

# ÆRATIS®

PVC PORCH PRODUCTS

## CUSTOM SHUTTERS IN-A-BOX



## SHUTTER ASSEMBLY INSTRUCTIONS & INSTALLATION INSTRUCTIONS

1. Inspect the contents of the package. Do not discard the shutter box until the shutters are painted. Download the latest shutter assembly and mounting instructions from [Aeratis.com](http://Aeratis.com). Please note: this shutter kit is best for surface mounting. If the project requires an inside mount, than the shutters must be cut to exact size, make sure to review the information on inside mounts.
2. Identify the height and width of shutters to be created. If a 7' Shutter Kit was purchased, one shutter has a maximum width of 21". The maximum height is 84". To determine the size of the shutter needed to create, simply measure the total width and height of the window. With the Aeratis Custom Shutters In-a-Box product, it can be made bigger, smaller, or wider than the window opening. The beauty is, it is a truly custom solution in the box.
3. To make assembly quick and easy there is a provided sizing chart below to help with the cut list. Using the chart below, look for the desired width of the shutters and find the length. Then cut the louvers and rails. Cutting Note: It is best to cut all 3 rails at the same time and it is best to cut 10-12 louvers at a time. This should be done using a chop or sliding miter saw. All cuts will need to be square so no need to worry about angles.

#### 4. Sizing Chart

<b>Overall Shutter Width</b>	<b>Length of Louvers</b>	<b>Length of Rails</b>
12"	8"	7"
13"	9"	8"
14"	10"	9"
15"	11"	10"
16"	12"	11"
17"	13"	12"
18"	14"	13"
19"	15"	14"
20"	16"	15"
21"	17"	16"
	Louver grooves are 1/2" deep	

#### 5. Length of each component in the package is:

- A. Louvers - Approximately 18"
- B. Mid-Rail, Top Rail and Bottom Rail - Approximately 16"
- C. Stiles - 36" for 3' kit
- D. Stiles - 60" for 5' kit
- E. Stiles - 84" for 7' kit
- F. Stiles - 120" for 10' kit

#### 6. Top Rail ( 1-3/8" x 2-1/2" x 16")

- A. When installing the top rail, it is best to make the cuts between the mortise holes in the two stiles. The top rail is the exact height of 2 mortise holes or 2 louvers. Please note: filler will need to be used on the top of the stile to fill in the mortise hole.

#### 7. Mid-Rail Placement ( 1-3/8" x 2" x 16")

- A. Note: the mid-rail is exactly 2-1/2" tall. This is the exact height of 2 louvers or two mortise holes. When placing the mid-rail it is best to center it over the mortise holes on the stiles. This will eliminate the need to rip a louver to fill a partial opening. The mid-rail can be placed anywhere between the bottom and top rail.

#### 8. Bottom Rail for 3', 5' and 7' Shutters ( 1-3/8" x 4" x 16") 10' shutters ( 1-3/8" x 12" x 16")

- A. Notice the bottom of the stile. The louver mortise starts exactly 4" from the bottom of the stile. When cutting down the shutter to meet the needs of the windows, try to cut the stiles from the top. It is best to cut between the mortises. The top rail will cover 2 mortises on your stiles as well.

#### 9. Cutting the Stiles (DO NOT CUT THE BOTTOM OF THE STILES)

- A. First measure the over all height for the shutter from the bottom of the stile to the top of the stile
- B. With a pencil, make a mark on both stiles on the face (side with the mortise holes).
- C. Using a speed square, make a mark across the entire face of both stiles. It is best practice to cut both stiles at the same time.
- D. Try to cut between two mortise holes. If the size needed will not allow this, once the shutter is complete, take the excess length off the bottom of the shutter using a table saw.

#### 10. Cutting Rails

- A. Before cutting the rails, double check the sizing chart above.
- B. It is best practice to cut all rails at the same time. If cutting all three at one time is not possible, then cut two at a time then use one of the two cut rails as a guide to cut the third rail.

#### 11. Shutter Assembly

- A. Place the two cut stiles on a smooth flat surface, make sure the mortise holes are facing upward on one stile and inward on the other. Double check that the stile bottoms are together. Please note: there is a left and right stile. Make sure the louver grooves/ mortise holes are going in the same direction. Also, double check that the 4 inches of missing mortise holes are on the bottom.
- B. Insert the louvers into the mortise holes on the stile that is facing upward. It is recommend to use a small amount of slow curing glue on the ends of the louvers. Once all louvers are installed, tip the stile toward the other stile laying on the surface. Line up the louver with the correct holes. Next, slide the louver into the mortise holes. Do not pull the louver all the way out of the previously installed louvers. Pull it half way out, not all the way out. By inserting all the louvers into one side, all the way, then sliding them into the mortise holes on the other stile will allow the insertion of the louvers much quicker. Once all louvers are in place, add the clamps to the shutter, but do not tighten the stiles together.
- C. Now insert the rails into place and tighten the clamps. Make sure the top and bottom rails are flush with the top and bottom of the stiles.

- D. While everything is in its correct place and the clamps are tight, using a 4" drill bit (3/16" x 4"), drill through the sides of the stiles and into the rails. Drill two holes per rail and make them evenly spaced and at least 1/2" from the edge of the rails. It is best practice to use a boarding bit or unibit and open each of the pre-drilled holes to the size of the head of the assembly screws. (10' shutters will require 4 screws in the bottom rail evenly spaced)
- E. Using an exterior construction adhesive (Loctite PL Premium 8x or equivalent), use a generous portion on the ends of the top rail, mid-rail (s) and bottom rail. Next, place the top rail, mid-rail (s) and bottom rail into place. Make sure to open up the clamps enough to allow the glue to pass inside the stiles.
- F. Working quickly and do not allow the glue to set up, tighten the clamps securing the shutter louvers and rails into place.
- G. Make sure all the rails are flush on the surface and insure they are all squarely in place.
- H. Using the 4" star head screws, place one screw in each hole and counter sink. Make sure the screw is very tight, but do not spin out the threads.
- I. Once the shutter has been completely secured with all the assembly screws, it is now time to clean up any excess glue around the louvers or on the surface of the stiles and rails. Use acetone and a lint free rag to wipe off any excess glue.
- J. Using a stainable interior/exterior wood filler, fill all the holes for the assembly screws. Make sure to fill the hole completely and leave a small amount of excess on top of the holes. When this dries, sand this flat.
- K. Once the glue has completely cured, remove the clamps and wipe down, removing any dust.
- L. If need be, sand lightly with an orbital sander using 200 grit sand paper. Be careful not to leave the sander in one place too long. Keep in mind, this is a PVC shutter.
- M. Make sure to sand down the hole fillers and double check the surface and remove any loose debris.
- N. Next step is to paint the shutters. See painting instructions for how to best paint your Aeratis PVC Shutters. The painting instructions can also be found online at [aeratis.com](http://aeratis.com).

# Shutter Painting Instructions

Once the shutters are clean and ready to paint make sure NOT to use an oil based paint. Oil based paints will not be absorbed by the PVC shutters.

1. The first step is to make sure all screws and any additional fasteners used are counter sunk below the surface of the shutters and these holes are filled.
2. Make sure all corners line up properly and all louvers are tight and secure. If they are not secure it is best to add some construction adhesive or fasten using pin nails.
3. NOTICE BEFORE PAINTING: It is easier to fix or sand any surface imperfections before the shutter is painted.
4. For best results, use an airless sprayer and spray each shutter with two coats of Pittsburgh Break-Through Paint (Exterior paints only Latex, acrylic or water-borne enamels). DO NOT USE OIL BASED PAINTS. Using fast drying paints like Pittsburgh Break-Through or Sherwin Williams Snap Dry will allow for application of two coats of paint within a couple of hours and install the shutters the same or the next day.
5. Other paints can be used, see the full list of approved paints at [Aeratis.com](http://Aeratis.com).
6. The key to painting the Aeratis formulation is to make sure the surface is clean and there is no moisture on the material. Note, NEVER use an oil base paint on any Aeratis products.
7. Never Paint an Aeratis product in the rain. DO NOT PAINT an Aeratis product if there is moisture or dew on the surface of the product.

# Hardware and Installation

## Surface mounting

It is not recommended to surface mount Aeratis Custom Shutters In-a-Box directly to the wall. It is always best to have airflow between the wall surface and the shutters. This allows the area to dry after rain and reduces issues that can come from ice build up. Each pair of shutters includes stainless steel hardware that can be used to mount the shutters. If not making them operable, you can just hold them back with the shutter dogs.

If the shutter must be mounted without the hardware, make sure to add a spacer to the mounting screws to keep the shutters at least 1" away from the wall. This will provide the spacing needed to allow moisture to dry and allow snow and ice to pass behind the shutters.

## Mounting Pintles and Hinges

When mounting your hinges and pintles, the easiest way is to install the hinges is to use the surface mount method.

1. Attach the L hinges to the face of the shutter. Keep in mind, the hinges typically are installed on the side of shutters that will face the wall when the shutters are in the open position. This will allow the shutters to open and close. Make sure the L part of the hinge is reaching across the stiles and reaches the top and bottom rail.
2. Create a space between the window sill and the finished shutters. Take a piece of left over louver or similar material and place it on top of the window sill to create the spacing needed.
3. Next, take one of the shutters and rest it on top of the space. This will give the clearance needed for the shutter to open and close without being obstructed by the widow sill.
4. Have someone hold the shutters in place to determine exactly where they need to be positioned.
5. Slide the shaft of the pintle into the opening on the end of the L hinge.
6. Using a sharp pencil, mark the hole positions on the trim face for each of the pintles (number may vary depending on the height of the shutters).
7. Remove the shutter from the pintles and set the pintles aside. Then remove the shutters.
8. Next, using a drill bit slightly smaller than the shaft of the pintle screws, drill out the holes that were marked. Then insert and tighten the screws through the pintle. If fastening to PVC trim, it is best to use 2" black stainless steel screws.

# Installing Shutter Dogs

Shutter dogs are meant to hold the shutters in the open position. In the hardware, Aeratis has included our shutter dog spacer and support. This item will not only support the shutters once they are installed, but it was also help guide the installation of the shutter dog.

After installing both shutters, pull them back to the fully open position. Next, slip the lag bolt through the center hole of the "S" shaped scroll dog. The left shutter dog should be in the shape of the letter S with the bigger part of the dog on the bottom. Next, slip the shutter support over the lag bolt. Make sure the flange is pointed in the upward direction. Make sure the set screws holes on the shutter supports are on the inside. Take the screw gun with a 1/2" driver and place it over the head of the lag bolt. Hold the vertical member of the shutter support in the bottom outside corner of the shutter. Ensure that the S is facing the correct direction. Press the lag bolt against the siding with a small amount of pressure in the upward direction and turn the lag bolt until the shutter support is snug up against the wall. Make sure the lag bolt is in a place where it will enter a structural member. Just siding or siding and plywood may not provide the support needed for the shutter dogs.

Next, close the shutter and from the inside, insert the 2 set screws into the shutter support. Make certain the flange is pointed upwards. Once the set screws are in place, turn the scroll dog and open the shutters. Once the shutter has cleared the scroll dog, turn the scroll dog to the vertical position..