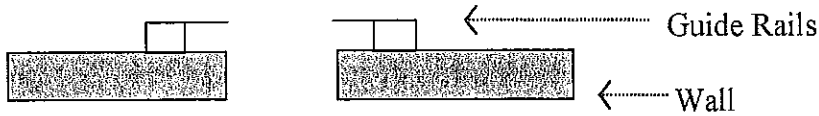


# Measuring Instructions

With the following instructions we want to show you how to get rough opening and finished size measurements. We also show you how to determine the operation type (strap, gear or motor).

## 1. Check the method of installation.

A. Adjacent to the opening, this is outside above or beyond the window or door.



B. Between the openings as in the case of an enclosure



## 2. Width Measurements:

Measure the opening to be covered with the shutter. Please add the measurements for the appropriate rail when the shutter is surface mounted:

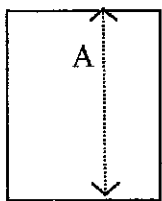
- 37 mm, 40 mm Slats and RE-1000: add 2 1/8" for each rail
- 50 mm, 55 mm and 60 mm Slats with 90° Box: add 2 5/8" for each rail
- 50 mm, 55 mm and 60 mm Slats with 10" or 12" 45° Box: add 3" for each rail

## 3. Height Measurements:

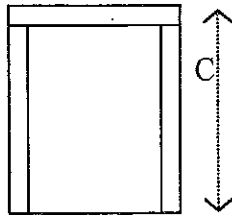
A. If you are mounting adjacent to the opening (shutter box above the opening), take the measurement of your opening and add 2" for the bottom hang down (end slat) plus the shutter box size. The shutter box size is determined by the profile and total height of the shutter; see page 5 (and Fig.3).

B. If you want to mount the shutter directly within an opening, simply measure the total opening height the shutter will fit into (Fig.4).

+ Box  
+ 2" hang down



↔ B ↔  
Fig.3



↔ D ↔  
Fig. 4

- A = Opening height
- B = Opening width
- C = Finished height
- D = Finished width

4. According to your method of operating, choose the exit position for the different operation types (see sketches for the exit positions)

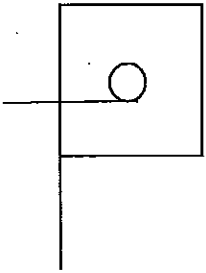
A. **Gear:** Exit positions I, II and III possible, I is most common

B. **Strap (Recoil Box) and Crank box with cord:** I, II and III possible, I is most common

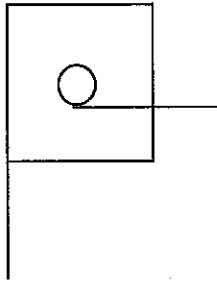
C. **Motor:** The motor exit is determined by the installer and depends on the switch location

D. If you would like a different option, please use sketch IV to draw your own version.

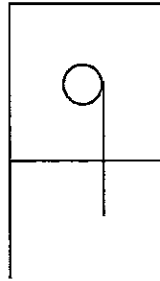
I.



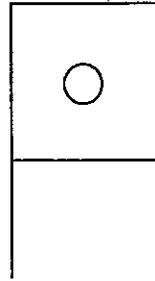
II.



III.



IV.



Always determine the side of operation as looking from inside of the house or opening. Our standard, if not specified, is inside right.

Note: Most shutters will be shipped in 3 separate cartons:

1. Shutter box assembled
2. Guide rails, Storm bars, L-Angles and shutter hardware and accessories
3. Curtain

## Printer-Ready Measuring Instructions for Rolling Shutters

### Print This Page

#### Printer-Ready measuring form | On-line Pricing

**About Built-Ins:** A built-in installation will require that we receive a set of construction plans showing elevations with accurate window and door placement, floor plan, window and door schedule, and construction details for windows and doors. The design for your project and a detailed quote will be completed promptly by one of our design specialists and provided to the architect, builder or homeowner along with details of installation. We can, given adequate lead time, design an interface between the windows you are purchasing for the house and our roll shutter system so the window shutter combination is installed as one unit.

I suggest you print out the Printer-Ready measuring form before starting.

Questions? Call 800-823-6677 [www.StormShutters.com](http://www.StormShutters.com)

**Numbers corresponded to numbers on the Measuring Form. The highlighted numbered boxes are required by the on-line pricing tool to produce a price.**

1. Opening Location. How we identify the shutters for each opening. (If you don't do this now, you'll be very confused later and if you order shutters, you will have a devil of a time figuring out which shutter goes where.
2. & **Measure Width and Height.** First, go outside and measure the width and height of the
3. opening you want to protect.
4. **Recess or Surface Mount installation.** If the shutter is to be recessed in the opening, skip questions 5 & 6
5. How much space do you have above the opening? Measure above the opening to determine if you have adequate space above the opening for the shutter hood. Small openings, 48" or less in height, will require 8"; an opening 80" high will require 9"; an opening 120" high will require 13" of clear space above the opening.
6. Do you have 3" of space on each side of the opening? We need 3" of clear space on each side of the opening for the side tracks. If you don't have adequate space, then give us a call to determine if we can suggest another installation procedure; consider storm panels or Bahama shutters.
7. **Manual or Electric Operation.** We now need you to mark the operator box with an (M) for motorized, (MA) for motorized with manual override, (G) for gear operation and (S) for a strap operator.
8. Type of Opening. Window or door
9. **Protection Level** - Light, Moderate or Hurricane

10. Location of Operator. Now let's determine which side of the shutter the operator will be on. Take a look at drawing 3 and simply mark right or left on the form. Easy!
11. Position of Operator. Now let's determine the position of the operator as it exits the hood and end cap. Look at drawing 4. (If you are using a motor don't answer this question. The electrician will exit the cord at the best spot for him to connect the wiring). If you are using a motor with a manual override, a gear or strap actuators you do need to indicate your preference as to where the actuator should exit the hood. Basically there are 2 options. One are you installing the actuator inside the house. If so I suggest the actuator exit the hood at point 3 as shown on drawing 4. Why? Because the actuator will be lower inside the house and there is less likelihood the ceiling or any other obstruction will interfere with the installation of the actuator.  
If you intend to operate the shutter from outside of the house, I suggest you take a look at the drawing #4 again. Most of our customers choose the #2 exit location. It is lower and easier to use than the higher location.
12. Handle Length. Now we get to choose the handle length. I suggest you measure from the ground where you would be standing when operating to the imaginary point where the operator will be and subtract 5'. This does not require an exact measurement. You can always shorten the handle if it is too long. However if it is too short I don't have a handle stretcher so you may have to stand on something (wink). 4' or 6' your choice. It will be a removable handle so you won't have to look at it all of the time.
13. Handle Color. Now a hard choice. The handle color... White or Brushed aluminum.
14. Hood Shape. Now we need to know which hood shape you like. I am partial to the 45-degree hood but the square is available as well. Picture 4 is the 45-degree. I am sure you can visualize what square looks like.
15. Shutter Assembly Color. Now I need to know the color you want the shutter assembly to be. There are 4 standard colors. Remember the color you see on your monitor may be different when you see the shutter in person. The white and bronze we use is the same as is commonly used for railings window frames pool cages etc. However if you are hung up on seeing the colors call the office and ask one of the folks there to send a sample to you.

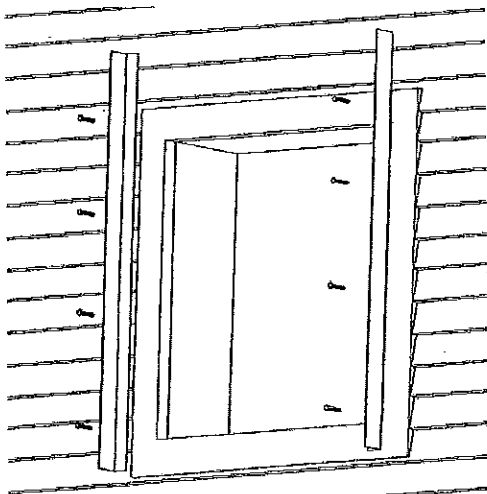
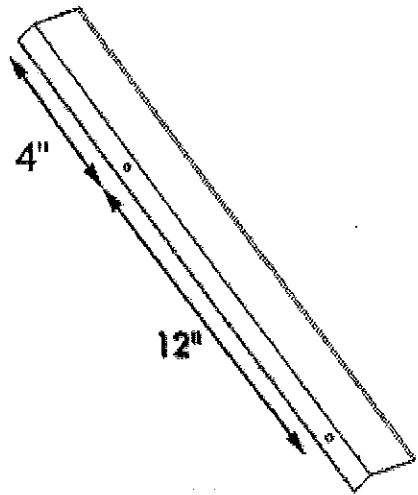
# Installation Instructions

Please read these instructions entirely before attempting to install your order!!!

1. Unpack your shutter components and inspect for correctness and damage. Report any discrepancies immediately to Alutech United.
2. Remove all protective plastic covering from shutter housing.
3. When measuring for the shutter you should have determined if you needed to build out ("pack out") the shutter so that the shutter clears any protrusions, handles or knobs. If you are able to mount the shutter directly to the wall go to Step #4 in the aluminum post or wood section.
4. You can "pack out" using either L-angle or aluminum post or wood. If your shutter is recess mounted within an opening go to the Recessed Mounting Section.

## L-Angle:

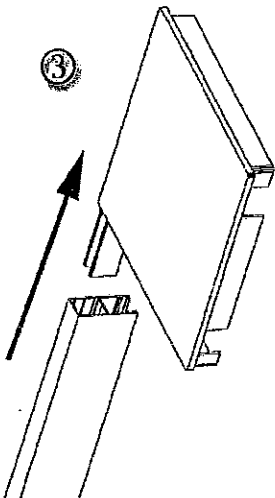
1. Set your pack out in place framing out where the shutter will be mounted.
2. Pre-drill the L-angle 1" leg with  $\frac{1}{4}$ " holes—4" from the top, 4" from the bottom and every 12"-18" in between.



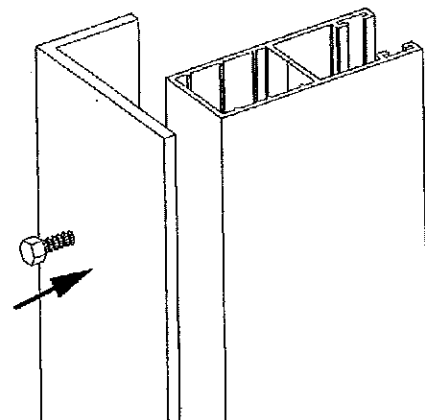
3. Mount these L-angles to the wall using a bubble level to ensure they are parallel and square. If you are mounting on siding you must first cut back the siding so that you can mount directly to a flat uniform surface.
4. If you are installing a Motorized shutter go to Step#5. If the shutter is motorized with a gear override see the Motor Override Section. You must now determine where your operator will be mounted and drill through the wall to get the operator to the inside of the structure. If your shutter has outside operation you need only to

mount the shutter at this point.

Now mark on the wall where your operating mechanism must come through and drill a  $\frac{3}{4}$ " hole directly on your mark (some customers like to insert a small piece of tubing through this hole for weather protection). Insert the end cap pins into the guide rails as shown in Figure 3. Now lift the entire shutter unit into place being very careful not to break the end cap pins.



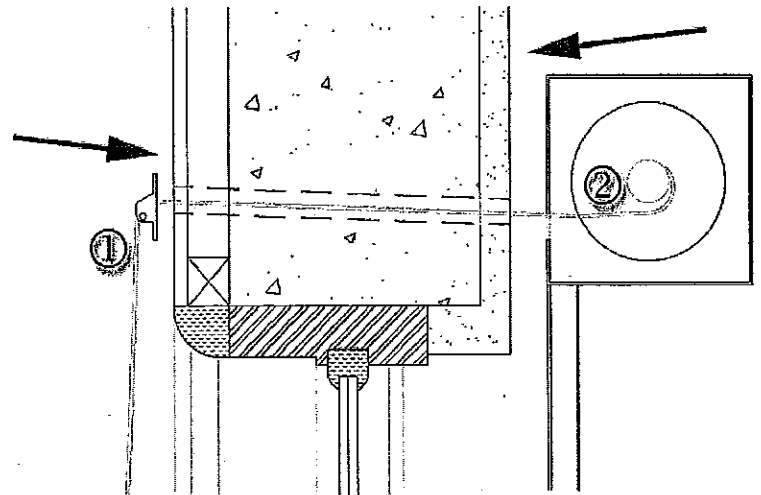
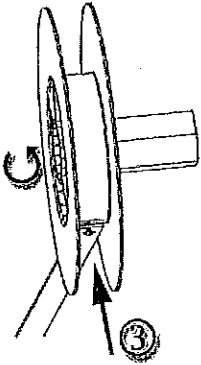
From the inside, now bring the operator through the wall into the operating mechanism of shutter. Secure the shutter in place by screwing outside of the L-angle into the guide rail, sure to keep them level and square.



through the making

**For Strap Operated Shutters:**

First lace the strap through the wall strap guide (1), then insert the strap through the wall. On the outside, attach the strap to the pulley (2) by making a small slit in the center of the strap pulley and loop it over the strap holder knob (3). Turn the axle in the "curtain down" direction filling the strap pulley until it is ¾ full.



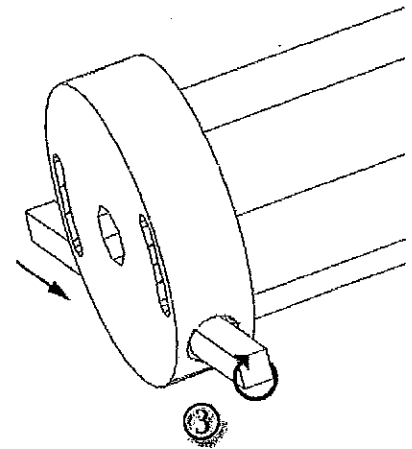
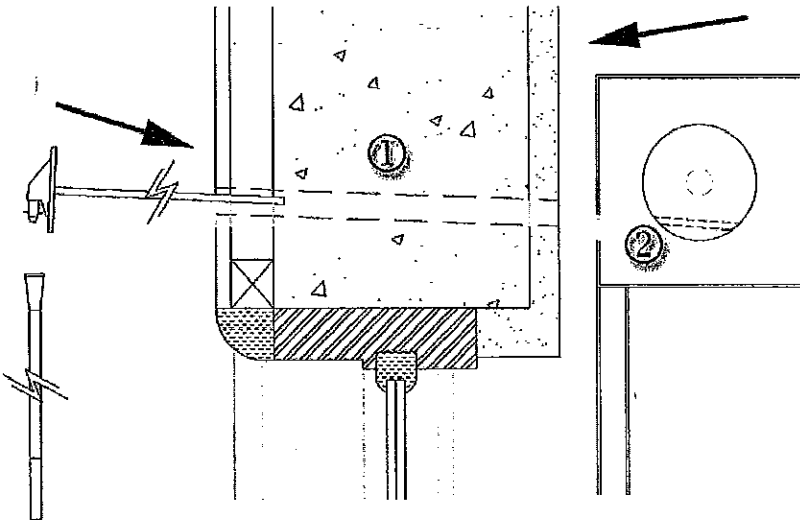
**For Crank Box Shutters:**

Lace the strap or cord through the wall guides (1), then insert the strap or cord through the wall. On the outside attach the strap or cord to the pulley (2). Turn the axle in the "curtain down" direction filling the pulley until it is ¾ full.

**For Gear Crank Shutters:**

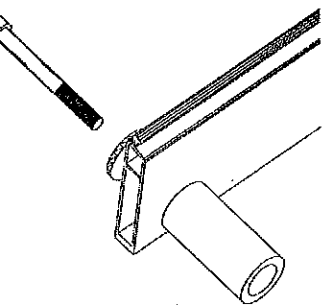
When drilling the ¾" hole angle your hole slightly up (1). This slight angle will keep any weather from leaking down toward your home. Insert the universal through the wall and into the gear (2). If the universal is too long mark and cut to length. The rod should come through the gear and just out the other side (3).

Attach the Universal Bullet device to the interior wall. Using the crank handle turn the axle in the "curtain down" direction until the gear stops turning.

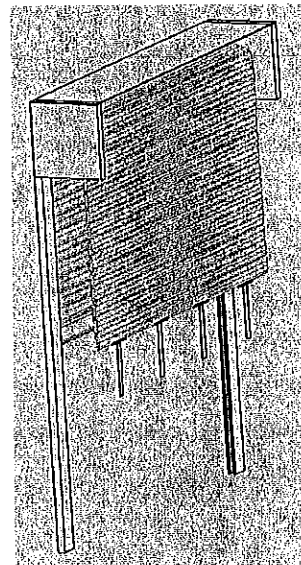


5. For Motorized shutters consult your electrician for local electric codes and electrical placement.
6. Once your shutter is mounted, secured, and all operators have been attached, fasten the sheet metal safety plates to the interior of both end caps. Lay a blanket or old sheet over the axle to keep the curtain from getting scratched in the following steps.

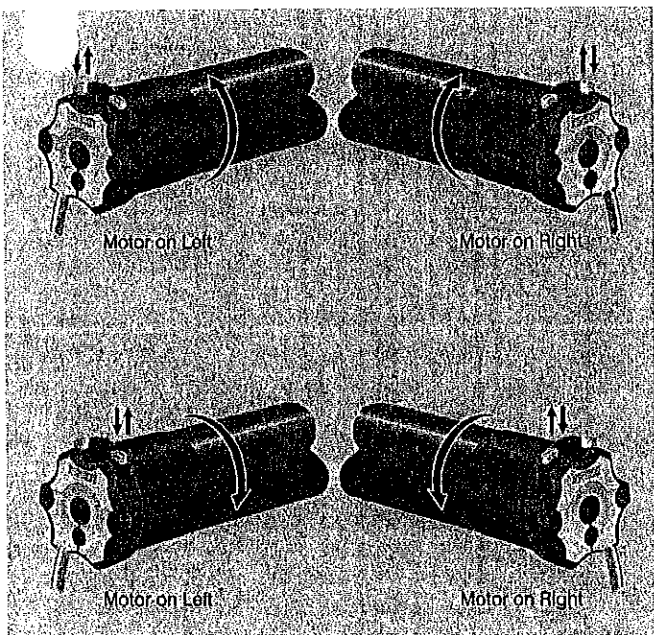
7. Starting with the end slat, place the curtain over the axle and down in the guide rails. Make sure that the concave slat profile is facing the shutter axle. Next attach the T-straps to the axle. Note: If this is a motorized shutter be sure to use the small painted screw on the motor side!!
8. Place T-straps on the top slat of your curtain spaced about every 15"-18"
9. Install the conical stoppers in the end slat as shown. Motorized shutters do not have stoppers for you to install, they are stopped by the motor limits.



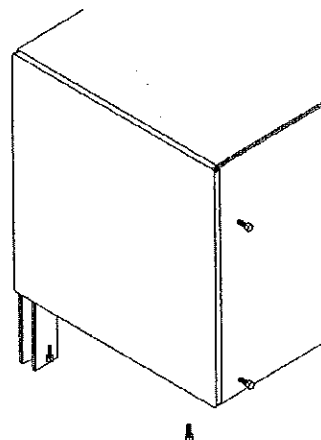
10. Now you must go inside and fasten all the operators. For strap and crank box operators, attach them to the wall where it is convenient for the customer. For Gear shutters, attach the handle and install the holder clip to the wall and store the handle in its receiver. For Motorized shutters, you can now set the limits. First pop out both the yellow and white limit buttons. With a tester switch connect like color wires to operate the shutter. Run the shutter up and push in the "up limit" when the end slat is the only slat hanging out of the housing. Now run the shutter down and push the "down limit" button when the shutter fully closes being careful not to allow the axle to overturn the T-straps past their locking position.



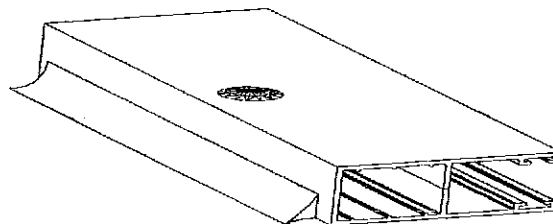
\*\*\* When the motor is mounted on the right (from the outside), the yellow button is the down limit and the white button is the up limit. For motors installed on the left (from the outside), the yellow button is the up limit and the white button is the down limit.



11. Put the housing cover on making sure that it locks in the "interlocking" configuration on the housing back. Attach the hood by drilling small self-tappers through the cover into the endcaps. Use 2 screws for the face and 2 on the bottom for each side.



12. Weatherproof the shutter by caulking along the edges of the entire shutter as pictured below.



## Aluminum Post or Wood & Surface Mounting

1. Set your pack out in place framing out where your shutter will be mounted.
2. If using wood, screw directly into the wall making sure the wood lays flat and is square. Use a bubble level to double check. If using aluminum posts, drill  $\frac{1}{2}$ " holes through the outside tube wall and  $\frac{1}{4}$ " holes through the inner wall of the tube. Make holes 4" from the top, 4" from the bottom, and space every 12"-18" in between. Remember to place holes where they will not interfere with guiderail fastener. Special "step-down" drill bits are available for this process. Contact AUI for details.
3. Securely attach the posts to the wall. If you are mounting to siding you must cut the siding first so that you are attaching directly to the flat wall surface.

4. Pre-drill your guiderails as shown – 6" from the top and bottom, and every 12" in between. Drilling on 6" center from the ends and 12" centers. Start by drilling a  $\frac{1}{2}$ " hole through the exterior wall of the hollow part of the guiderail. Next drill a  $\frac{1}{4}$ " hole through the same hole through the interior wall of the guiderail. Special "step-down" drill bits are available for this process. Contact AUI for details.

5. If you are installing a Motorized shutter go to Step #6. You must now determine where your operator will be mounted and drill through the wall to get the operator to the inside of the structure. If your shutter has outside operation you need only to mount the shutter at this point.

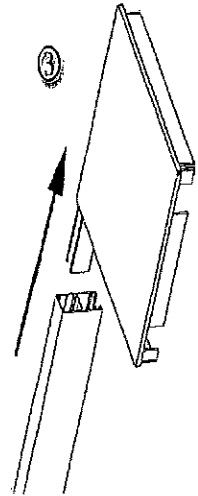
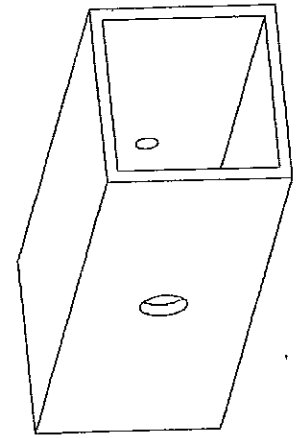
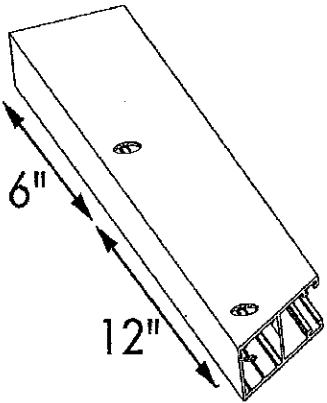
Now mark on the wall where your operating mechanism must come through for drilling. Remove the shutter and drill a  $\frac{3}{4}$ " hole where you just marked (some customers like to insert a small piece of tubing

through this hole for weather protection).

Insert the endcap pins into the guiderails as shown in figure (3). Now lift the entire shutter unit into place being very careful not to break the endcap pins at this stage.

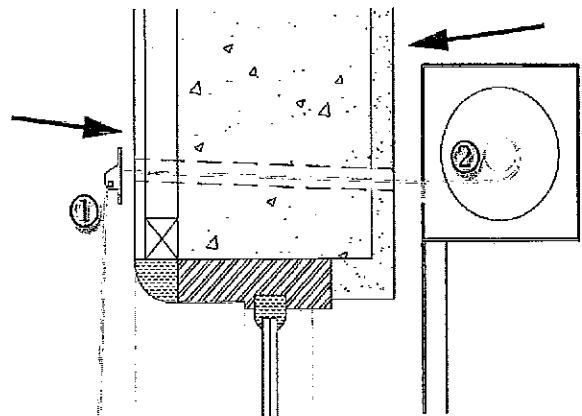
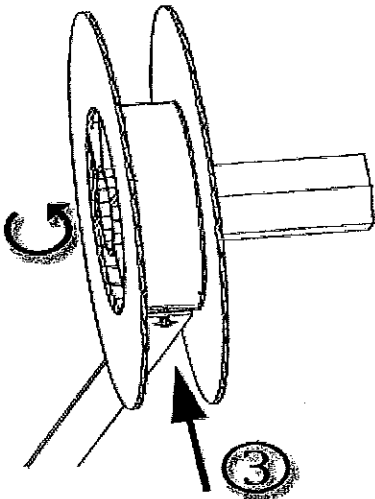
From the inside now bring the operator through the wall into the operation mechanism of the shutter.

Secure the shutter in place by screwing through your pre-drilled holes into the post/wood pack out you previously installed.



### For Strap Operated Shutters:

First lace the strap through the wall strap guide (1), then insert the strap through the wall. On the outside, attach the strap to the pulley (2) by making a small slit in the center of the strap pulley and loop it over the strap holder knob (3). Turn the axle in the "curtain down" direction filling the strap pulley until it is  $\frac{3}{4}$  full.





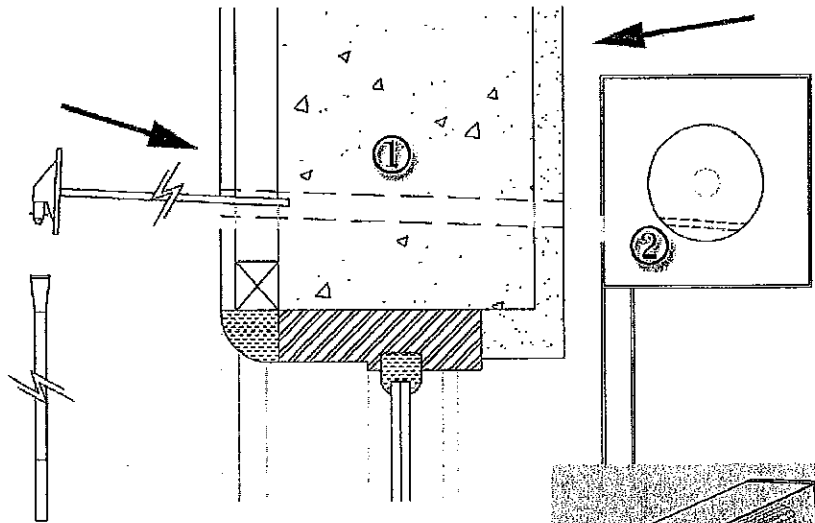
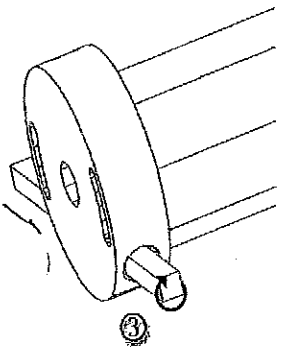
**For Crank Box Shutters:**

Lace the strap or cord through the wall guides (1), then insert the strap or cord through the wall. On the outside attach the strap or cord to the pulley (2). Turn the axle in the "curtain down" direction filling the pulley until it is  $\frac{3}{4}$  full.

**For Gear Crank Shutters:**

When drilling the  $\frac{3}{4}$ " hole, angle your hole slightly up (1). This slight angle will keep any weather from leaking down toward your home. Insert the universal through the wall and into the gear (2). If the universal is too long, mark and cut to length. The rod should come through the gear and out the other side (3).

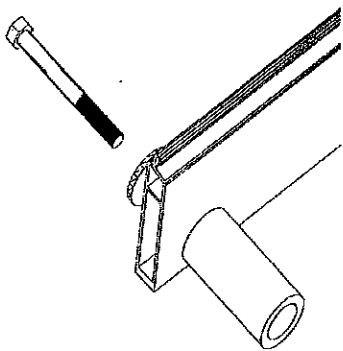
Attach the Universal Bullet device to the interior wall. Using the crank handle, turn the axle in the "curtain down" direction until the gear stops turning.



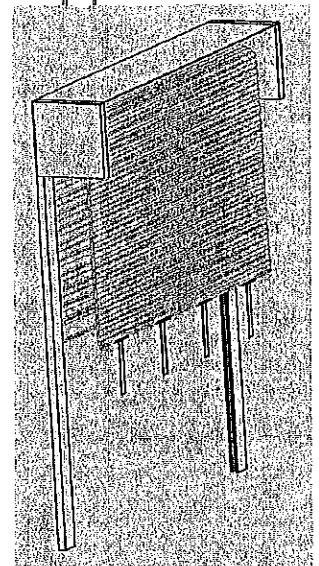
6. For Motorized shutters consult your electrician

for local electric codes and electrical placement.

7. Once your shutter is mounted and secure and all operators have been attached, fasten the sheet metal safety plates to the interior of both endcaps. Lay a blanket or old sheet over the axle to keep the curtain from getting scratched in the following steps.
8. Starting with the endslat, place the curtain over the axle and down in the guiderails. Make sure that the concave slat profile is facing the shutter housing. Next attach the T-

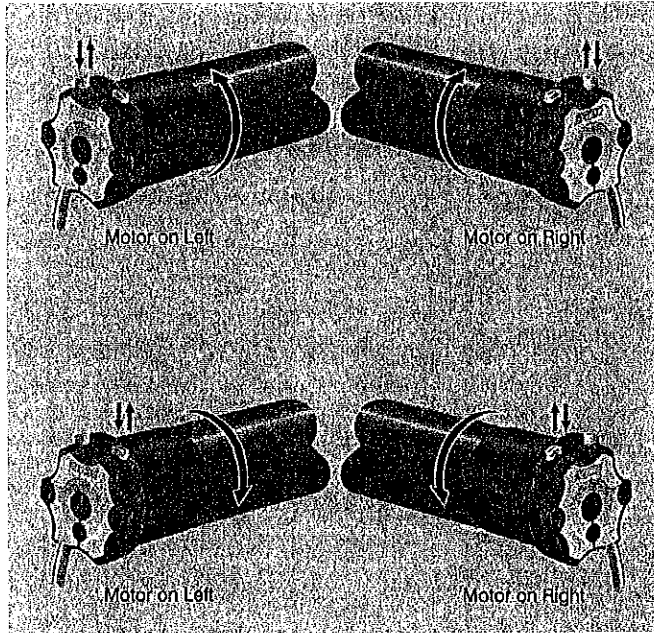


9. Place T-straps on the top slat of your curtain spaced about every 15"-18".
10. Install the conical stoppers in the endslat as shown. Motorized shutters do not have stoppers for you to install, they are stopped by the motor limits.
11. Now you must go inside and fasten all the operators. For strap and crank box operators, attach them to the wall where it is convenient for the customer. For Gear shutters, attach the handle and install the holder clip to the wall and store the handle in its receiver. For Motorized shutters, you can now set the limits. First pop out both the yellow and white limit buttons. With a tester switch connect like color wires to operate the shutter. Run the shutter up and push in the "up limit" when the endslat is the only slat hanging

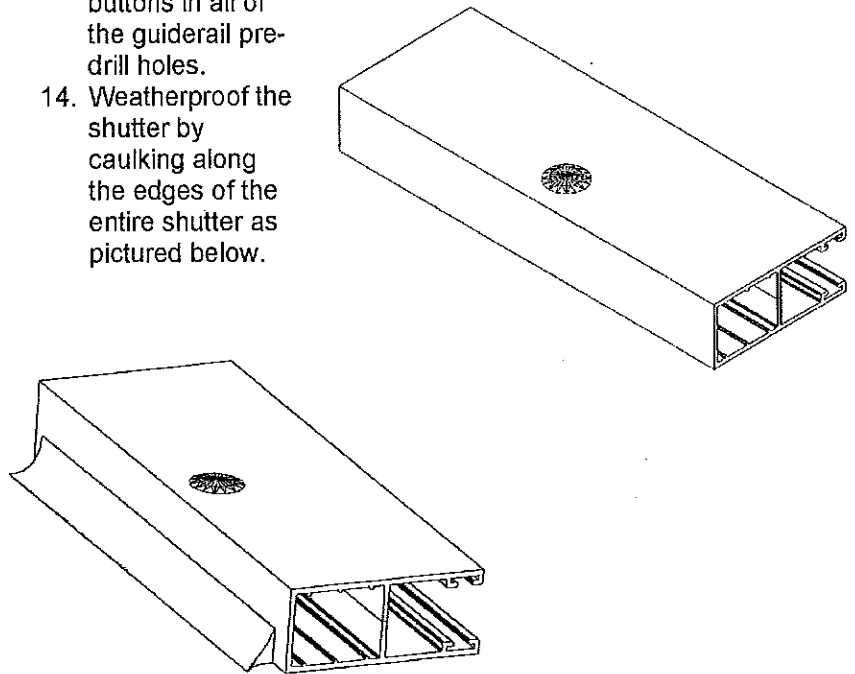


out of the housing. Now run the shutter down and push the "down limit" button when the shutter fully closes being careful not to allow the axle to overturn the T-straps past their locking position.

\*\*\* When the motor is mounted on the right (from the outside), the yellow button is the down limit and the white button is the up limit. For motors installed on the left (from the outside), the yellow button is the up limit and the white button is the down limit.

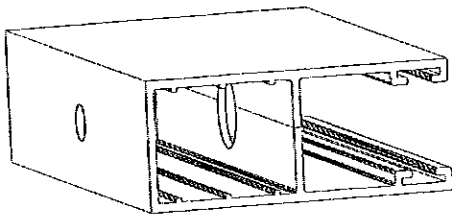


12. Put the housing cover on making sure that it locks in the "interlocking" configuration on the housing back. Attach the hood by drilling small self-tappers through the cover into the endcaps. Use 2 screws for the face and 2 on the bottom for each side.
13. Apply beauty buttons in all of the guiderail pre-drill holes.
14. Weatherproof the shutter by caulking along the edges of the entire shutter as pictured below.



**Recessed Mounting:**

1. If your shutter is to be recess mounted within an opening you must pre-drill the guiderails differently. Pre-drill the guiderails as shown in the figure on the left.
2. Start by drilling a 1/2" hole through the throat of the guiderail making sure to drill only the inner wall. Next drill a 1/4" hole through the outside wall of the guiderail. A "step-down" drill bit is available for this process. Contact AUI for information.
3. When securing the shutter, fasten through these pre-drilled holes. Follow the above directions for all other steps.

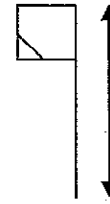


**Motor with Override**

If you are installing a shutter with a motor and gear override, you should follow the same instructions as the Gear Crank shutter along with the electrical and motor limit installation procedure.

# Housing Size Chart

- All Dimensions in Inches
- 45° and 90° Boxes
- 9" 90° Box only available in White



Max. Guide Rail Height

Max. Overall Height

Slat Profile	Box Size	Axle			Axle		
		40mm	60mm	70mm	40mm	60mm	70mm
RC-37	5 1/2	59 3/4	40 1/2		65 1/4	46	
	6 1/2	90 3/4	66 1/2		97 1/4	73	
	7	112	82		119	89	
	8	132 1/2	121		140 1/2	129	
	9		146			165	
	10		179			189	
RC-40 US-40 ROE-40	5 1/2	32 1/2	30 1/2		38	36	
	6 1/2	62 1/2	49 1/2		69	56	
	7	81	65	57	88	72	64
	8	103	96	88	111	104	96
	9		139	128		148	137
	10		165	159		175	169
RC-55	5 1/2						
	6 1/2						
	7		39	24		46	31
	8		50	55		58	63
	9		73	66		82	75
	10		97	102		107	112
RCE-60	5 1/2						
	6 1/2						
	7			39			46
	8			55			63
	9			64			73
	10			94			104
RE-1000	5 1/2						
	6 1/2						
	7		55	24		61 1/2	30 1/2
	8		63	39		70	46
	9		102	94		110	102
	10		121	113		130	122
RGS-55	5 1/2						
	6 1/2						
	7		33	24		40	31
	8		55	50		63	58
	9		74	69		83	78
	10		90	86		100	96
Barracuda 42	6 1/2	72 1/2	60 1/2	58	79	67	64 1/2
	7	90	85	82	97	92	89
	8		111	105		119	113
	9		156	150		166	159

## Installation Instructions

### Hardware

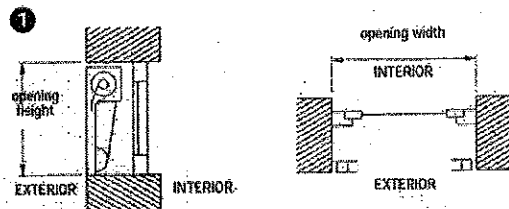
- We suggest, if you have a masonry house, Tapcon fasteners be used. The #14, x 2.75" will do the job.  
Tip: A good hammer drill will be indispensable
- If you have frame construction, we suggest you use #14, 2-1/2" stainless screws for mounting the shutter. The hood and end caps are assembled using #10, x 3/4" tech screws.  
Tip: A 12-14 volt battery drill will be indispensable.

### Pre-Installation

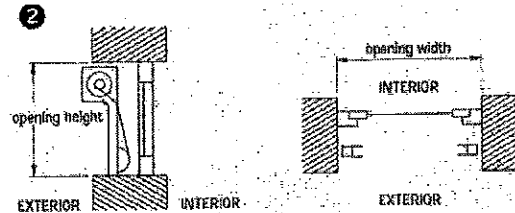
The installation of your roll shutter is critical to overall operation and your satisfaction. We ordinarily would tackle the hardest part of the project first; but since this is your first shutter installation, let's choose the easy one to learn.

Open the boxes for the shutter you want to install and review the contents. One box will have the hood, end caps, roll tube and miscellaneous items such as hangers or operators. The next box will contain the slats all rolled up. The third box will have the side tracks and other miscellaneous items.

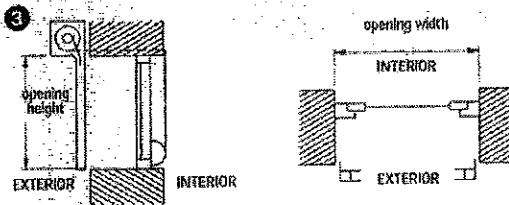
Assemble the hood and drive tube following the instructions provided.



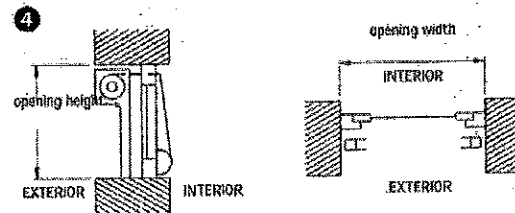
Typical recessed mount with hood inwards.



Typical recessed mount with hood facing outwards (most popular)

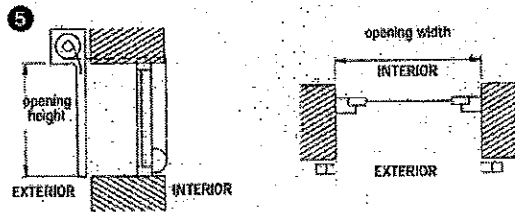


Typical surface mount hood with recessed mount side tracks.



Similar to #2 except hood fully recessed in opening and operator inside of

building.



[Click Images to Enlarge.](#)

Typical surface mount installation with operator inside building. (most popular after market installation)

### Installation Steps (click on image to enlarge.)

1. Attach hood assembly to wall. I suggest you attach the hood assembly to the wall centered on the opening with 2" of the wall showing under the hood. The fasteners should be in the uppermost corner of the shutter when installed. If the hood is over 48" wide, use 2 attach points to avoid stressing the hood. (Make sure the hood is level.)
2. Side Tracks. Find the 2 side tracks and slide one onto the legs of each end cap. You can do this prior to attaching the hood if you can maneuver the assembled hood and side tracks together. Then plumb the side track up and attach them to the wall. This step is the critical part. The side tracks must be perfectly vertical (plumb), and the hood assembly must be level (parallel to the ground) or the shutter may not work properly. I would then add additional fasteners as desired to the hood and or end caps. Remember hurricane winds can suck the shutter off the house as easily as push it inward.
3. The operator is next. If you are using a motor, then simply drill a hole in the side cap where the cord should exit to the electrical connection. If this needs to exit the rear of the box, a long 1/2" drill 16" long will be a big help. If the walls are very thick and the drill is not long enough, we use a 24" 1/4" drill to complete a hole for the wire. Then we use the 1/2" drill from inside using the 1/4" hole as a guide.

Assuming an outside mount gear, you can complete this at the end of the installation. If the shutter is to be operated from inside using a gear and universal, I suggest the following. Make sure the gear is oriented so the universal arm will be square to the wall. Then, using the 1/4" drill, simply slide the drill bit through the opening in the gear; and drill a hole through the wall. Using the hole inside the house as a guide, use the 1/2" drill to enlarge the 1/4" hole through the wall.

Then, install the universal shaft through the wall into the gear. The gear has a square opening that the universal shaft will slide into. If the shaft is to long, cut it to the appropriate length.

4. The slats are next. Operate the shutter until you see a row of slots. Then, attach the hangers to the roll of slats. You can only do it one way. Then, pick the roll of slats up and attach the hangers to the roll tube by compressing the hook end of the hanger into the slot. You may want to try this once with a single hanger before you try to pick up the roll of slats. The roll must be situated so it will roll away from the shutter. Also, the hangers must go behind the roll tube and over the top of the roll tube and then be attached to the roll tube. You will understand why it must go behind and over the top of the roll tube during the next step.
5. Operate the roll tube so the top of the tube moves forward. As you slowly operate the shutter, adjust the slats so they roll onto the tube centered inside of the end caps. If the slats aren't centered, they could hit the end caps damaging the slats or the end caps; not to mention ruin your day. Continue rolling the slats onto the roll tube until they are nearly done. Then, insert the last slats in the roll into the side tracks. Now, simply reverse the operator so the slats slide down the side tracks. Proud?
6. The side tracks may need stops at the bottom to prevent the slats from simply continuing out the bottom as you operate the shutter to close. We can't have that! If you require the stops, install them now.
7. Test Drive. Now, operate the shutter up and down a few times to insure smooth operation. Everything OK? Good! I told you the side tracks must be plumb and the hood level. Now you can see why!
8. Install the hood cover and check that the universal is securely installed inside the house.
9. Caulk the side tracks and across the hood and end caps.