

Short Drop-In Anchor

Internally Threaded Expansion Anchor



Drop-in anchors are internally threaded, deformation-controlled expansion anchors with a preassembled expander plug, suitable for flush mounting in solid base materials. Simpson Strong-Tie® now introduces a 1/2" diameter Short Drop-In to complement its existing 3/8" diameter offering for solid and hollow concrete applications. The short length enables shallow embedment that helps avoid drilling into rebar or prestressing strands.

FEATURES:

- Lipped edge enables flush installation and consistent embedment that contributes to uniform rod lengths and deployment into deep and bottomless holes
- Lipped edge eliminates the need for precisely drilled hole depths
- Each box includes a setting tool compatible with the anchor to ensure consistent installation

MATERIAL: Carbon steel **FINISH:** Zinc plated

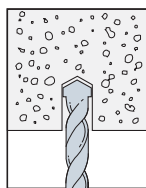


Drop-In Anchor Setting Tool

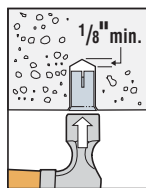
Short Drop-In Anchor Product Data

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

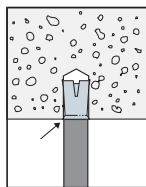
Installation Sequence



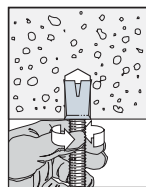
1. Drill a hole using the specified diameter carbide bit into the base material to a depth of at least 1/8" deeper than the required embedment. Then blow the hole clean of dust and debris using compressed air.



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 in the anchor to support pipes, wiring, etc.



Fixed-Depth Drill Bits Available for the 3/8" and 1/2" Short Drop-In Anchors

Fixed-depth drill bits take the guesswork out of drilling to the correct depth for Short Drop-In Anchors. Using the fixed-depth drill bit prevents overdrilling, which saves time and prolongs bit life.



Fixed-Depth Drill Bit Product Data

Drill Bit Diameter (in.)	Drop-In Anchor (in.)	Model No.	Drill Depth (in.)
1/2"	3/8"	MDPL050DIAS	15/16"
5/8"	1/2"	MDPL062DIAS	1 1/4"

Short Drop-In Anchor

Tension and Shear Loads for 3/8" and 1/2" Short Drop-In Anchor in Normal-Weight Concrete

Model No.	Rod Size (in.)	Drill Bit Dia. (in.)	Emb. Depth (in.)	Tension Critical Edge Distance (in.)	Shear Critical Edge Distance (in.)	Critical Spacing (in.)	Normal-Weight Concrete, f _c ≥ 2500 psi				Normal-Weight Concrete, f _c ≥ 4000 psi			
							Tension Load		Shear Load		Tension Load		Shear Load	
							Ultimate (lbs.)	Allowable (lbs.)	Ultimate (lbs.)	Allowable (lbs.)	Ultimate (lbs.)	Allowable (lbs.)	Ultimate (lbs.)	Allowable (lbs.)
DIA37S	3/8	1/2	3/4	4 1/2	5 1/4	3	1500	375	2274	570	2170	540	3482	870
DIA50S	1/2	5/8	1	6	7	4	2039	510	3224	805	3420	855	5173	1295

1. The allowable loads listed are based on a safety factor of 4.0.
2. Allowable loads may not be increased for short-term loading due to wind or seismic forces.
3. Refer to allowable load-adjustment factors for edge distances and spacing on page 157 of Simpson Strong-Tie *Anchoring and Fastening Systems for Concrete and Masonry* catalog.
4. Allowable loads may be linearly interpolated between concrete strengths.
5. The minimum concrete thickness is 1 1/2 times the embedment depth.

Tension and Shear Loads for 3/8" and 1/2" Short Drop-In Anchor in Hollow Core Concrete Panel

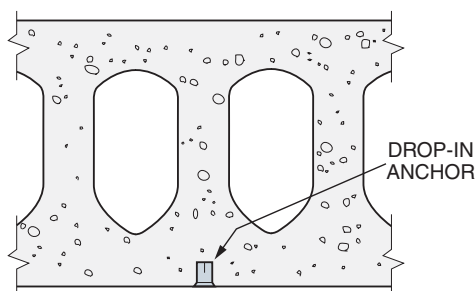
Model No.	Rod Size (in.)	Drill Bit Dia. (in.)	Emb. Depth (in.)	Tension Critical Edge Distance (in.)	Shear Critical Edge Distance (in.)	Critical Spacing (in.)	Hollow Core Concrete Panel, f _c ≥ 4000 psi			
							Tension Load		Shear Load	
							Ultimate (lbs.)	Allowable (lbs.)	Ultimate (lbs.)	Allowable (lbs.)
DIA37S	3/8	1/2	3/4	4 1/2	5 1/4	3	1860	465	3308	825
DIA50S	1/2	5/8	1	6	7	4	2650	660	4950	1235

1. The allowable loads listed are based on a safety factor of 4.0.
2. Allowable loads may not be increased for short-term loading due to wind or seismic forces.
3. Refer to allowable load-adjustment factors for edge distances and spacing on page 157 of Simpson Strong-Tie *Anchoring and Fastening Systems for Concrete and Masonry* catalog.
4. Allowable loads may be linearly interpolated between concrete strengths.

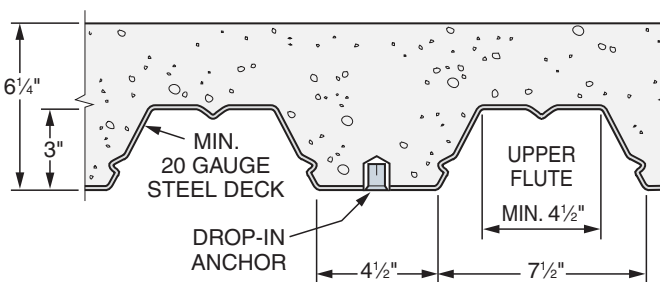
Tension and Shear Loads for 3/8" and 1/2" Short Drop-In Anchor in Sand-Lightweight Concrete Fill over Metal Deck

Model No.	Rod Size (in.)	Drill Bit Dia. (in.)	Emb. Depth (in.)	Tension Critical End Distance (in.)	Shear Critical End Distance (in.)	Critical Spacing (in.)	Install through the Lower Flute or Upper Flute of Metal Deck, f _c ≥ 3000 psi Concrete			
							Tension Load		Shear Load	
							Ultimate (lbs.)	Allowable (lbs.)	Ultimate (lbs.)	Allowable (lbs.)
DIA37S	3/8	1/2	3/4	6	7	8	1344	335	1649	410
DIA50S	1/2	5/8	1	8	9 3/8	10 5/8	1711	430	2070	515

1. The allowable loads listed are based on a safety factor of 4.0.
2. Allowable loads may not be increased for short-term loading due to wind or seismic forces.
3. Refer to allowable load-adjustment factors for edge distances and spacing on page 158 of Simpson Strong-Tie *Anchoring and Fastening Systems for Concrete and Masonry* catalog.
4. Anchors were installed with a 1" offset from the centerline of the flute.



Hollow Core Concrete Panel
(Anchor can be installed below web or hollow core)



Lightweight Concrete over Metal Deck

IN THE SPECS • ON THE JOB • AT YOUR SERVICE™

Simpson Strong-Tie offers a full line of anchors, adhesives, P.A.T. & Gas fastening and drill bits for all of your anchoring and fastening applications. Visit www.simpsonanchors.com or request our full line catalog for complete information.

This flier is effective until January 31, 2013, and reflects information available as of September 1, 2010. This information is updated periodically and should not be relied upon after January 31, 2013; contact Simpson Strong-Tie for current information and limited warranty or see www.simpsonanchors.com.