5V Installation Guide

UNION CORRUGATING COMPANY

Your Roof. For Life!
On Time and Complete!™

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.

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 double washered wood screws, minimum of 1" long. Position screws as shown in Figure 1 below. Screws should be applied at every purlin. Do not overdrive the screw as this will form a dimple which can collect water and cause leakage (see Figure 3). Do not leave loose screws that have missed the purlin. Remove the screws and seal the hole with butyl caulking or stitch screws. Do not apply screws through the anti-siphoning channel.

Figure 3

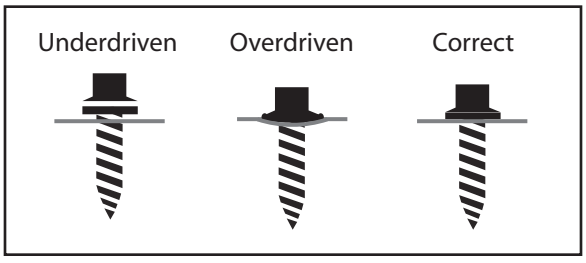


Figure 1

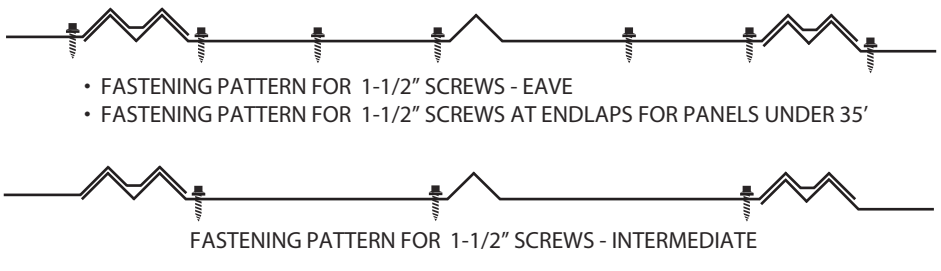
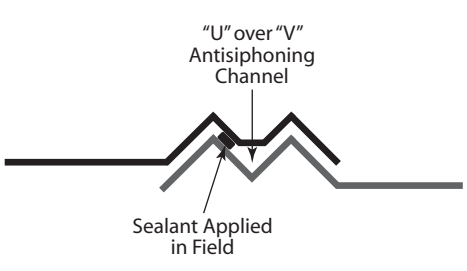


Figure 2



Roofing & Siding

For best results, start siding at door, window, or other opening in the wall. Use corner trim or other standard trim for strong, neat edges.

Slopes of less than 3" on 12" are not recommended. For slopes under 4" on 12", field applied sealant in recomended. For slopes of 3" on 12" or greater, end lap panels 6". Do not put fasteners in the lap if panels are over 35' long. Side laps should face away from the prevailing direction of driving rain. Lay the first sheet along the eave at the down-wind side of the roof. Install sheets in the sequence shown in Figure 4, always end lapping the upper panel on the top of the lower panel.

Figure 4

Sheet Installation Pattern

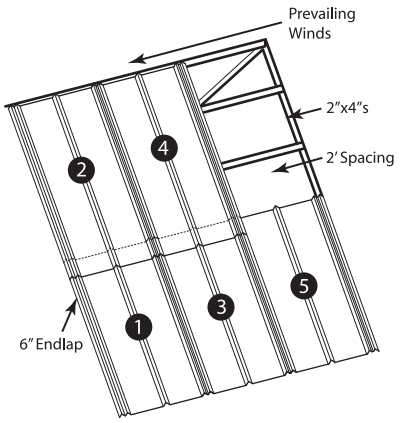
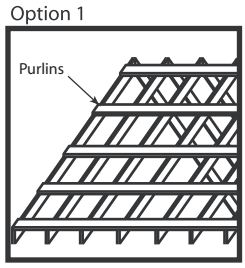


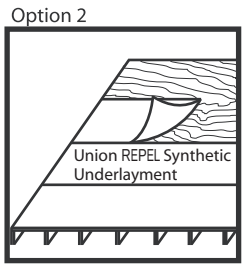
Figure 5 - Installation Options



Install Metal Directly to Wood Frame

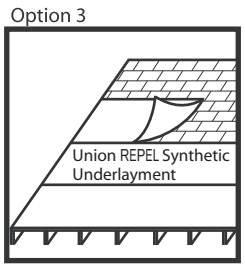
- Use Maximum 2' Purlin Spacing
- Install Metal

*DO NOT USE THIS OPTION FOR HEATED SPACES UNLESS INSULATION AND MOISTURE BARRIER PROTE-TION IS USED



Install Metal on Solid Deck

- Lay Plywood Deck
- Apply Union REPEL Synthetic Underlayment or other Moisture Barrier Protection
- Install Metal



Install Metal Over Existing Shingles

- Apply Union REPEL Synthetic Underlayment or other Moisture Barrier Protection
- Install Metal

* Proper ventilation and vapor barrier protection recommended for heated spaces

Allow an overhang of 2" at the eave to provide for a drip edge. Use inside closure at eave to prevent insect or bird infestation at openings. To protect against uplifting winds and to provide a finished appearance, apply rake trim or other standard gable trim. Apply fasteners every 6"-10". 14" ridge cap is recommending to protect against leakage. Seal off ridge and panel using outside closure strip. Use of tube or tape sealant is recommended at all side laps, especially for more shallow roofs. Apply the tube or tape sealant as shown in Figure 2 (front) at all lap ribs. Do not block the anti-siphoning channel with the tube or tape sealant.

CERTIFICATIONS & TESTING

- Dade County NOA #07-1114.01
- Florida Building Code Approval #FL9610.1, #FL9555.1 #FL6895.2, #FL4586.1
- Texas Department of Insurance Approval #119
- UL 790 Fire Resistance Class 4
- UL 2218 Impact Resistance Class 4
- UL 580 Uplift UL Class 90 CONSTRUCTION #579

ALLOWABLE UNIFORM LOADS PER SQUARE FOOT

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)

	LIVE LOAD (lb/ft^2)							WIND LOAD (lb/ft^2)						
SPAN (INCHES)	12"	15"	18"	21"	24"	30"	36"	12"	15"	18"	21"	24"	30"	36"
29 Gauge	146	93	64	47	36	23	16	200	128	89	65	50	32	22
26 Gauge	200	128	89	65	50	32	22	267	170	118	87	66	42	29

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.