

**CODE LISTED**  
ICC-ES ESR-2818  
**CATEGORY I**  
CRACKED &  
UNCRACKED CONCRETE

# Power-Stud+SD1

Strength Design Anchoring System



# Power-Stud™ + SD1

## Wedge Expansion Anchor

### PRODUCT DESCRIPTION

The Power-Stud+ SD1 anchor is a fully threaded, torque-controlled, wedge expansion anchor which is designed for consistent performance in cracked and uncracked concrete. Suitable base materials include normal-weight concrete, structural sand-lightweight concrete and concrete over metal deck. The anchor is manufactured with a zinc plated carbon steel body and expansion clip. Nut and washer are included.

### GENERAL APPLICATIONS AND USES

- Structural connections, i.e., beam and column anchorage
- Safety-related attachments
- Interior applications / low level corrosion environment
- Tension zone applications, i.e., cable trays and strut, pipe supports, fire sprinklers
- Seismic and wind loading applications

### FEATURES AND BENEFITS

- Consistent performance in high and low strength concrete
- Nominal drill bit size is the same as the anchor diameter
- Length ID code and indentifying marking stamped on head of each anchor
- Anchor can be installed through standard fixture holes
- Anchor design allows for follow-up expansion after setting under tensile loading

### APPROVALS AND LISTINGS

- International Code Council, Evaluation Service (ICC-ES), ESR-2818
- Tested in accordance with ACI 355.2 and ICC-ES AC193 for use in concrete under the design provisions of ACI 318 (Strength Design method using Appendix D)
- Evaluated and qualified by an accredited independent testing laboratory for use in cracked and uncracked concrete including seismic and wind loading (Category 1 anchors)
- Factory Mutual Approval for 3/8" and 1/2" diameters, File number 3033795

### GUIDE SPECIFICATIONS

**CSI Divisions:** 03151-Concrete Anchoring and 05090-Metal Fastenings. Expansion anchors shall be Power-Stud+ SD1 anchors as supplied by Power Fasteners, Inc., Brewster, NY. Anchors shall be installed in accordance with published instructions and the Authority Having Jurisdiction.

### MATERIAL SPECIFICATIONS

Anchor component	Specification
Anchor body	Medium carbon steel
Hex nut	Carbon steel ASTM A 563, Grade A
Washer	Carbon steel ASTM F 844; meets dimensional requirements of ANSI B18.22.2, Type A Plain
Expansion wedge (clip)	Carbon Steel
Plating	Zinc plating according to ASTM B 633, SC1, Type III (Fe/Zn 5) Minimum plating requirement for mild Service Condition

#### THREAD VERSION

UNC Threaded Stud

#### ANCHOR MATERIALS

Zinc plated carbon steel body and expansion clip, nut and washer

#### ANCHOR SIZE RANGE (TYP.)

1/4" diameter (uncracked concrete)

3/8" through 5/8" diameter (cracked and uncracked concrete)

#### SUITABLE BASE MATERIALS

Normal-weight concrete  
Structural sand-lightweight concrete  
Concrete over steel deck

#### Carbon Steel Clip

#### Carbon Steel Bolt

K-1459 12/09

Confidential - Property of Barnes Distribution, Barnes Group, Inc. Specifications subject to change without notice.

**866-GET-MROP**  
[www.BarnesDistribution.com](http://www.BarnesDistribution.com)

1301 E. 9th Street  
Cleveland, Ohio 44114