

MAC
METAL ARCHITECTURAL



Installation Guide

POLYMAC



ATTENTION

PROTECTION

The material may contain sharp edges. For this reason, we recommend wearing appropriate protective equipment: safety harness, safety boots, helmet, safety glasses, and gloves.

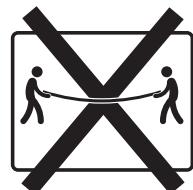


WARRANTY

The installation must be carried out according to the standards established by the current building code and the manufacturer's recommendations for the warranty to apply. In case of any issues during the installation of the profiles, it is important to notify the distributor before installing 500 ft² to ensure the warranty applies. It is also important to check that there are no corrections needed on the installation surface.

HANDLING

Handle the box with care, always lift it vertically and not horizontally, with two people. Always lift the box vertically and not horizontally. Use the same principle for handling the panels to avoid bending or deforming them.



HANDLING OF PACKAGES

1. To minimize the risk of material breakage, it is essential to follow specific rules when handling packages:
2. Minimize the movement of materials as much as possible before installation.
3. Always pay special attention when transporting from one point to another to avoid bending the sheets.
4. Use a forklift with forks adjusted to their maximum width to handle packages of sheets measuring up to 20 feet.
5. For lengths beyond this, use a telescopic mast forklift, a loading bar, or a crane.



HANDLING PACKAGES
OF UP TO
MAXIMUM OF 20 FT.



HANDLING PACKAGES
OF 20 FT AND OVER

ORDER RECEPTION AND INSPECTION

It is the customer's duty to inspect the order upon receipt. In the event of an error or if some panels are damaged, it is important to notify the distributor as soon as possible to correct the situation.

STORAGE

To maintain the aesthetic and physical properties of the Polymac, it is essential to follow specific storage rules.

If the panels cannot be installed immediately after delivery, store them indoors in a dry, flat, and well-ventilated area. Minimize movement as much as possible to reduce the risk of damage.

Storing panels outdoors is the customer's responsibility. If the material must be stored outdoors, place the panels flat in a location not directly exposed to the sun or extreme temperatures. These factors can cause the protective film to adhere more to the panels, making removing it difficult and possibly leaving glue residue on the product's surface. Additionally, stagnant water accumulation on the packages can contribute to their deterioration; hence, it is crucial to protect your order.

It is essential to follow these recommendations:

1. If possible, choose a level, secluded area where the panels will not interfere with the execution of work on the site and with limited sun exposure.
2. Cover the ground with a plastic tarp to prevent ground moisture from reaching the panels.
3. Place the panels about 6 inches (152 mm) off the ground to allow air circulation.
4. Elevate part of the panels to allow rainwater to drain off.
5. Protect the panels with a tarp. Do not use plastic, as it can create condensation.

ZIP SYSTEM PANEL, INSULATED R-SHEATHING

It is not recommended to install MAC cladding on Zip System panels, Insulated R Sheathing, or other similar double-composition panels containing a softer compound than wood.

It's crucial to understand that this type of panel does not provide a rigid installation base for MAC products. It allows deformation when exposed to the sun, depending on the temperature, which then results in the warping of the cladding panels.

INSTALLATION OF THE WOOD COLLECTION

Please note that all Polymac profiles ordered in one of the available WOOD COLLECTION colors will be delivered in the same panel contrast.

For 12 in panels, you will receive an order with the same panel number, either 7, 8, or 9.
For 20 in panel orders, you will receive an order with one of either 10 or 11 panels.

1. TOOLS

To properly execute the work, you will need a bender or bending pliers, a screwdriver and tin snips, sealant, a specialized MAC bender for the Polymac profile, a metal blade (see recommendations), an electric shear, and a MAC bending bar. You will also need a level and measuring tape.



ROTARY SAW

Cold-cutting rotary saws must be used with a specialized metal blade and according to the manufacturer's recommendations. For details of use, please refer to the cutting guide on our website.

1.1 ACCESSORIES

The following is a list of accessories required to install Polymac profiles:

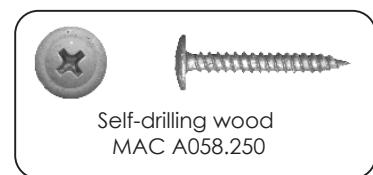
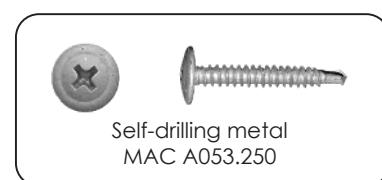
- MAC wood or metal screws, depending on the type of project;
- Steel roll;
- Bender
- Self-adhesive elastomeric membrane;
- Moldings;
- Sealant.

1.2 MAC SCREW

The use of MAC screws is highly recommended. In addition to being perfectly suited to our profiles, they are duly tested and conform to the ASTM B-117 2000h standard.

However, if another screw is used, it must meet the ASTM B-117 2000h standard to ensure the 40-year warranty.

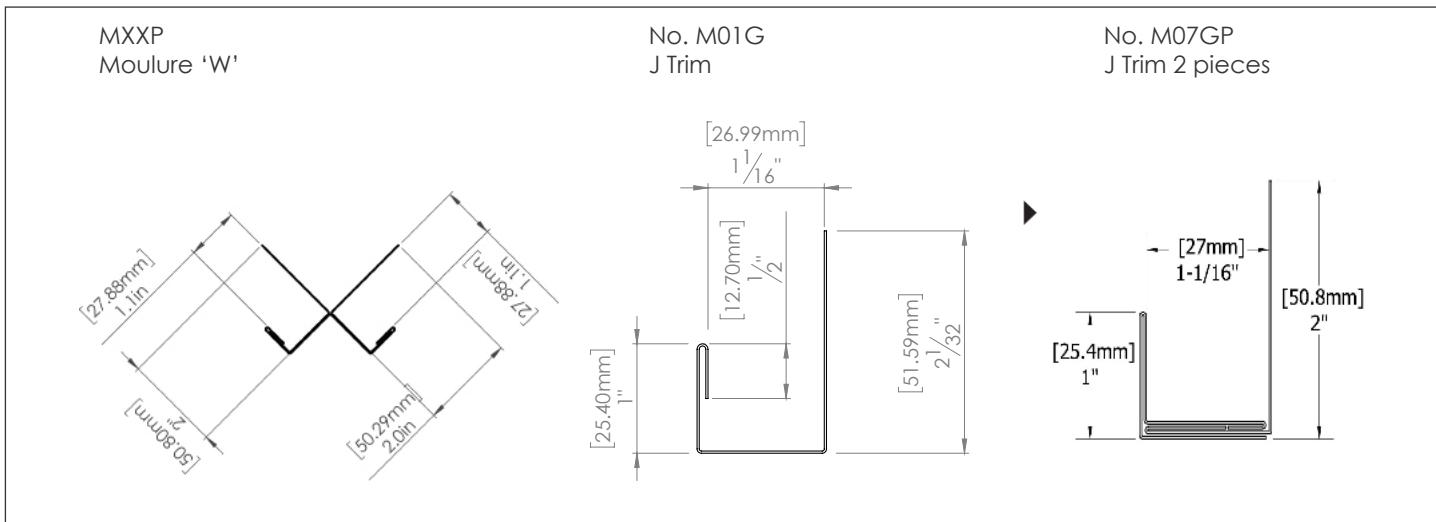
Screw with moderate contact to avoid hindering the material's expansion. The screws should not exert pressure either upwards or downwards to avoid deforming the sheets.



POLYMAC | MOLDINGS & TRIMS

<p>No. M15P U Trim (fixation trim)</p> <p>[15.88mm] 5/8"</p> <p>[23.81mm] 15/16"</p> <p>[22.33mm] 7/8"</p>	<p>No. M18P12 Offset Molding 12 in (fixation trim)</p> <p>[15.9mm] 5/8"</p> <p>[54mm] 2-1/8"</p> <p>[19.1mm] 3/4"</p>	<p>No. M18P20 Offset Molding 20 in (fixation trim)</p> <p>[15.9mm] 5/8"</p> <p>[54mm] 2-1/8"</p> <p>[19.1mm] 3/4"</p>
<p>No. M10P Starter Strip</p> <p>[76.2mm] 3"</p> <p>[25.4mm] 1"</p>	<p>No. M50G (POL, VS, MB) Drip</p> <p>[30.2mm] 1 3/16"</p> <p>[90.5mm] 3 9/16"</p> <p>[15.9mm] 5/8"</p>	<p>No. M14G (POL, VS, MB) L Trim</p> <p>[38.10mm] 1 1/2"</p> <p>[19.05mm] 3/4"</p> <p>[38.10mm] 1 1/2"</p>
<p>No. M56G (POL, VS, MB) Extended drip flashing w/ variable</p> <p>[19.05mm] 3/4"</p> <p>[26.99mm] 1 1/16"</p> <p>[63.50mm] 2 1/2"</p> <p>[12.70mm] 1/2"</p> <p>VARIABLE</p>		<p>No. M22G (POL, VS, MB) Inside Corner</p> <p>[38.10mm] 1 1/2"</p> <p>[22.23mm] 7/8"</p> <p>[63.50mm] 2 1/2"</p> <p>[26.99mm] 1 1/16"</p>

POLYMAC | MOLDINGS & TRIMS



2. PREPARATION

RECOMMENDATIONS

This installation guide provides general guidelines for installing the Polymac profile from MAC Metal Architectural. Cladding installation should always be carried out by a specialist in steel cladding installation. The information in this guide is presented for informational purposes and may not be suitable for all types of buildings and all climatic conditions. The examples provided are valid at the time of publication. Always refer to and comply with the building code and regulations in force in your region.

MAC Metal Architectural reserves the right to modify the content of this guide at any time without prior notice. To ensure you have the most up-to-date information, consult our website or contact your representative.

INSULATION AND VENTILATION

As a specialist in steel cladding installation, you play a crucial role in ensuring the proper installation of all components, including a ventilation system necessary to prevent condensation. Condensation can occur in all types of buildings and is not unique to buildings made with metal profiles. Poor ventilation can lead to moisture problems and a decrease in insulation efficiency.

Refer to building insulation and ventilation professionals to ensure the best practices are used for your project. They can guide and advise you appropriately.

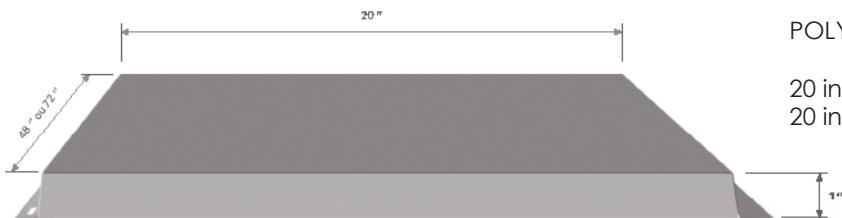
The Polymac profile is available in 4 standard and two corner panel formats. Its versatility and ease of adjustment directly on the job site make it the most efficient and affordable option on the market.

POLYMAC PANEL PROFILE



POLYMAC PANELS |

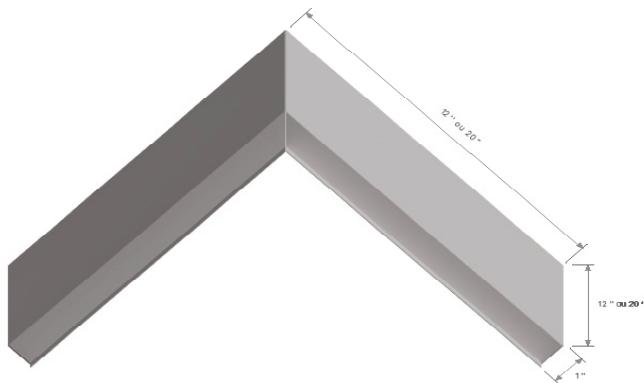
12 in (304.8 mm) x 1 in (25.4 mm) x 48 in (1 219.2 mm)
12 in (304.8 mm) x 1 in (25.4 mm) x 72 in (1 828.8 mm)



POLYMAC PANELS |

20 in (508 mm) x 1 in (25.4 mm) x 48 in (1 219.2 mm)
20 in (508 mm) x 1 in (25.4 mm) x 72 in (1 828.8 mm)

POLYMAC HORIZONTAL CORNER PANELS



POLYMAC CORNER PANELS |

12 in (304.8 mm) x 1 in (25.4 mm) x 12 in (304.8 mm)
20 in (508 mm) x 1 in (25.4 mm) x 12 in (304.8 mm)

WOOD OR STEEL FURRING

According to the construction standards in place in your region, the installation of wood or steel furring may be required. This guide demonstrates how to proceed with the installation of MAC cladding on wood furring. However, if the standards in your region do not require it, the decision to install it or not is yours. In such a case, the installation can be done directly on the recommended rigid surface covered with a weather barrier.

CREATING AN INSTALLATION PATTERN

Before any installation, we recommend calculating the width of the wall where you will install the panels to create, if not already done, an installation pattern based on the panel dimensions and determine if any sections will require cut panels.

3. INSTALLATION

PLASTIC FILM

Each sheet are covered with a plastic film designed to prevent damage to the surface during handling, transport, or installation.

It is important to remove the plastic film BEFORE installing the mouldings and sheets to prevent it from becoming trapped during assembly.

Make sure your walls are perfectly square before you start installing the coverings.

HIGH RISE BUILDING INSTALLATION

For HIGH-RISE buildings or buildings that are highly exposed to winds, additional caulking of the panels is recommended. It should be applied inside the female part of the staple in 1/2 x 1-inch strokes at 24-inch intervals using the sealant recommended by MAC and according to the wind resistance requirements set by the architect and the tests carried out by MAC.

Additionaly, it is recommended to add visible screws (painted A058 screws with neoprene washer with 24 in c/c spacing) between panels to greatly improve the wind resistance (see test results).

4. INSTALLATION OPTIONS

Many installation options are available with the Polymac profile. Be sure to follow the instructions for your chosen model in this guide.

HORIZONTAL INSTALLATION

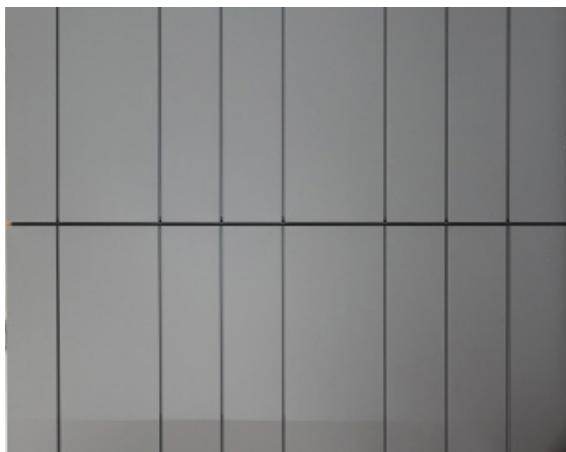


ALIGNED HORIZONTAL INSTALLATION



OFFSET HORIZONTAL INSTALLATION

VERTICAL INSTALLATION



ALIGNED VERTICAL INSTALLATION



OFFSET VERTICAL INSTALLATION

4.1 WALL PREPARATION | STARTER STRIP OR DRIP MOLDING

It is strongly recommended to install wood or steel furring at a 45° angle every 12 inches to obtain a final screw spacing of 16 inches center-to-center.



1. Install vertical furring first, then diagonal furring (approximately every 12 inches if you're using 3 in furring, and roughly every 16 inches if you use 4 in furring).

2. Use a laser to align one of the two sides (the top or bottom of the wall, depending on which side turns the corners of the building). Then, maintain height alignment between the two walls.

Once the wall is ready, install the starter or drip moulding, depending on the type of installation chosen.

HORIZONTAL INSTALLATION

4H. Now secure the starter strip 3 inches above where you will start your wall. Use MAC K-Latch 1 1/4 inch wood screws or MAC K-Latch metal screws as needed. Secure it with a first screw. When it is level, screw it in place.

VERTICAL INSTALLATION

4V. Now secure a drip moulding in place at the bottom of the wall.

*** Make sure the starter strip or drip molding is level, as it will guide the rest of the installation.

4.2 INSTALLATION OF "U" MOLDINGS (M15P) | HORIZONTAL AND VERTICAL ALIGNED INSTALLATION

4.2.1 "U" MOLDINGS (M15P) | ALIGNED HORIZONTAL INSTALLATION

Install the U-moldings starting at the outside corner, making sure to install the first 11 inches from the corner.

For the rest of the panels, you'll need to allow for the following distances between U-trims the rest of the wall panels, depending on the panel size chosen:

- 48.5 inches for 12" x 48" and 20" x 48" panels
- 72.5 inches for 12" x 72" and 20" x 72" panels



4.2.2 "U" MOLDINGS (M15P) | VERTICALLY ALIGNED INSTALLATION



To determine where to install the U-moldings, add 1/2 inch to the length of your panel starting from the drip moulding. For example, having 48-inch and 72-inch panels will give you 48.5 inches and 72.5-inch, respectively.

Mark the position of the U-molding on the wall and ensure it is securely in place, maintaining its level with the laser guide.

4.4 HORIZONTAL PANEL INSTALLATION

4.4.1 HORIZONTAL ALIGNED INSTALLATION



Insert the first panel into the starter strip and the U-moldings (M15P), then secure it in place with screws on the furring.



Next, install the remaining panels in the same row using a laser guide to ensure proper spacing between the panels.

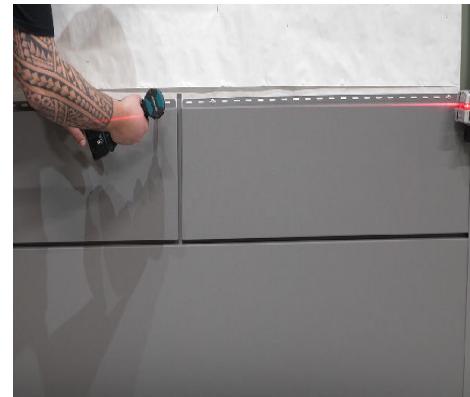
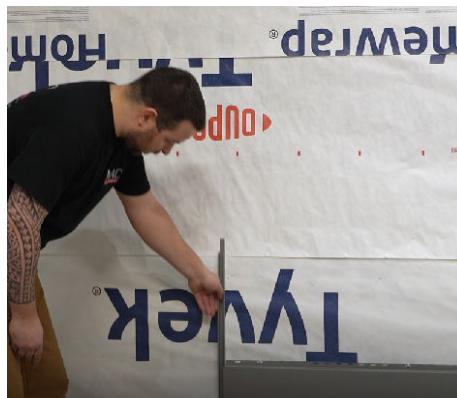


Repeat the horizontal installation of the panels by following the laser guide line along the upper facade line.



4.4.2 HORIZONTAL OFFSET INSTALLATION

1. Insert the first panel into the starter strip and then insert the intercalated moulding;
2. Fasten the panel in place with screws directly to the furring strips. If the screw-in location for the moulding offset moulding is between two furring strips, install support furring behind the panel.
3. Next, install the following panel in the same row using a laser guide to ensure proper horizontal alignment. Use spacers to provide a uniform distance for the vertical spacing between two panels. Secure the intercalated moulding and the panel in place.
4. Repeat this procedure for the remaining panels in the row.



4.5 VERTICAL PANEL INSTALLATION

4.5.1 VERTICAL ALIGNED INSTALLATION

Insert the first panel into the exterior corner and the U-molding (M15P); use spacers to ensure equal spacing. Then, secure the panel in place with screws on the furring.

Next, install the remaining panels in the same column using a laser guide to help ensure the proper spacing between the panels.



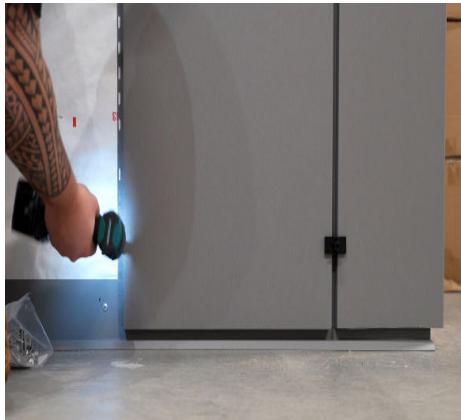
4.5.2 VERTICAL OFFSET INSTALLATION

Measure and mark the bottom panel depending on the type of intercalated design chosen. Please refer to section 4.9 regarding the cutting and bending of panels. Use spacers to install the bent panel into the corner panel or the previous panel, then secure it in place with screws on the furring.

Next, insert the intercalated moulding between each panel, use spacers to ensure equal spacing between each panel, and secure it.

Then, install the panels in the next column, using a laser level to guide the horizontal and vertical spacing between your panels.

Repeat the above installation for the remaining panels.



4.6 INSIDE CORNER | HORIZONTAL & VERTICAL INSTALLATION



We recommend installing an L-molding or creating a 90° L out of steel using steel scraps in the interior corner. Then, fix the L-molding in the corner of the wall to create a screen for water drainage. First, install all the panels on one of the two walls.

The panels of the adjacent wall will then overlap the panels of the first wall to create a panel overlap.

If it is necessary to cut a panel, measure from the U-molding (or intercalated moulding) to the interior corner or a J Trim, then cut the panel. Install the panel in place and secure it with MAC screws.

4.7 OUTSIDE CORNER

4.7.1 ALIGNED HORIZONTAL INSTALLATION

Insert the first exterior corner panel into the starter moulding and the U-moldings (fixation), then secure it in place with screws directly on the furring.

Next, proceed with the installation of the remaining corner panels up to the top of the wall using spacers.

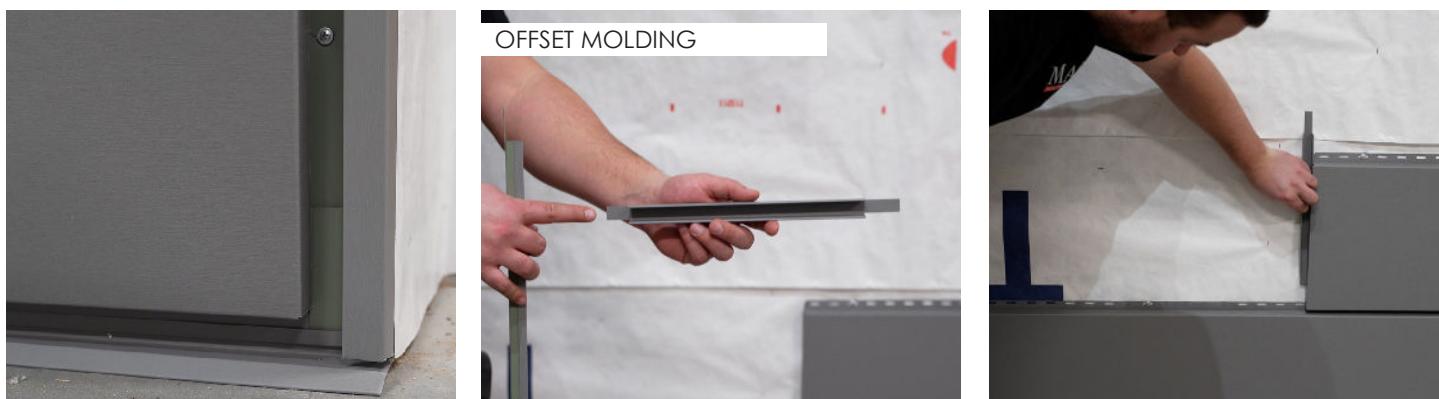


4.7.2 INTERCALATED HORIZONTAL INSTALLATION

Insert the first pre-bent exterior corner panel into the starter moulding and the intercalated mouldings at the ends, then secure the panel and the offset mouldings in place with screws directly on the furring.

For instructions on bending the corner panels, refer to section 4.9.

Next, install the remaining panels one row at a time by repeating these steps until the end of the wall (width-wise). Then, repeat these operations on the following rows using spacers and a laser level as a guide.



4.7.3 OUTSIDE CORNER | VERTICAL INSTALLATION



Refer to section 4.9 for cutting and bending a corner panel.

Once your corner panel is bent, insert the first one into the U-moulding (or intercalated molding) to form the exterior corner. Then secure the panel in place with screws on the furring.

Next, install the remaining exterior corner panels. Ensure that the corner panels are properly squared, as they will guide you throughout the installation.

4.8 OPENINGS | HORIZONTAL & VERTICAL INSTALLATION

4.8.1 OPENINGS THE MOLDINGS



Measure all the openings, then proceed with preparing the mouldings. Plan for J Trims on three sides and a drip moulding for the top of the opening.

Once ready, proceed with the installation of the mouldings around the openings.

4.8.2 OPENINGS | CUTTING PANELS

Then, adjust the panels as necessary to create a frame around the opening.

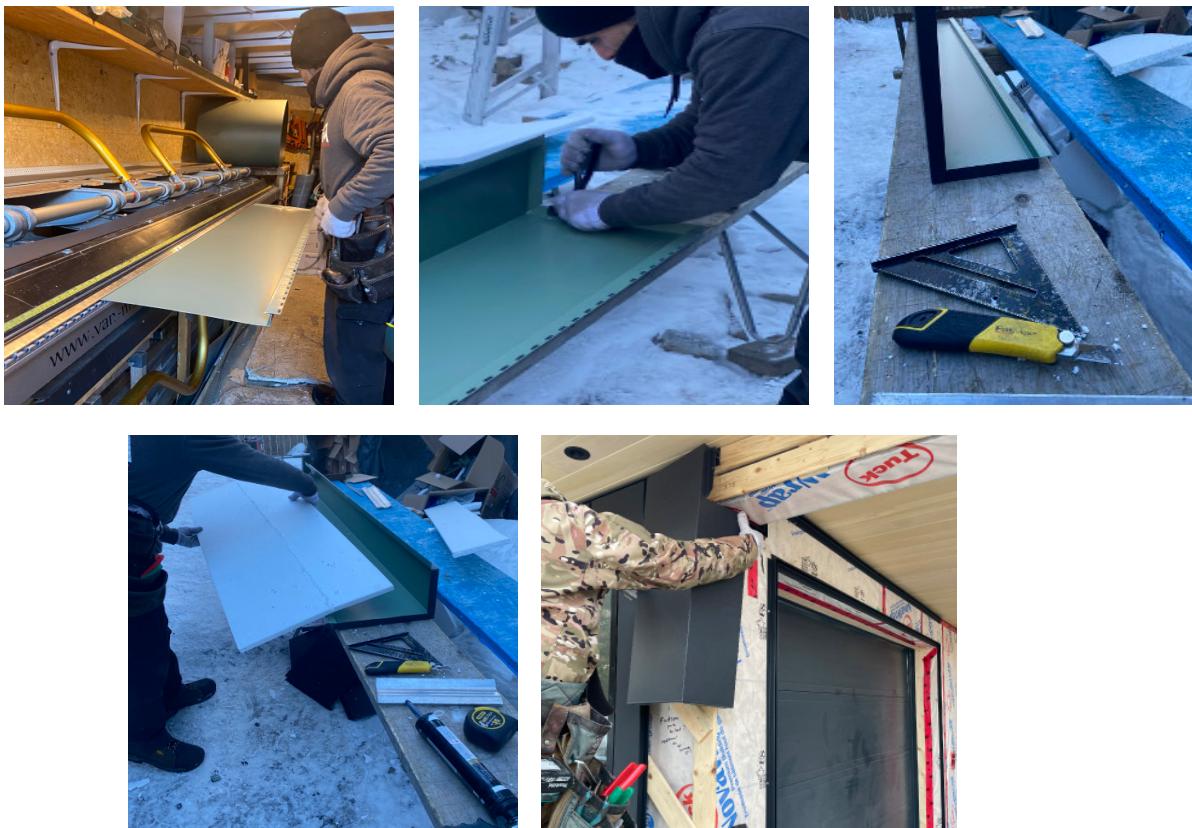


4.9 CUTTING AND BENDING

4.9.1 CUTTING AND BENDING FOR OUTSIDE CORNERS

MAC offers two standard corner formats, 12 in x 12 in x 1 in or 12 in x 20 in x 1 in, designed for horizontal installation. However, it is possible to create custom corner panels using standard Polymac panels by folding them with a bender. Here is how to proceed with a vertical installation with intercalated moulding:

1. Once the installation pattern for the intercalated moulding is determined, calculate the measurement of the panel;
2. Transfer this same measurement onto the pane;
3. Cut the male and female ends at a 45-degree angle;
4. If there is styrofoam, remove 1.5 inches to allow the bender to pass through, (Note that you can order panels with the styrofoam not glued in advance.);
5. Cut the panel with steel shears or a nibbler;
6. Place the panel in the bender and raise the arm to fold it into place.



4.9.2 MANUAL FOLD WITH VERTICAL CUT

In the case where you need to cut a panel vertically and recreate a factory fold that would be visible and not hidden in a J-trim.

1. Take the measurements between the two mouldings;
2. Mark the measurement on the panel and add the inch necessary for bending with the bender;
3. However, the male and female ends must be cut to the exact required measurement on the front of your panel;
4. Remove 1.5 inches of styrofoam to allow passage through the bender;
5. Cut the panel with metal shears or a nibbler;
6. Place the panel in the bender, then lift the arm to bend it. Lower the arm to form the factory fold.



4.9.3 HORIZONTAL PANEL CUT

If a horizontal cut of a panel is necessary at the end of a wall or around an opening, measure the distance between the previous panel and the J trim. Add 1/2 inch to the measurement to allow for spacing between the panels. This 1/2 inch will give you the measurement needed for your final panel.

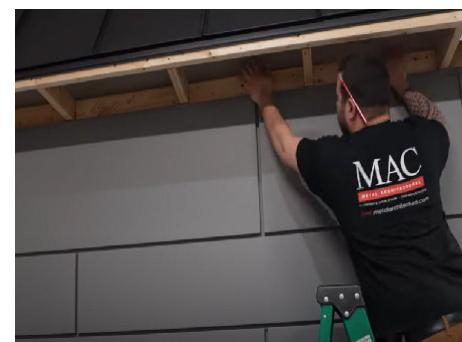
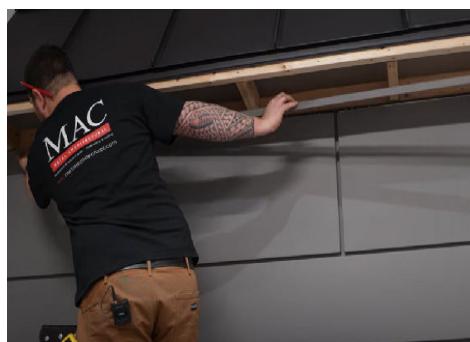


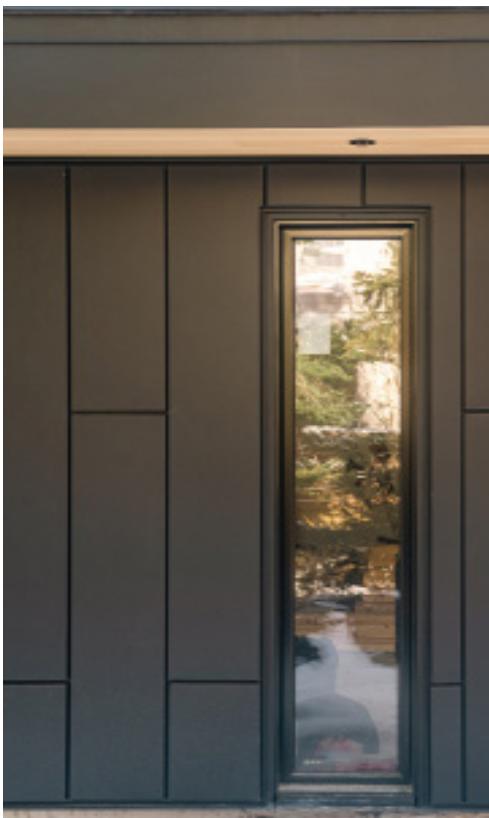
4.10 END OF THE WALL

HORIZONTAL INSTALLATION

For easier wall finishing, use M07GP 2-piece J Trim.

1. Before installing the last row of panels, take care to install the 1st part of the 2-piece J Trim, the screwing part.
2. Then measure the last panel, in case it doesn't reach the full height, and adjust it using electric shears.
3. Then, fix the cut remnant upside down to give more support to the cut panel. It's essential to ensure that the panel is tightly clamped to the moulding J Trim for maximum support.
4. Finally, finish off the wall by placing the front piece, i.e. the 2nd piece of J Trim of the J Trim on the other piece previously installed.





To get detailed instructions on how to install the Polymac profile, you can visit the PRO Space section of our website at MACmetalarchitectural.com

You'll find a wealth of technical information on our profiles. This includes a series of installation videos, moulding booklets, as well as access to technical drawings. You can also check out our YouTube channel for all the videos.

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