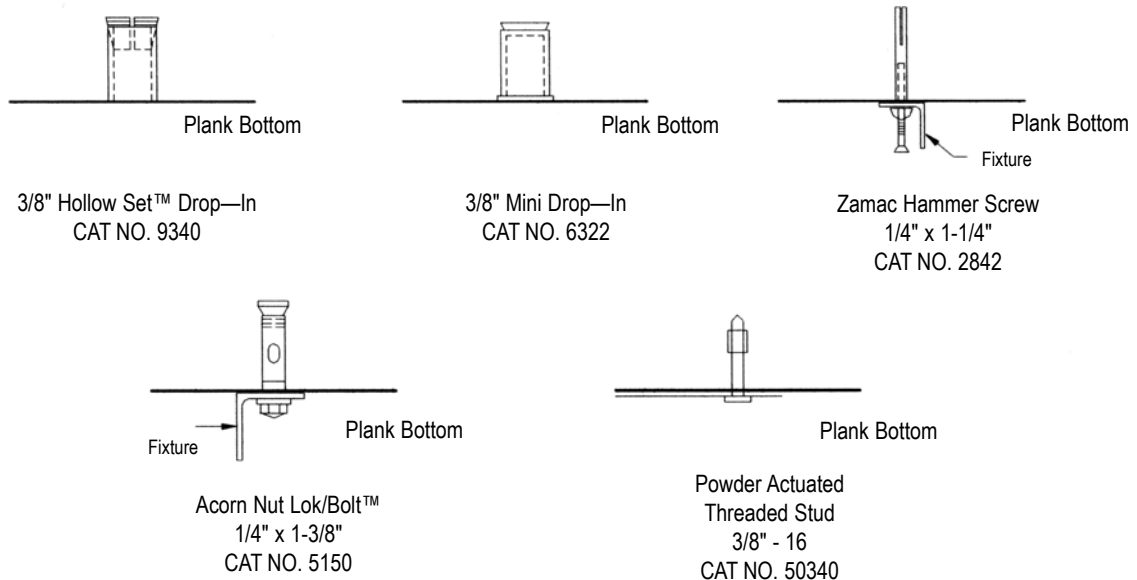


## BOTTOM INSERTS - POWERS FASTENERS

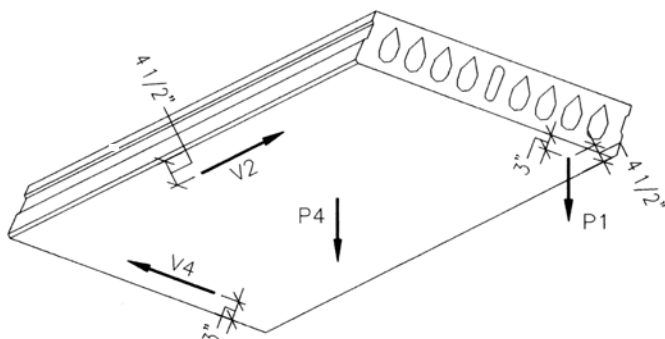
As part of a program for evaluating inserts used in Spancrete® hollowcore plank, five types of inserts manufactured by Powers Fasteners, Inc. were installed in the test plank bottom, directly under cores where the bottom thickness is 1-1/8".



### CONCLUSIONS:

1. Drilled sleeve type inserts are an economical and acceptable way of fastening to a Spancrete plank.
2. It is critical that the type of anchor does not extend into the core, that the embedment be at least 3/4", and that the manufacturer's specified installation procedures be followed.
3. Holding power is reduced when insert is located near any plank edge and in thin concrete sections.
4. If the concrete spalls into the core during drilling, the insert should not be used at that location.
5. Test values must be reduced by appropriate strength reduction factors and safety factors to obtain working load values.

*Test results are given on the reverse side.*



**BOTTOM INSERT  
TEST SETUP**

CAT NO.	PRODUCT DESCRIPTION	DRILL BIT DIA. (in.)	EMBED DEPTH (in.)	ULTIMATE TEST LOADS (lbs)				
				P1	P4	V2	V4	
9340	3/8" Hollow Set Drop-In	5/8"	3/4"	AVG.	1967	2523	3772	2723
				LOW	1470	2020	2530	2080
6322	3/8" Mini Drop-In	1/2"	3/4"	AVG.	2284	2346	2372	2088
				LOW	1590	1910	1790	760
2842	Zamac Hammer Screw 1/4" x 1 1/4"	1/4"	3/4"	AVG.	754	875	925	981
				LOW	670	670	710	600
5150	Acorn Nut Lok/Bolt 1/4" x 1-3/8"	1/4"	3/4"	AVG.	1338	879	1252	885
				LOW	1040	710	730	620
50340	3/8"—16 Powder Actuated Threaded Stud	-	3/4"	AVG.	N/A	1129	1028	942
				LOW	N/A	970	790	700

**NOTE:**

1. Test values must be reduced by appropriate strength reduction factors and safety factors to obtain working load values. For more information on anchor design and installation, please refer to either the latest edition of Power's Fastening Systems Design Manual or [www.powers.com](http://www.powers.com).
2. All tests were performed at Power Fastener's Technical Center in New Rochelle, NY: and in accordance with ASTM E—488, Standard Test Methods For Strength of Anchors in Concrete and Masonry Materials. Five tests were done for each load case.

**EAST**

Oldcastle Precast, Inc.  
South Bethlehem, NY

Oldcastle Precast, Inc.  
Manchester, NY

Conewago Precast Building  
Systems  
Hanover, PA

**MIDWEST**  
Spancrete, Inc.  
Green Bay, WI

Spancrete Industries, Inc.  
Waukesha, WI

Hanson Structural Precast  
Midwest, Inc.  
Maple Grove, MN

Spancrete of Illinois, Inc.  
Arlington Heights, IL

**WEST**  
Hanson Structural Precast  
Pacific, Inc.  
Inwindale, CA

**KIE-CON**  
Div. of Kiewitt Pacific Co.  
Antioch, CA

Owell Precast  
Sandy, UT

**SOUTHWEST**  
Manco Structures, Ltd.  
Schertz, TX

**SOUTH**

Cement Industries, Inc.  
Fort Myers, FL

Florida Precast Industries, Inc.  
Sebring, FL

**MC Precast, Inc.**  
Atlanta, GA

**CANADA**  
Burnco Concrete Products Ltd.  
Calgary, Canada

**EGYPT**  
Samcrete Egypt  
Ahram, Giza

**MEXICO**

ITISA  
Mexico City, Mexico

Spancrete Noreste  
Monterrey, Mexico

**TURKEY**  
Yapi-Merkezi  
Camlica-Istanbul, Turkey

**CARIBBEAN**  
Preconco Limited  
Barbados, West Indies

Spancrete Caribbean, Ltd.  
Trinidad, West Indies

**UAE**  
Hi-Tech Concrete Products, LLC  
Abu Dhabi, UAE

**MACHINE MANUFACTURER**

Spancrete Machinery  
Corporation  
Waukesha, WI

Spancrete is also manufactured in

Armenia	Denmark	Russia
Australia	Guatemala	South Korea
Belgium	Hungary	Spain
Brazil	Ireland	Switzerland
China	Israel	
Croatia	Japan	