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Measuring The Roof

1) Measure from Eave Fascia Board to peak of Ridge to determine panel length.
2) Measure length of eave and divide by panel coverage width to determine number of panels needed.
3) For panels that intersect a Valley, measure the longest panel length and the ridge length. Divide the ridge length by the panel coverage width to determine the number of panels needed. Divide the longest panel length by the number of panels. This will give you the length you need to deduct from each panel.
4) For panels that intersect at a Hip location use the same method as a valley but use the eave dimension versus the ridge.
5) For calculating flashings measure each individual area and divide by 10'. The standard flashing length is 10'-6". Measuring all the area and adding them together can result in being short pieces of flashing or having to piece small pieces together.
6) For calculating panel fasteners calculated 1 screw per every square foot. For flashing fasteners 10 screws per piece of flashing.

Tools Required

Standard Tools required for field installation:

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

If Metal is not going to be used immediately, store the material inside in a well ventilated area. If storing the material inside is not an option, the material must be stored off of the ground with one end 4" to 8" higher than the other to allow for run-off. When storing outside cover the material with a Tarp to protect from the elements.

Handling

When handling metal panels, special care should be taken to prevent scratching of the material. Always use clean gloves or hands to handle material to reduce the risk of transferring dirt and oils to the material. Panels should always be carried by the panel edge so the panel is vertical to the ground. Panels should never be carried horizontal as this can result in bending or buckling of the panel.

Safety

Always wear gloves when working with metal panels to avoid cuts from sharp edges. When cutting or drilling metal panels always wear safety glasses and sweep off any metal shavings to prevent eye injuries from flying metal fragments. Metal Panels can be slippery in dry weather conditions so wear shoes with non-slip soles. Avoid working or walking on metal roofs during wet conditions as the panels will become extremely slippery.
Pre-Installation

Before beginning installation the installer should check the roof deck for squareness. MetalMax recommends 2 different methods for verifying this.

Method "1" - Measure diagonally across one slope from similar points at the ridge and eave. If the roof area is square then the measurements will be the same. Make adjustments as necessary to achieve a square area. Use a chalk line to mark the square line from Eave to Ridge.

Method "2" - Using the 3-4-5 triangle system. Measure along the eave to a multiple of 3, measure along the gable end to a multiple of 4. The diagonal of these should be a multiple of 5. If the diagonal is not a multiple of 5 you will need to adjust your measuring points starting with the 4 leg until a square surface has been determined. Use a chalk line to mark the square line from Eave to Ridge.
INSTALLATION RECOMMENDATIONS

MAXX® STEELBINDER® (Cupped Head Sealers) & HWH STEELBINDER® Sealers & KWIKSEAL® II WOODBINDER®

1. Select the proper screw gun for installing self drilling fasteners.

<table>
<thead>
<tr>
<th>MANUFACTURER</th>
<th>MAXX STEELBINDER</th>
<th>HWH STEELBINDER &amp; KWIKSEAL® II WOODBINDER</th>
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<tr>
<td>MILWAUKEE</td>
<td>6750-20</td>
<td>6750-20</td>
</tr>
<tr>
<td>DEWALT</td>
<td>6750-20</td>
<td>6750-20</td>
</tr>
<tr>
<td>IRWIN</td>
<td>92V261</td>
<td>92V261</td>
</tr>
</tbody>
</table>

*For use installing all self drilling fasteners from #6 through #14 diameters. Tool speed as high as 7000 RPM can be used for #6 through #10 diameters in thin materials. Do not use 4000 RPM drywall guns.

2. Set the magnet in the driving socket to the proper depth. Socket must bear securely on the hex washer face of the fastener.

- Correct: Magnet clear of fastener head.
- Incorrect: Space exists between socket and hex washer face.

3. Use depth sensing nospiece on screw gun to allow proper seating of fastener. Do not overdrive. (See illustration)

4. Drive fastener perpendicular to surface.

5. Select extension cords with the correct wire size. See table below.

<table>
<thead>
<tr>
<th>RATED AMPERES</th>
<th>EXTENSION CORD LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>(TOOLS)</td>
<td>25'</td>
</tr>
<tr>
<td>Through 5</td>
<td>10'</td>
</tr>
<tr>
<td>5.1 - 8.0</td>
<td>10'</td>
</tr>
<tr>
<td>8.1 - 12.0</td>
<td>10'</td>
</tr>
<tr>
<td>12.1 - 15.0</td>
<td>10'</td>
</tr>
</tbody>
</table>

* Tool manufacturer’s recommended size based upon limiting the line voltage drop to five volts at 150% of the rated amperes.

6. Do not force the fasteners. Apply only enough end pressure to allow drill point to cut efficiently.
MAX-Panel Profile

Screw Pattern for Panel

Screw Pattern for Bottom Edge of Panel
Accessories

1/8" Stainless Steel Pop Rivet

#1/4-14x7/8" Stitch Screw

#10 Woodbinder woodgrip Screw. Available in 1", 1-1/2" and 2"

#10 Pancake Head Screw. Available in 1" and 1-1/2"

Outside Closure

Inside Closure

Low-Profile Vented Closure

Uni-Vent Vented Closure (1"x2"x20-0" Roll)

Emseal Expandable Hip/Valley Closure

Solar Seal 900 Gunnable Sealant

Butyl Mastic 1/2"x3/32x4

Pipe Flashing, Available for pipe sizes from 1/4" up to 13". Available in Grey EPDM, Hi-Temp Silicone, and Retro-Fit
1) Eave Flashing
2) Rake Flashing
3) Ridge Cap Flashing
4) Hip Cap Flashing
5) Endwall Flashing
6) Sidewall Flashing
7) Lower Gambrel Flashing
8) Valley Flashing
Residential Eave

Specify Pitch:

Residential Rake

Small Outside Corner
Roof over applications
Ridge Cap

Specify Pitch:

Wide Ridge Cap

Specify Pitch:

Residential Hip Cap

Specify Pitch:
Endwall

Specify Pitch:

Sidewall

Specify Pitch:

Lower Gambrel

Specify Pitch:
Upper Gambrel

Specify Pitch:

Residential Valley

Color

5"

5"

9"

1"

1"

9"
**Eave Flashing**

1) Attach Eave Trim to Roof Deck with #10 x 1" Pancake Screws 24" on center.

2) Set Inside Closure into position approximately 1" from Eave Trim face.

3) Lay Roofing Panel into position. Minimum overhang of 1/4", Maximum overhang of 1-1/2"

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**Residential Rake**

1) Apply Butyl Mastic to leg of Rake Flashing that will sit on Roofing Panel. Start Installation from low end of roofing and work up towards Ridge.

2) Attach Rake Flashing to Roof and Facia with #10 x 1" Woodgrip Fasteners every 24"
**Small OSC as Rake Flashing**

1) Apply Butyl Mastic to leg of Outside Corner Flashing that will sit on Roofing Panel. Start Installation from low end of roofing and work up towards Ridge.

2) Attach Rake Flashing to Roof and Facia with #10 x 1" Woodgrip Fasteners every 24"

**Ridge Cap**

1) Measure and apply Outside Closures to Roofing Panel approximately 1" from outside edge of Ridge Cap.

2) Set Ridge Cap into position and attach to Roofing Panel with #1/4-14 x 7/8 Stitch Screws. Make sure that fastener goes through the closure into the high-rib of the panel.
**Vented Ridge Cap**

1) Measure and apply Vented Outside Closures to Roofing Panel approximately 1" from outside edge of Ridge Cap.

2) Set Ridge Cap into position and attach to Roofing Panel with #1/4-14 x 7/8 Stitch Screws. Make sure that fastener goes through the closure into the high-rib of the panel.

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**Hip Cap**

1) Measure and apply Hip/Valley Closures to Roofing Panel approximately 1" from outside edge of Ridge Cap.

2) Set Ridge Cap into position and attach to Roofing Panel with #1/4-14 x 7/8 Stitch Screws. Make sure that fastener goes through the closure into the high-rib of the panel.
**Side Wall**

1) Apply butyl tape to bottom side of Flashing and attach with 1" woodgrip screw.
3) Attach upper side to wall with a fastener.
3) For Wood Siding use a trim block to seal edge of trim to building.
4) For brick, cut 1/8" groove in wall and install reglet trim. Run a bead of sealer at top edge of trim.
5) For siding, remove bottom J-Channel and attach upper side of trim to wall. Re-Install J-Channel and siding.

**End Wall**

1) Apply butyl tape to bottom side of Flashing and attach with 1" woodgrip screw.
3) Attach upper side to wall with a fastener.
3) For Wood Siding use a trim block to seal edge of trim to building.
4) For brick, cut 1/8" groove in wall and install reglet trim. Run a bead of sealer at top edge of trim.
5) For siding, remove bottom J-Channel and attach upper side of trim to wall. Re-Install J-Channel and siding.
lower Gambrel/Pitch Break

1) Install Lower Panel first
2) Install Outside Closure and apply Butyl Mastic to top of Closure
3) Lay flashing into place and attach through Closure and Mastic with Stitch Screw
4) Set Inside Closure into position and install Upper Panel

Upper Gambrel

1) Install Lower Panel first
2) Install Outside Closure and apply Butyl Mastic to top of Closure
3) Lay flashing into place and attach through Closure and Mastic with Stitch Screw
4) Set Inside Closure into position and install Upper Panel
Valley

1) Attach Valley Flashing to roof deck with #10x1" Pancake Screws
2) Apply Butyl Mastic and Hip/Valley Closure.
3) Install Panel a Minimum of 4" up from center of Valley. Attach Panels with #10x1" Woodgrip screws through closure and mastic.