

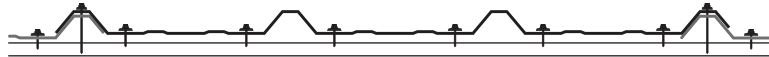
## Fastening Patterns for MR 9" and MR 12":

1. **Following recommendations:** Use of recommended fasteners and washers, along with the installation instructions for panel fastening positions to obtain maximum product performance.

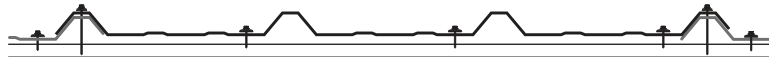
### 2. Fasteners Positioning at Side-Laps, Supports & End-Laps:

#### MR 12"

Edge purlins



Internal purlins



#### MR 9"

Edge purlins



Internal purlins



### 3. Recommended Washers & Fasteners:

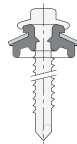
**Metal structures:** Self-Drilling Tapping Screw

**Wood structures:** Tapping Screw

**Side Stitching:** Self-Drilling Tapping Screw

**Washer:** EPDM Bonded Metal Washer

#### EPDM Bonded Metal Washer



3/4" Bonded Washer



1" Bonded Washer

#### EPDM Bonded Metal Washer



#12-14 x 1-1/4" HWH w/1-1/8" Oversize Bonded Washer (pre-drilling w/oversize holes required on all sheets)

### 4. Washer Combinations:

a. **Small Washer** - 3/4" Special EPDM Bonded Washer.

Note: As a general rule, 3/4" washers are installed on the corrugation crest fastening points.

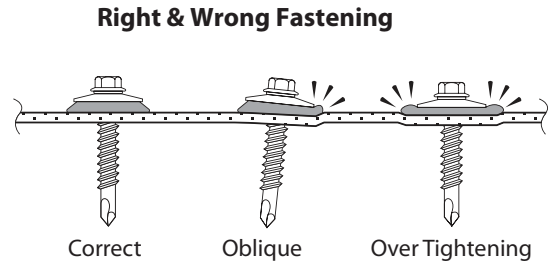
Additional oversize pre-drilling is recommended.

b. **Large Washer** - 1" Special EPDM Bonded Washer.

Note: As a general rule, 1" washers are installed at the valley fastening points. Additional oversize pre-drilling is recommended.

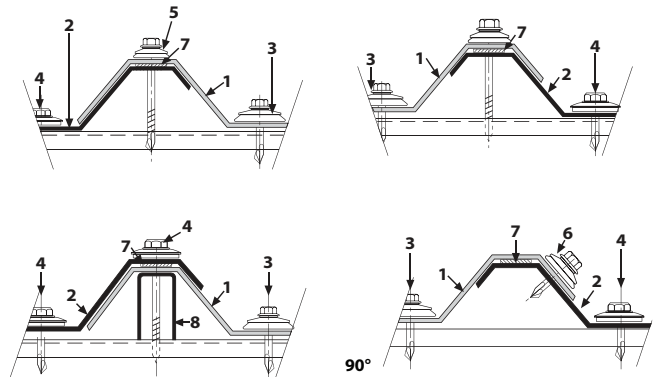
**5. Installation & Fastening Tips:**

- a. **Allow for expansion & contraction at fasteners:** For all panels, pre-drill panels at all fastening points with a 1/8" hole larger than the screw diameter to allow for increased expansion and contraction. For panels 12' in length or less, pre-drill a hole 1/16" larger than the diameter of the fastener. We recommend panels are not installed when temperatures are below 40°F and above 80°F.
- b. **Drive fasteners perpendicular to panel face.** Use an adjustable-torque power screwdriver to ensure against overtightening. Avoid distortion of washer/gasket and panel (See diagram). Do not use an impact impact wrench for fastening sheets.
- c. **Installation Direction:** We recommend starting installation from the bottom up, on one side, and work to the left or right. Do not start working from both ends to the middle. Lap the top panel over the lower one.



- d. **Keep sheet straight and flush during installation.** Do not overtighten sheet or fasteners.
- e. **Side-Lap Support:** At a side-lap of metal on one or two panels wood or steel support may be required.

**Fastening Details**

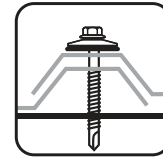


**f. Fastening Details**

- 1. MR panel
- 2. Adjoining metal panel
- 3. Valley fastener with 1" washer
- 4. Metal crest and valley fastener
- 5. Side-lap fastener with 3/4" washer
- 6. Side-lap stitching fastener and 3/4" washer
- 7. Expandable sealant/silicone
- 8. Optional side-lap support clip

**g. Fasteners Positioning Comments:**

General valley fasteners should be installed at the top and bottom edges and at the end-laps of panels. In multipanel runs, the number of fasteners should be reduced at mid-purlins, unless the building inspector demands otherwise. The remaining fasteners should be evenly positioned adjoining the main corrugations of the specific panel.



**6. Maximum Recommended Loads (Based on panels 38" wide with net 36" coverage):**

Panel Type	Panel Thickness		Span Between Supports			
	Inch	mm	2 feet	3 feet	4 feet	5 feet
MR 9"	.031	0.8	50 psf	25 psf	10 psf	--
MR 12"	.031	0.8	50 psf	50 psf	35 psf	20 psf

The dimensions specified do not supersede the requirements of local construction codes. The maximum recommended loads are based on continuous beam setting, according to allowed deflection of 1/20 of the span, and valid for mid span only.

*Note: Load refers to both wind and snow loads and is intended for skylights and sidelites only.*