

SELECTION CHART

Dynabolt Carbon Steel with Zinc Plating



Typical Applications—
Shelf ledgers, electrical boxes,
conduit

Environment—Interior
(non-corrosive)

Level of Corrosion—Low



HEAD STYLE	PART NUMBER	ANCHOR DIA. & DRILL BIT SIZE	EFFECTIVE ANCHOR LENGTH* In. (mm)	BOLT DIA./ THREAD PER INCH	MIN. EMBEDMENT In. (mm)	MAX. THICKNESS OF MATERIAL TO BE FASTENED In. (mm)	QTY./WT. PER BOX lbs.	QTY./WT. PER MASTER CARTON lbs.
ACORN NUT	AN-1413	1/4"	1-3/8 (34.9)	3/16" /24	1-1/8 (28.6)	1/4 (6.4)	100/2.6	1000/27
	HN-1413 HN-1422	1/4"	1-3/8 (34.9) 2-1/4 (57.2)	3/16" /24 3/16" /24	1-1/8 (28.6) 1-1/8 (28.6)	1/4 (6.4) 1-1/8 (28.6)	100/2.3 100/3.4	1000/24 1000/35
HEX NUT	HN-1614 HN-1624	5/16"	1-1/2 (38.1) 2-1/2 (63.5)	1/4" /20 1/4" /20	1-1/4 (31.8) 1-1/4 (31.8)	1/4 (6.4) 1-1/4 (31.8)	100/4.0 100/5.9	1000/41 800/47
	HN-3817 HN-3830	3/8"	1-7/8 (47.6) 3 (76.2)	5/16" /18 5/16" /18	1-1/2 (38.1) 1-1/2 (38.1)	3/8 (9.5) 1-1/2 (38.1)	50/3.5 50/4.9	500/36 400/40
	HN-1222 HN-1230 HN-1240	1/2"	2-1/4 (57.2) 3 (76.2) 4 (101.6)	3/8" /16 3/8" /16 3/8" /16	1-7/8 (47.6) 1-7/8 (47.6) 1-7/8 (47.6)	3/8 (9.5) 1-1/8 (28.6) 2-1/8 (54.0)	25/3.3 25/4.0 25/5.3	250/34 200/33 200/44
	HN-5822 HN-5830 HN-5842	5/8"	2-1/4 (57.2) 3 (76.2) 4-1/4 (108.0)	1/2" /13 1/2" /13 1/2" /13	2 (50.8) 2 (50.8) 2 (50.8)	1/4 (6.4) 1 (25.4) 2-1/4 (57.2)	25/6.3 150/7.0 10/3.9	150/38 150/46 100/41
	TIE WIRE	TW-1614	5/16"	1-1/2 (38.1)	1/4" /20	1-1/2 (38.1)	9/32 hole (7.1)	100/4.9

PERFORMANCE TABLE

Ultimate Shear and Tension 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)	No.10	1-1/8 (28.6)	Carbon or Stainless	1,200 (5.3)	1,620 (7.2)	1,600 (7.1)	1,620 (7.2)	2,100 (9.3)	1,620 (7.2)
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)	4,000 (17.8)	3,140 (14.0)	4,500 (20.0)	4,400 (19.6)	5,000 (22.2)
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)

Ultimate Shear and Tension 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)	No.10	1-1/8 (28.6)	Carbon or Stainless	1,080 (4.8)	1,160 (5.2)	1,220 (5.4)	1,940 (8.6)
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)	3,920 (17.4)	3,160 (14.1)	4,840 (21.5)
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)

Ultimate Shear and Tension Values in 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)	1,360 (6.0)	1,120 (5.0)	1,360 (6.0)	1,120 (5.0)	1,620 (7.2)	1,120 (5.0)	1,360 (6.0)
				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)	1,620 (7.2)
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)	2,560 (11.4)
1/2 (12.7)	25 (33.9)	3/8 (9.5)	1-7/8 (47.6)	Carbo	-- --	-- --	2,220 (9.9)	4,000 (17.8)	-- --	-- --	2,220 (9.9)	4,000 (17.8)
				Stainless	-- --	-- --	2,100 (9.3)	4,000 (17.8)	-- --	-- --	2,100 (9.3)	4,000 (17.8)
5/8 (15.9)	55 (74.6)	1/2 (12.7)	2 (50.8)	Carbon	-- --	-- --	3,080 (13.7)	6,440 (28.6)	-- --	-- --	3,080 (13.7)	6,440 (28.6)
				Stainless	-- --	-- --	3,080 (13.7)	6,440 (28.6)	-- --	-- --	3,080 (13.7)	6,440 (28.6)

* 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 Shear and Tension 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