## Installation Instructions

**Threaded Penetration Fitting - Double Sided for pipes from 1.5” through 2.7” OD**

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<th>CH-BDB</th>
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<td>1.5</td>
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<td>1.7</td>
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### Prepare all Surfaces
All surfaces to be bonded should be prepared prior to completing the installation steps below.

**Warning:** Failure to follow each step will void the warranty and may result in premature failure of the penetration fitting. Adhere to the following general instructions for each step of the installation.

**Bonding to Poly & FRP surfaces:** Clean and sand (rough up) sump surfaces with CH-DAG II. Remove all gel coat on all fiberglass surfaces. Apply CH-DBB V to all surfaces to be bonded both the fitting and sump wall.

**Cleaning:** Spray all surfaces to be bonded with CH-DAG II Cleaner and allow to air dry. Excess cleaner may be wiped off with a clean dry cloth.

### Step 1

**Hole Preparation:** Drill a 3 1/2” Diameter hole where the fitting is to be installed. Where possible run the pipe perpendicular to the sump surface. Sand around the hole 1 1/2” on all sides to be bonded.

- **Hole Saw 3 1/2”**
- **Minimum Spacing between Centers 5.5”**

### Step 2

**Sump Preparation:** Occasionally the sump may have uneven wall thickness. This is particularly true of hand laid up fiberglass sumps. To assure a consistent seal, sand all uneven areas until the wall thickness is consistent.

### Step 3

**Dry fit the fittings:** Dry fit. If you have trouble installing the fitting recheck the holes. You may need to clean the holes with the hole saw or sand paper. The body must fit freely through the hole.

### Step 4

**Clean & Bond:** Spray all surfaces to be bonded with CH-DAG II Cleaner. Wipe dry or air dry. Apply CH-DBB V Bonder to the fitting surface that creates a seal with the sump wall. When installing there should be enough bonder so that a small bead escapes the perimeter of the fitting when the nuts are tightened to the fitting. If no bonder is present remove fitting and apply again.

### Step 5

**Tighten Nut, Install Pipe and Tighten Band Clamps:** Tighten nut with water pump pliers until snug. Do not over tighten nut. Install pipe and tighten band clamps. Do not exceed 60 in lb. Pipe should be run perpendicular to the sump wall. Do not exceed 15 deg off angle. Install the boot over the body on the outside of the sump. Tighten clamps to boot and pipe.

### Tools Required

- 3 1/2” hole saw
- 5/16 nut driver for band clamps
- Water Pump Pliers
- CH-DAG III applicator gun for CH-DBB V bonder

### Products Needed

- CH-DAG II - Cleaner .1 Cans per penetration fitting
- CH-DBB V - Methylmethacrylate Bonder - 15 ml per fitting