

# FEDDERLITE<sup>®</sup> M PANEL SYSTEM



DS958

**Prefabricated, Lightweight, Outsulation<sup>®</sup>  
Mechanically Fastened Exterior Wall Panels with  
Integrated Reinforcing Channels**

## **Fedderlite M Panel System Fabrication and Installation Instructions**



## **Fedderlite M Panel System Fabrication Instructions**

### **FABRICATION Materials and Tools Checklist**

1. Approved Fedderlite M shop drawings
2. Insulation board manufactured to Dryvit's specifications
3. , TREMGrip or Dryvit AP Adhesive™
4. Aluminum Fedderlite and Fedderlite M Channels
5. Fedderlite Channel Adhesive, AP Adhesive or TREMGrip
6. Specified Dryvit base coat
7. Type I or II Portland Cement if using wet mix base coat
8. Specified reinforcing mesh manufactured to Dryvit's specifications
9. Dryvit Demandit® Smooth or Color Prime™
10. Specified Dryvit finish
11. EPS hotwire cutting machine
12. Fedderlite Channel punch
13. 1/2 in (12.7 mm) variable speed drill
14. "Twister" paddle, or equivalent
15. Hawk and trowel
16. Spray equipment – when required for spray product applications

## Fedderlite M Panel System Fabrication Instructions

### I. FABRICATION

#### A. Fedderlite M Fabricator

1. Prepare shop drawings and submit to architect for approval as required.
2. The Fedderlite M panels are fabricated per approved shop drawings. No fabrication should begin without approval of the shop drawings by the architect or purchaser.
  - a. When possible, dimensions should be verified in the field before fabrication begins.
  - b. Resolve all discrepancies of field dimensions versus shop drawings.
  - c. Determine final panel sizes based on project requirements and shop drawings.
    - 1) Type of channel: aluminum Fedderlite and Fedderlite M
    - 2) Channel spacing
    - 3) Mounting rail location
    - 4) Support locations and type
  - d. To avoid conflicts later, shop drawings should include details for all interfaces to dissimilar materials, vertical and horizontal panel to panel joints, joint treatment with sealant type and backer rod specified. Panels should be numbered appropriately with care given to ensure the extrusions are offset from panel to panel.

### II. PREPARATION OF FEDDERLITE PANELS

#### A. Insulation Board

1. Obtain the appropriate size insulation board to conform with the panel module.
  - a. The minimum thickness of the insulation board is 2 in (51 mm).
  - b. Consult with your local EPS molder for length and width availability.
  - c. If more than one sheet of insulation board is issued in a panel module, these insulation board edges must be adhered together with a Fedderlite laminating adhesive such as, AP Adhesive, or TREMGrip.

#### B. Cutting Fedderlite Channels

1. Fedderlite channels are available in aluminum; see specifications. Standard available lengths are as follows:
  - a. Aluminum – 10 ft -0 in and 12 ft -0 in (3.0 m -0 m and 3.7 m -0 m).

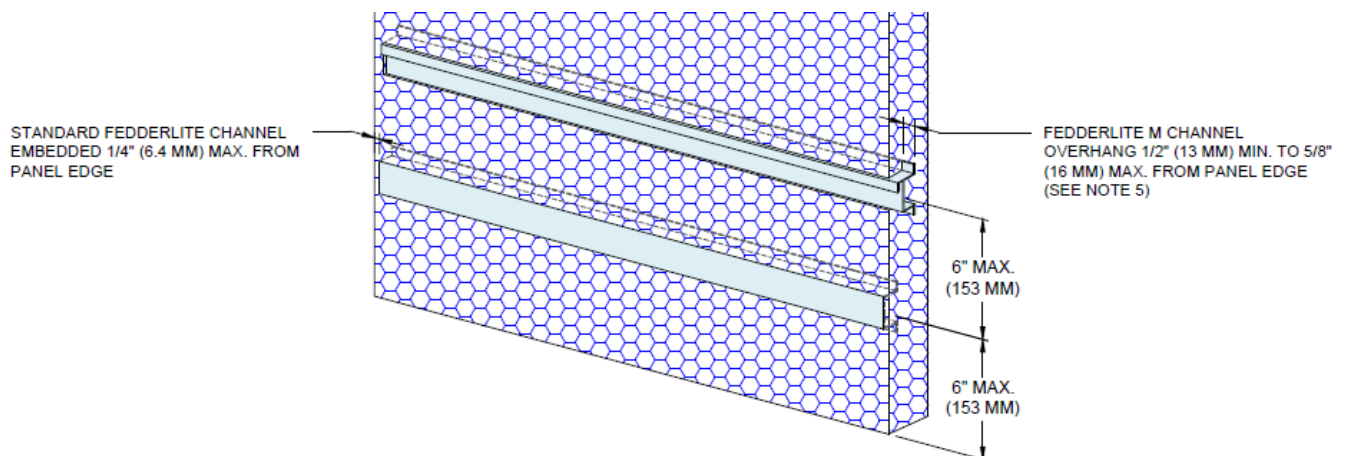
**NOTE: Special lengths may be cut to order. Contact your Dryvit representative for specifics.**

2. Fedderlite panels are cut to the appropriate length with a band or chop saw. OSHA standards are to be followed when utilizing power tools.

**NOTE: Allow a 1/2 in (12.7 mm) overhang on each end of the finished panel as noted in the shop drawings, typically this occurs on the lower left and upper right extrusions.**

#### C. Placement of Fedderlite Channels

1. A standard Fedderlite extrusion should be installed 6" on center from the bottom of the panel. (As shown in Figure 1.)
2. First course of Fedderlite M channels should begin 12" on center from the bottom of the panel. (As shown in Figure 1.)



### Fedderlite M Panel System Fabrication Instructions

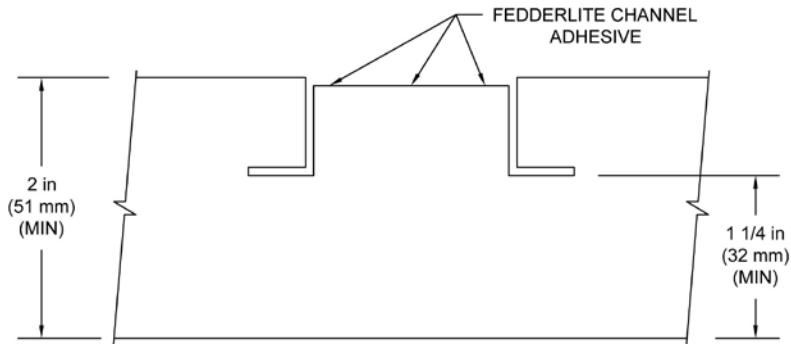
3. Locate the proper position of the Fedderlite M channels and cut grooves in the insulation board with the Fedderlite cutting machine in accordance with the approved shop drawings.

**IMPORTANT: When assembling panels consisting of more than one sheet of insulation, the groove must be cut perpendicular to the adhered edges.**

**After cutting the grooves in the insulation board, apply approved Fedderlite M Channel Adhesive (Dryvit AP Adhesive or TREMGrip) to the insulation board in a continuous bead along each side of the groove as well as the flat portion of the cut. See Figure 2.**

Figure 2

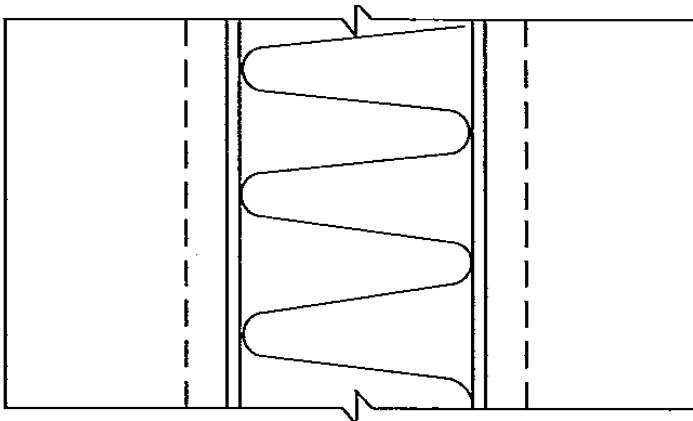
Insulation Board section of Channel Cutout



Top View

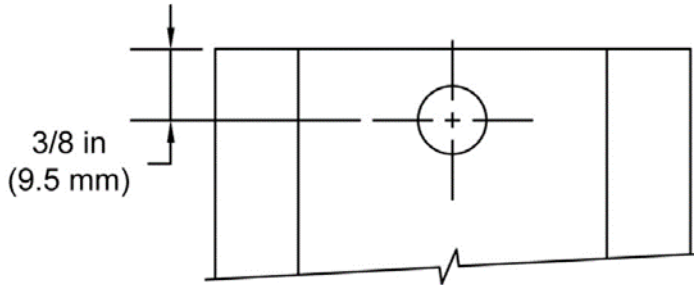
Apply a bead of AP Adhesive in a wavy pattern as shown below in figure 3.

Figure 3



**Fedderlite M Panel System Fabrication Instructions**

6. Slide the Fedderlite M channel into each groove.
  - a. Fedderlite M Channel should extend beyond the edge of the panel to accommodate the appropriate fastener as per shop drawings. See Figure 4.
  - b. Provide a minimum of 3/8 in (9.5 mm) fastener edge distance as shown in Figure 4. Holes may be pre-drilled in the factory if noted on the shop drawings for ease of installation.



4. After sliding the channel into place, apply an additional bead of adhesive between the channel and the insulation board along both sides of the channel. Take care not to allow excess adhesive to get onto the face of the Fedderlite M panel.
5. Install Fedderlite and Fedderlite M Channels as per channel layout in the shop drawings.

**III. Installation of Aesthetic Joints and EPS Shapes**

**A. Layout**

1. Locate any aesthetic joints or applied EPS shape on the shop drawings.

**B. Installation**

1. Use the appropriate tool to cut the aesthetic joint into the EPS.
2. Apply EPS shapes with hot melt glue or approved adhesive.

**IV. APPLICATION OF THE DRYVIT COATINGS**

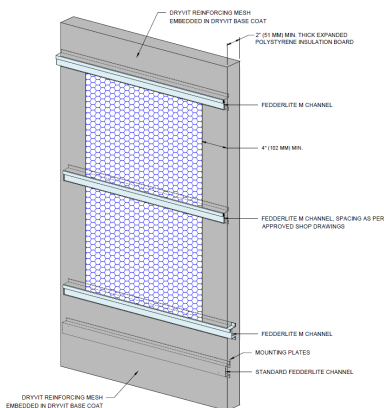
**A. Inspection**

1. Prior to applying the reinforced base coat, remove any irregularities from the face of the insulation board by rasping the surface in a light circular motion. The entire surface of the panel must be rasped to minimize telegraphing of board joints and ensure maximum adhesion of the base coat.
  - a. Use Grade 36 grit sandpaper with a hand or air rasp. **TIP: Do not sand parallel to board joints.**
  - b. Remove all loose pieces of insulation board and dust from the sanding operation using a brush or compressed air.

**B. Application of the Reinforced Base Coat**

1. Refer to Dryvit's Outsulation® System Application Instructions, [DS204](#), for mixing of wet materials and application techniques.
2. The reinforced base coat must be returned onto each panel edge and extend a minimum of 4 in (102 mm) onto the back of the panel.
2. At the panel base return the base coat and mesh over the Standard Fedderlite Channel to the bottom of the Fedderlite M panel as shown in Figure 5 below.

Figure 5



## Fedderlite M Panel System Fabrication Instructions

**IMPORTANT: FOR INSTALLATIONS WHICH RESULT IN AN AIR SPACE GREATER THAN 1/4 in (6.4 mm) BETWEEN THE BACK OF THE PANEL AND THE SUBSTRATE, THE FEDDERLITE PANEL MUST BE TOTALLY ENCAPSULATED WITH THE PRIMUS/ADHESIVE MIXTURE AND REINFORCING MESH.**

### C. Application of Finish

1. Roller or brush apply color-coordinated Demandit Smooth or Color Prime to the panel edges in preparation for receiving sealant.
2. Trowel or spray apply the Dryvit finish over the face of the panel. Techniques should be followed as outlined in Dryvit's Outsulation System Application Instructions, [DS204](#), for the specific finish being applied.

### D. Panel Labeling

1. Panels should be marked on the back and lower and right edge with an indelible marker with the designated panel number depicted on the shop drawing.

### E. Tolerances

1. Finished Fedderlite M panels shall conform to the following dimensional tolerances:
  - a. Length and Width  $\pm 1/8$  in (3.2 mm)
  - b. Thickness  $\pm 1/8$  in (3.2 mm)
  - c. Out of plane  $\pm 1/8$  in (3.2 mm)
  - d. Squareness  $\pm 1/4$  in (6.4 mm)

## V. FEDDERLITE M PANEL HANDLING AND PACKAGING

### A. Material Handling

1. When handling Fedderlite M panels, we suggest that clean gloves be used by workers to ensure that the panels are kept clean.
2. Generally, the panels can be lifted by two (2) workers. However, larger panels may require lifting devices. It is recommended that the panels be carried in a vertical position to prevent breakage. When lifting panels with a hoist use a tie line to control the panel while in the air and keep panel from kiting and getting damaged.
  - a. Panel weight is approximately 2.5 lbs per square foot (12.2 Kg/m<sup>2</sup>)

### B. Packaging

1. Panels should be packaged as per the installers requested sequence.
2. Panels may be packaged laying down or standing up on skids or crates.
3. Position the panels face to face and separated by appropriate spacers to prevent damage to the panel face.

**TIP: It is recommended that the panels be transported in a vertical position. Stacking the panels horizontally may result in indentations or damage to the panel face. Use of a protective padding such as DOW Ethafoam sheeting or EPS material between panels works well when packaged face to face and laid flat rather than standing up. For packaging of Dryvit Reflectit finished panels, small profile bubble wrap works well to protect the finish surface and prevent sticking or adhering to the finish surface. All finishes must be completely dry prior to packaging.**

4. Secure panels with an adequate amount of padding during transport to prevent shifting.
5. Protective covering of the panels is necessary during transport to prevent staining and damage from roadside debris. The covering must be secured and weighted to prevent wind damage. Use opaque, white protective wrap to cover and protect the panels. Avoid darker colored material as excessive heat can damage packaged panels. Panels must be completely dry prior to packaging.
6. The maximum service temperature of the EPS insulation is 165 °F (74 °C). Care must be taken to protect the panels from exposures that would cause this value to be exceeded.
7. Upon delivery, the panels shall be handled as listed in the Material Handling Section. At this time, all panels must be inspected by the panel installer. The panel installer shall ensure that all panels meet the contract documents and are proper size, color and texture. The panel installer must notify the panel manufacturer of all discrepancies. The panel installer should not accept the panels which are not in accordance with the contract documents.

### C. Storage

1. Panels must be protected from weather and kept in an area free from traffic.
  - a. Temporary covering must be provided to prevent soiling of the panels and must be secured and weighted to prevent wind damage.
2. Panels must be positioned face to face and separated by appropriate spacers to prevent damage. **NOTE: To minimize potential for damage and contamination, panels should be installed as soon as possible and not be stored for an excessive amount of time at the job site.**
3. Place panels near the area where they will be installed.

### Fedderlite M Panel System Fabrication Instructions

4. Protect all panels from weather and other contaminants prior to installation.
5. Storing panels in direct sunlight with shrink-wrap or plastic can result in excessive temperatures that could potentially damage the panels.

### INSTALLATION Recommended Tools Checklist

1. Screw gun
2. Hammer drill (masonry and concrete)
3. Caulking guns (for TREMGrip application)
4. Minimum 50 ft string (15.2 mm)
5. Template and shims (to determine and set joint sizes)
6. Chalk lines
7. Level and plumb bobs
8. Drill bits (appropriate size and type for substrate)
9. Fasteners as per approved shop drawings
10. Phillips and/or hex head drivers (adequate extension to accommodate the panel thickness)
11. Clean gloves
12. Adequate scaffolding or lift to provide full access to receive the Fedderlite M panels

Layout of project may be aided by the use of laser leveling and plumbing techniques. For long runs, a water level can also be used. Using the proper tools for a specific project will greatly speed the installation of Fedderlite M panels.

## VI INSTALLATION

### A. Erection of Fedderlite M Panels

#### 1. General

- a. Boom lifts, mark lifts, scaffolding or staging around the area where Fedderlite M panels will be installed. Observe all scaffolding load limitations.
- b. Lifting devices, if needed, should be available on site and set up.
- c. Review the shop drawings and ensure that all panels for the designated area are on site prior to installation.
- d. Appropriate safety equipment (hard hats, shoes, etc.) in accordance with OSHA and local regulations shall be used during the panel installation.

### B. Installation Sequence

1. Prior to installing the Fedderlite M panels, examine the substrate to ensure it is in compliance with the contract documents. The architect, general contractor and/or owner shall be advised of all discrepancies. Work shall not proceed until all unsatisfactory conditions have been corrected.

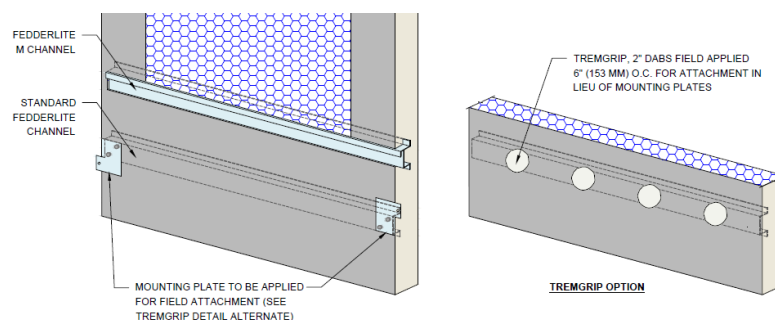
### C. Installation of Fedderlite M Mounting Rail

1. Using a water level or laser, layout the location of the mounting rail in accordance with the shop drawings.  
**Note: Be sure to allow for panel joint in the specified joint size, when laying out the Mounting Rail.**
2. String a line across the area to receive the Fedderlite M Mounting Rail to locate any high spots in the wall.
3. Use fasteners with spacing as shown in the approved shop drawings for attachment of the Fedderlite M panels.
4. When drainage design is specified install a 1/16" shim behind the Fedderlite M Mounting Rail at each fastener.
5. Install shims at the fasteners to ensure the mounting rail is straight and true to ensure the panel fits easily onto the mounting rail.

**NOTE: Fasteners are engineered by the panel fabricator to resist all design loads in accordance with accepted engineering principles and local building code requirements.**

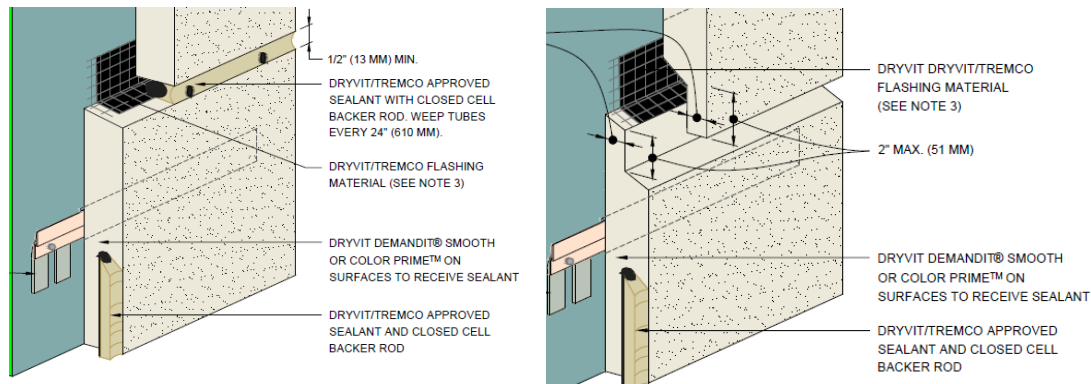
### D. Install the mounting plates

1. Attach the mounting plates the back of the panel screwing through the basecoat and mesh into the lower Fedderlite M channel as shown in the shop drawings.
2. TREMGrip may be used in lieu of the Mounting Plates as noted in Fedderlite M details providing proper temperatures are met.



## Fedderlite M Panel System Fabrication Instructions

- E. Install the Fedderlite M panels as per the layout in the shop drawings.
- F. When drainage design is desired install flashing at the panel top as shown in [DS949](#) and the illustrations below to properly direct incidental moisture off the substrate.



## VII. Flashing and Sealant

- A. Install fluid applied flashings at panel tops as shown in the shop drawings.
- B. Install all flashings and sealant immediately after panel installation.
- C. Refer to Dryvit's publication [DS153](#) for the most current listing of sealants which have been tested for compatibility with the Fedderlite M Panel materials.

## VIII. Maintenance and Repair

- A. Refer to DryvitCARE EIFS Repair Procedures, [DS498](#).

## **DISCLAIMER**

Information contained in this document conforms to standard detail and product recommendations for the installation of the Dryvit Fedderlite M Panel System products as of the date of publication of this document and is presented in good faith. Dryvit Systems, Inc. assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To ensure that you are using the latest, most complete information, contact Dryvit Systems, Inc., at:

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