

Drop-In Internally Threaded Expansion Shell Anchor

Drop-in anchors are internally threaded, deformation-controlled expansion anchors with a preassembled expander plug, suitable for flush mount applications in solid base materials. The anchor is set by driving the expansion plug towards the bottom of the anchor using the setting tool. Drop-in anchors are also available in coil-threaded versions for 1/2" and 3/4" coil threaded rod.

The Lipped Drop-In (DIAL) features a lip at the top of the anchor body that keeps the top of the anchor flush with the concrete. This eliminates the need for precisely drilled hole depths and allows for easier flush installation, consistent embedment and uniform rod lengths.


Short Drop-In anchors are for use in solid and hollow concrete. The short length permits shallow embedment that helps to avoid drilling into rebar or prestressing strands. The wide surface flange enables the Short Drop-In to be installed in deep or bottomless holes. Fixed-depth drill bits are also available to take the guesswork out of drilling to the correct depth for these 3/8" and 1/2" Short Drop-Ins. Using the fixed-depth bit drill bit prevents overdrilling, which saves time and prolongs bit life.

MATERIAL: Carbon and stainless steel
(DIA37S and DIA50S available in zinc-plated, carbon steel only)

FINISH: Carbon steel: Zinc plated


INSTALLATION:

- Drill a hole in the base material using the appropriate diameter carbide drill bit as specified in the table. Drill the hole to the specified embedment depth plus 1/8" for flush mounting. Blow the hole clean using compressed air. Overhead installations need not be blown clean.

 **Caution:** Oversized holes will make it difficult to set the anchor and will reduce the anchor's load capacity.

- Insert designated anchor into hole. Tap with hammer until flush against surface.
- Using the designated Drop-In setting tool, drive expander plug towards the bottom of the anchor until shoulder of setting tool makes contact with the top of the anchor.
- Minimum thread engagement should be equal to the nominal diameter of the threaded insert.

CODES: Drop-In: City of L.A. RR24682; Factory Mutual 3017082; Underwriters Laboratories File Ex3605. Meets requirements of Federal Specifications A-A-55614, Type I. Short Drop-In: Factory Mutual 3017082 and Underwriters Laboratories File Ex3605.

 The load tables list values based upon results from the most recent testing and may not reflect those in current code reports. Where code jurisdictions apply, consult the current reports for applicable load values.

TEST CRITERIA: The Drop-In anchor has been tested in accordance with ICC-ES's Acceptance Criteria for Expansion Anchors (AC01) for the following:

- Seismic/wind loading
- Combination tension and shear loads
- Critical and minimum edge distance and spacing

SUGGESTED SPECIFICATIONS: Drop-In anchors shall be internally threaded, expanding shell anchors. The anchor shell shall be zinc plated carbon steel with a minimum 70,000 psi tensile strength, type 303 or 316 stainless steel, as called for on the drawings. Drop-In anchors shall meet Federal Specification A-A-55614, Type I. Anchors shall be Drop-In anchors from Simpson Strong-Tie, Pleasanton, CA. Anchors shall be installed following the Simpson Strong-Tie instructions for Drop-In internally threaded expansion shell anchors.

Material Specifications

Anchor Component	Component Material		
	Zinc Plated Carbon Steel	Type 303 Stainless Steel	Type 316 Stainless Steel
Anchor Body	Meets minimum 70,000 psi tensile	AISI 303. Meets chemical requirements of ASTM A-582	Type 316
Expander Plug	Meets minimum 50,000 psi tensile	AISI 303	Type 316
Thread	UNC/Coil-thread	UNC	UNC

Note: DIA37S, DIA50C and DIA75C are not available in stainless steel.



Drop-In



Lipped Drop-In

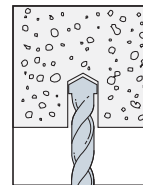


Short Drop-In

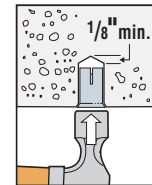


Coil-Thread Drop-In

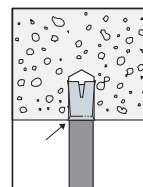
Installation Sequence



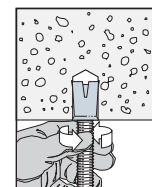
1. Drill a hole using the specified diameter carbide bit into the base material to a depth of at least 1/8" deeper than the required embedment. Then blow the hole clean of dust and debris using compressed air.



2. Insert Drop-In anchor into hole. Tap with hammer until flush against surface.



3. Using the Drop-In anchor setting tool, drive expander plug toward the bottom of the anchor until the shoulder of setting tool makes contact with the top of the anchor.



4. Install threaded rod into the anchor to support pipes, wiring, etc.

Drop-In Internally Threaded Expansion Shell Anchor

Drop-In Anchor Product Data - Carbon and Stainless Steel

Rod Size (in.)	Carbon Steel Model No.	303 Stainless Model No.	316 Stainless Model No.	Drill Bit Diameter (in.)	Bolt Threads (per in.)	Body Length (in.)	Thread Length (in.)	Quantity	
								Box	Ctn.
1/4	DIA25	DIA25SS	DIA256SS	3/8	20	1	3/8	100	500
3/8	DIA37	DIA37SS	DIA376SS	1/2	16	1 1/2	5/8	50	250
1/2	DIA50	DIA50SS	DIA506SS	5/8	13	2	3/4	50	200
5/8	DIA62	DIA62SS	—	7/8	11	2 1/2	1	25	100
3/4	DIA75	DIA75SS	—	1	10	3 1/8	1 1/4	20	80



Drop-In Anchor

Lipped Drop-In Anchor Product Data

Rod Size (in.)	Carbon Steel Model No.	Drill Bit Diameter (in.)	Bolt Threads (per in.)	Body Length (in.)	Thread Length (in.)	Quantity	
						Box	Ctn.
1/4	DIAL25	3/8	20	1	3/8	100	500
3/8	DIAL37	1/2	16	1 1/2	5/8	50	250
1/2	DIAL50	5/8	13	2	3/4	50	200



Lipped Drop-In Anchor

Short Drop-In Anchor Product Data

Rod Size (in.)	Model No.	Drill Bit Diameter (in.)	Bolt Threads (per in.)	Body Length (in.)	Thread Length (in.)	Quantity	
						Box	Carton
3/8	DIA37S ¹	1/2	16	3/4	1/4	100	500
1/2	DIA50S ¹	5/8	13	1	5/8	50	200

1. A dedicated setting tool is included with each box of DIA37S and DIA50S.



Short Drop-In Anchor

Coil-Thread Drop-In Anchor Product Data

Rod Size (in.)	Carbon Steel Model No.	Drill Bit Diameter (in.)	Bolt Threads (per in.)	Body Length (in.)	Thread Length (in.)	Quantity	
						Box	Ctn.
1/2	DIA50C ¹	5/8	6	2	3/4	50	200
3/4	DIA75C ¹	1	5	3 1/8	1 1/4	20	80

1. DIA50C and DIA75C accept 1/2" and 3/4" coil-thread rod, respectively.



Coil-Thread Drop-In Anchor

Drop-In Anchor Setting Tool Product Data

Model No.	For use With	Box Qty.
DIAS25	DIA25, DIAL25	10
DIAS37	DIA37, DIAL37	10
DIAS50	DIA50, DIA50C, DIAL50	10
DIAS62	DIA62	5
DIAS75	DIA75, DIA75C	5

- Setting Tools sold separately except for DIA37S and DIA50S.
- Setting Tools for use with carbon and stainless-steel Drop-In anchors.



Drop-In Anchor Setting Tool

Fixed-Depth Drill Bit Product Data

Drill Bit Diameter (in.)	Drop-In Anchor (in.)	Model No.	Drill Depth (in.)
1/2	3/8	MDPL050DIAS	1 5/16
5/8	1/2	MDPL062DIAS	1 1/4



Fixed-Depth Drill Bit