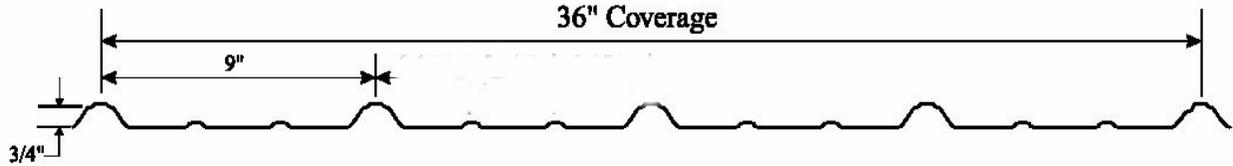


# Discount Direct Metal Roofing

## Plus Rib Roofing Panels

### *Installation Instructions*

All questions and concerns please call 904-696-9700



[Discount Direct Metal Roofing](#) Plus Rib Metal Roofing Panels are a strong, resilient, economical, and an eye-catching solution to the increasing interest and requests for metal roofing opportunities of residential homes, commercial applications, agricultural, and utility buildings in Florida.

Plus Rib metal panels provide a 36-inch coverage with 3/4-inch ribs on 9-inch centers, and utilize an anti-siphoning channel to provide protection from severe weather conditions. Both panels and trim are fabricated using state-of-the-art computerized equipment at our manufacturing facility in Jacksonville, Florida, to assure uniformity and consistency in the manufactured product.

Panels are roll-formed to the lengths specified by customers in either Galvalume® or multiple colors of painted 26 gauge and 29 gauge high-tensile metal, ready for either customer pickup or on-site delivery.

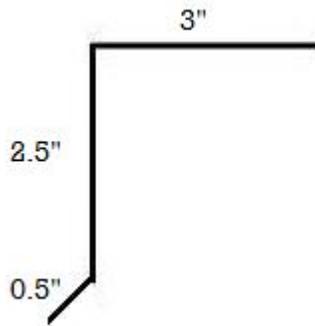
[Discount Direct Metal Roofing](#) also stocks a complete line of fasteners, sealants, and other accessories to every need of either the do-it-yourself homeowner or roofing contractor. Both in-stock and custom-made flashing and trim are available in all colors as well.

**Two gauges of material are available:** 26-gauge and 29-gauge metal panels. Your [Discount Direct Metal Roofing](#) Representative is waiting to assist you in making the best choice for your particular roofing needs. Discount Direct Metal Roofing Plus Rib metal panel is manufactured in a bare, Galvalume® finish in compliance with ASTM A-653 Structural Steel Grade 80. The AZ-55 Galvalume® finish is not only durable and cost effective, but provides the reflectivity which is especially valuable with southern weather extremes. The paint system applicable to our product provides exterior protection plus superior resistance to corrosion and Ultraviolet radiation. All of [Discount Direct Metal Roofing](#) Plus Rib finishes are of the highest quality in the industry.

# Standard Roofing Trim

Your trim dimensions may vary

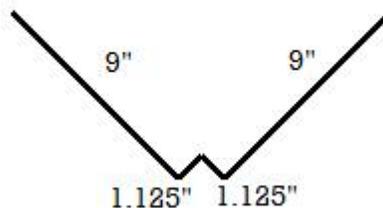
## Eave Drip & Fascia or Equivalent



For custom eave drip, specify the amount of the eave that will be covered, and for steeper roofs specify pitch. If fascia is desired, specify your dimensions that you want concealed by the eave drip.

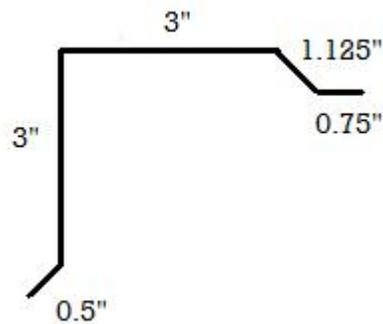
Eave drip and fascia provide a complete appearance along the drip eave of the house, as well as providing protection for the materials they cover. The eave drip should completely cover the top edge of the fascia. Inside closures can also be used for sealing off the open ribs of the panels as an alternative option.

## Preformed Valley



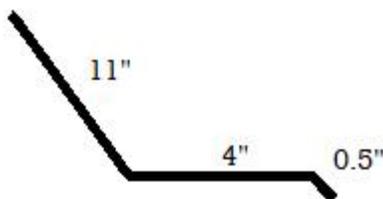
Preformed Valleys use a diverter to prevent water from rushing under panels on the opposite side therefore channeling water off the roof. Universal Closures are generally used to assure a good seal.

## Gable Flashing (aka Rake Trim)



Gable flashing is used to trim the edge of the roofing panel at the gable end of the roof. It is made to match the eave drip in size to maintain a uniform appearance. Gable trim is necessary on most roofs to prevent rain water from getting underneath the metal panels. While not recommended, if the panel is allowed to hang over the gable end, eave drip can be used as an alternative. Butyl tape between the Gable trim and panel eliminates potential leaks.

## Transition Flashing



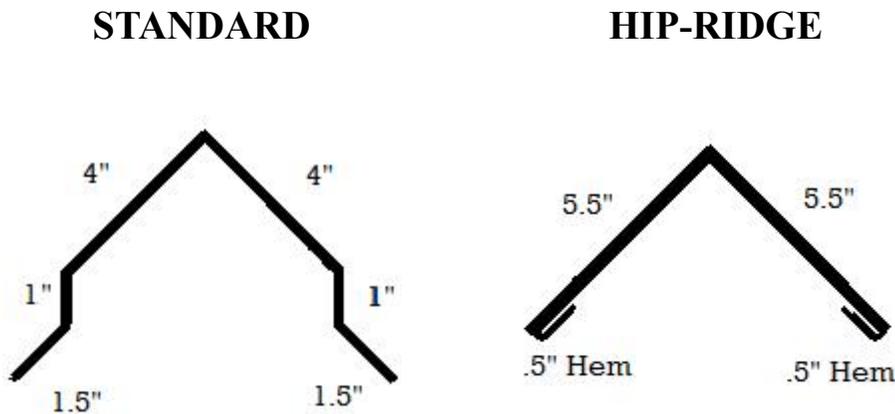
Transition flashing prevents leakage at the point where two different roof pitches meet. It is sealed on the lower-pitch side with Outside Closures and can be sealed underneath the higher-pitch side with inside closures. For custom transition flashing, specify the pitches of the two roof slopes and—if required—specify dimensions "a" and "b". The transition flashing provides a continuous drainage without leaks when installed with the proper closures.

## Side-wall & End-wall Flashing



Sidewall flashing is applied when the side of the roof butts up against an adjacent wall. Butyl tape should be applied where the "foot" of the flashing attaches to the roof and if used along the top edge of the counter-flashing. The Endwall flashing should be sealed using outside closures. End-wall flashing is applied where the upward slope of a roof meets a wall. The wall-side of both types of flashing can either be covered over with siding or sealed with counter-flashing. Endwall pitch should always be specified.

## The Ridge Cap (Standard 12-inch Ridge Caps or equivalent)



The Ridge Cap is used to seal the point at which two upward slopes meet. This can be both along the ridge of the roof as well as a covering for a hip. Self-drilling lap TEK screws are applied through the Ridge Cap into the ribs of the metal roofing panels. Debris, insects, or prevailing rain can find easy access under the ridge cap, so closures are often used to either totally or partially seal the opening. Closures under ridge caps are available in 3 types: solid, vented, and universal type.



**Pipe Boots** provide a water tight seal around roof vents and come in a variety of sizes. Boots seal with caulk or butyl tape and conform to the shape of the metal panel ribs.

## Roof Application and Pitch

[Discount Direct Metal Roofing](#) panels require a specified degree of pitch to ensure proper water drainage. The minimum roof slope recommended for all panels is 3 inches of rise per foot. If the slope of the roof is below a 2/12 pitch, contact our representative before installation. ***Florida Building Code REQUIRES a minimum of a 2/12 pitch.***

Panel installation should begin at the gable end of the roof opposite of the prevailing rain bearing wind (this will provide added assurance against wind-driven rain being forced under the laps). Measure one panel width in from the roof edge. At this point, chalk a line from ridge to eave. Place a leading edge of the first panel along this line. It is extremely important that this panel be laid square to the eave and ridge so that the remaining panels will line up square on the roof frame. It is wise to have a person at the eave and at the ridge to ensure that the proper panel coverage is being maintained across the roof. Make sure that the metal panels are correctly side-lapped.

In applications where end-lapping is required, the upper panel on the slope should lap over the panel that is lower on the slope. Lower roof pitch requires a greater amount of panel overlap. All end-lap applications require two horizontal rows (across the panel) of butyl sealant tape and proper fastening to ensure a maximum water seal application. On low-pitched roofs, butyl tape or caulk should be applied at the panel lap to keep water from overflowing the lap.

Providing an overhang of 1 to 2 inches is recommended to provide a drip edge, although only a 1-inch overhang is required where gutters are used. The open metal panel ribs at the eave can be sealed with inside closures. For maximum weather-tightness, a row of butyl tape can be applied above and beneath inside closures.

## Trimming and Cutting Steel Panels

The best tool for cutting steel panels across the profile is either a portable hand shear or a nibbler. Care should be taken to remove all loose particles from roof surfaces after application. For safety and to prevent particles from Nibblers, panels should be cut on the ground. To cut panels lengthwise: hand shears or turbo shears are recommended.

## Ordering Roof Panels and Screws

Care should be taken when ordering, and that **exact** length measurements are stated to avoid having to take corrective measures after purchase. Panel lengths should fall 1 to 2 inches short of the ridge and should extend 1 to 2 inches past the eave to allow a sufficient drip edge (except concerning gutters).

### *How to Calculate Screws:*

For 2-foot spacing between rows of screws, multiply the total linear feet of metal by 3. *Example:* If your order is 1500 feet of Plus Rib roofing.  $1500 \times 3 = 4500$  screws would be applicable for fastening. [Discount Direct Metal Roofing](#) sales representatives are ready to assist customers with information specific to their particular metal roofing needs.

## Ordering and Applying Trim

The most common flashing for metal roofing is the **Ridge cap**, which is applied at the peak of a roof where two opposing roof slopes join. Other flashing includes: **Gable** flashing, **Eave Drip** flashing, **Transition** flashing, **End wall** flashing, **Sidewall** flashing and **Valley** flashing. For a roof pitch exceeding 5/12 (5 inch rise in 12 inches), the slope of the roof should be specified upon ordering **Ridge caps**, **End wall**, and **Eave drip**. Verify local code requirements.

Both slopes should be specified when ordering Transition flashing if a steeper roof slope meets a lesser slope. At the Gable edge, the use of Gable trim adds to the appearance of the structure and protects the fly-rafter, and a sidewall flashing is used where the *side* of a panel butts up against an adjacent wall. In both instances, the installer/contractor should be careful to seal between the gable rake or sidewall and panel with butyl sealant tape, and to fasten the rake every 6" to 12" up the slope of the roof with the required screws.

If eave drip is used on the gable, the number of 90-degree eave drip should be specified separately from that used on the drip edge when ordering. To prevent penetration of water, insects, and debris at the ridge, outside closures may be inserted between the ridge cap and the top end of the panel and inside closures are used at the eaves. Screws are applied through the ridge cap, closure, and rib in at least every other rib of the panels. At least a #8 x 1" and up to a 2 ½" screw should be used for attaching panels. Self-drilling lap screws should be used to attach ridge caps.

## Damage Prevention

Keep Metal Roofing Product Materials Dry! Paint and finishes of [Discount Direct Metal Roofing](#) panels and trim are designed to endure severe rain and wet weather conditions.

**CAUTION:** Neither paint, galvanized, nor Galvalume finishes, are designed to be in continuous contact with water or condensation for long periods of time. **Damage may occur if uninstalled panels or trim are allowed to remain wet in storage.**

Be sure to store material that will not be installed immediately in a dry location. Wet material should be air-dried and re-stacked. NOTE: Plastic should not be used to cover metal panels.

## Applying Screws

Special washer screws applied through the flat of the metal is the recommended method used to attach metal roofing panels. 1-inch screws can be used if penetration of only  $\frac{3}{4}$  inch is either necessary or desired; otherwise, #10 x 1- $\frac{1}{2}$  inch screws are recommended for metal to wood application. 2-inch screws are also available. Do not fasten panels to wood or purlins through the rib, see approved screw pattern on **Page 9**.

Metal roofing application can be aided by pre-drilling panels, allowing screws to go quickly and accurately into the desired spacing. Pre-drilling will work provided that pilot holes *are placed accurately* in the proper locations on panels. Purlin spacing must be uniform and carefully measured. Any particles left on the roof caused by the application of screws must be removed. Note: pre-drilling is difficult to do correctly and is only recommended for experts.

To apply metal roofing over existing shingles, we recommend first overlaying the shingles with properly attached 1x4 or greater, (2x4) or metal hat channel purlins. If pressure treated lumber is used, 30 lb. felt paper should be applied over them in strips to prevent potential chemical interaction with the roofing panels.

<b>Do:</b>	<b>Do Not:</b>
<ul style="list-style-type: none"><li>• Use 2,500 rpm maximum screw gun and high quality drive bits and sockets.</li><li>• Be sure screw head engages into the drive socket completely.</li><li>• Install screw perpendicular to the fastening surface.</li><li>• Use a tool with torque control or depth sensing nose piece to prevent over-torqued and under-torqued screws.</li><li>• Install screw so at least 3 full threads extend beyond the substrate.</li></ul>	<ul style="list-style-type: none"><li>• Do not exert excessive pressure!</li><li>• Do not over drive the screw!</li><li>• <b>Do not use Impact tools!</b></li></ul>

## High Velocity Wind Zones:

For solid decking, at least 1/2-inch structural plywood or OSB (**5/8" for any High velocity wind zone of 120 and above**) supported on rafters at a maximum of 24" on center. Battens: Plus Rib Metal Roofing can be separated from the moisture barrier by minimum, nominal 1"x3" yellow pine battens spaced on maximum 24" centers or according to ASCE 7-16 calculations where applicable.

**Caution: Direct contact between pressure treated lumber, green, damp, and metal roofing must be avoided in order to prevent potential corrosion and moisture build-up.** The battens must be fastened to the roof deck with minimum #6 screws at 12" on-center or two minimum 8d common or pneumatic nails spaced 8" on-center or one every 4" on-center (or by applicable calculations according to ASCE 7-16)

Battens must be installed to support the entire width and length of ridge, eave, hip, valley, and gable end trims. Battens are optional if re-roofing over shingles.

NOTE: Re-roofing over shingles without a batten is allowed providing the roof has been checked by a licensed roofing contractor to insure levelness and pullout integrity. Wood purlin spacing can be up to 30 inches for 29-gauge (2 feet is most common) and up to 4 1/2 feet for 26-gauge roofing. Screws should be placed on both sides of the ribs on the eave.

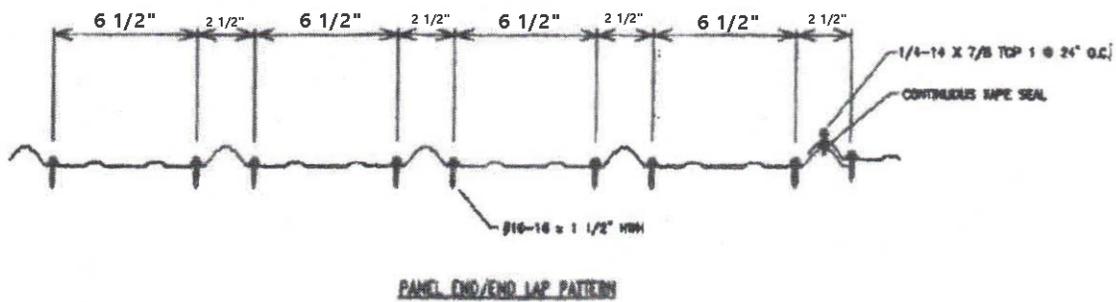
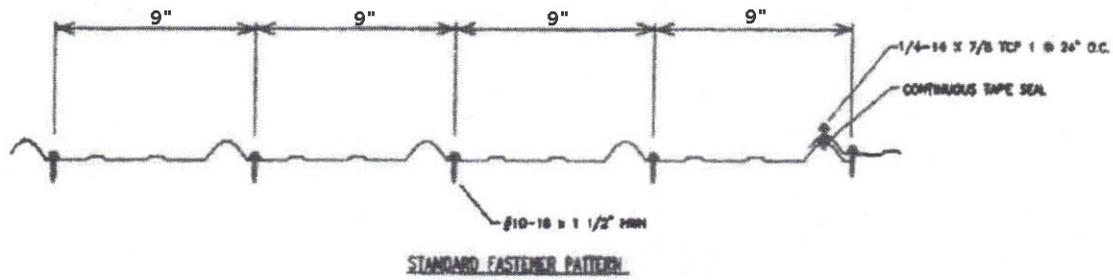
### Manufacturers Recommended Alternate Fastening Schedule:

**Manufacturers Recommended Alternate Fastening Schedule**

Alternate Fastening Schedule (On Center Spacing or Fastener Row)									
	Type	Placement To	Fastener Size	Wind Speed Zone					
				90		100		110	
				On Center Spacing	Trim Areas	On Center Spacing	Trim Areas	On Center Spacing	Trim Areas
Zone 1	Nail	Wood	10d x 1-3/4"	24"	12"	24"	12"	24"	12"
	Wood Fast Screw	Wood	#9 x 1-1/2"	24"	12"	24"	12"	24"	12"
	Wood Fast Stitch	Wood	#12 x 3/4"	12"	12"	12"	12"	12"	12"
	Metal Fast Stitch	18 Ga Steel and Higher	#12 x 1"	36"	36"	36"	36"	36"	36"
	Metal Fast Stitch	20 Ga Steel and Lower	#14 x 7/8"	12"	12"	12"	12"	12"	12"
Zone 2 & 3	Nail	Wood	10d x 1-3/4"	12"	6"	10"	5"	8"	4"
	Wood Fast Screw	Wood	#9 x 1-1/2"	24"	12"	24"	12"	24"	12"
	Wood Fast Stitch	Wood	#12 x 3/4"	12"	12"	12"	12"	12"	12"
	Metal Fast Stitch	18 Ga Steel and Higher	#12 x 1"	36"	36"	36"	36"	36"	36"
	Metal Fast Stitch	20 Ga Steel and Lower	#14 x 7/8"	12"	12"	12"	12"	12"	12"

## Screw Pattern Requirements by Florida Building Code

(floridabuilding.org) FL-13613-R4



**Indemnity:** All prices, designs, and colors are subject to change without notice.

**Disclaimer:** We are not responsible for any damage to metal roofing panels or trim caused by metal shavings not being properly removed after screw application or pre-drilling. Despite the fact that we have made every attempt at accuracy in this manual, we are not responsible for typographic, printing, or technical errors.

**Caution--:** Wear protective gear when handling panels, metal roofing may have sharp edges. Do not handle panels in high wind. Do not handle panels near electrical lines. Do not stand on unfastened panels. Do not cut panels with a Skilsaw, grinder, or other rotary devices. Only cut metal panels with tools that shear such as hand snips. Do not use an impact drill for installing screws.