



INTRODUCTION

The application and detail drawings depicted herein are strictly for illustration purposes only and may not be applicable to all conditions. It is the responsibility of the designer, roofing contractor, and installer to ensure that the following details are adapted to meet the conditions encountered within any particular building design.

Extreme Metal Fabricators, LLC shall be held harmless from any and all claims resulting from a lack of watertightness as a result of following these suggested typical detail drawings.

The installer shall be familiar with all erection instructions and examine the roof substrate to ensure it meets the minimum requirements and that the building is square before starting any work. Provide a written report of potential problems to the general contractor, architect, or owner. Do not start any work until all unsatisfactory conditions have been corrected.

When starting panel installation ensure panels are held true, plumb and straight. All panel widths are nominal and it is recommended that periodic measurements be taken to ensure horizontal spacing is not gaining or losing width.

Sealant used in joints and flashings shall be approved by Extreme Metal Fabricators, LLC. Sealant used in seams shall be the sealant used in testing the panel profile. Sealant shall be field applied on clean, dry surfaces without any skips or voids in the bead. Sealant shall be supplied or approved by Extreme Metal Fabricators, LLC.

Oil canning can be described as the amount of waviness found in the flat area of metal panels. *Oil canning* is an inherent characteristic of light-gauge, cold-formed metal products and is **not a cause for rejection**. Proper torque on exposed fasteners, narrower widths of panels, heavier gauges, the use of stiffening ribs or striations are common means to help minimize potential *oil canning*.

Tin snips or a "nibbler" type electric tool are recommended for field cutting panels, Circular saws, torches, and plasma cutters are not to be used. All metal shavings and/or filings must be removed each day to avoid rusting the metal surfaces which could void the paint warranty and shorten the life of the product.

When using dissimilar metals and/or PT wood a separation barrier must be used to prevent contact between dissimilar metals and/or PT wood. Fasteners used into PT lumber should be tested and approved for use. Approved fasteners are Series 300 stainless steel, hot-dipped galvanized, or fasteners coated with an approved coating capable of resisting the corrosive effects of PT lumber.

It is the building owner's or design professional's responsibility to consult with the authorities having jurisdiction to determine the specific requirements of each project and system. Extreme Metal Fabricators, LLC should be contacted when local, controlling codes or insurance requirements conflict with Extreme Metals Fabricators, LLC recommendations.

Extreme Metal Fabricators, LLC

📍 2160 SW Poma Drive Palm City, FL 34990 ☎️ (772) 223-4055 (Phone) 📠 (772)781-7492 (Fax)





SAFETY

It is the installer's responsibility to study and ensure compliance with all applicable OSHA and other safety requirements before starting any projects, including but not limited to, record keeping, fall protection, ladder safety, electrical and hand tools, and personal protective garments and equipment.

Safety railing, netting, harnesses, and safety lines should be provided and used by all crew members working on the roof.

MATERIAL STORAGE

Unload material and inspect for damage. Notify Extreme Metal Fabricators, LLC immediately regarding any damaged material.

It is recommended that all material be protected from the elements when stored on the jobsite. Materials should be installed soon after delivery, preferably beginning the following day. If material must be stored outside, proper precautions must be taken to protect the material from damage and trapping moisture beneath, on top of, and between panels. The panels must be stored at an angle to promote drainage of water off the bundle. Sufficient support must be provided to the raised and angled bundles to avoid excessive bowing, which may result in puddling of water. The bundle must be completely sheltered with a loose fitting waterproof tarp to protect the bundle during rain, while allowing for air circulation and drying of condensed water.

In addition to water there are other important factors that contribute to the corrosion of stored panels. These factors are temperature and exposure time. Given enough time, panels will eventually become wet and storage corrosion may occur under most job site conditions. Even in a well-protected bundle the natural temperature and humidity variations will cause water to condense on and between the panels. Shipping the bundle from a cold area to a warm area will cause water to condense not only on the bundle but also between the panels.

Extreme Metal Fabricators, LLC will deliver the roofing panels to the jobsite either in bundled packages or rollformed at the jobsite. It is the customer's responsibility to store the panels properly. Extreme Metal Fabricators, LLC will not be held responsible for damage that may occur after delivery. It is recommended that sufficient personnel of the customer's forces be present at time of delivery to facilitate staging and storing of the roofing panels and trim.

Extreme Metal Fabricators, LLC

📍 2160 SW Poma Drive Palm City, FL 34990 ☎️ (772) 223-4055 (Phone) 📠 (772)781-7492 (Fax)





CLEANING AND MAINTENANCE GUIDE

Kynar 500 or Hylar 5000 fluoropolymer coating systems have a similar molecular structure as Teflon®. The molecules on the surface of the coating are bound so well together they resist reacting with almost anything. This surfacing helps them resist the effects of many elements found in the environment such as air pollution, acid rain, and general airborne dirt.

Although Kynar 500 or Hylar 5000 finishes are extremely durable, periodic cleaning to remove buildup of resins, and other residue is recommended to extend coating life and also to comply with coating manufacturer's warranties. A variety of methods for removal of surface deposits are available. Washing with plain water using hoses or light pressure spray equipment is usually adequate. When surfaces are dulled with heavy deposits of dirt or other contaminants, stronger methods may be needed.

Two precautions: (1) do not use wire brushes, abrasives or similar cleaning tools which will mechanically abrade the coatings surface and (2) certain cleaning agents listed below should be tested in an inconspicuous area before use.

TYPE I: HOT OR COLD DETERGENT SOLUTIONS

A 5% solution in water of commonly used commercial and industrial detergents will not have any deleterious effect on a fluoropolymer surface. These solutions should be followed by an adequate rinse of water. Use a cloth or sponge for application.

TYPE II: SOLVENTS

Most organic solvents are flammable and/or toxic and must be handled accordingly. Keep away from open flames, sparks, and electrical motors. Use adequate ventilation, protective clothing, and goggles.

Solvents that may be used to remove non-water soluble deposits (tar, grease, oil, paint, graffiti, etc.) from fluoropolymer surfaces include:

ALCOHOLS

- I. Methanol (wood alcohol)
- II. Denatured Alcohol (ethanol)
- III. Isopropyl (rubbing alcohol)

Note: Methanol is toxic. All solvents should only be handled using protective gloves and safety glasses.

PETROLEUM SOLVENTS AND TURPENTINE

- I. Kerosene
- II. Mineral Spirits
- III. VM&P naphtha
- IV. Turpentine (wood or gum spirits)

Extreme Metal Fabricators, LLC

📍 2160 SW Poma Drive Palm City, FL 34990 ☎ (772) 223-4055 (Phone) 📠 (772)781-7492 (Fax)





TYPE III: CHEMICAL SOLUTIONS

Our tropical climate is conducive to the formation of mildew. Dirt and spore deposits can permit mildew growth to occur. The following solution is recommended to remove mildew when necessary:

- 1/3 cup dry powdered laundry detergent (such as Tide®)
- 1 quart sodium hypochlorite 5% solution (such as Clorox®)
- 3 quarts water

Rust Stains: Hydrochloric, citric acid or muriatic acid, diluted with ten volumes of water, may assist in removing rust stain from fluoropolymer surfaces. Limit contact to five minutes. Oxalic acid solutions or acetic acid (vinegar) may be used for the same purpose. Flush with large amounts of fresh clean water.

Caution: acid solutions are corrosive and toxic. Flush all surfaces with copious amounts of water after use and ensure proper ventilation in the work space.

WARRANTY NOTE

Misuse or abuse of any of the cleaning agents listed above will result in a voiding of warranty for the surface affected.

Extreme Metal Fabricators, LLC

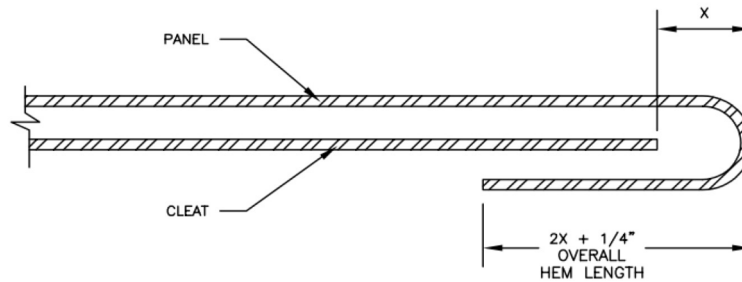
📍 2160 SW Poma Drive Palm City, FL 34990 ☎ (772) 223-4055 (Phone) 📠 (772)781-7492 (Fax)



HEM LENGTHS

A standing seam roof panel experiences changes in panel length with changes in panel temperature. A panel must be fixed at one end and allowed to expand and contract on the other end. If the panel end that is not fixed incorporates a hemmed detail, allowance must be made for the panel to move.

The length of the hem will vary according to the anticipated temperature range, the length of the panel, and the type of metal. The below example and table can be used as a guideline. If more stringent analysis is required, a design professional should be consulted. When installing panels, be sure to leave the correct gap between the end of the panel that is not fixed, and the cleat. Be sure that the hem is not tight against the cleat. Also be sure that the lower edge of the hem will not contact any flashings when the panels contract. All hems should be cut clean and crisp in a straight line, as these are visible from the underside, and should not be crimped tightly to the cleat.



THERMAL MOVEMENT TABLE

PANEL AND SUBSTRATE MATERIALS	PANEL LENGTH (FT)		
	10ft	50ft	100ft
Aluminum over Rigid Insulation	3/16"	7/8"	1-9/16"
Aluminum over Wood Deck	3/16"	11/16"	1-3/8"
Aluminum over Steel Deck	1/8"	5/8"	1-3/16"
Aluminum over Concrete Deck	1/8"	5/8"	1-1/4"
Steel over Rigid Insulation	1/8"	1/2"	7/8"
Steel over Wood Deck	1/16"	3/8"	5/8"
Steel over Steel Deck	1/16"	3/8"	5/8"
Steel over Concrete Deck	1/16"	3/8"	1/2"

Extreme Metal Fabricators, LLC

2160 SW Poma Drive Palm City, FL 34990 (772) 223-4055 (Phone) (772)781-7492 (Fax)





EXTREME METAL FABRICATORS

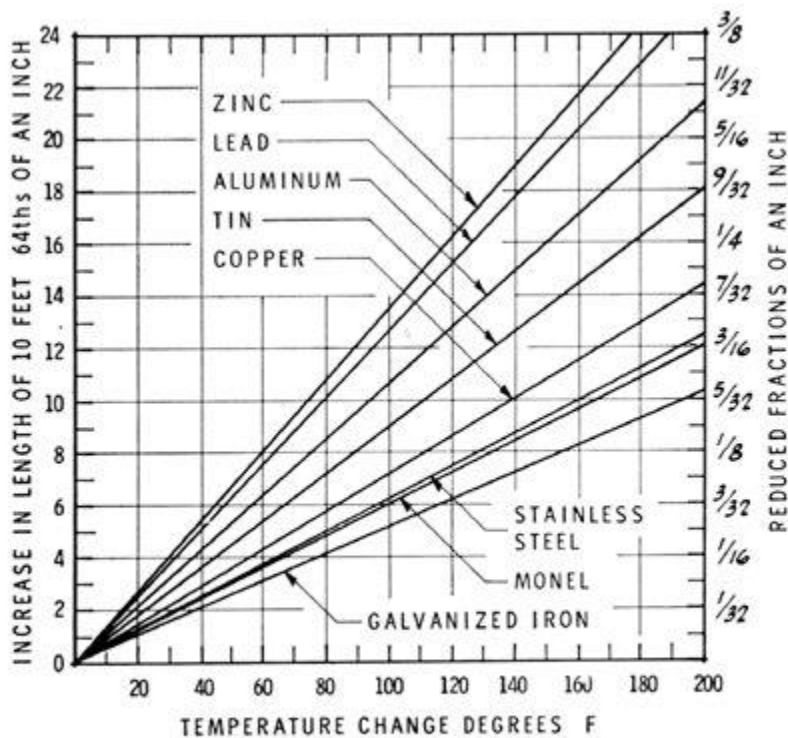


Figure 6. Thermal movement for 10-foot lengths of commonly used flashing metals

Extreme Metal Fabricators, LLC

📍 2160 SW Poma Drive Palm City, FL 34990 ☎ (772) 223-4055 (Phone) 📠 (772)781-7492 (Fax)





EXTREME METAL

FABRICATORS

Extreme Metal Fabricators, LLC

📍 2160 SW Poma Drive Palm City, FL 34990 ☎️ (772) 223-4055 (Phone) 📠 (772)781-7492 (Fax)

