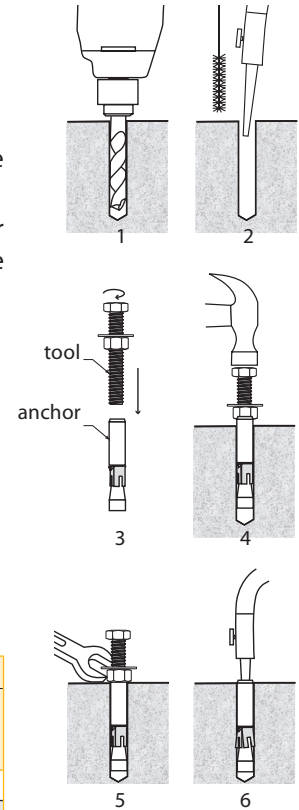


# POWER-Drop™ and Standard Drop-In Anchors

## Installation Instructions: POWER-Drop Anchors

1. Drill the hole perpendicular to the work surface. Do not ream the hole or allow the drill to wobble. Drill the hole to the proper minimum hole depth as shown in the chart for the anchor to be installed.
2. Thoroughly clean hole using compressed air and a nylon brush. An unclean hole may compromise anchor performance.
3. Set the initial anchor embedment: Thread the sacrificial cap screw with assembled nut and washer fully into the anchor. Refer to the table for Installation Spacing, then set that distance between the top of the anchor and the bottom of the washer to match this value.
4. After setting the installation spacing, place the anchor into the hole and hammer downward on the top of the sacrificial cap screw until the nut makes contact with the surface of the concrete.
5. To set the anchor you must tighten the nut. You may need to keep the cap screw from turning. Refer to Installation Turns as shown in the chart below.
6. Once the anchor is set remove the cap screw and clear the anchor with compressed air to remove any concrete dust from the threads



**NOTE: Always wear safety glasses.** Follow drill manufacturer's instructions. Use only solid carbide-tipped drill bits meeting ANSI B212.15 diameter standards

## Maximum Tensile Capacity For Static Loads

Cat. No.	For Bolt Size	Anchor Dimensions (in.)	Min. Hole Depth (in.)	H <sub>nom</sub> Embedment Depth (in.)	Installation Torque	Installation Turns	Drill Dia. (in.)	4000 psi	
								Tension (lb.)	Shear (lb.)
PD38	3/8 UNC	1/2 x 2-5/16	3	2-5/8	25	2-1/2	1/2	6409	4200
PD12	1/2 UNC	5/8 x 3-3/32	4	3-15/32	55	2-1/2	5/8	10352	7340
PD58	5/8 UNC	7/8 x 3-13/16	5	4-5/16	90	3	7/8	16500	11880
PD34	3/4 UNC	1 x 4-5/8	5-3/4	5-1/4	175	4	1	21409	13360
PD1	1 UNC	1-1/4 x 5	6-1/2	5-3/4	290	3	1-1/4	24752	26440

# Drop-In Anchors/Mini Drop-In Anchors



## Specifications, Listings and Approvals

### Materials:

- Carbon steel with zinc plating
  - ASTM B633 Type III, SC1 (clear chromate added)
- Type 303 and Type 316 stainless steel

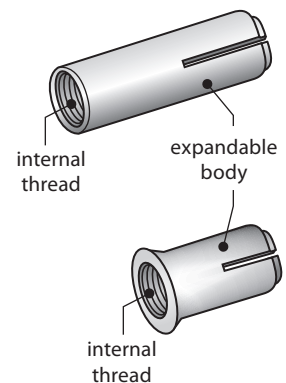
**Thread:** UNC Coarse Thread

**Federal Specifications:** GSA FFS-325, Group VIII, Type I

**Underwriters Laboratory:** File #EX 3875

## Key Features /Benefits

- Requires relatively shallow embedment
- Eliminates requirement for rod couplings in overhead applications
- Highly dependable – complete anchor setting is assured
- Simply drive the internal expander plug with a hammer or mallet
- Available options
  - **Lipped version:** sets flush with concrete
  - **Mini drop-in anchors:** ideal for hollow core, precast and post-tension slabs



Order information on following page.

## Order Information

NOTE: One setting tool included in each box of anchors

Catalog Number				Setting Tool	Anchor Thread Size (in.)	Anchor Size (in.)	Quantity Box/ Carton
Carbon	Lipped Carbon	303 Stainless Steel	316 Stainless Steel				
WD14	WDL14	WDS14	WDSS14	ST14	1/4	3/8 x 1	100/1000
-	WDM38	-	-	STM38	3/8	1/2 x 3/4	50/500
WD38	WDL38	WDS38	WDSS38	ST38	3/8	1/2 x 1-5/8	50/500
<b>WDU38*</b>	-	-	-	ST38	3/8	1/2 x 1-5/8	50/500
WD12	WDL12	WDS12	WDSS12	ST12	1/2	5/8 x 2	50/500
<b>WDU12*</b>	-	-	-	ST12	1/2	5/8 x 2	50/500
WD58	-	WDS58	WDSS58	ST58	5/8	7/8 x 2-1/2	25/200
WD34	-	WDS34	WDSS34	ST34	3/4	1 x 3-1/4	25/150

\* May qualify as domestic substitute under WTO Free Trade Agreement.

## Maximum Tensile and Shear Guidelines For Static Loads

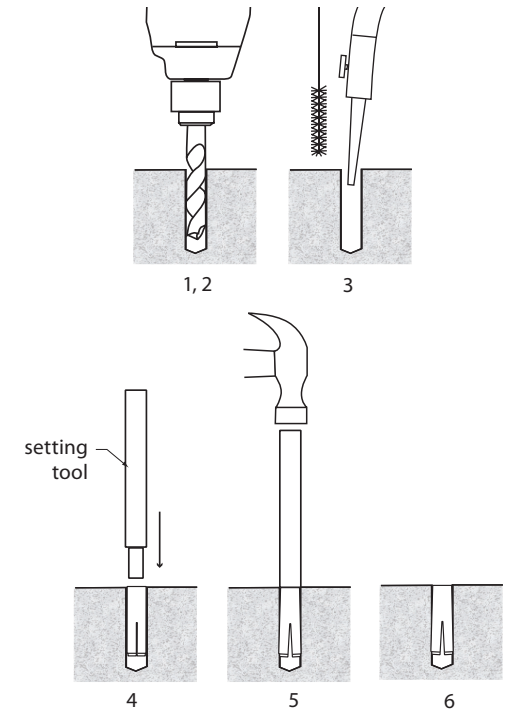
Catalog No.	Anchor Thread Dia. (in.)	Drill Dia. (in.)	Max. Tight. Torque T/Max (ft-lb.)	Embed. Depth (in.)	4000 psi Unreinforced Stone Aggregate Concrete	
					Tension (lb.)	Shear (lb.)
WD14	1/4	3/8	5	1	2629	1709
WDL14	1/4	3/8	5	1	2629	1709
WDM38	3/8	1/2	5	3/4	2230	2903
WD38	3/8	1/2	10	1-5/8	4165	2889
<b>WDU38*</b>	3/8	1/2	10	1-5/8	4165	2889
WDL38	3/8	1/2	10	1-5/8	4165	2889
WD12	1/2	5/8	20	2	7114	5060
<b>WDU12*</b>	1/2	5/8	20	2	7114	5060
WDL12	1/2	5/8	20	2	7114	5060
WD58	5/8	7/8	40	2-1/2	8571	8263
WD34	3/4	1	70	3-1/4	12971	11760
WDS14	1/4	3/8	5	1	2410	1670
WDS38	3/8	1/2	10	1-5/8	3990	2710
WDS12	1/2	5/8	20	2	6995	4850
WDS58	5/8	7/8	40	2-1/2	-	-
WDS34	3/4	1	70	3-1/4	-	-
WDSS14	1/4	3/8	5	1	-	-
WDSS38	3/8	1/2	10	1-5/8	-	-
WDSS12	1/2	5/8	20	2	-	-
WDSS58	5/8	7/8	40	2-1/2	-	-
WDSS34	3/4	1	70	3-1/4	-	-

Source (available on request): SGS U.S. Testing Co., Inc., Tulsa, OK, 1996

## Edge Distance and Spacing Requirements

Embedment (E) in Anchor Dia. (d)	Spacing	Edge Distance
$E < 6d$ (shallow)	3.50E	1.75E
$6d \leq E \leq 8d$ (standard)	2.00E	1.00E
$8d < E$ (deep)	1.50E	0.75E

## Installation Instructions



1. Select the proper size drill bit from the Maximum Tensile Chart. Drill the hole perpendicular to the work surface. To assure full holding power, do not ream the hole or allow the drill to wobble.
2. Drill the hole at least as deep as the full length of the anchor, but not closer than two anchor diameters to the bottom (opposite) surface of the concrete.
3. Clean the hole using compressed air and a nylon brush.
4. Tap the anchor, threaded portion last, into the hole. Make sure that the top of the anchor is flush with, or below, the level of the work surface.
5. Insert the setting tool into the threaded end of the anchor and expand the anchor by striking the end of the setting tool with a hammer. The anchor is set (fully expanded) when the shoulder of the setting tool touches the anchor. **Full expansion is necessary for proper anchor performance.**
6. The anchor is now ready to accept threaded hardware.

**NOTE: Always wear safety glasses.** Follow the drill manufacturer's safety instructions. Use only solid carbide-tipped drill bits meeting ANSI B212.15 diameter standards.