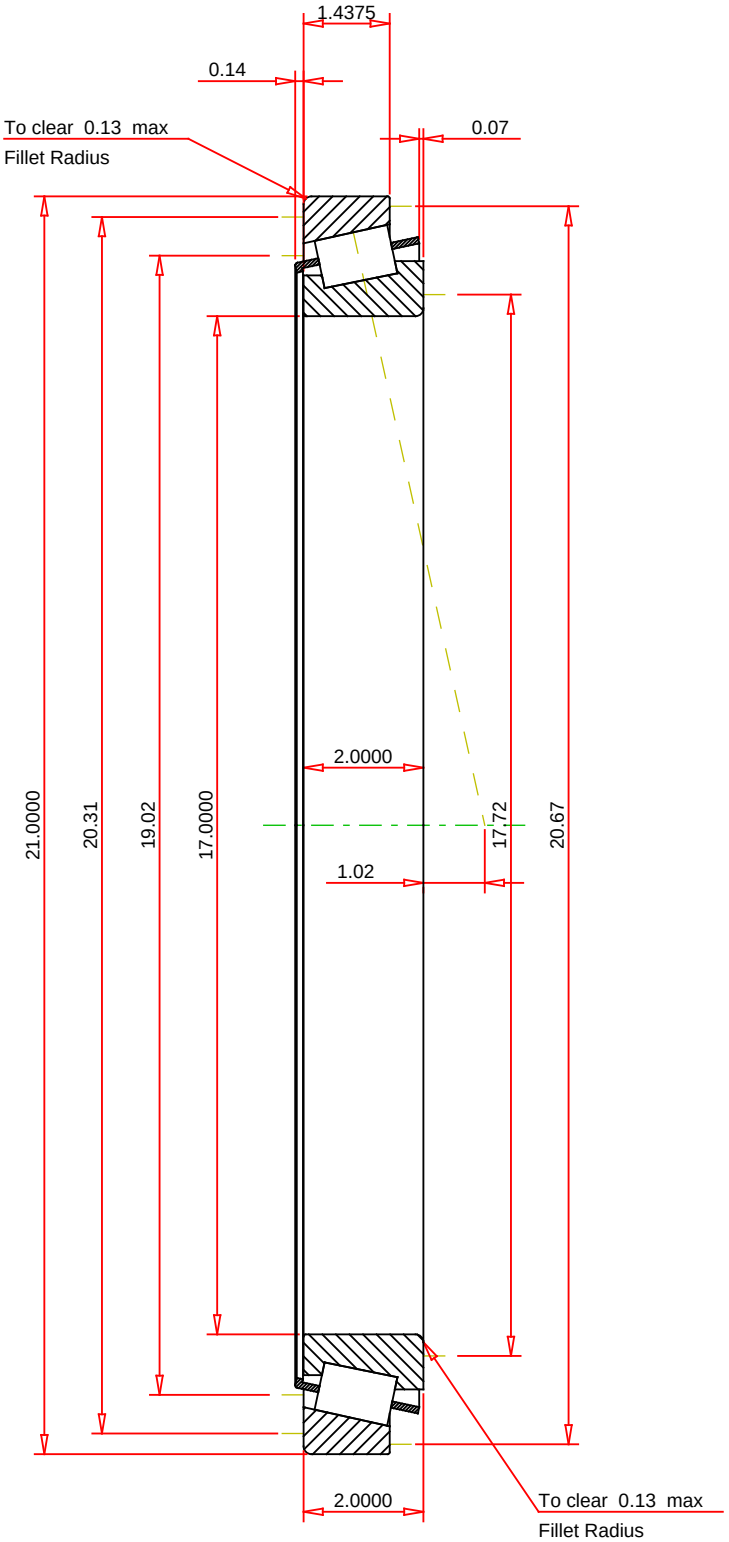
[9] These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



IMPERIAL UNITS

ISO Factor - e	0.33	
ISO Factor - Y	1.8	
Bearing Weight	50.3	lb
Number of Rollers Per Row	50	
Effective Center Location	1.02	inch

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

L269143 - L269110
TS BEARING ASSEMBLY

K Factor	1.76	
Dynamic Radial Rating - C90	205000	lbf
Dynamic Thrust Rating - Ca90	117000	lbf
Static Radial Rating - C0	1760000	lbf
Dynamic Radial Rating - C1	792000	lbf

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

FOR DISCUSSION ONLY