INSTALLATION INSTRUCTIONS SECTION 2: 2" PLASCORE STUDLESS WALL SYSTEM

Instructions available in Spanish

THE FOLLOWING INFORMATION IS PROVIDED BY PLASCORE, INC. AS A GENERAL GUIDELINE FOR INSTALLATION OF THE PLASCORE 2" STUDLESS WALL SYSTEM. THIS INFORMATION SHOULD BE REVIEWED PRIOR TO COMMENCING INSTALLATION. THE INFORMATION IS INTENDED TO COVER STANDARD INSTALLATION PRACTICES, AND MAY NOT COVER CUSTOM DETAILS SPECIFIC TO THE PARTICULAR PROJECT IN QUESTION. CONSULT PLASCORE INC. FOR QUESTIONS ON CUSTOM INSTALLATION APPLICATIONS.

1. RECEIVING MATERIAL

A. Materials are packed in crates which may be up to 3,600 lbs, and 200 inches long. Plascore advises that crates be handled by fork trucks with long forks and appropriate load ratings.

B. Standard shipping arrangements are made with box trucks to be unloaded at a shipping dock. Special arrangements can be made at an upcharge to ship materials on Flatbed trucks for side loading/unloading.

C. Crates will typically be stacked on the trucks to minimize freight costs. Considerations should be made to unload stacked crates in a safe and careful manner to avoid damage and injury.

D. Receiver should visibly inspect all crates as they are unloaded. Any crate damage should be noted on the bill of lading to facilitate a freight claim if product is found to be damaged.

E. Receiver should verify the packing slip matches the crate labels as they are unloaded. Notify Plascore immediately of any discrepancies.

F. Crates should be stored in a climate controlled area where they are protected from moisture, humidity, and temperature extremes.

(*CONSTRUCTION TIPS:)*

1. *Using short forks may result in crates tipping and being punctured by the end of the forks.*
2. *Hardware/Extrusion crates are typically built to be 4 way and handled from either side, however panel and door crates are built to be handled from the ends only. Please notify Plascore at the time the order is placed if Flat Bed trucks are required for side unloading so crates can be built to accommodate this.*
3. *Do not store crates under tarps outdoors. Tarps can become torn or lose their waterproofing characteristics quickly, allowing water to penetrate to the crates.*

2. UNCRATING/INSPECTING MATERIAL

A. Panels are packed with a protective film covering the cleanroom surfaces. All film should be left in place as long as possible to prevent damage.

B. All panels should be unloaded by two people lifting the panel straight up off of the stack. Dragging panels from the side of a crate will result in damage.

C. If damage to material is noted, stop unloading and notify Plascore immediately for further instruction. (Please reference Plascore submittals for material data sheets on acceptable product defects/tolerances)

D. It is advised that customers inventory material as they are uncrating it and notify Plascore immediately of any discrepancies from the crate label descriptions.

(CONSTRUCTION TIPS:)

1. *Remove all 4 sides from panel crates before removing the panels. This facilitates lifting panels straight upward instead of sliding them.*
2. *The use of panel suction cups may help in the handling of panels.*
3. *Protective film may show cuts or scratches; however, the panel may be undamaged underneath. Peel back the protective film in the area in question to determine if panels are actually damaged below.*
4. *Do not remove protective film until the panels have been allowed to acclimate to room temperature, and humidity is less than 50%. Allow a minimum of 36 hours of acclimation before removing film. Failure to follow these guidelines could result in adhesive residue being left behind on the panel surface. If adhesive residue is found on panels STOP removing film and contact Plascore immediately.*

3. INSTALLATION OF HEADTRACK

A. Locate headtrack part# M0859. Remove protective film before installation.

B. Locate the centerline of the 2" wall assembly on the floor, and transfer that location up to the ceiling with a laser or plumb bob.

C. If installing against a Plascore ceiling, position the headtrack flat against the ceiling and use the supplied self-drilling tek screws (part# 0120525) to fasten the headtrack to the ceiling. Fasteners should be installed at a minimum spacing of 24" and torqued to **6-9 in·lbs**.

D. Headtrack should be mitered and fit together as tightly as possible at all corners. Some gapping is ok if the headtrack is on an interior wall as it will be covered with coving.

E. Continuous lengths of headtrack should be butted together.

F. If installing against a grid ceiling, the grid must be sufficiently strong enough or braced to support the lateral load of the wall panels.

(CONSTRUCTION TIPS:)

1. *Cuts can be made with tin snips or miter saw.*
2. *If cutting with a saw, be sure to use a blade designed for steel sheet metal.*
3. *If cutting with a saw, use a spacer block inside the headtrack channel to keep the edges from bending during the cut.*

4. INSTALLATION OF FLOORTRACK

A. Locate floortrack assembly part# A0288. The assembly consists of a base extrusion and a top extrusion.

B. Locate the centerline of the 2" wall assembly on the floor. Measure 1" off the centerline to locate the edge of the floortrack. The base is exactly 2" wide to match the wall width.

C. Install the base extrusion flat against the floor. Use appropriate fasteners to secure the base extrusion to the floor. Fastener type may vary by floor type (Fasteners not provided by Plascore). Floortrack base should be fastened at a minimum spacing of 24", and within 3" of the end of each section of floortrack.

D. Floor track can be mitered or butt jointed at corners. If mitered, the corner will be enclosed, however the last two inches of the top spline must be cut off to allow the panels to be butt jointed.

E. Continuous lengths of floortrack should be butted together.

F. There should be a gap left in the floortrack at all doorways. Consult the submittal door drawings for overall door widths. Floortrack does not need to be tight to the door jamb, a tolerance of 1/8" can be left between the floortrack and door jamb.

G. The top half of the floortrack slides over the base track and gets fastened into the base from the sides. Before fastening the two pieces, the top floortrack should be leveled at a nominal height of 4".

H. The top half of the floortrack is secured to the base track with self drilling tek screws (#0120525). Install one screw on each side with a minimum spacing of 18". If installing a vinyl flooring, flat head pop rivets can be used in place of tek screws to prevent bump ups in the vinyl cove base.

(CONSTRUCTION TIPS:)

1. *Cuts can be made with a miter saw using a blade designed for cutting aluminum.*
2. *When leveling the floortrack, start the 4" base height at the high point of the room. The floortrack can be adjusted from 3.5"-5.25", so much of the adjustment is greater than 4".*
3. *It may be helpful to use a clamp to hold the top floortrack in place once leveled during the fastening process.*
4. *It may be helpful to predrill holes in the floortrack assembly once leveled to help with installation of tek screws.*
5. *At T-intersections, the intersecting floortrack can be held back from the perpendicular track 1/8"-1/4"to allow the panel to pass by without interfering with the floortrack spline.*

5. 2" WALL PANEL PREPERATION

A. Determine a starting point to begin installing Plascore 2" Studless wall panels. The wall panels are installed progressively, so be sure to choose a starting point that allows the panels to be installed continuously from one end of the wall to the other, or from the middle out to the wall ends.

B. Locate the Plascore floor plan and/or the panel label key drawing to determine the next panel size required for installation. If referencing the panel label key drawing, the key will depict the panel number corresponding to a sticker located on each panel edge. Panels designated as "-cut" on the key indicate the panel is to be field cut in the width. If referencing the floor plan, you can use the dimensions on the plan to find the correct sized panel.

C. If any cuts are required, move panels to an area designated for panel cutting, and make cuts for equipment penetrations and any panel sizing required.

(CONSTRUCTION TIPS:)

1. *Start installation in a corner or wall start, preferably where a field cut is not required and build towards the end where field cuts may be allowed.*
2. *Wall panels can only be cut at a corner or wall start where the cut edge is going to be hidden by coving.*
3. *Keep ALL panel drops that contain a finished edge. Drops are figured to be used as part of the project material count.*
4. *Use panel drops as efficiently as possible.*
5. *Leave all protective film in place during cutting and handling of panel.*
6. *Cut panel with a circular saw intended for use on steel sheet metal. (i.e. Milwaukee brand 8" Metal Cutting Saw 6370-20)*
7. *Avoid using reciprocating saws if possible as they may tear skins from core if the blade catches.*
8. *Keep all surfaces that panels may rest on free of metal chips to avoid scratches.*

6. 2" WALL PANEL INSTALLATION

A. Peel back protective film 1" from edge of the prepared panel so it does not get pinched in the panel seam.

B. Install the first panel by angling the top of the panel up into the headtrack until it clears the floortrack spline, and then lower the panel onto the floortrack so that the spline engages the panel extrusion slot.

C. Install a black plastic spline (part# E0047) into the installed panel edge. The spline should run top to bottom of the panel seam. The spline does not need to be one continuous piece.

D. Continue installing adjacent panels by engaging the panel edge with the spline of the installed panel.

E. Protect panels from damage at all times. Corrugated plastic sheets or equivalent are recommended.

(CONSTRUCTION TIPS:)

1. *Panels should be pushed together as tightly as possible. If necessary, a block of wood and mallet can be used to tap the panels into place. Be sure the wood is only contacting the panel extrusion to avoid damaging the panel skin.*
2. *It may be helpful to use suction cups to handle 2" wall panels.*
3. *It is imperative that door openings are plum and square during panel installation to insure proper installation of doors later.*

7. 2" WINDOW PANEL INSTALLATION

A. A window module is make up of a base panel, a window assembly, and a header panel.

B. Install the base panel as described under the panel installation section. The base panel should have four finished sides.

C. Place a plastic spline in the top rail of the base panel. Leave the spline 1" short on each side to avoid the miter of the internal panel and window extrusions, as the miter can sometimes be slightly offset and make it difficult to install the spline.

D. Install the 2" thick window unit on top of the base panel, engaging the splines and pushing it up tight against the base and adjacent vertical panels. Be sure that the Plascore logo is orientated correctly if applicable.

E. Install a spline in the top rail of the window assembly, then install the window header panel.

(CONSTRUCTION TIPS:)

1. *It may be helpful to use suction cups to handle window assembly units.*
2. *Window should be sealed against the panel with silicone caulk, cold weld sealant will not adhere to the glass.*

8. RAISED AIR RETURN WALL INSTALLATION

A. 2" raised wall panels use the same panel type as the full height studless walls.

B. Determine the correct depth/width of the chase, as well as the mounting height.

C. Locate the correct mounting bracket. 3"x3" brackets are typically used at inside corner locations where a return wall butts perpendicular to a full height wall. Gussets are used in continuous runs of raised return walls, or at outside corners. The gussets are made to match the depth of the chase.

D. Install 3"x3" brackets as detailed in the shop drawings by first installing two Plus-nut type rivnuts into the full height panel. The brackets are then fastened to the rivnuts using 1" hex head bolts and lock washers. Torque bolts to **6-10 ft·lbs**.

E. Install Gussets as detailed in the shop drawings by first installing four plus-nut type rivnuts into the full height panel. The gussets are then fastened to the rivnuts using 1" hex head bolts and lock washers. Torque bolts to **6-10 ft·lbs.** Gussets should have a maximum spacing of 4'.

F. Install part# E0043 air return base track to the 3"x3" brackets and gussets with t-nuts, button head cap screws, and lock washers. Torque bolts to **6-10 ft·lbs.** The t-nuts fit into the slot on the back side of the E0043 air return base track. The track should be mitered at all inside and outside corners.

G. T bar splice bars are included to tie together butt joints in the E0043 extrusion where required. T-bar miter brackets are used at outside corners, unless there is a gusset present.

H. Install enclosure cap on the back side of the E0043 base track to cover the visible portion of the t-slot.

I. If applicable, install wire screen along the top of the gussets, utilizing stainless steel wire to tie the mesh to pre-drilled holes within the gusset. Use clips fastened to the wall to hold the screen where gussets aren't present.

J. Install panels in the same manner as section 6.

(CONSTRUCTION TIPS:)

1. *Gussets will be handed at outside corners. Be sure to use the correct gusset that will allow the base track to wrap around the gusset.*

9. COVE INSTALLATION

A. Coving should be installed at all vertical inside corners, and all wall-to-ceiling intersections unless otherwise specified.

B. Install the injection molded 3-way cove corner at all inside corners where the cove intersects from three directions.

C. Install the injection molded 2-way cove corner at all outside corners where the cove intersects from two directions.

D. Install the injection molded tapered cove corner at all raised wall inside corners where the coving does not go down to floor level. The tapered coving acts as a termination point for the coving and is installed into the cove base extrusion.

E. Install the cove base extrusion to the panels using supplied tek screws. Install a screw into the wall and into the ceiling every 2'. Torque the fasteners to **6-9 in·lbs.** Run the cove base all the way to the tabs of the inside and outside corner covers (cove base should stop 3-1/2" from the corners). Run the cove base to the bottom of the wall panels. Butt cove base end to end for continuous stretches of cove.

F. Install the PVC coving into the cove base. The legs of the coving will need to be trimmed back at the corners to allow it to overlap the injection molded components.

G. All cove to corner connections must be sealed with cold weld or silicone.

H. The coving installs with pressure to create a tight fit against the panels. The coving may also be cold welded to the panels at the discretion of the owner.

(CONSTRUCTION TIPS:)

1. *When installing coving, be sure to get one end started, and apply pressure with hands or a rounded mallet/tool behind the point of engagement. This will create a zipper effect to help install the cove. Trying to press the cove directly into the base will be difficult. Do NOT use a hammer to pound cove into the extrusion as this may cause damage to the cove and/or panels.*
2. *At raised air return walls, stop the bottom of the tapered cove point at the location on the base track where the radius begins.*
3. *At the bottom of full height walls, stop the coving at the bottom of the panels at the nominal 4" off the floor. The flooring contractor should cove the inside corner of their flooring to match the radius of the PVC cove.*

10. UL LISTED ELECTRICAL WIREWAY INSTALLATION (METHOD #1)

A. Refer to supplemental installation drawing #S0997 for installation of devices in the Plascore UL Listed Wireway.

11. UL LISTED ELECTRICAL WIREWAY INSTALLATION (METHOD #2)

A. UL Listed aluminum channel raceways are located on the vertical edges of each 2" studless wall panel.

B. Power must be turned off prior to any installation of devices.

C. All electrical components used are to be UL Listed.

D. Electrical devices should be installed by a licensed electrician and must be installed in compliance with local electrical and building codes and NEC codes.

E. Use a template to layout any cutouts. Mark using a soft pencil only, do not use markers, pens, or any permanent inks or dies. Cutouts should be located per electrical shop drawings (not provided by Plascore).

F. The center of the raceway is 2" from the vertical panel edge. The clear opening of the raceway extends 1-1/2" in each direction from the center line. (See project details).

G. Drill pilot holes and use a saw or router to make the cutout.

H. Use 12 GA THHN Copper wire, white and black with green ground. A separate ground conductor must be run from the top junction box to the metal junction box located in the vertical raceway to bond the box and raceway.

I. Use RACO metal box #400 or equivalent where required by local codes.

J. Use RACO # 983 insulated #12 solid wire, 6" long pigtail with grounding screw or equivalent where required by local codes.

K. Use #10 or larger grounding screw, slotted or hexagonal, green in color, plated steel, SS, copper, or copper alloy.

L. The grounding screw shall be used in combination with a cupped washer, or upturned lugs, or a locally acceptable equivalent method that will secure the #12 GA conductor under the screw head. Sheet metal screws are NOT acceptable.

M. The supply box located at the top of the wall shall be a 4" by 4" standard junction box, with lock nuts and the appropriate cover.

N. Use 6" by ½" Standard EMT pipe nipple – Galvanized steel.

O. Use #6-32 x 3 self-tapping blunt tip screws to fasten all junction boxes to the panel system. Sheet metal screws are NOT acceptable. The screw must maintain metal to metal contact with both the grounded box and the raceway. This will create a bond between the two, thus grounding the raceway.

P. Use 20 amp NEMA6-20R, NEMA5-20R, or equivalent 250V Duplex outlets.

Q. Use 20 amp 120/277 V rated switches.

R. Apply SS switch and duplex covers over the electrical devices.

S. Wiring shall not fill the raceway to 40%, or 2.4 square inches.

T. Never exceed the electrical ratings of the devices selected.

U. Follow the manufacturer's instructions for wiring selected devices.

V. Plascore does not accept responsibility or liability for failure to comply with Local and NEC codes, failure to follow wiring instructions, nor any deviation from installation instructions.

W. Panels cut in the height dimension must be filed to remove any burrs from the raceway area.

X. Panels cut in the width direction would no longer be considered UL listed if the cut is made in any portion of the raceway.

Y. Panels may contain horizontal extrusions, however they are not considered UL Listed Raceways.

12. SEALING OF PANEL SEAMS AND PENETRATIONS

A. All uPVC to uPVC surfaces should be cold welded using cold weld sealant (provided by Plascore). Coving may be cold welded to the panels at the discretion of the owner. Any sealant against a non-uPVC surface should be an approved silicone caulk (provided by others).

B. For cold weld seams, it is imperative that the surfaces to be bonded are completely free of dirt, residue, moisture or any other foreign substance that may inhibit the chemical bonding of the cold weld sealant.

C. Cold weld sealant should only be applied once the room has been conditioned to room temperature and humidity levels. Temperature and humidity greatly impacts the curing cycle of the cold weld product.

D. For silicone seams, follow the silicone manufacturer's application instructions for best results.

(CONSTRUCTION TIPS:)

1. *The cold weld product skins over immediately and cannot be tooled. Any bubbles, gaps, or other defects should be allowed to cure before attempting to repair the imperfection. Attempting to tool the product before it has cured will generally result in smears that are difficult to deal with.*
2. *The opening of the cold weld sealant tube should be 1/16"-1/8".*
3. *When applying the cold weld sealant, hold the tip perpendicular to the seam as you go. This helps strike a flat bead as it's being dispensed.*
4. *If new to cold welding, it is recommended to practice on scrap panels, or non-visible areas first.*
5. *If cold welding long seams, it may be helpful to break the seam, allow it to cure, and start at the break point to continue with the seam.*
6. *By nature cold welding products tend to shrink as it cures, so the seams will be slightly concave once cured. It is not possible to get a completely flush seam by applying additional cold weld sealant as it will just build up on the edges and continue to shrink in the middle.*