



Valor Installation Procedure

Overview

For gutter guards to work correctly, there are many factors and techniques to consider when installing Valor products. With Valor gutter guards the slope or angle of the guard is important (which will vary depending on the roof material and the slope or angle of the roof). The better the installer does in getting the installation factors correct (the ideal target angle), the better the performance of the Valor gutter guard. Sometimes it is not possible to get all of the factors correct, so getting close enough to the ideal target angle is the next best option.

Safety

Always make your Safety is the top priority. Use ladders, tools and equipment correctly.

Tools

1. Rechargeable Drill
2. ¼" hex driver (both short & long shaft)
3. Metal cutting snips (Tinner & Aviation types)
4. Silicone Caulking, Clear, 100% (GE brand, 4 oz tube)
5. Ladders, optional LadderMax standoff (recommended)

Optional Tools: Work bar, 2" putty knife, work gloves, 2" paint brush, gutter scoop,
Portable Bandsaw with metal cutting bandsaw blade, tool belt

Products

Valor gutter guard products

Screws, ¼" hex head self-taping galvanized (3/4" long)

Optional Products: endcaps, outside miter cover, inside miter diverter, inside miter kit,
Optional GG cleaning brush

Prepare Work Area

Clean out gutters, repair gutters if needed, seal gutter seams if needed, clean out downspouts. Recommend using Geocel 2320 or SeamerMate 85148 for sealing gutters, always use cleaner like Windex or 409 spray and let dry before applying a sealing chalk. (Go to YouTube to watch "How to Reseal a Leaking Gutter" video).

Installation differences between “Under the Shingle” or “Rear Fascia” Methods

There are two install methods to put Valor gutter guards on gutters.

1. The Under the Shingle method is where the rear wing of the Valor guard slides under the roof shingle and on top of the moisture barrier (or tar paper). The rear of the guard is supported by the roof deck and the guard is attached to the front lip of the gutter with a screw. Typically the angle of the guard is sufficient to allow debris to “naturally self-clean” when using this method, but there are techniques to adjust the guard angle to the “best” angle. Most installations are performed this way, and this method is approved by the major roofing manufactures as long as no screws or nails go through the roof.
2. The Rear Fascia Method is where the back wing of the guard attaches to the rear of the gutter or the fascia board with a screw without going under the roof shingle. This may be necessary if the roof shingle is sealed, the gutter is sloped, or shingle is unable to be lifted (as in the case of metal roof systems or heavy tile systems or in areas of very high winds, or sloped gutters with long runs). Then the front of the guard is attached with a screw to the gutter front lip.

Basic Installation Guidelines

- Determine the **ideal target angle** or best angle to use for the product, install as close as possible to this target angle.
- It is not recommended to install gutter guards flat, as debris will not be able to be pushed off by the rainfall. There are several “advanced techniques” to resolve this. See the Valor Website for this information, under the contractor page, Advanced Techniques tab.
- It is recommended to install each inside corners first (with diverters), then each outside corners (with seam cover), then filling in the straight sections in between those corners.

Performance Factors and Determining the Ideal Target Ange to use for your specific roof and gutter conditions:

There are 4 factors/criteria for a gutter guard to have top performance. ANGLE (or slope) of both the guard and the roof, Roof Shingle MATERIAL (metal, tile, asphalt, wood, etc.), the RUN (length from gutter to ridge top), and FLOW (amount) of water (rainfall), (see appendix 3 for details). Install as close to the “ideal target angle” as possible. The Valor recommended install angle (the ideal target angle) will ensure the best performance under high flow water condition. If “Ideal/best” or “better” angles are not possible, install as close as possible to these angles as possible. If the ideal install angle is not achieved, it only means that some water may go over the guard in high water flow conditions, but most of the water will still go through the guard as designed.

Recommended installation angles for Valor Products						
			<i>Valor target angle (degrees)</i>			
Roof	Angle	Slope (rise/run)	best	better	good	
Flat wing		Recommended				
Flat Roof	0	0/12	19	15	11	
Low pitch	4	1/12	19	15	11	
Low pitch	8	2/12	19	15	11	
Standard pitch	11	3/12	19	15	11	
Standard pitch	15	4/12	19	15	11	
Bent Wing		Recommended				
* Standard pitch	19	5/12	19	15	11	
* Standard pitch	22	6/12	19	15	11	
Heavy pitch	26	7/12	15	11	8	
Heavy pitch	30	8/12	15	11	8	
Heavy pitch	34	9/12	15	11	8	
High pitch	38	10/12	15	11	8	
High pitch	41	11/12	15	11	8	
High pitch	45	12/12	15	11	8	
Very High	45>	>12/12	15	11	8	
Example: A standard pitch roof of 4/12 pitch is at a roof angle of 15 degrees,						
therefore, the target angle for Valor is 19 degrees, but realistically						
the range for Valor could be from 11 degrees to 19 degrees with +or-3						
degrees play. *The Grey area can be BW or Flat but use discretion not all act the same						

Setting the installation angle of Valor gutter guards

Refer to the Valor Recommended Install angles chart above. Although Valor gutter guard can work at steeper pitches. The rule of thumb is they should not exceed 25 degrees regardless of roof pitch for optimal performance. The optimal target is 19 degrees 5/12 and below. 19 degrees 5/12 and higher.

Using the Under the Shingle method:

If angle of guard is too high, then cutting the back wing horizontally will reduce the install angle (cutting ¼" off at a time on a test piece of guard and reinstall until the correct desired angle is achieved.

If angle is guard is too low, either install the larger wing version of Valor, or install a wing extension on the Valor wing, or attach small ¼" to ½" wood strip to rear of Valor wing to lift upward. In rare situations, the gutter itself may need to be raised or lowered, but only as a last resort.

Using the Rear Fascia Install method:

It is recommended to attach the rear wing to the fascia before attaching the front lip screw, this allows some adjustment of the guard to reach the desired angle before securing the front lip screw.

The Rear Fascia Install method allows for some adjusting of the rear wing up or down too allow for the correct guard angle to be achieved. In some cases, the wing may be too long and will need adjusting. If angle of guard is too high, lower rear wing and attach, or if lowering the wing is not possible, cutting the back wing horizontally on a test piece of guard to determine the correct amount to cut to achieve the desired install angle. Install a "resting" screw on the fascia every 18" to "rest" the back wing on in order to secure the back wing from falling into the gutter. Also install a "locking" screw on the fascia every 24"

to “lock” the Valor rear wing into place. Run a small bead of silicone sealant between the gap of the guard wing and the fascia after guard is secure to prevent small debris to wedge in.

How to cut Valor Straight cut, Inside cut, Outside cut

Straight cut:

Using tin snips.

1. Draw line on Valor to cut.
2. Cut front lip.
3. Cut back wing.
4. Turn Valor product over and cut both louver channels.
5. Cut screen to finish.

Inside corner cut:

Using tin snips.

1. Draw angle line on Valor to cut.
2. Cut front lip at angle.
3. Cut back wing at angle.
4. Turn Valor product over and cut both louver channels.
5. Cut each louver separately at the angle line.
6. Cut screen to finish. Note: the steeper the install angle of Valor, the slightly less of an angle is cut or inside miters (see appendix 4)

Outside corner cut:

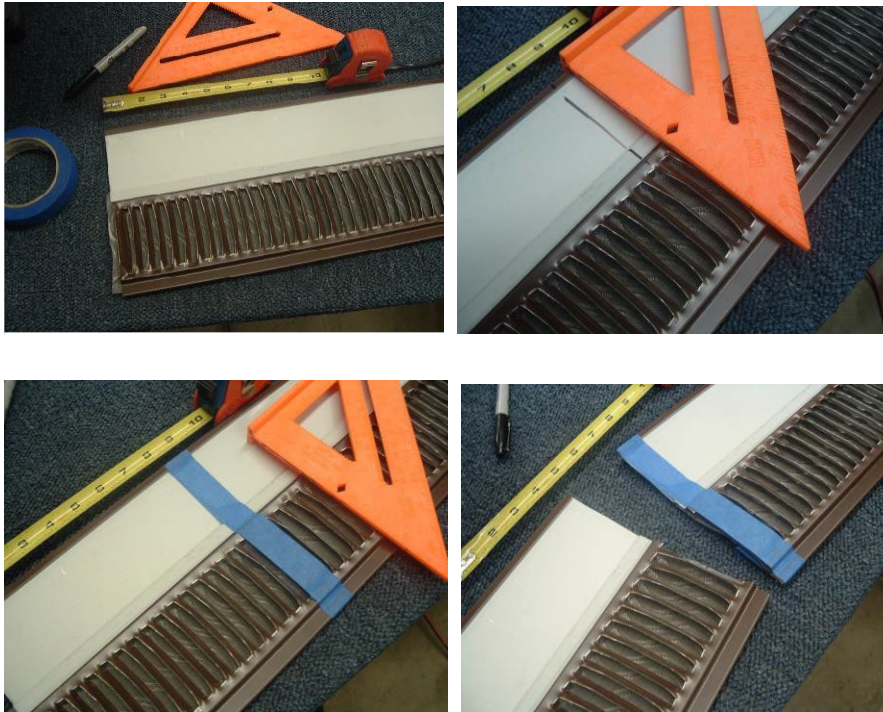
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4. Turn Valor product over and cut both louver channels.
5. Cut each louver separately at the angle line.
6. Cut screen to finish. Note: the steeper the install angle of Valor, the slightly less of an angle is cut for outside miters (see appendix 4)

Straight run installs under the shingle method:

1. Using the wing of the Valor product or a 2” putty knife, slide under the first roof shingle but on top of the tar paper or moisture barrier (see appendix 5 for details). Take care not to tear the moisture barrier.
2. Install Valor rear wing under the shingle and align the edge of Valor to its location.
3. Pull the Valor product forward allowing the front lip of the guard to meet up with the front lip of the gutter.
4. Install front screws (3 per full section).
5. Install a small silicone bead to seal the end mesh.

Optional: On Composition Asphalt Shingles, the Valor wing can be installed either between the starter shingle and the moisture barrier, or between the first shingle and the starter shingle, which ever results in the guard's install "best" angle.



Straight run installs Rear Fascia method

1. Fit Valor on gutter and determine the best angle for the guard.
2. Ensure the correct fit for the guard as some placement adjusting may be necessary.
3. Adjust guard back wing higher than the front lip (if possible) to ensure correct guard angle.
4. Align the side edge and attach with screw the rear of guard to the fascia or gutter.
5. Install front screws.
6. Install small silicone bead to seal the side edgemesh. Repeat to cover the gutter.

End cap installation

There are several ways to end caps.

1. Cut 2" of the metal frame away and leave the mesh, fold the mesh downward to be flush with the endcap.
2. Or, cut a metal sheet metal (painted) to fit, making a 0.5" 90 degree angle cover to silicone or screw on the top of the guard while about 1" to 2" of metal is downward in the gutter, flush with the gutter endcap.
3. Or, fold up the endcap top ridge, install gutter guard, seal gap with silicone.

Note: The best results for endcap installs is to not have a gap to allow bees or wasps to enter.

Outside corner (miter) install

1. Most **Outside corners** on gutters are at a 90 degree angle (precutting 2x45 Degree angle is recommended)
2. Determine the correct cut angles and draw those angle lines on the product
3. Cut the guard to the correct angle, note that when flat, a 45 degree is used, but as the slope increases, the cut angle on the gutter guard **INCREASES**. Example: on a 4/12 pitch roof, cut 48 degree angles. This allows the gutter guard wing to move farther apart keeping a good seal while the roof angle increases.
4. Seal the gap with silicone or use a sheet metal cover over gap, glue cover in place with silicone.

Inside corner (miter) install

1. Most **Inside corners** on gutters are at a 90 degree angle (precutting 2x45 Degree angle is recommended)
2. Determine the correct cut angles and draw those angle lines on the product
3. Cut the guard to the correct angle, note that when flat, a 45 degree is used, but as the slope increases, the cut angle on the gutter guard **DECREASES**. Example: on a 4/12 pitch roof, cut 43 degree angles. This allows the gutter guard wing to move closer together keeping a good seal while the roof angle increases.
4. Seal the gap with silicone and place 2 small silicone V-diverter bumps on the screen, and place one or more metal roof diverters in the roof valley.

Inside corner roof diverter install

The main use of a water diverter in a valley location is to slow the water down and in part fan the water across the gutter guard allowing more time for water to enter the screen. While each roof, slope, and valley are different. Generally speaking, you should use 3 sets of V-diverters on a valley in 3-foot intervals. Depending on the distance from the corner to the peak you may need more. You can make the V-roof diverter from sheet metal (painted) by cutting a 6"x 1.5" rectangle, bending up the long side by 0.5" leaving a 1" at a 90 degree Angle, then cut a V in the center of the 0.5 side, bend together to form a V. Then glue the diverter on the roof with silicone approx. 6" above the gutter guard and then another approx. 3' up on the valley and again 3 feet further up and continue needed. It is important to water-test this solution before moving on. A hose with good water pressure or a 5 gallon bucket of water all at once will work.

High Flow Water Kit

Use the Valor Large Mesh product for inside miters on valleys and high water flow roof areas and for highly pitch roofs (> 9/12 pitch). This is the standard 4 ft. Valor product fitted with a larger mesh screen (a 20 mesh screen), where installers cut to width size as needed or use the full 4 ft section.
Inside corner and Outside corner templates

For different roof pitch installs, pre-cut templates that allow exact cutting of angles. Example, a 1/12 pitch roof needs a 45 degree inside cut for a 45 degree inside corner, but a 5/12 pitch roof needs a 43 degree inside cut for a 45 degree inside corner due to the rise in angle of rear portion of the gutter guard.

On Line Installation Assistance

Go to www.ValorGG.com to view our installation videos to assist you on the installation procedure.

If you need further assistance, email John Shank at Jshank@artesianhp.com and provide you name, business name, and phone number, and brief description of the issue. She will get our Valor Install Technician to call you.

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