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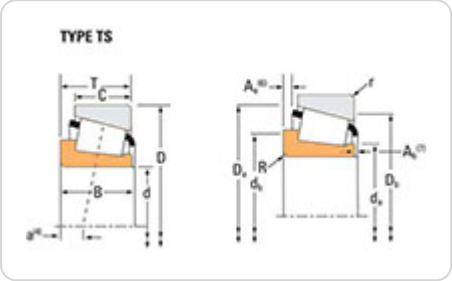
Part Number 416, Tapered Roller Bearings - Single Cones - Imperial



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

Cone Part Number	416
Bore (d)	1.1811 in

	30 mm
Dynamic Radial Load Rating - 90M Revs (C90) [1]	6740 lbf 30000 N
Dynamic Radial Load Rating - 1M Revs (C1) [2]	26000 lbf 116000 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[3]	45300 lbf 201000 N
Dynamic Radial Load Rating 2-Row - 90M Revs (C90-2row) [4]	11700 lbf 52200 N
K Factor [5]	2.22

Other Dimensions

Inner Ring Width (B)	1.145 in 29.083 mm
Max Shaft Fillet Radius[6]	0.03 in 0.760 mm
Shaft Backing Shoulder Diameter - Frontface (da)	1.52 in 38.5 mm
Shaft Backing Shoulder Diameter - Backface (db)	1.54 in 39 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]	-0.38 in -9.7 mm
Weight	2.1 lb 1.00 Kg

Ratings

Static Radial Load Rating (C0)	28000 lbf 124000 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[8]	3040 lbf 13500 N

Factors

G1 Factor	34.4
G2 Factor	9.9
Geometry Factor (Cg)[9]	0.0731

[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.