

# MicroMax Gutter Guard Installation Instructions

## **! Warning !**

**Follow all tool and ladder manufacturer's instructions and safety recommendations. Always be aware of power lines. Move your ladder into position for each panel installation. Use caution when handling and cutting the product, as the edges can be sharp. Wear safety glasses and work gloves.**

### **Required:**

½" to ¾" zip screws; ladder with stand-off; metal/aviator snips; screw gun; tape measure; Quick Square; pencil or marker; safety goggles; work gloves.

### **Optional Products:**

A level to check pitch of gutters. Extra quick-screw gutter hangers. Geocel 2300 Construction Tripolymer Sealant (clear) or similar product (do not use silicone caulk, it will fail in the sun). Elbows and leaders as needed.

### **Before Installation**

Remove all leaves, debris, strainers and screening from the gutters and downspouts. Ensure that the downspouts are free of clogs and that the gutters are pitched correctly towards the downspout so that they drain completely. Add in extra quick screw hangers as needed to ensure gutters are held in place on the fascia board. Use Geocel sealant at all gutter joints to make sure they are watertight. This includes end caps; miters; drop outlets.

### **Installation Order and Partial Panels**

It is typically best to start an installation at an inside or outside corner (if there are any) and work away from that corner to the other end of the gutter run. Generally, every run will have one short section. Usually the short piece will be at the end of the gutter run you are working on. You do have the option of putting the short piece somewhere else along the run, if there is a place where it will be less conspicuous. In that case you will need to work from either end of the gutter run towards that section.

You should not install panels any shorter than 18-20 inches, if possible. If you need to reinforce a panel because of its shortened length or positioning (i.e., an inside corner where one side of the gutter run is only a few inches long or like the image to the right), use a quick screw hidden hanger in that location and do not screw in the screw. The screw head should brace the panel from below and not allow it to bow. **Note:** if the screw head is too high, screw it into the fascia as much as necessary to provide the support you need. If you need it higher, replace the screw in the hanger with a longer one.



### **Cutting Panels**



pic A



pic B



pic C



pic D



pic E



pic F

Measure and mark the panel to size (see pic A & B) using tape measure, marker and square. Cut the panel at the ½ inch front lip and front I-beam (see pic C & D). Next cut the panel at the back lip, top and bottom (see pic E). Finally cut across the screen to complete the cut (see pic F).

### **Standard Installation**



pic A

pic B

pic C

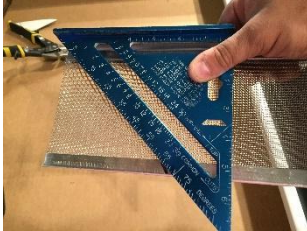
pic D

The product should be installed by setting the back of the panel as high as possible on the fascia board, just below the shingle. The front lip will snap into place with the front I-beam behind the gutter front lip. Use zip screws to secure the back of panel along the fascia board (see pic A). Next screw down through the front lip of the panel into the front lip of the gutter (see pic B). At the end of a panel or where two panels butt together place screws  $\frac{3}{4}$ " from the end of each panel (see pic C & D) and one in the middle of a full panel. It is recommended that you use 3 screws for the front of the panel and 3 screws for the back. Six screws per panel. It is important to maximize the pitch of the panels to ensure that debris will not collect on the screen.

### Inside Corners



pic A



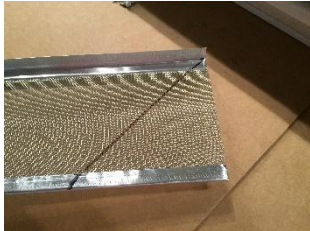
pic B



pic C



pic D



pic E



pic F



pic G



pic H

To install an inside corner, you will need to cut one piece at 45 deg. angle. Mark the panel at the front of the gutter miter (see pic A). Mark a line using a square to the back lip of the panel (see pic B & C). Using snips cut the entire panel at the mark (see pic D). For the other half of the inside corner you will cut the front lip metal away leaving the screen to run long and overlap the mitered half. Make the same mark using your square (see pic A). Cut the front lip and bottom I beam using your snips. Then cut the front lip away leaving only screen (see pic G). Notch the back lip as shown to create a tight fit at the miter (see pic H).



pic A



pic B



pic C

Once the mitered pieces are cut place the first mitered panel (the one that was fully cut at the mark) in place (see pic A). Then place the piece with the screen running long over the first piece (see pic B). Once the panels are fit and screwed to the gutter and fascia, place two screws into the long edge of the overlap (see pic C). This will strengthen the inside miter and keep the screen from lifting.

### Outside Corners



pic A



pic B



pic C



pic D

An outside corner is much like an inside corner in reverse. Mark the panel at the gutter miter front and back (see pic A). Cut through the entire panel at that line. Mark the other side of the miter the same way. Cut away the front aluminum along the mark (see pic B). Remove the rear aluminum along the mark (see pic C). Install the fully cut panel first then overlap the panel with the extended screen over the miter. Place two zip screws where the screens overlap each other (see pic D).

### **End Caps**



pic A



pic B



pic C



pic D



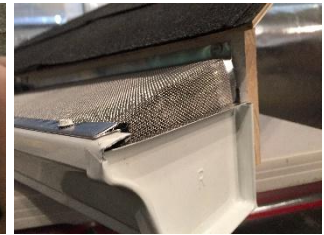
pic E



pic F



pic G



pic H

In order to close the opening created by angled panel begin by adding 2" to the length of the needed size (see pic A) and mark the front and back lip of the panel. Cut the front and back lip (see pic B & C). Next remove the aluminum front lip by cutting along the front edge of the screen (see pic D). Next mark and cut the screen away at a 45 deg. angle from the front edge (see pic D). Next, cut the bottom I beam at the 2" mark and bend forward toward front of the screen (see pic E). Cut away the back vertical lip at the 2" mark (see pic F). Using your square mark a line at the back of panel from where the screen meets the metal back to the 2" mark (see pic G.). Bend the panel downward at the 2" mark and set the panel inside the gutter end cap (see pic H). Screw in the panel  $\frac{3}{4}$ " from the end at the front lip and back of the panel into the fascia (see pic F). A bead of Geocell sealant can be used at the top of the gutter end cap to ensure that the gutter is completely closed. This will prevent debris, birds or insects from getting into the gutter.

### **Downspout Tie-Ins**

If a downspout from an upper level run of gutter empties above a lower run of gutter, it is optimal to extend the downspout so that it extends into the lower run of gutter. Otherwise, you may see overshooting where a high volume of water is dropped from an upper run onto a lower run. Whenever possible link the downspouts of the upper gutter into the lower gutter by using your snips to cut a hole the size of the downspout through the screen. Seal the opening around the downspout and panel together with a thin bead of Geocel.

### **Valleys, Reverse Gables**

Valleys and reverse gables can pose a problem for any gutter guard. If you have a valley that deposits large volumes of water onto a small section of gutter, you may experience overshooting. You can place a  $\frac{1}{4}$ " bead of Geocell sealant at a 45 deg. Angle to the inside miter to help water change direction and flow into the gutter. You can also place a  $\frac{1}{4}$ " bead of Geocell sealant on a straight run of gutter at an angle on either side of a reverse gable. See our website for possible solutions to this issue.

### **Maintenance**

Debris may occasionally need to be brushed off the system, particularly if the system is installed at a flat angle. If there is moss on your roof it is possible that moss may in time row on the filter and possibly clog it. Use of a moss prevention agent is recommended in that situation. Installation of gutter guards will not affect the build-up of ice dams or icicles during winter, which are primarily caused by ventilation issues. If there is a build-up of roof tar on the filter from shingles that are new, old, cut or under a high volume water area, you can clean off the screen with carburetor cleaner. See our website for more information on these issues.