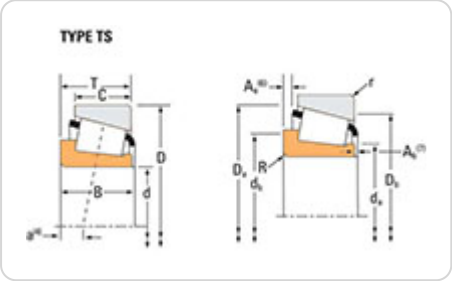
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Part Number 3193, Tapered Roller Bearings - Single Cones - Imperial





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.

Key Dimensions

Series	3100
Cone Part Number	3193

Bore (d)	1.2500 in 31.750 mm
Dynamic Radial Load Rating - 90M Revs (C90) [1]	5520 lbf 24600 N
Dynamic Radial Load Rating - 1M Revs (C1) [2]	21300 lbf 94800 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[3]	37100 lbf 165000 N
Dynamic Radial Load Rating 2-Row - 90M Revs (C90-2row) [4]	9620 lbf 42800 N
K Factor [5]	1.76

Other Dimensions

Inner Ring Width (B)	1.1810 in 29.997 mm
Max Shaft Fillet Radius[6]	0.14 in 3.600 mm
Shaft Backing Shoulder Diameter - Frontface (da)	1.56 in 39.5 mm
Shaft Backing Shoulder Diameter - Backface (db)	1.79 in 45.5 mm
Cage Location Relative to Frontface (Ab)	0.06 in 1.5 mm
Cage Location Relative to Backface (Aa)	0.03 in 0.8 mm
Effective Center Location[7]	-0.4 in -10.2 mm
Weight	1 lb 0.40 Kg

Ratings

Static Radial Load Rating (C0)	22800 lbf 102000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[8]	3140 lbf 14000 N

Factors

G1 Factor	23.4
G2 Factor	8.76
Geometry Factor (Cg)[9]	0.0697

[1] 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.

[2] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[3] Based on 1 x 10^6 revolutions L_{10} life, for the ISO life calculation method.

[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 for a single-row, $C_{90(2)}$ is the two-row radial value.

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

[6] These maximum fillet radii will be cleared by the bearing corners.

[7] Negative value indicates effective center inside cone backface.

[8] 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.

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