



INSTALLATION MANUAL FOR WALL CLADDING

ENGINEERED FOR HASSLE FREE INSTALLATION

TrimLock (Insulated Metal Panel, IMP) is purposefully designed for simple installation with less job site hassle, It can be handled alone by one installer.

All TrimLock cladding products follow the guidance of a Passive Build & Green build Canada application and performance level.

Before you install TrimLock IMP, learn your local building code requirements and how the codes relate to the instructions given in this manual.

Installers need to be aware of building code requirements in the geographic areas where they are installing, and how the codes relate to the instructions given in this manual.

Local building codes must always be observed, they are the legal representation for an installation in a given jurisdiction, however, local codes are based on the national model building codes. Model codes themselves do not have the force of law until they are adopted by a province or local jurisdiction.

In Canada, the primary model code is the National Building Code of Canada (NBC), published by the National Research Council of Canada. TrimLock IMP panel procedures follow global recognized metal sandwich panel and exterior insulating finishing systems that follow install guidelines in order to provide best performance. However, any specific requirement in a local code will usually override any provision of the manufacturer's instructions, especially if the local requirement is more restrictive. Therefore, TrimLock insulated metal panel installations must always conform to local building codes, however local code may also require that the installation conform to the siding manufacturer's instructions.

INSTALLING FOR WIND LOAD RESISTANCE

TrimLock IMP system is remarkably untouched by high wind, given its light weight and relatively simple installation but in order for it to perform to its potential, it must be properly installed.

Installation fastening procedures are a standard guide to the global IMP market, installers need to assure that the panel is installed in a way that allows it to meet these standards. The instructions in this manual provide the minimum requirements for most installation situations. However, TrimLock may have different instructions of the products, or may have special installation requirements that apply in high wind locations. Always consult the manufacturer's instructions before starting an IMP installation.



WATER-RESISTING BARRIER

TrimLock (IMP) Insulated metal panel's are exterior insulating cladding's, not water resisting barriers, and are designed to allow the material underneath to breathe. This factor alone requires a supplemental rain screen that reduces the amount of water that reaches an underlying water-resisting barrier. To achieve designed performance, and to comply with the most recent building codes, TrimLock products must be installed over a water resisting barrier (building envelope). Which is intended to prevent liquid water that has penetrated behind the exterior covering from further intruding into the exterior wall assembly. Water resisting barrier systems often consist of a combination of exterior cladding, flashed wall openings and penetrations, water resisting barrier material (paper envelope), sheathing. Effective exterior wall systems will shed the water initially, control moisture flow by capillary and diffusion action, and minimize absorption into the wall structure. The level of water resistance required is determined by the applicable building code, the structure, and the climate. If correctly installed as required by local code, TrimLock IMP system can effectively withstand the elements. Note that additional measures (firing strips) may provide increased protection against water intrusion than the minimum requirements of the building code. ****NOTE** each weather barrier manufacture has detailed instructions on how to properly envelope your building e.g, (Typar, Tyvek, Barricade Wrap Plus) each manufacture complies with local building codes and recommendations. Consult online for proper installation along with local building code guidelines.**

Each color region represents local building code compliant to the NRC regulations. Consulting local building codes will ensure proper weather barrier guidelines and installation.



STORAGE

When transporting TrimLock IMP to a job site, make certain to keep the crates flat and supported along their entire length. At the job site, take the following precautions when storing TrimLock IMP crates:

- Store the crates on a flat surface and support the entire length of the crate.
- Keep the product dry, the product is intended for vertical installation for proper watershed.
- Store the crates away from areas where falling objects or other activity that may cause damage.
- Do not store the crates in stacks more than two crates high at 50" tall each crate.
- Do not store the crate in any location where temperatures may exceed 130° F/54.4°C (e.g., on blacktop pavement during unusually hot weather or under dark tarps or plastic wraps without air circulation).

RE-SIDING OVER STUCCO, MASONRY AND SIDING

Asbestos siding is a regulated material, and the appropriate environmental agency or local building code official should be contacted before re-siding over this product. Application directly over Stucco, Siding, Masonry can be achieved without removal but proper preparation will be necessary, consult TrimLock for preparation procedures.

BASIC INSTALLATION RULES

Before getting started, it is important to review several rules of thumb for application. The following rules, are critical for proper TrimLock IMP installation:

1. Determine the IMP profile for proper directional installation. Most TrimLock IMP panels can be installed vertical and or horizontal.
2. When installing each panel, push down from the top until the lock is fully engaged with the piece below or adjacent to each other, use mechanical fasteners and fasten it into place.
3. Overlap each adjoining panel by ½" by using the prepared overlapping ends (horizontal install)
4. Fasten nails or other fasteners in the center of the nailing slots
5. Do not drive or over tighten the fastener against the cladding nail hem. Drive fasteners straight and level to prevent distortion and buckling of the panel.
6. Leave a minimum of 1/8" (3.175 mm) clearance at all openings and stops to allow for normal expansion and contraction.
7. Do not caulk the overlap joints, caulk all window and door sills and sides after the window trim is installed. Do Not caulk the headers.
8. Do not face-nail or staple through siding, except in very limited applications where the nail hem is removed and in the peeks of gable walls then caulk and color.
9. In re-siding, furring or removal of uneven original siding may be necessary.
10. Ensure that the substrate is stable, keep in mind that exterior cladding can only be as straight and stable as what lies under it. TrimLock Cladding will account for some wall indifference's due to the EPS insulation.

DISPOSAL/RECYCLING

Dispose of all scrap or excess material in a manner that is consistent with local and provincial rules and regulations. EPS is a material that can be recycled.



CLEAN UP

TrimLock IMP product line is maintained with little to no effort. It is possible to wash it down with an ordinary garden hose and or pressure washer. CAUTION if using a pressure washer keep the pressure end off the wall at least 18" to avoid possible damage. Soft brushing may be used for heavy dirt deposits such as mud. When washing down the entire wall, start at the top and work to the bottom in order to prevent streaking.

PANEL PROFILES

TrimLock IMP comes in a variety of shapes, and colors, creating a wide array of looks for different houses and or commercial complexes. The product is manufactured primarily from galvanized steel, EPS insulation, and a proprietary texture, available in a wide color selection. Mill colored steel and wood-grain is available with limited color selection, all variety of panel can be installed vertical and horizontal.

ACCESSORIES

Outside and Inside Corner Posts are used to provide a finished edge at an inside or outside corner. Trim and Molding give every installation a professional appearance, while providing a water-resisting facade. Some accessories include window / soffit trim, starter strips, J-channels, drip caps, T-bar. (Flashing Code-compliant) Flashing should be integrated with the water-resisting barrier and applied around windows, doors, other openings and roof lines.

BASIC INSTALLATION TOOLS AND EQUIPMENT

Skill saw, table saw, cut off saw (grinder), radial-arm saw or panel saw, can speed the cutting as well. A fine-tooth sheet steel blade and or a steel cutting diamond blade. In extremely cold weather, move the saw through the material slowly to prevent chipping or cracking. For best results when cutting, cut on the insulation side (back side) for a cleaner cut. Utility Knife is for trimming insulation when needed. Good quality tin snips or compound aviation-type snips will speed the cutting and shaping of the cladding and metal trim.

WALL SUBSTRATE MATERIALS

TrimLock single clad panels should be applied over a sheathing that provides a sound, flat as possible surface. Consult local building codes for sheathing requirements. TrimLock cladding can be installed over common wood sheathings such as plywood, oriented strand board (OSB), ICF block, masonry and concrete.

FASTENING PROCEDURES

Use aluminum, galvanized steel, or other corrosion-resistant nails, staples, or screws when installing TrimLock cladding. Minimum fastener length must be sufficient to penetrate sheathing other applicable substrate and framing. A minimum of 1 1/4" (32 mm) penetration into substrate or in accordance with local building code requirements. Nail heads should be 5/16" (7.9mm) minimum in diameter, shanks should be 1/8"(3.2mm) in diameter. Substrates such as masonry, ICF block construction, a combination of mechanical fasteners and adhesives can be used. Consult TrimLock for further recommendations.



Although all measures have been taken to lessen the effect through the manufacturing process and material make-up, TrimLock cladding can expand and contract 1/8" (3.175 mm) +/- during normal year-round changes in temperature. Whether using a nail, screw, or staple to fasten the siding, the following basic rules must be followed:

- Make sure the panels are fully locked tight along the length of the interlocking edges.
- Do not over drive the head of the fastener tightly against the siding nail hem. Tight nailing, screwing, or stapling will cause the metal to buckle and may cause improper locking of each section.
- When fastening, start in the center of the panel and work toward the ends.
- Center the fasteners in the nailing slots so they are hidden by the next course of cladding,
- Drive fasteners straight and level to prevent distortion and buckling of the panel.
- Space the fasteners a maximum of 16" (406mm) apart for horizontal siding panels, every 12" (305mm) for vertical siding panels, and every 8" to 12" (203mm to 305mm) for accessories. Start fastening the starter strip at the bottom of the wall.
- Nail down loose boards of existing substate and replace damaged area.
- Scrape off loose caulking and re-caulk around windows, doors, and other areas to protect from moisture penetration.
- Remove all protrusions such as gutters, downspouts, and light fixtures.
- Check all walls for evenness and install furring strips where necessary. When installing furring strips, please take appropriate measures to install properly.

TrimLock cladding panel's are installed before any trim work is completed. This includes all inside and outside corners, window and soffit trim, these trims are installed on top of the finished product.

Step 1: Starter strip: In order for the siding to be installed properly in a level fashion, the starter strip at the bottom of the wall must be level and set at the proper height at transition. Fig 1.

- Determine the lowest point of the wall that will be sided; from that point, measure up 2.5" (63.5 mm) and partially drive a nail at one corner, when finished this line will be where the top nailing flange of the starter strip will be lined up for levelness.
- Attach a chalk line; go to the next corner and pull the line taut.
- Make sure the line is level by using a line level or a 4' (1.2m) level.
- Snap the chalk line and repeat around the entire building.
- Install the starter strip by lining up the top of the back nailing flange of the starter strip using the chalk line as the level guide. Leave a 1/4" gap between each strip for water management. Weep holes can be drilled in the bottom of the starts strip for increased water management.

Step 2: Properly install all building envelope according to local building codes and envelope manufactures instructions. Including all metal flashing, peel and stick flashing, envelope overlapping tape seal. *Consult local building codes and enveloping instructions*

Step 3: Start installing the TrimLock cladding, vertical and horizontal panels are designed to be installed left to right and bottom to top. At the starting point install the cladding flush with the left corner of the wall, then install the mechanical fasteners Fig 2. then continue by adding panels in the same direction covering the remainder of the wall. When a horizontal install is chosen stagger the joints so they do not line up with each other.



- The TrimLock panel is intended to be 1 piece vertical installation from the bottom of the building to the soffit so there are no joints in the middle of each panel. On larger walls that do not permit 1 piece install (Exceeds 144") a mid band application is introduced to continue each course upward. Fig 4. A horizontal installation is overlapped 1/2" on joining ends. After the first course, the cut-off at the end of each course can be used as the starter piece on the next course eliminating waste. In some cases, a mid band transition may be required for change of color, change of product, indifferent wall thicknesses, etc. Fig 4.
- Cut the product at least 1/8" away from all openings and soffit to allow for the trim work to be installed. Each of the cladding styles can be complimented with other types of trim work, installed prior to the cladding install or over the top of the cladding. (Attention must be taken to ensure the trim work is sealed around all openings).

Fig: 1 Foundation transition

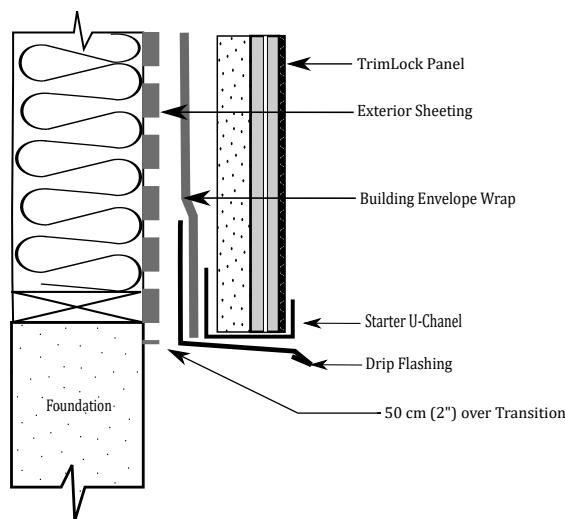


Fig: 2 outside / inside corner

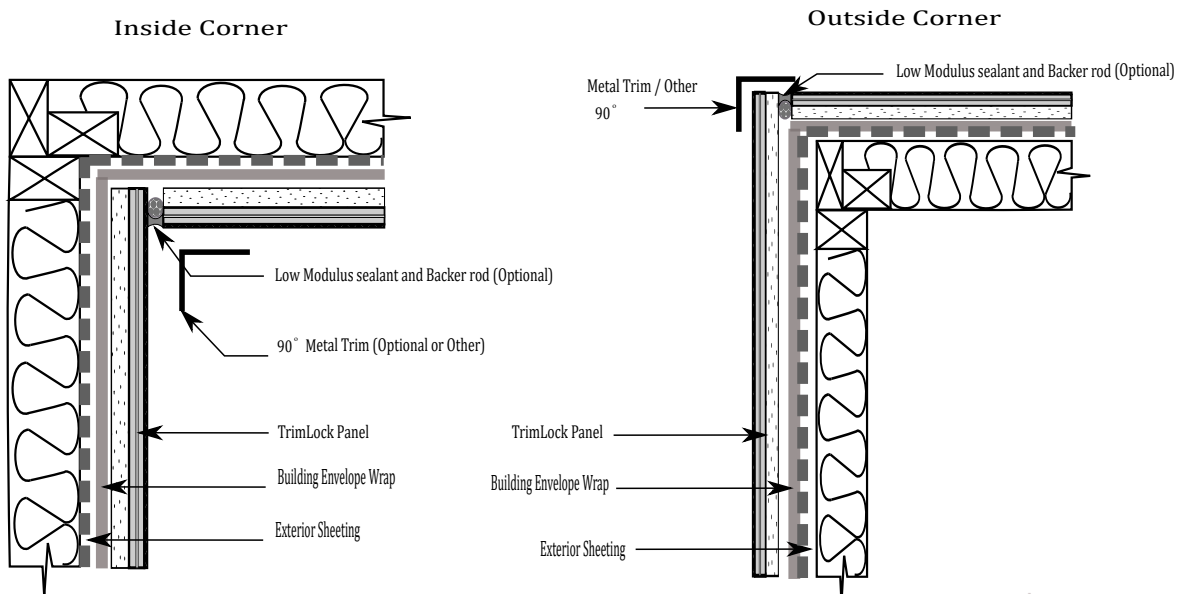


Fig: 3 Hidden fastening flanges

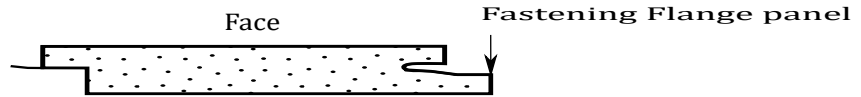


Fig: 4 - TrimLock Wall Panel Exceeding 144" Tall

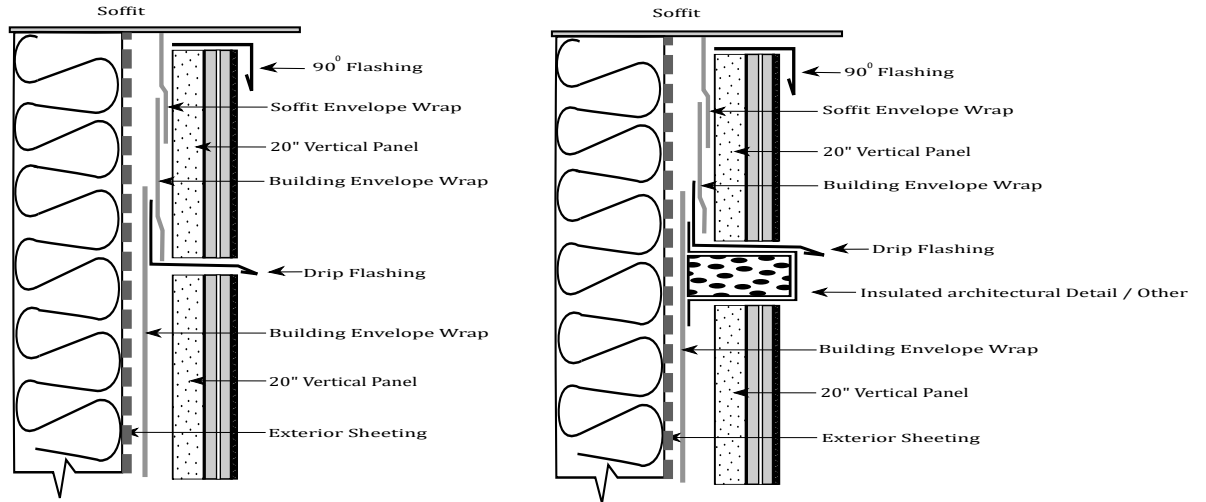
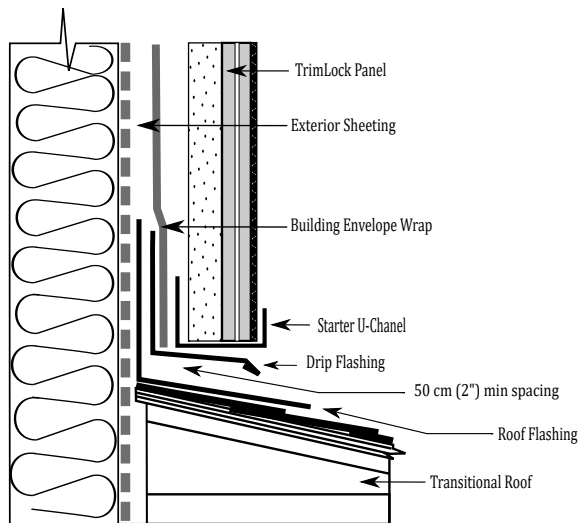
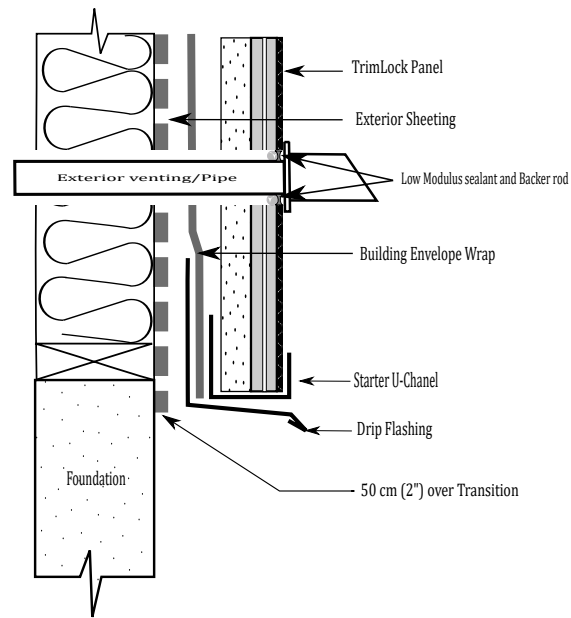


Fig: 5 Roof line transition

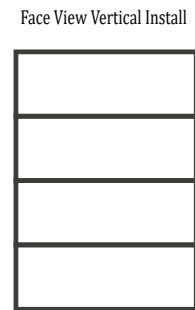
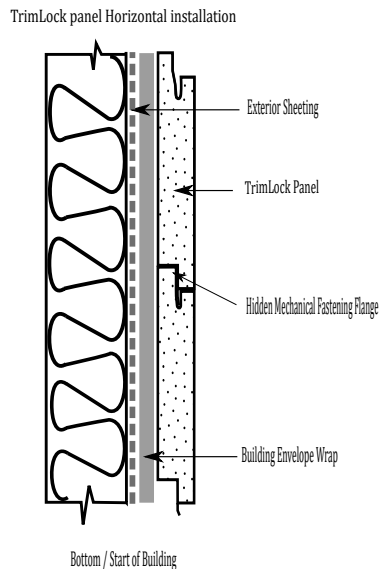
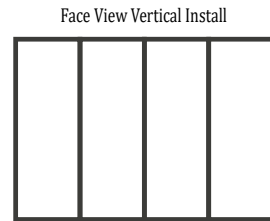
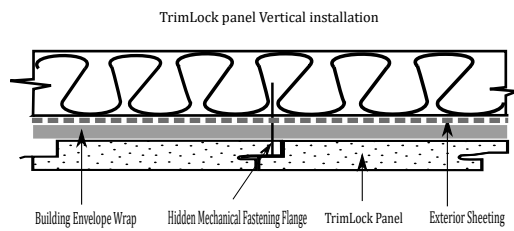


Step 4: When each wall is complete start by sealing off all wall protrusions such as vents with appropriate sealants. Fig 7.

Fig: 7 Vents, Piping, Wall protrusions.



Top & Side View Panel install and profile direction



*** Wall strapping for water management may be necessary, check with local building codes and guidelines ***



Step 4: Start installing trim work around openings, windows, doors, corners etc. for the finished look and proper sealing of edges. Inside and outside corners see option, Fig 2.

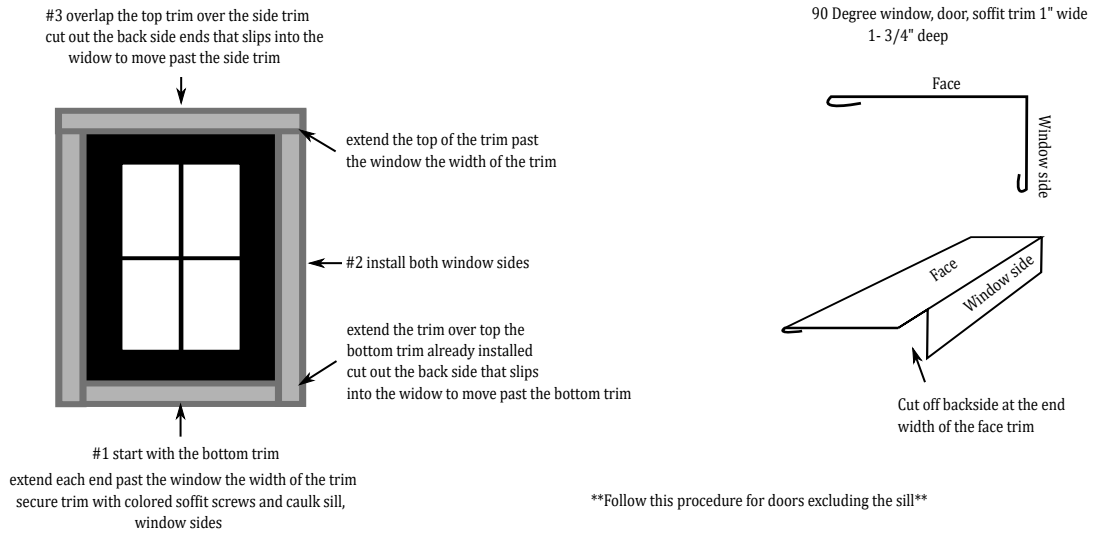
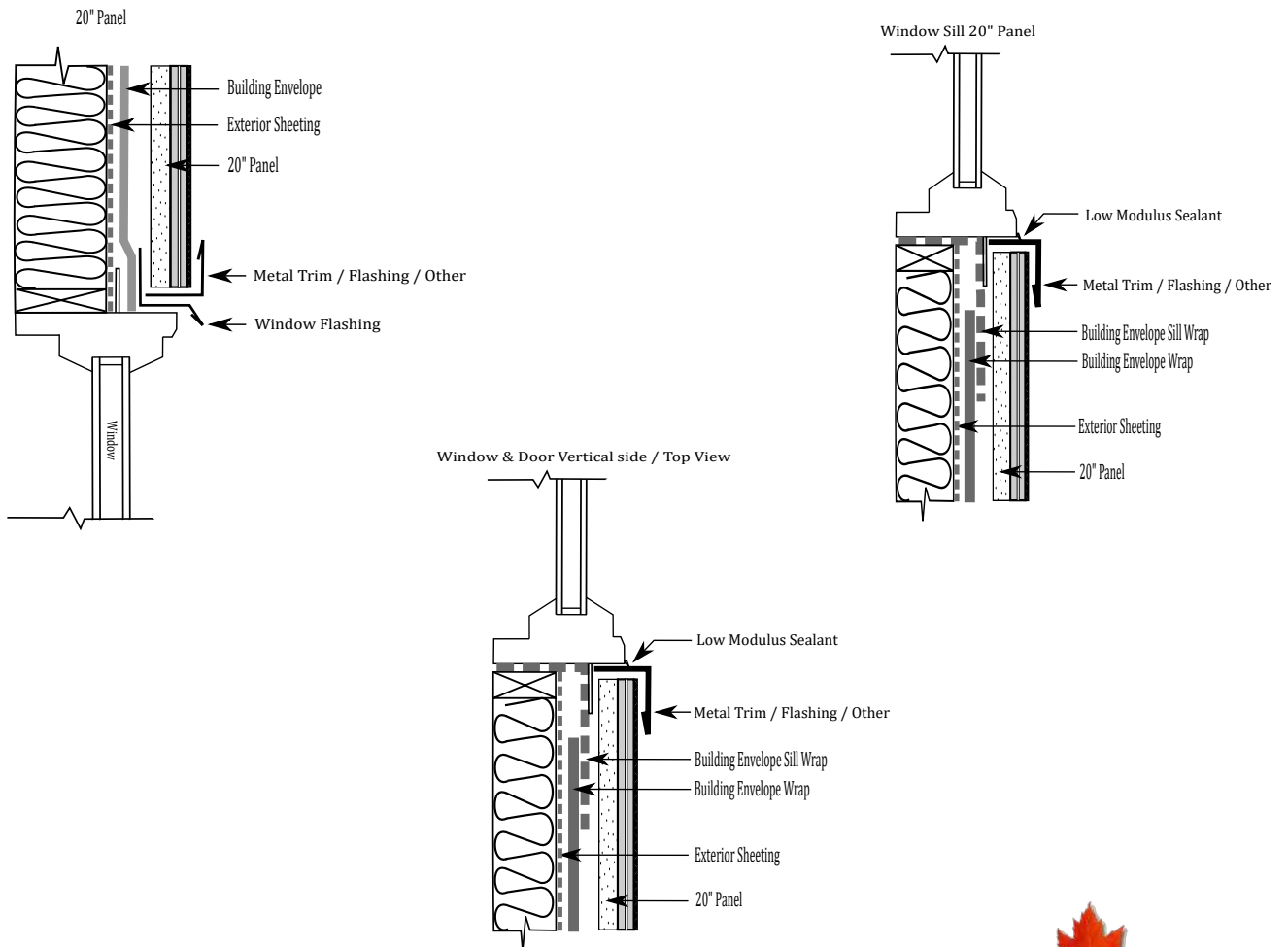


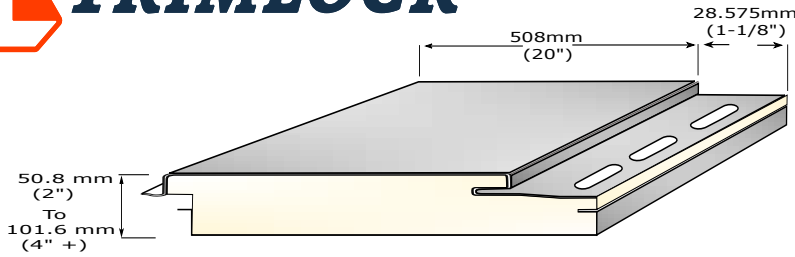
Fig: 8 Window and door header / sill / vertical finish





IMP

**Sandwich Panel
Smooth or Pleated**



Standard Features

Steel Cladding	Core Thickness	R-Value	Weight
G90-gr33 24 gauge Galvanize Mill Coated Color	50.8mm (2")	RSI 1.4088 (R 8)	21.9 kg
	63.5mm (2.5")	RSI 1.629 (R 9.25)	22.68 kg
	76.2 mm (3")	RSI 2.1132 (R 12)	23.46 kg
	101.6mm (4")	RSI 2.8176 (R 16)	25.02kg



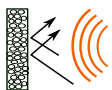
Standard Panel size 508mm (20") x 3657.6mm (144") coverage 1.858 sq/meters (20 sq/ft)
Panel with can range from 8" up to 20" wide (with or without reveal)

Higher R-Value and insulation thickness available upon request

Steel Cladding	26ga Galvannealed steel G90 gr33 / 24ga Galvalume steel gr50
Insulation	EPS bead board
Coatings	Water-borne Acrylic Polyurethane Enamel (Variable Substrate Technology)
Supporting Trim	55% Aluminum-Zinc Coated Steel ASTM 792 SMP Pre-painted Steel AZ50 Substrate
Install	Horizontal / Vertical



Classifications CAN/ULC-S701
CCMC 12424-L
CCMC 12425-L
CCMC 12426-L
ICC-ES ESR-1587
ASTM E413-16 STC 25 Sound Transmission
ASTM E90-09 OITC 25 Sound Transmission
ASTM E330-14 Uniform Proof Load 2080 Pa (43.5 psf) Free standing perimeter fastening



Sound Suppression



Thermal *Insulation*



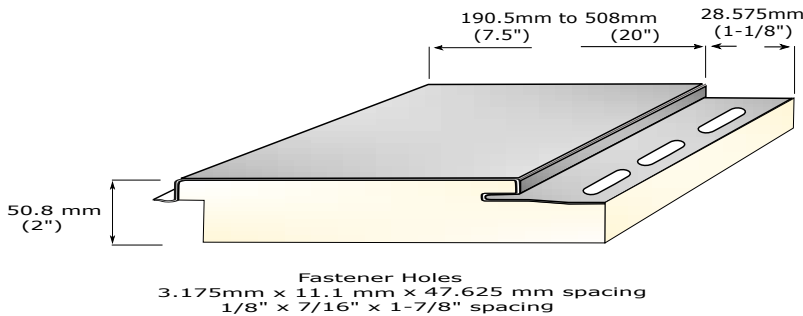
Energy Saving



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Single IMP Interlock Cladding



Standard Features

Core Thickness	Steel Cladding	R-Value	Weight
50.8mm (2")	G90-gr33 26 gauge Galvanize	RSI 1.4088 (R 8)	12.9 kg

Higher R-Value and insulation thickness available upon request

Classifications / Configuration

Standard Panel size 508mm (20") x 3657.6mm (144") coverage 1.858 sq/meters (20 sq/ft)
Panel with can range from 8" up to 20" wide (with or without reveal)

Steel Cladding 26ga Galvannealed steel G90 gr33 / 24ga Galvalume steel gr50

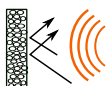
Insulation EPS bead board

Coatings Water-borne Acrylic Polyurethane Enamel (Variable Substrate Technology)

Supporting Trim 55% Aluminum-Zinc Coated Steel ASTM 792
SMP Pre-painted Steel AZ50 Substrate

Install Horizontal / Vertical

Classifications CAN/ULC-S701
CCMC 12424-L
CCMC 12425-L
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Sound Suppression



Thermal Insulation



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All materials used to produce the TrimLock cladding product is recognized as industry standards for IMP systems (Insulated Metal Panel) recognizing each of its components regulated under each specific building code requirements.

Coating

(1) Primer meets the requirements of CISC/CPMA Specifications 1 -73a and 2-75.

(2) Finish color coating:

Water-borne Acrylic Urethane Enamel interior and exterior applications. VST formulated (Variable Substrate Technology) that complies with Government of Canada Emission regulations under category 52.

Galvanized / Galvannealed Sheet Steel

(1) Where sheet steel is required to be galvanized, it shall be metallic-coated with zinc or an alloy of 55% aluminium-zinc meeting requirements of,

(a) ASTM A653 / A653M, "Steel Sheet, Zinc -Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process", or

(b) ASTM A792 / A792M, "Sheet Steel, 55% Aluminum-Zinc Alloy-Coated by the Hop Dip Process"

(2) Where galvanized sheet steel is intended for use in locations exposed to the weather or as a flashing material, it shall have a zinc coating not less than G90 (Z275) coating designation or aluminum-zinc alloy coating not less than the AZM150 coating designation.

EPS Insulation

(1) Where EPS insulation is intended for use in exterior locations that complies with CAN/ULC-702.1 testing code

TrimLock continues to develop new technologies and procedures to provide the ultimate in passive home building for exterior energy efficiency. Passive building is a global program that has gained popularity and expectations over the last 39 years providing building comfort and functionality while achieving exterior finishing class. TrimLock's core commitment is based on this program and will continue improving for years to come.

The installation procedures outlined in this guide are intended for reference on how to install the TrimLock cladding products. It is the responsibility of the designer, engineer, installer and or home owner to follow local building codes and specifications. As installation progresses onsite, the installer will find their own methods and incorporate their own abilities and experiences to install a perfect finished job.

Questions and install guidelines pertaining to the TrimLock cladding product can be forwarded or called into the main office to assist the completion of the install.

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