

## UNISORB® CAPSULE ANCHOR SYSTEM

### CAPSULE ANCHOR WITH STUD ASSEMBLY



This system provides a superior method of heavy duty anchoring using a high strength adhesive to retain a threaded rod and other materials such as rebar in concrete or other masonry material. The system consists of an adhesive capsule containing the proper proportion of base resin, hardener and aggregate for the anchor, an appropriate length stud with washer and nut, and a drive unit to allow the stud to be inserted into a standard hammer drill.

To install the anchor, a clearance hole is prepared and a capsule is inserted. The stud is driven into the hole with a standard hammer drill using the drive unit.

The driving action breaks the adhesive capsule HVU and mixes the pre-measured components. At room temperature the anchor nuts may be torqued down within approximately 30 minutes.

Extensive testing and field trials have proven the HVU Adhesive Capsule Anchor Systems are among the most dependable on the market. They are far superior to the expansion type anchoring system, and stronger than the concrete itself.

STUD ASSEMBLY SPECIFICATIONS (ASTM 1554 GR. 55)						
Anchor Size	Capsule Size	Drill Dia.	Hole Depth	Anchor No. & Length	*Allowable Tensile Load	*Allowable Shear Load
3/8"	<b>HVU2 3/8 x 3-1/2</b>	7/16"	3-1/2" (89mm)	S-38 x 5-1/8"	4360 lbs 1978 kg	2270 lbs 1030 kg
1/2"	<b>HVU2 1/2 x 4-1/4</b>	9/16"	4-1/4" (108mm)	S-12 x 6-1/2"	7985 lbs 3622 kg	4150 lbs 1882 kg
5/8"	<b>HVU2 5/8 x 5</b>	11/16"	5" (127mm)	S-58 x 8"	11030 lbs 5003 kg	6610 lbs 2998 kg
3/4"	<b>HVU2 3/4 x 6-5/8</b>	7/8"	6-5/8" (168mm)	S-34 x 10"	16825 lbs 7632 kg	9785 lbs 4438 kg
7/8"	<b>HVU2 7/8 x 6-5/8</b>	1"	6-5/8" (168mm)	S-78 x 10"	16825 lbs 7632 kg	13505 lbs 6126 kg
1"	<b>HVU2 1 x 8-1/4</b>	1-1/8"	8-1/4" (210mm)	S-100 x 12"	23380 lbs 10605 kg	17720 lbs 8038 kg
1-1/4"	<b>HVU2 1-1/4 x 12</b>	1-3/8"	11" (279mm)	S-114 x 16"	35995 lbs 16327 kg	28345 lbs 12857 kg

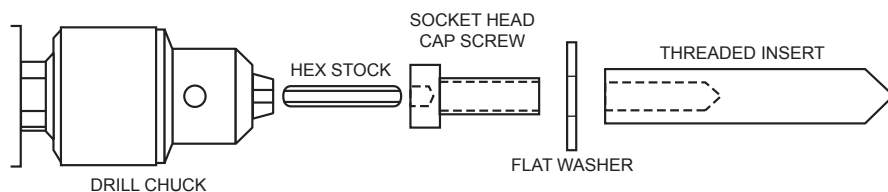
\*Allowable Load Data

- The allowable tensile loads assume a 4,000 psi (280 kg/cm<sup>2</sup>) uncracked concrete with holes created by a carbide tipped hammer-drill bit.
- The allowable shear loads are based on an F 1554 Gr. 55 anchor.
- All loads assume an appropriate distance from the edge of the concrete to the anchor location as well as between anchors. Special length anchor assemblies are available. Please contact the factory with complete installation details (dimensions, loads, etc.) for assistance.



## INSTALLATION SOLUTIONS

### CAPSULE ANCHOR WITH INTERNALLY THREADED INSERT



This system provides a superior method of heavy duty anchoring using a high strength adhesive to retain a threaded insert in concrete or other masonry material. The system consists of an HVU Adhesive Capsule containing the proper proportion of base resin, hardener and aggregate for the anchor and an appropriately sized threaded insert. The customer provides an appropriately sized socket head cap screw and washer, along with a short length of hex stock to be used as a driver when inserted into the chuck of a standard hammer drill.

The cap screw can then be used to secure the machine.

To install the anchor, a clearance hole is prepared and a capsule inserted. The threaded insert is driven into the hole with a standard rotary hammer drill using the equipment shown in the illustration below. This action breaking and mixing with pre-measured components. At room temperature, the anchor bolts may be torqued down in approximately 30 minutes.

INTERNALLY THREADED INSERT SPECIFICATIONS						
Insert Size	Capsule Size	Drill Dia.	Hole Depth	Maximum Thread Engagement	*Allowable Tensile Load	*Allowable Shear Load
3/8 x 4-1/4"	<b>HVU-12</b>	11/16"	4-3/8" (110mm)	15/16"	6300 lbs 2858 kg	3490 lbs 1583 kg
1/2 x 5"	<b>HVU-58</b>	7/8"	5" (127mm)	1-3/16"	11030 lbs 5003 kg	6385 lbs 2896 kg
5/8 x 6-5/8"	<b>HVU-78</b>	1-1/8"	6-3/4" (170mm)	1-1/2"	17305 lbs 7849 kg	10170 lbs 4613 kg
3/4 x 8-1/4"	<b>HVU-100</b>	1-1/4"	8-1/8" (205mm)	1-7/8"	22850 lbs 10365 kg	15055 lbs 6829 kg

Metric dimensions are for reference only.

\*Assumes using and ASTM A193 Gr. B7 cap screw.

- The allowable tensile loads assume a 4,000 psi (280 kg/cm<sup>2</sup>) uncracked concrete with holes created by a carbide tipped hammer-drill bit.
- All loads assume an appropriate distance from the edge of the concrete to the anchor location as well as between anchors. Special length anchor assemblies are available. Please contact the factory with complete installation details (dimensions, loads, etc.) for assistance.

### HILTI HVU2 ADHESIVE



HILTI HVU2 ADHESIVE CURE TIMES	
Concrete Temperature	Cure Time
68°F (20°C) & Over	5 minutes
50°F to 67°F (10°C to 19°C)	10 minutes
41°F to 49°F (5°C to 9°C)	20 minutes
32°F to 40°F (0°C to 4°C)	40 minutes
23°F to 31°F (-5°C to -1°C)	3 hours
14°F to 22°F (-10°C to -6°C)	5 hours