

## **HUSHCORE™ *Ultimate*™ System For Liquid Cooled Chillers Installation Guidelines**

HUSHCORE™ *Ultimate*™ Systems are highly customized high performance designs. Detailed fabrication drawings for each *Ultimate*™ System will outline structural steel anchorage and tie in requirements, panel layouts and support methodologies, and erection needs of auxiliary components such as acoustical louvers and silencers used on the project.



### **1) PLANNING**

Review the CAD erection drawings and bill of materials which will list all panels, trim (flashing) and other accessory items required for the job.

### **2) INSTALLATION OF STRUCTURAL STEEL**

Most HUSH GUARD™ enclosures up to a size that does not exceed a 12' roof span in any one direction or height are completely self-supporting without the use of supplementary structural steel. When required, the structural steel will be detailed on the drawings and should be installed according to the erection drawings.

### **3) INSTALLATION OF BASE CHANNEL**

Like all trim and flashing, the base channel is supplied in standard lengths and must be cut to size by the installing contractor. It is the customer's responsibility to be sure that the foundation or bearing surface is suitable for the support of the enclosure.

#### **4) ERECTION OF WALL PANELS**

Start at a corner and set panels on each side of the corner into the floor channel. Secure corner panels with outside corner flashing using sheet metal screws. Tongue and groove panels or supplementary H joiners are used to sequentially connect additional panels in either direction until all perimeter walls have been erected.

#### **5) DOOR FRAMES AND DOORS**

Door frames and doors are installed during the natural panel sequence with adjacent panels fitting against the frame on both sides for standard doors. Depending on the size, some standard and premium doors may be pre-installed in a larger panel.

#### **6) INSTALLATION OF ROOF PANELS**

Install the roof panels according to the erection sequence shown on the drawing.

#### **7) INSTALLATION OF TRIM**

Install all outside and inside trim and flashing. At a minimum, it is recommended to anchor inside and outside corner flashing at all panel joints and at all internal panel stiffeners using tec screws supplied with the enclosure.

#### **8) ACCESSORY ITEMS**

Lighting, ventilation systems and other accessories should be installed as per the drawings.

#### **9) FACTORY CUTOUTS**

Factory cutouts must be sealed in accordance with the following guidelines. Split flashing or HUSH BLOCK™ RLV-100 is used to seal oversized openings around pipes, duct and other obstructions where shown on the drawings.

#### **10. FIELD CUTOUTS**

Where field cutouts or panel modifications are planned or necessary, the procedure shall be as follows:

Step 1 – Locate the exact position of the desired penetration or field cut and determine the exact size needed. Add approximately 1” horizontally and vertically to these dimensions for additional clearance.

Step 2 – Maintaining this clearance, use a hole cutting saw or a sheet metal cutting tool such as a jigsaw or a saber saw to cut the external (solid) side of the acoustical panel.

Step 3 – Using a sharp utility knife or similar tool, cut away the internal acoustic fill to accommodate only the item to penetrate the enclosure.

Step 4 –Following the same procedure as Step 2, use a hole saw or sheet metal cutting tool to remove the perforated sheet allowing the 1” clearance as performed on the outer solid panel.

Step 5 – Use cap channel and tec screws to finish off exposed cut panel edges. If the field cut is for a pipe or duct penetration, continue with steps 6 to 12.

Step 6 – Measure the maximum vertical and horizontal dimension of the opening and then proceed to add approximately 2” per side to each of these dimensions.

Step 7 – Cut a piece of high density vinyl material or solid galvanized sheet metal as outer seal to the dimensions obtained in Step 6.

Step 8 – Similarly cut a piece of vinyl or solid steel material for the inner seal of the panel to the dimensions obtained in Step 6.

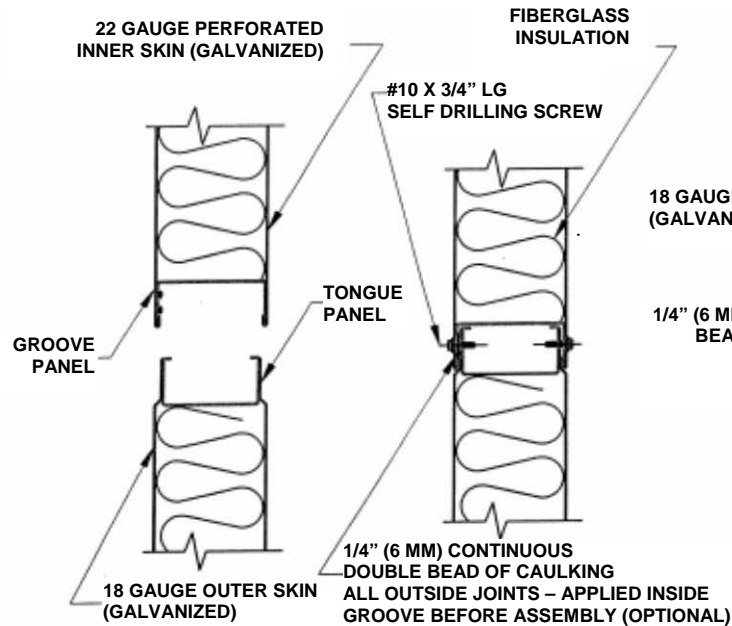
Step 9 – Cutting from the top downward to approximately the center of the proposed penetration, custom fit the vinyl or sheet metal pieces to fit contour of the penetration. This should be performed with accuracy and be accomplished using a utility knife for the vinyl and a sheet metal shear or similar sheet metal cutting tool for the solid galvanized sheet metal.

Step 10 – Place the outer surface seal (from Step 7) in place and secure to the external surface of the enclosure panel. This should be accomplished by using a small bead of silicone on sheet metal surfaces and then securing this material in place with self-tapping sheet metal screws. The vinyl material would be installed utilizing an approximately 2” wide sheet metal strip to hold the vinyl in place. This sheet metal strip would then be secured to the enclosure utilizing self-tapping sheet metal screws.

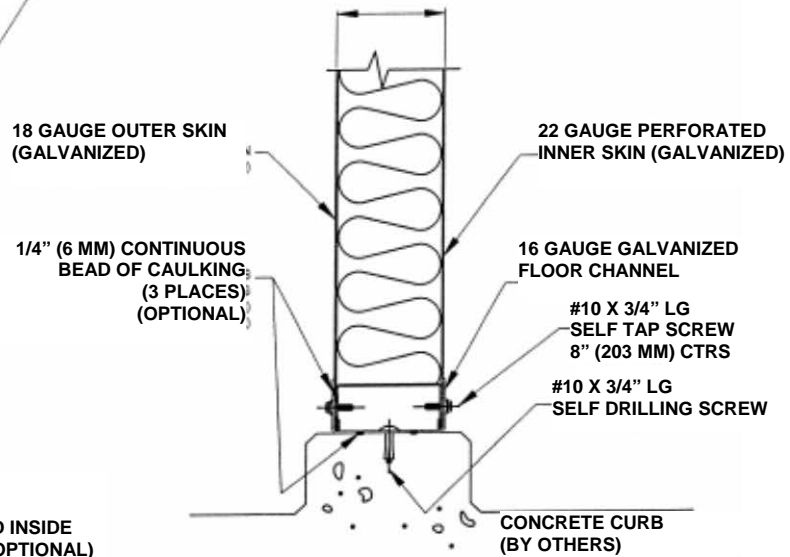
Step 11 – From the inside out, install additional acoustic fill material into any openings which are surrounding the penetration.

Step 12 – Proceed as in Step 10 above to install the internal seal material on the inside surface of the acoustical panel. With a flexible silicone or similar material, seal around the external surface of the penetration to eliminate openings which may allow noise to escape.

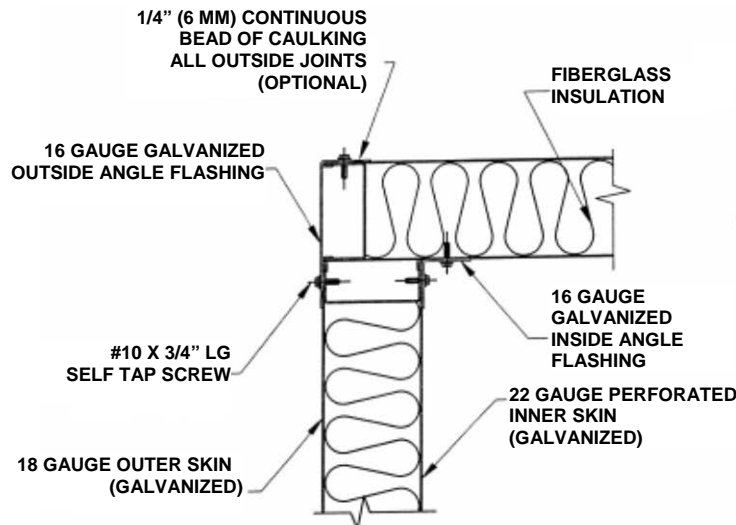




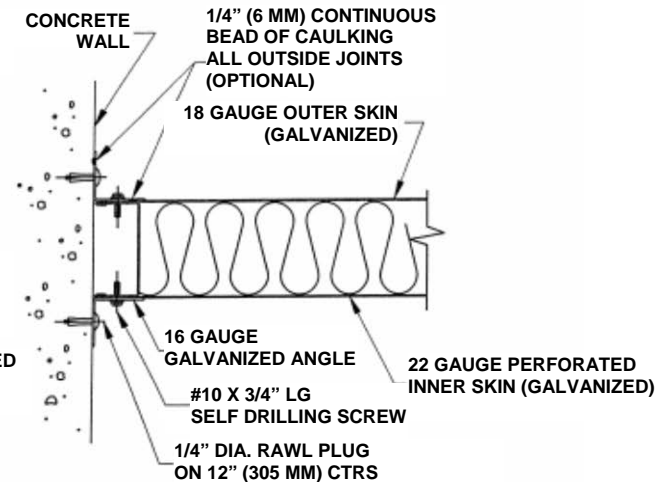
**TYPICAL TONGUE AND GROOVE PANEL CONNECTION**



**TYPICAL PANEL TO CURB CONNECTION**



**TYPICAL 90 DEGREE PANEL CONNECTION**



**TYPICAL PANEL TO WALL CONNECTION**