

Dynabolt Sleeve Anchor - Technical Data

PERFORMANCE TABLES

Dynabolt Sleeve Anchors

Ultimate Tension and Shear Values in Concrete (Lbs/kN)*

ANCHOR DIA. In. (mm)	INSTALLATION TORQUE Ft. Lbs. (Nm)	BOLT DIA. In. (mm)	MINIMUM EMBEDMENT DEPTH In. (mm)	ANCHOR TYPE (STEEL)	f'c = 2000 PSI (13.8 MPa)		f'c = 3000 PSI (20.7 MPa)		f'c = 4000 PSI (27.6 MPa)	
					TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)
1/4 (6.4)	3.5 (4.7)	3/16 (4.8)	1-1/8 (28.6)	Carbon or Stainless	1,200 (5.3)	1,215 (5.4)	1,325 (5.9)	1,215 (5.4)	1,450 (6.4)	1,215 (5.4)
5/16 (7.9)	8 (10.8)	1/4 (6.4)	1-1/4 (31.8)		1,400 (6.2)	2,040 (9.1)	1,920 (8.5)	2,220 (9.9)	2,600 (11.6)	2,400 (10.7)
3/8 (9.5)	14 (19.0)	5/16 (7.9)	1-1/2 (38.1)		1,620 (7.2)	2,560 (11.4)	2,240 (10.0)	2,800 (12.5)	3,100 (13.8)	3,040 (13.5)
1/2 (12.7)	20 (27.1)	3/8 (9.5)	1-7/8 (47.6)		2,220 (9.9)	3,250 (14.5)	3,140 (14.0)	4,000 (17.8)	4,400 (19.6)	4,500 (20.0)
5/8 (15.9)	48 (65.1)	1/2 (12.7)	2 (50.8)		3,080 (13.7)	6,440 (28.6)	4,400 (19.6)	7,240 (32.2)	6,120 (27.2)	8,080 (35.9)
3/4 (19.1)	90 (122.0)	5/8 (15.9)	2-1/4 (57.2)		4,200 (18.7)	10,200 (45.4)	6,060 (27.0)	11,600 (51.6)	8,900 (39.6)	13,100 (58.3)

* For continuous extreme low temperature applications, use stainless steel.

For AN-1405, Ultimate Pullout: 500 lbs. & Ultimate Shear: 1751 lbs. based on 4,000 psi.

* Allowable values are based upon a 4 to 1 safety factor. Divide by 4 for allowable load values

Dynabolt Sleeve Anchors

Ultimate Tension and Shear Values in Lightweight Concrete (Lbs/kN)*

ANCHOR DIA. In. (mm)	INSTALLATION TORQUE Ft. Lbs. (Nm)	BOLT DIA. In. (mm)	MINIMUM EMBEDMENT DEPTH In. (mm)	ANCHOR TYPE (STEEL)	f'c = 4000 PSI (27.6 MPa)		f'c = 6000 PSI (41.4 MPa)	
					TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)
1/4 (6.4)	3.5 (4.7)	3/16 (4.8)	1-1/8 (28.6)	Carbon or Stainless	870 (3.9)	730 (3.2)	1,066 (4.7)	894 (4.0)
5/16 (7.9)	8 (10.8)	1/4 (6.4)	1-1/4 (31.8)		1,260 (5.6)	1,680 (7.5)	1,440 (6.4)	2,220 (9.9)
3/8 (9.5)	14 (19.0)	5/16 (7.9)	1-1/2 (38.1)		1,620 (7.2)	2,300 (10.2)	2,240 (10.0)	2,800 (12.5)
1/2 (12.7)	25 (33.9)	3/8 (9.5)	1-7/8 (47.6)		2,600 (11.6)	2,400 (10.7)	3,160 (14.1)	2,400 (10.7)
5/8 (15.9)	48 (65.1)	1/2 (12.7)	2 (50.8)		3,240 (14.4)	5,600 (24.9)	4,300 (19.1)	7,840 (34.9)
3/4 (19.1)	90 (122.0)	5/8 (15.9)	2-1/4 (57.2)		3,640 (16.2)	8,640 (38.4)	5,800 (25.8)	12,480 (55.5)

Dynabolt Sleeve Anchors

Ultimate Tension and Shear Values in Concrete Masonry Units (Lbs/kN)*

ANCHOR DIA. In. (mm)	INSTALLATION TORQUE Ft. Lbs. (Nm)	BOLT DIA. In. (mm)	MINIMUM EMBEDMENT DEPTH In. (mm)	ANCHOR TYPE (STEEL)	LIGHTWEIGHT				MEDIUM WEIGHT			
					HOLLOW CORE		GROUT FILLED		HOLLOW CORE		GROUT FILLED	
					TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)
1/4 (6.4)	3.5 (4.7)	3/16 (4.8)	1-1/8 (28.6)	Carbon	1,120 (5.0)	1,215 (5.4)	1,120 (5.0)	1,215 (5.4)	1,120 (5.0)	1,215 (5.4)	1,120 (5.0)	1,215 (5.4)
					Stainless	640 (2.8)	1,620 (7.2)	640 (2.8)	1,620 (7.2)	640 (2.8)	1,620 (7.2)	640 (2.8)
3/8 (9.5)	15 (20.3)	5/16 (7.9)	1-1/2 (38.1)	Carbon	1,360 (6.0)	2,560 (11.4)	1,360 (6.0)	2,560 (11.4)	1,360 (6.0)	2,560 (11.4)	1,360 (6.0)	2,560 (11.4)
					Stainless	1,160 (5.2)	2,560 (11.4)	1,160 (5.2)	2,560 (11.4)	1,160 (5.2)	2,560 (11.4)	1,160 (5.2)
1/2 (12.7)	25 (33.9)	3/8 (9.5)	1-7/8 (47.6)	Carbon	N/A	N/A	2,220 (9.9)	3,500 (15.6)	N/A	N/A	2,220 (9.9)	3,500 (15.6)
					Stainless	N/A	N/A	2,100 (9.3)	3,500 (15.6)	N/A	N/A	2,100 (9.3)
5/8 (15.9)	55 (74.6)	1/2 (12.7)	2 (50.8)	Carbon	N/A	N/A	3,080 (13.7)	6,440 (28.6)	N/A	N/A	3,080 (13.7)	6,440 (28.6)
					Stainless	N/A	N/A	3,080 (13.7)	6,440 (28.6)	N/A	N/A	2,820 (12.5)
3/4 (19.1)	90 (122.0)	5/8 (15.9)	2-1/2 (63.5)	Carbon	N/A	N/A	4,200 (18.7)	10,200 (45.4)	N/A	N/A	4,200 (18.7)	10,200 (45.4)

* Allowable values are based upon a 4 to 1 safety factor. Divide by 4 for allowable load values. The tabulated values are for anchors installed in a minimum of 12 diameters on center and a minimum edge distance of 6 diameters for 100 percent anchor efficiency. Spacing and edge distance may be reduced to 6 diameter spacing and 3 diameter edge distance, provided the values are reduced 50 percent. Linear interpolation may be used for intermediate spacings and edge distances.

Combined Tension and Shear Loading—for Dynabolt Anchors

Allowable loads for anchors subjected to combined shear and tension forces are determined by the following equation:

$$(Ps/Pt) + (Vs/Vt) \leq 1$$

Ps = Applied tension load

Vs = Applied shear load

Pt = Allowable tension load

Vt = Allowable shear load