DEWALT
ANCHORS & FASTENERS

# Product Submittal/Substitution Request

TO:

PROJECT:

PROJECT LOCATION:

SPECIFIED ITEM:

Section | Page | Paragraph | Description

**PRODUCT SUBMIT TAL / SUBSTITUTION REQUESTED:**

**DEWALT® Anchors & Fasteners Screw-Bolt+ -**

The attached submittal package includes the product description, specifications, drawings, and performance data for use in the evaluation of the request.

**SUBMITTED BY:**

Name: Signature:

Company:

Address:

Date: Telephone: Fax:

**FOR USE BY THE ARCHITECT AND/OR ENGINEER**

☐ **Approved** ☐ **Approved as Noted** ☐ **Not Approved**

(If not approved, please briefly explain why the product was not accepted.)

By: Date:

Remarks:

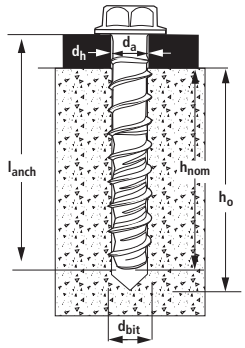
Questions or inquiries? Contact us at engineering@powers.com, or call 1.800.524.3244

## DEWALT® Screw-Bolt+ Submittal Section:

**Product Pages:**

# INSTALLATION SPECIFICATIONS

## Screw-Bolt+ Anchor Detail



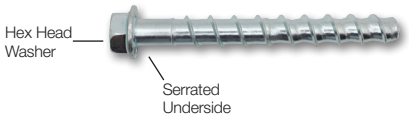

**Nomenclature**

$d_a$ = Diameter of Anchor
$d_{bit}$ = Diameter of Drill Bit
$d_h$ = Diameter of Clearance Hole
h = Base Material Thickness.
$h_{nom}$ = Minimum Nominal Embedment
$h_o$ = Minimum Hole Depth

## Head Marking

**Legend**

Diameter and Length Identification Mark




**Legend**

Diameter and Length Identification Mark


## Installation Specifications for Screw-Bolt+ in Concrete and Supplemental Information

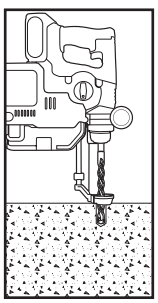
| Anchor Property/ Setting Information | | Notation | Units | Nominal Anchor Diameter (inch) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 1/4 | 3/8 | 1/2 | 5/8 | 3/4 |
| Anchor outside diameter | | $d_a$ (d) | in. (mm) | 0.250 (6.4) | 0.375 (9.5) | 0.500 (12.7) | 0.625 (15.9) | 0.750 (19.1) |
| Nominal drill bit diameter (ANSI) | | $d_{bit}$ | in. | 1/4 | 3/8 | 1/2 | 5/8 | 3/4 |
| Minimum diameter of hole clearance in fixture | | $d_h$ | in. (mm) | 11/32 (8.7) | 1/2 (12.7) | 5/8 (15.9) | 3/4 (19.1) | 7/8 (22.2) |
| Minimum embedment depth[1] | | $h_{nom}$ | in. (mm) | 1 (25) | 1-1/2 (38) | 1-3/4 (44) | 2-1/2 (64) | 2-1/2 (64) |
| Minimum hole depth | | $h_o$ | in. (mm) | $h_{nom}$ + 3/8 (9.5) | | | | |
| Minimum member thickness | | $h_{min}$ | in. (mm) | $h_{nom}$ + 2 (51) | | | | |
| Minimum edge distance | | $c_{min}$ | in. (mm) | 1-1/2 (38) | 1-1/2 (38) | 1-3/4 (44) | 1-3/4 (44) | 1-3/4 (44) |
| Minimum spacing | | $s_{min}$ | in. (mm) | 1-1/2 (38) | 2 (51) | 2-3/4 (70) | 2-3/4 (70) | 3 (76) |
| Max manual installation torque | | $T_{inst,max}$ | ft.-lbf. (N-m) | 19 (26) | 25 (34) | 45 (61) | 60 (81) | 70 (95) |
| Max impact wrench power (torque) | | $T_{impact,max}$ | ft.-lbf. (N-m) | 150 (203) | 300 (407) | 300 (407) | 700 (950) | 700 (950) |
| Hex Head | Impact wrench socket size | - | in. | 7/16 | 9/16 | 3/4 | 15/16 | 1-1/8 |
| | Maximum head height | - | in. | 21/64 | 3/8 | 31/64 | 37/64 | 43/64 |
| | Maximum washer diameter | - | in. | 37/64 | 3/4 | 1-1/16 | 1-1/8 | 1-13/32 |
| Flat Head | Driver Size | - | in. | T-30 | T-50 | T-55 | - | - |
| | Max head height | - | in. | 13/64 | 21/64 | 11/32 | - | - |
| | Max head diameter | - | in. | 17/32 | 57/64 | 1 | - | - |
| | Countersunk angle | - | in. | 82 | 82 | 82 | - | - |
| Effective tensile stress area (screw anchor body) | | $A_{se}$ | $in^2$ | 0.045 | 0.094 | 0.176 | 0.274 | 0.399 |
| Minimum ultimate strength | | $f_{uta}$ | psi | 100,000 | 105,000 | 115,000 | 95,000 | 95,000 |
| Minimum yield strength | | $f_y$ | psi | 80,000 | 84,000 | 92,000 | 76,000 | 76,000 |

See Strength Design Information for installation specifications in strict accordance with ICC-ES ESR-3889.

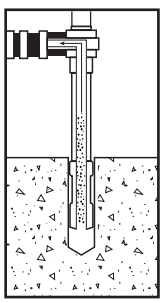
1. See load capacities for Screw-Bolt+ in normal weight concrete for additional nominal embedment depths.

# INSTALLATION INSTRUCTIONS

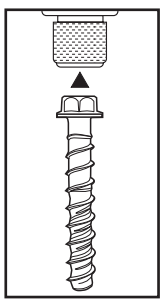
## Installation Instructions for Screw-Bolt+ (Hex Head Version Illustrated, Flat Head Version Not Shown)



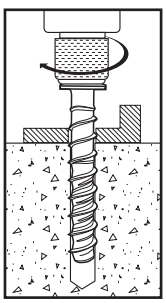
**Step 1**
Using the proper drill bit size, drill a hole into the base material to the required depth. The tolerances of the drill bit used should meet the requirements of ANSI standard B212.15



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



**Step 3**
Select a torque wrench or powered impact wrench and do not exceed the maximum torque, $T_{inst,max}$ or $T_{impact,max}$ respectively for the selected anchor diameter and embedment. Attach an appropriate sized hex socket/driver to the impact wrench. Mount the screw anchor head into the socket.



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