PBR • R • IR PANEL
INSTALLATION GUIDE

UNION
CORRUGATING COMPANY

Your Roof. For Life.™

Important Notice: This is only a guide. It is the users responsibility to verify local building code requirements. Please check with your local building code office before beginning any project.

Storage

If metal is not to be installed immediately, store inside in a well ventilated, dry location. Condensation or other moisture can form between the sheets during storage causing water stains or white rust which detracts from the appearance of the product and may affect the product's useful life. Trapped moisture between sheets of painted metal can cause white rust to form underneath the paint. This can cause the paint to flake off the panel immediately or several years later. To prevent white rust and staining, break the shipping bands on the material. Store the material on end or on an incline of at least 8" with a supporting board underneath to prevent sagging. Fan the sheets slightly at the bottom to allow for air circulation. Keep the sheets off of the ground with an insulator such as wood. Any outdoor storage is at the customer's own risk. If outdoor storage cannot be avoided, protect the metal using a canvas cover or waterproof paper. Never cover the metal with plastic as this will cause condensation to form.

General Installation Information

Insure that the structure is square and true before beginning panel installation. If the structure is not square, the panels will not properly seal at the side laps. Green or damp lumber is not recommended. Moisture released from the damp lumber may damage the metal panels. Remove any loose metal shavings left on roof surface immediately to prevent corrosion. Keep roof free of debris that could trap moisture on the metal, causing corrosion. The R Panel is recommended for use on side walls only. For roof installations, use the PBR Panel which has a purlin bearing leg to provide greater support at the laps. The IR Panel is used on side walls only. The minimum pitch for roofing applications is 1:12.

Safety Precautions

Always wear heavy gloves when working with steel panels to avoid cuts from sharp edges. When power cutting or drilling steel panels, always wear safety glasses to prevent eye injury from flying metal fragments. If you must walk on a metal roof, take great care. Metal panels can become slippery, so always wear shoes with non-slip soles. Avoid working on metal roofs during wet conditions when the panels can become extremely slippery. Walking or standing on a metal roof which does not have a plywood or other deck beneath it is not recommended. However, if you must do so, always walk on the purlins, never between. Do not, for any reason, walk on a roof made of material thinner than 29 gauge.

Fastening

If you wish to pre-drill fastener holes, use a cover sheet to prevent hot metal shavings from sticking to panels. It is recommended that you cut panels upside down using a nibbler. For best results, use #14 x 7/8" Lap Tek Screws at panel overlaps. For installation into a steel fram, use #12 x 1" (minimum) Self-Drilling Screws. For installation into a wood frame, use #10 x 1" (minimum) Wood Screws. Position fasteners as shown in Figure 1.
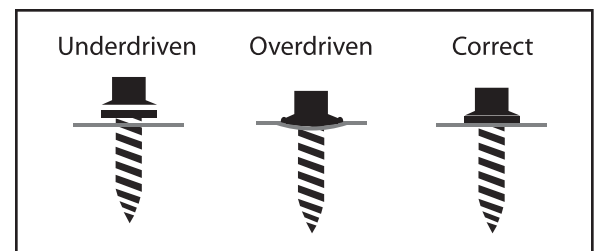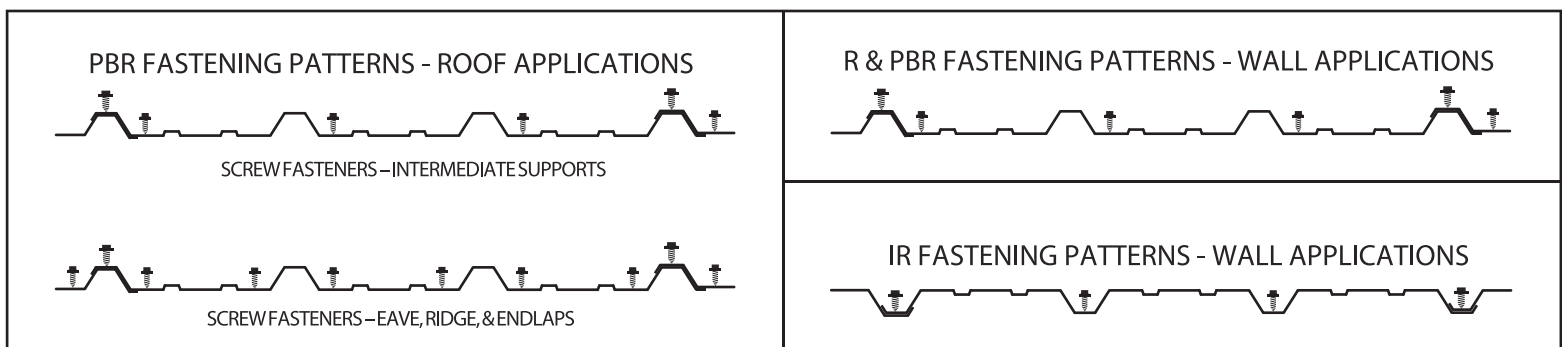

Underdriven   Overdriven   Correct

Figure 1

PBR FASTENING PATTERNS - ROOF APPLICATIONS

SCREW FASTENERS – INTERMEDIATE SUPPORTS

SCREW FASTENERS – EAVE, RIDGE, & ENDLAPS

R & PBR FASTENING PATTERNS - WALL APPLICATIONS

IR FASTENING PATTERNS - WALL APPLICATIONS

Roofing & Siding

Since the R Panel profile is symmetric, either edge of the panel can be overlapped. For the PBR Panel, the non-purlin bearing leg side of the panel must lap over the purlin bearing leg side. In either case, it is recommended that the panel be installed so that the open side of the lap faces away from the prevailing wind. See Figure 2 for panel overlap diagram and Figure 3 for Sheet Installation Pattern.
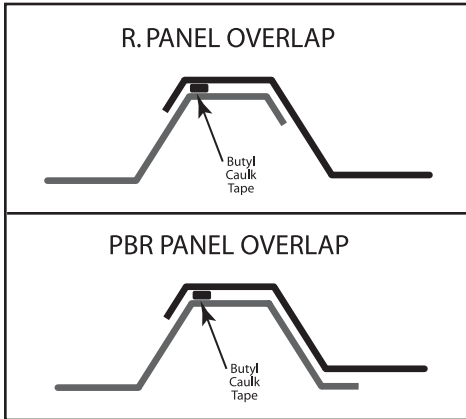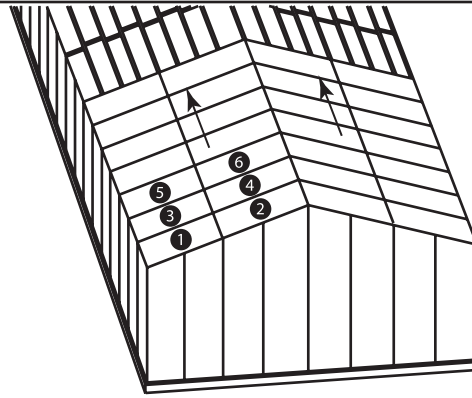
Figure 2

R. PANEL OVERLAP

Butyl Caulk Tape

PBR PANEL OVERLAP

Butyl Caulk Tape

Figure 3

Sheet Installation Pattern

Butyl Caulk Tape and Closure Strip

Eave: Apply Butyl Tape along entire eave. Remove upper protective cover from portion where panel is to be applied. Lay R Panel Inside Closure on top of tape. Apply another layer Butyl Tape on top of closure strip. Remove top layer of protective cover just before applying panel. (See Figure 4)
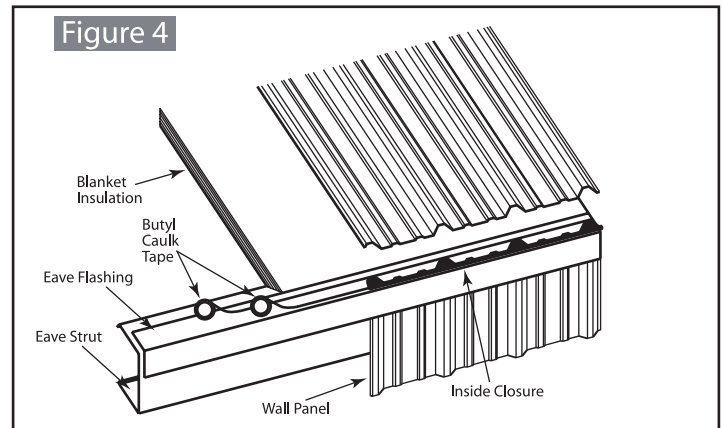
Ridge: For standard Ridge Cap, apply Butyl Tape both underneath and on top of outside closure strip, just below the fastener line as in eave application.

Sidelap: Apply Butyl Tape on the outer edge of the major rib of the underside of the panel. (See Figure 2)

Endlap: Apply Butyl Tape across the width of the underside panel just below the fastener line.

Gable/Rake Flashing: Apply Butyl Tape before applying Gable/Rake Trim.

Figure 4

Blanket Insulation

Butyl Caulk Tape

Eave Flashing

Eave Strut

Wall Panel

Inside Closure

CERTIFICATIONS & TESTING - PBR Panel

- Florida Building Code Approval #FL4585.1, #FL6914.1
- Texas Department of Insurance Approval #117
- UL 790 Fire Resistance Class A
- UL 2218 Impact Resistance Class 4

R Panel and PBR Panel Certification
- UL 580 Uplift UL Class 90 CONSTRUCTION #30, 79, 161, 167 & 638

ALLOWABLE UNIFORM LOADS PER SQUARE FOOT - R and PBR Panels (IR Panel used on side walls only)

Maximum purlin spacing for roof 2' on center and maximum girt spacing for sidewall 3' on center. Place fasteners in the pan of panel for best results. (Three spans or more)

SPAN (INCHES)	LIVE LOAD (lb/ft²)							WIND LOAD (lb/ft²)						
	24"	30"	36"	42"	48"	54"	60"	24"	30"	36"	42"	48"	54"	60"
26 Gauge	351	224	156	114	87	69	56	271	174	120	88	67	53	43

NOTES:

1. Theoretical allowable loads are based on section properties and allowables calculated in accordance with 2001 AISI Specifications.
2. Theoretical allowable loads are based on three or more uniform spans.
3. For roof panels, deduct self weight for actual 'live load' capacity of the panel.
4. These loads are for panel strength. Frames, purlins, decks and fasteners must be designed to resist all loads imposed on the panel.
5. Check local building codes if panel testing is required.