

IMPORTANT INFORMATION

The application and detail drawings in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations. All projects should conform to applicable building codes for that particular area. It is recommended to follow all building regulations and standard industry practices.

We cannot be responsible for the performance of the wall system if it is not installed in accordance with the suggested instructions referenced in this manual. If there is a conflict between this manual and the actual erection drawings, the erection drawings are to take precedence.

Prior to ordering and installing materials, all dimensions should be verified by field measurements.

We reserve the right to modify, without notice, any details, recommendations or suggestions. Any questions you may have regarding proper installation of these Concealed Fastened Wall Panel systems should be directed to your representative.

Oil canning is not a cause for rejection. Oil canning can be described as the amount of waviness found in the flat areas of metal panels. Oil canning is an inherent characteristic of light gauge cold formed metal products, particularly those with broad flat areas. There are many factors which may contribute to oil canning that the plant is not able to control. These factors include: misalignment of the support system, over driving of fasteners used on the panels, stress (whether inherent in the panel or induced), thermal expansion and contraction of the panel, improper material handling, width, gauge, length, color of panels and improper installation (reference Metal Construction Association "Oil Canning Position Paper"- Appendix A).

Consult your representative for any additional information not outlined in this manual.

This manual is designed to be utilized as a guide when installing a Concealed Fastened Wall Panel system. It is the responsibility of the erector to ensure the safe installation of this product system.

SAFETY

STUDY APPLICABLE OSHA AND OTHER SAFETY REQUIREMENTS BEFORE FOLLOWING THESE INSTRUCTIONS.

The installation of metal wall systems is a dangerous procedure and should be supervised by trained knowledgeable erectors. **USE EXTREME CARE WHILE INSTALLING WALL PANELS.**

It is not possible for us to be aware of all the possible job site situations that could cause an unsafe condition to exist. The erector of the wall system is responsible for reading these instructions and determining the safest way to install the wall system.

These instructions are provided only as a guide to show a knowledgeable, trained erector the correct relationship of parts to one another. If following any of the installation steps would endanger a worker, the erector should stop work and decide upon a corrective action.

Fall protection for workers installing wall panels must be provided.

TABLE OF CONTENTS

Important Information	1
Table of Contents	2
Customer Service	3
General Instructions	4
Panel Profiles	5-7
Flashing Profiles	8-10
Accessories / Fasteners	11
Design Information	12-17
DETAILS	
Base - H, V	18, 19
Sill - H, V	20, 21
Jamb - H, V	22, 23
Head - H, V	24, 25
Outside Corner - H, V	26, 27
Inside Corner - H, V	28, 29
Coping - H, V	30, 31
Reveal - H	32
Transition - V	33
Care and Maintenance	34
Notes	35

'H' indicates horizontal panels, 'V' indicates vertical panels

Best Buy Metals National Sales

**1652 S Lee Hwy
Cleveland, TN 37311**

800-728-4010

info@bestbuymetals.com

Safety

Use proper safety gear, safe equipment and safe processes. Safety gear includes gloves, arm guards, safety goggles and fall protection. Safe equipment includes maintained screw gun, saw, snips and folder. Safe processes include being aware of dangers and taking appropriate measures to avoid them.

Material Receipt

Upon receipt of material, confirm all parts have been delivered and that there is no damage. Any shortages should be reported to the Metal Sales contact. Transit damage should be noted on the bill of lading.

Material Storage

Material not used right away, should be stored inside, out of the elements. If inside storage is not available, tarp the material such that air can circulate. Elevate the crates off the ground and slope so that water will run off.

Handling

Transport panels in the crates to the installation site. Adequate support for individual panels every 6' to 8' is necessary. Grasp a panel by one side and let the other side hang down.

Wall Condition

Before installing panels, ensure the wall support material is plumb, square and true. Variance from in-plane should not exceed 1/4" in 10'.

Wall Assembly

Cover building envelope sheathing with a moisture barrier, such as peel-and-stick underlayment or synthetic building wrap for resistance to air and water penetration through the wall assembly. Install the moisture barrier horizontally from the bottom upward, overlapping each run over the previous, lower run.

Spacers

Spacers with a minimum depth of 1/4" are recommended at clips and trims to hold the wall assembly off of the wall line and allow water to drain. Spacers may be shims, hat channels or furring strips installed to not hold water.

Plan the Work

Before installing panels on a wall section, plan for alignment with adjacent wall sections. Decide if the first panel will be a full or partial panel. Consider the locations of wall penetrations and openings.

Clip Fasteners

Do not overtighten the panel clip fasteners. The fasteners should be brought just to firm contact between the support material, panel and clip. Overtightening the clip fasteners can make installation of the next panel difficult. The panel must be capable of sliding along its length after the clips are installed.

The number of fasteners per clip can be either one or two, depending on the support material and the design load requirements.

Installation Practice

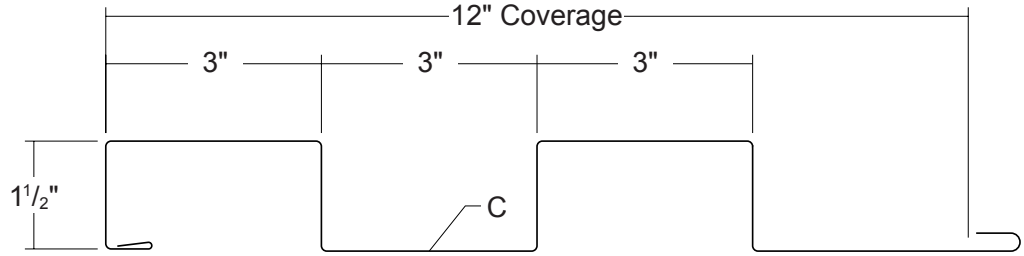
For horizontal panels, start at the bottom of the wall and work up the wall toward the top. Always 'shingle' panels and trims so that water will run down off of one member on to the next. Ensure every surface has adequate slope to permit water to run off and not collect on any surface.

When installing panels, give effort to stay on module by checking the coverage of each panel.

Strippable Film

Panels and trim are typically provided with strippable film as protection against minor fabrication, transit and handling damage. The strippable film must be removed just before installation. Waiting until after panel installation to remove the strippable film or after significant exposure to sunlight can make removal very difficult.

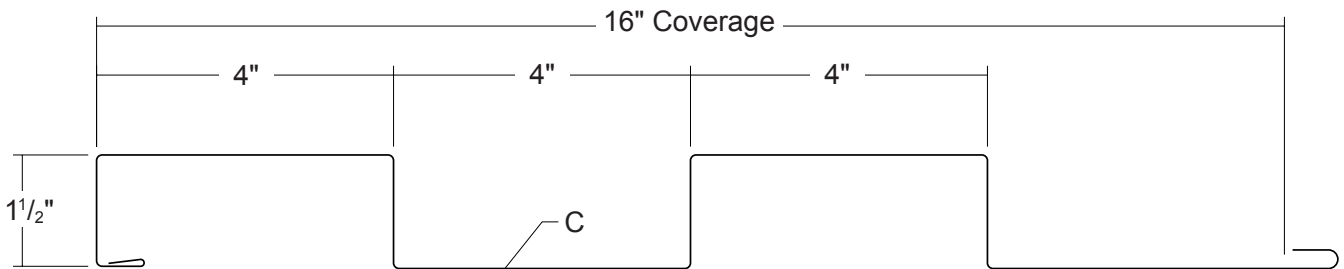
EM15-126 Box Rib



Panel can be produced in lengths from 5' to 30'.

Product No.	Coverage	Description	Gauge	Finish
2774041	12"	2 rib	24	Galvalume® (ACG)
27740XX	12"	2 rib	24	PVDF Painted
2974041	12"	2 rib	22	Galvalume® (ACG)
29740XX	12"	2 rib	22	PVDF Painted

EM15-168 Box Rib

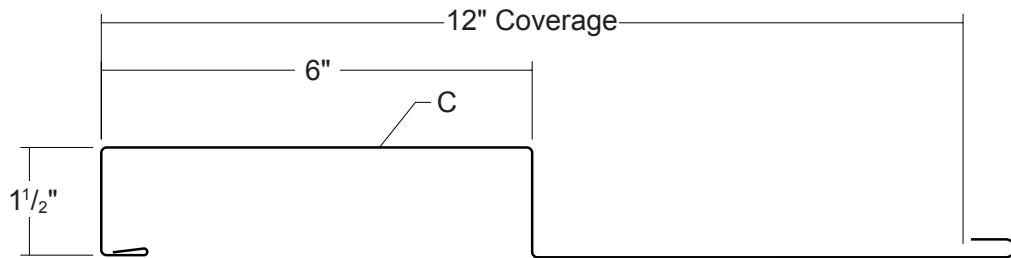


Panel can be produced in lengths from 5' to 30'.

Product No.	Coverage	Description	Gauge	Finish
2774241	16"	2 ribs	24	Galvalume® (ACG)
27742XX	16"	2 ribs	24	PVDF Painted
2974241	16"	2 ribs	22	Galvalume® (ACG)
29742XX	16"	2 ribs	22	PVDF Painted

1.5" EMPIRE SERIES INSTALL GUIDE

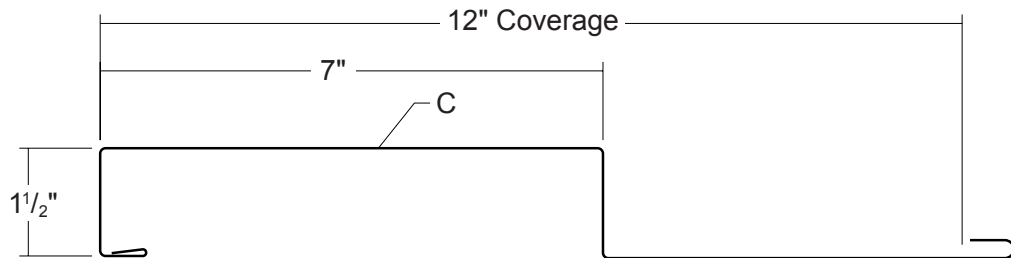
EM15-1266 Box Rib



Panel can be produced in lengths from 5' to 30'.

Product No.	Coverage	Description	Gauge	Finish
2777041	12"	1 rib	24	Galvalume® (ACG)
27770XX	12"	1 rib	24	PVDF Painted
2977041	12"	1 rib	22	Galvalume® (ACG)
29770XX	12"	1 rib	22	PVDF Painted

EM15-1275 Box Rib

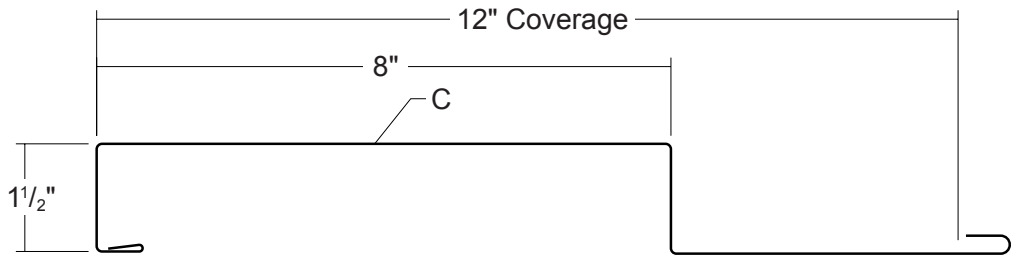


Panel can be produced in lengths from 5' to 30'.

Product No.	Coverage	Description	Gauge	Finish
2777541	12"	1 ribs	24	Galvalume® (ACG)
27775XX	12"	1 ribs	24	PVDF Painted
2977541	12"	1 ribs	22	Galvalume® (ACG)
29775XX	12"	1 ribs	22	PVDF Painted

1.5" EMPIRE SERIES INSTALL GUIDE

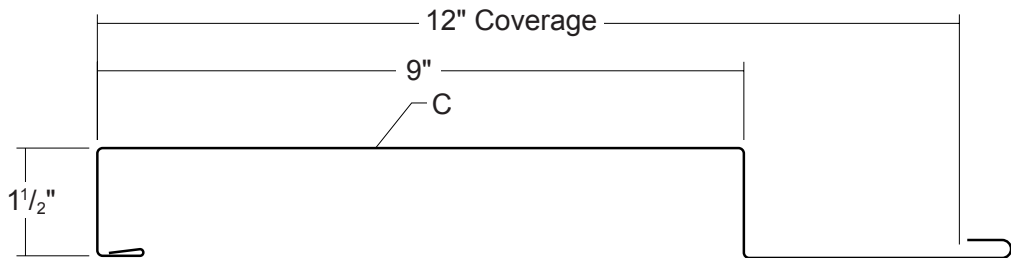
EM15-1284 Box Rib



Panel can be produced in lengths from 5' to 30'.

Product No.	Coverage	Description	Gauge	Finish
2778041	12"	1 rib	24	Galvalume® (ACG)
27780XX	12"	1 rib	24	PVDF Painted
2978041	12"	1 rib	22	Galvalume® (ACG)
29780XX	12"	1 rib	22	PVDF Painted

EM15-1293 Box Rib



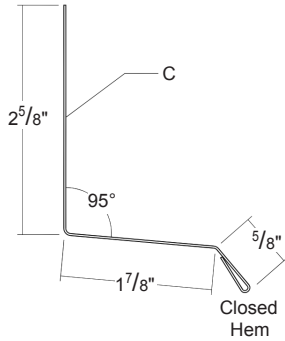
Panel can be produced in lengths from 5' to 30'.

Product No.	Coverage	Description	Gauge	Finish
2778541	12"	1 ribs	24	Galvalume® (ACG)
27785XX	12"	1 ribs	24	PVDF Painted
2978541	12"	1 ribs	22	Galvalume® (ACG)
29785XX	12"	1 ribs	22	PVDF Painted

1.5" EMPIRE SERIES INSTALL GUIDE

Flashing Profiles

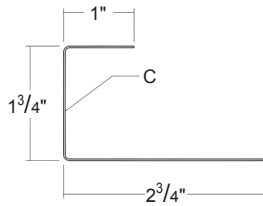
BASE TRIM 1.5"



Product No.	Length	Gauge	Finish
5870841	10'-2"	24	Galvalume® (ACG)
58708XX	10'-2"	24	PVDF Painted
6070841	10'-2"	22	Galvalume® (ACG)
60708XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 5 5/8"

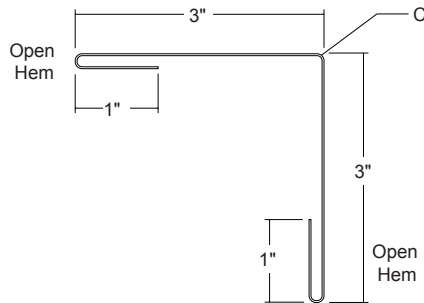
C-CLOSURE 1.5"



Product No.	Length	Gauge	Finish
5871241	10'-2"	24	Galvalume® (ACG)
58712XX	10'-2"	24	PVDF Painted
6071241	10'-2"	22	Galvalume® (ACG)
60712XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 5 1/2"

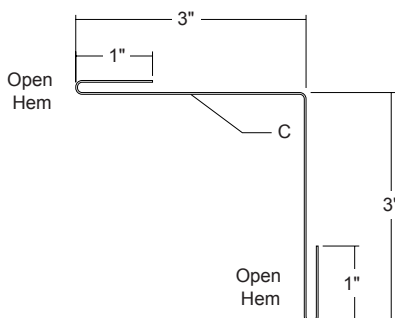
OUTSIDE CORNER



Product No.	Length	Gauge	Finish
5872441	10'-2"	24	Galvalume® (ACG)
58724XX	10'-2"	24	PVDF Painted
6072441	10'-2"	22	Galvalume® (ACG)
60724XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 8 1/8"

INSIDE CORNER



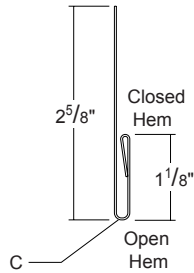
Product No.	Length	Gauge	Finish
5872641	10'-2"	24	Galvalume® (ACG)
58726XX	10'-2"	24	PVDF Painted
6072641	10'-2"	22	Galvalume® (ACG)
60726XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 8 1/8"

1.5" EMPIRE SERIES INSTALL GUIDE

Flashing Profiles

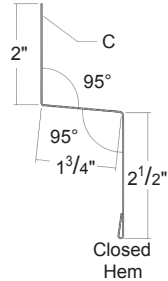
PANEL STARTER



Product No.	Length	Gauge	Finish
5872841	10'-2"	24	Galvalume® (ACG)
58728XX	10'-2"	24	PVDF Painted
6072841	10'-2"	22	Galvalume® (ACG)
60728XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 4³/₈"

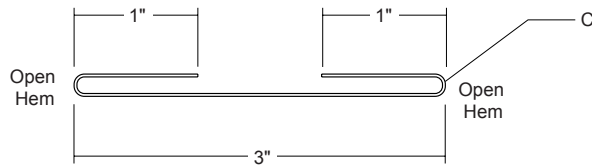
TRANSITION 1.5"



Product No.	Length	Gauge	Finish
5873841	10'-2"	24	Galvalume® (ACG)
58738XX	10'-2"	24	PVDF Painted
6073841	10'-2"	22	Galvalume® (ACG)
60738XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 6³/₄"

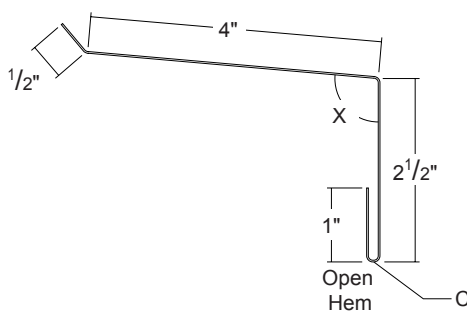
REVEAL



Product No.	Length	Gauge	Finish
5874041	10'-2"	24	Galvalume® (ACG)
58740XX	10'-2"	24	PVDF Painted
6074041	10'-2"	22	Galvalume® (ACG)
60740XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 5¹/₈"

SILL/JAMB TRIM

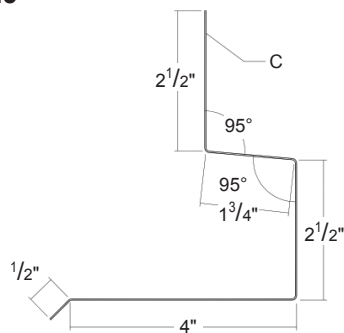


Product No.	Length	Gauge	Finish
5871841	10'-2"	24	Galvalume® (ACG)
58718XX	10'-2"	24	PVDF Painted
6071841	10'-2"	22	Galvalume® (ACG)
60718XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 8"

X= 95° for Sill or 90° for Jamb

HEAD TRIM 1.5"



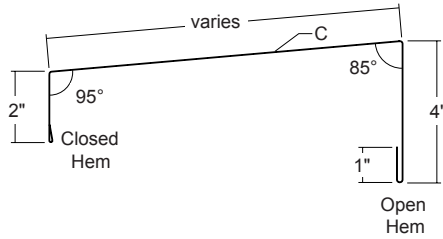
Product No.	Length	Gauge	Finish
5872241	10'-2"	24	Galvalume® (ACG)
58722XX	10'-2"	24	PVDF Painted
6072241	10'-2"	22	Galvalume® (ACG)
60722XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 11¹/₈"

1.5" EMPIRE SERIES INSTALL GUIDE

Flashing Profiles

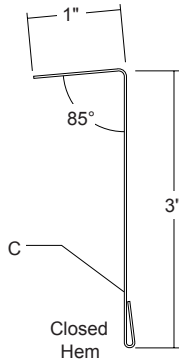
COPING



Width	Product No.	Length	Gauge	Finish
8"	58714XX	10'-2"	24	PVDF Painted
10"	58715XX	10'-2"	24	PVDF Painted
12"	58716XX	10'-2"	24	PVDF Painted
8"	60714XX	10'-2"	22	PVDF Painted
10"	60715XX	10'-2"	22	PVDF Painted
12"	60716XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 15 1/2", 17 1/2" or 19 1/2"

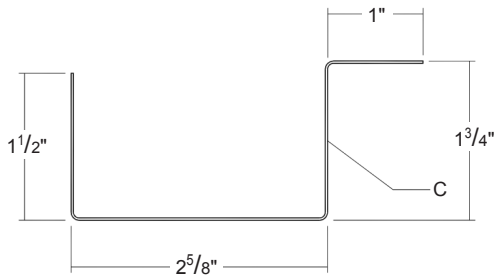
COPING CLEAT



Product No.	Length	Gauge	Finish
5873441	10'-2"	24	Galvalume® (ACG)
58734XX	10'-2"	24	PVDF Painted
6073441	10'-2"	22	Galvalume® (ACG)
60734XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 4 1/2"

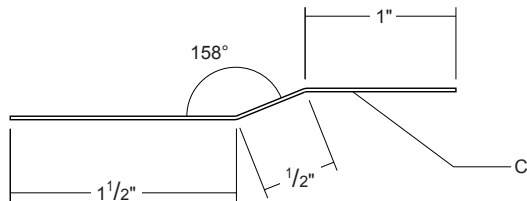
PANEL END CLOSURE 1.5"



Product No.	Length	Gauge	Finish
5873241	10'-2"	24	Galvalume® (ACG)
58732XX	10'-2"	24	PVDF Painted
6073241	10'-2"	22	Galvalume® (ACG)
60732XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 6 7/8"

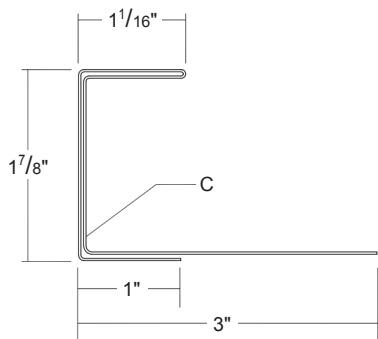
OFFSET CLEAT



Product No.	Length	Gauge	Finish
5806499	10'-2"	24	PVDF Painted

Flashing Stretch Out = 3"

WINDOW CLOSURE 1.5"

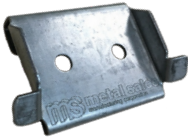
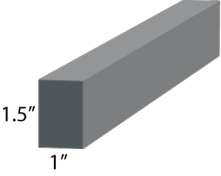
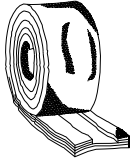

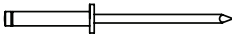
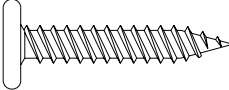
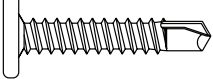
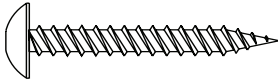

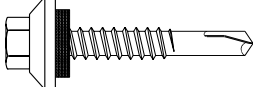


Product No.	Length	Gauge	Finish
5874441	10'-2"	24	Galvalume® (ACG)
58744XX	10'-2"	24	PVDF Painted
6074441	10'-2"	22	Galvalume® (ACG)
60744XX	10'-2"	22	PVDF Painted

Flashing Stretch Out = 9 7/8"

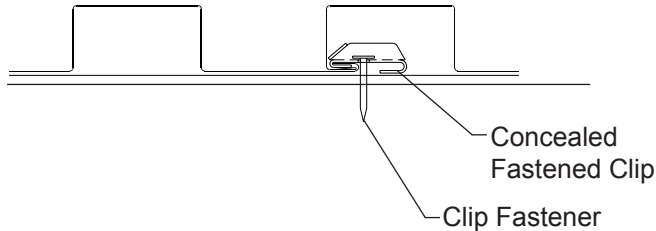
1.5" EMPIRE SERIES INSTALL GUIDE

Accessories / Fasteners

CONCEALED FASTENED CLIP	Product No.	Size	WT/200	Finish
	4934200	3" x 1 ³ / ₄ " x ³ / ₄ "	30.00 lbs	G90
UNIVERSAL CLOSURE	Product No.	Description	WT/Ea	Type
	6411100	1" x 1 ¹ / ₂ " x 50'	4.00 lbs	Foam
	6411199	1" x 1 ¹ / ₂ " x 10'	0.80 lbs	Foam
DOUBLE BEAD TAPE SEALANT	Product No.	Description	WT/Ctn.	Type
	6403899	7 ⁷ / ₈ " x ³ / ₁₆ " x 25' 20 Rolls per Carton	40.00 lbs	Butyl
TUBE SEALANT	Product No.	Description	WT/Ea	Color
	6402800	Acrylic Tube Sealant	3.31 lbs	Clear
	64028XX	Tube Sealant	3.31 lbs	Color Match
POP RIVET	Product No.	Description	WT/250	Finish
	8240201	1 ¹ / ₈ " x ³ / ₈ " Pop Rivet	0.75 lbs	Bare
	82402XX	1 ¹ / ₈ " x ³ / ₈ " Pop Rivet	0.75 lbs	Painted
PANCAKE HEAD WOOD SCREW	Product No.	Description	WT/250	Finish
	8243100	#10-12 x 1" PH Wood Screw	1.90 lbs	Plated
PANCAKE HEAD DRILLER	Product No.	Description	WT/250	Finish
	8242100	#10-16 x 1" PH Driller	1.90 lbs	Plated
LOW PROFILE WOOD SCREW	Product No.	Description	WT/250	Finish
	8244100	#12-11 x 1 ¹ / ₂ " LP Wood Screw	2.75 lbs	Painted
WOOD SCREW XL	Product No.	Description	WT/250	Finish
	8212300	#10-14 x 1 ¹ / ₂ " Wood Screw XL	3.75 lbs	Plated
	82123XX	#10-14 x 1 ¹ / ₂ " Wood Screw XL	3.75 lbs	Painted
SELF DRILLER XL	Product No.	Description	WT/250	Finish
	8235300	#12-14 x 1 ¹ / ₄ " Self Driller XL	3.75 lbs	Plated
	82353XX	#12-14 x 1 ¹ / ₄ " Self Driller XL	3.75 lbs	Painted

EM15-126 Box Rib

PANEL ATTACHMENT



FASTENING INFORMATION

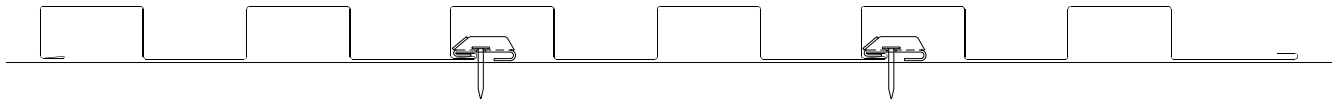
- Concealed Fastened Clip is 3" x 1³/₄" x 3/₄", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions.
- Fasteners should extend 1/2" or more past the inside face of the support material for steel and wood sheathing support materials.
- Clip Fasteners:
 - Attaching to Wood:
 - #12-11 x 1¹/₂" Low Profile Wood Screw
 - Attaching to Steel:
 - < 18 ga: 1/4"-13 Deck Screw
 - ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Drill
 - > 12 ga: 1/4"-14 Self Driller, No Washer

INSTALLATION DIRECTION

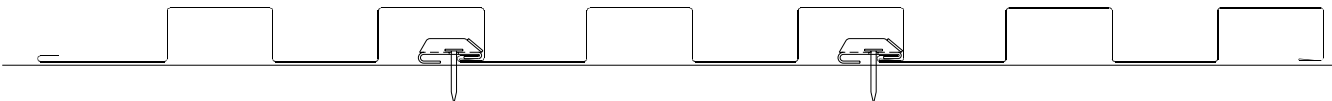
Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

Left-to-Right Installation of Vertically-Oriented Panels



Right-to-Left Installation of Vertically-Oriented Panels



SECTION PROPERTIES

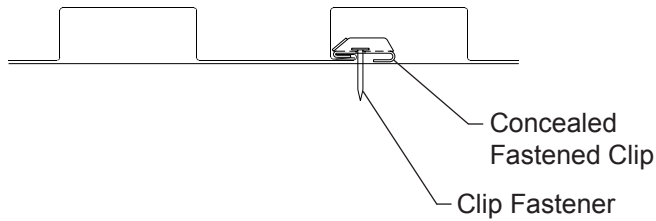
**ALLOWABLE UNIFORM LOADS, psf
For various fastener spacings**

Ga	Width in	Yield ksi	Weight psf	Top In Compression		Bottom In Compression		Inward Load					Outward Load				
				I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	12	50	1.56	0.1189	0.1156	0.1324	0.1549	120	97	71	47	23	40	35	30	25	20
22	12	50	2.04	0.1702	0.1710	0.1845	0.2248	120	97	71	47	23	40	35	30	25	20

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. I_{xx} and S_{xx} are effective section properties for deflection and bending.
2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable loads include load testing over 16 ga girts. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase for wind.

EM15-168 Box Rib

PANEL ATTACHMENT

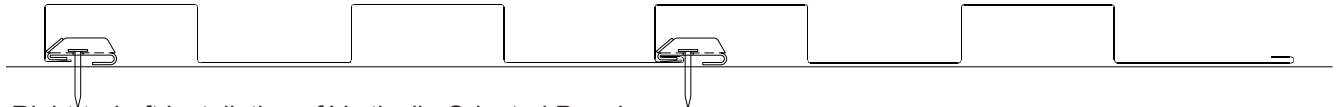


INSTALLATION DIRECTION

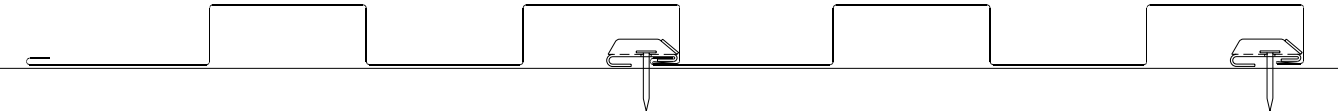
Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

Left-to-Right Installation of Vertically-Oriented Panels



Right-to-Left Installation of Vertically-Oriented Panels



FASTENING INFORMATION

- Concealed Fastened Clip is 3" x 1³/₄" x ³/₄", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions.
- Fasteners should extend ¹/₂" or more past the inside face of the support material for steel and wood sheathing support materials.
- Clip Fasteners:
 - Attaching to Wood:
 - #12-11 x 1¹/₂" Low Profile Wood Screw
 - Attaching to Steel:
 - < 18 ga: ¹/₄"-13 Deck Screw
 - ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Drill
 - > 12 ga: ¹/₄"-14 Self Driller, No Washer

SECTION PROPERTIES

ALLOWABLE UNIFORM LOADS, psf For various fastener spacings

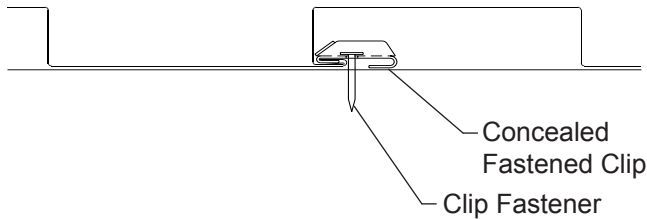
Ga	Width in	Yield ksi	Weight psf	Top In Compression		Bottom In Compression		Inward Load					Outward Load				
				Ixx in ⁴ /ft	Sxx in ³ /ft	Ixx in ⁴ /ft	Sxx in ³ /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	16	50	1.40	0.0960	0.0896	0.1118	0.1208	120	97	71	47	23	40	35	30	25	20
22	16	50	1.83	0.1388	0.1332	0.1568	0.1759	120	97	71	47	23	40	35	30	25	20

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. Ixx and Sxx are effective section properties for deflection and bending.
2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable loads include load testing over 16 ga girts. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase for wind.

1.5" EMPIRE SERIES INSTALL GUIDE

EM15-1266 Box Rib

PANEL ATTACHMENT

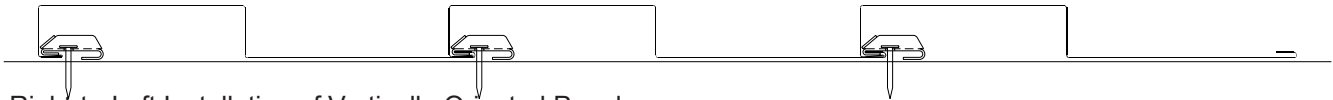


INSTALLATION DIRECTION

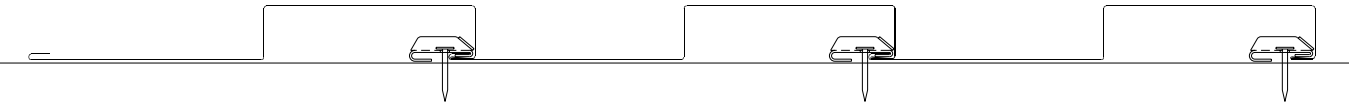
Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

Left-to-Right Installation of Vertically-Oriented Panels



Right-to-Left Installation of Vertically-Oriented Panels



FASTENING INFORMATION

- Concealed Fastened Clip is 3" x 1³/₄" x 3/₄", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions.
- Fasteners should extend 1/2" or more past the inside face of the support material for steel and wood sheathing support materials.
- Clip Fasteners:
 - Attaching to Wood:
 - #12-11 x 1¹/₂" Low Profile Wood Screw
 - Attaching to Steel:
 - < 18 ga: 1/4"-13 Deck Screw
 - ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Drill
 - > 12 ga: 1/4"-14 Self Driller, No Washer

SECTION PROPERTIES

ALLOWABLE UNIFORM LOADS, psf For various fastener spacings

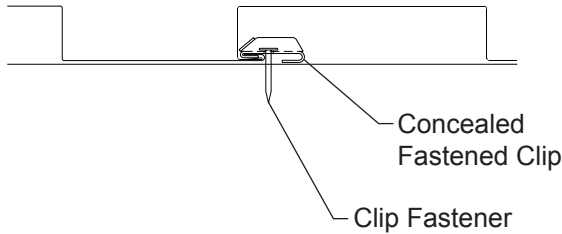
Ga	Width in	Yield ksi	Weight psf	Top In Compression		Bottom In Compression		Inward Load					Outward Load				
				Ixx in ⁴ /ft	Sxx in ³ /ft	Ixx in ⁴ /ft	Sxx in ³ /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	12	50	1.33	0.0726	0.0623	0.1015	0.1061	120	97	71	47	23	103	83	64	44	25
22	12	50	1.74	0.1058	0.0930	0.1416	0.1530	120	97	71	47	23	103	83	64	44	25

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. Ixx and Sxx are effective section properties for deflection and bending.
2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable loads include load testing over 16 ga girts. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase for wind.

1.5" EMPIRE SERIES INSTALL GUIDE

EM15-1275 Box Rib

PANEL ATTACHMENT

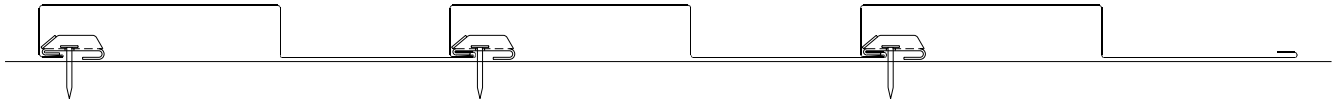


INSTALLATION DIRECTION

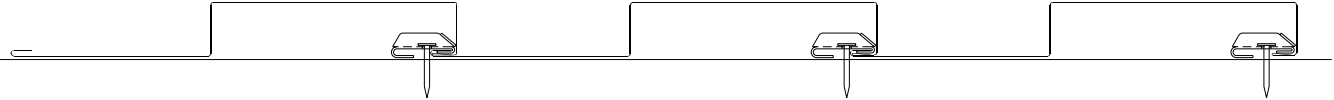
Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

Left-to-Right Installation of Vertically-Oriented Panels



Right-to-Left Installation of Vertically-Oriented Panels



FASTENING INFORMATION

- Concealed Fastened Clip is 3" x 1³/₄" x 3/₄", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions.
- Fasteners should extend 1/2" or more past the inside face of the support material for steel and wood sheathing support materials.
- Clip Fasteners:
 - Attaching to Wood:
 - #12-11 x 1 1/2" Low Profile Wood Screw
 - Attaching to Steel:
 - < 18 ga: 1/4"-13 Deck Screw
 - ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Drill
 - > 12 ga: 1/4"-14 Self Driller, No Washer

SECTION PROPERTIES

ALLOWABLE UNIFORM LOADS, psf For various fastener spacings

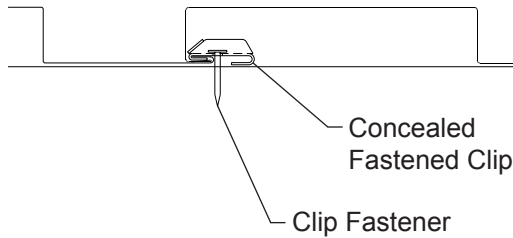
Ga	Width in	Yield ksi	Weight psf	Top In Compression		Bottom In Compression		Inward Load					Outward Load				
				I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	12	50	1.33	0.0690	0.0602	0.1071	0.1071	120	97	71	47	23	103	83	64	44	25
22	12	50	1.74	0.1024	0.0924	0.1497	0.1544	120	97	71	47	23	103	83	64	44	25

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. I_{xx} and S_{xx} are effective section properties for deflection and bending.
2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable loads include load testing over 16 ga girts. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase for wind.

1.5" EMPIRE SERIES INSTALL GUIDE

EM15-1284 Box Rib

PANEL ATTACHMENT

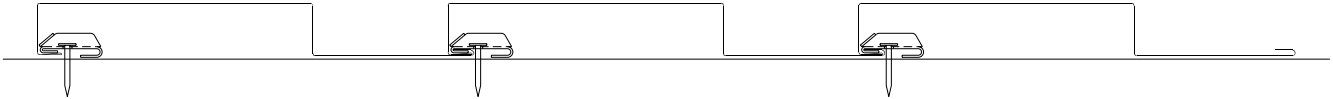


INSTALLATION DIRECTION

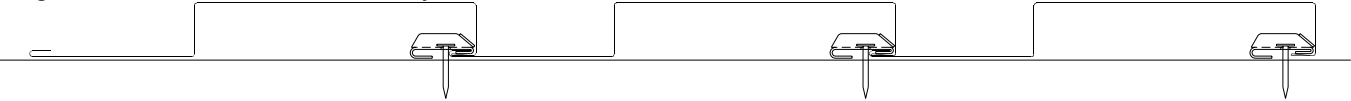
Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

Left-to-Right Installation of Vertically-Oriented Panels



Right-to-Left Installation of Vertically-Oriented Panels



FASTENING INFORMATION

- Concealed Fastened Clip is 3" x 1³/₄" x 3/₄", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions.
- Fasteners should extend 1/2" or more past the inside face of the support material for steel and wood sheathing support materials.
- Clip Fasteners:
 - Attaching to Wood:
 - #12-11 x 1¹/₂" Low Profile Wood Screw
 - Attaching to Steel:
 - < 18 ga: 1/4"-13 Deck Screw
 - ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Drill
 - > 12 ga: 1/4"-14 Self Driller, No Washer

SECTION PROPERTIES

ALLOWABLE UNIFORM LOADS, psf For various fastener spacings

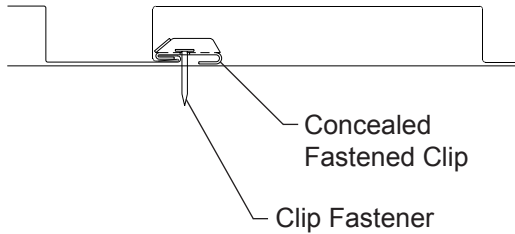
Ga	Width in	Yield ksi	Weight psf	Top In Compression		Bottom In Compression		Inward Load					Outward Load				
				I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	12	50	1.33	0.0671	0.0605	0.1118	0.1079	120	97	71	47	23	103	83	64	44	25
22	12	50	1.74	0.0982	0.0915	0.1564	0.1553	120	97	71	47	23	103	83	64	44	25

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. I_{xx} and S_{xx} are effective section properties for deflection and bending.
2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable loads include load testing over 16 ga girts. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase for wind.

1.5" EMPIRE SERIES INSTALL GUIDE

EM15-1293 Box Rib

PANEL ATTACHMENT

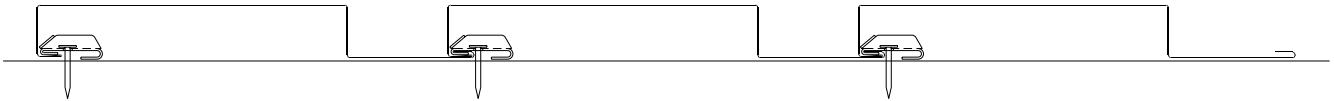


INSTALLATION DIRECTION

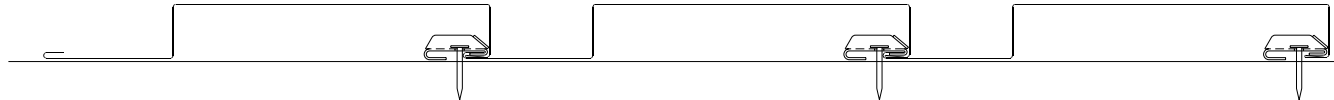
Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

Left-to-Right Installation of Vertically-Oriented Panels



Right-to-Left Installation of Vertically-Oriented Panels



FASTENING INFORMATION

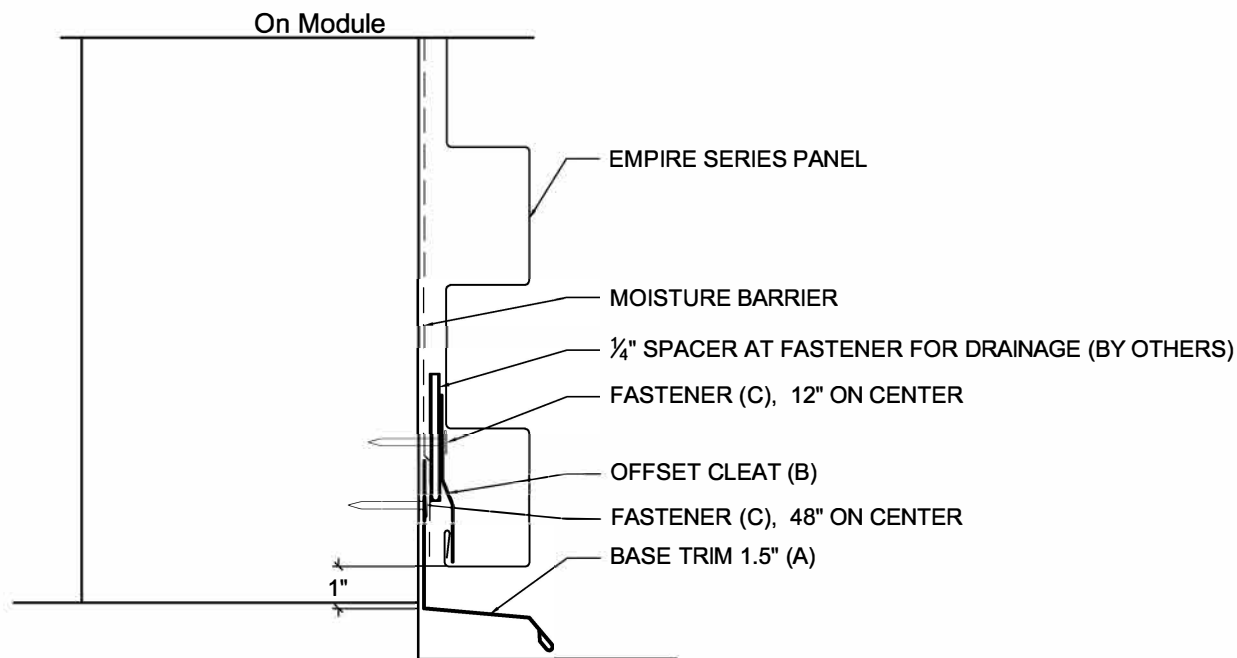
- Concealed Fastened Clip is 3" x 1³/₄" x ³/₄", from 16 ga, G90 material with 2 fastener holes.
- Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions.
- Fasteners should extend ¹/₂" or more past the inside face of the support material for steel and wood sheathing support materials.
- Clip Fasteners:
 - Attaching to Wood:
 - #12-11 x 1¹/₂" Low Profile Wood Screw
 - Attaching to Steel:
 - < 18 ga: ¹/₄"-13 Deck Screw
 - ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Drill
 - > 12 ga: ¹/₄"-14 Self Driller, No Washer

SECTION PROPERTIES

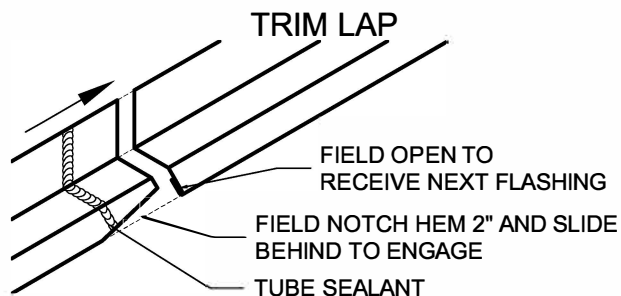
ALLOWABLE UNIFORM LOADS, psf For various fastener spacings

Ga	Width in	Yield ksi	Weight psf	Top In Compression		Bottom In Compression		Inward Load					Outward Load				
				Ixx in ⁴ /ft	Sxx in ³ /ft	Ixx in ⁴ /ft	Sxx in ³ /ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	12	50	1.33	0.0640	0.0600	0.1156	0.1082	120	97	71	47	23	106	86	67	47	27
22	12	50	1.74	0.0929	0.0901	0.1617	0.1554	120	97	71	47	23	106	86	67	47	27

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. Ixx and Sxx are effective section properties for deflection and bending.
2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable loads include load testing over 16 ga girts. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.
3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
4. Allowable loads do not include a 1/3 stress increase for wind.



ELEVATION VIEW

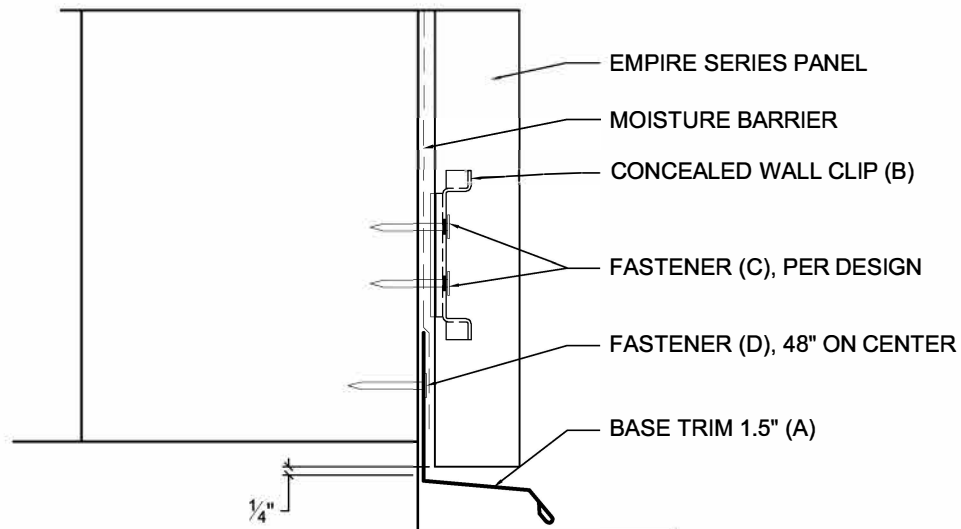


NO FASTENERS THROUGH TRIM LAP

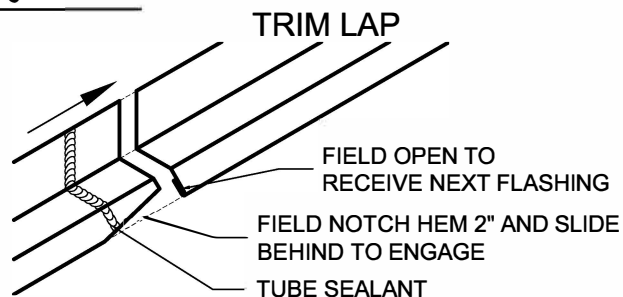
INSTALL ORDER

1. BASE TRIM
2. MOISTURE BARRIER
3. SPACER & OFFSET CLEAT
4. PANEL

	Part	Description	Product #	Length	Installation Information
(A)		Base Trim 1.5" 24 Ga Base Trim 1.5" 22 Ga	58708XX 60708XX	10'-2"	Install Moisture Barrier over top of Base Trim
(B)		Offset Cleat 24 Ga	5806499	10'-2"	Install 2" x 2" x 1/4" spacer behind Offset Cleat. Hook panel onto Offset Cleat.
(C)		#10-12 x 1" PH Wood Screw	8243100	1"	For attachment to wood decking
(C)		#10-16 x 1" PH Driller	8242100	1"	For attachment to metal framing



ELEVATION VIEW

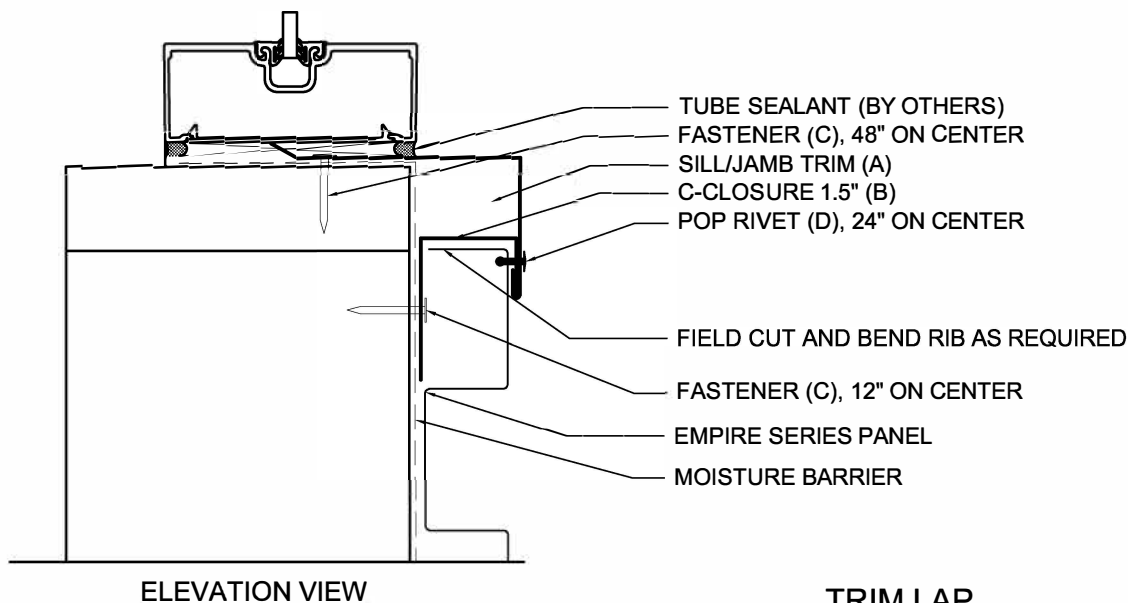


NO FASTENERS THROUGH TRIM LAP

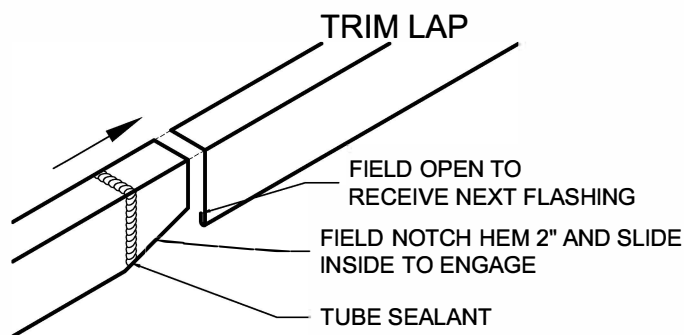
INSTALL ORDER

1. BASE TRIM
2. MOISTURE BARRIER
3. PANEL

	Part	Description	Product #	Length	Installation Information
(A)		Base Trim 1.5" 24 Ga Base Trim 1.5" 22 Ga	58708XX 60708XX	10'-2"	Install Moisture Barrier over top of Base Trim
(B)		Concealed Wall Clip 16 Ga Galv	4934200	3"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(C)		#12-11 x 1½" LP Wood Screw	8244100	1½"	For clip attachment to wood sheathing
(C), (D)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(D)		#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood sheathing



- INSTALL ORDER**
1. MOISTURE BARRIER
 2. C-CLOSURE
 3. PANEL
 4. SILL TRIM
 5. WINDOW SILL

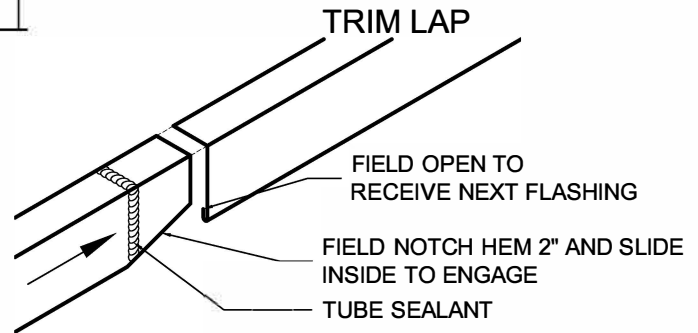
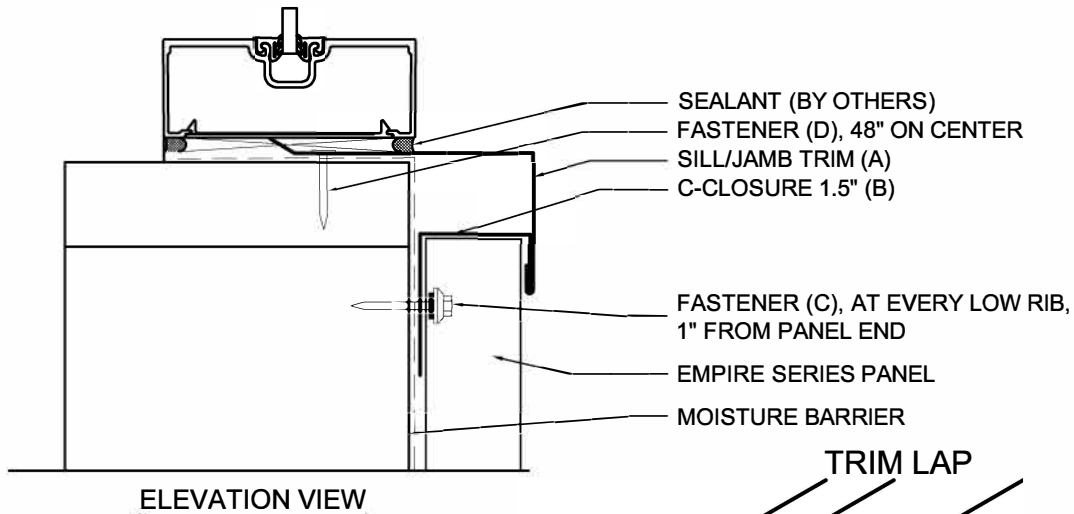


NO FASTENERS THROUGH TRIM LAP

Part	Description	Product #	Length	Installation Information
(A)	Sill/Jamb Trim 24 Ga Sill/Jamb Trim 22 Ga	58718XX 60718XX	10'-2"	Hook Sill/Jamb Trim onto C-Closure and fasten in place. Ensure Sill/Jamb Trim is installed with slope to allow for water drainage.
(B)	C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure and hook Sill/Jamb Trim over 1" leg.
(C)	#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(C)	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(D)	1/8" x 3/8" Pop Rivet	82402XX		Attach Sill/Jamb Trim to C-Closure and panel.

1.5" EMPIRE SERIES INSTALL GUIDE

Sill - Vertical



NO FASTENERS THROUGH TRIM LAP

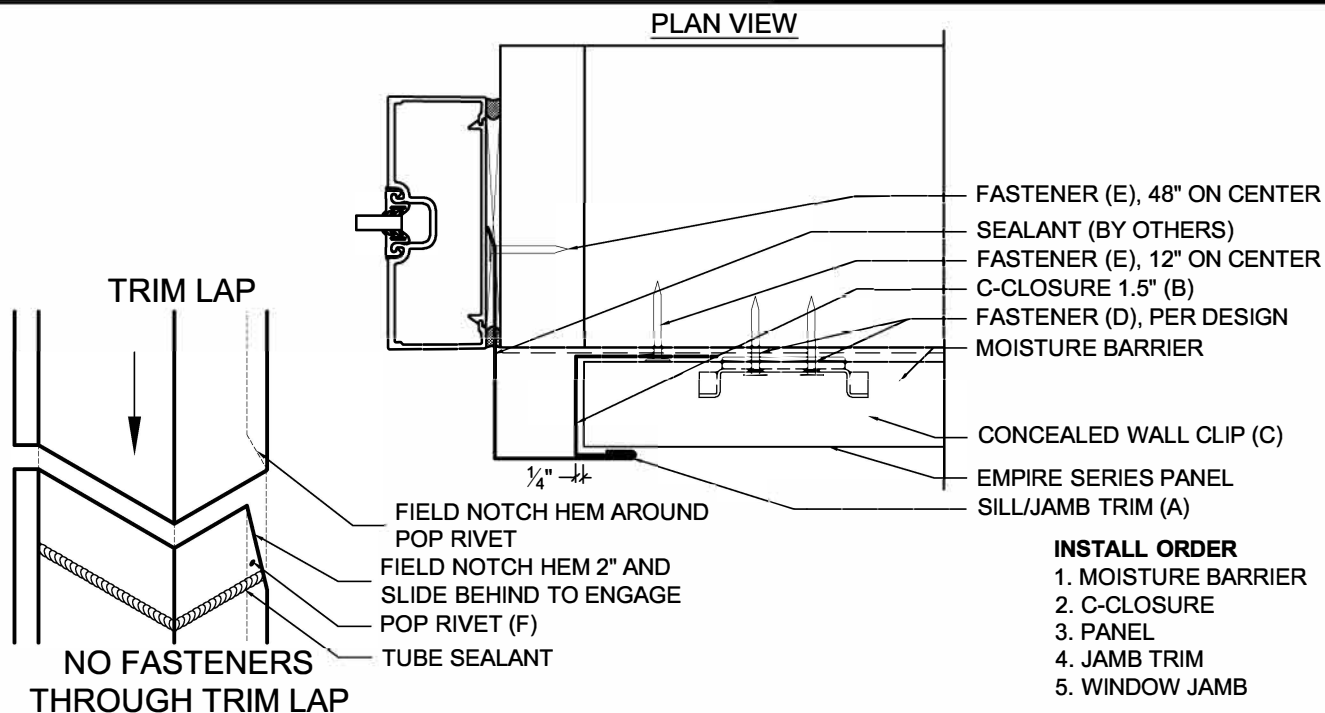
INSTALL ORDER

1. MOISTURE BARRIER
2. C-CLOSURE
3. PANEL
4. SILL TRIM
5. WINDOW SILL

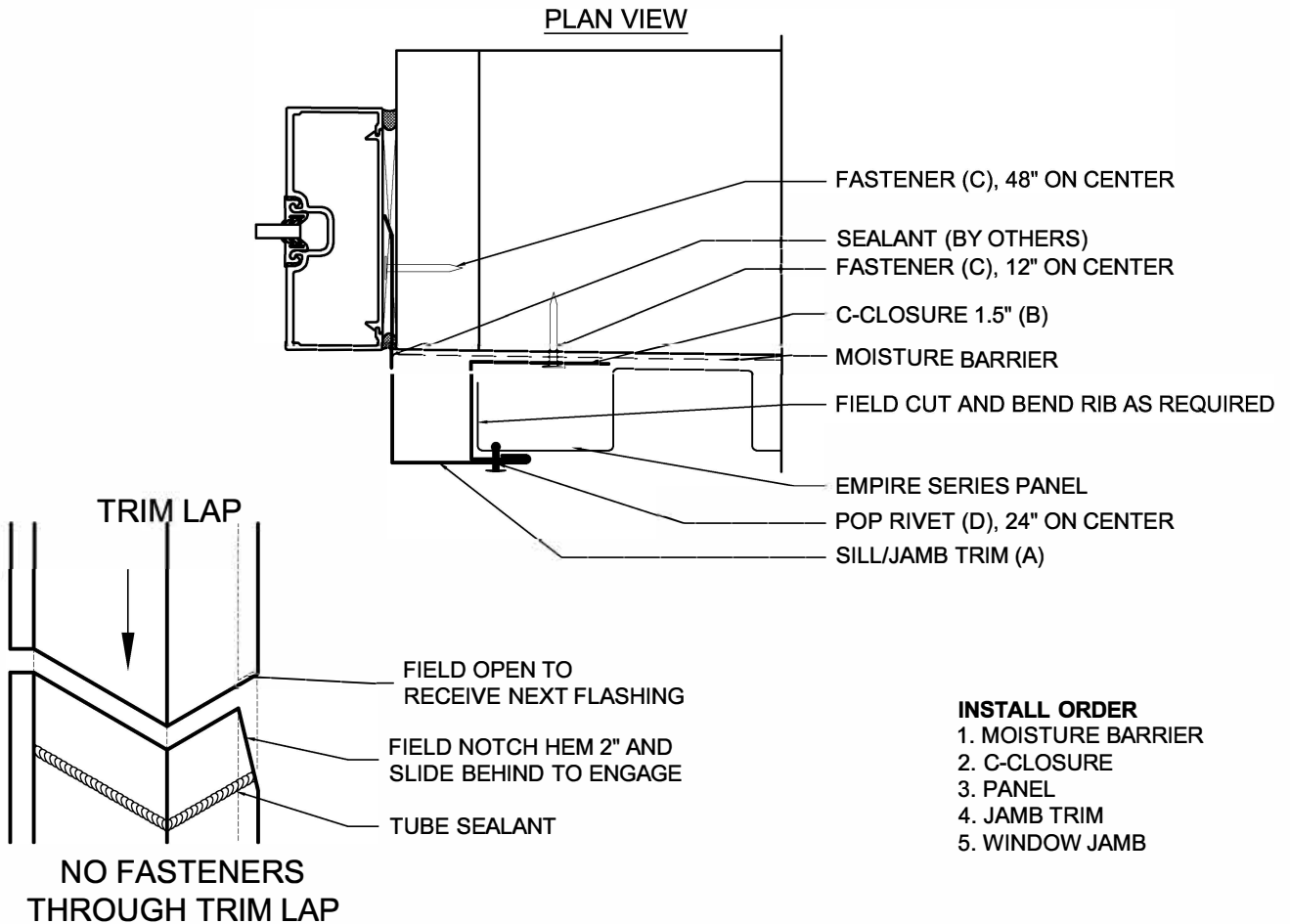
Part	Description	Product #	Length	Installation Information
(A)	Sill/Jamb Trim 24 Ga Sill/Jamb Trim 22 Ga	58718XX 60718XX	10'-2"	Hook Sill/Jamb Trim onto C-Closure and fasten in place. Ensure Sill/Jamb Trim is installed with slope to allow for water drainage.
(B)	C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure and hook Sill/Jamb Trim over 1" leg.
(C)	#10-14 x 1 1/2" Wood Screw XL	82123XX	1 1/2"	Install over wood decking
(C)	#12-14 x 1 1/4" Self Driller XL	82353XX	1 1/4"	Install over metal framing
(D)	#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(D)	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking

1.5" EMPIRE SERIES INSTALL GUIDE

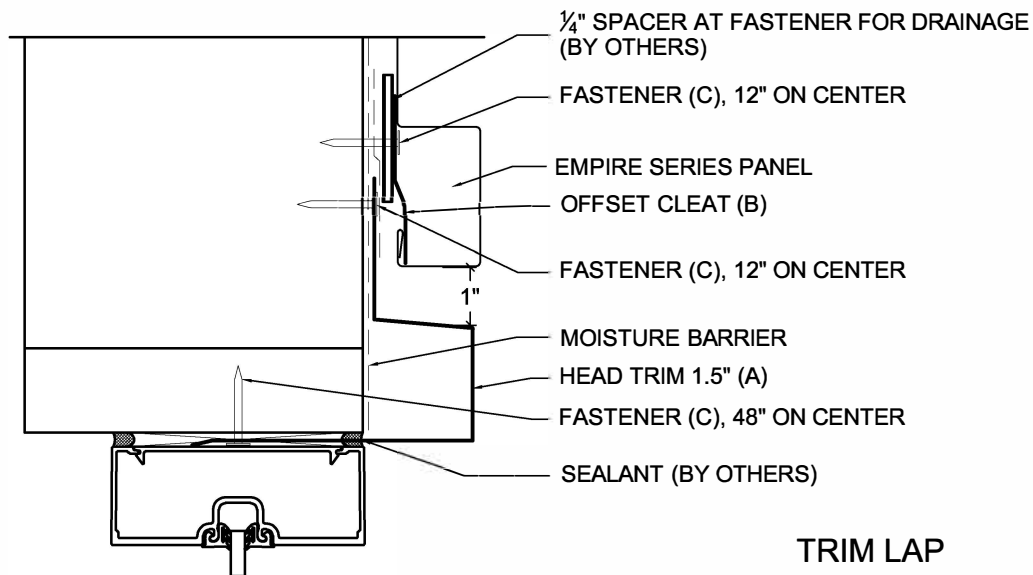
Jamb - Horizontal



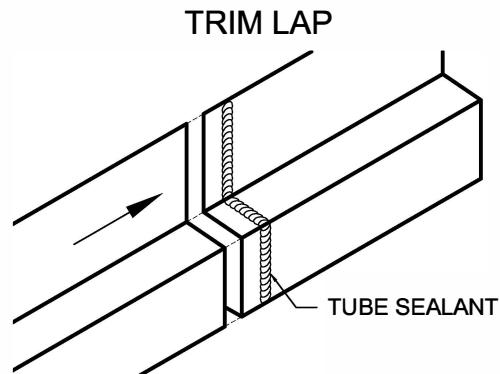
Part	Description	Product #	Length	Installation Information
(A)	<p>Sill/Jamb Trim 24 Ga Sill/Jamb Trim 22 Ga</p>	58718XX 60718XX	10'-2"	Hook Sill/Jamb Trim onto C-Closure and fasten into place.
(B)	<p>C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga</p>	58712XX 60712XX	10'-2"	Install C-Closure and hook Sill/Jamb Trim over 1" leg.
(C)	<p>Concealed Wall Clip 16 Ga Galv</p>	4934200	3"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(D)	<p>#12-11 x 1 1/2" LP Wood Screw</p>	8244100	1 1/2"	For clip attachment to wood sheathing
(D), (E)	<p>#10-16 x 1" PH Driller</p>	8242100	1"	For clip/trim attachment to metal framing
(E)	<p>#10-12 x 1" PH Wood Screw</p>	8243100	1"	For trim attachment to wood decking
(F)	<p>1/8" x 3/8" Pop Rivet</p>	82402XX		Attach Sill/Jamb Trim to C-Closure



	Part	Description	Product #	Length	Installation Information
(A)		Sill/Jamb Trim 24 Ga Sill/Jamb Trim 22 Ga	58718XX 60718XX	10'-2"	Hook Sill/Jamb Trim onto C-Closure and fasten into place.
(B)		C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure and hook Sill/Jamb Trim over 1" leg.
(C)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(C)		#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(D)		1/8" x 3/8" Pop Rivet	82402XX		Attach Sill/Jamb Trim to C-Closure and panel.



ELEVATION VIEW

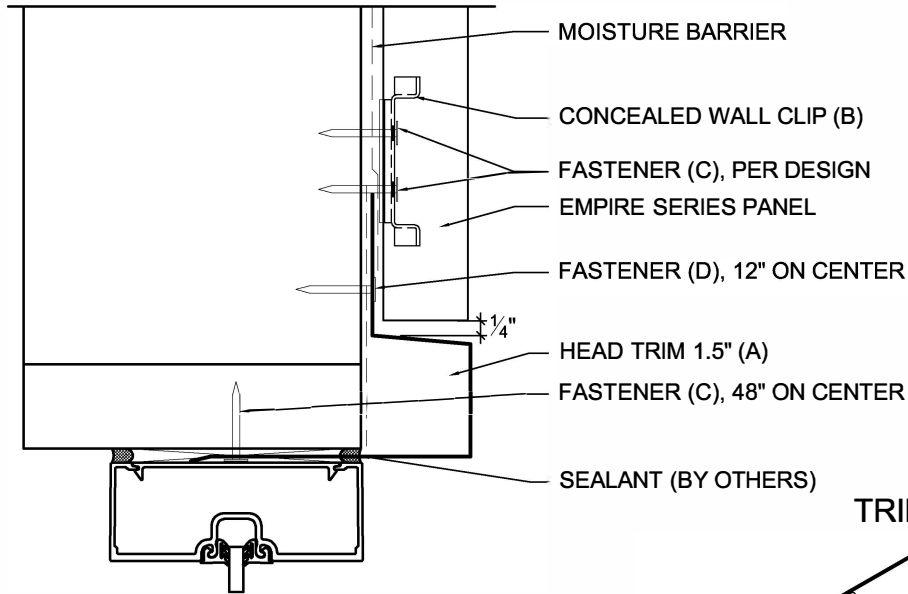


NO FASTENERS THROUGH TRIM LAP

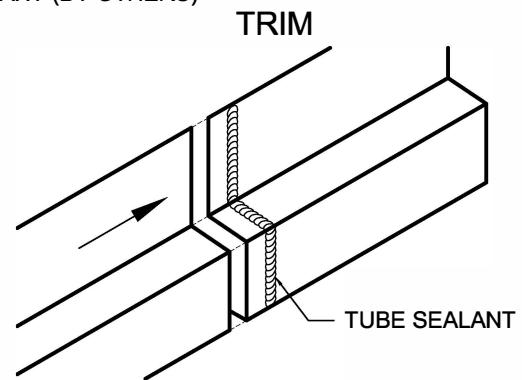
INSTALL ORDER

1. HEAD TRIM
2. MOISTURE BARRIER
2. SPACER & OFFSET CLEAT
3. PANEL
4. WINDOW HEAD

	Part	Description	Product #	Length	Installation Information
(A)		Head Trim 1,5" 24 Ga Head Trim 1,5" 22 Ga	58722XX 60722XX	10'-2"	Install Moisture Barrier over top of Head Trim and fasten in place. Ensure Head Trim is installed with slope to allow for water drainage.
(B)		Offset Cleat 24 Ga	5806499	10'-2"	Install 2" x 2" x 1/4" spacer behind Offset Cleat. Hook panel onto Offset Cleat.
(C)		#10-12 x 1" PH Wood Screw	8243100	1"	For attachment to wood decking
(C)		#10-16 x 1" PH Driller	8242100	1"	For attachment to metal framing



ELEVATION VIEW



NO FASTENERS THROUGH TRIM LAP

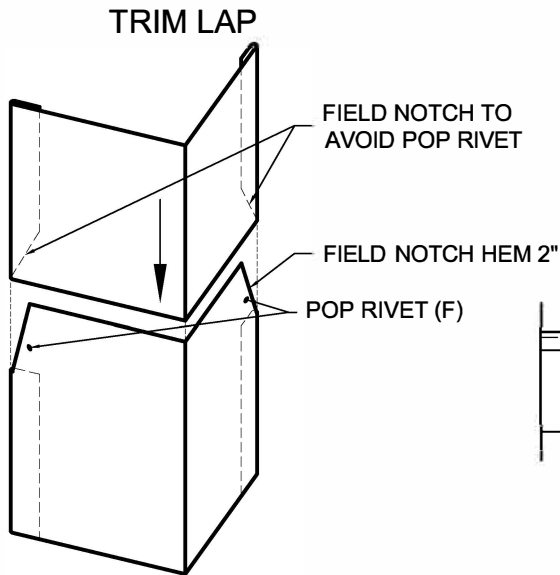
INSTALL ORDER

1. HEAD TRIM
2. MOISTURE BARRIER
3. PANEL
4. WINDOW HEAD

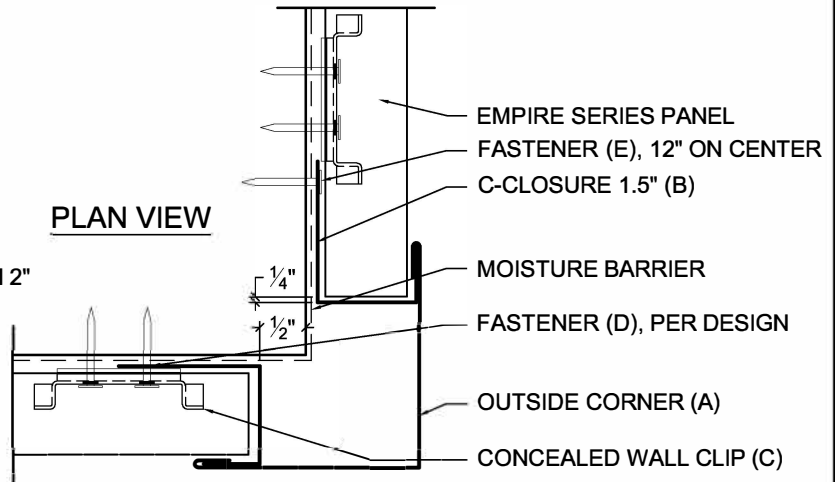
Part	Description	Product #	Length	Installation Information	
(A)		Head Trim 1.5" 24 Ga Head Trim 1.5" 22 Ga	58722XX 60722XX	10'-2"	Install Head Trim and fasten in place with Moisture Barrier over the top of the Head Trim. Ensure Head Trim is installed with slope to allow for water drainage.
(B)		Concealed Wall Clip 16 Ga Galv	4934200	3"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(C)		#12-11 x 1½" LP Wood Screw	8244100	1½"	For clip attachment to wood decking
(C), (D)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(D)		#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking

1.5" EMPIRE SERIES INSTALL GUIDE

Outside Corner-Horizontal



PLAN VIEW



INSTALL ORDER

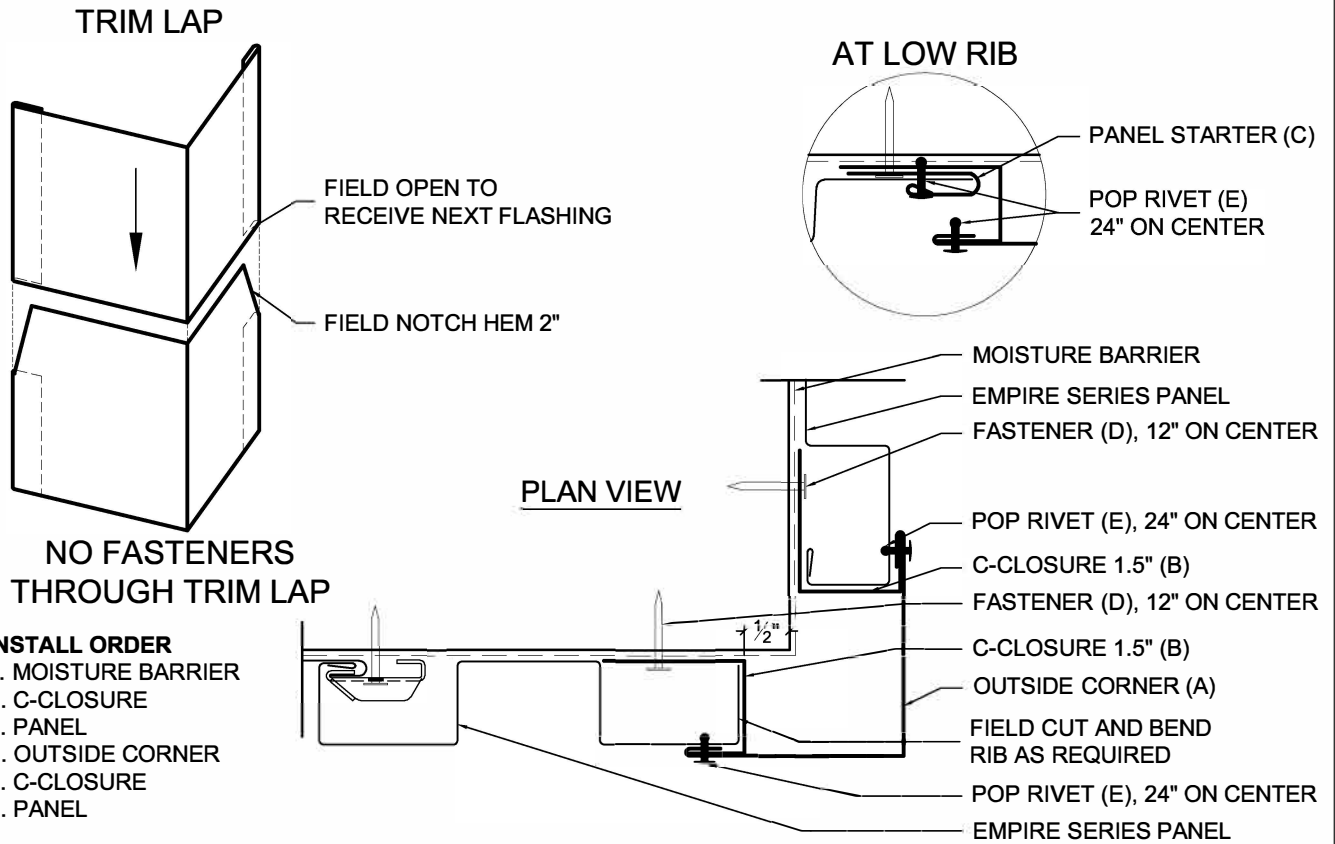
1. MOISTURE BARRIER
2. C-CLOSURE
3. PANEL
4. OUTSIDE CORNER
5. C-CLOSURE
6. PANEL

NO FASTENERS THROUGH TRIM LAP

Part	Description	Product #	Length	Installation Information
(A)	Outside Corner 24 Ga Outside Corner 22 Ga	58724XX 60724XX	10'-2"	Hook Outside Corner around C-Closure, pull C-Closure into place. Pop Rivet to C-Closures under trim lap.
(B)	C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure to start panel.
(C)	Concealed Wall Clip 16 Ga Galv	4934200	3"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(D)	#12-11 x 1 1/2" LP Wood Screw	8244100	1 1/2"	For clip attachment to wood decking
(D), (E)	#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(E)	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(F)	1/8" x 3/8" Pop Rivet	82402XX		Attach Outside Corner to C-Closures at lap.

1.5" EMPIRE SERIES INSTALL GUIDE

Outside Corner - Vertical

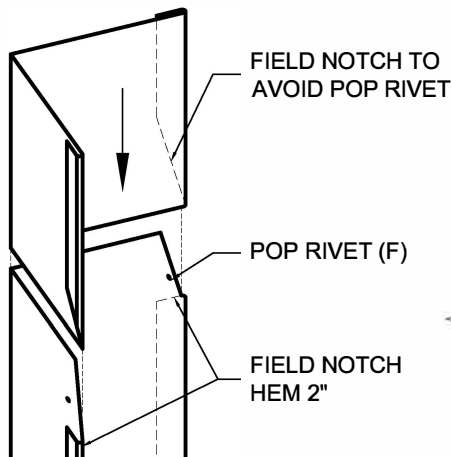


Part	Description	Product #	Length	Installation Information
(A)	Outside Corner 24 Ga Outside Corner 22 Ga	58724XX 60724XX	10'-2"	Hook Outside Corner around C-Closures. Pop Rivet to panel and C-Closures.
(B)	C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure to start panel.
(C)	Panel Starter 24 Ga Panel Starter 22 Ga	58728XX 60728XX	10'-2"	Fasten to face of C-Closure, slide low rib of panel into open hem.
(D)	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(D)	#10-16 x 1" PH Driller	8242100	1"	For trim attachment to metal framing
(E)	1/8" x 3/8" Pop Rivet	82402XX		Attach Outside Corner to C-Closures and panels.

1.5" EMPIRE SERIES INSTALL GUIDE

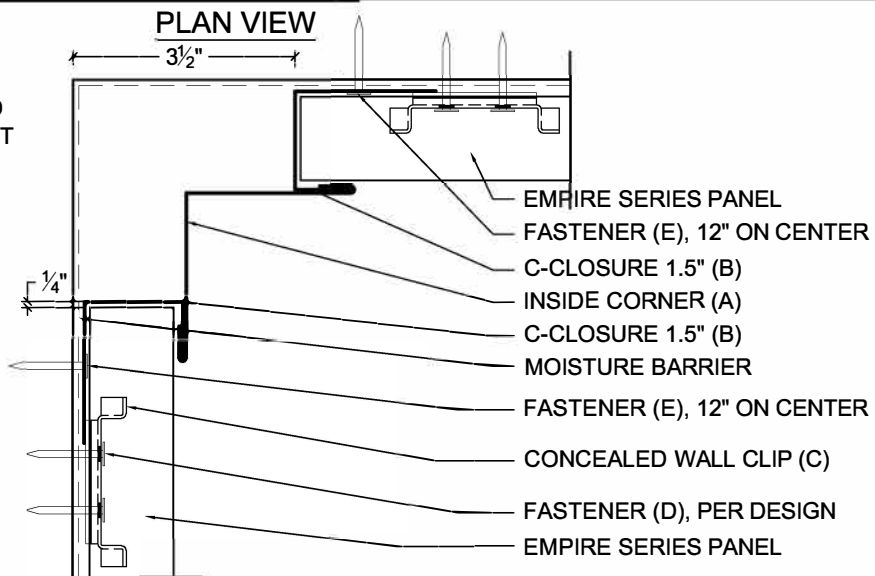
Inside Corner - Horizontal

TRIM LAP

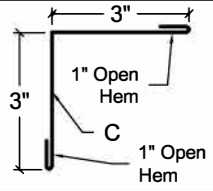
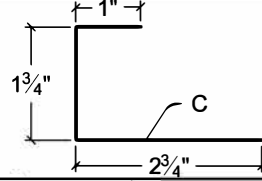
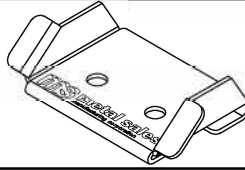
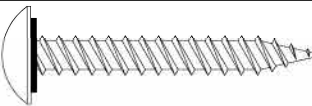
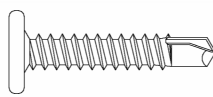
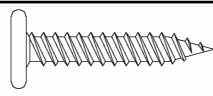
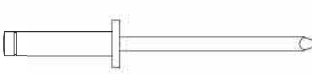


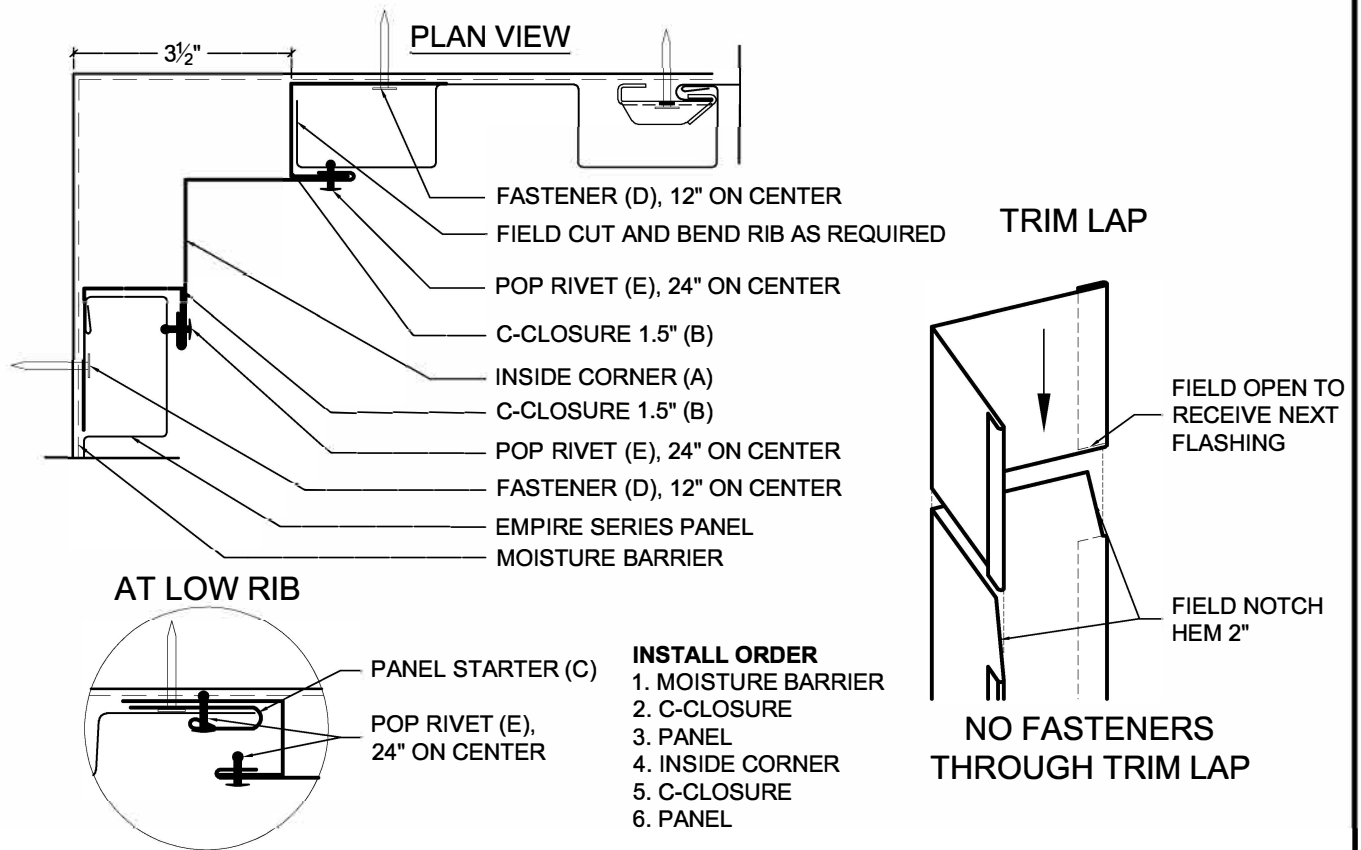
NO FASTENERS THROUGH TRIM LAP

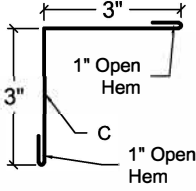
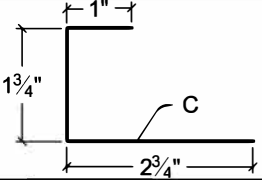
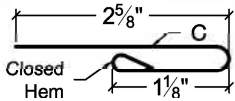
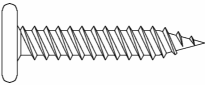
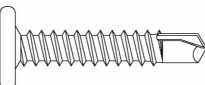

PLAN VIEW

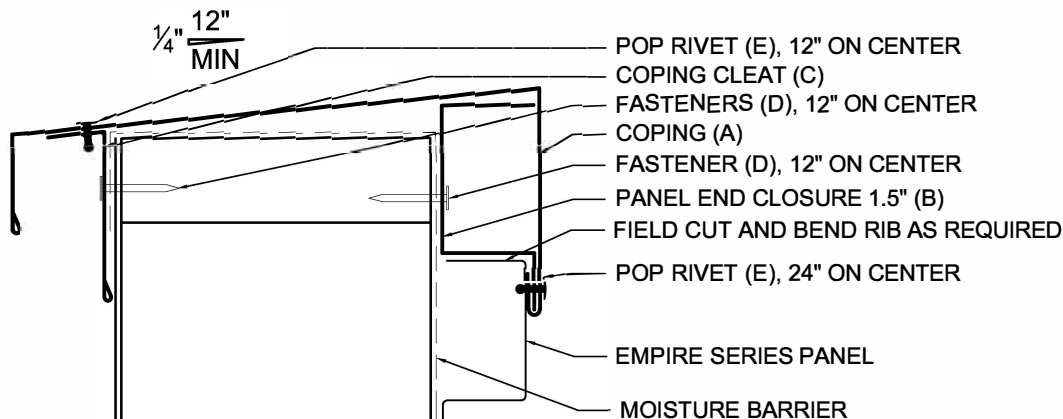


- INSTALL ORDER**
1. MOISTURE BARRIER
 2. C-CLOSURE
 3. PANEL
 4. INSIDE CORNER
 5. C-CLOSURE
 6. PANEL

Part	Description	Product #	Length	Installation Information
(A) 	Inside Corner 24 Ga Inside Corner 22 Ga	58726XX 60726XX	10'-2"	Hook Inside Corner around C-Closures into place. Pop Rivet to C-Closures under trim lap.
(B) 	C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure on each side of corner.
(C) 	Concealed Wall Clip 16 Ga Galv	4934200	3"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(D) 	#12-11 x 1 1/2" LP Wood Screw	8244100	1 1/2"	For clip attachment to wood decking
(D), (E) 	#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(E) 	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(F) 	1/8" x 3/8" Pop Rivet	82402XX		Attach Inside Corner to C-Closures at lap.



	Part	Description	Product #	Length	Installation Information
(A)		Inside Corner 24 Ga Inside Corner 22 Ga	58726XX 60726XX	10'-2"	Hook Inside Corner Trim around C-Closures. Pop Rivet to closure trims and panel 24" on center.
(B)		C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure on each side of corner.
(C)		Panel Starter 24 Ga Panel Starter 22 Ga	58728XX 60728XX	10'-2"	Fasten to face of C-Closure, slide low rib of panel into open hem.
(D)		#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(D)		#10-16 x 1" PH Driller	8242100	1"	For trim attachment to metal framing
(E)		1/8" x 3/8" Pop Rivet	82402XX		Attach Inside Corner to C-Closures and panels.



ELEVATION VIEW

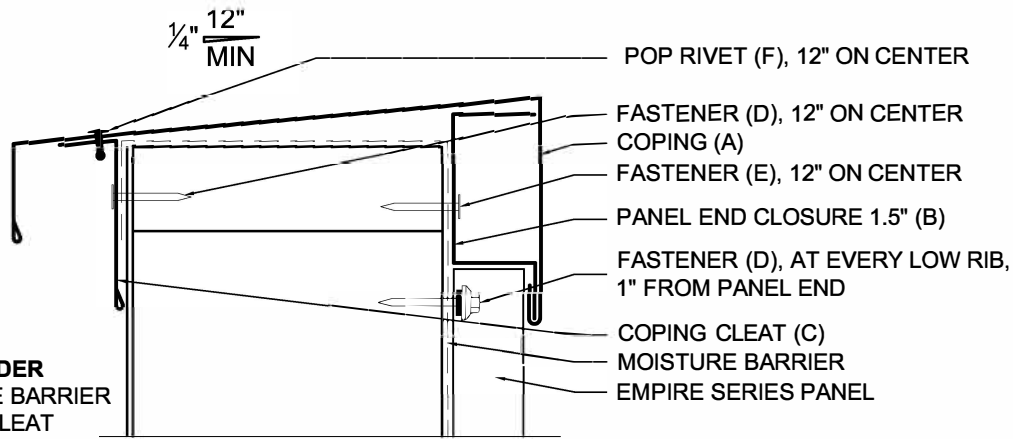
INSTALL ORDER

1. MOISTURE BARRIER
2. COPING CLEAT
3. PANEL END CLOSURE
4. COPING
5. PANEL

Part	Description	Product #	Length	Installation Information
	Coping 8" 24 Ga Coping 8" 22 Ga Coping 10" 24 Ga Coping 10" 22 Ga Coping 12" 24 Ga Coping 12" 22 Ga	58714XX 60714XX 58715XX 60715XX 58716XX 60716XX	10'-2"	Hook Coping onto Panel End Closure and Pop Rivet to Coping Cleat.
	Panel End Closure 1.5" 24 Ga Panel End Closure 1.5" 22 Ga	58732XX 60732XX	10'-2"	Carefully locate Panel End Closure to support Coping.
	Coping Cleat 24 Ga Coping Cleat 22 Ga	58734XX 60734XX	10'-2"	Install Coping Cleat to accept Coping attachment.
	#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
	1/8" x 3/8" Pop Rivet	82402XX		Trim to trim attachment

1.5" EMPIRE SERIES INSTALL GUIDE

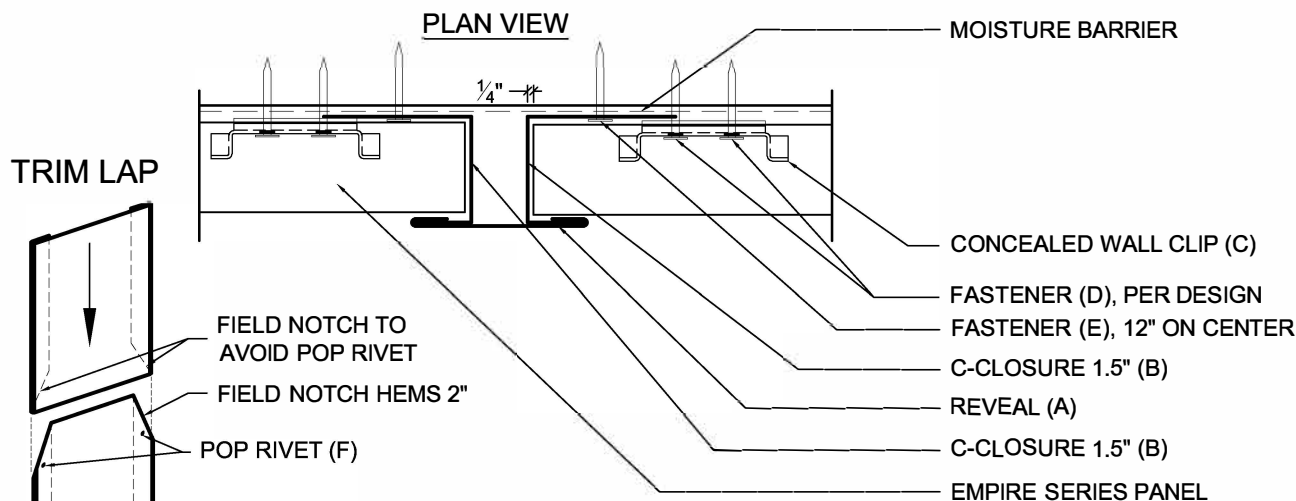
Coping - Vertical



- INSTALL ORDER**
1. MOISTURE BARRIER
 2. COPING CLEAT
 3. PANEL
 4. PANEL END CLOSURE
 5. COPING

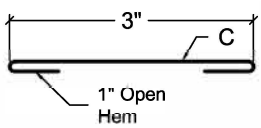
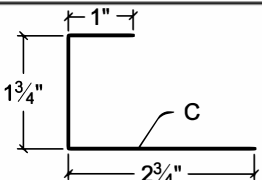
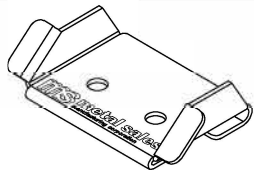
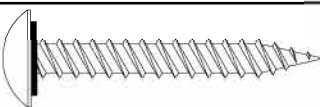
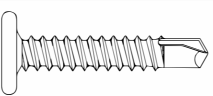
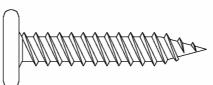

ELEVATION VIEW

	Part	Description	Product #	Length	Installation Information
(A)		Coping 8" 24 Ga Coping 8" 22 Ga Coping 10" 24 Ga Coping 10" 22 Ga Coping 12" 24 Ga Coping 12" 22 Ga	58714XX 60714XX 58715XX 60715XX 58716XX 60716XX	10'-2"	Hook Coping onto Panel End Closure and Pop Rivet to Coping Cleat.
(B)		Panel End Closure 1.5" 24 Ga Panel End Closure 1.5" 22 Ga	58732XX 60732XX	10'-2"	Carefully locate Panel End Closure to support Coping.
(C)		Coping Cleat 24 Ga Coping Cleat 22 Ga	58734XX 60734XX	10'-2"	Install Coping Cleat to accept Coping attachment.
(D)		#10-14 x 1 1/2" Wood Screw XL	82123XX	1 1/2"	Install over wood decking
(D)		#12-14 x 1 1/4" Self Driller XL	82353XX	1 1/4"	Install over metal framing
(E)		#10-12 x 1" PH Wood Screw	8243100	1"	For attachment to wood decking
(E)		#10-16 x 1" PH Driller	8242100	1"	For attachment to metal framing
(F)		1/8" x 3/8" Pop Rivet	82402XX		Trim to trim attachment

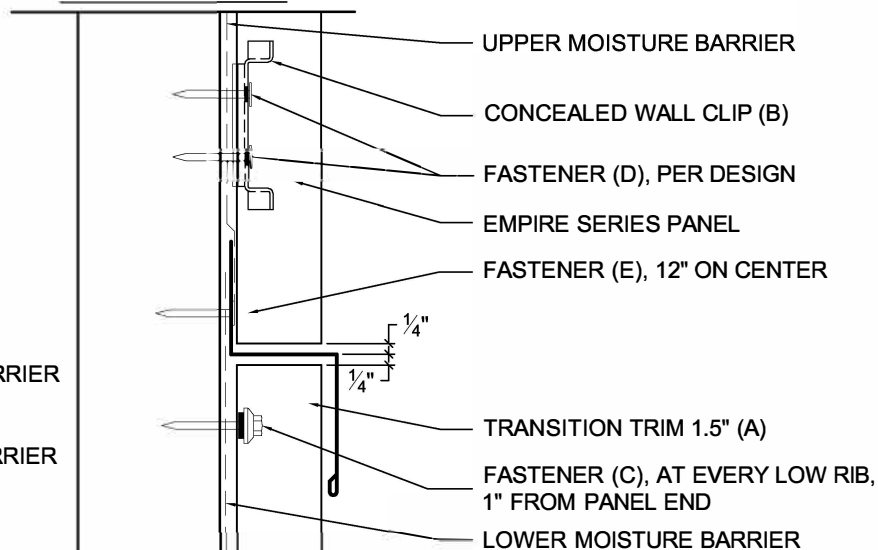


**NO FASTENERS
THROUGH TRIM LAP**

- INSTALL ORDER**
1. MOISTURE BARRIER
 2. C-CLOSURE
 3. PANEL
 4. REVEAL

Part	Description	Product #	Length	Installation Information
(A) 	Reveal 24 Ga Reveal 22 Ga	58740XX 60740XX	10'-2"	Hook Reveal to C-Closures. Pop Rivet to C-Closure under trim lap.
(B) 	C-Closure 1.5" 24 Ga C-Closure 1.5" 22 Ga	58712XX 60712XX	10'-2"	Install C-Closure to restrain Reveal. Leave 1/4" gap between end of panels and back of C-Closures.
(C) 	Concealed Wall Clip 16 Ga Galv	4934200	3"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(D) 	#12-11 x 1 1/2" LP Wood Screw	8244100	1 1/2"	For clip attachment to wood decking
(D), (E) 	#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(E) 	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(F) 	1/8" x 3/8" Pop Rivet	82402XX		Attach Reveal to C-Closures at trim lap.

ELEVATION VIEW



INSTALL ORDER

1. LOWER MOISTURE BARRIER
2. LOWER PANEL
3. TRANSITION TRIM
4. UPPER MOISTURE BARRIER
5. UPPER PANEL

	Part	Description	Product #	Length	Installation Information
(A)		Transition Trim 1.5" 24 Ga Transition Trim 1.5" 22 Ga	58738XX 60738XX	10'-2"	Install Transition Trim over lower panels. Install Moisture Barrier over top of Transition Trim
(B)		Concealed Wall Clip 16 Ga Galv	4934200	3"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(C)		#10-14 x 1 1/2" Wood Screw XL	82123XX	1 1/2"	Install over wood decking
(C)		#12-14 x 1 1/4" Self Driller XL	82353XX	1 1/4"	Install over metal framing
(D)		#12-11 x 1 1/2" LP Wood Screw	8244100	1 1/2"	For clip attachment to wood sheathing
(D), (E)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(E)		#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking

Though factory-applied pre-painted finishes are very durable and will last many years, eventually it may be desirable to thoroughly clean or repaint them.

Dirt pickup may cause apparent discoloration of the paint when it has been exposed in some dirt-laden atmospheres for long periods of time. In areas of strong sunlight, slight chalking may cause some change in appearance. A good cleaning will often restore the appearance of these buildings and render repainting unnecessary. An occasional light cleaning will help maintain a good appearance.

In many cases, simply washing the building with plain water using a hose or pressure sprayer will be adequate. In areas where heavy dirt deposits dull the surface, a cloth or soft bristle brush and solution of water and detergent ($\frac{1}{3}$ cup of laundry detergent per gallon of water for example) may be used. This should be followed by an adequate rinse of water. Do not use wire brushes, abrasives, or cleaning tools which will scratch the coating surface.

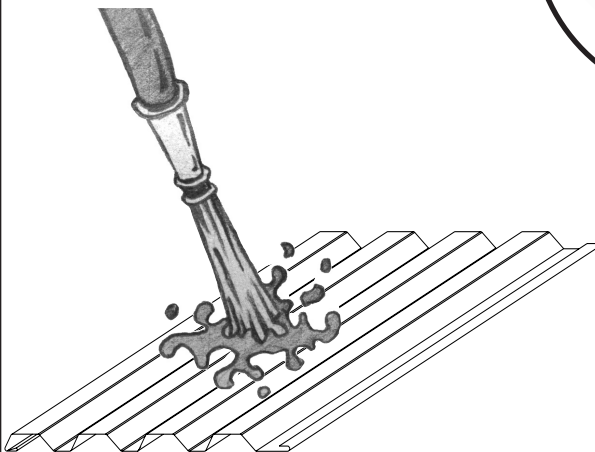
Mildew may occur in areas subject to high humidity but is not normally a problem due to the high inherent mildew resistance of the baked finish that is used. However, mildew can grow on dirt and spore deposits in some cases. To remove mildew along with the dirt, the following solution is recommended.

- $\frac{1}{3}$ cup detergent (Tide® or equivalent)
- $\frac{2}{3}$ cup trisodium phosphate (Solex® or equivalent)
- 1 quart of 5% sodium hypochlorite solution (Clorox® or equivalent)
- 3 quarts of water

Strong solvents and abrasive type cleaners should be avoided. Most organic solvents are flammable and toxic, and must be handled accordingly. When using a solvent, consult maintenance professionals and label instructions for proper handling and disposal of washings. If required, a mild solvent such as mineral spirits can be used to remove caulking compounds, oil, grease, tars, wax and similar substances. Use a cloth dampened with mineral spirits and apply only to areas which are contaminated. Follow up the use of this mild solvent with detergent cleaning and rinsing.



**DO NOT USE A
WIRE BRUSH**



**HOSE OR PRESSURE SPRAY
FOR ADEQUATE CLEANING**



**USE MILD DETERGENT AND WATER
FOR HEAVY DIRT DEPOSITS**



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