

GENERAL INFORMATION

AGGRE-GATOR®

300 Series Stainless Bi-Metal Concrete and Masonry Fasteners

PRODUCT DESCRIPTION

The Aggre-Gator anchor is a Bi-Metal screw anchor for light to medium duty applications in concrete and masonry block base materials. The Aggre-Gator is fast and easy to install and provides a neat, finished appearance. Aggre-gator anchors provide unmatched corrosion resistance in demanding applications, such as those in coastal or wet areas.

GENERAL APPLICATIONS AND USES

- Exposed anchoring/coastal/wet areas
- Hurricane shutters/windows/awnings/thresholds
- Stone facade support anchors
- Aluminum enclosures
- Curtain wall & window wall support anchors
- ACQ-treated wood

FEATURES AND BENEFITS

- + High in-place value over life of structure
- + High strength and ductility
- + Stalgard GB coating creates greater galvanic compatibility in dissimilar metal applications involving aluminum
- + Thread profile provides quick cutting and stability during installation
- + Best choice for ACQ-treated lumber

APPROVALS AND LISTINGS

- Miami-Dade County Notice of Acceptance (NOA) No. 19-0619.01
- Florida Statewide Product Approval FL29068.1

GUIDE SPECIFICATIONS

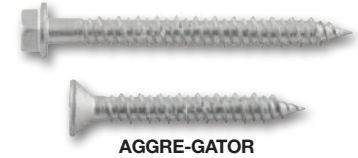
CSI Divisions: 03 16 00 - Concrete Anchors, 04 05 19.16 - Masonry Anchors and 05 05 19 - Post-Installed Concrete Anchors. Concrete Screw Anchors shall be Aggre-Gator as supplied by DEWALT, Towson, MD. Concrete screw anchors shall be installed in accordance with published instructions and the Authority Having Jurisdiction

MATERIAL SPECIFICATIONS

Anchor Component	Specification
Anchor Head and Shank	300 Series Stainless Steel
Anchor Gimlet Point and Tapping Threads	Hardened Steel
Coating/Plating/Finish	Stalgard® GB

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AGGRE-GATOR

HEAD STYLES

- Hex Washer Head
- TrimFit® Flat Head

ANCHOR MATERIALS

- 300 series (18-8) stainless steel head and shank and hardened steel tapping threads and gimlet points
- Stalgard® GB (Galvanic Barrier) coating

ANCHOR SIZE RANGE

- 1/4" diameter x 1-1/4" to 4" length

SUITABLE BASE MATERIALS

- Normal-weight Concrete
- Hollow Concrete Masonry (CMU)
- Grout-Filled Concrete Masonry (CMU)

INSTALLATION SPECIFICATIONS

Dimension	Anchor Diameter, d	
	1/4" HEX	1/4" TFH
Ultracon+ Drill Bit Size (in)	3/16	3/16
Typ. Fixture Clearance hole (in)	5/16	5/16
Head Height (in)	9/64	3/16
Head Width (in)	5/16	13/32
Washer OD (in)	13/32	N/A
Washer Thickness (in)	3/64	N/A
Hex Driver (in)/ Phillips Driver	5/16	#3

300 Series Stainless Steel Aggre-Gator Identification

The head markings consist of a "D" for the DEWALT brand, the number "3" for the 300 series stainless steel classification, and the length code

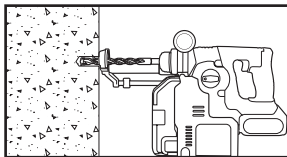
Hex Washer Head



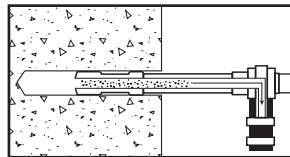
TrimFit® Head



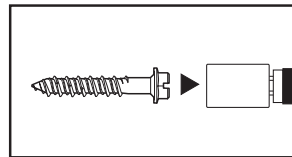
Installation Instruction for Aggre-Gator



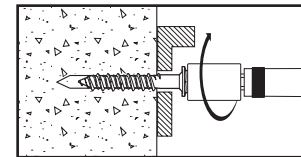
Step 1
Using the proper drill bit size, drill a hole into the base material to the required depth, h_0 , which is a 1/4-inch deeper than the minimum embedment depth, h_{nom} .



Step 2
Remove dust and debris from the hole during drilling (e.g. dust extractor) or following drilling (e.g. suction, forced air) to extract loose particles created by drilling.



Step 3
Attach a Ultracon+ installation socket to a percussion drill and set the drill to rotary only mode. Mount the screw anchor head into the socket. For flat head versions a bit tip must be used with the socket tool.



Step 4
Place the point of the Aggre-Gator tool for the selected anchor size to a rotary drill and set the drill to rotary only mode. Mount the screw anchor head into the socket. For flat head versions a bit tip must be used with the socket tool. Drive the anchor in one steady continuous motion until it is fully seated at the proper embedment. The driver will automatically disengage from the head of the Aggre-Gator.

Aggre-Gator Length Code Identification System

Length ID marking on head		□	A	B	C	D	E	F
Overall anchor length l_{anch} (inches)	From	1"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
	Up to but not including	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"

Installation Table for Aggre-Gator in Concrete¹

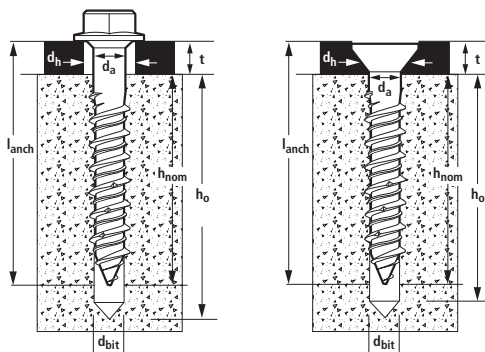
Anchor Property/ Setting Information	Notation	Units	Nominal Anchor Diameter
			1/4
Anchor Shank Diameter	d_a	in.	0.189
Typ. diameter of hole clearance in fixture	d_h	in.	5/16
Nominal drill bit diameter	d_{bit}	in.	3/16" UltraCon+ Bit
UltraCon+ bit tolerance range	-	in.	.202-.206
Minimum nominal embedment depth	h_{nom}	in.	1
Minimum hole depth	h_0	in.	1-1/4
Hex Head Socket size	-	in.	5/16
Phillips Bit Size	-	No.	3

1. The minimum base material thickness must be $1.5h_{nom}$ or 3", whichever is greater.

Installation Table for Aggre-Gator in Masonry

Anchor Property/ Setting Information	Notation	Units	Nominal Anchor Diameter
			1/4
Anchor Diameter	d_a	in.	0.189
Diameter of clearance hole in fixture	d_h	in.	5/16
Nominal drill bit diameter	d_{bit}	in.	3/16" UltraCon+ Bit
UltraCon+ bit tolerance range	-	in.	.202-.206
Minimum nominal embedment depth (Grout Filled Masonry)	h_{nom}	in.	1-1/4
Minimum hole depth (Grout Filled Masonry)	h_0	in.	1-1/2
Minimum nominal embedment (Hollow Masonry)	h_{nom}	in.	1-1/4
Minimum hole depth (Hollow Masonry)	h_0	in.	1-1/2
Hex Head Socket size	-	in.	5/16
Phillips Bit Size	-	No.	3

Anchor Detail



Nomenclature

- d = Diameter of anchor
- d_{bit} = Diameter of drill bit
- d_h = Diameter of fixture clearance hole
- h_{nom} = Minimum embedment depth
- h = Base material thickness
The minimum value of h should be $1.5h_{nom}$ or 3" whichever is greater
- h_0 = Minimum hole depth

PERFORMANCE DATA

Ultimate Load Capacities for Aggre-Gator in Normal Weight Concrete^{1,2}

Nominal Anchor Diameter	Min. Edge Dist. (in.)	Min. Spacing (in.)	Min. Embed. (in.)	Minimum Concrete Compressive Strength										
				2000 psi		2500 psi		3000 psi		3500 psi		4000 psi		
				Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	
1/4	1-1/4	3	1	450	-	495	-	955	-	1015	-	1070	-	
			1-3/8	1105	-	1215	-	1215	-	1215	-	1270	-	
			1-3/4	1125	-	1235	-	1235	-	1235	-	1270	-	
	1-1/2	3	1	450	780	495	815	955	980	1015	1020	1070	1020	
			1-3/8	1105	990	1215	1035	1215	1175	1215	1220	1270	1220	
			1-3/4	1125	1170	1235	1220	1235	1220	1235	1220	1270	1220	
	2-1/2	1-1/2	1	740	780	815	815	965	980	1030	1020	1085	1020	
			1-3/8	960	990	1055	1035	1055	1175	1055	1220	1085	1220	
			1-3/4	1220	1170	1340	1220	1340	1220	1340	1220	1380	1220	
		3	1-1/2	-	765 ⁽³⁾	-	800 ⁽³⁾	-	-	-	-	-	-	-
			1-3/4	-	760 ⁽⁴⁾	-	795 ⁽⁴⁾	-	-	-	-	-	-	-
			1-1/2	740	865	815	900	965	900	1030	900	1085	900	
	3	1-1/2	1-3/8	960	1580	1055	1650	1055	1965	1055	2040	1085	2040	
			1-3/4	1220	1870	1340	1950	1340	1985	1340	2060	1380	2060	

1. Tabulated load values are for anchors installed in concrete. Concrete compressive strength must be at the specified 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. Consideration of safety factors of 10 and higher may be necessary depending upon the application such as life safety or overhead.
3. 1x4 nominal (3/4" Max Thick) treated No. 2 southern yellow pine attached to concrete. Embedment depth in concrete.
4. 2x4 nominal (1-1/2" Max Thick) treated No. 2 southern yellow pine attached to concrete. Embedment depth in concrete.

Allowable Load Capacities for Aggre-Gator in Normal Weight Concrete^{1,2}

Nominal Anchor Diameter	Min. Edge Dist. (in.)	Min. Spacing (in.)	Min. Embed. (in.)	Minimum Concrete Compressive Strength										
				2000 psi		2500 psi		3000 psi		3500 psi		4000 psi		
				Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	
1/4	1-1/4	3	1	110	-	120	-	235	-	250	-	265	-	
			1-3/8	275	-	300	-	300	-	300	-	315	-	
			1-3/4	280	-	305	-	305	-	305	-	315	-	
	1-1/2	3	1	110	195	120	200	235	245	250	255	265	255	
			1-3/8	275	245	300	255	300	290	300	305	315	305	
			1-3/4	280	290	305	305	305	305	305	305	315	305	
	2-1/2	1-1/2	1	185	195	200	200	240	245	255	255	270	255	
			1-3/8	240	245	260	255	260	290	260	305	270	305	
			1-3/4	305	290	335	305	335	305	335	305	345	305	
		3	1-1/2	-	190 ⁽³⁾	-	200 ⁽³⁾	-	-	-	-	-	-	-
			1-3/4	-	190 ⁽⁴⁾	-	195 ⁽⁴⁾	-	-	-	-	-	-	-
			1-1/2	185	215	200	225	240	225	255	225	270	225	
	3	1-1/2	1-3/8	240	395	260	410	260	490	260	510	270	510	
			1-3/4	305	465	335	485	335	495	335	515	345	515	

1. Allowable load capacities listed are calculated using an applied safety factor of 4.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
2. Allowable loads suggested herein are only valid when both the minimum anchor center-to-center spacing and minimum edge distances are complied with.
3. 1x4 (3/4" Max Thick) treated No. 2 southern yellow pine attached to concrete. Embedment depth in concrete.
4. 2x4 (1-1/2" Max Thick) treated No. 2 southern yellow pine attached to concrete. Embedment depth in concrete.

Ultimate Load Capacities for Aggre-Gator in Hollow and Grout-Filled Concrete Masonry^{1,2}

Nominal Anchor Diameter (in.)	Min. Edge Dist. (in.)	Min. Spacing (in.)	Min. Embed. (in.)	Hollow Block		Grout-Filled Block	
				Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)
1/4	2	3	1-1/4	780	935	830	1035
			2	-	-	1625	2365
	4	1-1/2	1-1/4	-	-	745	1410
			2	-	-	2015	2385
	4	3	1-1/4	880	1055	-	-

1. Tabulated load values are for anchors installed in grout-filled concrete block conforming to ASTM C-90.
2. Ultimate load capacities must be reduced by a minimum safety factor of 5.0 or greater to determine allowable working load. Consideration of safety factors of 10 and higher may be necessary depending upon the application such as life safety or overhead.

Allowable Load Capacities for Aggre-Gator in Hollow and Grout-Filled Concrete Masonry^{1,2}

Nominal Anchor Diameter (in.)	Min. Edge Dist. (in.)	Min. Spacing (in.)	Min. Embed. (in.)	Hollow Block		Grout-Filled Block	
				Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)
1/4	2	3	1-1/4	155	185	165	205
			2	-	-	325	470
	4	1-1/2	1-1/4	-	-	145	280
			2	-	-	400	475
	4	3	1-1/4	175	210	-	-

1. Allowable load capacities listed 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 or overhead.
2. Allowable loads suggested herein are only valid when both the minimum anchor center-to-center spacing and minimum edge distances are complied with.

MECHANICAL ANCHORS
AGGRE-GATOR®
 300 Series Stainless Bi-Metal Concrete and Masonry Fasteners

ORDERING INFORMATION

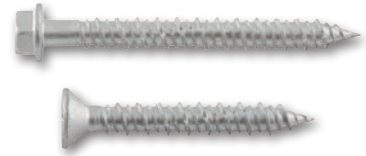
Silver Stalgard Aggre-Gator®

Cat. No.		Screw Size	Standard Box	Standard Carton
HWH	TFH			
DFM3EML300	DFM3EMM300	1/4" X 1-1/4"	50	300
DFM3EML315	DFM3EMM310	1/4" X 1-3/4"	50	300
DFM3EML325	DFM3EMM320	1/4" X 2-1/4"	50	300
DFM3EML335	DFM3EMM330	1/4" X 2-3/4"	50	300
DFM3EML345	DFM3EMM340	1/4" X 3-1/4"	50	300
DFM3EML365	DFM3EMM360	1/4" X 4"	50	300

HWH = Hex Washer Head, TFH = TrimFit® Flat Head

One straight shank drill bit included in each standard box

Hex Head Aggre-Gator anchors are measured from below the washer while flat head Aggre-Gator anchors are measured end to end. To select the proper minimum anchor length, determine the embedment depth required to obtain the desired load capacity. Then add the thickness of the fixture, including any spacers or shims, to the embedment depth.



UltraCon+ Drill Bits

Cat. No.	Description
DW5382	3/16 x 7" UltraCon+ SDS bit



Installation Kit

Cat. No.	Description
DW5366	UltraCon®+ Installation Kit includes: 5/32" and 3/16" UltraCon+ bit, 1/4" and 5/16" nutsetters, #2 and #3 Phillips bits, Phillips flat head adapter, percussion adapter, drive sleeve and 1/8" allen wrench



Rotary Hammers

Cat. No.	Description
DCH273	20V Max* XR Brushless 1" L-Shape SDS Plus Rotary Hammer
DCH133	20V Max* XR Brushless 1" D-Handle SDS Plus Rotary Hammer



Accessories

Cat. No.	Description
DWH303DH	Onboard Dust Extractor for 1 in. SDS Plus Hammers
DWH050	Large Hammer Dust Extraction - Hole Cleaning
DWH200	Dust Extraction Tube Kit with Hose



Dust Extractors

Cat. No.	Description
DCV585	Flexvolt® 60V Max* Dust Extractor
DWV010	8 Gallon Wet Dry Hepa/Rrp Dust Extractor
DWV012	10 Gallon Wet Dry Hepa/Rrp Dust Extractor
DWH161D1	20V Max* XR Brushless Universal Dust Extractor Kit



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