



# **PBR-Panel**

**Metal Roof and Wall Panel**

## **Installation Manual**

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.

Metal Sales Manufacturing Corporation is not responsible for the performance of the roof 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 approved Metal Sales' erection drawings, the approved erection drawings are to take precedence.

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

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 Metal Sales 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, material handling, width, gauge, length, color of panels, and installation. (Reference Metal Construction Association "Oil Canning Position Paper" - Appendix A).

Metal Sales reserves the right to modify, without notice, any details, recommendations or suggestions. Any questions you may have regarding proper installation of the Magna-Loc roofing system should be directed to your Metal Sales representative, (see pages 2 and 3).

Consult Metal Sales for any additional information not outlined in this manual.

This manual is designed to be utilized as a guide when installing Magna-Loc roofing 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.**

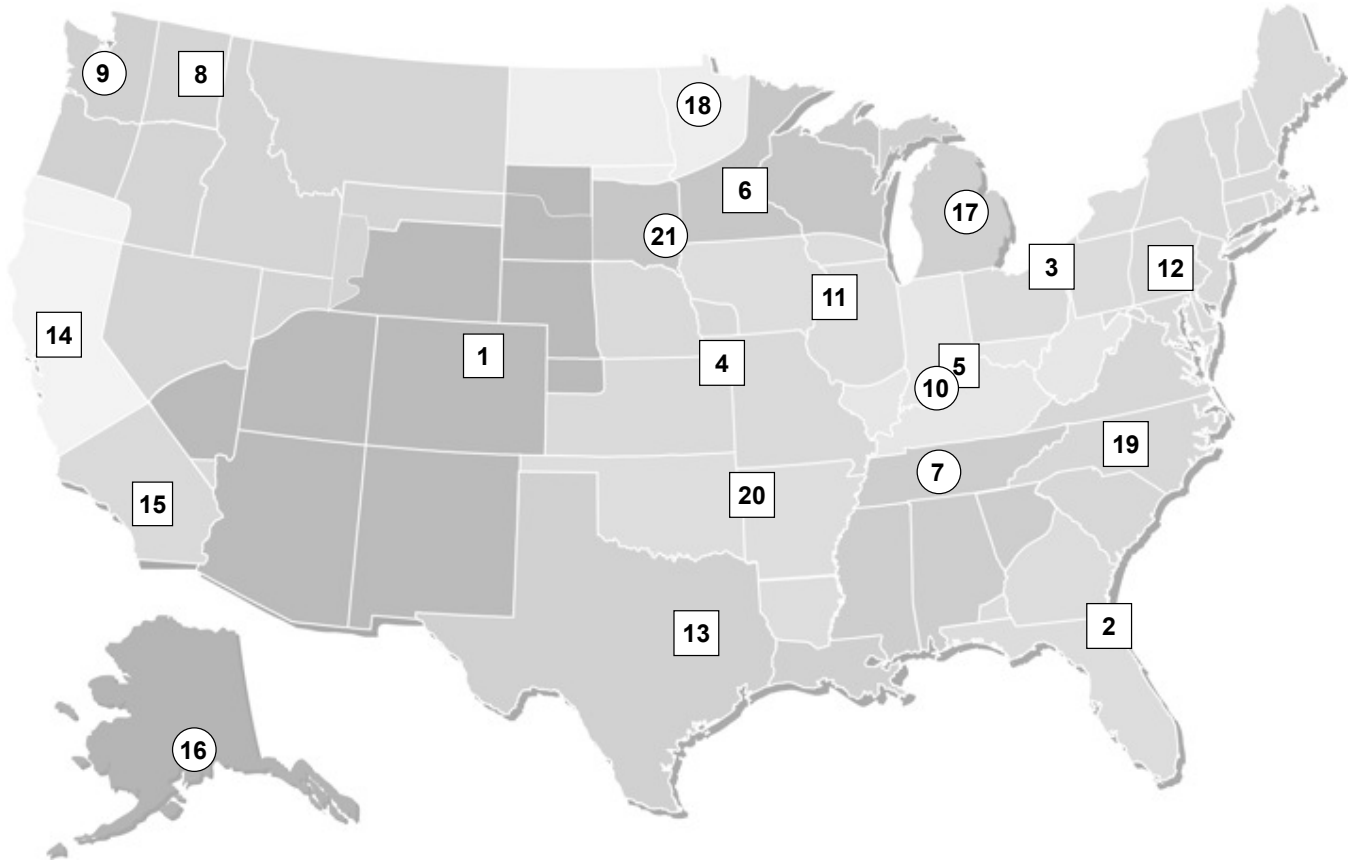
The installation of metal roof systems is a dangerous procedure and should be supervised by trained knowledgeable erectors. **USE EXTREME CARE WHILE INSTALLING ROOF PANELS.** It is not possible for Metal Sales to be aware of all the possible job site situations that could cause an unsafe condition to exist. The erector of the roof system is responsible for reading these instructions and determining the safest way to install the roof system.

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

Provide required safety railing, netting, or safety lines for crew members working on the roof.

Do not use the roof panel as a walking platform. The roof panels will not withstand the weight of a person standing at the edge of the panel.

Do not stand on any part of a roof panel until the panel has been completely attached.



NOTE: Shaded areas represent regions served by each location.

 Branches that manufacture PBR-Panel and/or R-Panel

**Metal Sales offers a complete line of metal roof, wall, and fascia panel systems for the commercial, architectural, industrial, residential, and agricultural markets. Metal Sales offers over 75 profiles with a wide selection of widths, colors, and gauges - new construction or retrofit.**

**1.) DENVER BRANCH**

7990 E. I-25 Frontage Road  
Longmont, CO 80504  
303.702.5440 Phone  
800.289.7663 Toll Free  
800.289.1617 Toll Free Fax

**2.) JACKSONVILLE BRANCH**

7110 Stuart Avenue  
Jacksonville, FL 32254  
904.783.3660 Phone  
800.394.4419 Toll Free  
904.783.9175 Fax  
800.413.3292 Toll Free Fax

**3.) JEFFERSON BRANCH**

352 East Erie Street  
Jefferson, OH 44047  
440.576.9070 Phone  
800.321.5833 Toll Free  
440.576.9242 Fax  
800.233.5719 Toll Free Fax

**4.) INDEPENDENCE BRANCH**

1306 S. Powell Road  
Independence, MO 64057  
816.796.0900 Phone  
800.747.0012 Toll Free  
816.796.0906 Fax

**5.) SELLERSBURG BRANCH**

7800 State Road 60  
Sellersburg, IN 47172  
812.246.1866 Phone  
800.999.7777 Toll Free  
812.246.0893 Fax  
800.477.9318 Toll Free Fax

**6.) ROGERS BRANCH**

22651 Industrial Blvd.  
Rogers, MN 55374  
763.428.8080 Phone  
800.328.9316 Toll Free  
763.428.8525 Fax  
800.938.9119 Toll Free Fax

**7.) NASHVILLE BRANCH**

4314 Hurricane Creek Blvd.  
Antioch, TN 37013  
615.641.7100 Phone  
800.251.8508 Toll Free  
615.641.7118 Fax  
800.419.4372 Toll Free Fax

**8.) SPOKANE BRANCH**

East 2727 Trent Avenue  
Spokane, WA 99202  
509.536.6000 Phone  
800.572.6565 Toll Free  
509.534.4427 Fax

**9.) SEATTLE BRANCH**

20213 84th Avenue, South  
Kent, WA 98032  
253.872.5750 Phone  
800.431.3470 Toll Free (Outside WA)  
800.742.7900 Toll Free (Inside WA)  
253.872.2008 Fax

**11.) ROCK ISLAND BRANCH**

8111 West 29th Street  
Rock Island, IL 61201  
309.787.1200 Phone  
800.747.1206 Toll Free  
309.787.1833 Fax

**12.) DEER LAKE BRANCH**

29 Pinedale Industrial Road  
Orwigsburg, PA 17961  
570.366.2020 Phone  
800.544.2577 Toll Free  
570.366.1648 Fax  
800.544.2574 Toll Free Fax

**13.) TEMPLE BRANCH**

3838 North General Bruce Dr.  
Temple, TX 76501  
254.791.6650 Phone  
800.543.4415 Toll Free  
254.791.6655 Fax  
800.543.4473 Toll Free Fax

**14.) WOODLAND BRANCH**

1326 Paddock Place  
Woodland, CA 95776  
530.668.5690 Phone  
800.759.6019 Toll Free  
530.668.0901 Fax

**15.) FONTANA BRANCH**

14213 Whittram Avenue  
Fontana, CA 92335  
909.829.8618 Phone  
800.782.7953 Toll Free  
909.829.9083 Fax

**16.) ANCHORAGE BRANCH**

4637 Old Seward Hwy.  
Anchorage, AK 99503  
907.646.7663 Phone  
866.640.7663 Toll Free  
907.646.7664 Fax

**17.) BAY CITY BRANCH**

5209 Mackinaw Road  
Bay City, MI 48706  
989.686.5879 Phone  
888.777.7640 Toll Free  
989.686.5870 Fax  
888.777.0112 Toll Free Fax

**18.) DETROIT LAKES BRANCH**

1435 Egret Avenue  
Detroit Lakes, MN 56501  
218.847.2988 Phone  
888.594.1394 Toll Free  
218.847.4835 Fax  
888.594.1454 Toll Free Fax

**19.) MOCKSVILLE BRANCH**

188 Quality Drive  
Mocksville, NC 27028  
336.751.6381 Phone  
800.228.6119 Toll Free  
336.751.6301 Fax  
800.228.7916 Toll Free Fax

**20.) FORT SMITH BRANCH**

7510 Ball Road  
Fort Smith, AR 72908  
479.646.1176 Phone  
877.452.3915 Toll Free  
479.646.5204 Fax

**21.) SIOUX FALLS BRANCH**

2700 West 3rd Street, Suite 4  
Sioux Falls, SD 57104  
605.335.2745 Phone  
888.297.0024 Toll Free

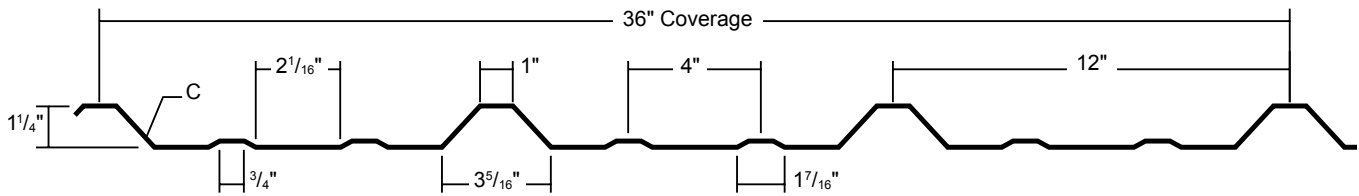
**TECHNICAL SUPPORT****TECHNICAL SERVICES**

545 South 3rd Street  
Louisville, KY 40202  
502.855.4300 Phone  
800.406.7387 Toll Free  
502.855.4290 Fax  
800.944.6884 Toll Free Fax

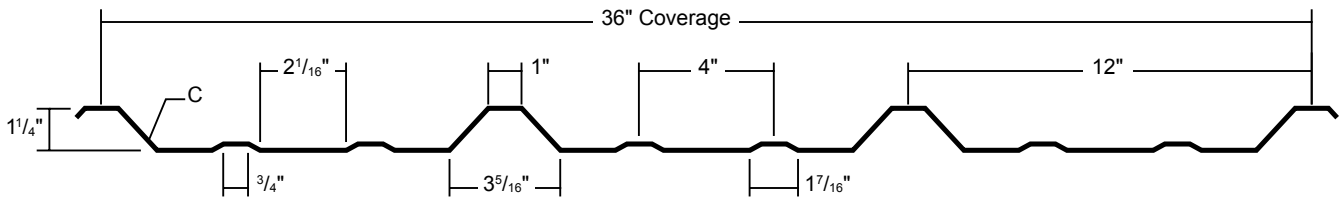
# PBR-PANEL

# PANEL OVERVIEW

## PBR-PANEL PROFILE



## R-PANEL PROFILE



## SLOPE

The minimum recommended slope for any "R" and "PBR"-Panel is 1:12. Metal Sales recommends that in all roof applications sealant be used on sidelaps.

## SUBSTRATE

R-Panel is designed to be utilized over open structural framing, but can easily be used with a solid substrate. The recommended substrate is 5/8" plywood with a 30 pound felt moisture barrier. To avoid panel distortion, use a properly aligned and uniform substructure. **PBR-Panel is recommended for roof applications.**

## COVERAGE

Each panel has a coverage of 36".

## LENGTH

Lengths under 5'-0" are available with some cutting restrictions. Maximum recommended panel length is 45'-0". Longer panels require additional consideration in packaging, shipping, and erection. Please consult your Metal Sales branch for recommendations.

## AVAILABILITY

Panels are available in 26, 24, and 22 gauge. Minimum quantities may apply.

## APPLICATION

Commercial, Industrial, and Architectural panels.

## PERFORMANCE TEST

UL 580, UL 2218, UL 790, Texas Department of Insurance, Cantilever Diaphragm.

## FASTENING SYSTEM

Direct Fastened (exposed).

## FASTENERS

The fastener selection guide should be consulted for choosing proper fasteners for specific applications. Quantity and type of fastener must meet necessary loading and code requirements (see PGI-12-14).

## MATERIALS

Steel grade 50 per ASTM A-792  
Steel grade 80 per ASTM A-792 or ASTM A-653

## FINISH

- ▶ Acrylic Coated Galvalume® (ACG) / ASTM A-792 - AZ55
- ▶ Pre-painted Galvalume / ASTM A-792 - AZ50
- ▶ MS Colorfast45®
- ▶ PVDF (Kynar 500)

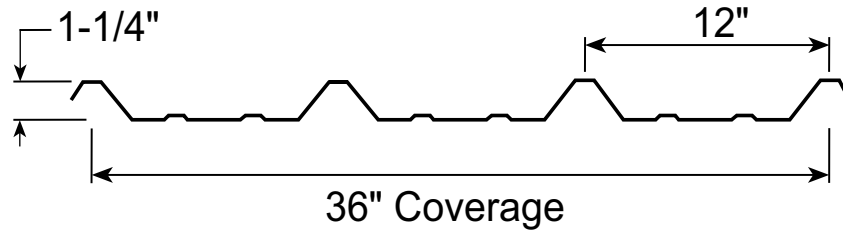
\* Differential appearance of Acrylic Coated Galvalume roofing materials is not a cause for rejection.

\*\* Meets both Kynar 500 and Hylar 5000 specifications.

# PBR-PANEL

# PANEL OVERVIEW

## PBR-PANEL PROFILE



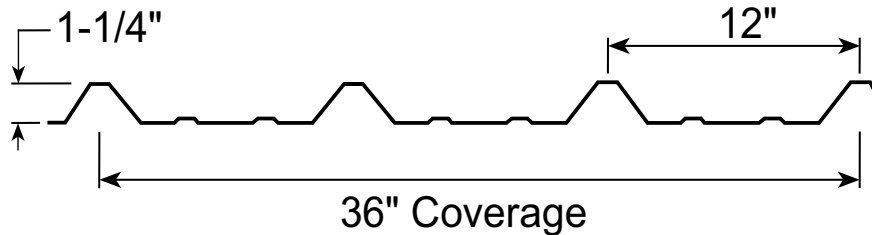
| FINISH | GAUGE | COVERAGE | PRODUCT NO. | WT/SQ |
|--------|-------|----------|-------------|-------|
|--------|-------|----------|-------------|-------|

|                 |    |     |         |     |
|-----------------|----|-----|---------|-----|
| ACG             | 26 | 36" | 2505241 | 83  |
| MS Colorfast45® | 26 | 36" | 25052__ | 83  |
| PVDF Standard♦  | 26 | 36" | 26052__ | 83  |
| ACG             | 24 | 36" | 2505241 | 106 |
| PVDF Standard♦  | 24 | 36" | 26052__ | 106 |

♦ See Metal Sales color charts for color selection. \_\_ Represents color code

\*Additional lead time required.

## R-PANEL PROFILE



| FINISH | GAUGE | COVERAGE | PRODUCT NO. | WT/SQ |
|--------|-------|----------|-------------|-------|
|--------|-------|----------|-------------|-------|

|                 |    |     |         |     |
|-----------------|----|-----|---------|-----|
| ACG             | 26 | 36" | 2505241 | 83  |
| MS Colorfast45® | 26 | 36" | 25052__ | 83  |
| PVDF Standard♦  | 26 | 36" | 26052__ | 83  |
| ACG             | 24 | 36" | 2505241 | 106 |
| PVDF Standard♦  | 24 | 36" | 26052__ | 106 |

♦ See Metal Sales color charts for color selection. \_\_ Represents color code

\*Additional lead time required.

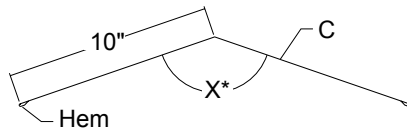
## PANEL NOTES

1. For panel lengths over 45'-0", please inquire.
2. Panels may be installed over structural framing or solid substrate.
3. Minimum recommended roof slope: 1:12. Sidelap sealant and stitch screws required on less than 3:12 slope.
4. Finishes:
  - MS Colorfast45®
  - PVDF (Kynar 500)

# PBR-PANEL

# FLASHING PROFILES

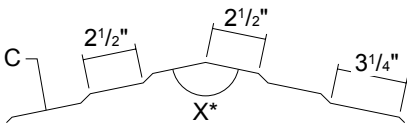
## 20" RIDGE/HIP COVER



\* See chart on page GI-8

| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5500641     | 13.90 lbs | 10'-2" |
| 26    | ACG             | 5500841     | 27.80 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55006__     | 13.90 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55008__     | 27.80 lbs | 20'-3" |
| 26    | PVDF            | 56006__     | 13.90 lbs | 10'-2" |
| 26    | PVDF            | 56008__     | 27.80 lbs | 20'-3" |
| 24    | ACG             | 5700641     | 15.90 lbs | 10'-2" |
| 24    | ACG             | 5700841     | 31.80 lbs | 20'-3" |
| 24    | PVDF            | 58006__     | 15.90 lbs | 10'-2" |
| 24    | PVDF            | 58008__     | 31.80 lbs | 20'-3" |

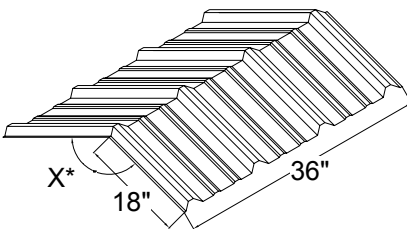
## UNIVERSAL RIDGE COVER



\* See chart on page XX

| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5501041     | 13.90 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55010__     | 13.90 lbs | 10'-2" |
| 26    | PVDF            | 56010__     | 13.90 lbs | 10'-2" |
| 24    | ACG             | 5701041     | 15.90 lbs | 10'-2" |
| 24    | PVDF            | 58010__     | 15.90 lbs | 10'-2" |

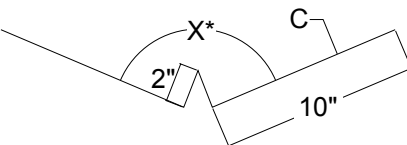
## PBR-PANEL FORMED RIDGE



\* See chart on page GI-8, Angle same as Ridge/Hip Cover.  
 \*\*4:12 Maximum slope on all Formed Ridge  
 (Please inquire on minimum quantities required)

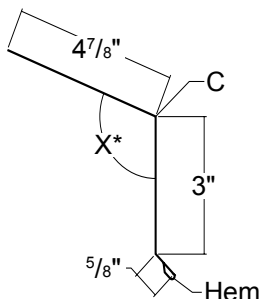
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5592141     | 9.00 lbs  | 18"    |
| 26    | MS Colorfast45® | 55921__     | 9.00 lbs  | 18"    |
| 26    | PVDF            | 56921__     | 9.00 lbs  | 18"    |
| 24    | ACG             | 5672141     | 10.10 lbs | 18"    |
| 24    | PVDF            | 56722__     | 10.10 lbs | 18"    |

## VALLEY



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5301841     | 13.90 lbs | 10'-2" |
| 26    | ACG             | 5502041     | 27.80 lbs | 20'-3" |
| 26    | MS Colorfast45® | 53018__     | 13.90 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55020__     | 27.80 lbs | 20'-3" |
| 26    | PVDF            | 54018__     | 13.90 lbs | 10'-2" |
| 26    | PVDF            | 56020__     | 27.80 lbs | 20'-3" |
| 24    | ACG             | 5701841     | 16.85 lbs | 10'-2" |
| 24    | ACG             | 5702041     | 33.70 lbs | 20'-3" |
| 24    | PVDF            | 58018__     | 16.85 lbs | 10'-2" |
| 24    | PVDF            | 58020__     | 33.70 lbs | 20'-3" |

## EAVE

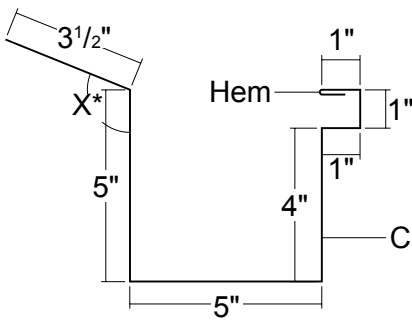


| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5506941     | 6.00 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55069__     | 6.00 lbs | 10'-2" |
| 26    | PVDF            | 56069__     | 6.00 lbs | 10'-2" |
| 24    | ACG             | 5706941     | 7.00 lbs | 10'-2" |
| 24    | PVDF            | 58069__     | 7.00 lbs | 10'-2" |

# PBR-PANEL

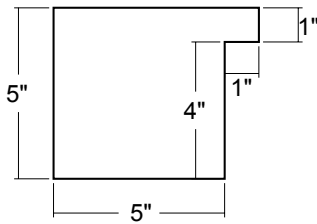
# FLASHING PROFILES

## BOX GUTTER



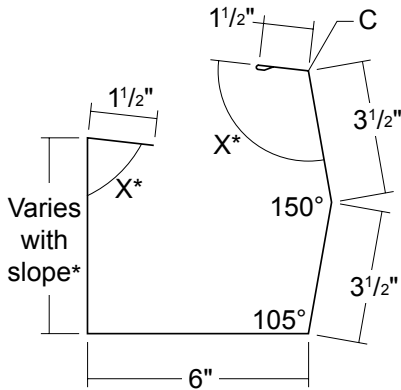
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5507741     | 14.00 lbs | 10'-2" |
| 26    | ACG             | 5507941     | 28.00 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55077__     | 14.00 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55079__     | 28.00 lbs | 20'-3" |
| 26    | PVDF            | 56077__     | 14.00 lbs | 10'-2" |
| 26    | PVDF            | 56079__     | 28.00 lbs | 20'-3" |
| 24    | ACG             | 5707741     | 16.95 lbs | 10'-2" |
| 24    | ACG             | 5707941     | 33.90 lbs | 20'-3" |
| 24    | PVDF            | 58077__     | 16.95 lbs | 10'-2" |
| 24    | PVDF            | 58079__     | 33.90 lbs | 20'-3" |

## BOX GUTTER END CAP



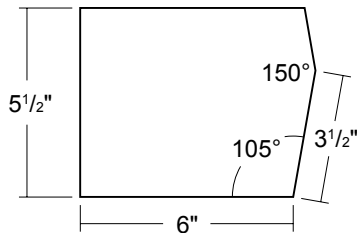
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT  | SIDE  |
|-------|-----------------|-------------|---------|-------|
| 26    | ACG             | 5508141     | .20 lbs | Left  |
| 26    | ACG             | 5508241     | .20 lbs | Right |
| 26    | MS Colorfast45® | 55081__     | .20 lbs | Left  |
| 26    | MS Colorfast45® | 55082__     | .20 lbs | Right |
| 26    | PVDF            | 56081__     | .20 lbs | Left  |
| 26    | PVDF            | 56082__     | .20 lbs | Right |
| 24    | ACG             | 5708141     | .24 lbs | Left  |
| 24    | ACG             | 5708241     | .24 lbs | Right |
| 24    | PVDF            | 58081__     | .24 lbs | Left  |
| 24    | PVDF            | 58082__     | .24 lbs | Right |

## SCULPTURED GUTTER



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5508441     | 14.00 lbs | 10'-2" |
| 26    | ACG             | 5508641     | 28.00 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55084__     | 14.00 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55086__     | 28.00 lbs | 20'-3" |
| 26    | PVDF            | 56084__     | 14.00 lbs | 10'-2" |
| 26    | PVDF            | 56086__     | 28.00 lbs | 20'-3" |
| 24    | ACG             | 5708441     | 16.95 lbs | 10'-2" |
| 24    | ACG             | 5708641     | 33.90 lbs | 20'-3" |
| 24    | PVDF            | 58084__     | 16.95 lbs | 10'-2" |
| 24    | PVDF            | 58086__     | 33.90 lbs | 20'-3" |

## SCULPTURED GUTTER END CAP



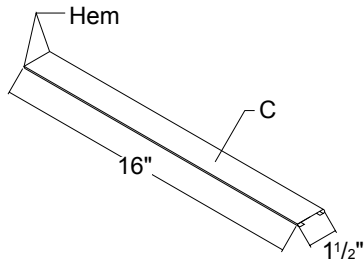
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT  | SIDE  |
|-------|-----------------|-------------|---------|-------|
| 26    | ACG             | 5508841     | .20 lbs | Left  |
| 26    | ACG             | 5508941     | .20 lbs | Right |
| 26    | MS Colorfast45® | 55088__     | .20 lbs | Left  |
| 26    | MS Colorfast45® | 55089__     | .20 lbs | Right |
| 26    | PVDF            | 56088__     | .20 lbs | Left  |
| 26    | PVDF            | 56089__     | .20 lbs | Right |
| 24    | ACG             | 5708841     | .24 lbs | Left  |
| 24    | ACG             | 5708941     | .24 lbs | Right |
| 24    | PVDF            | 58088__     | .24 lbs | Left  |
| 24    | PVDF            | 58089__     | .24 lbs | Right |



# PBR-PANEL

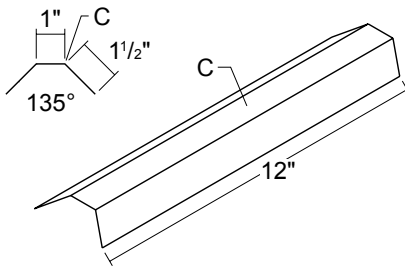
# FLASHING PROFILES

## BOX GUTTER/DOWNSPOUT STRAP



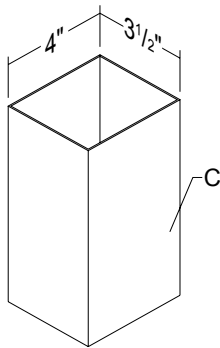
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT  | LENGTH |
|-------|-----------------|-------------|---------|--------|
| 26    | ACG             | 5509241     | .32 lbs | 1'-4"  |
| 26    | MS Colorfast45® | 55092__     | .32 lbs | 1'-4"  |
| 26    | PVDF            | 56092__     | .32 lbs | 1'-4"  |
| 24    | ACG             | 5709241     | .36 lbs | 1'-4"  |
| 24    | PVDF            | 58092__     | .36 lbs | 1'-4"  |

## GUTTER HANGAR



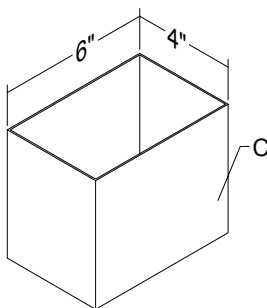
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT  | LENGTH |
|-------|-----------------|-------------|---------|--------|
| 26    | ACG             | 5509141     | .32 lbs | 1'-0"  |
| 26    | MS Colorfast45® | 55091__     | .32 lbs | 1'-0"  |
| 26    | PVDF            | 56091__     | .32 lbs | 1'-0"  |
| 24    | ACG             | 5709141     | .41 lbs | 1'-0"  |
| 24    | PVDF            | 58091__     | .41 lbs | 1'-0"  |

## 4" X 3-1/2" DOWNSPOUT



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5509441     | 13.90 lbs | 10'-2" |
| 26    | ACG             | 5509741     | 27.80 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55094__     | 13.90 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55097__     | 27.80 lbs | 20'-3" |
| 26    | PVDF            | 56094__     | 13.90 lbs | 10'-2" |
| 26    | PVDF            | 56097__     | 27.80 lbs | 20'-3" |
| 24    | ACG             | 5709441     | 16.85 lbs | 10'-2" |
| 24    | ACG             | 5709741     | 33.70 lbs | 20'-3" |
| 24    | PVDF            | 58094__     | 16.85 lbs | 10'-2" |
| 24    | PVDF            | 58097__     | 33.70 lbs | 20'-3" |

## 6" X 4" DOWNSPOUT

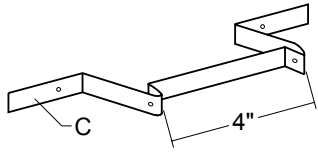


| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5509841     | 13.90 lbs | 10'-2" |
| 26    | ACG             | 5510141     | 27.80 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55098__     | 13.90 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55101__     | 27.80 lbs | 20'-3" |
| 26    | PVDF            | 56098__     | 13.90 lbs | 10'-2" |
| 26    | PVDF            | 56101__     | 27.80 lbs | 20'-3" |
| 24    | ACG             | 5709841     | 16.85 lbs | 10'-2" |
| 24    | ACG             | 5710141     | 33.70 lbs | 20'-3" |
| 24    | PVDF            | 58098__     | 16.85 lbs | 10'-2" |
| 24    | PVDF            | 58101__     | 33.70 lbs | 20'-3" |

# PBR-PANEL

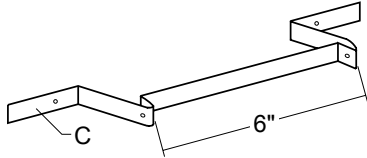
# FLASHING PROFILES

## 4" DOWNSPOUT STRAP



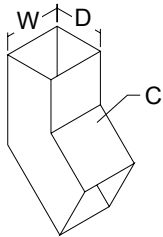
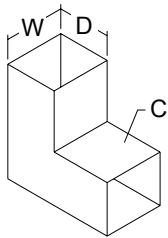
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT  |
|-------|-----------------|-------------|---------|
| 26    | ACG             | 5511041     | .32 lbs |
| 26    | MS Colorfast45® | 55110__     | .32 lbs |
| 26    | PVDF            | 56110__     | .32 lbs |
| 24    | ACG             | 5711041     | .36 lbs |
| 24    | PVDF            | 58110__     | .36 lbs |

## 6" DOWNSPOUT STRAP



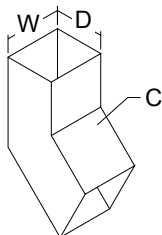
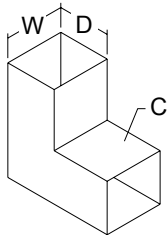
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT  |
|-------|-----------------|-------------|---------|
| 26    | ACG             | 5511241     | .32 lbs |
| 26    | MS Colorfast45® | 55112__     | .32 lbs |
| 26    | PVDF            | 56112__     | .32 lbs |
| 24    | ACG             | 5711241     | .36 lbs |
| 24    | PVDF            | 58112__     | .36 lbs |

## 4" X 3-1/2" ELBOW



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | TYPE      |
|-------|-----------------|-------------|----------|-----------|
| 26    | ACG             | 5510241     | 2.00 lbs | 95 Degree |
| 26    | MS Colorfast45® | 55102__     | 2.00 lbs | 95 Degree |
| 26    | PVDF            | 56102__     | 2.00 lbs | 95 Degree |
| 24    | ACG             | 5710241     | 2.30 lbs | 95 Degree |
| 24    | PVDF            | 58102__     | 2.30 lbs | 95 Degree |
| 26    | ACG             | 5510641     | 2.00 lbs | 45 Degree |
| 26    | MS Colorfast45® | 55106__     | 2.00 lbs | 45 Degree |
| 26    | PVDF            | 56106__     | 2.00 lbs | 45 Degree |
| 24    | ACG             | 5710641     | 2.30 lbs | 45 Degree |
| 24    | PVDF            | 58106__     | 2.30 lbs | 45 Degree |

## 6" X 4" ELBOW



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | TYPE      |
|-------|-----------------|-------------|----------|-----------|
| 26    | ACG             | 5510441     | 2.00 lbs | 95 Degree |
| 26    | MS Colorfast45® | 55104__     | 2.00 lbs | 95 Degree |
| 26    | PVDF            | 56104__     | 2.00 lbs | 95 Degree |
| 24    | ACG             | 5710441     | 3.00 lbs | 95 Degree |
| 24    | PVDF            | 58104__     | 3.00 lbs | 95 Degree |
| 26    | ACG             | 5510841     | 2.00 lbs | 45 Degree |
| 26    | MS Colorfast45® | 55108__     | 2.00 lbs | 45 Degree |
| 26    | PVDF            | 56108__     | 2.00 lbs | 45 Degree |
| 24    | ACG             | 5710841     | 3.00 lbs | 45 Degree |
| 24    | PVDF            | 58108__     | 3.00 lbs | 45 Degree |

# PBR-PANEL

# FLASHING PROFILES

| PEAK | GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|------|-------|-----------------|-------------|-----------|--------|
|      | 26    | ACG             | 5502241     | 8.25 lbs  | 10'-2" |
|      | 26    | ACG             | 5502441     | 16.50 lbs | 20'-3" |
|      | 26    | MS Colorfast45® | 55022__     | 8.25 lbs  | 10'-2" |
|      | 26    | MS Colorfast45® | 55024__     | 16.50 lbs | 20'-3" |
|      | 26    | PVDF            | 56022__     | 8.25 lbs  | 10'-2" |
|      | 26    | PVDF            | 56024__     | 16.50 lbs | 20'-3" |
|      | 24    | ACG             | 5702241     | 9.95 lbs  | 10'-2" |
|      | 24    | ACG             | 5702441     | 19.90 lbs | 20'-3" |
|      | 24    | PVDF            | 58022__     | 9.95 lbs  | 10'-2" |
|      | 24    | PVDF            | 58024__     | 19.90 lbs | 20'-3" |

| SCULPTURED HIGH SIDE EAVE | GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|---------------------------|-------|-----------------|-------------|-----------|--------|
|                           | 26    | ACG             | 5502241     | 8.25 lbs  | 10'-2" |
|                           | 26    | ACG             | 5502441     | 16.50 lbs | 20'-3" |
|                           | 26    | MS Colorfast45® | 55022__     | 8.25 lbs  | 10'-2" |
|                           | 26    | MS Colorfast45® | 55024__     | 16.50 lbs | 20'-3" |
|                           | 26    | PVDF            | 56022__     | 8.25 lbs  | 10'-2" |
|                           | 26    | PVDF            | 56024__     | 16.50 lbs | 20'-3" |
|                           | 24    | ACG             | 5702241     | 9.95 lbs  | 10'-2" |
|                           | 24    | ACG             | 5702441     | 19.90 lbs | 20'-3" |
|                           | 24    | PVDF            | 58022__     | 9.95 lbs  | 10'-2" |
|                           | 24    | PVDF            | 58024__     | 19.90 lbs | 20'-3" |

| RAKE | GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|------|-------|-----------------|-------------|-----------|--------|
|      | 26    | ACG             | 5590441     | 8.10 lbs  | 10'-2" |
|      | 26    | MS Colorfast45® | 55904__     | 8.10 lbs  | 10'-2" |
|      | 26    | PVDF            | 56904__     | 8.10 lbs  | 10'-2" |
|      | 24    | ACG             | 5790441     | 10.80 lbs | 10'-2" |
|      | 24    | PVDF            | 59904__     | 10.80 lbs | 10'-2" |

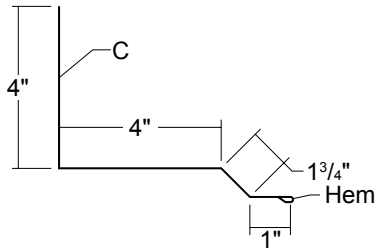
| SCULPTURED RAKE | GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-----------------|-------|-----------------|-------------|-----------|--------|
|                 | 26    | ACG             | 5591141     | 13.80 lbs | 10'-2" |
|                 | 26    | ACG             | 5591241     | 27.60 lbs | 20'-3" |
|                 | 26    | MS Colorfast45® | 55911__     | 13.80 lbs | 10'-2" |
|                 | 26    | MS Colorfast45® | 55912__     | 27.60 lbs | 20'-3" |
|                 | 26    | PVDF            | 56911__     | 13.80 lbs | 10'-2" |
|                 | 26    | PVDF            | 56912__     | 27.60 lbs | 20'-3" |
|                 | 24    | ACG             | 5791141     | 17.70 lbs | 10'-2" |
|                 | 24    | ACG             | 5791241     | 35.40 lbs | 20'-3" |
|                 | 24    | PVDF            | 58911__     | 17.70 lbs | 10'-2" |
|                 | 24    | PVDF            | 58912__     | 35.40 lbs | 20'-3" |

| SCULPTURED RAKE END | GAUGE | FINISH          | PRODUCT NO. | WEIGHT  | LENGTH |
|---------------------|-------|-----------------|-------------|---------|--------|
|                     | 26    | ACG             | 5504641     | .15 lbs |        |
|                     | 26    | MS Colorfast45® | 55046__     | .15 lbs |        |
|                     | 26    | PVDF            | 56046__     | .15 lbs |        |
|                     | 24    | ACG             | 5704641     | .18 lbs |        |
|                     | 24    | PVDF            | 58046__     | .18 lbs |        |

# PBR-PANEL

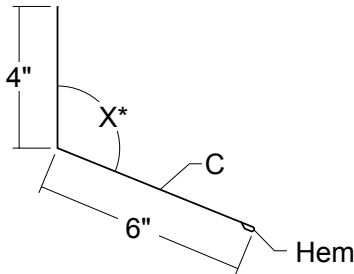
# FLASHING PROFILES

## RAKEWALL



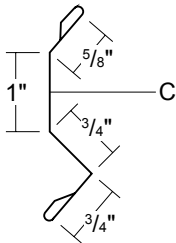
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5590241     | 7.20 lbs  | 10'-2" |
| 26    | ACG             | 5590341     | 14.40 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55902__     | 7.20 lbs  | 10'-2" |
| 26    | MS Colorfast45® | 55903__     | 14.40 lbs | 20'-3" |
| 26    | PVDF            | 56902__     | 7.20 lbs  | 10'-2" |
| 26    | PVDF            | 56903__     | 14.40 lbs | 20'-3" |
| 24    | ACG             | 5790241     | 9.60 lbs  | 10'-2" |
| 24    | ACG             | 5790341     | 19.20 lbs | 20'-3" |
| 24    | PVDF            | 58902__     | 9.60 lbs  | 10'-2" |
| 24    | PVDF            | 58903__     | 19.20 lbs | 20'-3" |

## PITCH BREAK



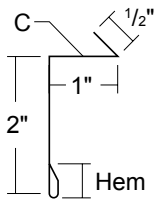
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5504841     | 6.90 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55048__     | 6.90 lbs | 10'-2" |
| 26    | PVDF            | 56048__     | 6.90 lbs | 10'-2" |
| 24    | ACG             | 5704841     | 8.30 lbs | 10'-2" |
| 24    | PVDF            | 59048__     | 8.30 lbs | 10'-2" |

## COUNTER FLASHING



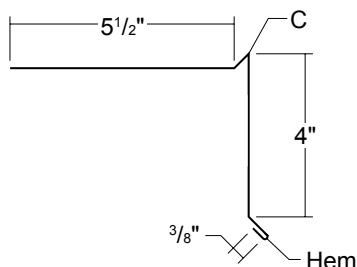
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5505241     | 2.75 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55052__     | 2.75 lbs | 10'-2" |
| 26    | PVDF            | 56052__     | 2.75 lbs | 10'-2" |
| 24    | ACG             | 5705241     | 3.35 lbs | 10'-2" |
| 24    | PVDF            | 59052__     | 3.35 lbs | 10'-2" |

## REGLET FLASHING



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5505441     | 2.65 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55054__     | 2.65 lbs | 10'-2" |
| 26    | PVDF            | 56054__     | 2.65 lbs | 10'-2" |
| 24    | ACG             | 5705441     | 3.20 lbs | 10'-2" |
| 24    | PVDF            | 59054__     | 3.20 lbs | 10'-2" |

## GRAVEL STOP

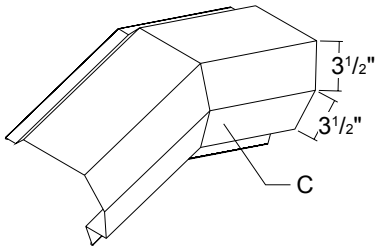


| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5503041     | 7.25 lbs  | 10'-2" |
| 26    | ACG             | 5503241     | 14.50 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55030__     | 7.25 lbs  | 10'-2" |
| 26    | MS Colorfast45® | 55032__     | 14.50 lbs | 20'-3" |
| 26    | PVDF            | 56030__     | 7.25 lbs  | 10'-2" |
| 26    | PVDF            | 56032__     | 14.50 lbs | 20'-3" |
| 24    | ACG             | 5703041     | 8.80 lbs  | 10'-2" |
| 24    | ACG             | 5703241     | 17.60 lbs | 20'-3" |
| 24    | PVDF            | 58030__     | 8.80 lbs  | 10'-2" |
| 24    | PVDF            | 58032__     | 17.60 lbs | 20'-3" |

# PBR-PANEL

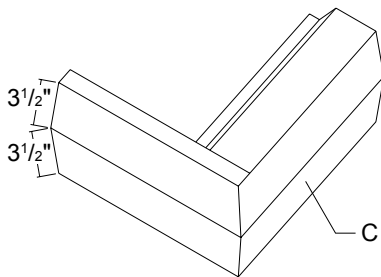
# FLASHING PROFILES

## SCULPTURED PEAK BOX



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   |
|-------|-----------------|-------------|----------|
| 26    | ACG             | 5596341     | 6.00 lbs |
| 26    | MS Colorfast45® | 55963__     | 6.00 lbs |
| 26    | PVDF            | 56963__     | 6.00 lbs |
| 24    | ACG             | 5796341     | 7.00 lbs |
| 24    | PVDF            | 59963__     | 7.00 lbs |

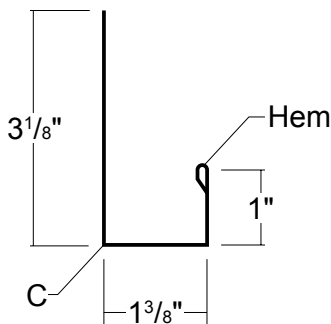
## SCULPTURED CORNER BOX



Looking from Eave to Ridge  
(Right Shown)

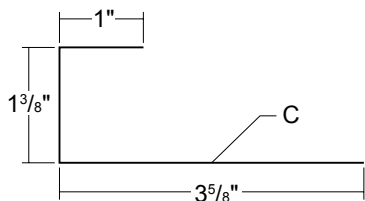
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | SIDE  |
|-------|-----------------|-------------|----------|-------|
| 26    | ACG             | 5596441     | 7.00 lbs | Left  |
| 26    | ACG             | 5596241     | 7.00 lbs | Right |
| 26    | MS Colorfast45® | 55964__     | 7.00 lbs | Left  |
| 26    | MS Colorfast45® | 55962__     | 7.00 lbs | Right |
| 26    | PVDF            | 56964__     | 7.00 lbs | Left  |
| 26    | PVDF            | 56962__     | 7.00 lbs | Right |
| 24    | ACG             | 5796441     | 8.00 lbs | Left  |
| 24    | ACG             | 5796241     | 8.00 lbs | Right |
| 24    | PVDF            | 58964__     | 8.00 lbs | Left  |
| 24    | PVDF            | 58962__     | 8.00 lbs | Right |

## R-PANEL JAMB



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5596641     | 3.00 lbs | 7'-3"  |
| 26    | ACG             | 5520841     | 4.20 lbs | 10'-2" |
| 26    | ACG             | 5596741     | 5.80 lbs | 14'-2" |
| 26    | MS Colorfast45® | 55966__     | 3.00 lbs | 7'-3"  |
| 26    | MS Colorfast45® | 55208__     | 4.20 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55967__     | 5.80 lbs | 14'-2" |
| 26    | PVDF            | 56966__     | 3.00 lbs | 7'-3"  |
| 26    | PVDF            | 56208__     | 4.20 lbs | 10'-2" |
| 26    | PVDF            | 56967__     | 5.80 lbs | 14'-2" |
| 24    | ACG             | 5796641     | 3.60 lbs | 7'-3"  |
| 24    | ACG             | 5720841     | 5.00 lbs | 10'-2" |
| 24    | ACG             | 5796741     | 7.00 lbs | 14'-2" |
| 24    | PVDF            | 58966__     | 3.60 lbs | 7'-3"  |
| 24    | PVDF            | 58208__     | 5.00 lbs | 10'-2" |
| 24    | PVDF            | 58967__     | 7.00 lbs | 14'-2" |

## C-CLOSURE

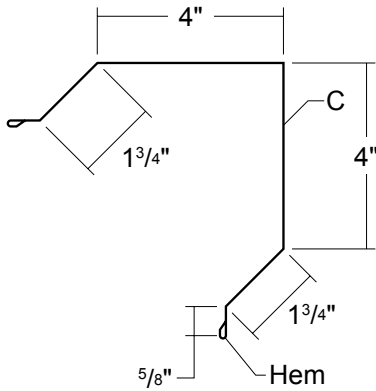


| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5520641     | 4.00 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55206__     | 4.00 lbs | 10'-2" |
| 26    | PVDF            | 56206__     | 4.00 lbs | 10'-2" |
| 24    | ACG             | 5720641     | 5.00 lbs | 10'-2" |
| 24    | PVDF            | 58206__     | 5.00 lbs | 10'-2" |

# PBR-PANEL

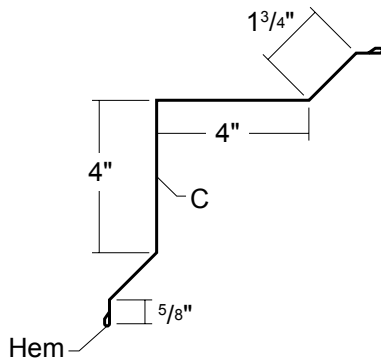
# FLASHING PROFILES

## PBR-PANEL OUTSIDE CORNER



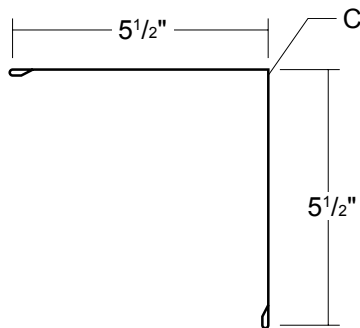
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5591441     | 9.30 lbs  | 10'-2" |
| 26    | ACG             | 5591541     | 13.05 lbs | 14'-2" |
| 26    | ACG             | 5591641     | 18.60 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55914__     | 9.30 lbs  | 10'-2" |
| 26    | MS Colorfast45® | 55915__     | 13.05 lbs | 14'-2" |
| 26    | MS Colorfast45® | 55916__     | 18.60 lbs | 20'-3" |
| 26    | PVDF            | 56914__     | 9.30 lbs  | 10'-2" |
| 26    | PVDF            | 56915__     | 13.05 lbs | 14'-2" |
| 26    | PVDF            | 56916__     | 18.60 lbs | 20'-3" |
| 24    | ACG             | 5791441     | 11.70 lbs | 10'-2" |
| 24    | ACG             | 5791541     | 16.20 lbs | 14'-2" |
| 24    | ACG             | 5791641     | 23.40 lbs | 20'-3" |
| 24    | PVDF            | 58914__     | 11.70 lbs | 10'-2" |
| 24    | PVDF            | 58915__     | 16.20 lbs | 14'-2" |
| 24    | PVDF            | 58916__     | 23.40 lbs | 20'-3" |

## PBR-PANEL INSIDE CORNER



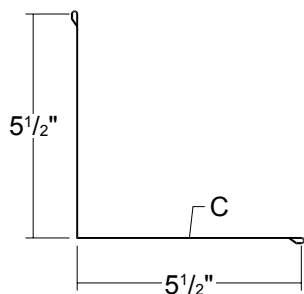
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5591741     | 9.30 lbs  | 10'-2" |
| 26    | ACG             | 5591841     | 13.05 lbs | 14'-2" |
| 26    | ACG             | 5591941     | 18.60 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55917__     | 9.30 lbs  | 10'-2" |
| 26    | MS Colorfast45® | 55918__     | 13.05 lbs | 14'-2" |
| 26    | MS Colorfast45® | 55919__     | 18.60 lbs | 20'-3" |
| 26    | PVDF            | 56917__     | 9.30 lbs  | 10'-2" |
| 26    | PVDF            | 56918__     | 13.05 lbs | 14'-2" |
| 26    | PVDF            | 56919__     | 18.60 lbs | 20'-3" |
| 24    | ACG             | 5791741     | 11.70 lbs | 10'-2" |
| 24    | PVDF            | 58917__     | 11.70 lbs | 10'-2" |

## OUTSIDE CORNER



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5513241     | 7.70 lbs  | 10'-2" |
| 26    | ACG             | 5513641     | 15.40 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55132__     | 7.70 lbs  | 10'-2" |
| 26    | MS Colorfast45® | 55136__     | 15.40 lbs | 20'-3" |
| 26    | PVDF            | 56132__     | 7.70 lbs  | 10'-2" |
| 26    | PVDF            | 56136__     | 15.40 lbs | 20'-3" |
| 24    | ACG             | 5713241     | 10.20 lbs | 10'-2" |
| 24    | ACG             | 5713641     | 20.40 lbs | 20'-3" |
| 24    | PVDF            | 58132__     | 10.20 lbs | 10'-2" |
| 24    | PVDF            | 58136__     | 20.40 lbs | 20'-3" |

## INSIDE CORNER

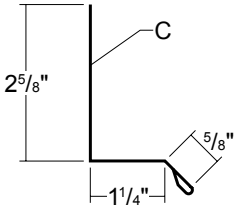


| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5512641     | 7.70 lbs  | 10'-2" |
| 26    | ACG             | 5513041     | 15.40 lbs | 20'-3" |
| 26    | MS Colorfast45® | 55126__     | 7.70 lbs  | 10'-2" |
| 26    | MS Colorfast45® | 55130__     | 15.40 lbs | 20'-3" |
| 26    | PVDF            | 56126__     | 7.70 lbs  | 10'-2" |
| 26    | PVDF            | 56130__     | 15.40 lbs | 20'-3" |
| 24    | ACG             | 5712641     | 10.20 lbs | 10'-2" |
| 24    | ACG             | 5713041     | 20.40 lbs | 20'-3" |
| 24    | PVDF            | 58126__     | 10.20 lbs | 10'-2" |
| 24    | PVDF            | 58130__     | 20.40 lbs | 20'-3" |

# PBR-PANEL

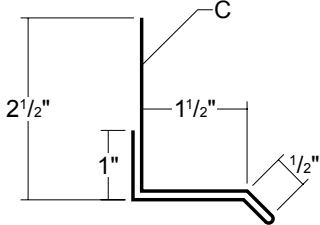
# FLASHING PROFILES

## 1-1/4" BASE



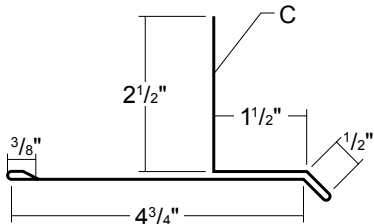
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5513841     | 3.25 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55138__     | 3.25 lbs | 10'-2" |
| 26    | PVDF            | 56138__     | 3.25 lbs | 10'-2" |
| 24    | ACG             | 5713841     | 4.40 lbs | 10'-2" |
| 24    | PVDF            | 58138__     | 4.40 lbs | 10'-2" |

## 1.5" SILL/HEAD



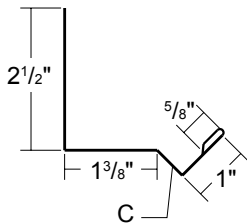
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5511441     | 5.20 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55114__     | 5.20 lbs | 10'-2" |
| 26    | PVDF            | 56114__     | 5.20 lbs | 10'-2" |
| 24    | ACG             | 5711441     | 6.30 lbs | 10'-2" |
| 24    | PVDF            | 58114__     | 6.30 lbs | 10'-2" |

## 1.5" SILL TO SOFFIT



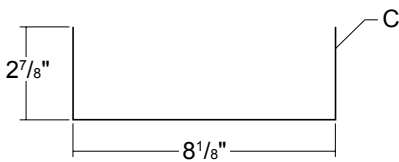
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5511841     | 7.20 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55118__     | 7.20 lbs | 10'-2" |
| 26    | PVDF            | 56118__     | 7.20 lbs | 10'-2" |
| 24    | ACG             | 5711841     | 8.75 lbs | 10'-2" |
| 24    | PVDF            | 58118__     | 8.75 lbs | 10'-2" |

## HEAD CHANNEL



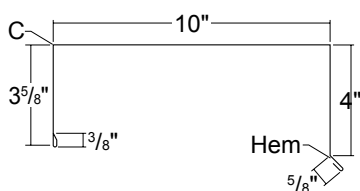
| GAUGE | FINISH          | PRODUCT NO. | WEIGHT   | LENGTH |
|-------|-----------------|-------------|----------|--------|
| 26    | ACG             | 5596041     | 1.60 lbs | 3'-6"  |
| 26    | ACG             | 5512241     | 4.50 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55960__     | 1.60 lbs | 3'-6"  |
| 26    | MS Colorfast45® | 55122__     | 4.50 lbs | 10'-2" |
| 26    | PVDF            | 56960__     | 1.60 lbs | 3'-6"  |
| 26    | PVDF            | 56122__     | 4.50 lbs | 10'-2" |
| 24    | ACG             | 5712241     | 5.15 lbs | 10'-2" |
| 24    | PVDF            | 58122__     | 5.15 lbs | 10'-2" |

## HEAD/JAMB COVER



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5512441     | 9.25 lbs  | 10'-2" |
| 26    | ACG             | 5596141     | 12.25 lbs | 14'-2" |
| 26    | MS Colorfast45® | 55124__     | 9.25 lbs  | 10'-2" |
| 26    | MS Colorfast45® | 55961__     | 12.25 lbs | 14'-2" |
| 26    | PVDF            | 56124__     | 9.25 lbs  | 10'-2" |
| 26    | PVDF            | 56961__     | 12.25 lbs | 14'-2" |
| 24    | ACG             | 5712441     | 11.00 lbs | 10'-2" |
| 24    | PVDF            | 58124__     | 11.00 lbs | 10'-2" |



## COPING



| GAUGE | FINISH          | PRODUCT NO. | WEIGHT    | LENGTH |
|-------|-----------------|-------------|-----------|--------|
| 26    | ACG             | 5502641     | 12.20 lbs | 10'-2" |
| 26    | MS Colorfast45® | 55026__     | 12.20 lbs | 10'-2" |
| 26    | PVDF            | 56026__     | 12.20 lbs | 10'-2" |
| 24    | ACG             | 5702641     | 15.35 lbs | 10'-2" |
| 24    | ACG             | 5702841     | 30.70 lbs | 14'-2" |
| 24    | PVDF            | 58026__     | 15.35 lbs | 10'-2" |
| 24    | PVDF            | 58028__     | 30.70 lbs | 14'-2" |

# PBR-PANEL

# ACCESSORIES

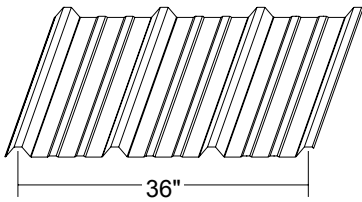
| PBR-PANEL CLOSURE  |                    | SIZE                    | TYPE    | PRODUCT NO. | WT/100   |         |
|--|--------------------|-------------------------|---------|-------------|----------|---------|
|  <p>Outside Closure</p>  <p>Inside Closure</p> | 1" x 3'-0"         | Polyethylene Foam Glued | 6460699 | 9.00 lbs    |          |         |
|  | 1" x 3'-0"         | Polyethylene Foam Glued | 6460800 | 7.00 lbs    |          |         |
| UNIVERSAL CLOSURE  |                    | SIZE                    | TYPE    | PRODUCT NO. | WT/100   | COLOR   |
|   | 1" x 1 1/2" x 50'  | Polyethylene Foam       | 6411100 | 4.00 lbs    | Grey     |         |
|  |                    |                         |         |             |          |         |
| VERSA VENT   |                    | SIZE                    | TYPE    | PRODUCT NO. | WT/10    | CTN QTY |
|   | 1" x 1 1/2" x 10'  | Vented Foam             |         |             |          | 10      |
|  |                    |                         |         |             |          |         |
| PROFILE VENT   |                    | SIZE                    | TYPE    | PRODUCT NO. | WEIGHT   | CTN QTY |
|   | 3" x 50'           | Vented Foam             |         |             |          | 2       |
|  |                    |                         |         |             |          |         |
| SINGLE BEAD TAPE SEALANT   |                    | SIZE                    | TYPE    | PRODUCT NO. | WT/CTN   | CTN QTY |
|   | 7/8" x 3/16" x 25' | Butyl                   | 6404099 | 40.00 lbs   | 48 Rolls |         |
|  |                    |                         |         |             |          |         |
| TUBE SEALANT   |                    | SIZE                    | TYPE    | PRODUCT NO. | WT/CTN   | CTN QTY |
|   | 10.3 oz            | Urethane White          | 6402830 | 30.00 lbs   | 30 Tubes |         |
|  | 10.3 oz            | Urethane Bronze         | 6402999 | 30.00 lbs   | 30 Tubes |         |
|  | 10.3 oz            | Urethane Grey           | 6402829 | 30.00 lbs   | 30 Tubes |         |



# PBR-PANEL

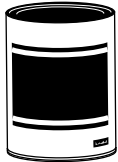
# ACCESSORIES

## LIGHT TRANSMITTING PANEL



| SIZE           | S.F. WEIGHT | PRODUCT NO. | WT/PC     | COLOR |
|----------------|-------------|-------------|-----------|-------|
| 3'-0" X 12'-0" | 8 oz        | 6190030     | 21.00 lbs | White |

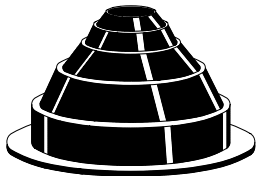
## TOUCH-UP PAINT



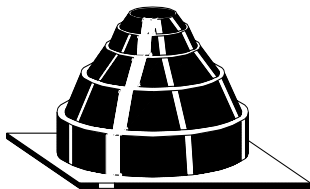
| SIZE        | TYPE            | PRODUCT NO. | WEIGHT   |
|-------------|-----------------|-------------|----------|
| Pint        | MS Colorfast45® | 66004__     | 1.60 lbs |
| Pint        | PVDF            | 66010__     | 1.60 lbs |
| 2 oz Bottle | PVDF            | 66005__     | .15 lbs  |

## RUBBER ROOF DECK FLASHING

Rubber Roof Jack Round Base



Retro Roof Jack Square Base



| SIZE       | TYPE   | PRODUCT NO. | BASE DIA.       | WEIGHT    |
|------------|--------|-------------|-----------------|-----------|
| #1 Flasher | Rubber | 68501__*    | 1/4" - 2"       | 3.00 lbs  |
| #2 Flasher | Rubber | 68502__*    | 1 3/4" - 3 1/4" | 3.00 lbs  |
| #3 Flasher | Rubber | 68503__*    | 1/4" - 5"       | 3.00 lbs  |
| #4 Flasher | Rubber | 68504__*    | 3" - 6 1/4"     | 3.00 lbs  |
| #5 Flasher | Rubber | 68505__*    | 4 1/4" - 7 1/2" | 5.00 lbs  |
| #6 Flasher | Rubber | 68506__*    | 5" - 9"         | 9.00 lbs  |
| #7 Flasher | Rubber | 68507__*    | 6" - 11"        | 11.00 lbs |
| #8 Flasher | Rubber | 68508__*    | 7" - 13"        | 13.00 lbs |
| #9 Flasher | Rubber | 68509__*    | 10" - 19"       | 13.00 lbs |

\*Special order colors: 93=Brown; 94=Green; 95=Red; 96=Blue; 97=White; 98=Grey; 99=Black

|            |             |         |                 |           |
|------------|-------------|---------|-----------------|-----------|
| #1 Flasher | HT Silicone | 6850011 | 1/4" - 2"       | 3.00 lbs  |
| #2 Flasher | HT Silicone | 6850012 | 1 3/4" - 3 1/4" | 3.00 lbs  |
| #3 Flasher | HT Silicone | 6850013 | 1/4" - 5"       | 3.00 lbs  |
| #4 Flasher | HT Silicone | 6850014 | 3" - 6 1/4"     | 3.00 lbs  |
| #5 Flasher | HT Silicone | 6850015 | 4 1/4" - 7 1/2" | 5.00 lbs  |
| #6 Flasher | HT Silicone | 6850016 | 5" - 9"         | 9.00 lbs  |
| #7 Flasher | HT Silicone | 6850017 | 6" - 11"        | 11.00 lbs |
| #8 Flasher | HT Silicone | 6850018 | 7" - 13"        | 13.00 lbs |
| #9 Flasher | HT Silicone | 6850019 | 10" - 19"       | 13.00 lbs |

|                |             |         |             |          |
|----------------|-------------|---------|-------------|----------|
| #1 Masterflash | Retrofit HT | 6850060 | 1/4" - 2"   | 4.00 lbs |
| #2 Masterflash | Retrofit HT | 6850061 | 1 1/4" - 3" | 4.00 lbs |
| #3 Masterflash | Retrofit HT | 6850062 | 1/4" - 4"   | 4.00 lbs |

### GRAY ROUND RETRO ROOF JACK

|                |                  |         |             |          |
|----------------|------------------|---------|-------------|----------|
| #1 Masterflash | Retrofit E.P.D.M | 6850073 | 1/4" - 2"   | 4.00 lbs |
| #2 Masterflash | Retrofit E.P.D.M | 6850074 | 1 1/4" - 3" | 4.00 lbs |
| #3 Masterflash | Retrofit E.P.D.M | 6850075 | 1/4" - 4"   | 4.00 lbs |

### BLACK ROUND RETRO ROOF JACK

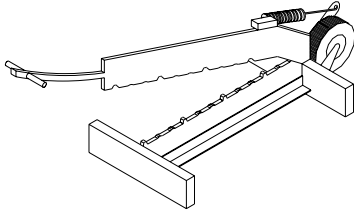
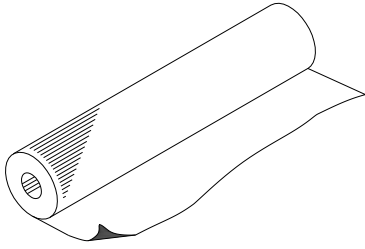
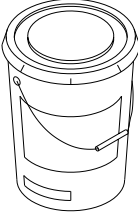
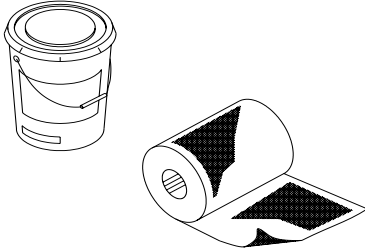
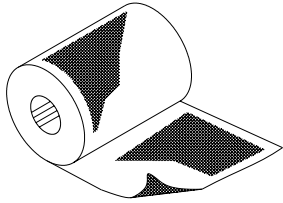
|                |                  |         |             |          |
|----------------|------------------|---------|-------------|----------|
| #1 Masterflash | Retrofit E.P.D.M | 6850070 | 1/4" - 2"   | 4.00 lbs |
| #2 Masterflash | Retrofit E.P.D.M | 6850071 | 1 1/4" - 3" | 4.00 lbs |
| #3 Masterflash | Retrofit E.P.D.M | 6850072 | 1/4" - 4"   | 4.00 lbs |

### BLACK SQUARE RETRO ROOF JACK

|                |                  |         |             |          |
|----------------|------------------|---------|-------------|----------|
| #1 Masterflash | Retrofit E.P.D.M | 6850046 | 1/4" - 2"   | 4.00 lbs |
| #2 Masterflash | Retrofit E.P.D.M | 6850047 | 1 1/4" - 3" | 4.00 lbs |
| #3 Masterflash | Retrofit E.P.D.M | 6850048 | 1/4" - 4"   | 4.00 lbs |

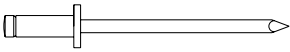
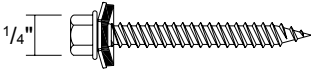
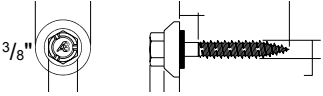
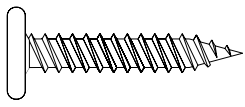
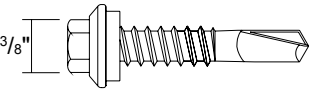
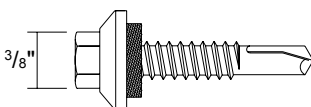
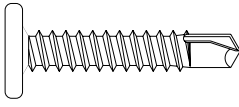
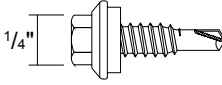
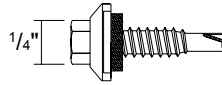
# PBR-PANEL

# ACCESSORIES

| PBR-PANEL SHEAR   | PROFILES              | TYPE   | PRODUCT NO. | WEIGHT    |   |
|---|-----------------------|--|-------------|-----------|---|
|    | PBR-Panel and R-Panel | Straight   | 6536799     | 85.00 lbs |   |
| ms-HT UNDERLAYMENT  | SIZE                  | TYPE   | PRODUCT NO. | WT/ROLL   | COVERAGE  |
|    | 36" x 75'-0"          | Peel-n-Stick High Temp Underlayment                                    | 4121200     | 44.00 lbs | 2 Squares/Roll                                    |
| UNDERLAYMENT PRIMER   | SIZE                  | TYPE   | PRODUCT NO. | WT/ROLL   | COVERAGE  |
|   | 5 Gallon              | Liquid   | 6600000     | 44.00 lbs | 100-125 sf per gallon depending on substrate      |
| ALSAN KIT   | SIZE                  | CONTENTS   | PRODUCT NO. | WT/ROLL   | COVERAGE  |
|  | Kit                   | 1 Gallon Alsan<br>1 Roll Poly Fleece<br>Tools<br>1 Instructional Video | 4130300     | 10.00 lbs | 25 sf per gallon depending on weather temperature |
| POLY FLEECE ROLL  | SIZE                  | TYPE   | PRODUCT NO. | WT/ROLL   | QTY   |
|  | 4" x 50'              | Poly Fleece  | 4130500     | .30 lbs   | 1 Roll  |
|   | 6" x 50'              | Poly Fleece  | 4130400     | .50 lbs   | 1 Roll  |

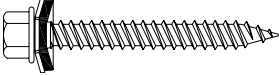

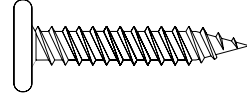
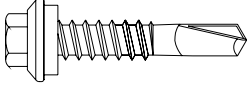
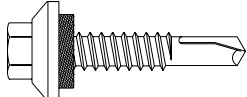
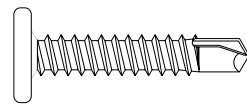
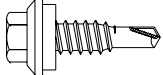
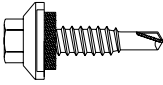
# PBR-PANEL

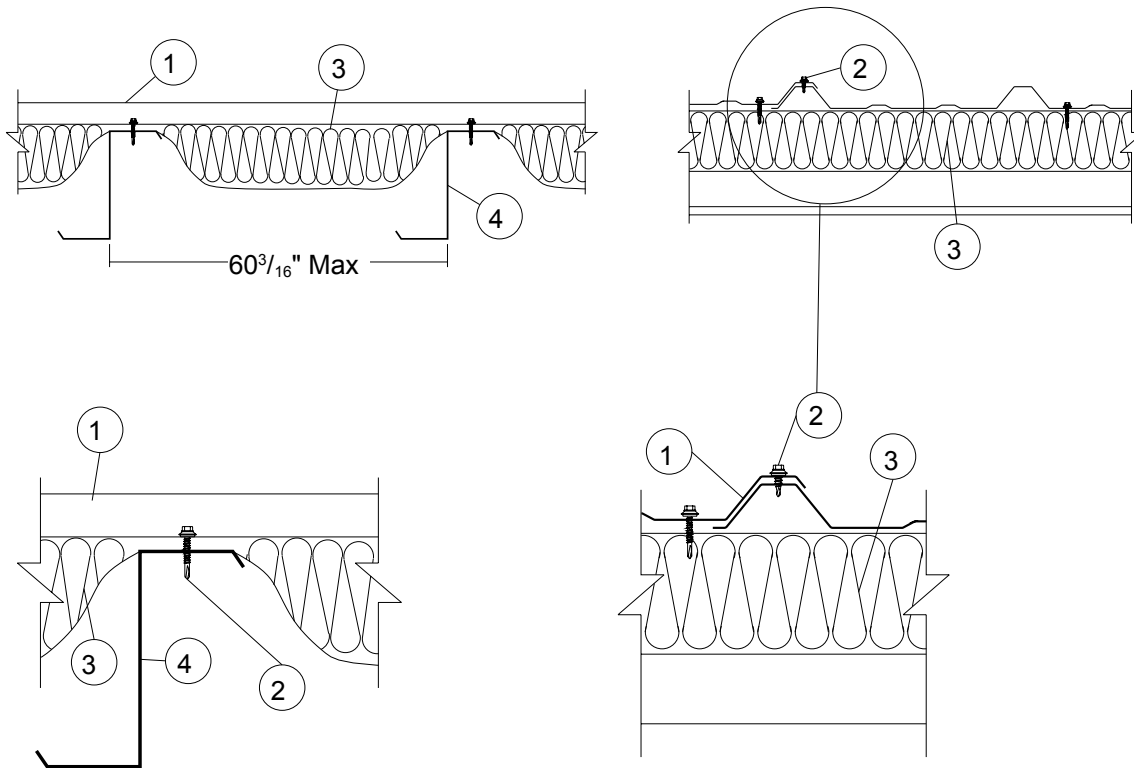
# FASTENERS

| POP RIVET  |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|--|-----------------|----------|---------|-------------|-----------|--------|
|  <p>*Limited stocked colors</p> | 1/8" x 3/16"    | Aluminum | 8240901 | Unpainted   | .75 lbs   |        |
|  | 1/8" x 3/16"    | Aluminum | 82409__ | Painted*    | .75 lbs   |        |
| WOODSCREW  |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                                 | #10-14 x 1"     | A        | 82101__ | Painted     | 4.30 lbs  |        |
|  | #10-14 x 1 1/2" | A        | 82103__ | Painted     | 5.50 lbs  |        |
|  | #10-14 x 2"     | A        | 82104__ | Painted     | 6.70 lbs  |        |
| WOODSCREW XL   |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                                 | #10-14 x 1"     | A        | 8212100 | XL          | 6.50 lbs  |        |
|  | #10-14 x 1 1/2" | A        | 8212300 | XL          | 7.50 lbs  |        |
| XL Fasteners are recommended for use with bare galvalume panels and flashings.                                   |                 |          |         |             |           |        |
| PANCAKE HEAD WOODSCREW   |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                                 | #10-12 x 1"     | A        | 8243100 | Plated      | 6.50 lbs  |        |
| SELF DRILLER (SD)  |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                               | #12-14 x 1"     | Driller  | 82201__ | Painted     | 7.80 lbs  |        |
|  | #12-14 x 1 1/2" | Driller  | 82203__ | Painted     | 8.50 lbs  |        |
|  | #12-14 x 2"     | Driller  | 82204__ | Painted     | 11.00 lbs |        |
| SELF DRILLER XL  |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                               | #12-14 x 1"     | Driller  | 8235300 | XL          | 12.00 lbs |        |
|  | #12-14 x 1 1/2" | Driller  | 8235400 | XL          | 13.00 lbs |        |
|  | #12-14 x 2"     | Driller  | 8235500 | XL          | 14.00 lbs |        |
| XL Fasteners are recommended for use with bare galvalume panels and flashings.                                   |                 |          |         |             |           |        |
| PANCAKE HEAD SELF DRILLER  |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                               | #10-16 x 1"     | Driller  | 8242100 | XL          | 6.50 lbs  |        |
| STITCH   |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                               | 1/4" -14 x 7/8" | Stitch   | 82348__ | Painted     | 7.70 lbs  |        |
| STITCH XL  |                 | SIZE     | TYPE    | PRODUCT NO. | FINISH    | WT/250 |
|                               | 1/4" -14 x 7/8" | Stitch   | 8236800 | XL          | 10.50 lbs |        |
| XL Fasteners are recommended for use with bare galvalume panels and flashings.                                   |                 |          |         |             |           |        |

# PBR-PANEL

# FASTENER PHYSICAL PROPERTIES

| FASTENER  | SIZE    | HEAD DIA/TYPE | THREAD DIA. O.D. | THREAD DIA. I.D. | MIN TENSILE | MIN. TORSIONAL | NOM. SHEAR |
|---|---------|---------------|------------------|------------------|-------------|----------------|------------|
| <b>WOODSCREW</b><br>                   | #10-14  | 1/4" HWH      | .190-.200        | .128-.133        |             |                |            |
| <b>WOODSCREW XL</b><br>                | #10-14  | 1/4" HWH      | .190-.200        | .128-.133        |             |                |            |
| <b>PANCAKE HEAD WOODSCREW</b><br>      |         |               |                  |                  |             |                |            |
| <b>SELF DRILLER</b><br>               | #12-14  | 5/16" HWH     | .209-.215        | .157-.165        | 3446        | 128            | 2100       |
| <b>SELF DRILLER XL</b><br>           | #12-14  | 5/16" HWH     | .209-.215        | .157-.165        | 3446        | 130            | 2100       |
| <b>PANCAKE HEAD SELF DRILLER</b><br> |         |               |                  |                  |             |                |            |
| <b>STITCH</b><br>                    | 1/4 -14 | 5/16" HWH     | .240-.246        | .185-.192        |             |                |            |
| <b>STITCH XL</b><br>                 | 1/4 -14 | 5/16" HWH     | .240-.246        | .185-.192        |             |                |            |



## PBR-PANEL

**Construction No. 161**  
 November 02, 2001  
 Uplift - Class 90  
 Fire Not Investigated

1. Metal Roof Deck PanNo. 26 MSG min gauge coated steel. Panels continuous over two or more spans. End laps to occur over purlins with panels overlapped a min of 4 in. with lap centered over purlin web. A line of tape sealant may be used at panel side and end laps.

Metal Sales Manufacturing Corporation "R-Panel" "PBR-Panel".

2. Panel Fasteners For panel to panel and panel to purlin connections to be No. 12-14 by 1 in. self-drilling, self-tapping, hex head, plated steel screws with a 5/8 in. OD formed steel washer and a neoprene sealing washer.

As alternate Fasteners - For panel to purlin connections, 1/4 - 14 HHAB self-tapping, plating steel screws, with a separate 5/8 in. OD dome shaped steel washer and a neoprene sealing washer may be used.

Or: No. 14-10HHA, self-tapping, plating steel screws, with a separate, 5/8 in. OD dome shaped steel washer and a neoprene sealing washer may be used.

Spacing, for panel - to - purlin connections to be 12 in. on center beginning 2 - 1/2 in. from center line on one side of each major rib. Spacing at end lap to be in a 5 - 7 - 5 - 7 in. pattern beginning 2 - 1/2 in. from the center line on both sides of each major rib.

Fastener for panel to purlin connection to be 1-1/4 in. long when insulation (Item 3) is greater that 4-1/2 in.

Spacing for panel - to - panel connections to be 20 in. on center with a fastener located in line with the purlin fasteners.

3. Insulation (Optional) - Any compressible blanket insulation 6 in. max thickness before compression.

4. Purlin No. 16 MSG min gauge steel (50,000 psi min yield).

5. Lateral Bracing (Not shown) - As required.

Refer to General Information, Roof Deck Construction, (Roofing Materials and Systems Directory) for items not evaluated.

\* Bearing the UL Classification Mark.

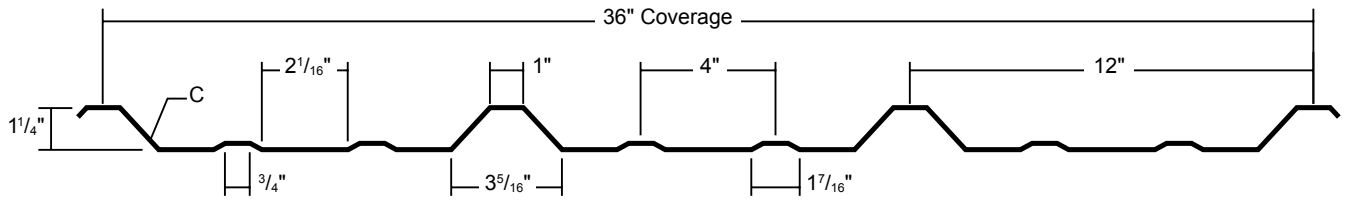


Underwriters Laboratories Inc. ®  
 LISTED

# PBR-PANEL

# SECTION PROPERTIES

## R-PANEL



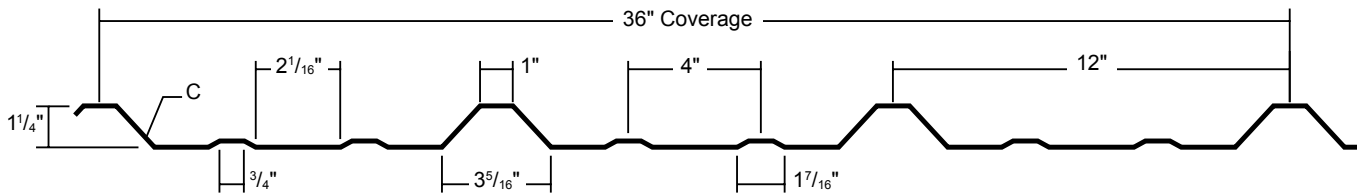
### SECTION PROPERTIES

### ALLOWABLE UNIFORM LOADS PSF (3 or More Equal Spans)

| Ga. | Width (in.) | Yield KSI | Weight PSF | Top in Compression                  |                                     | Bottom in Compression               |                                     | Inward Load |     |     |    |    |    |     | Outward Load |     |     |    |    |  |  |
|-----|-------------|-----------|------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------|-----|-----|----|----|----|-----|--------------|-----|-----|----|----|--|--|
|     |             |           |            | I <sub>xx</sub> In <sup>4</sup> /ft | S <sub>xx</sub> In <sup>3</sup> /ft | I <sub>xx</sub> In <sup>4</sup> /ft | S <sub>xx</sub> In <sup>3</sup> /ft | 2'          | 3'  | 4'  | 5' | 6' | 7' | 2'  | 3'           | 4'  | 5'  | 6' | 7' |  |  |
|     |             |           |            |                                     |                                     |                                     |                                     |             |     |     |    |    |    |     |              |     |     |    |    |  |  |
| 26  | 36"         | 80        | 0.87       | 0.0350                              | 0.0348                              | 0.0293                              | 0.0439                              | 235         | 119 | 71  | 47 | 27 | 17 | 270 | 132          | 77  | 50  | 35 | 26 |  |  |
| 24  | 36"         | 50        | 1.13       | 0.0543                              | 0.0558                              | 0.0427                              | 0.0595                              | 316         | 147 | 85  | 55 | 38 | 27 | 398 | 185          | 106 | 68  | 48 | 35 |  |  |
| 22  | 36"         | 50        | 1.45       | 0.0767                              | 0.0814                              | 0.0600                              | 0.0790                              | 434         | 199 | 113 | 73 | 51 | 37 | 594 | 273          | 155 | 100 | 70 | 51 |  |  |

- Theoretical Section Properties have been calculated per AISI 2007 "North American Specification for the Design of Cold-Formed Steel Structural Members". I<sub>xx</sub> & S<sub>xx</sub> are effective section properties for deflection and bending.
- Allowable load is calculated in accordance with AISI 2007 specification considering : bending, shear, combined bending and shear, deflection and ASTM E 1592 testing for 24 ga and 22 ga. Allowable load is base on 3 or more equal span condition. Allowable load does not consider panel weight, web crippling, fasteners / support conditions or testing for 26 gauge.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase in uplift.

## PBR-PANEL



### SECTION PROPERTIES

### ALLOWABLE UNIFORM LIVE LOADS PSF (3 or More Equal Spans)

| Ga. | Width (in.) | Yield KSI | Weight PSF | Top in Compression                  |                                     | Bottom in Compression               |                                     | Inward (Gravity / Deflection) Load |     |     |    |    |    |     | Outward Uplift (Stress) Load |     |    |    |    |  |  |
|-----|-------------|-----------|------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|-----|-----|----|----|----|-----|------------------------------|-----|----|----|----|--|--|
|     |             |           |            | I <sub>xx</sub> In <sup>4</sup> /ft | S <sub>xx</sub> In <sup>3</sup> /ft | I <sub>xx</sub> In <sup>4</sup> /ft | S <sub>xx</sub> In <sup>3</sup> /ft | 2'                                 | 3'  | 4'  | 5' | 6' | 7' | 2'  | 3'                           | 4'  | 5' | 6' | 7' |  |  |
|     |             |           |            |                                     |                                     |                                     |                                     |                                    |     |     |    |    |    |     |                              |     |    |    |    |  |  |
| 26  | 36"         | 80        | 0.84       | 0.0367                              | 0.0367                              | 0.0317                              | 0.0458                              | 261                                | 129 | 76  | 49 | 35 | 23 | 223 | 107                          | 62  | 40 | 28 | 21 |  |  |
| 24  | 36"         | 50        | 1.09       | 0.0560                              | 0.0579                              | 0.0457                              | 0.0613                              | 330                                | 153 | 88  | 57 | 39 | 29 | 314 | 145                          | 83  | 53 | 37 | 27 |  |  |
| 22  | 36"         | 50        | 1.43       | 0.0800                              | 0.0860                              | 0.0633                              | 0.0816                              | 453                                | 207 | 118 | 76 | 53 | 39 | 474 | 218                          | 124 | 80 | 55 | 40 |  |  |

- Theoretical Section Properties have been calculated per AISI 2007 "North American Specification for the Design of Cold-Formed Steel Structural Members". I<sub>xx</sub> & S<sub>xx</sub> are effective section properties for deflection and bending.
- Allowable load is calculated in accordance with AISI 2007 specification considering : bending, shear, combined bending and shear, deflection and ASTM E 1592 testing for 24 ga and 22 ga. Allowable load is base on 3 or more equal span condition. Allowable load does not consider panel weight, web crippling, fasteners / support conditions or testing for 26 gauge.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase in uplift.

## RECEIVING MATERIAL

It is the responsibility of the installer to unload material from the delivery truck. The installer shall be responsible for providing suitable equipment for unloading of material from the truck.

After receiving material, check the condition of the material, and review the shipment against the shipping list to ensure all materials are accounted for. If damages or shortages are discovered, it should be noted on the Bill of Lading at the time of delivery. A claim should be made against the carrier as soon as possible. Metal Sales is not responsible for any damages or shortages unless they are documented in writing and presented to Metal Sales within 48 hours.

## GENERAL HANDLING

Each bundle should be handled carefully to avoid being damaged. Care should be taken to prevent bending of the panel or abrasion to finish. Whenever possible, the bundle should remain crated until it is located in its place of storage. If bundles must be opened, we recommend you re-crate them before lifting. To avoid damage please lift the bundle at its center of gravity.

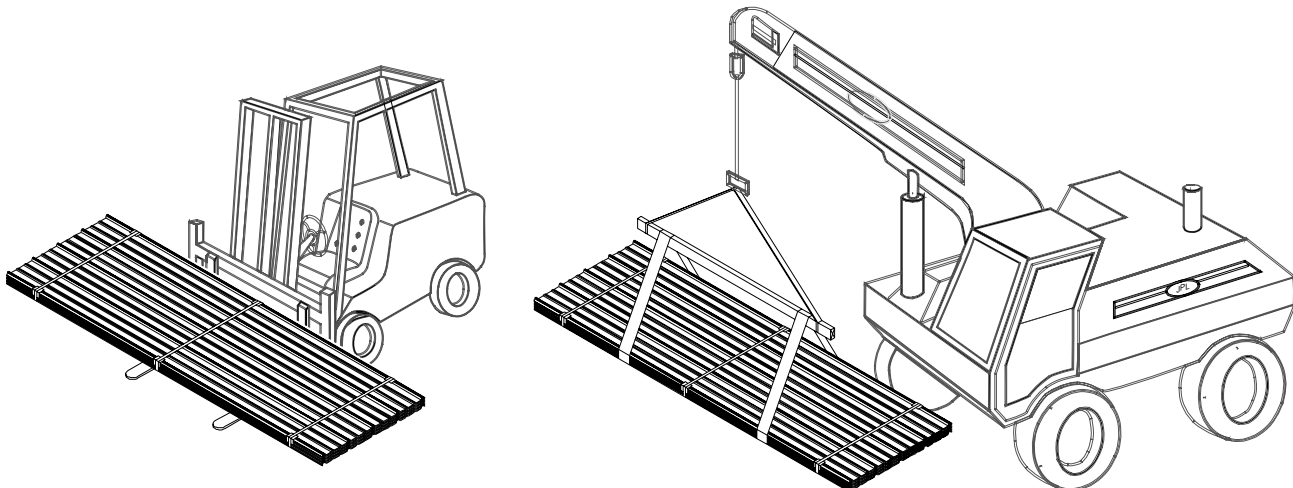
### CAUTION

Improper loading and unloading of bundles and crates may result in bodily harm and/or material damage. Metal Sales is not responsible for bodily injuries and/or material damages resulting from improper loading and unloading.

## MECHANICAL HANDLING

**Forklift** - A forklift may be used for panels up to 20'-0" long. Please make sure the forks are at their maximum separation. Do not transport open bundles. When transporting bundles across rough terrain, or over a longer distance, some means of supporting the panel load must be used.

**Crane** - A crane should be used when lifting panels with lengths greater than 20'-0". Please be sure to utilize a spreader bar to ensure the even distribution of the weight to the pick up points. As a rule when lifting panels, no more than  $\frac{1}{3}$  of the length of the panel should be left unsupported. Never use wire rope because this will damage the panels.

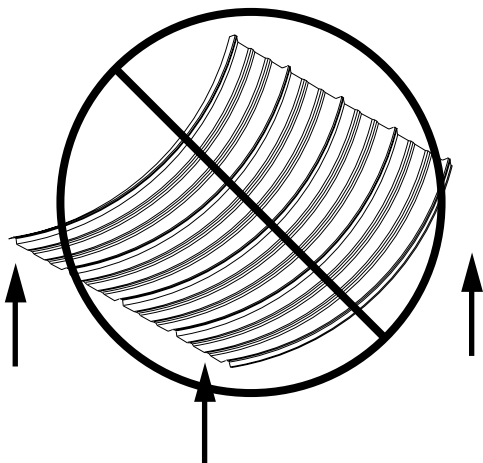
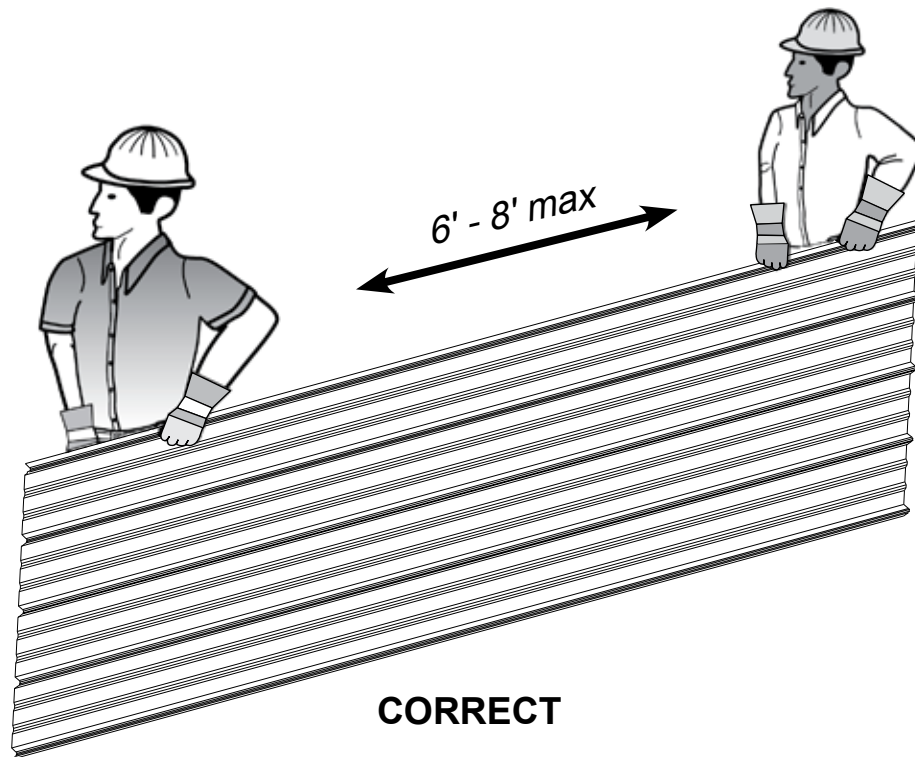


## MANUAL HANDLING

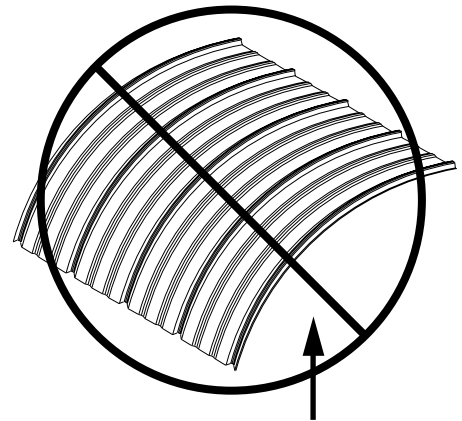
When handling painted steel care should be taken to prevent scratching of material. Clean gloves should be worn at all times to prevent a reaction with salts found on bare skin. Installers should wear rubber sole shoes to keep from scuffing material while walking on the roof.

Handling of individual panels should be done carefully and properly to avoid bending or damaging. PBR-Panels should be carried by grasping the edge of the panel so that the PBR-Panel is vertical to the ground. The PBR-Panel should not be carried with the panel horizontal to the ground as this could cause the panel to buckle or bend in the center.

Normally individual panels can be handled by people placed every 6'-0" to 8'-0" along the length of the panel.



**INCORRECT**

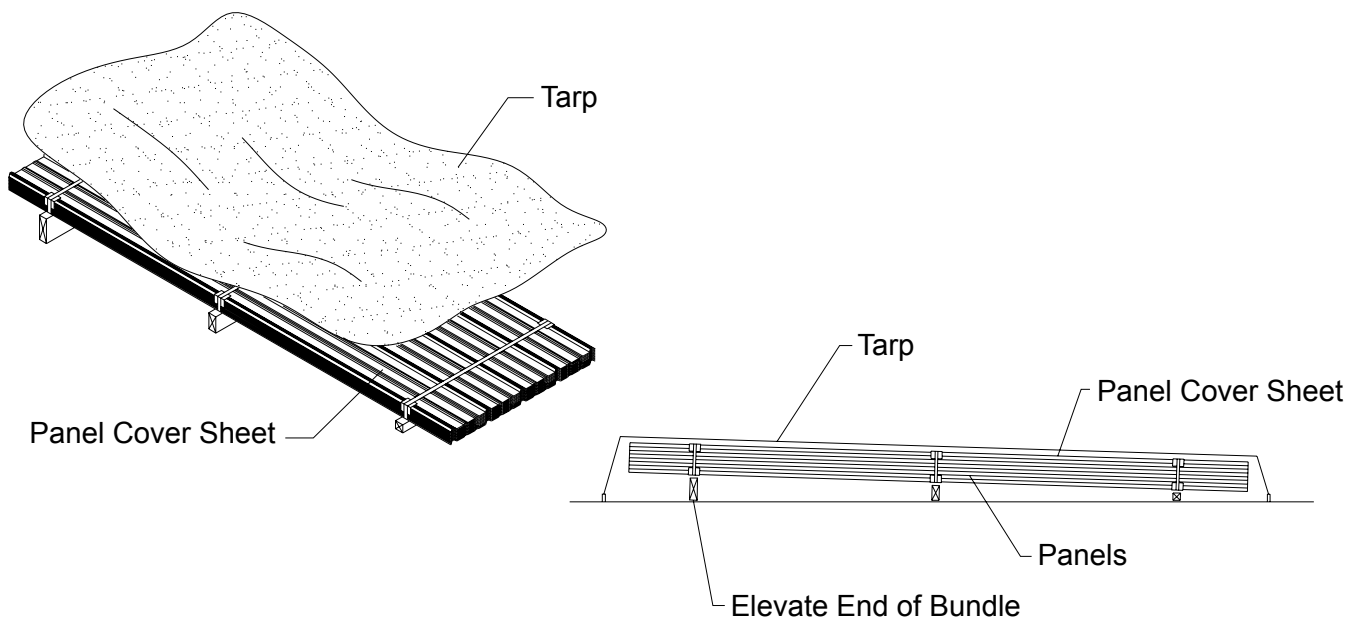




## GENERAL

Please inspect panels for moisture accumulation. If moisture has formed, the panels should be unbundled, wiped dry, and allowed to dry completely. Once dry, carefully re-stack the panels and loosely recover allowing for ample air circulation.

Bundled sheets should be stored high enough off of the ground to allow for air circulation and prevent contact with accumulating water. Elevate one end of the bundle to allow any moisture to run off the panels. Metal Sales recommends covering the bundle with a tarp. Do not use tight fitting plastic-type tarps as panel bundle covers. While they may provide protection from heavy downpours, they can also retard necessary ventilation and trap heat and moisture that may accelerate metal corrosion. If panels are to be stored in possible bad weather, we suggest they be stored inside. Extended storage of panels in a bundle is not recommended. **Under no circumstances should the panels be stored near or come in contact with salt water, corrosive chemicals, ash, or fumes generated or released inside the building or nearby plants, foundries, plating works, kilns, fertilizer, and wet or green lumber.**



## FOOT TRAFFIC

Care of metal panels and flashings must be exercised throughout erection. Foot traffic can cause distortion of panel and damage to finish. Traffic over the installed system must be kept to an absolute minimum. Installers should wear rubber sole shoes to keep from scuffing material while walking on the roof.

When walking on the roof panels is unavoidable, walk only in the flats of the panel. Walking on the ribs can cause damage to the panels.

## REQUIRED TOOLS

Standard required tools for field installation include:

- Screw Guns
- Magnetic Bits
- Metal Nibbler or Shear
- Tin Snips
- Tape Measure
- Hammer
- Chalk Line
- Power Drill
- Drill Bits
- Pop Rivet Gun
- Safety Goggles
- Gloves
- Ear Plugs
- Fall Protection

## CONDITION OF SUBSTRUCTURE

Metal Sales' panels are designed to be installed over open framing and/or directly over a wood substrate (minimum 5/8") with 30# felt moisture barrier (or an Ice and Water Shield when required by Local Building Codes).

Always check with local building codes prior to all installations for any additional requirements that may be specific to your area.

Galvanized and Galvalume panels should not be in contact with, or subject to, water runoff from copper, lead, or uncoated steel materials.

Condensate water from air conditioning units typically contains dissolved copper. This condensate should be discharged through a plastic pipe extended beyond the edge of the roof.

The roof should be inspected for any trapped moisture or structural damage such as bowing or sagging rafters and warped or loose roof purlins or solid decking. These areas should be repaired prior to installing new metal panels.

Prior to installation, make sure there are no nails or fasteners protruding from the roof framing or wood substrate which could damage the panels and impede the installation process.

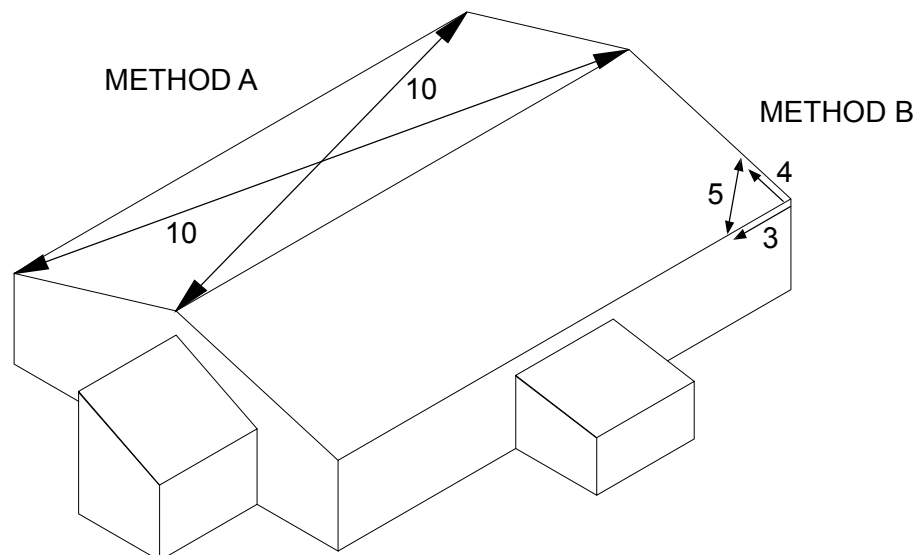
When installed, panel distortion may occur if not applied over properly aligned and uniform substructure.

Whether installing over new or existing roof, the installer should check the roof deck for squareness before installing panels. Several methods can be used to verify squareness of the structure for proper installation of the panels.

**METHOD "A"** - One method for checking the roof for squareness is to measure diagonally across one slope of the roof from similar points at the ridge and eave and obtain the same dimension.

**METHOD "B"** - The 3-4-5 triangle system may also be used. To use this system, measure a point from the corner along the edge of the roof at a module of three (3). Measure a point from the same corner along another edge at a module of four (4).

By measuring diagonally between the two points established, the dimension should be exactly a module of five (5) to have a square corner. Multiple uses of this system may be required to determine building squareness. If the endwall cannot be made square, the roof system cannot be installed as shown in these instructions.



## FIELD CUTTING

Tin snips or a "nibbler" type electric tool are recommended for field cutting metal panels. Cutting the steel generates slivers or metal chips. These slivers and metal chips must be immediately removed from the panels because they will damage the finish and shorten the life of the product.

One method of preventing this problem is to flip the panels over when cutting. This allows the slivers and metal chips to be brushed from the back side and avoids damaging the paint on the top side of the panels.

When cutting metal panels and flashings, goggles must be worn for eye protection.

### CAUTION

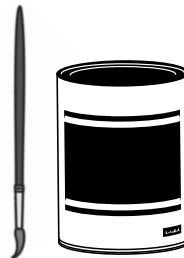
All product surfaces should be free of debris at all times. Installed surfaces should be wiped clean at the end of each work period. Never cut panels over metal surfaces. Metal shavings will rust on the surface, voiding the warranty.

## TOUCH-UP PAINT

All painted panels and flashings have a factory applied baked on finish. Handling and installing panels may result in some small scratches or nicks to the paint finish. Touch-up paint is available in matching colors from Metal Sales. It is recommended that a small brush be used to apply touch-up paint to those areas that are in need of repair. Touch-up paint does not have the superior chalk and fade resistance of the factory applied paint finish and will normally discolor at an accelerated rate. Aerosol paint should not be used because of the over-spray that may occur.



SPRAY PAINT



TOUCH-UP PAINT

## VENTILATION

Proper design and installation of vapor barriers and ventilation systems are important to prevent condensation and the resulting problems of moisture damage and loss of insulation efficiency.

Condensation occurs when moisture laden air comes in contact with a surface temperature equal to or below the dew point of the air. This phenomenon creates problems that are not unique with metal buildings; these problems are common to all types of construction.

The underside of the metal roof on a typical metal building (no attic) should be protected from condensation by insulating with a faced insulation. This should reduce the potential of condensation forming on the underside of the panels.

On buildings that have an attic space or are being retrofitted with a metal roofing system, vents should be placed at both the eave and peak of the roof in order to prevent a buildup of moisture (humidity) in the attic space.

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 environments 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 damage 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. 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

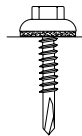
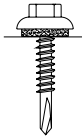
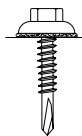
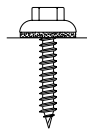
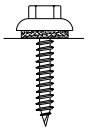
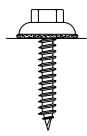
Strong solvents and abrasive type cleaners should be avoided. Most organic solvents are flammable and toxic and must be handled accordingly. When using a solvent, consult maintenance professionals and label instructions for proper handling and disposal of washings. If required, a mild solvent such as 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.



## FASTENER INSTALLATION TECHNIQUE

**Recommended Tool Type** - Use depth locating nose or adjustable clutch on screw gun to prevent over-drilling and strip out. **Do not use impact tools or runners.**

**Seating the washer** - Apply sufficient torque to seat the washer - do not overdrive the fastener.

|              | <b>CORRECT</b><br>Sealing material slightly visible at edge of metal washer. Assembly is watertight. | <b>TOO LOOSE</b><br>Sealing material is not visible; not enough compression to seal properly. | <b>TOO TIGHT</b><br>Metal washer deformed; sealing material pressed beyond washer edge. |
|--------------|--|---|---|
| SELF DRILLER |                     |              |       |
| WOODSCREW    |                     |              |       |

**To prevent wobbling** - Make sure fastener head is completely engaged in the socket. If the head does not go all the way in the socket - tap the magnet deeper into the socket to allow full head engagement. Metal chips will build up from drilling and should be removed from time to time.

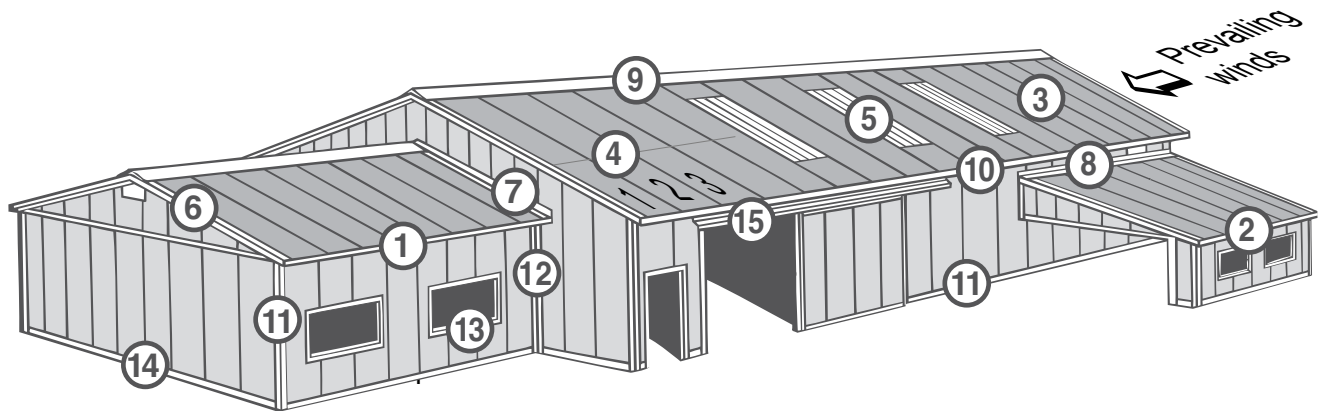
**Protect drill point** - Push only hard enough on the screw gun to engage clutch. This prevents excess friction and burn out of the drill point. Correct pressure will allow screw to drill and tap without binding.

**Drilling through sheet and insulation** - Ease up on pressure when drilling through insulation to avoid striking the purlin or girt with the point - apply more pressure after drill point contacts purlin or girt.

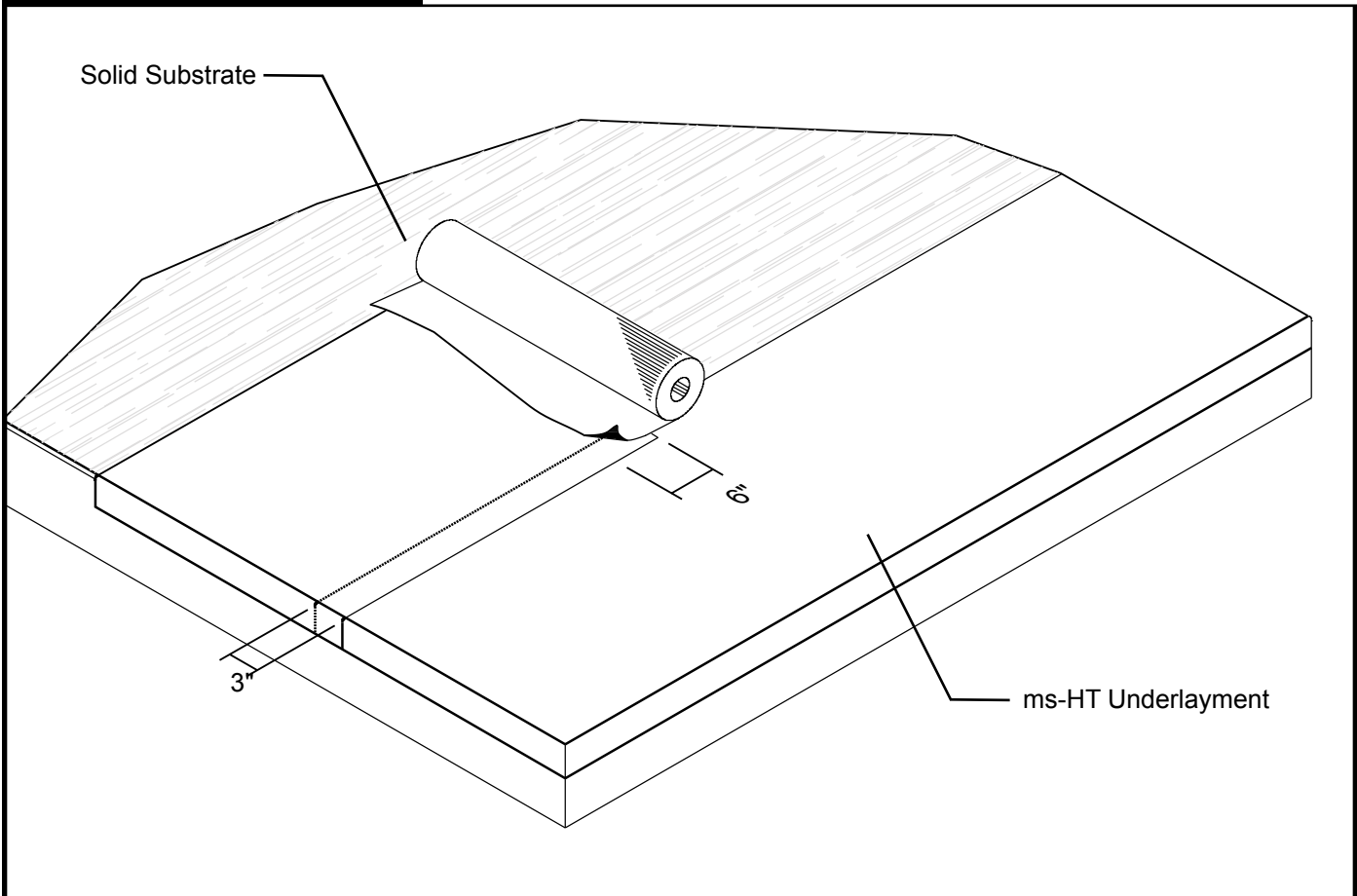
**Drilling through purlin overlaps** - Drilling through lapped purlins requires extra care. Excessive voids between purlins sometimes damages drill points and two self-drillers might be necessary to complete the operation. It is sometimes advantageous to predrill.

## NOTES

- As shown below with the number designations, install panel against the prevailing wind. Installing Wall Panels first then Roof Panels
- To minimize corrosion, siding panels should not be installed all the way to the ground.
- Siding panels should lap over the foundations or splash boards at least three inches.
- Make sure panels are square and plumb, to assure straight and proper alignment of the entire row of panels.
- For areas with high wind considerations, closer fastener spacing may be required.
- It is necessary to attach a temporary guide to the foundation to use as an alignment guide when installing siding panels.



| # | ROOF PANEL DETAILS        | PAGE(S) | #  | ROOF PANEL DETAILS        | PAGE(S)        |
|---|---------------------------|---------|----|---------------------------|----------------|
| - | ms-HT Install             | 34      | 7  | Rakewall                  | 46             |
| 1 | Eave Flashing             | 35      | 8  | Endwall                   | 47             |
| - | Valley                    | 36      | 9  | Ridge                     | 48             |
| 3 | Roof Panel Install        | 37-38   | 10 | Sculptured Gutter         | 49             |
| 4 | Endlap                    | 39      | #  | <b>WALL PANEL DETAILS</b> | <b>PAGE(S)</b> |
| 5 | Light Transmitting Panels | 40      | 11 | Outside Corner            | 50             |
| - | Rubber Roof Jack          | 41      | 12 | Inside Corner             | 51             |
| - | Formed Ridge              | 42      | 13 | Jamb                      | 52             |
| - | Ridge/Hip Flashing        | 43      | 14 | Base                      | 53             |
| 6 | Sculptured Rake           | 44      | 17 | Head Channel              | 54             |
| 6 | Rake                      | 45      | -  | Gravel Stop               | 55             |

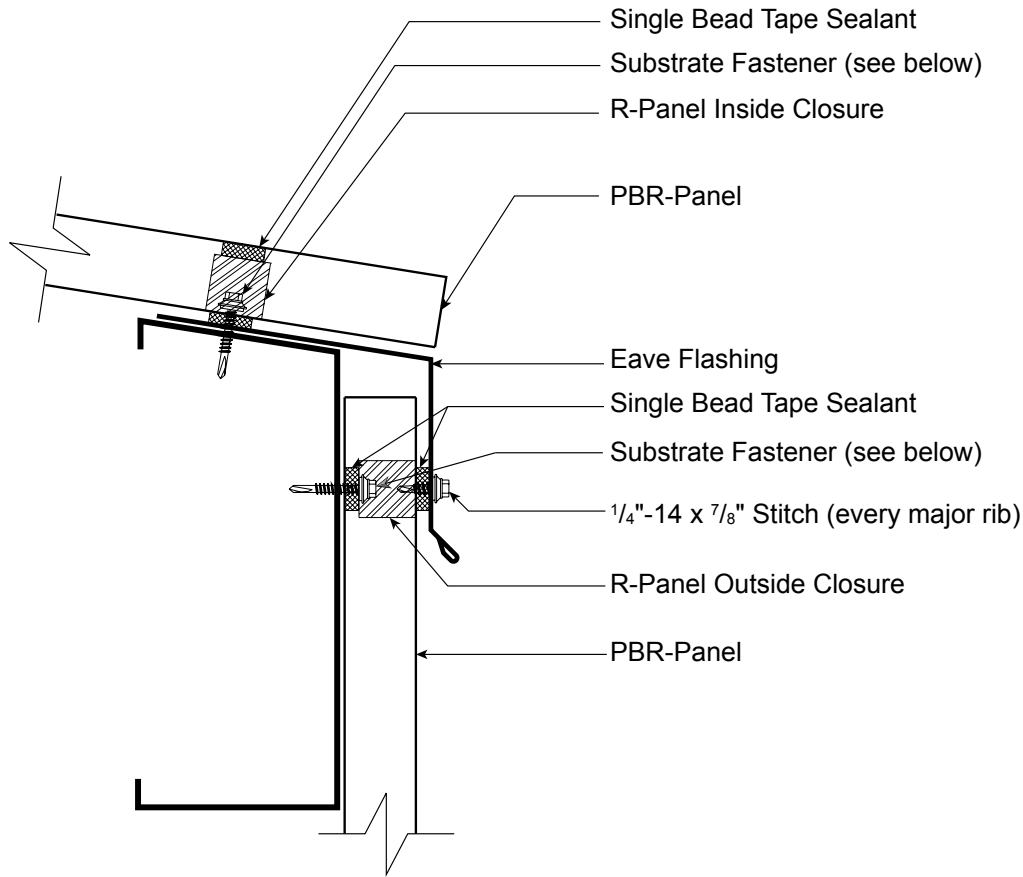
**GENERAL INFORMATION**

- ▶ Thickness: 40 mil
- ▶ Dimensions: 67' x 3'
- ▶ Gross Coverage: 200 ft<sup>2</sup>
- ▶ Net Coverage: 183 ft<sup>2</sup>
- ▶ Roll Weight: 43 lbs
- ▶ Installation Temperature: Above 50°

**INSTALLATION STEPS**

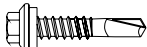
Note: ms-HT is a SBS modified bitumen self adhesive membrane intended to be used as a roofing underlayment. It has a slip resistant surface and will seal around penetrating fasteners.

1. Before installing the PBR-Panel roof it is recommended that a high-temperature underlayment (ms-HT) be installed on the solid substrate.
2. The ms-HT should extend over the edge of the roof surface a minimum of 2" on each side.
3. Start at the low side of the roof and roll out horizontally across the roof substructure.
4. If more than 1 roll is required as it is installed then the ms-HT must be overlapped a minimum of 6".
5. Once the bottom row is down and secure the next row is installed upslope of the first row. Lap the ms-HT a minimum of 3".



## SUBSTRATE FASTENER INFORMATION

### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate



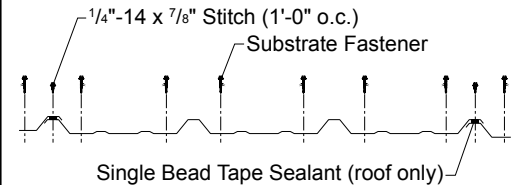
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

## PBR-PANEL FASTENING PATTERN

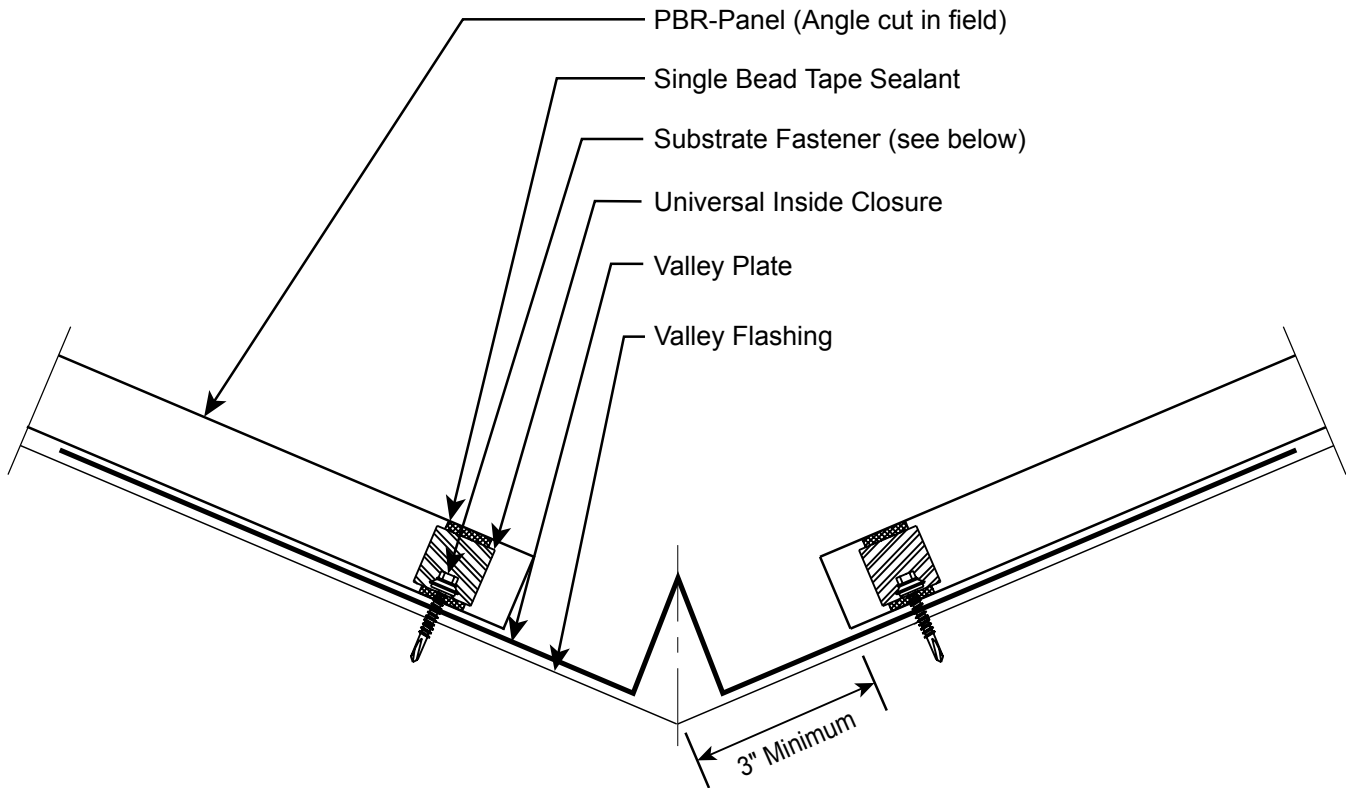


## INSTALLATION STEPS

Note: If you are installing an Eave Flashing where there is wall panel, the wall panel must be installed first.

1. Place the Eave Flashing at the eave and mark where the bottom of the Eave Flashing hits the wall panel.
2. Apply a row of Single Bead Tape Sealant along the top of the wall panel so that it is above your mark and below the fasteners at the top of the wall panel.
3. Place an Outside Closure or a Universal Closure over the Single Bead Tape Sealant.
4. Apply a second row of Single Bead Tape Sealant to the outside face of the wall closures along the eave.
5. Install the eave flashing flush against the wall panels, making sure to hide the closure, and fasten to the wall panel with a Stitch Fastener through the sealant and closure, at every major rib.
6. Fasten the top of the Eave Flashing to the roof deck with the appropriate Pancake Head Fastener, four feet on center to hold the Eave Flashing in place until the roof panels can be installed.

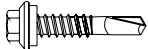




## SUBSTRATE FASTENER INFORMATION

## PBR-PANEL FASTENING PATTERN

### Open Framing



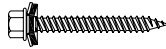
**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate

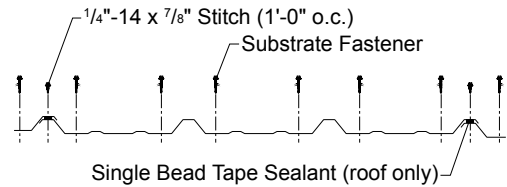


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



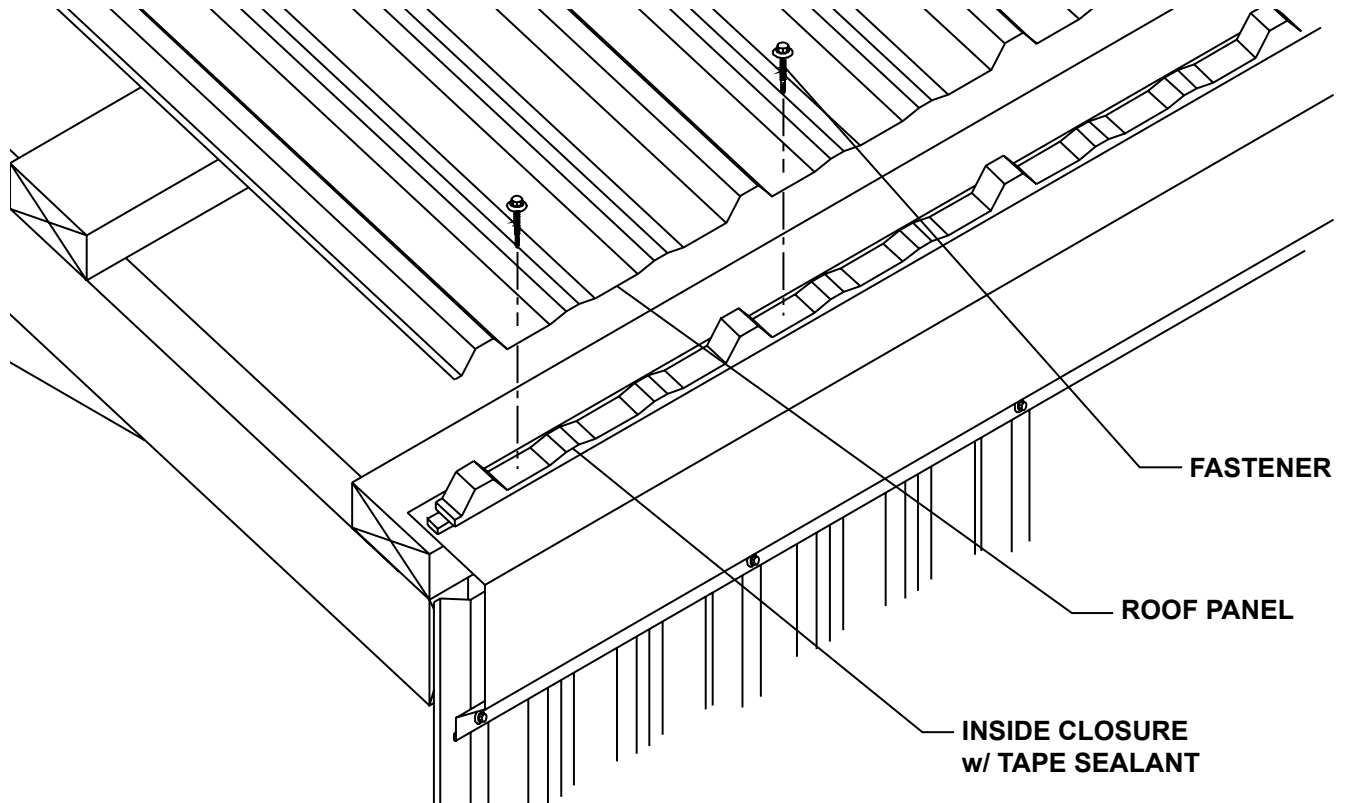
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"



## INSTALLATION STEPS

Note: It is recommended that ms-HT be installed under the valley flashing for added moisture protection.

1. If two or more valley flashings are required, the valley must be installed working from eave to peak. If two or more Valley Flashings are required, then they must be lapped a minimum of 6" with two continuous beads of Tube Sealant between them.
2. Do not install fasteners through the valley lap.
3. Place the Valley Flashing upside down at the eave of the building and mark the cut line for the valley angle. Cut the Valley flashing with Turbo-Shears starting from each side, working towards the center "V". Mark the center "V" as shown to allow extra material to cap off the end of the valley flashing. Cut with Turbo-Shears and Tin Snips. Bend the cut tabs in to close the V.
4. Apply a three-eighths inch bead of Tube Sealant along the Eave Flashings and place the Valley Flashing down.
5. Fasten the Valley Flashing to the roof deck with pancake head woodscrews four feet on center, on each side



### SUBSTRATE FASTENER INFORMATION

#### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

#### Solid Wood Substrate



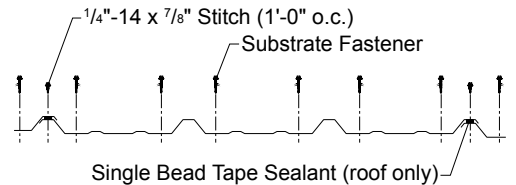
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

#### 2X Wood Framing



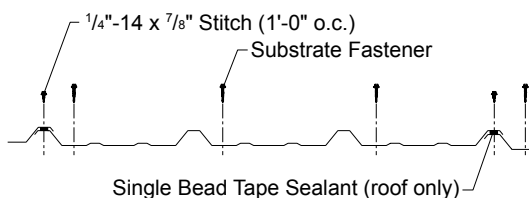
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

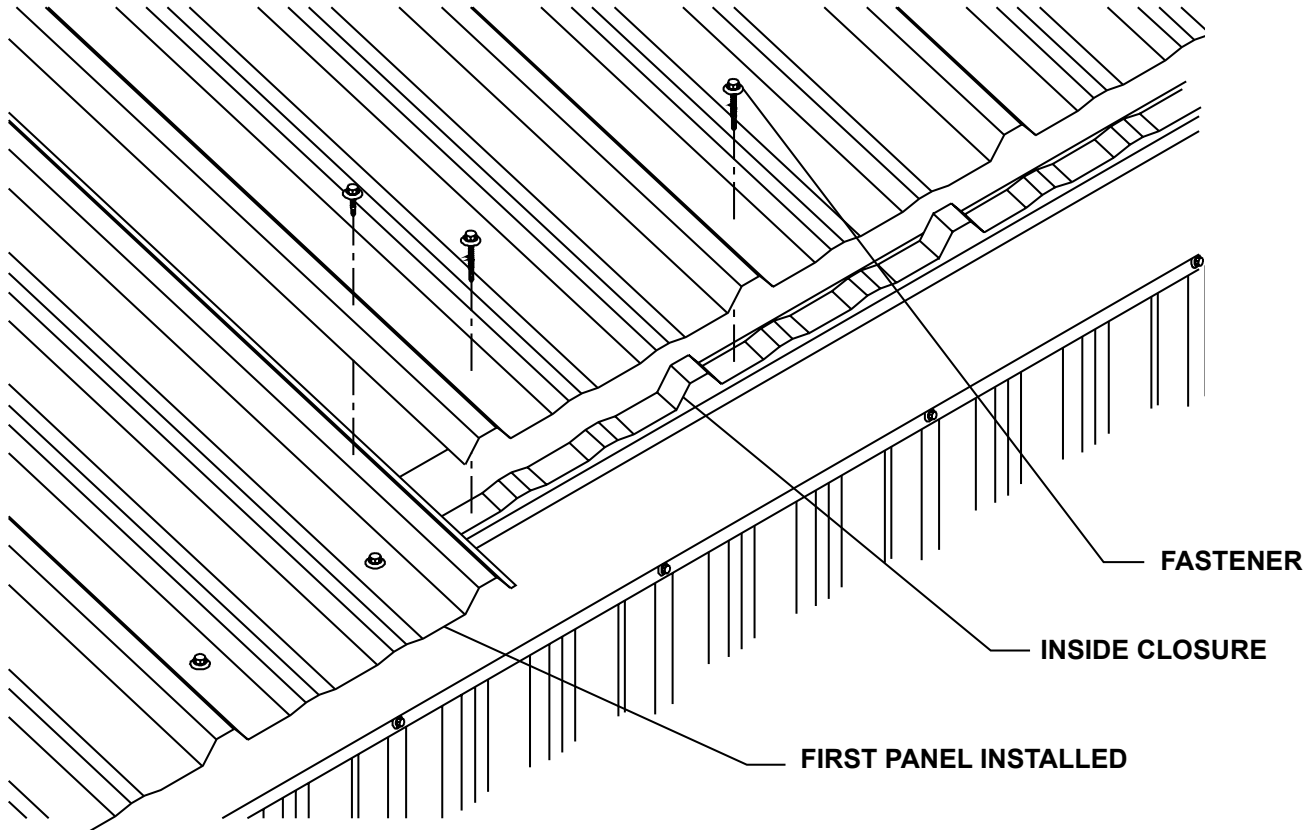
### PBR-PANEL END FASTENING PATTERN



### INSTALLATION STEPS

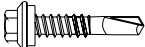


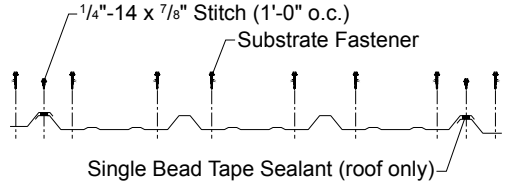
1. If your project has new or existing wall panels, you must consider adding additional overhang to your roof panels equal to the depth of the wall panels.
2. Turn the PBR Inside Closure over and attach Single Bead Tape Sealant to the underside. Place the PBR Inside Closure on top of the Eave Flashing. Install another row of Single Bead Tape Sealant to the top of the Inside Closure.
3. Make sure that the Inside Closure is square with the roof. Place the PBR-Panel over the Inside Closure.
4. The fastening pattern for roof panels at the panel ends, eave, gutter, ridge, or highside eave and at the endlap is as shown.
5. Fasteners at the ridge and highside eave are installed one inch from the end of the panels.
6. For certain building codes and state or county specifications, special fastener spacing may be required.
7. For the field of the panel the fastening pattern is as shown below.





**SUBSTRATE FASTENER INFORMATION**

**PBR-PANEL FASTENING PATTERN**

|   |  |   |  |
|---|--|---|--|
| <p><b>Open Framing</b></p>  <p><b>Self Driller</b><br/>#12-14 x 1"<br/>#12-14 x 1-1/2"<br/>#12-14 x 2"</p> | <p><b>Solid Wood Substrate</b></p>  <p><b>Woodscrew</b><br/>#10-14 x 1"<br/>#10-14 x 1-1/2"<br/>#10-14 x 2"</p> | <p><b>2X Wood Framing</b></p>  <p><b>Woodscrew</b><br/>#10-14 x 1"<br/>#10-14 x 1-1/2"<br/>#10-14 x 2"</p> |  <p>1/4"-14 x 7/8" Stitch (1'-0" o.c.)<br/>Substrate Fastener<br/>Single Bead Tape Sealant (roof only)</p> |
|---|--|---|--|

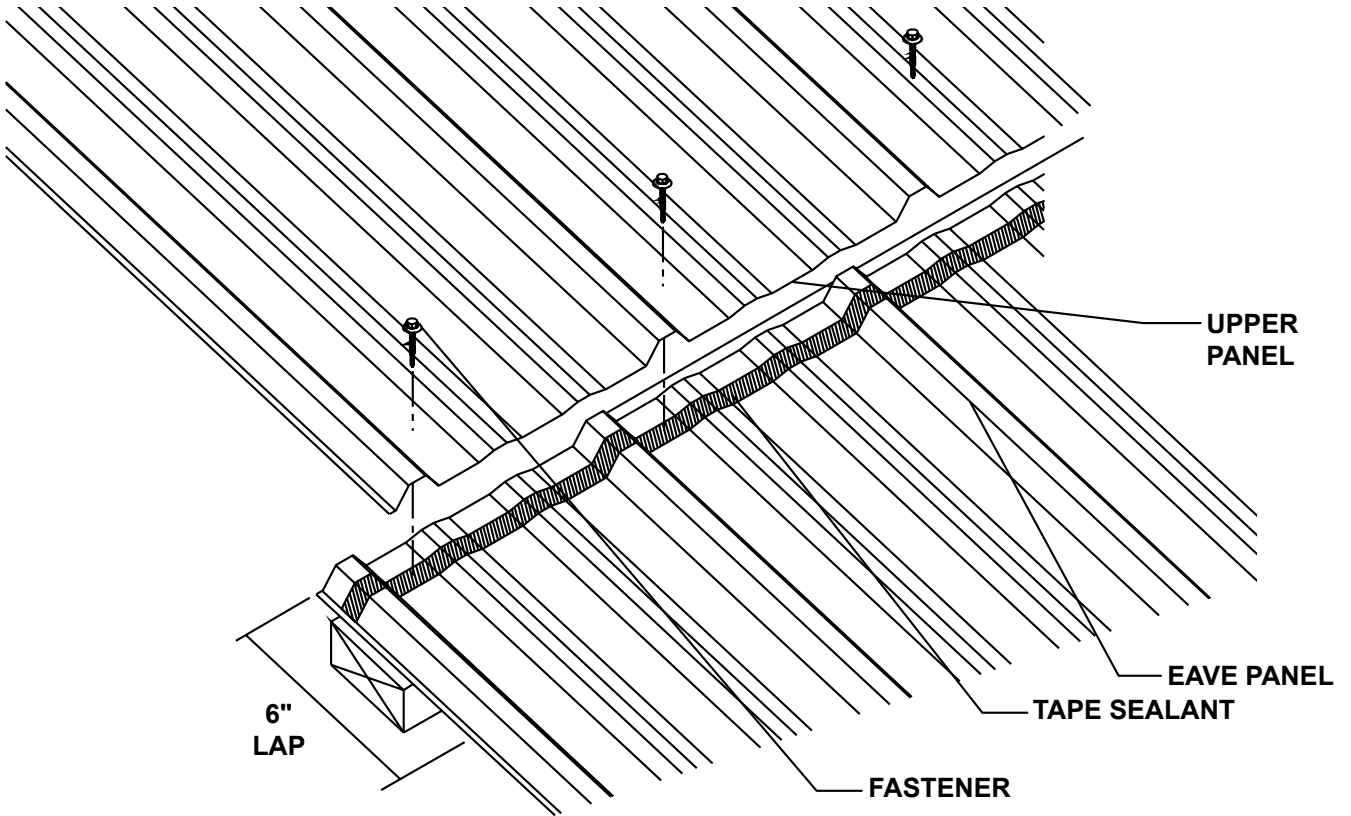
**INSTALLATION STEPS**

Note:

1. Before you install the next PBR-Panel, Single Bead Tape Sealant must be placed on the under lap rib of the previous panel.
2. Place the second panel on top of the previously installed panel covering the Single Bead Tape Sealant. Make sure that it is flush and square at the eave with the previous panel.
3. Install a Stitch Fastener on top of the lapping rib one foot on center through the sealant and the underlap rib.
4. Repeat this process for the remaining panels.
5. If you come to a valley condition, lay the panel down at the valley and mark the panel ribs to be cut. Snap a chalk line for the diagonal cut of the panel three inches from the center of the valley.
6. A Universal Closure is used instead of an Inside Closure at the valley condition.
7. Be sure to clean any debris or excess sealant before continuing the next section of the roof.

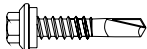
# PBR-PANEL

# ENDLAP INSTALLATION



## SUBSTRATE FASTENER INFORMATION

### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate



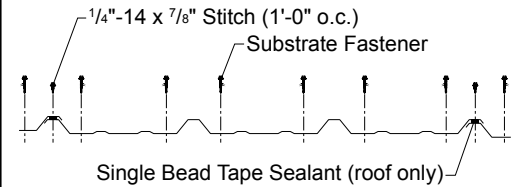
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

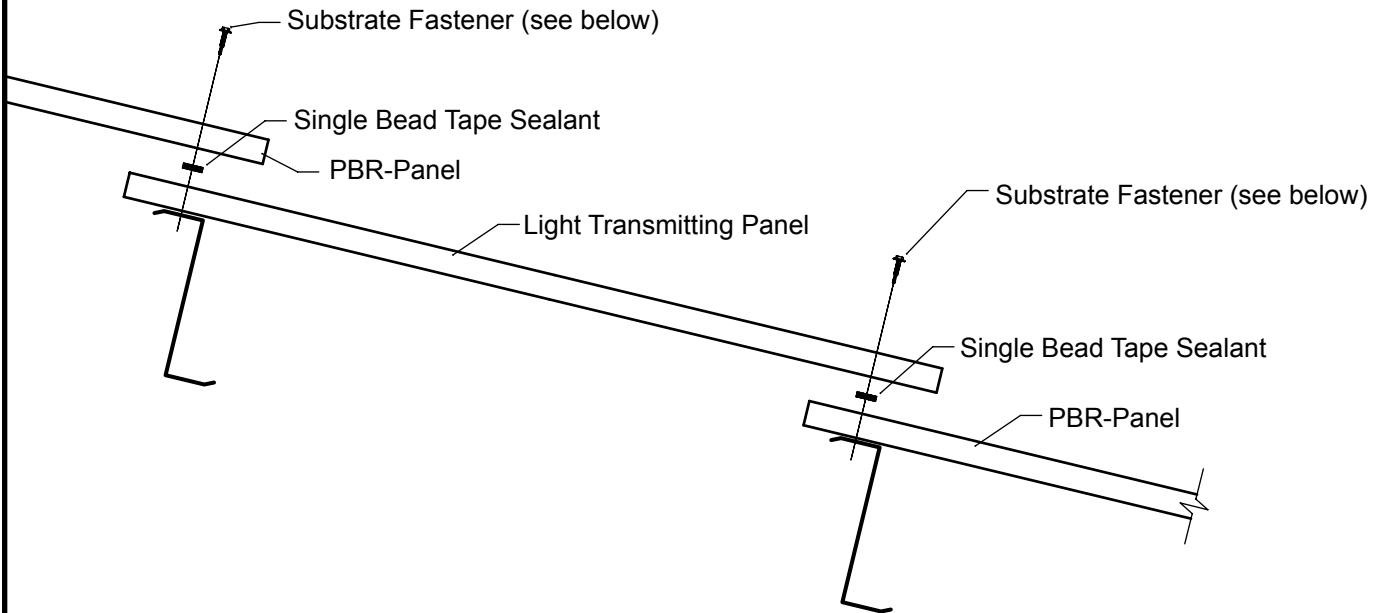
## PBR-PANEL FASTENING PATTERN



## INSTALLATION STEPS

Note:

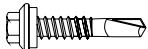
1. If more than one PBR Panel is required on a single panel run working eave to highside, then a panel endlap is required.
2. Start by installing all of the eave panels first. At the highside of the eave panels measure down three inches and apply a row of Single Bead Tape Sealant. Next apply another row of Single Bead Tape Sealant just above and below that first row.
3. Lap the highside panel over the eave panel a minimum of six inches.
4. Measure up the highside panel and install woodscrews with the correct fastening pattern so that the fastener goes through the middle row of the tape sealant and into the roof deck.



## SUBSTRATE FASTENER INFORMATION

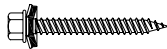
## PBR-PANEL ENDLAP FASTENING PATTERN

### Open Framing



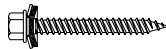
**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate

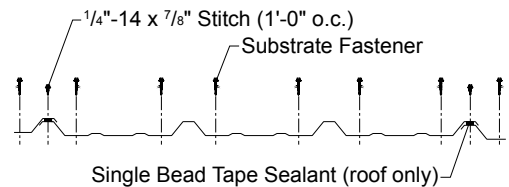


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

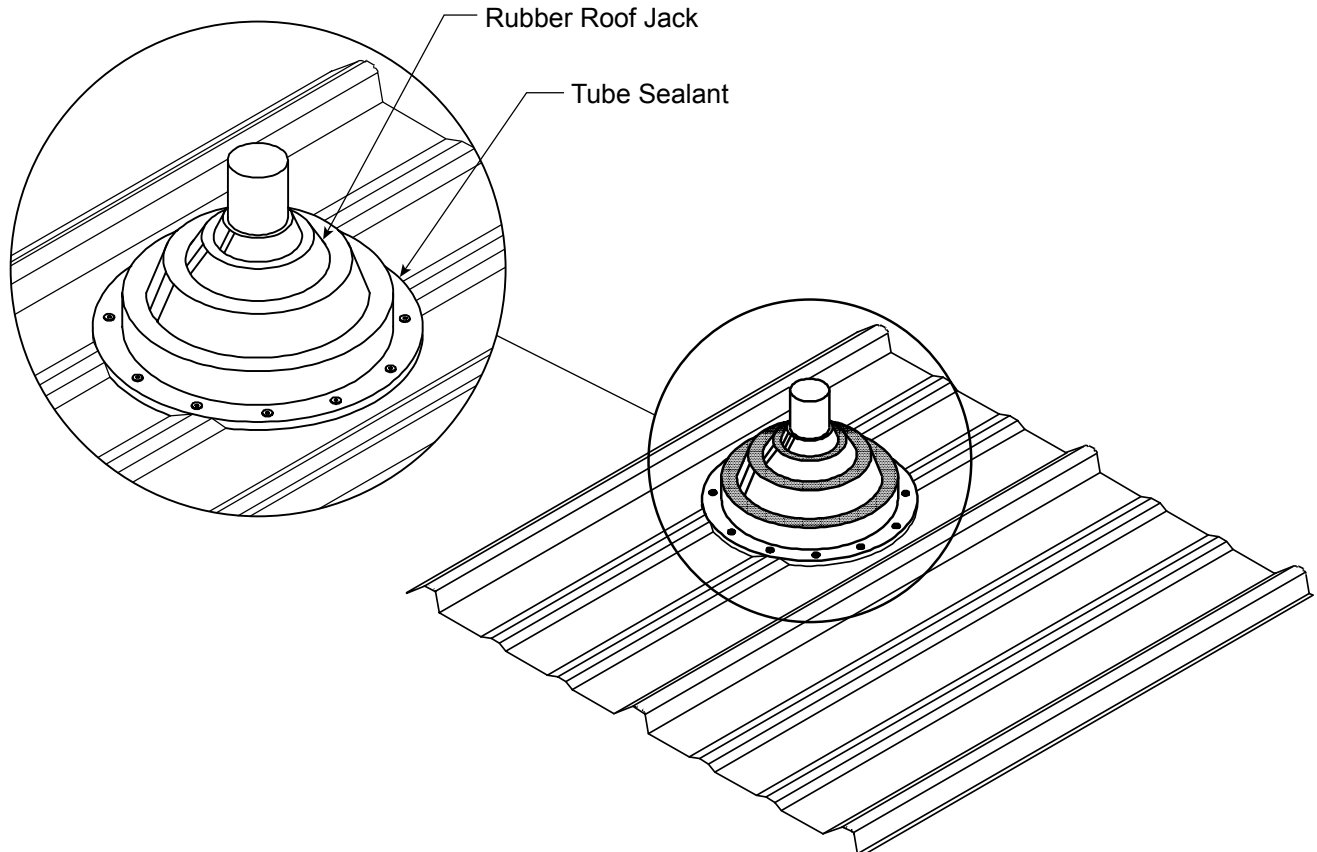


## INSTALLATION STEPS

Note: Light Transmitting Panels require a minimum 6" lap at the low and high side of the panel.

1. Always install Light Transmitting Panels working from eave to ridge of the building for proper lapping.
2. After the Eave PBR-Panel is installed apply a row of Single bead Tape Sealant. Make sure that the Single Bead Tape Sealant is directly above your substrate member you are attaching to.
3. Place the low side of the Light Transmitting Panel over the Single Bead Tape Sealant.
4. Fasten the panels together with the substrate fastener, making sure the fastener goes through the middle of the Single Bead Tape Sealant and into the roof substrate member below.
5. Lap the highside panel over the Light Transmitting Panel a minimum of 6".
6. Measure up the highside panel and install woodscrews with the correct fastening pattern so that the fastener goes through the middle row of the Single Bead Tape Sealant and into the substrate member.

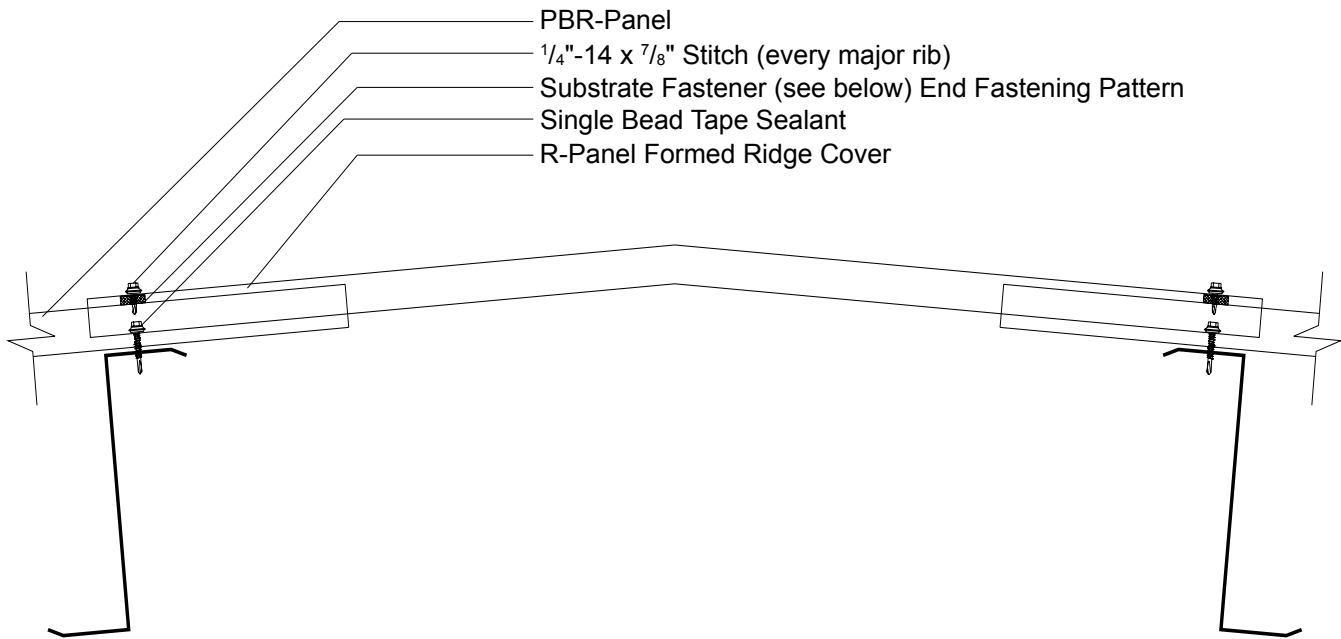
**SAFETY NOTE:** Never step, stand or walk on Light Transmitting Panels. They are not designed to carry point loading.



### INSTALLATION STEPS

Note: Always abide by local plumbing codes when you're installing vent pipes

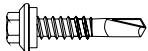
1. Areas around roof vents or rooftop units may show that corrosive fumes are emitted from a process within a building.
2. In the following example the procedures are for vent pipes six inches or less and not transmitting extremely hot or caustic materials.
3. The vent pipe must extend through the flat of the roof panel so that the Rubber Roof Jack does not block the flow of water. If the vent pipe extension cannot be raised directly into the minor ribs of the new roof panel, use elbows to offset the pipe.
4. Determine the size and length of the vent pipe to be raised.
5. Take the appropriate measurements for the pipe size and vent location, mark them on the PBR-Panel and cut the hole in the panel.
6. When cutting the hole in the panel for the penetration make the radius of the hole one half inch larger than the radius of the pipe. This will allow the panel to expand and contract around the penetration
7. Cut the top of the rubber roof jack so that it fits snug on the pipe. Slide the rubber roof jack onto the pipe all the way down until it is sitting on the roof panel.
8. If you are installing a square based rubber roof jack, make sure you turn it diamond shaped so the water runs around the side.
9. Lift the base of the rubber roof jack up so you can install tube sealant to the underside at the pipe.
10. Flip the rubber roof jack back down, flush with the panel
11. Bend up the base tabs of the rubber roof jack one side at a time and apply a bead of tube sealant. Repeat this with the other three sides of the rubber roof jack.
12. Attach the base of the rubber roof jack to the panel using stitch fasteners spaced 2" on center.
13. Apply tube sealant to the top of the rubber roof jack where it meets the pipe.



## SUBSTRATE FASTENER INFORMATION

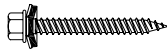
## PBR-PANEL END FASTENING PATTERN

### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate

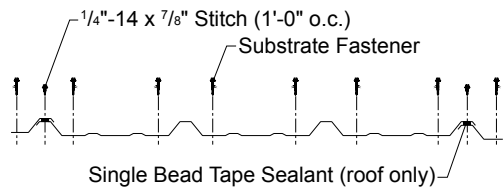


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



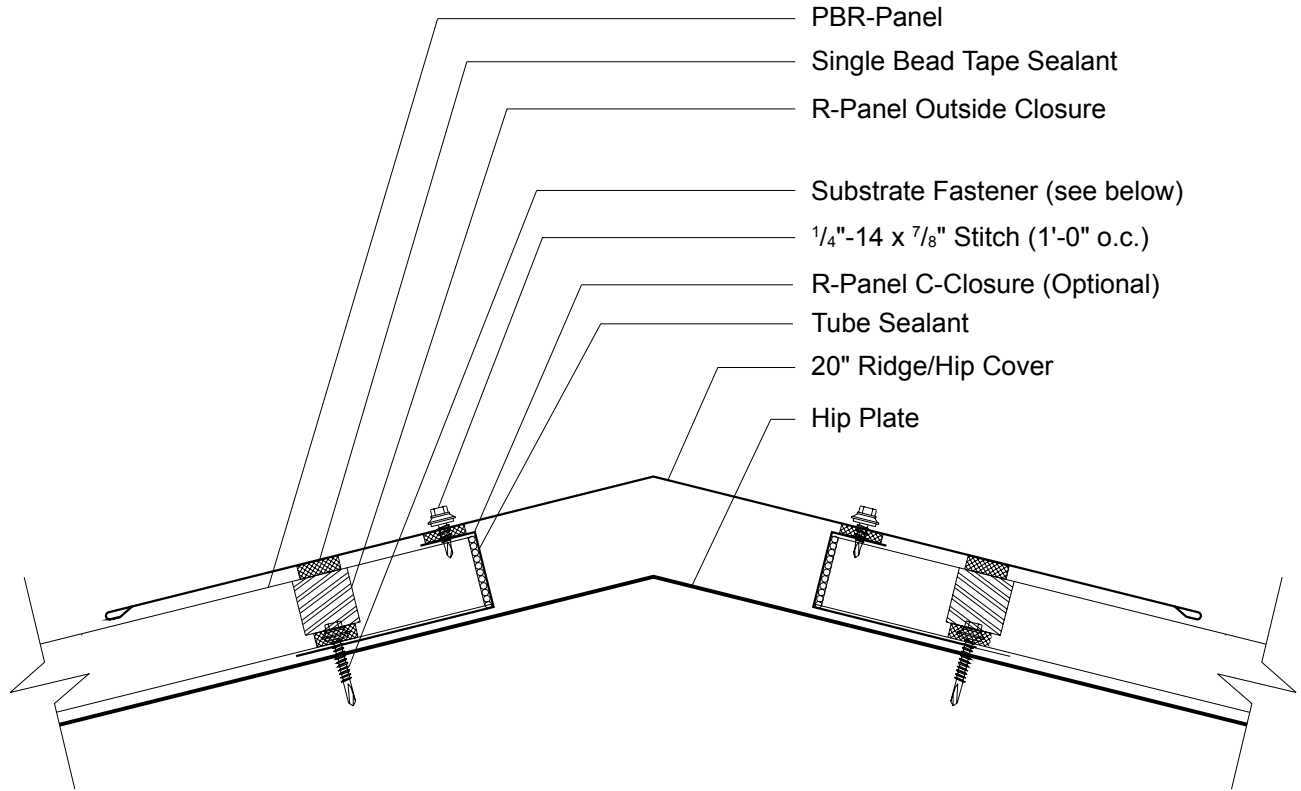
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"



## INSTALLATION STEPS

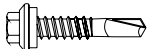
Note: It is critical that the panel ribs line up on both sides of the ridge before installing the Formed Ridge Flashing.

1. If you are using a Formed Ridge Flashing
2. If you using a Formed Ridge Condition then it should be installed before the Sculptured Rake.
3. Place the Formed Ridge Cover on top of the PBR roof panels at the ridge. Mark where the ridge flashing hits the PBR roof panels on both sides of the ridge.
4. Place a row of Single Bead Tape Sealant across the panel and over each panel rib on both sides of the ridge.
5. Fasten the Formed Ridge Flashing to the PBR roof panels with Woodscrew Fasteners, with the end fastening pattern.



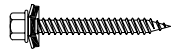
## SUBSTRATE FASTENER INFORMATION

### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate



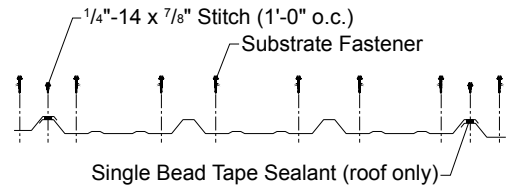
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

## PBR-PANEL END FASTENING PATTERN

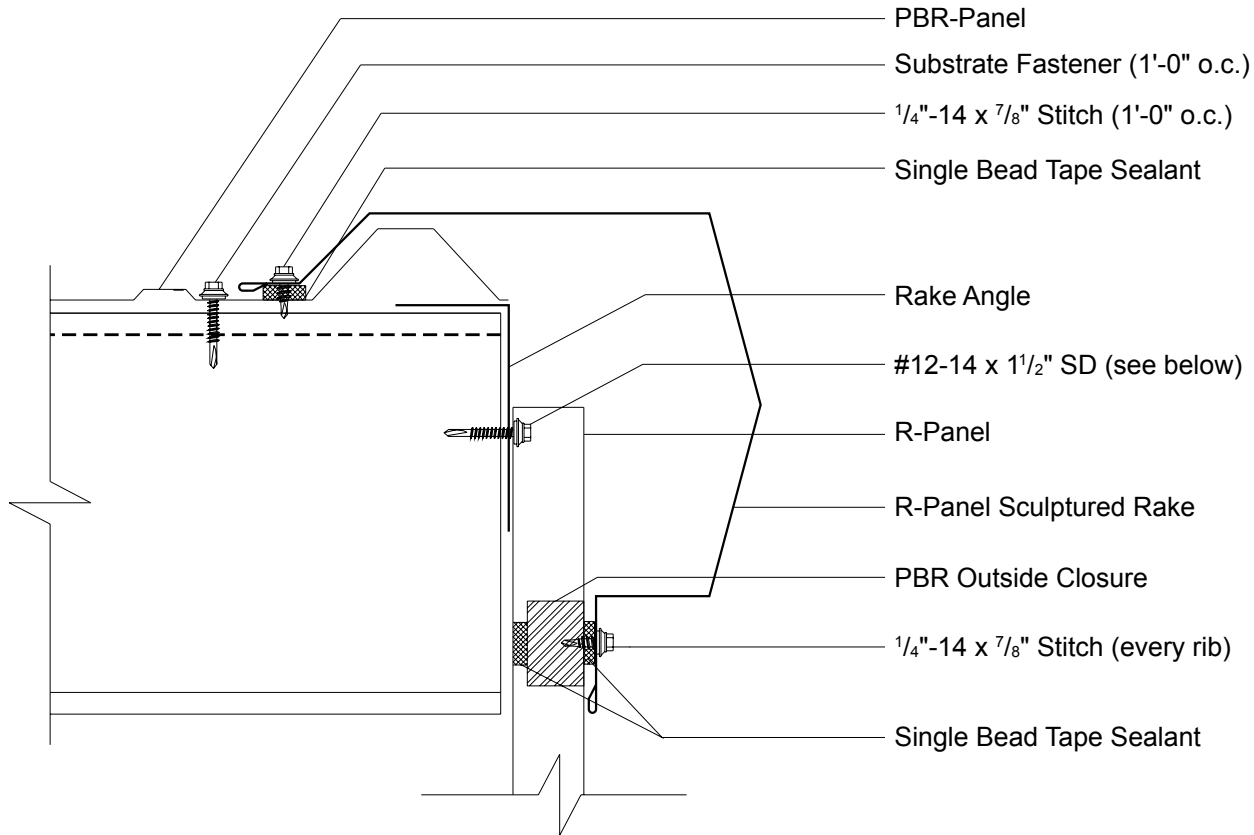


## INSTALLATION STEPS

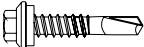


Note: C-Closure is optional on Hip installation.

1. Place the 20" Ridge/Hip Cover on top of the PBR roof panels. Mark where the edge of the Ridge/Hip Cover hits the PBR roof panels, upslope of your mark and downslope of the end fasteners, place a row of Single Bead Tape Sealant across the panel and over each panel rib.
2. Place PBR Outside Closures on top of the Single Bead Tape Sealant.
3. Apply a second row of Single Bead Tape Sealant to the top of the PBR Outside Closures.
4. Fasten the Ridge/Hip Cover to the PBR roof panels through the PBR Outside Closures with Stitch Fasteners, one at every major rib.
5. Now fasten the top of the Pitch Break Flashing to the wall or behind the wall panel.
6. If two or more flashings are required lap the flashing over the previously installed flashing by a minimum of two inches. Place a two beads of tube sealant between the flashings and secure with pop rivets two and a half inches on center.



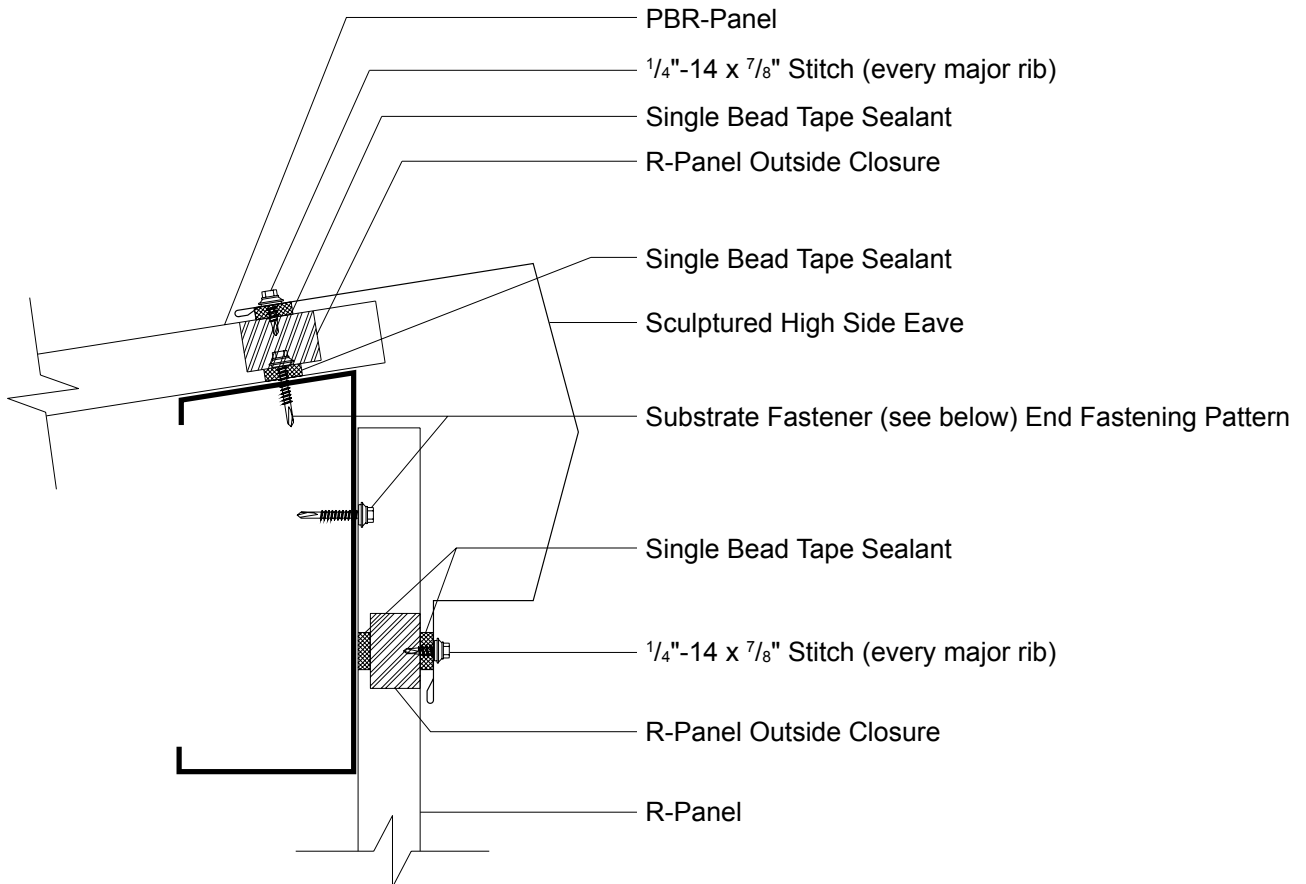


## SUBSTRATE FASTENER INFORMATION

| Open Framing  | Solid Wood Substrate  | 2X Wood Framing   |  |
|---|---|---|--|
|  |  |  |  |
| <b>Self Driller</b><br>#12-14 x 1"<br>#12-14 x 1-1/2"<br>#12-14 x 2"                | <b>Woodscrew</b><br>#10-14 x 1"<br>#10-14 x 1-1/2"<br>#10-14 x 2"                   | <b>Woodscrew</b><br>#10-14 x 1"<br>#10-14 x 1-1/2"<br>#10-14 x 2"                   |  |

## INSTALLATION STEPS

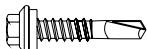
1. Before installing the Sculptured Rake Flashing the Rake Ends will need to be installed.
2. Place the Rake Ends into the end of the Sculptured Rake Flashing and fasten with Pop Rivets.
3. Place the Sculptured Rake Flashing on the rake of the building and lightly mark where the bottom of the flashing hits the wall panel along the slope. Also mark where the edge of the Sculptured Rake rests on the roof panel.
4. Place a row of Single Bead Tape Sealant along the slope of the rake at the top of the wall panel so that it is behind the Sculptured Rake Flashing.
5. Apply a Universal Closure over the Single Bead Tape Sealant. Press firmly into place.
6. For slopes up to three to twelve a PBR Outside Closure can be used for PBR wall panels.
7. The Universal closure will act as a barrier to keep insects and debris from entering the building.
8. Apply a second row of Single Bead Tape Sealant to the face of the Universal Closure. Also apply a row of Single Bead Tape Sealant to the roof panels inside of the marks made.
9. Install the Sculptured Rake Flashing flush against the wall panels, making sure to hide the Universal Closure. Fasten through the closure to the wall panel with a Stitch Fastener at every major rib.
10. Fasten the Sculptured Rake Flashing to the PBR roof panel with a Stitch fastener 1'-0" o.c..



### SUBSTRATE FASTENER INFORMATION

### PBR-PANEL END FASTENING PATTERN

#### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

#### Solid Wood Substrate

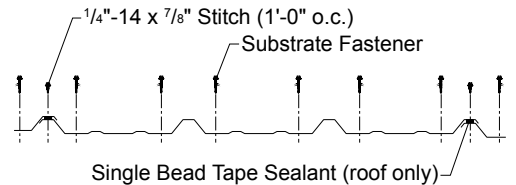


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

#### 2X Wood Framing

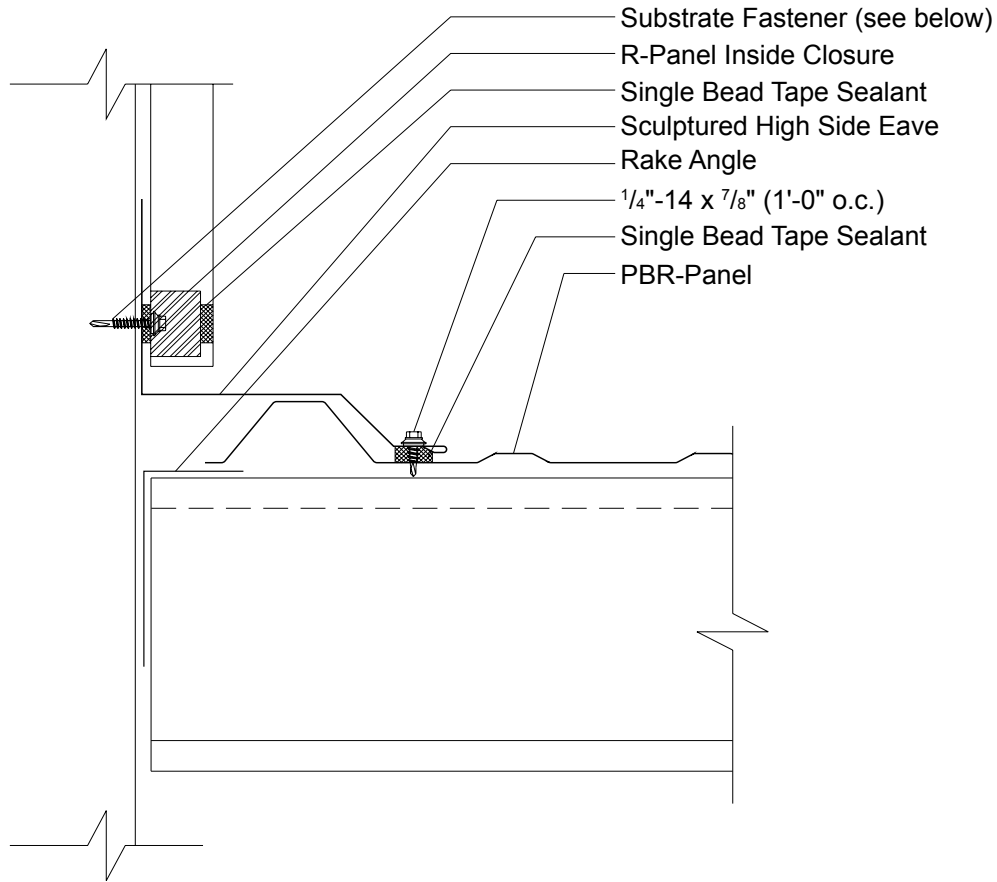


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"



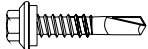
### INSTALLATION STEPS

1. Place the Sculptured Highside Eave Flashing at the peak of the roof. Lightly mark where the bottom of the Sculptured Highside Eave Flashing meets the wall panel and the top edge hits the roof panel.
2. Place a row of Single Bead Tape Sealant across the roof panel and over each panel rib above the mark.
3. Place PBR Outside Closures along the length of the highside on the roof panels. Be sure the Outside Closures are located so that the Sculptured Highside Eave Flashing will cover them.
4. Apply a second row of Single Bead Tape Sealant to the top of the outside closures along the highside.
5. Now place a row of Single Bead Tape Sealant along the top of the wall panel so that it is above the wall mark.
6. Place the Outside Closures or a Universal Closure over the Single Bead Tape Sealant. The Outside Closure or Universal Closure will act as a barrier to keep insects and debris from entering the building.
7. Apply a second row of Single Bead Tape Sealant to the top of the Outside Closures along the at the wall.
8. Place Sculptured Highside Eave Flashing flush against the roof and wall panels.
9. Fasten the Sculptured Highside Eave Flashing to the PBR roof panel through the PBR Outside Closures with Stitch Fasteners, one at every major rib.
10. Now fasten the Sculptured Highside Eave Flashing to the wall with Stitch Fasteners at every major rib.



## SUBSTRATE FASTENER INFORMATION

### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

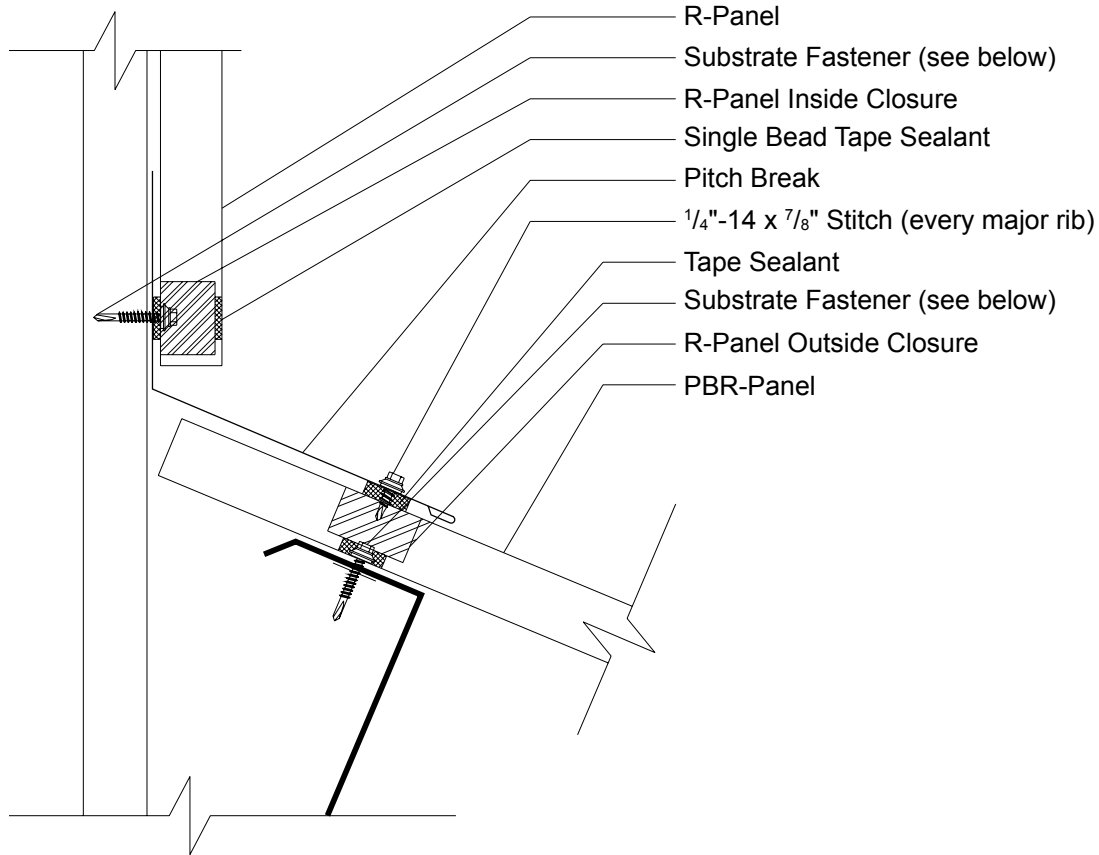
### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

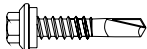
## INSTALLATION STEPS

1. Place the Rakewall Flashing up against the wall and resting on the roof panel. Lightly mark the edge of the flashing on the roof panel.
2. Apply a row of Single Bead Tape Sealant on the major rib of the roof panel down the slope.
3. Lay the Rakewall Flashing down and fasten it to the PBR roof panel with a Stitch fastener one foot on center.
4. Now fasten the top of the Rakewall Flashing to the wall.
5. Install the counter flashing, reglet or wall panel and fasten to the parapet wall with the appropriate fastener one foot on center. If counter flashing or reglet is used, seal it to parapet wall with tube sealant.



## SUBSTRATE FASTENER INFORMATION

### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate



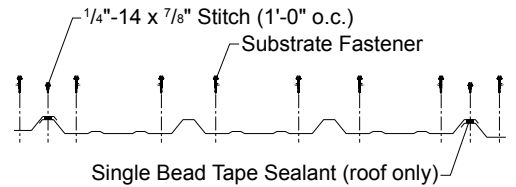
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



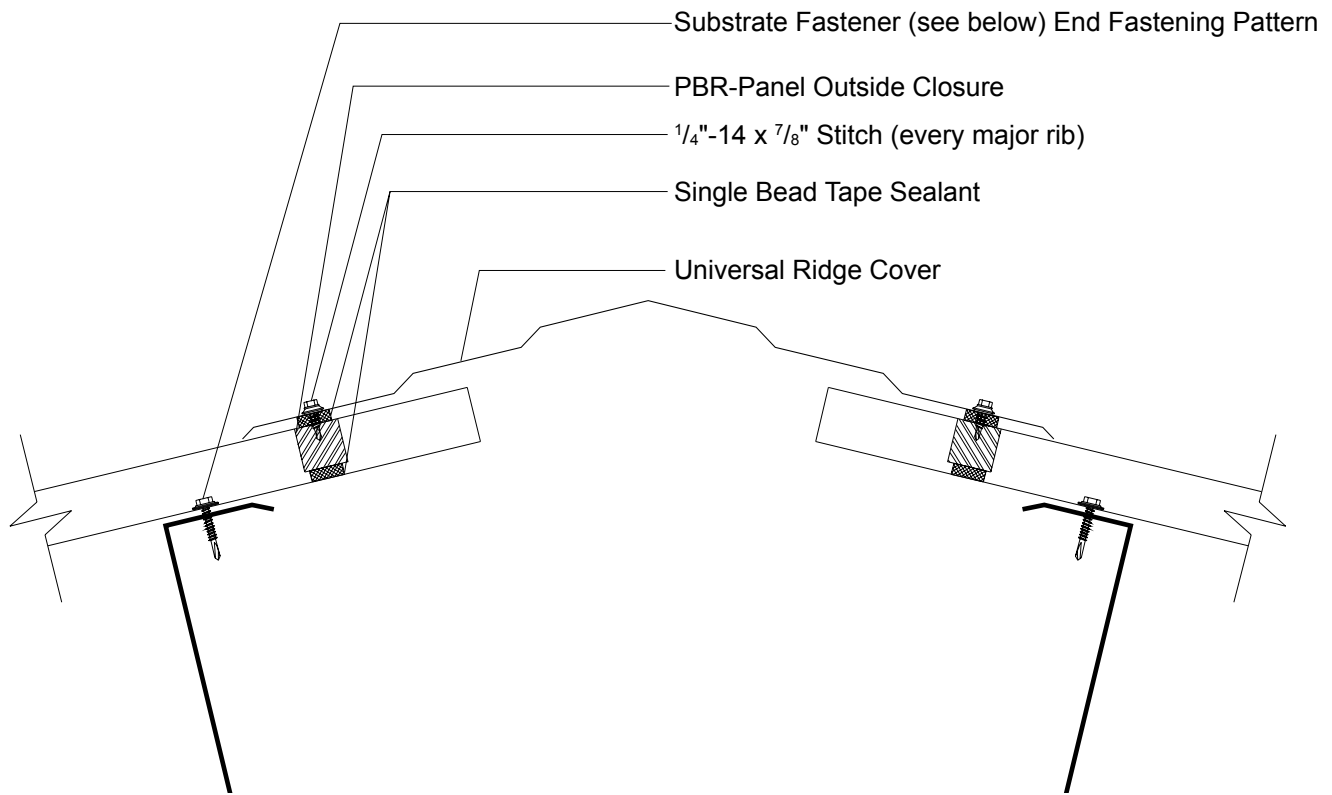
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

## PBR-PANEL END FASTENING PATTERN



## INSTALLATION STEPS

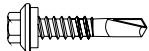
1. Place the Pitch Break Flashing on top of the PBR roof panels. Mark where the edge of the Pitch Break Flashing hits the PBR roof panels, upslope of your mark and downslope of the end fasteners, place a row of Single Bead Tape Sealant across the panel and over each panel rib.
2. Place PBR Outside Closures on top of the Single Bead Tape Sealant.
3. Apply a second row of Single Bead Tape Sealant to the top of the PBR Outside Closures.
4. Fasten the Pitch Break Flashing to the PBR roof panels through the PBR Outside Closures with Stitch Fasteners, one at every major rib.
5. Now fasten the top of the Pitch Break Flashing to the wall or behind the wall panel.
6. Install the counter flashing, reglet or wall panel and fasten to the parapet wall with the appropriate fastener one foot on center. If counter flashing or reglet is used, seal it to parapet wall with tube sealant.
7. If two or more flashings are required lap the flashing over the previously installed flashing by a minimum of two inches. Place a two beads of tube sealant between the flashings and secure with pop rivets two and a half inches on center.



### SUBSTRATE FASTENER INFORMATION

### PBR-PANEL END FASTENING PATTERN

#### Open Framing



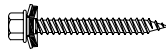
**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

#### Solid Wood Substrate

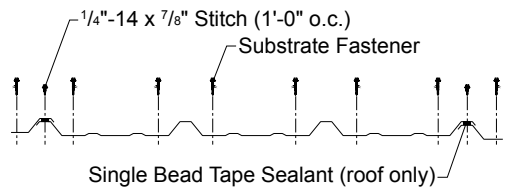


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

#### 2X Wood Framing

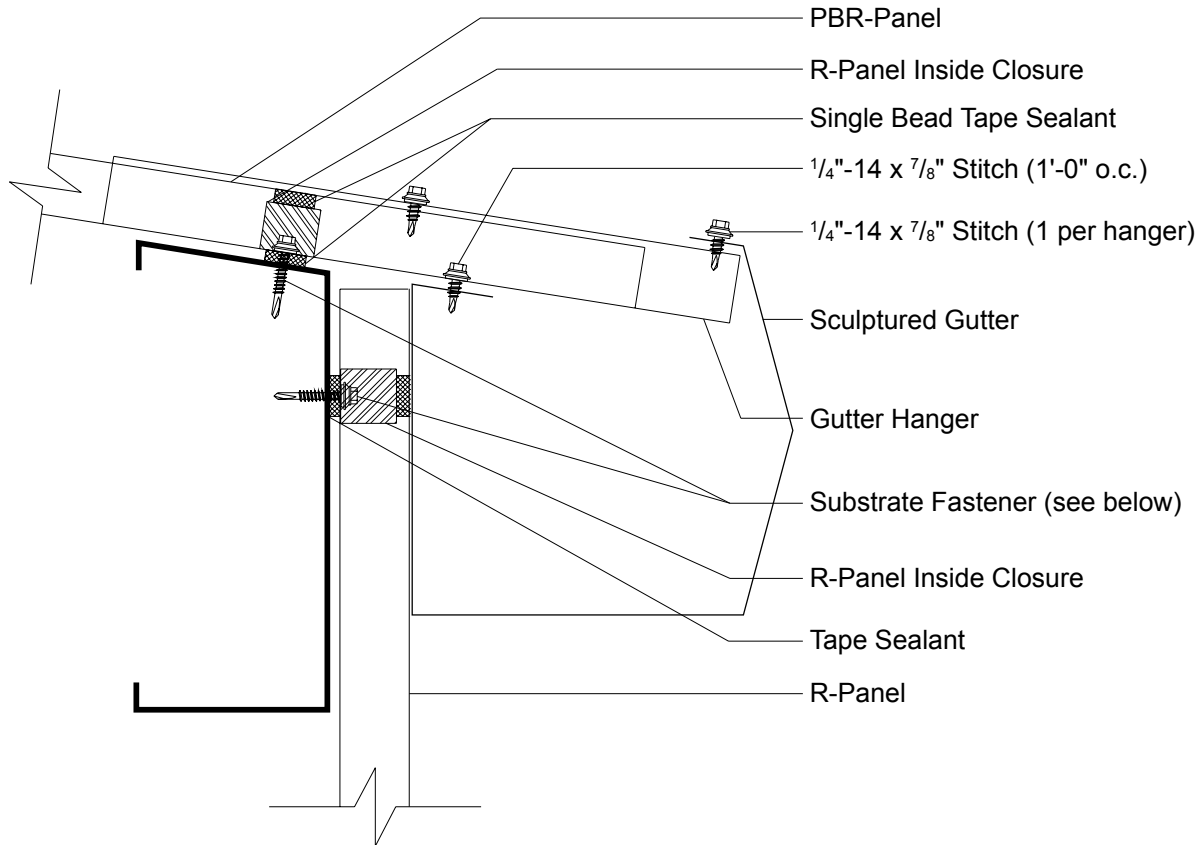


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"



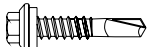
### INSTALLATION STEPS

1. Place the Universal Ridge Cover on top of the PBR roof panels. Mark the edge location of both sides of the Universal Ridge Flashing. Place a row of Single Bead Tape Sealant two inches up from your mark, across the panel and over each panel rib on both sides of the ridge.
2. Place PBR Outside Closures on top of the outside closures along the length of the ridge.
3. Apply a second row of Single Bead Tape Sealant to the top of the PBR Outside Closures.
4. Place the Universal Ridge Flashing down on the ridge and fasten the Universal Ridge Flashing to the PBR-Panels through the PBR Outside Closures with Stitch Fasteners, one at every major rib.
5. If two or more flashings are required lap the flashing over the previously installed flashing by a minimum of two inches. Place a two beads of tube sealant between the flashings and secure with pop rivets two and a half inches on center.



## SUBSTRATE FASTENER INFORMATION

### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate



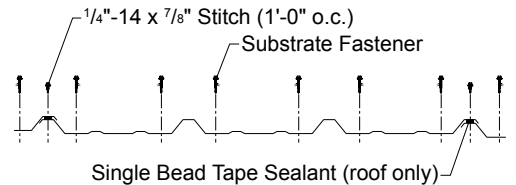
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



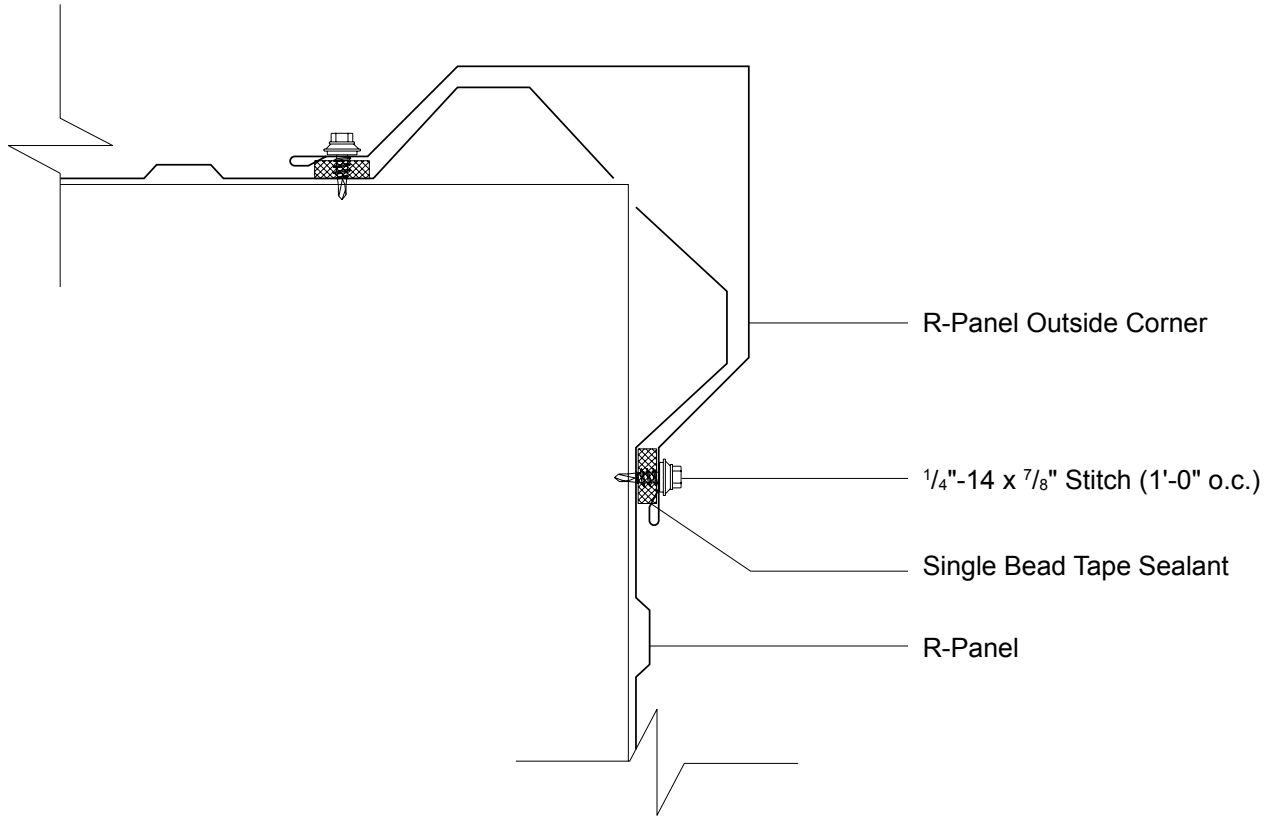
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

## PBR-PANEL END FASTENING PATTERN



## INSTALLATION STEPS

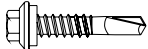
1. install the Gutter Hangers. They need to be spaced at no greater than three feet on center along the gutter line.
2. Hold the Sculptured Gutter in place flush against the Eave Flashing. Set the Gutter Hanger on top of the major rib of the PBR roof panel and slide the Gutter Hanger into the front of the gutter. Lightly mark on the panel the end of the gutter hanger. Measure and install the other Gutter Hangers down the length of the Gutter.
3. Apply Single Bead Tape Sealant to the top of the ribs. Place the Gutter Hangers as marked and fasten the Gutter Hanger to the major rib of the panel with two Stitch Fasteners.
4. Once all of the Gutter Hangers are in place install the Sculptured Gutter flashing back against the Eave Flashing.
5. Fasten the back of the Sculptured Gutter flashing to the end of the roof panel with Stitch Fasteners at a maximum of one foot on center.
6. Now fasten the front of the Sculptured Gutter to the Gutter Hangers with Stitch Fasteners. One fastener per Gutter Hanger.
7. Always remember the size and gauge of the Sculptured Gutter should be designed to applicable governing building codes.



## SUBSTRATE FASTENER INFORMATION

## OPTIONAL FLASHING

### Open Framing



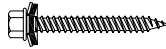
**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate

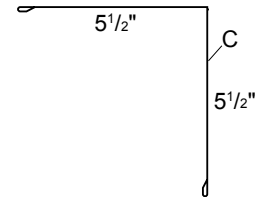


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



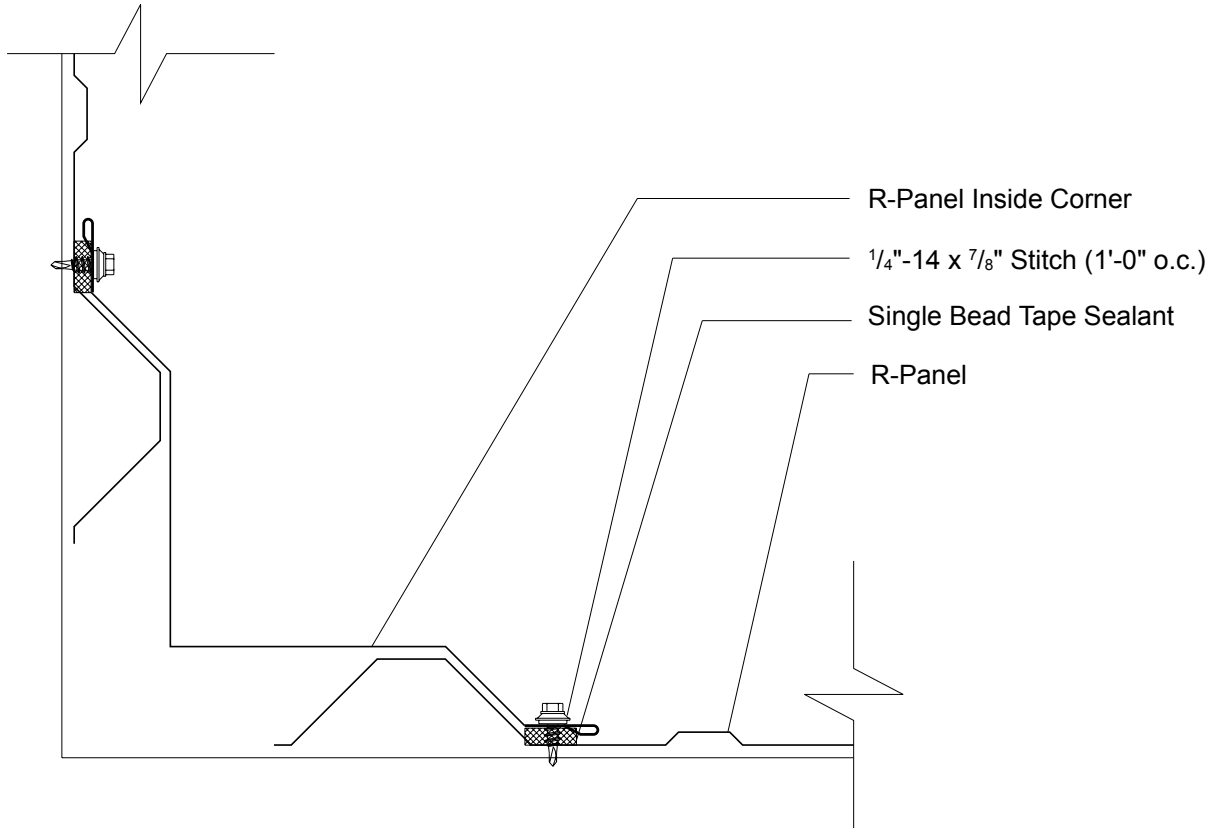
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"



## INSTALLATION STEPS

Note: Outside Corner Flashings should be installed working from the ground up.

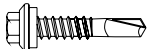
1. After the PBR wall panel is installed place the first Outside Corner Flashing at the base of the building.
2. Install a row of Single Bead Tape Sealant on each side of the Outside Corner Flashing.
3. Place the Outside Corner Flashing on the wall panels.
4. Fasten to the wall panels with 1/4"-14 x 7/8" Stitch Fasteners, 1'-0" on center.
5. If more than one Outside Corner Flashing is needed then a flashing lap is required.
6. Apply two rows of Tube Sealant to the top of the installed Outside Corner Flashing.
7. Lap the flashings a minimum of 3" and fasten with Pop Rivets 2" on center.



### SUBSTRATE FASTENER INFORMATION

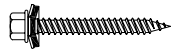
### OPTIONAL FLASHING

#### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

#### Solid Wood Substrate

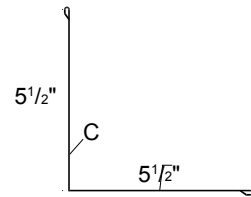


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

#### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

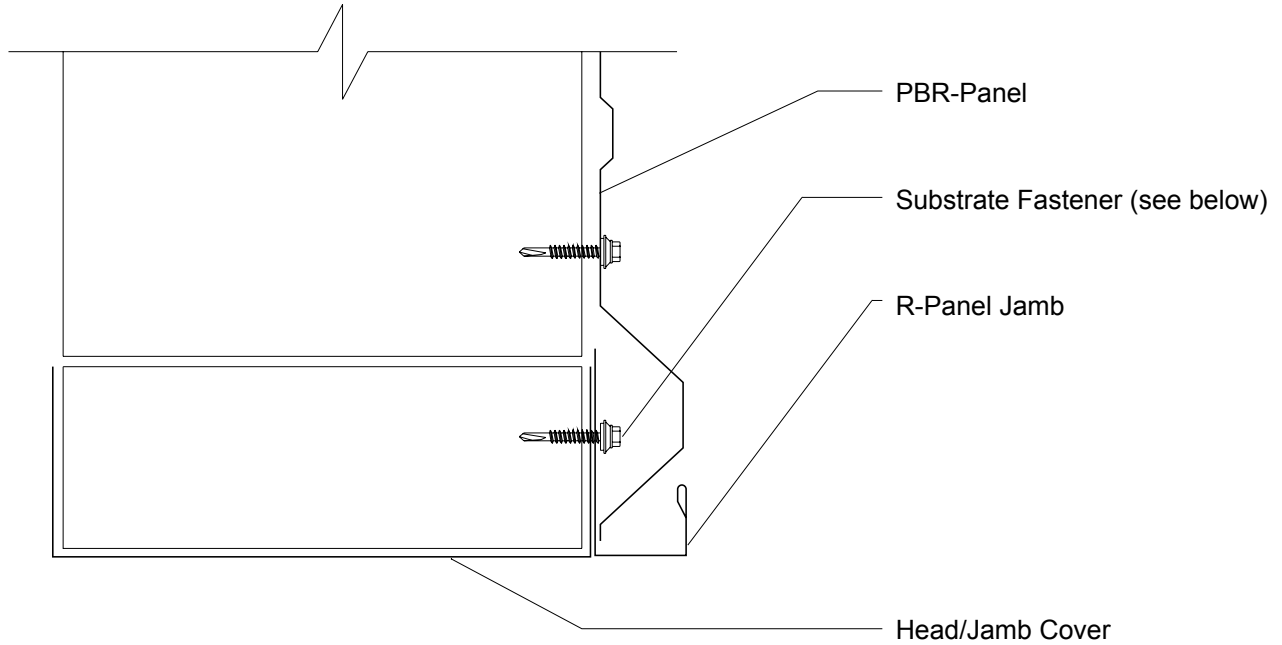


### INSTALLATION STEPS

Note: Inside Corner Flashings should be installed working from the ground up.

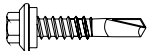
1. After the PBR wall panel is installed place the first Inside Corner Flashing at the base of the building.
2. Install a row of Single Bead Tape Sealant on each side of the Inside Corner Flashing.
3. Place the Inside Corner Flashing on the wall panels.
4. Fasten to the wall panels with 1/4"-14 x 7/8" Stitch Fasteners, 1'-0" on center.
5. If more than one Inside Corner Flashing is needed then a flashing lap is required.
6. Apply two rows of Tube Sealant to the top of the installed Inside Corner Flashing.
7. Lap the flashings a minimum of 3" and fasten with Pop Rivets 2" on center.





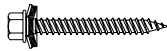
## SUBSTRATE FASTENER INFORMATION

### Open Framing



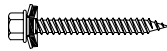
**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

### Solid Wood Substrate

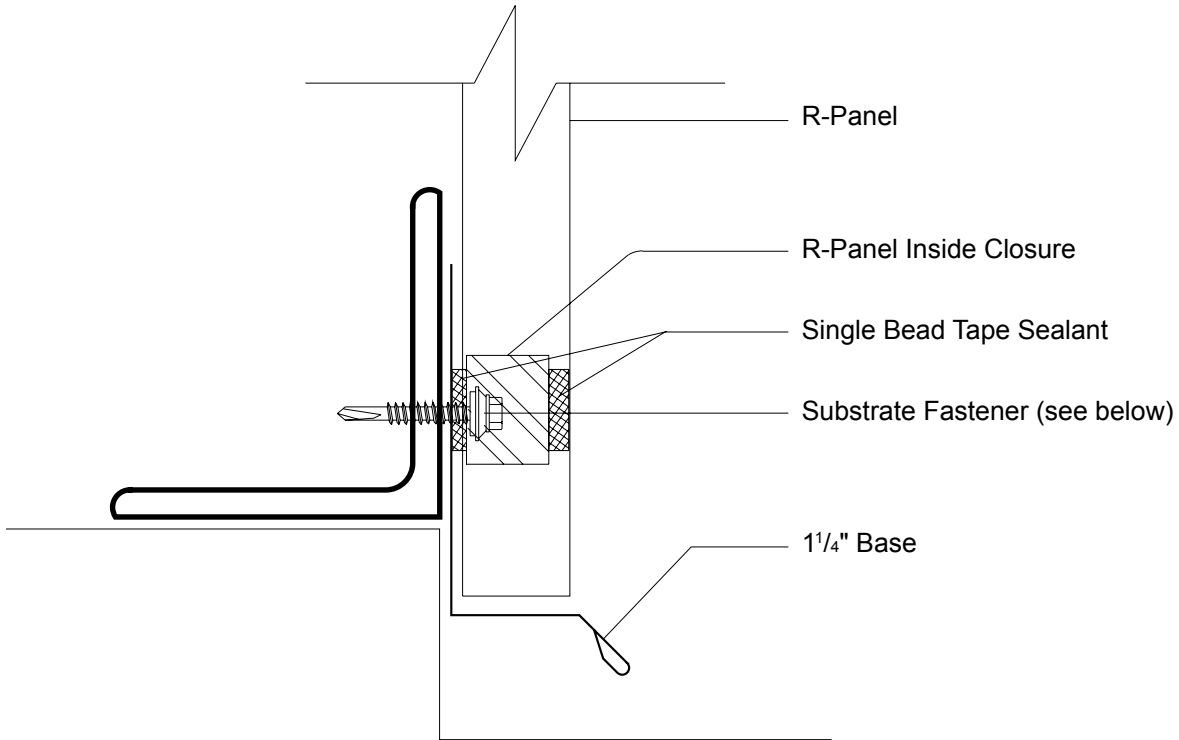


**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

### 2X Wood Framing



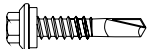
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"



### SUBSTRATE FASTENER INFORMATION

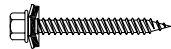
### PBR-PANEL FASTENING PATTERN

#### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

#### Solid Wood Substrate

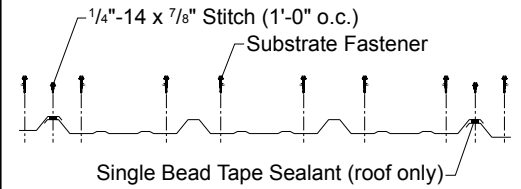


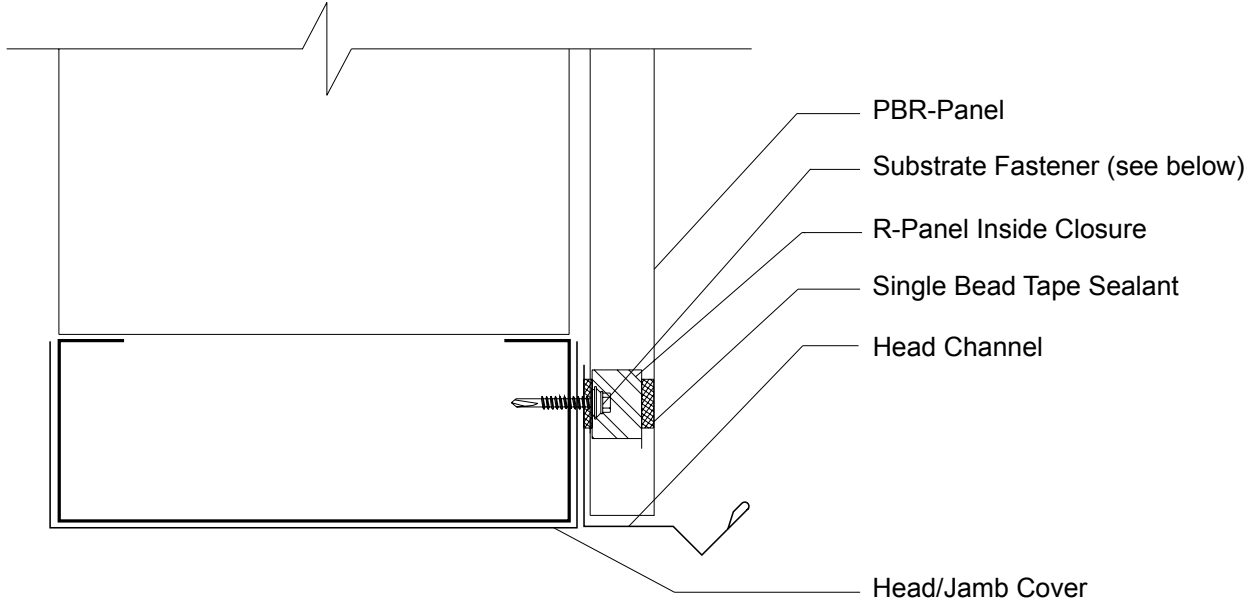
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

#### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

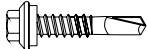




### SUBSTRATE FASTENER INFORMATION

### PBR-PANEL FASTENING PATTERN

#### Open Framing



**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

#### Solid Wood Substrate

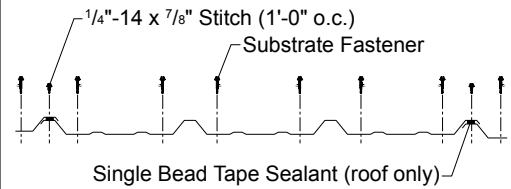


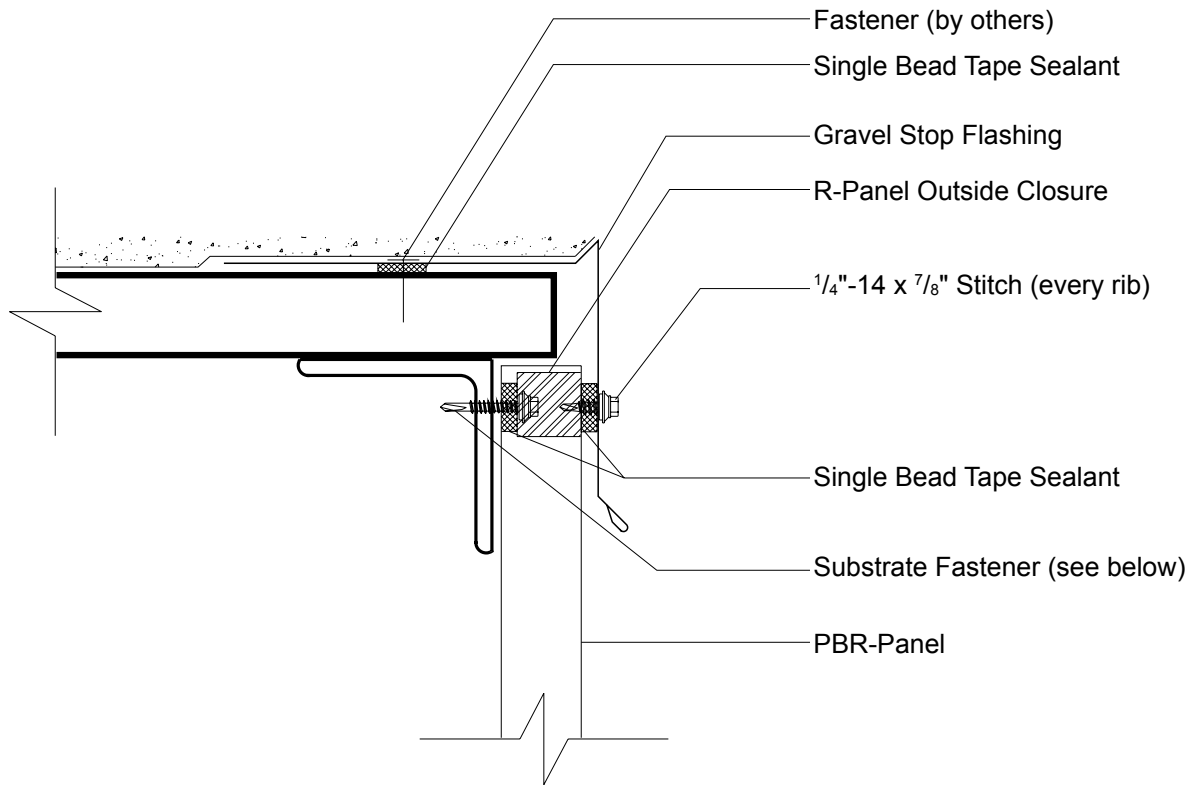
**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

#### 2X Wood Framing



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

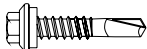




**SUBSTRATE FASTENER INFORMATION**

**PBR-PANEL FASTENING PATTERN**

**Open Framing**



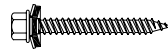
**Self Driller**  
 #12-14 x 1"  
 #12-14 x 1-1/2"  
 #12-14 x 2"

**Solid Wood Substrate**



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

**2X Wood Framing**



**Woodscrew**  
 #10-14 x 1"  
 #10-14 x 1-1/2"  
 #10-14 x 2"

