

GENERAL INFORMATION

316 STAINLESS STEEL WEDGE-BOLT

Screw Anchor

PRODUCT DESCRIPTION

The 316 Stainless Steel Wedge-Bolt anchor is a one piece, heavy duty screw anchor with a finished hex head. It is simple to install, easy to identify, fully removable and vibration resistant. The Wedge-Bolt has many unique features and benefits that make it well suited for many applications, both indoors and out. Optimum performance is obtained using a combination of patented design concepts. The steel threads along the anchor body self tap into the hole during installation and provide positive keyed engagement. The benefit to the designer is higher load capacities, while the benefit to the user is ease of installation. The Wedge-Bolt can be installed with either a powered impact wrench or conventional hand socket.

316 Stainless Steel Wedge-Bolt screw anchors are designed to be used with a matched tolerance Wedge-Bit for optimum performance. The Wedge-Bolt works in fixture clearance holes that are 1/16" over nominal, which is typical of standard fixture holes used in steel fabrication.

GENERAL APPLICATIONS AND USES

- Interior and Exterior Applications
- Support Ledgers and Windows
- Railing and Fencing
- Storage Facilities
- Repairs & Retrofits
- Maintenance

FEATURES AND BENEFITS

- + High corrosion resistance of Type 316 Stainless Steel
- + Consistent performance in high and low strength concrete
- + Anchor can be installed through standard fixture holes
- + Diameter, length and identifying marking stamped on head of each anchor
- + Can be installed with an impact wrench or conventional hand socket
- + Fast installation and immediate loading minimizes downtime
- + Finished hex head provides attractive appearance and minimizes tripping hazard
- + Can be installed closer to the edge than traditional expansion anchors
- + Ratchet teeth on underside of hex washer head lock against the fixture
- + Removable

APPROVALS AND LISTINGS

- Tested in accordance with ASTM E488, AC106 criteria and AC193 criteria

GUIDE SPECIFICATIONS

CSI Divisions: 03 16 00 - Concrete Anchors, 04 05 19.16 - Masonry Anchors and 05 05 19 - Post-Installed Concrete Anchors. Screw anchors shall be 316 Stainless Steel Wedge-Bolt as supplied by Powers Fasteners, Brewster, NY. Anchors shall be installed in accordance with published instructions and the Authority Having Jurisdiction.

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316 STAINLESS STEEL WEDGE-BOLT

HEAD STYLES

- Stainless Steel Body and hex washer head

ANCHOR MATERIALS

- Type 316 Stainless Steel

ANCHOR SIZE RANGE (TYP.)

- 1/4" diameter through 1/2" diameter (see ordering information)

SUITABLE BASE MATERIALS

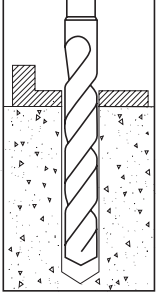
- Normal-weight concrete
- Grouted Concrete Masonry (CMU)
- Brick Masonry

MATERIAL SPECIFICATIONS

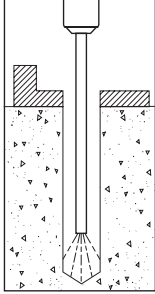
Anchor component	Specification
Anchor Body and hex washer head	Type 316 Stainless Steel ¹
1. With sacrificial carbon steel drive tip and tapping threads.	

INSTALLATION INSTRUCTIONS

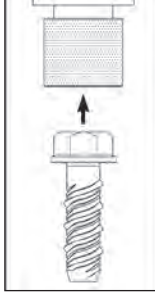
Installation Instructions for 316 Stainless Steel Wedge-Bolt



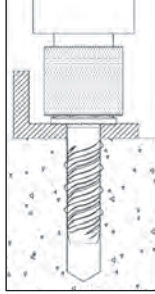
Step 1
Using the proper Wedge-bit size, drill a hole into the base material to the required depth. The tolerances of the Wedge-bit used must meet the requirements of the published Wedge-bit range.



Step 2
Remove dust and debris from the hole using a hand pump, compressed air or a vacuum to remove loose particles left from drilling.

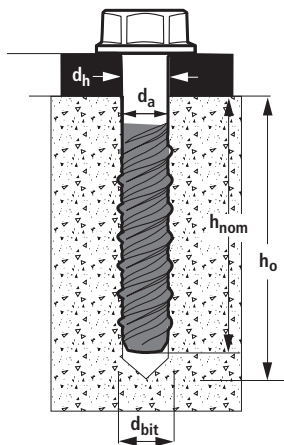


Step 3
Select a powered impact wrench that does not exceed the maximum torque, T_{screw} , for the selected anchor diameter. Attach an appropriate sized hex socket/driver to the impact wrench. Mount the screw anchor head into the socket.



Step 4
Drive the anchor through the fixture and into the hole until the head of the anchor comes into contact with the fixture. The anchor should be snug after installation. Do not spin the hex socket off the anchor to disengage.

316 Stainless Steel Wedge-Bolt Anchor Detail



Nomenclature

- d_a = Diameter of Anchor
- d_{bit} = Diameter of Drill Bit
- d_h = Diameter of Clearance Hole
- h = Base Material Thickness.
The value of h should be $1.5h_{nom}$ or $3"$, whichever is greater
- h_{nom} = Minimum Nominal Embedment
- h_o = Minimum Hole Depth

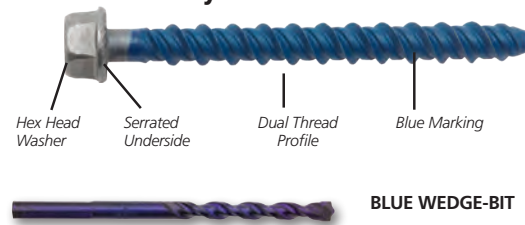
Hex Head Marking



Legend

Diameter, material, and length identification mark

Matched Tolerance System



BLUE WEDGE-BIT

Designed and tested as a system for consistency and reliability

REFERENCE DATA (ASD)

Installation Specifications for 316 Stainless Steel Wedge-Bolt in Concrete

Anchor Property / Setting Information	Notation	Units	Nominal Anchor Diameter		
			1/4	3/8	1/2
Anchor diameter	d_o	in. (mm)	0.250 (6.4)	0.375 (9.5)	0.500 (12.7)
Minimum diameter of hole clearance in fixture	d_h	in. (mm)	5/16 (7.9)	7/16 (11.1)	9/16 (14.3)
Nominal drill bit diameter	d_{bit}	in.	1/4 Wedge-Bit	3/8 Wedge-Bit	1/2 Wedge-Bit
Minimum nominal embedment depth	h_{nom}	in. (mm)	1-3/4 (44)	2 (51)	2-3/4 (70)
Minimum hole depth	h_o	in. (mm)	2 (51)	2-1/4 (57)	3 (77)
Minimum overall anchor length	ℓ_{anch}	in. (mm)	2 (51)	2-1/2 (64)	3 (76)
Maximum impact wrench power (torque)	T_{screw}	ft.-lbf. (N-m)	115 (156)	245 (332)	300 (407)
Torque wrench/socket size	-	in.	7/16	9/16	3/4
Head height	-	in.	7/32	21/64	7/16

For SI: 1 inch = 25.4 mm, 1 ft.-lbf = 1.356 N-m.

MECHANICAL ANCHORS
316 STAINLESS STEEL WEDGE-BOLT
Screw Anchor

Ultimate Load Capacities for 316 Stainless Steel Wedge-Bolt in Normal-Weight Concrete^{1,2}

Nominal Anchor Diameter in.	Minimum Embedment Depth, h _{nom} in. (mm)	Minimum Concrete Compressive Strength									
		f'c = 2,500 psi (17.3 MPa)		f'c = 3,000 psi (20.7 MPa)		f'c = 4,000 psi (27.6 MPa)		f'c = 6,000 psi (41.4 MPa)		f'c = 8,000 psi (55.2 MPa)	
		Tension lbs. (kN)	Shear lbs. (kN)	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	1-3/4 (44)	955 (4.2)	1,385 (6.2)	1,045 (4.6)	1,520 (6.8)	1,210 (5.4)	1,755 (7.8)	1,440 (6.4)	2,560 (11.4)	1,660 (7.4)	2,960 (13.2)
	2-1/2 (64)	2,660 (11.8)	1,385 (6.2)	2,915 (13.0)	1,520 (6.8)	3,365 (15.0)	1,755 (7.8)	3,145 (14.0)	2,560 (11.4)	3,630 (16.1)	2,960 (13.2)
3/8	2 (51)	935 (4.2)	2,400 (10.7)	1,025 (4.6)	2,630 (11.7)	1,185 (5.3)	3,035 (13.5)	1,645 (7.3)	3,030 (13.5)	1,900 (8.5)	3,500 (15.6)
	2-1/2 (64)	1,925 (8.6)	2,485 (11.1)	2,105 (9.4)	2,720 (12.1)	2,435 (10.8)	3,145 (14.0)	2,965 (13.2)	5,250 (23.4)	3,420 (15.2)	6,060 (27.0)
	3-1/2 (89)	4,480 (19.9)	2,485 (11.1)	4,910 (21.8)	2,720 (12.1)	5,670 (25.2)	3,145 (14.0)	6,360 (28.3)	5,250 (23.4)	7,345 (32.7)	6,060 (27.0)
1/2	2-3/4 (70)	4,880 (21.7)	8,550 (38.0)	5,345 (23.8)	9,365 (41.7)	6,170 (27.4)	10,810 (48.1)	8,185 (36.4)	11,690 (52.0)	9,450 (42.0)	13,495 (60.0)
	3-1/2 (89)	6,235 (27.7)	9,520 (42.3)	6,830 (30.4)	10,430 (46.4)	7,890 (35.1)	12,045 (53.6)	9,315 (41.4)	11,425 (50.8)	10,760 (47.9)	13,190 (58.7)
	4-1/2 (114)	7,810 (34.7)	9,520 (42.3)	8,555 (38.1)	10,430 (46.4)	9,880 (43.9)	12,045 (53.6)	11,220 (49.9)	11,425 (50.8)	12,955 (57.6)	13,190 (58.7)

1. Tabulated load values are for anchors installed in concrete. Concrete compressive strength must be at a minimum at the time of installation.
2. Ultimate load capacities must be reduced by a minimum safety factor of 4.0 or greater to determine allowable working load. The tabulated load values account for the sacrificial drive tip not being present during service life.

Allowable Load Capacities for 316 Stainless Steel Wedge-Bolt in Normal-Weight Concrete^{1,2,3,4}



Nominal Anchor Diameter in.	Minimum Embedment Depth, h _{nom} in. (mm)	Minimum Concrete Compressive Strength									
		f'c = 2,500 psi (17.3 MPa)		f'c = 3,000 psi (20.7 MPa)		f'c = 4,000 psi (27.6 MPa)		f'c = 6,000 psi (41.4 MPa)		f'c = 8,000 psi (55.2 MPa)	
		Tension lbs. (kN)	Shear lbs. (kN)	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	1-3/4 (44)	240 (1.1)	345 (1.5)	260 (1.2)	380 (1.7)	305 (1.4)	440 (2.0)	360 (1.6)	640 (2.8)	415 (1.8)	740 (3.3)
	2-1/2 (64)	665 (3.0)	345 (1.5)	730 (3.2)	380 (1.7)	840 (3.7)	440 (2.0)	785 (3.5)	640 (2.8)	910 (4.0)	740 (3.3)
3/8	2 (51)	235 (1.0)	600 (2.7)	255 (1.1)	660 (2.9)	295 (1.3)	760 (3.4)	410 (1.8)	760 (3.4)	475 (2.1)	875 (3.9)
	2-1/2 (64)	480 (2.1)	620 (2.8)	525 (2.3)	680 (3.0)	610 (2.7)	785 (3.5)	740 (3.3)	1,315 (5.8)	855 (3.8)	1,515 (6.7)
	3-1/2 (89)	1,120 (5.0)	620 (2.8)	1,230 (5.5)	680 (3.0)	1,420 (6.3)	785 (3.5)	1,590 (7.1)	1,315 (5.8)	1,835 (8.2)	1,515 (6.7)
1/2	2-3/4 (70)	1,220 (5.4)	2,140 (9.5)	1,335 (5.9)	2,340 (10.4)	1,545 (6.9)	2,705 (12.0)	2,045 (9.1)	2,925 (13.0)	2,365 (10.5)	3,375 (15.0)
	3-1/2 (89)	1,560 (6.9)	2,380 (10.6)	1,710 (7.6)	2,610 (11.6)	1,975 (8.8)	3,010 (13.4)	2,330 (10.4)	2,855 (12.7)	2,690 (12.0)	3,300 (14.7)
	4-1/2 (114)	1,955 (8.7)	2,380 (10.6)	2,140 (9.5)	2,610 (11.6)	2,470 (11.0)	3,010 (13.4)	2,805 (12.5)	2,855 (12.7)	3,240 (14.4)	3,300 (14.7)

1. Tabulated load values are for anchors installed in concrete. Concrete compressive strength must be at a minimum at the time of installation.
2. Allowable load capacities are calculated using an applied safety factor of 4.0. The tabulated load values account for the sacrificial drive tip not being present during service life.
3. Allowable load capacities must be multiplied by reduction factors when anchor spacing or edge distances are less than critical distances.
4. Linear interpolation may be used to determine allowable loads for intermediate embedments and compressive strengths.

DESIGN CRITERIA (ALLOWABLE STRESS DESIGN)

Combined Loading

For anchors loaded in both shear and tension, the combination of loads should be proportioned as follows:

$$\left(\frac{N_u}{N_n}\right) + \left(\frac{V_u}{V_n}\right) \leq 1$$

Where: N_u = Applied Service Tension Load
 N_n = Allowable Tension Load
 V_u = Applied Service Shear Load
 V_n = Allowable Shear Load

LOAD ADJUSTMENT FACTORS FOR SPACING AND EDGE DISTANCES¹

Anchor Installed in Normal-Weight Concrete

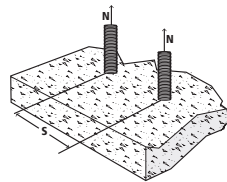
Anchor Dimension	Load Type	Critical Distance (Full Anchor Capacity)	Critical Load Factor	Minimum Distance (Reduced Capacity)	Minimum Load Factor
Spacing (s)	Tension	$s_{cr} = 12d$	$F_{NS} = 1.0$	$s_{min} = 4d$	$F_{NS} = 0.50$
	Shear	$s_{cr} = 12d$	$F_{VS} = 1.0$	$s_{min} = 4d$	$F_{VS} = 0.75$
Edge Distance (c)	Tension	$c_{cr} = 8d$	$F_{NC} = 1.0$	$c_{min} = 3d$	$F_{NC} = 0.70$
	Shear	$c_{cr} = 12d$	$F_{VC} = 1.0$	$c_{min} = 3d$	$F_{VC} = 0.15$

1. Allowable load values found in the performance data tables are multiplied by reduction factors when anchor spacing or edge distances are less than critical distances. Linear interpolation is allowed for intermediate anchor spacing and edge distances between critical and minimum distances. When an anchor is affected by both reduced spacing and edge distance, the spacing and edge reduction factors must be combined (multiplied). Multiple reduction factors for anchor spacing and edge distance may be required depending on the anchor group configuration.

LOAD ADJUSTMENT FACTORS FOR NORMAL-WEIGHT CONCRETE

Spacing, Tension (F_{NS})

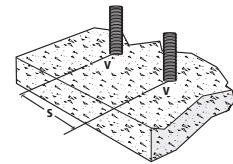
Dia. (in.)	1/4	3/8	1/2	
s_{cr} (in.)	3	4-1/2	6	
s_{min} (in.)	1	1-1/2	2	
Spacing, s (inches)	1	0.50	-	-
	1-1/2	0.63	0.50	-
	2	0.75	0.58	0.50
	2-1/2	0.88	0.67	0.56
	3	1.00	0.75	0.63
	4-1/2	-	1.00	0.81
6	-	-	1.00	



Notes: For anchors loaded in tension, the critical spacing (s_{cr}) is equal to 12 anchor diameters (12d) at which the anchor achieves 100% of load. Minimum spacing (s_{min}) is equal to 4 anchor diameters (4d) at which the anchor achieves 50% of load.

Spacing, Shear (F_{VS})

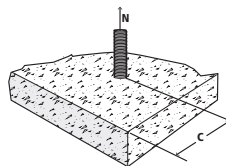
Dia. (in.)	1/4	3/8	1/2	
s_{cr} (in.)	3	4-1/2	6	
s_{min} (in.)	1	1-1/2	2	
Spacing, s (inches)	1	0.75	-	-
	1-1/2	0.81	0.75	-
	2	0.88	0.79	0.75
	2-1/2	0.91	0.83	0.78
	3	1.00	0.88	0.81
	4-1/2	-	1.00	0.91
6	-	-	1.00	



Notes: For anchors loaded in shear, the critical spacing (s_{cr}) is equal to 12 anchor diameters (12d) at which the anchor achieves 100% of load. Minimum spacing (s_{min}) is equal to 4 anchor diameters (4d) at which the anchor achieves 75% of load.

Edge Distance, Tension (F_{NC})

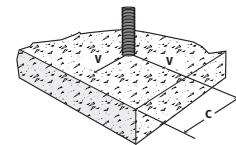
Dia. (in.)	1/4	3/8	1/2	
c_{cr} (in.)	2	3	4	
c_{min} (in.)	3/4	1-1/8	1-1/2	
Edge Distance, c (in.)	3/4	0.70	-	-
	1-1/8	0.79	0.70	-
	1-1/2	0.88	0.76	0.70
	1-7/8	0.97	0.82	0.75
	2	1.00	0.84	0.76
	2-1/4	-	0.88	0.79
	3	-	1.00	0.88
	4	-	-	1.00



Notes: For anchors loaded in tension, the critical edge distance (c_{cr}) is equal to 8 anchor diameters (8d) at which the anchor achieves 100% of load. Minimum edge distance (c_{min}) is equal to 3 anchor diameters (3d) at which the anchor achieves 70% of load.

Edge Distance, Shear (F_{VC})

Dia. (in.)	1/4	3/8	1/2	
c_{cr} (in.)	3	4-1/2	6	
c_{min} (in.)	3/4	1-1/8	1-1/2	
Edge Distance, c (in.)	3/4	0.15	-	-
	1-1/8	0.29	0.15	-
	1-1/2	0.43	0.24	0.15
	1-7/8	0.58	0.34	0.22
	2-1/4	0.72	0.43	0.29
	3	1.00	0.62	0.43
	4-1/2	-	1.00	0.72
	6	-	-	1.00



Notes: For anchors loaded in shear, the critical edge distance (c_{cr}) is equal to 12 anchor diameters (12d) at which the anchor achieves 100% of load. Minimum edge distance (c_{min}) is equal to 3 anchor diameters (3d) at which the anchor achieves 15% of load.

MASONRY PERFORMANCE DATA

Ultimate Load Capacities for 316 Stainless Steel Wedge-Bolt installed into the Face or End of Grout Filled Concrete Masonry^{1,2,3}

Nominal Anchor Diameter d in.	Minimum Embed. h _{nom} in. (mm)	Minimum Edge Distance in. (mm)	Minimum End Distance in. (mm)	Tension lbs. (kN)		Loading Direction	Shear lbs. (kN)	
				f'm = 1,500 psi	f'm = 2,000 psi		f'm = 1,500 psi	f'm = 2,000 psi
1/4	1-3/4 (44)	3-3/4 (95)	1-1/2 (38)	570 (2.5)	660 (2.9)	Perpendicular or parallel to wall edge or end	645 (2.9)	745 (3.3)
	2-1/4 (57)	3-3/4 (95)	1-1/2 (38)	1,145 (5.1)	1,325 (5.9)		910 (4.0)	1,050 (4.7)
3/8	2 (51)	3-3/4 (95)	1-1/2 (38)	1,535 (6.8)	1,775 (7.9)	Perpendicular or parallel to wall edge or end	775 (3.4)	895 (4.0)
	3 (76)	3-3/4 (95)	3-3/4 (95)	2,300 (10.2)	2,655 (11.8)	Perpendicular or parallel to wall edge or end	3,110 (13.8)	3,585 (15.9)
	3 (76)	3-3/4 (95)	11-1/4 (286)			Parallel to wall edge	3,325 (14.8)	3,835 (17.1)
1/2	2-3/4 (70)	3-3/4 (95)	1-3/4 (44)	1,330 (5.9)	1,535 (6.8)	Perpendicular or parallel to wall edge or end	2,050 (9.1)	2,365 (10.5)
	2-3/4 (70)	3-3/4 (95)	3-3/4 (95)				2,630 (11.7)	3,040 (13.5)
	4-1/2 (114)	3-3/4 (95)	11-1/4 (286)	4,680 (20.8)	5,400 (24.0)		2,630 (11.7)	3,040 (13.5)
	4-1/2 (114)	11-1/4 (286)	11-1/4 (286)				7,290 (32.4)	8,415 (37.4)

1. Tabulated load values are for anchors installed in minimum 8-inch wide, Grade N, Type II, normal-weight concrete masonry units conforming to ASTM C 90 that have reached the minimum designated ultimate strength at the time of installation (f'm ≥ 1,500 psi).
2. Ultimate load capacities must be reduced by a minimum safety factor of 5.0 or greater to determine allowable working load.
3. The tabulated load values are applicable for screw anchors installed at a critical spacing between screw anchors of 16 times the screws anchor diameter. Remove the tabulated load anchor diameter. Linear interpolation may be used for intermediate spacing distances.

MECHANICAL ANCHORS

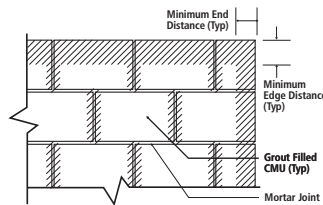
316 STAINLESS STEEL WEDGE-BOLT
Screw Anchor



Allowable Load Capacities for 316 Stainless Steel Wedge-Bolt installed into the Face or End of Grout Filled Concrete Masonry^{1,2,3,4,5}

Nominal Anchor Diameter d in.	Minimum Embed. h _{nom} in. (mm)	Minimum Edge Distance in. (mm)	Minimum End Distance in. (mm)	Tension lbs. (kN)		Loading Direction	Shear lbs. (kN)	
				f'm = 1,500 psi	f'm = 2,000 psi		f'm = 1,500 psi	f'm = 2,000 psi
1/4	1-3/4 (44)	3-3/4 (95)	1-1/2 (38)	115 (0.5)	130 (0.6)	Perpendicular or parallel to wall edge or end	130 (0.6)	150 (0.7)
	2-1/4 (57)	3-3/4 (95)	1-1/2 (38)	230 (1.0)	265 (1.2)		180 (0.8)	210 (0.9)
3/8	2 (51)	3-3/4 (95)	1-1/2 (38)	305 (1.4)	355 (1.6)	Perpendicular or parallel to wall edge or end	155 (0.7)	180 (0.8)
	3 (76)	3-3/4 (95)	3-3/4 (95)	460 (2.0)	530 (2.4)	Perpendicular or parallel to wall edge or end	620 (2.8)	715 (3.2)
	3 (76)	3-3/4 (95)	11-1/4 (286)			Parallel to wall edge	665 (3.0)	765 (3.4)
1/2	2-3/4 (70)	3-3/4 (95)	1-3/4 (44)	265 (1.2)	305 (1.4)	Perpendicular or parallel to wall edge or end	410 (1.8)	475 (2.1)
	2-3/4 (70)	3-3/4 (95)	3-3/4 (95)				525 (2.3)	610 (2.7)
	4-1/2 (114)	3-3/4 (95)	11-1/4 (286)	935 (4.2)	1,080 (4.8)		525 (2.3)	610 (2.7)
	4-1/2 (114)	11-1/4 (286)	11-1/4 (286)				1,460 (6.5)	1,685 (7.5)

1. Tabulated load values are for anchors installed in minimum 8-inch wide, Grade N, Type II, normal-weight concrete masonry units conforming to ASTM C 90 that have reached the minimum designated ultimate strength at the time of installation (f'm ≥ 1,500 psi).
2. Allowable load capacities are calculated using an applied safety factor of 5.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety.
3. Linear interpolation for allowable loads for anchors at intermediate embedment depths may be used.
4. For installation in 3,000 psi grout filled concrete masonry (f'm = 3,000 psi) the load capacity in 1,500 psi grout filled concrete masonry (f'm = 1,500) may be increased by 40% and the load capacity in 2,000 psi grout concrete masonry (f'm = 2,000 psi) may be increased by 22%.
5. The tabulated load values are applicable for screw anchors installed at a critical spacing between screw anchors of 16 times the screws anchor diameter. Remove the tabulated load anchor diameter. Linear interpolation may be used for intermediate spacing distances.



Wall Face
Permissible Anchor Locations
(Un-hatched Area)

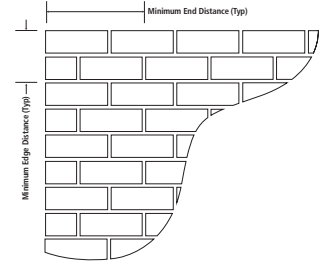
MECHANICAL ANCHORS

316 STAINLESS STEEL WEDGE-BOLT
Screw Anchor

Ultimate Load Capacities for 316 Stainless Steel Wedge-Bolt installed into Multiple Wythe Solid Clay Brick Masonry^{1,2}

Nominal Anchor Diameter d in.	Minimum Nominal Embedment Depth h _{nom} in. (mm)	Minimum Edge Distance in. (mm)	Minimum End Distance in. (mm)	Minimum Spacing Distance in. (mm)	Tension lbs. (kN)	Shear lbs. (kN)
1/4	2.5 (63.5)	3.5 (88.9)	2.5 (63.5)	4 (101.6)	1,170 (5.2)	1,380 (6.1)
3/8	2.75 (69.9)	6 (152.4)	6 (152.4)	6 (152.4)	1,435 (6.4)	2,875 (12.8)
1/2	3.25 (82.6)	9.5 (241.3)	9.5 (241.3)	8 (203.2)	1,840 (8.2)	7,655 (34.1)

1. Tabulated load values are for anchors installed in multiple wythe, minimum Grade SW, solid clay brick masonry walls conforming to ASTM C 62. Mortar must be minimum Type N. Masonry compressive strength must be at the specified minimum at the time of installation ($f'_m \geq 1,500$ psi).
2. Ultimate load capacities must be reduced by a minimum safety factor of 5.0 or greater to determine allowable working load.



Allowable Load Capacities for 316 Stainless Steel Wedge-Bolt installed into Multiple Wythe Solid Clay Brick Masonry^{1,2}

Nominal Anchor Diameter d in.	Minimum Nominal Embedment Depth h _{nom} in. (mm)	Minimum Edge Distance in. (mm)	Minimum End Distance in. (mm)	Minimum Spacing Distance in. (mm)	Tension lbs. (kN)	Shear lbs. (kN)
1/4	2.5 (63.5)	3.5 (88.9)	2.5 (63.5)	4 (101.6)	235 (1.0)	275 (1.2)
3/8	2.75 (69.9)	6 (152.4)	6 (152.4)	6 (152.4)	285 (1.3)	575 (2.6)
1/2	3.25 (82.6)	9.5 (241.3)	9.5 (241.3)	8 (203.2)	370 (1.6)	1,530 (6.8)

1. Tabulated load values are for anchors installed in multiple wythe, minimum Grade SW, solid clay brick masonry walls conforming to ASTM C 62. Mortar must be minimum Type N. Masonry compressive strength must be at the specified minimum at the time of installation ($f'_m \geq 1,500$ psi).
2. Allowable load capacities listed are calculated using an applied safety factor of 5.0. Consideration of safety factors of 10 or higher may be used depending on the application, such as life safety.

ORDERING INFORMATION

316 Stainless Steel Wedge-Bolt

Cat. No.	Anchor Size	Box Qty.	Ctn. Qty.	Wt./100 (lbs)	Wedge-Bit Cat. No.			
					SDS-Plus	SDS-Max	Spline	Straight Shank
07870	1/4 x 2	100	600	3.94	01312	-	-	01370
07872	1/4 x 3	100	500	5.16	01314	-	-	01372
07876	1/4 x 4	100	500	6.56	01314	-	-	01372
07878	1/4 x 5	100	500	7.20	01315	-	-	-
07880	3/8 x 2-1/2	50	300	10.42	01316	-	-	01380
07882	3/8 x 3	50	250	11.96	01316	-	-	01380
07884	3/8 x 4	50	250	15.06	01316	-	-	01380
07886	3/8 x 5	50	250	17.92	01318	-	-	01384
07888	1/2 x 3	50	150	21.17	01320	01354	01340	01390
07890	1/2 x 4	50	150	25.87	01320	01354	01340	01390
07892	1/2 x 5	25	100	31.70	01322	01354	01340	01394
07894	1/2 x 6	25	75	36.73	01322	01354	01340	01394

The published size includes the diameter and length of the anchor measured from under the head to the tip.
*316 Stainless Steel Wedge-Bolt has a blue marking and must be installed with a matched tolerance Wedge-Bit.



Wedge-Bit

Cat. No.	Wedge-Bit Description	Usable Length	Tube Qty.	Ctn. Qty.
01312	SDS 1/4" x 4"	2"	1	250
01314	SDS 1/4" x 6"	4"	1	100
01315	SDS 1/4" x 8"	6"	1	-
01316	SDS 3/8" x 6"	4"	1	200
01318	SDS 3/8" x 8"	6"	1	100
01332	SDS 3/8" x 12"	10"	1	50
01319	SDS 3/8" x 18"	16"	1	50
01320	SDS 1/2" x 6"	4"	1	150
01322	SDS 1/2" x 10"	8"	1	50
01334	SDS 1/2" x 12"	10"	1	50
01335	SDS 1/2" x 18"	16"	1	50
01340	Spline 1/2" x 13"	8"	1	20
01342	Spline 1/2" x 16"	11"	1	-
01354	SDS-Max 1/2" x 13"	8"	1	20
01370	HD Straight Shank 1/4" x 4"	2-3/4"	1	100
01372	HD Straight Shank 1/4" x 6"	4"	1	-
01380	HD Straight Shank 3/8" x 6"	4"	1	-
01384	HD Straight Shank 3/8" x 13"	11"	1	-
01390	HD Straight Shank 1/2" x 6"	4"	1	-
01394	HD Straight Shank 1/2" x 13"	11"	1	50



316 Stainless Steel Wedge-Bolt+ Screw Anchor Installation Accessories

Cat. No.	Description	Wt./100 (lbs)
08280	Hand pump / dust blower	1



MECHANICAL ANCHORS

316 STAINLESS STEEL WEDGE-BOLT
Screw Anchor