# Table of Contents

## Panel Information
- Pro-Panel II Panel Profile .................................. PPP-2
- Panel Overview .............................................. PPP-2

## Flashing Profiles
- Eave (Direct Fasten) ........................................ PPP-3
- Cleat .............................................................. PPP-3
- Box Gutter ....................................................... PPP-3
- Box Gutter End ............................................... PPP-3
- Universal Gutter/Downspout Strap ...................... PPP-3
- 6" x 4" Downspout ........................................... PPP-3
- 6" x 4" 95° Elbow ............................................ PPP-3
- Downspout Bracket .......................................... PPP-3
- Valley ............................................................ PPP-3
- Pro-Panel II Rake .......................................... PPP-3
- Rakewall ......................................................... PPP-3
- Pitch Break ..................................................... PPP-3
- Peak .............................................................. PPP-3
- 11" Ridge/Hip Cover ....................................... PPP-3
- 20" Ridge/Hip Cover ....................................... PPP-3
- Vented Ridge Cover ......................................... PPP-4
- Vent Drip ....................................................... PPP-4
- Pro-Panel II Inside Corner ................................ PPP-4
- Pro-Panel II Outside Corner ............................... PPP-4
- 1.5" Sill/Head .................................................. PPP-4
- 1.5" Sill to Soffit ............................................. PPP-4
- Head Jamb Cover ............................................. PPP-4
- Pro-Panel II Jamb ............................................. PPP-4
- 1.25" Base ........................................................ PPP-4
- Gravel Stop .................................................... PPP-4

## Accessory Profiles
- Pro-Panel II Closures ...................................... PPP-5
- Universal Closure .......................................... PPP-5
- Pro-Panel II Light Transmitting Panel .................. PPP-5
- Tube Sealant .................................................. PPP-5
- Tape Sealant .................................................. PPP-5
- Rubber Roof Jack ........................................... PPP-5
- Retro Roof Jack .............................................. PPP-5
- Rubber Roof Flashing Kit .................................. PPP-5
- Touch-Up Paint ............................................... PPP-5
- Continuous Ridge Vent .................................... PPP-5
- Pro-Panel II Panel Shear .................................. PPP-5
- Vent Material .................................................. PPP-5
- Louver with Screen ......................................... PPP-5

## Testing Information
- Section Properties and General Information ........ PPP-6

## Design/Installation Considerations
- Fastener Installation Technique ............................ PPP-7
- Condition of Substructure ................................... PPP-7
- Fastening Information ....................................... PPP-8

## Detail Conditions
- Eave Detail .................................................... PPP-9
- Box Gutter Detail ............................................ PPP-9
- Valley Detail ................................................... PPP-10
- Rake Detail ..................................................... PPP-10
- Rakewall Detail ............................................... PPP-11
- Endwall Detail ................................................ PPP-11
- High Side Eave Detail ..................................... PPP-12
- 20" Ridge/Hip Detail ....................................... PPP-12
- Ridge Detail ................................................... PPP-13
- Gravel Stop Detail .......................................... PPP-13
- Outside Corner Detail ..................................... PPP-14
- Inside Corner Detail ....................................... PPP-14
- Jamb Detail ..................................................... PPP-15
- Head Detail ..................................................... PPP-15
- Base Detail ..................................................... PPP-16

## Notes
- Notes .............................................................. PPP-16
### PANEL OVERVIEW

#### PANEL PROFILE

- 5\(\frac{1}{8}\)" SLOPE
- 10\(\frac{1}{8}\)" SUBSTRATE
- 9" COVERAGE
- 3\(\frac{1}{8}\)" LENGTH
- 36" AVAILABILITY
- 2\(\frac{1}{4}\)" APPLICATION
- 23/4" FASTENING SYSTEM
- 5/8" FASTENERS
- 26 gauge MATERIALS
- Acrylic Coated Galvalume® (ACG) / ASTM A-792 - AZ55
- Prepainted Galvalume / ASTM A-792 - AZ50
- MS Colorfast45®
- Fluorocarbon (PVDF) * **

#### SLOPE

The minimum recommended slope for any Pro-Panel II roofing panel is 3:12.

#### SUBSTRATE

Pro-Panel II 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.

#### COVERAGE

Pro-Panel II panels are available in a 36" width with a 5/8" rib height.

#### 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 (see PGI-2 and PGI-3 for locations).

#### AVAILABILITY

Pro-Panel II panels are available in 26 gauge.

#### APPLICATION

Commercial and Industrial panel.

#### PERFORMANCE TEST

UL 2218, UL 790, Miami-Dade County Approved, Texas Department of Insurance

#### FASTENING SYSTEM

Direct Fasten (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
- Prepainted Galvalume / ASTM A-792 - AZ50
- MS Colorfast45®
- * Fluorocarbon (PVDF) **

  * Differential appearance of Acrylic Coated Galvalume roofing materials is not a cause for rejection.
  ** Meets both Kynar 500 and Hylar 5000 specifications.
**PRO-PANEL II® FLASHING PROFILES**

**EAVE (DIRECT FASTEN)**

Length 10'-2" - *Specify Slope Angle

**CLEAT**

Length 10'-2"

**BOX GUTTER**

Length 10'-2", 20'-3" - *Specify Slope Angle

**BOX GUTTER END**

**UNIVERSAL GUTTER/DOWNSPOUT BRACKET**

Length 10'-2", 20'-3" (Also available 4" x 3 1/2")

**DOWNSPOUT 6" x 4"**

Length 10'-2", 20'-3" - *Specify Slope Angle

**95°ELBOW 6" x 4"**

(Also available 4" x 3 1/2")

**DOWNSPOUT BRACKET**

(Also available 4")

**VALLEY**

Length 10'-2", 20'-3" - *Specify Slope Angle

**PRO-PANEL II RAKE**

Length 10'-2", 20'-3"

**RAKEWALL**

Length 10'-2"

**PITCH BREAK**

Length 10'-2" - *Specify Slope Angle

**PEAK**

Length 10'-2", 20'-3" - *Specify Slope Angle

**11" RIDGE/HIP COVER**

**20" RIDGE/HIP COVER**

Length 10'-2", 20'-3" - *Specify Slope Angle
PRO-PANEL II® Flashing Profiles (cont.)

**VENTED RIDGE COVER**

- 3” X 3”
- 1½” Hem
- Length 10'-2", 20'-3" - *Specify Slope Angle

**VENT DRIP**

- 1½” Hem
- Length 10'-2"

**PRO-PANEL II OUTSIDE CORNER**

- 4”
- Hem
- Length 10'-2", 14'-2", 20'-3"

**1.5” SILL/HEAD**

- 2½”
- 1½”
- Hem
- Length 10'-2"

**1.5” SILL TO SOFFIT**

- 3½”
- 1½”
- Length 10'-2"

**HEAD JAMB COVER**

- 2½”
- 8½”
- Length 10'-2", 14'-2"

**PRO-PANEL II JAMB**

- 2½”
- 1”
- Length 10'-2"

**GRAVEL STOP**

- 5½”
- 1½”
- Length 10'-2" - *Specify Slope Angle

C- Indicates color side of flashing.
**PRO-PANEL II® ACCESSORY PROFILES**

**PRO-PANEL II CLOSURES**
- Outside Closure
- Inside Closure
- Polyethylene Foam

**TUBE SEALANT**
- 10.3 oz. Cartridge
- Urethane

**RUBBER ROOF JACK**
- MINI (1/4" to 1/2" O.D. Pipe)
- #2 (1/2" to 3" O.D. Pipe)
- #4 (3" to 6" O.D. Pipe)
- #6 (6" to 9" O.D. Pipe)
- #8 (7" to 13" O.D. Pipe)

**RETRO ROOF JACK**
- #801RETRO (5/8" to 2 1/2" O.D. Pipe)
- #802RETRO (2" to 7 1/4" O.D. Pipe)
- #803RETRO (3 1/2" to 10" O.D. Pipe)

**TAPE SEALANT**
- 1/2" X 1/2" X 50'
- Single Bead
- Butyl - Gray

**RUBBER ROOF FLASH KIT**
- 12" x 50'-0" Flash Kit
- 18" x 50'-0" Flash Kit

**CONTINUOUS RIDGE VENT**
- 9" x 10', 12" x 10'

**LOUVRE WITH SCREEN**
- 3' x 3' or 3' x 4'

**UNIVERSAL CLOSURE**
- 1" x 1 1/2" x 50' Polyethylene Foam
- 1" x 1 1/2" x 10' Polyethylene Foam

**PRO-PANEL II LIGHT TRANSMITTING PANEL**
- 36"

**PRO-PANEL II LIGHT TRANSMITTING PANEL**
- 5 Ounce White Fiberglass
- Available In 10' and 12' Panels

**VENT MATERIAL**
- 3 3/4" X 1 5/8" X 50' Polyethylene Foam
- 1" x 1 1/2" x 50' Polyethylene Foam

**VENT MATERIAL**
- 1" x 1 1/2" x 10' Polyethylene Foam

**VENT MATERIAL**
- 7/8" X 1 1/2" X 50' Polyethylene Foam

**VENT MATERIAL**
- 4" X 7/8" X 50' Polyethylene Foam
### PRO-PANEL II® SECTION PROPERTIES AND LOAD TABLES

**ATTACHMENT DETAIL**

- 1/4"-14 x 7/8" Stitch Screw (1'-0" o.c.)
- #9-15 Woodscrew

**OPTIONAL PROFILE**

- Anti-Siphon Groove

**FASTENING PATTERN**

- 1/4"-14 x 7/8" Stitch Screw
- #9-15 Woodscrew

---

### SECTION PROPERTIES

<table>
<thead>
<tr>
<th>Ga.</th>
<th>Width (in.)</th>
<th>Yield KSI</th>
<th>Weight PSF</th>
<th>Top in Compression</th>
<th>Bottom in Compression</th>
<th>Inward Load</th>
<th>Outward Load</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>lxx In³/ft</td>
<td>Sxx In³/ft</td>
<td>2’ 2.5’ 3’</td>
<td>3.5’ 4’ 5’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2’ 2.5’ 3’</td>
<td>3.5’ 4’ 5’</td>
</tr>
<tr>
<td>29</td>
<td>36”</td>
<td>80</td>
<td>0.71</td>
<td>0.0067</td>
<td>0.0134</td>
<td>90 58 41</td>
<td>27 18 9</td>
</tr>
<tr>
<td>26</td>
<td>36”</td>
<td>80</td>
<td>0.87</td>
<td>0.0090</td>
<td>0.0181</td>
<td>115 75 52</td>
<td>35 23 12</td>
</tr>
</tbody>
</table>

---

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

- **SECTION PROPERTIES**
  - **Bottom in Compression**
    - Sxx In³/ft: 0.0063
    - Sxx In³/ft: 0.0170
  - **Top in Compression**
    - lxx In³/ft: 0.0047
    - Sxx In³/ft: 0.0133

- **ALLOWABLE UNIFORM LOADS PSF**
  - **Inward Load**
    - 2’ 2.5’ 3’ 3.5’ 4’ 5’
    - 90 58 41 27 18 9
  - **Outward Load**
    - 2’ 2.5’ 3’ 3.5’ 4’ 5’
    - 122 79 55 35 23 12

---

### GENERAL INFORMATION

- **Slope**
  - The minimum recommended slope for Pro-Panel II® roof panel is 3:12.

- **Substructure**
  - Pro-Panel II® is designed to be utilized over open structural framing, or a solid substrate. To avoid panel distortion, use a properly aligned and uniform substructure.

- **Coverage**
  - Pro-Panel II® panels are available in 5/8" rib height with a coverage width of 36".

- **Length**
  - Minimum factory cut length is 5'-0". Maximum recommended panel length is 45'-0". Longer panels require additional consideration in packaging, shipping, and erection. Please consult Metal Sales for recommendations.

- **Fasteners**
  - The fastener selection guide should be consulted for choosing the proper fastener for specific applications. Quantity and type of fastener must meet necessary loading and code requirements.
  - **NOTE:** All panels are subject to surface distortion due to improperly applied fasteners. Overdriven fasteners will cause stress and induce oil canning across the face of the panel at or near the point of attachment.

- **Availability**
  - **Finishes:** Acrylic Coated Galvalume® or MS Colorfast45®
  - **Gauges:** 26 ga and 29 ga standard

---

**ATTACHMENT DETAIL**

- 1/4"-14 x 7/8" Stitch Screw (1'-0" o.c.)
- #9-15 Woodscrew

**OPTIONAL PROFILE**

- Anti-Siphon Groove

**FASTENING PATTERN**

- 1/4"-14 x 7/8" Stitch Screw
- #9-15 Woodscrew
**FASTENER INSTALLATION TECHNIQUE**

**Recommended Tool Type** - Use depth locating nose or adjustable clutch on screw gun to prevent overdrilling 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.

<table>
<thead>
<tr>
<th>CORRECT</th>
<th>TOO LOOSE</th>
<th>TOO TIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sealing material slightly visible at edge of metal washer. Assembly is watertight.</td>
<td>Sealing material is not visible; not enough compression to seal properly.</td>
<td>Metal washer deformed; sealing material pressed beyond washer edge.</td>
</tr>
</tbody>
</table>

**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.

**CONDITION OF SUBSTRUCTURE**

Whether over solid substrate or open structural framing, panel distortion may occur if not applied over properly aligned and uniform substructure.

The installer should check the roof deck for squareness before installing Pro-Panel II 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). Then 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.
PRO-PANEL II® DESIGN / INSTALLATION CONSIDERATIONS (CONT.)

PRO-PANEL II FASTENING PATTERNS

1/4" 14 x 7/8" Stitch Screw (1'-0" o.c.)

Pro-Panel II

Anti-Siphon Groove

Pro-Panel II Fastening Pattern - Interior

Pro-Panel II Fastening Pattern - Ends
**PRO-PANEL II® EAVE DETAIL**

3:12 Slope Minimum

- Pro-Panel II Panel
- Tape Sealant
- #12-14 x 1 1/2" SD (see below)
- Pro-Panel II Inside Closure
- Eave
- #12-14 x 1 1/2" SD (see below)
- Tape Sealant
- 1/4"-14 x 7/8" Stitch Screw (every rib)
- Pro-Panel II Outside Closure
- Pro-Panel II Panel

**PRO-PANEL II® BOX GUTTER DETAIL**

3:12 Slope Minimum

- Pro-Panel II Panel
- Tape Sealant
- Pro-Panel II Inside Closure
- #12-14 x 1 1/2" SD (see below)
- Universal Gutter/Downspout Strap
- 1/8 x 3/16" Pop Rivet (every rib)
- Box Gutter
- Tape Sealant
- 1/4"-14 x 7/8" Stitch Screw (every rib)
- Pro-Panel II Inside Closure
- Pro-Panel II Panel

- 1/4"-14 x 7/8" Stitch Screw (1'-0" o.c.)
- #12-14 x 1 1/2" SD

**Pro-Panel II Fastening Pattern**
PRO-PANEL II® VALLEY DETAIL

3:12 Slope Minimum

- Pro-Panel II
- Tape Sealant
- #12-14 x 1\(\frac{1}{2}\)" SD (see below)
- Pro-Panel II Inside Closure
- Valley Plate
- Valley

3" Minimum

\(\frac{1}{4}"\) - 14 x 7/8" Stitch Screw (1'-0" o.c.)

#12-14 x 1\(\frac{1}{2}\)" SD

PRO-PANEL II RAKE DETAIL

3:12 Slope Minimum

- Pro-Panel II Panel
- 1\(\frac{1}{4}\)" - 14 x 7/8" Stitch Screw (1'-0" o.c.)
- Tape Sealant

- Pro-Panel II Rake
- #12-14 x 1\(\frac{1}{2}\)" SD (see below)
- Tape Sealant
- 1\(\frac{1}{4}\)" - 14 x 7/8" Stitch Screw (every rib)
- Pro-Panel II Outside Closure
- Pro-Panel II Panel

\(\frac{1}{4}"\) - 14 x 7/8" Stitch Screw (1'-0" o.c.)

#12-14 x 1\(\frac{1}{2}\)" SD

Pro-Panel II Fastening Pattern
**PRO-PANEL II® RAKEWALL DETAIL**

3:12 Slope
Minimum

- #12-14 x 1½" SD (see below)
- Pro-Panel II Outside Closure
- Tape Sealant
- Rakewall
- ¼"-14 x ⅜" Stitch Screw (1'-0" o.c.)
- Tape Sealant
- Pro-Panel II Panel

**PRO-PANEL II® ENDWALL DETAIL**

3:12 Slope
Minimum

- #12-14 x 1½" SD (see below)
- Pro-Panel II Inside Closure
- Tape Sealant
- Pitch Break
- ¼"-14 x ⅜" Stitch Screw (every rib)
- Tape Sealant
- Pro-Panel II Outside Closure
- Tape Sealant
- #12-14 x 1½" SD (see below)
- Pro-Panel II Panel

- ¼"-14 x ⅜" Stitch Screw (1'-0" o.c.)
- #12-14 x 1½" SD

**Pro-Panel II Fastening Pattern**
**PRO-PANEL II® HIGH SIDE EAVE DETAIL**

3:12 Slope Minimum

- Pro-Panel II Panel
- 1/4" x 7/8" Stitch Screw (every rib)
- Tape Sealant
- Pro-Panel II Outside Closure
- Highside Eave
- #12-14 x 1 1/2" SD (see below)

- Tape Sealant
- 1/4"-14 x 7/8" Stitch Screw (every rib)

**PRO-PANEL II® 20" RIDGE/HIP DETAIL**

3:12 Slope Minimum

- Pro-Panel II Panel
- #12-14 x 1 1/2" SD (see below)
- 1/4"-14 x 7/8" Stitch Screw (every rib)
- Tape Sealant
- Pro-Panel II Outside Closure
- 20" Ridge/Hip Cover

- Tape Sealant
- 1/4"-14 x 7/8" Stitch Screw (every rib)

**Pro-Panel II® Fastening Pattern**

- 1/4"-14 x 7/8" Stitch Screw (1'-0" o.c.)
- #12-14 x 1 1/2" SD
**PRO-PANEL II® RIDGE DETAIL**

3:12 Slope
Minimum

- 1/4"-14 x 7/8" Stitch Screw (every rib)
- Tape Sealant
- Pro-Panel II Outside Closure
- #12-14 x 1 1/2" SD (see below)
- Pro-Panel II Panel
- Universal Ridge Cover

Pro-Panel II Fastening Pattern

**PRO-PANEL II® GRAVEL STOP DETAIL**

3:12 Slope
Minimum

- Fastener (by others)
- Tape Sealant
- Gravel Stop
- Pro-Panel II Outside Closure
- Tape Sealant
- 1/8" x 3/32" Pop Rivet (every rib)
- Cleat
- #12-14 x 1 1/2" SD (see below)
- Pro-Panel II Panel

Pro-Panel II Fastening Pattern
**PRO-PANEL II® JAMB DETAIL**

- Pro-Panel II
- #12-14 x 1½" SD (1'-0" o.c.)
- Pro-Panel II Jamb
- Head/Jamb Cover

**PRO-PANEL II® HEAD DETAIL**

- Pro-Panel II
- #12-14 x 1½" SD (see below)
- Pro-Panel II Inside Closure
- Tape Sealant
- Head Channel
- Head/Jamb Cover

- ⅛"-14 x ⅝" Stitch Screw (1'-0" o.c.)
- #12-14 x 1½" SD

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PRO-PANEL II® BASE DETAIL

- Pro-Panel II Panel
- #12-14 x 1 1/2" SD (see below)
- Pro-Panel II Inside Closure
- Tape Sealant
- 1 1/4" Base

PRO-PANEL II Fastening Pattern

- 1/8" x 1/4" Stitch Screw (1'-0" o.c.)
- #12-14 x 1 1/2" SD

PRO-PANEL II NOTES

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