

## CSD/DSD Split-Drive Anchors

The Split-Drive anchor is a one-piece expansion anchor that can be installed in concrete, grout-filled block and stone. As the anchor is driven in, the split-type expansion mechanism on the working end compresses and exerts force against the walls of the hole.

### Features

- Available in countersunk (CSD) and duplex-head (DSD) styles
- DSD anchor can be removed with a claw hammer for temporary applications

**Material:** Carbon steel

**Coating:** Zinc plated; mechanically galvanized

### Installation

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

**Caution:** Oversized holes in the base material will greatly reduce the anchor's load capacity. For CSD, embedment depths greater than 1 1/2" may cause bending during installation.

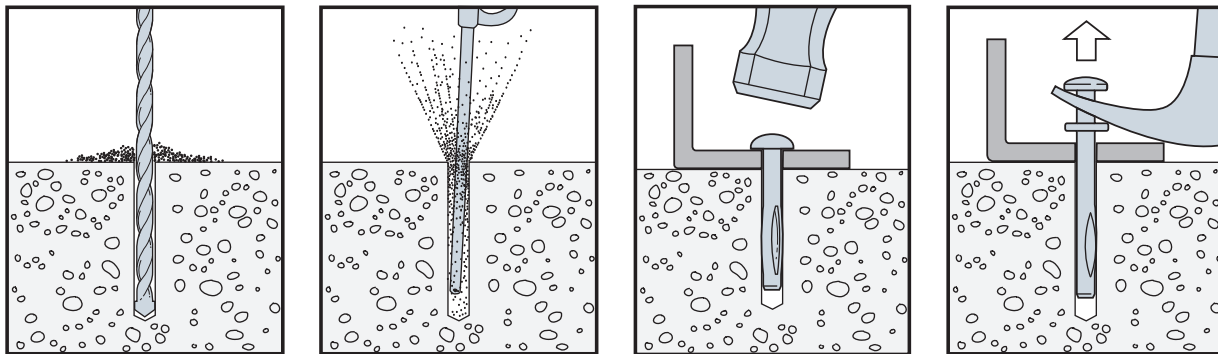
1. Drill a hole in base material using a 1/4"-diameter carbide-tipped drill. Drill hole to specified embedment depth and blow clean using compressed air. Overhead installation need not be blown clean. Alternatively, drill hole deep enough to accommodate embedment depth and dust from drilling. Position fixture and insert split-drive anchor through fixture hole.
2. For CSD, 3/8"-diameter fixture hole is recommended for hard fixtures such as steel. For DSD, 5/16"-diameter fixture hole is recommended.
3. Drive anchor until head is flush against fixture.



**DSD**  
(duplex)

**CSD**  
(countersunk)

### Installation Sequence



DSD anchor may be removed with a claw hammer.

# CSD/DSD Design Information — Concrete

Mechanical Anchors

## CSD/DSD Product Data

Size (in.)	Model No.	Head Style/Finish	Drill Bit Diameter (in.)	Quantity	
				Box	Carton
¼ x 1½	CSD25112	Countersunk head – Zinc plated	¼	100	500
¼ x 2	CSD25200			100	500
¼ x 2½	CSD25212			100	500
¼ x 3	CSD25300			100	400
¼ x 3½	CSD25312			100	400
¼ x 4	CSD25400			100	400
¼ x 3	CSD25300MG	Countersunk head – Mechanically galvanized <sup>1</sup>	¼	100	400
¼ x 4	CSD25400MG			100	400
¼ x 3	DSD25300	Duplex head – Zinc plated	¼	100	400

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

## CSD 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 (lb.)		Shear Load (lb.)	
					$f'_c \geq 2,000$ psi		$f'_c \geq 2,000$ psi	
					Ultimate Load	Allowable Load	Ultimate Load	Allowable Load
¼	¼	1¼	2½	3	655	165	970	240

## DSD 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.)	Concrete Compressive Strength (psi)	Tension Load (lb.)		Shear Load (lb.)	
						Ultimate Load	Allowable Load	Ultimate Load	Allowable Load
¼	¼	1¼	2½	3	2,500	800	200	2,480	620
¼	¼	1¼	2½	3	4,000	1,060	265	2,740	685

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