EXTRUTECH PLASTICS, INC

"Manufacturer of American Made Wall and Ceiling Panels"

Established 1992

PANEL INSTALLATION INSTRUCTIONS
FOR 1/2" LINER PANELS

PRODUCT NUMBER: P1000, P2000, P1300, P1600, P2400, P3000

Class A Rated for Smoke & Flame By US & Canadian Standards – ISO 9001:2015 Certified for Quality – USDA & CFIA Accepted

EXTREMELY IMPORTANT INFORMATION PLEASE READ ENTIRE PACKET!

"Warranty Is Void If Panels Not Installed According to Instructions"

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- **1.2** Radiant Floor Heat, requires allowance for panel expansion
- **1.3** 120 Degree Maximum heat exposure
- **1.4 Panel Spacing** - COLD WEATHER INSTALLATION

"**DO NOT INSTALL PANELS TIGHT TOGETHER ALLOW PANELS TO EXPAND**"
Below 40°F Insert a **Nickel**, 65°F to 40°F Inset a **Dime**, Above 65°F allow panel movement.
Cut the panel 1/4" to 5/16" short at each end, to allow panel to grow.

- **1.5 Panel Storage** - Proper panel and trim storage and handling requirements.

2. ⚠ GENERAL NOTES - Panel Installation **Note:** Panels need to be able to **expand/contract**

- **2.1** Follow manufacturer's safety instructions
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- **2.3** Do not use Power Nailing guns
- **2.4** Do not use staples – **DO NOT USE any MASTIC type ADHESIVE** on back of panels
- **2.5** Use recommended fasteners (see section 8 & 9) Panels need to be able to expand/contract

3. CEILING PANEL INSTALLATION – CEILING IS INSTALLED PRIOR TO WALLS

⚠ **-** Use only P1300-12", P3000-12" and P1600-16" wide panels on Ceiling

- **3.1** MAXIMUM SPAN - 24" Maximum span of panel - Important Notes & Warnings
- **3.3** Use 3 mil poly sheeting on insulated ceilings
- **3.4** Use recommended fasteners (see section 8 & 9)

4. WALL PANEL INSTALLATION – CEILING IS INSTALLED PRIOR TO WALLS

- Use P2400- 24" wide panel for WALLS ONLY;
  NOTE: (*There is NO manufacturer's warranty of the P2400 Panel if used on Ceilings*)
- P1300 -12"and P1600- 16" panels may also be used on walls and ceilings.

- **4.1** Trim options and trim installation
- **4.2** First Panel Installation
- **4.3** thru **4.5,** Continuing the Panel Installation (See Trims & Last Panel Installation)
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- **4.7** Installing last panel

Use recommended fasteners (see section 8 & 9)

5. HORIZONTAL WALL PANEL INSTALLATION

- **5.1** Start at the top of the wall with panel installation

EXTRUTECH PLASTICS, INC.
5902 W. Custer Street • Manitowoc, WI 54220 • Phone 920-684-9650 • Fax 920-684-4344
www.epiplastics.com • e-mail: info@epiplastics.com • Toll Free 888-818-0118

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6. PANEL CUTTING INSTRUCTIONS
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7. INSTALLATION IN COLD OR WARM WEATHER
7.1 Cold Temperatures - Below 40°F (4 C) Warm Panels to a minimum 60°F (16°C) overnight.

7.2 Warm Temperatures- above 70°F (21 C) Cool Panels to a minimum 60°F (16°C) overnight.

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INSTRUCTIONS:

1. WARNINGS & SPECIAL INSTALLATION NOTES

1.1 Radiant Tube Heaters must be shielded and 24" clearance must be maintained between Extrutech products and the shielding of the Radiant Tube Heater. *Please do not install ceiling furnaces within 24" of our panels. If you install single unit heaters you must install additional ceiling fans to re-circulate the heat down away from the ceiling.*

Extrutech Plastics recommends ceiling fans or blowers be installed with "Tube-Type Radiant Heaters" to move the air throughout your wash for uniform heat distribution.

1.2 For Area's of Radiant Floor Heat allow 1/16" space between panels and 1/4" space around openings and ends of the panels, to allow the panels room to expand due to the heated floors.

1.3 The P1300-12" Panel, P3000-12", P1600-16" Panel, P2400-24" Panel and (all PVC) have a ***heat distortion threshold of 120 degrees Fahrenheit***. Please discuss this with your HVAC contractor prior to installation.

Our warranty does not cover distorted panels because of excessive heat due to improper installation and operation of heaters, radiant floor heat & furnaces in areas using our PVC panels. Please contact EPI if you have any questions about your project. Please read our 20-Year Warranty prior to installing your panels.

1.4 Panel Spacing - When installing in temperatures below 40°F, insert a **Nickel** (.075") between panels. When installing in temperatures 65°F – 40°F, use a **Dime** (.050"), temperatures above 65° F do not force tight.

Do not over tighten fasteners to panels; allow panels to move in warmer weather. (Also read Section 7)

Cut panel 1/4" to 5/16" short at each end, to allow panel to grow.

1.5 Panel Storage - Proper panel and trim delivery, storage, and handling requirements.

- **DELIVERY** Deliver materials to work area in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- **STORAGE** Store materials flat inside, in original packaging, in a clean, dry area indoors.

- Store inside on a flat surface the entire length of panels, - Remove Banding to prevent bowing.
- Pallets must lay flat and straight with no bow in the pallet.
- Do not store in temperatures exceeding 120 degrees, - Do not store outside on blacktop.
- Do not stack pallets of materials on top each other, - Store protected from elements.
- Do not store outside under dark tarps or in closed metal storage units or trailers.

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- Do not store where objects may fall onto panels, - Store away from construction activity.

HANDLING Protect materials during handling and installation to prevent damage.
Keep panels in poly-bags until ready to use.

2. GENERAL NOTES – Panel Installation

2.1 Read and follow all safety instructions

2.2 The P1300 Panel, P3000 Panel, P1600 Panel, P2400 Panel and (all PVC) have a heat distortion threshold of 120 degrees Fahrenheit. Please discuss this with your HVAC contractor prior to installation.

2.3 DO NOT USE a Hilti® type 22 nailing gun. The guns blow the fastener through the nailing fin, cracking it and leaving little or no holding power. Each panel should be screwed every 16"- 24" along the nailing fin -NEVER go beyond 24" without a fastener and fasten the ends all trims and panels, along the nailing fin, to the building structure.

2.4 DO NOT USE **Staples or Nails** – They will not hold this product.
DO NOT USE **Mastic type Adhesive -** *See Fastener Section 9 for a list of recommended fasteners!*

2.5 Recommended Fasteners for panel installation for: (See Details and Suppliers on section 9)
Masonry Installation – Use with Washers!
Option A 3/16" x 1 1/4**"** Tapcon® **with** 1/4" Stainless Washers – Must use with a washer
Option B 1/4" x 1" (All Nylon) Fastenal® Nylon Nail-in Anchors w/mushroom head
Wood & Metal Installation **–** when using truss head screws no washers are required!
Wood – No. 8 x 3/4" Truss Phillips Head Screw
Metal – No 10-16 x 1/2" Flat Phillips Head Self Drilling Screw – use with a washer

Keep screw head above top of the nailing fin. **Do not recess the screw head** into the nailing fin. The nailing fin should lay flat against the surface and allow for panel expansion; (see section 8) not deformed around the screw head. It takes a little longer to install, but the panel will stay in place. When using a truss head screw for metal and wood framing, no washer is necessary. See Section 9 for fastener details.

3. CEILING PANEL INSTALLATION – 12" and 16" Wide Panels Only!

Ceiling Panel Options: P1300-12"FLAT, P3000-12" BEADED and P1600-16" FLAT Panel
NOTE: (*There is NO manufactures warranty of the P2400 Panel if used on Ceilings*)

3.1 The ceiling should be installed prior to walls. (However, a ceiling can be installed at a later date.)
- See Warnings on Radiant Tube Heaters Installation – Section 1.1
- See Special Notes for installation in cold temperatures – Section 7
- Note all ends of panels and trim need to secured to the structure 3.4 & 4.2
- See Recommended Fasteners & Supplier Information – Section 9
- **Do not use Staples or Nails** – They will not hold this product

3.2 Recommended maximum panel span is 24" between ceiling trusses.

3.3 _INSULATION – If your building is going to be insulated, you should install 3 Mil. poly sheeting as a vapor barrier on ceilings BEFORE installing our panels.

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3.4 CEILING PANEL INSTALLATION – 12" and 16" Wide Panels Only!

1. Panels should run 90 degrees to the ceiling trusses or furring strips. You may use either Inside Corner or J-Trim around the perimeter of ceiling. J-Trim can be used if you are only installing the ceiling panels and should be installed around the perimeter of the ceiling prior to ceiling panel installation. IMPORTANT that all panel and trim ends and every 16"- 24" of their nailing fin length be fastened to the structure. J-Trim is installed to the ceiling, with the widest part of the trim attached to the ceiling and opening to the center of the ceiling. (Walls can be installed at a later date using J-Trim at the top of the wall).
2. If Inside Corner is used, it can be installed around the ceiling perimeter (1.) before or (2.) after your ceiling panels are installed. (1.) Installed prior to ceiling installation with the widest part of the trim attached to the ceiling and opening to the center of the ceiling, butting up to existing side walls. (2.) If installing new wall panels, Inside Corners are installed tight to the bottom of the ceiling panels with screws into the side wall and the ½" opening facing down to the floor, creating the top channel for new wall panels.
3. Cut panels 1/2" short of actual measurement to allow for panel movement, installing the panels 1/4" in from each wall.
4. Begin by taking the first panel and placing it at one end of the ceiling with the tongue facing the wall and the nailing fin facing against the ceiling and away from the wall. Adjust panel so it is running parallel with the outside wall. Fasten the panel through the nailing fin, at each rafter, every 16"-24", with the recommended fasteners called out in Section 9. For the first panel only, fasten the tongue side of panel along the wall with the same type of screw – keeping the screws within 1" of wall so they are covered with the perimeter trim.
5. Now that the first panel is up and fastened, you can install the remaining ceiling panels. Place the tongue of the second panel into the groove of the first panel. Push the panels together (*see section 1.4 about panel spacing*) and fasten the second panel through the nailing fin at every rafter, just like the first panel. Now, step back and check out how it looks, measure back to wall as you install each panel and make sure you are running square with the outside wall, and not running at an angle.
6. Proceed and install the remaining ceiling panels as in Step 6.
7. When installing the **last ceiling panel** you may have to rip it down to fit. Measure your remaining space, bumping your tape against the wall and reading the distance at the panel edge, not the nailing fin edge. Rip the panel 1/4" narrower than your measurement. Slide the last panel into the wall. Again keep screw within 1" of wall so the trim covers it.

Now, the ceiling is complete.

4. VERTICAL WALL PANEL INSTALLATION – **The ceiling should be installed prior to walls. Door and window trim boards, trim boards, casings, etc., can be installed before or after panel installation.**

NOTE: (*There is NO manufactures warranty of the P2400 Panel if used on Ceilings*)

Panel Options: 12",16" & 24" Wide Flat Panel (P1300,P1600 & P2400) & 12"W Beaded Panel (P3000)

- See Recommended Fasteners & Supplier Information – Section 9

4.1 Base Trim Installation

1. For Panel Installation without using a trim, use a straight edge to set a 1/2" to 3/4" gap above the floor to allow water to drain away from wall, it also leaves a nice reveal or site line. Do not use silicone at the bottom of the panels or trim, you want the moisture to drain away from the wall. Review construction

methods for proper drainage for floors and away from walls before installing Extrutech Panels or trims.

2. J-Trim Option J-trim (Item # P0100) for installation along the floor, drill 1/4" weep holes, 12" apart in the bottom of the J-trim, to allow water to drain out of trim. Trims and panels do not provide a water proof barrier along the base of the wall or wall surface. Install the first piece of J-Trim 1/2" to 3/4" above the floor, use a spacer block (not provided) to maintain space along length of floor. Install trim with the open end up so it can receive the wall panel. Fasten trims with screws every 16" or 24" along flange trim, secure trim around perimeter of area panels need to be installed. As an option, you can screw through the nailing fin of the panel and the J-Trim, attaching both to the wall with the one fastener as you install the panels.

3. Inside Corner Trim Option trim (Item# P0270) installation along the floor drill 1/4" weep holes 12" apart in the bottom J of the trim to allow moisture to drain away from the wall. Trims and panels do not provide a water proof barrier along the base of the wall or wall surface.

4. Drip Edge Option Drip Edge trim (Item# P0260) installation for areas of high moisture or standing water, a water proof wall curb is recommended. The drip Edge is used to set on the top edge of a wall curb. The trim is designed for the thickness of our 1/2" panels. Fasten with screws every 16" or 24" along the upper flange of trim that will be covered by the panels, secure trim along the base, of area panels need to be installed. As an option, you can screw through the nailing fin of the panel and the Drip Edge, attaching both to the wall with the one fastener as you install the panels.

Trims and panels do not provide a water proof barrier along the base of the wall or wall surface.

WARRANTY does not cover damage because of water or other liquids penetration under or thru trims or panels do to improper construction methods or improper product installation, do not cover damage do to flooding, man-made or acts of nature.

4.2 Panel Installation: Allow for expansion of panels, cut them 1/4"- 5/16" shorter at each end. Do not install panels over dirty, moldy drywall in high moisture areas or try to fasten panels just to drywall, fiber board or insulation board. In high moisture areas such as carwashes, wash down areas follow building codes as required. Install the panels over a moisture resistant gypsum recommended for areas that frequently get wet. Fasten panels to building structure with recommended fasteners. IMPORTANT that all panel and trim ends and every 16"- 24"of their length be fastened to the structure. Extrutech is not responsible for installation of panels or trims. In Cold Weather, under 60°F (16°C) you must gap the panels 1/16" to allow for expansion.

When installing the 24" Wide Panel (P2400) on concrete or block wall only, it is necessary to use fasteners along the nailing fin and if desired approved construction sealant/ adhesive can be applied to back of panels but is not required for panel stability.

4.3 Place panel in the corner, tongue first and raise up into ceiling trim Inside Corner or (J-Trim - if no ceiling installed) and then bend slightly in the middle so you can get the panel into the J-Trim at the floor.

4.4 Level the first panel, again raise slightly off floor, about 1/4" to allow for panel expansion – and fasten the panel to the wall through the nailing fin. Fasten every 16" – 24" along the nailing fin. You then must fasten the tongue side near the corner with screws. Keep fasteners within 1"of the corner, so the corner trim covers them.

4.5 Once the first panel is in place and level you may proceed to cut and install the remaining wall panels by

repeating the same process, you used to install the first panel. Remember to add J-Trim along the floor and ceiling trim as you go around the room if required.

To aid in installing the panels use a 1' long 2X4 against the nailing fin, to slide the panels together.

4.6 At door and window openings install J-Trim or Outside Corner prior to installing the wall panels. This makes a nice clean border around your windows and doors.

Install, Inside Corner Trim (P0270)at each corner once you have the adjacent wall covered with our panel. You may want to put a small bead of clear silicone caulk on the back side of the Corner Trim before you install it, to make a water-tight corner.

4.7 When installing the last panel to the wall you may have to rip it down to fit. Measure the remaining space, bumping your tape against the wall or back inside edge of the installed trim and reading the distance at the panel edge, not the nailing fin edge. Rip the panel ¼" narrower than your measurement. See "Cutting Panels". Along the grooved edge of the installed panel, apply a small bead of clear silicone caulk. It helps lock the last panel in place. Also apply a bead of construction sealant/adhesive to the concrete wall about 2"-3" from the corner. Slide the last panel into the corner or trim; then back into the installed panel. Apply pressure to the panel to set the sealant/adhesive. You may also fasten with a screw along the cut edge within 1" of the corner; but only if the trim will cover it later, such as an Inside Corner trim.

5. HORIZONTAL WALL PANEL INSTALLATION **–** **-** <u>All Panel Widths!</u> Review Panel Installation Instructions above prior to installing panels horizontally.
After the trim is installed start hanging the wall panels from the top down to the floor. So, start at the ceiling with the first panel and install with the nailing fin pointing to the floor, groove down. This way, no water will lay in the groove.

- Proceed to install the remaining panels as directed.

6. PANEL CUTTING INSTRUCTIONS **–** Flat and Beaded panels can be cut by using these methods:

6.1 <u>Read and follow all Safety Instructions for power and hand tools.</u>

- Wear safety glasses!
- Cut through product slowly, don't rush.
- Powered miter saw with fine tooth blade.
- Table saw with fine tooth plywood blade or 80 tooth carbide blade.
- Fixed blade utility knife and a straight edge to guide knife, Score area 4-6 times with sharp knife to cut through product.
- Sometimes you may find that panels cut nicely when you put your saw blade on backwards or use a vinyl blade. Try on a piece of scrap panel first to see the result of that cut.
- Temperature is a factor when working with vinyl. Warm weather is no problem but cold temperatures can create some issues.

7. RECOMMENDATIONS <u>INSTALLATION IN COLD OR WARM WEATHER</u>

Extrutech Plastics, Inc. ***<u>IS NOT</u>*** responsible for expansion problems. **The warranty on**

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this product is null and void if not installed according to Extrutech installation methods.

------- Panels need to be able to **expand and contract** -------

7.1 Cold Temperatures - Below 40°F (4°C) Warm Panels to a minimum 60°F (16°C) overnight.

Bring panels inside and warm to 60°F (16°C) degrees or warmer, if possible, overnight before installing them in a warm bay.

Don’t install panels tight when cold! When it warms up your panels will expand. Allow for expansion; **Panel Spacing** - When installing in temperatures Below 40°F, insert a **Nickel** (.075”) between panels.When installing in temperatures 65°F - 40°F, Inset a **Dime** (.050”), temperatures Above 65° F, do not force tight.

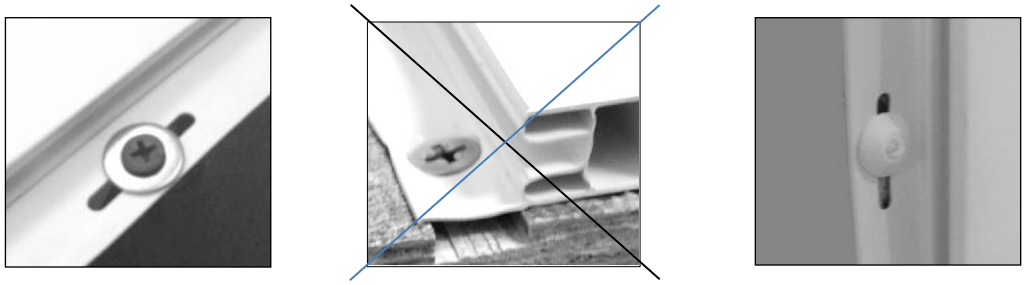
Do not over tighten fasteners to panels; allow panels to move in warmer weather.
Cut the panel 1/4" to 5/16” short at each end, to allow panel to grow.

7.2 Warm Temperatures- above 70°F (21 C) Cool Panels to a minimum 60°F (16°C) overnight.

8. FASTENER INSTALLATION SAMPLES Keep screw head above top of the nailing fin. **Do not recess the screw head** into the nailing fin. The nailing fin should lay flat against the surface and allow for panel expansion; not deformed around the screw head. It takes a little longer to install, but the panel will stay in place. When using a truss head screw for metal and wood framing, no washer is necessary. See Section 9 for fastener details.

Masonry wall application

(Tapcon® - **with** washer) - OR - (Nylon Nail-in Anchor)



CORRECT **INCORRECT** **CORRECT**

9. RECOMMENDED FASTENERS AND SUPPLIERS:

Note: Fasteners can be provided with panels if requested during the quoting process or purchased locally. For your convenience we have listed recommended Fastenal part numbers.

9.1 FASTENERS:

Supplier: FASTENAL www.fastenal.com

Applications: - Please read and follow fastener’s preparation and installation instructions.

Part No.	Description
	Fasteners for **Masonry** applications (Option 1)
50841	1/4" x 1”(All Nylon) Fastenal® **Nylon Nail-in Anchors** w/mushroom head
	Fasteners for **Masonry** applications (Option 2)
51550	Tapcon® 3/16” Dia. x 1 1/4” Long Phillips Flat Head Screw.

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(Use with Stainless Washer Item# 1171013)

9.1 FASTENERS:
Supplier: FASTENAL www.fastenal.com
Applications: Please read and follow fastener's preparation and installation instructions.

Fasteners for **Metal** applications

11135767	No. 10-16 x 1/2" Truss Head Phillips Self Drilling Screw (Use with Stainless Washer Item# 1171013)
1171013	1/4" Stainless Steel Flat Washer,.265 ID.x .500 OD.x.032 thick.

Fasteners for **Wood** applications:

71792	No. 8 x 3/4" **Truss Head** Phillips Sheet Metal Screw 8-18 Stainless Steel

Nail-in Anchors
(All Nylon)

Tapcon® screw
(with a 1/4" washer)

Truss Head Screw

9.2 SEALANTS - Silicone Caulk - Not to be used as only method of water proofing
Supplier: DAP® www.dap.com Silicone Rubber Sealant, Caulk
Purchase through local Building Supply Center
Description:
Clear 100% Silicone Rubber Sealant, Caulk

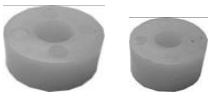
9.3 ADHESIVE - Contact Extrutech for proper application (Link) Phone: 888-818-0118
Not to use Mastic type adhesive -This application will void any warranty

Product:	Titebond®, Tremco, - Adhesive for limited use on Panels & Trims
Supplier:	Titebond® by Franklin Intrl., Tremco® By RPM, Purchase locally Building Supply Center or FASTENAL www.fastenal.com

Part No.	Description:
Ultimate MP®	Heavy Duty Construction Sealant, Caulk. Use As Panel & trim Adhesive
Dymonic FC®	Heavy Duty Construction Sealant, Caulk. Use As Panel & trim Adhesive

9.4 SPACERS: - (For Hanger and Bracket support)
Supplier: EXTRUTECH PLASTICS INC. www.epiplastics.com

Part No.	Description:
13RS100054	1" O.D. x 3/8"I.D. x ½" thick - Nylon Spacer
25R50ZR7N	3/4" O.D. x 1/4" I.D.x ½" thick - Nylon Spacer



1" Nylon Spacer
3/4" Nylon Spacer