Crimp Drive® Anchor

The Crimp Drive anchor is an easy-to-install expansion anchor for use in concrete and grout-filled block. The pre-formed curvature along the shaft creates an expansion mechanism that secures the anchor in place and eliminates the need for a secondary tightening procedure. This speeds up anchor installation and reduces the overall cost.

Five crimp anchor head styles are available to handle different applications that include fastening wood or light-gauge steel, attaching concrete formwork and hanging overhead support for sprinkler pipes or suspended ceiling panels.

Material: Carbon steel, stainless steel

Coating: Zinc plated and mechanically galvanized

Codes: Factory Mutual 3031136 for the ⅜" rod coupler.

Head Styles: Mushroom, rod coupler, countersunk, tie-wire and duplex

Mushroom Head | **Rod Coupler**

Countersunk Head | **Tie-Wire** | **Duplex Head**

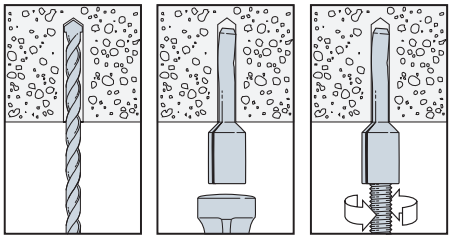
Installation

Warning: Industry studies show that hardened fasteners can experience performance problems in wet or corrosive environments. Accordingly, with the exception of the duplex anchor, use these products in dry, interior and non-corrosive environments only.

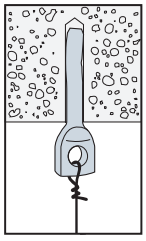
1. Drill a hole using the specified diameter carbide bit into the base material to a depth of at least ½" deeper than the required embedment.
2. Blow the hole clean of dust and debris using compressed air. Overhead application need not be blown clean. Where a fixture is used, drive the anchor through the fixture into the hole until the head sits flush against the fixture.
3. Be sure the anchor is driven to the required embedment depth. The rod coupler and tie-wire models should be driven in until the head is seated against the surface of the base material.

Installation Sequence

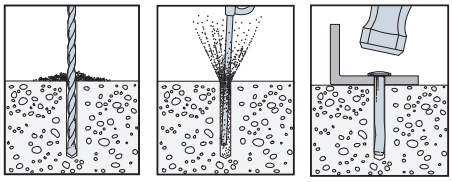
Rod Coupler



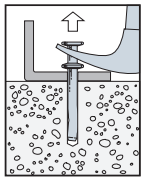
Tie-Wire



Mushroom Head

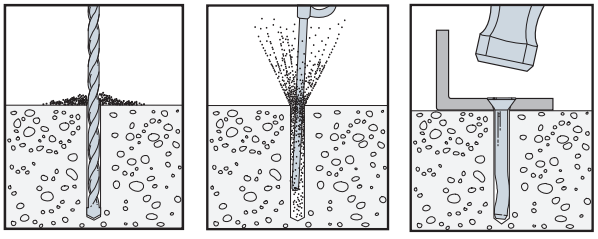


Duplex



Duplex-head anchor may be removed with a claw hammer

Countersunk Head Installation Sequence



Crimp Drive® Anchor

Crimp Drive Anchor Product Data

Size (in.)	Model No.	Head Style/ Finish	Drill Bit Dia. (in.)	Min. Fixture Hole Size	Min. Embed. (in.)	Quantity	
						Pkg. Qty.	Carton Qty.
3/16 x 1 1/4	CD18114M	Mushroom Head / Zinc Plated	3/16	1/4	7/8	100	1,600
3/16 x 2	CD18200M				1 1/4	100	500
3/16 x 2 1/2	CD18212M				1 1/4	100	500
3/16 x 3	CD18300M				1 1/4	100	500
3/16 x 3 1/2	CD18312M				1 1/4	100	500
3/16 x 4	CD18400M				1 1/4	100	500
1/4 x 1	CD25100M		1/4	5/16	7/8	100	1,600
1/4 x 1 1/4	CD25114M				7/8	100	1,600
1/4 x 1 1/2	CD25112M				1 1/4	100	1,600
1/4 x 2	CD25200M				1 1/4	100	500
1/4 x 2 1/2	CD25212M				1 1/4	100	500
1/4 x 3	CD25300M				1 1/4	100	500
1/4 x 3 1/2	CD25312M				1 1/4	100	500
1/4 x 4	CD25400M				1 1/4	100	500
3/8 x 2	CD37200M		3/8	7/16	1 3/4	25	125
3/8 x 3	CD37300M				1 3/4	25	125
1/4 x 3	CD25300MG	Mushroom Head / Mechanically Galvanized	1/4	5/16	1 1/4	100	500
1/4" rod coupler	CD25114RC	Rod Coupler / Zinc Plated	3/16	N/A	1 1/4	100	500
3/8" rod coupler	CD37112RC		1/4	N/A	1 1/2	50	250
3/16 x 2 1/2	CD18212C	Countersunk Head / Zinc Plated	3/16	1/4	1 1/4	100	500
3/16 x 3	CD18300C				1 1/4	100	500
3/16 x 4	CD18400C				1 1/4	100	500
1/4 x 1 1/2	CD25112C		1/4	5/16	1 1/4	100	500
1/4 x 2	CD25200C				1 1/4	100	500
1/4 x 2 1/2	CD25212C				1 1/4	100	500
1/4 x 3	CD25300C				1 1/4	100	500
1/4 x 3 1/2	CD25312C				1 1/4	100	400
1/4 x 4	CD25400C				1 1/4	100	400
1/4 x 3	CD25300CMG	Countersunk Head / Mechanically Galvanized[1]	1/4	5/16	1 1/4	100	500
1/4 x 4	CD25400CMG				1 1/4	100	400
1/4" Tie Wire	CD25118T	Tie-Wire/Zinc Plated	1/4	N/A	1 1/8	100	500
1/4" duplex	CD25234D	Duplex Head/Zinc Plated	1/4	5/16	1 1/4	100	500

1. Mechanical galvanizing meets ASTM B695, Class 55, Type 1. Intended for some pressure-treated wood sill plate applications. Not for use in other corrosive or outdoor environments. See p. 235 for details.

Length Identification Head Marks on Mushroom, Countersunk and Duplex-Head Crimp Drive Anchors (corresponds to length of anchor — inches)

Mark	☐	A	B	C	D	E	F
From	1	1 1/2	2	2 1/2	3	3 1/2	4
Up To But Not Including	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2

Crimp Drive® Design Information — Concrete

Carbon-Steel Crimp Drive Allowable Tension and Shear Loads in Normal-Weight Concrete

Size (in.)	Drill Bit Diameter (in.)	Embed. Depth (in.)	Minimum Spacing (in.)	Minimum Edge Distance (in.)	Tension Load		Shear Load	
					$f'_c \geq 2{,}000$ psi Concrete	$f'_c \geq 4{,}000$ psi Concrete	$f'_c \geq 2{,}000$ psi Concrete	$f'_c \geq 4{,}000$ psi Concrete
					Allowable Load (lb.)	Allowable Load (lb.)	Allowable Load (lb.)	Allowable Load (lb.)
Mushroom/Countersunk Head								
3/16	3/16	1 1/4	3	3	145	250	340	450
1/4	1/4	1 1/4	3	3	175	275	395	610
3/8	3/8	1 3/4	4	4	365	780	755	1,305
Duplex Head								
1/4	1/4	1 1/4	3	3	175	275	395	610
Tie Wire								
1/4	1/4	1 1/8	3	3	155	215	265	325
Rod Coupler[4]								
1/4	3/16	1 1/4	3	3	145	250	—	—
3/8	1/4	1 1/2	4	4	265	600	—	—

1. The allowable loads listed are based on a safety factor of 4.0.
2. The minimum concrete thickness is 1½ times the embedment depth.
3. Allowable loads may be linearly interpolated between concrete strengths listed.
4. For rod coupler, mechanical and plumbing design codes may prescribe lower allowable loads; verify with local codes.

*See p. 14 for an explanation of the load table icons.

Crimp Drive® Design Information — Concrete

Carbon-Steel Crimp Drive Allowable Tension and Shear Loads in Sand-Lightweight Concrete over Steel Deck

Size (in.)	Drill Bit Diameter (in.)	Embed. Depth (in.)	Minimum Spacing (in.)	Minimum Edge Distance (in.)	Tension Load (Install in Concrete)	Tension Load (Install Through Steel Deck)	Shear Load (Install in Concrete)	Shear Load (Install Through Steel Deck)
					$f'_c \geq 3{,}000$ psi Concrete	$f'_c \geq 3{,}000$ psi Concrete	$f'_c \geq 3{,}000$ psi Concrete	$f'_c \geq 3{,}000$ psi Concrete
					Allowable Load (lb.)	Allowable Load (lb.)	Allowable Load (lb.)	Allowable Load (lb.)
Mushroom/Countersunk Head								
3/16	3/16	1 1/4	4	4	115	85	345	600
1/4	1/4	1 1/4	4	4	145	130	375	890
3/8	3/8	1 3/4	5 1/2	5 1/2	315	330	1,030	1,085
Duplex Head								
1/4	1/4	1 1/4	4	4	145	130	375	890
Tie Wire								
1/4	1/4	1 1/8	3	3	130	90	275	210
Rod Coupler[4]								
1/4	3/16	1 1/4	4	4	115	85	—	—
3/8	1/4	1 1/2	5	5	300	280	—	—

1. The allowable loads listed are based on a safety factor of 4.0.
2. The minimum concrete thickness is 1 1/2 times the embedment depth.
3. Anchors may be installed off-center in the flute, up to 1" from the center of flute.
4. Anchor may be installed in either upper or lower flute.
5. Deck profile shall be 3" deep, 20-gauge minimum.
6. For rod coupler, mechanical and plumbing design codes may prescribe lower allowable loads; verify with local codes.

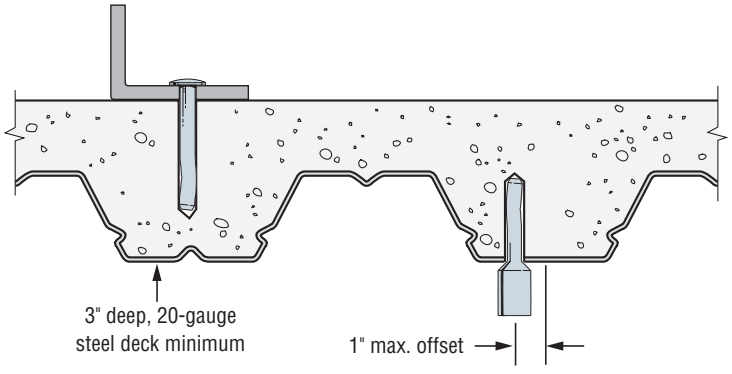


Figure 1. Sand-Lightweight Concrete on Steel Deck

*See p. 14 for an explanation of the load table icons.