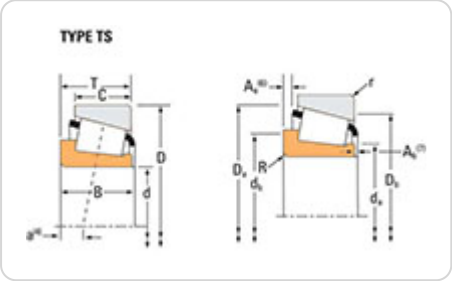
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Part Number 1780, Tapered Roller Bearings - Single Cones - Imperial





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	1700
Cone Part Number	1780

Bore (d)	1.0000 in 25.400 mm
Dynamic Radial Load Rating - 90M Revs (C90) [1]	2650 lbf 11800 N
Dynamic Radial Load Rating - 1M Revs (C1) [2]	10200 lbf 45400 N
C1 - Dynamic Radial Rating (Two-Row, 1 million revolutions)[3]	17800 lbf 79100 N
Dynamic Radial Load Rating 2-Row - 90M Revs (C90-2row) [4]	4610 lbf 20500 N
K Factor [5]	1.9

Other Dimensions

Inner Ring Width (B)	0.781 in 19.837 mm
Max Shaft Fillet Radius[6]	0.03 in 0.800 mm
Shaft Backing Shoulder Diameter - Frontface (da)	1.18 in 30 mm
Shaft Backing Shoulder Diameter - Backface (db)	1.2 in 30.5 mm
Cage Location Relative to Frontface (Ab)	0.08 in 2 mm
Cage Location Relative to Backface (Aa)	0.01 in 0.3 mm
Effective Center Location[7]	-0.27 in -6.9 mm
Weight	0.4 lb 0.20 Kg

Ratings

Static Radial Load Rating (C0)	10200 lbf 45300 N
C_{a90} - Dynamic Thrust Rating (90 million revolutions)[8]	1390 lbf 6200 N

Factors

Geometry Factor (Cg)[9]	0.0521

[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.