

## GENERAL INFORMATION

**ULTRACON+®**

Concrete Screw Anchor

**PRODUCT DESCRIPTION**

The UltraCon+ fastening system is a complete family of screw anchors for light to medium duty applications in concrete, masonry block, brick, and wood base materials. The UltraCon+ is fast and easy to install and provides a neat, finished appearance. The UltraCon+ screw anchor is engineered with matched tolerance drill bits and installation tools designed to meet the needs of the user and also provide optimum performance. The UltraCon+ features a gimlet point for self-drilling into wood base materials without pre-drilling.

The UltraCon+ screw anchor is available in carbon steel with a Stalgard coating in several colors. Head styles include a slotted hex washer head, Phillips flat head, Phillips Trimfit flat head and Hex flange head.

**GENERAL APPLICATIONS AND USES**

- Window installations
- Shutters and guards
- Interior hand rails
- Interior lighting fixtures
- Metal door frames
- Thresholds
- Joint flashing
- Screened Enclosures

**FEATURES AND BENEFITS**

- + Available in several head styles
- + Several colors and finishes to match application
- + Removable (reusable in wood)
- + High-low thread design for greater stability and grip
- + Does not exert expansion forces
- + No hole spotting required
- + Good corrosion protection with Stalgard coating
- + Gimlet point for self drilling into wood base material

**APPROVALS AND LISTINGS**

- International Code Council, Evaluation Service (ICC-ES), ESR-3068 for uncracked concrete, ESR-3196 for masonry, ESR-3042 for wood, and ESR-3213 for chemically treated lumber
- Code compliant with the International Building Code/International Residential Code: 2018 IBC/IRC, 2015 IBC/IRC, 2012 IBC/IRC, and 2009 IBC/IRC
- Tested in accordance with ACI 355.2 and ICC-ES AC193 (including ASTM E488) for use in structural concrete, ICC-ES AC106 for use in masonry, ICC-ES AC233 for use in wood, and ICC-ES AC257 for use in pressure treated lumber
- Evaluated and qualified by an accredited independent testing laboratory for reliability against brittle failure, e.g. hydrogen embrittlement
- Florida Statewide Approval FL29080

**GUIDE SPECIFICATIONS**

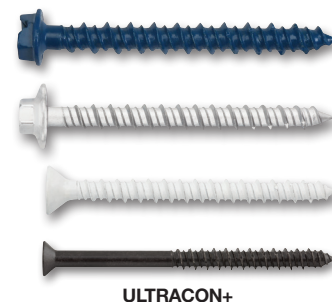
CSI Divisions: 03 16 00 - Concrete Anchors, 04 05 19.16 - Masonry Anchors, 05 05 19 - Post-Installed Concrete Anchors and 06 05 23 - Wood, Plastic, and Composite Fastenings. Concrete Screw Anchors shall be UltraCon+ anchors as supplied by DEWALT, Towson, MD.

**MATERIAL SPECIFICATIONS**

Anchor Component	Specification
Anchor Body	Case hardened carbon steel
Coating/Plating/Finish	Stalgard® (various colors) 1000 hour rating for ASTM B117 salt spray test

**SECTION CONTENTS**

General Information.....	1
Material Specifications .....	1
Installation Specifications .....	2
Reference Performance Data .....	4
Masonry Performance Data .....	5
Strength Design Information .....	8
Strength Design Performance Data .....	10
Ordering Information.....	11



ULTRACON+

**HEAD STYLES**

- Slotted Hex Washer Head
- Hex Flange Head
- Phillips Flat Head
- TrimFit® Flat Head

**ANCHOR MATERIALS**

- Carbon Steel with Stalgard Coating

**ANCHOR SIZE RANGE (TYP.)**

- 3/16" diameter x 1-1/4" to 4" lengths
- 1/4" diameter x 1" to 6" lengths

**SUITABLE BASE MATERIALS**

- Normal-weight Concrete
- Lightweight Concrete
- Grouted Concrete Masonry
- Hollow Concrete Masonry (CMU)
- Solid Brick Masonry
- Wood

**CODE LISTED**  
 ICC-ES ESR-3068  
 UNCRACKED CONCRETE

**CODE LISTED**  
 ICC-ES ESR-3196  
 MASONRY

**CODE LISTED**  
 ICC-ES ESR-3042  
 WOOD-TO-WOOD

**CODE LISTED**  
 ICC-ES ESR-3213  
 CHEMICALLY TREATED LUMBER

## INSTALLATION SPECIFICATIONS

### UltraCon+ Carbon Steel Hex Head

Dimension	Anchor Diameter, d	
	3/16"	1/4"
UltraCon+ Drill Bit Size, $d_{bit}$ (in.)	5/32"	3/16"
Typ. Fixture Clearance Hole, $d_h$ (in.)	1/4"	5/16"
Head Height (in.)	7/64"	9/64"
Hex Head Wrench/Socket Size	1/4"	5/16"
Washer O.D., $d_w$ (in.)	11/32"	13/32"
Washer Thickness, (in.)	1/32"	1/32"

### UltraCon+ Carbon Steel Flat Head

Dimension	Anchor Diameter, d	
	3/16"	1/4"
UltraCon+ Drill Bit Size, $d_{bit}$ (in.)	5/32"	3/16"
Typ. Fixture Clearance Hole, $d_h$ (in.)	1/4"	5/16"
Phillips Head O.D., (in.)	3/8"	1/2"
Phillips Head Height, (in.)	9/64"	3/16"
Phillips Bit Size (No.)	2	3

In light gauge steel material (.036" and below), the clearance hole can be the same diameter as the drill bit.

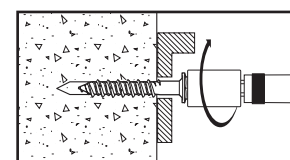
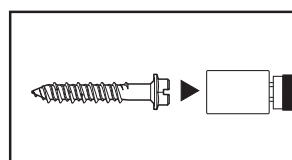
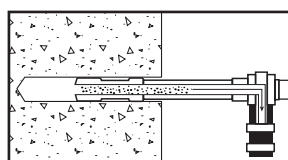
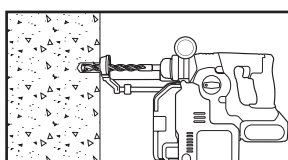
### UltraCon+ Carbon Steel TrimFit Flat Head

Dimension	Anchor Diameter, d
	1/4"
UltraCon+ Drill Bit Size, $d_{bit}$ (in.)	3/16"
Typ. Fixture Clearance Hole, $d_h$ (in.)	3/8"
Phillips TrimFit Head O.D. (in.)	13/32"
Phillips TrimFit Head Height (in.)	3/16"
Phillips Bit Size, (No.)	#3

### UltraCon+ Carbon Steel Hex Flange Head

Dimension	Anchor Diameter, d
	1/4"
UltraCon+ Drill Bit Size, $d_{bit}$ (in.)	3/16"
Typ. Fixture Clearance Hole, $d_h$ (in.)	5/16"
Head Height Including Flange, (in.)	15/64"
Hex Head Wrench/Socket Size, (in.)	5/16"
Washer OD, (in.)	39/64"

### Installation Instruction for UltraCon+



#### Step 1

Using the proper drill bit size, drill a hole into the base material to the required depth,  $h_o$ , 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 tool for the selected anchor size 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 UltraCon+ through the fixture into the pre-drilled hole and 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 UltraCon+.

### Head Marking

Hex Washer Head



Phillips Flat Head



TrimFit Flat Head



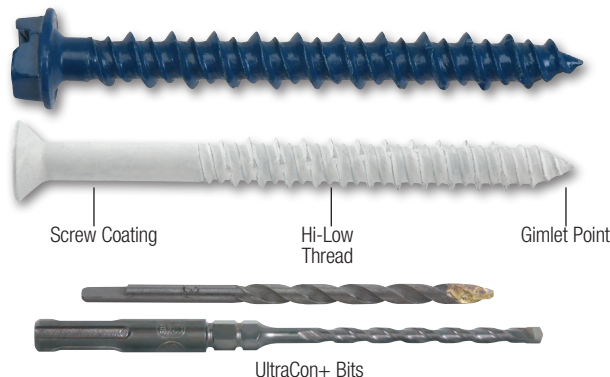
Hex Flange Head



#### Legend

- 'D' Marking = UltraCon+
- '+' Symbol = Strength Design Compliant Anchor
- 'C' Mark = Length Identification Mark
- '•' Mark = TrimFit Flat Head Identification

### Matched Tolerance System



### UltraCon+ Length Code Identification System

Length ID marking on head		□	A	B	C	D	E	F	G	H	I	J
Overall anchor length $L_{anch}$ (inches)	From	1"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"
	Up to but not including	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"	6-1/2"

## ORDERING INFORMATION

## Blue UltraCon+ Standard Pack

Cat. No.		Screw Size	Quantity	
HWH	PFH		Box	Carton
DFM12700	DFM12740	3/16" x 1-1/4"	100	500
DFM12702 *	-	3/16" x 1-3/4"	100	500
-	DFM12742	3/16" x 1-3/4"	100	600
DFM12704	DFM12744	3/16" x 2-1/4"	100	500
DFM12706	DFM12746	3/16" x 2-3/4"	100	500
DFM12708	DFM12748	3/16" x 3-1/4"	100	500
DFM12710	DFM12750	3/16" x 3-3/4"	100	500
DFM12712	DFM12752	3/16" x 4"	100	500
DFM12715	-	1/4" x 1"	100	500
DFM12720	DFM12760	1/4" x 1-1/4"	100	500
DFM12722 *	DFM12762	1/4" x 1-3/4"	100	500
DFM12724	DFM12764	1/4" x 2-1/4"	100	500
DFM12726	DFM12766	1/4" x 2-3/4"	100	500
DFM12728	DFM12768	1/4" x 3-1/4"	100	500
DFM12730	DFM12770	1/4" x 3-3/4"	100	500
DFM12732	DFM12772	1/4" x 4"	100	500
DFM12734	DFM12774	1/4" x 5"	100	500
DFM12735	DFM12776	1/4" x 6"	100	500

HWH = Hex Washer Head (slotted); PFH = Phillips Flat Head

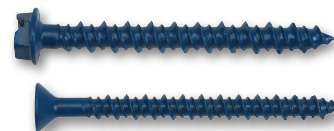
- Shaded grey catalog numbers denote sizes which are less than the standard anchor length for strength design.

\* Catalog numbers with a \* denote sizes that meet the minimum anchor length requirement for strength design provided the fixture attachment does not exceed 0.036-inch (0.91mm) in thickness.

- One straight shank drill bit included in each standard box.

- Hex Washer Head and Hex Flange Head UltraCon+ anchors are measured from below the washer. Phillips Flat Head and TrimFit Flat Head UltraCon+ anchors are measured end to end.

- To select the proper minimum anchor length, determine the embedment depth required to obtain desired load capacity. Then add the thickness of the fixture, including any spacers or shims, to the embedment depth.



## Blue UltraCon+ Master Pack

Cat. No.		Screw Size	Quantity
HWH	PFH		
DFM12700B	DFM12740B	3/16" x 1-1/4"	5000
DFM12702B *	DFM12742B	3/16" x 1-3/4"	3000
-	DFM12744B	3/16" x 1-3/4"	2500
DFM12704B	-	3/16" x 2-1/4"	2000
DFM12706B	DFM12746B	3/16" x 2-3/4"	1500
DFM12708B	DFM12748B	3/16" x 3-1/4"	1000
DFM12710B	DFM12750B	3/16" x 3-3/4"	1000
DFM12712B	DFM12752B	3/16" x 4"	1000
DFM12720B	-	1/4" x 1-1/4"	2000
-	DFM12760B	1/4" x 1-1/4"	2500
DFM12722B *	-	1/4" x 1-3/4"	2000
-	DFM12762B	1/4" x 1-3/4"	2500
DFM12724B	DFM12764B	1/4" x 2-1/4"	1500
DFM12726B	DFM12766B	1/4" x 2-3/4"	1000
DFM12728B	DFM12768B	1/4" x 3-1/4"	1000
DFM12730B	DFM12770B	1/4" x 3-3/4"	500
DFM12732B	DFM12772B	1/4" x 4"	500
DFM12734B	-	1/4" x 5"	500
DFM12735B	-	1/4" x 6"	500

HWH = Hex Washer Head (slotted); PFH = Phillips Flat Head

- Shaded grey catalog numbers denote sizes which are less than the standard anchor length for strength design.

\* Catalog numbers with a \* denote sizes that meet the minimum anchor length requirement for strength design provided the fixture attachment does not exceed 0.036-inch (0.91mm) in thickness.

- One straight shank drill bit included in each standard box.

- Hex Washer Head and Hex Flange Head UltraCon+ anchors are measured from below the washer. Phillips Flat Head and TrimFit Flat Head UltraCon+ anchors are measured end to end.

- To select the proper minimum anchor length, determine the embedment depth required to obtain desired load capacity. Then add the thickness of the fixture, including any spacers or shims, to the embedment depth.

