Shaver Industries
20 Steckle Place, Kitchener, ON N2E 2C3
Ph 1(888) 766 8328
www.shaverinc.com

Assembly Instructions
Spring-Assist Vertical Vinyl Curtain Door
"Projection Mount"

Valued Shaver's Customer: We have pre-assembled the roller, valence, and bracketry components for your door system. This should dramatically simplify the installation procedure. While the installation is very straightforward, please note the following details.

System Overview:

Your Shaver's Spring Assist Vertical Curtain Door is a high quality, high performance flexible door system based on proven components and our many years of experience in the vinyl partition fabrication business. We are confident that it will bring you and/or your customer years of reliable and trouble-free service.

Your specific system is a vinyl roll-up curtain door with projection-mount bracketry. The design dimensions for your door were based on the field survey information that we had available for your door configuration. Should the sizes be incorrect or if you experience difficulty with the installation of your door please contact the factory. Field modifications for changing the width or height of the finished door are very difficult and it is usually best to return the unit to the factory for the appropriate changes. Note that the vertical extrusions are cut to the same height as your stated door opening, which will place the entire spring roll, upper bracketry, and valence box above the door header.

Unpacking and Inspection:

Please unpack your systems carefully and notify the factory immediately if there are any shortages or if any items have been damaged during transit. Your kit(s) should have all of the necessary hardware and components for a complete installation with the following exceptions (installer-provided hardware):

1. Mounting hardware for securing the custom extrusions bracketry to the building inner or outer fascia.

System Assembly:

Roll-Tube Enclosure Mounting:

Prior to installing the Roll Tube Enclosure the projection supports must be firmly mounted to the fascia of your building. To determine the mounting locations for the supports it is first necessary to measure the "ear to ear" distance on your assembled enclosure as shown in the following photo (Photo 1). This dimension will typically be a few inches wider than the installed width of your existing overhead door tracks. This dimension will be referred to as DIM "A".

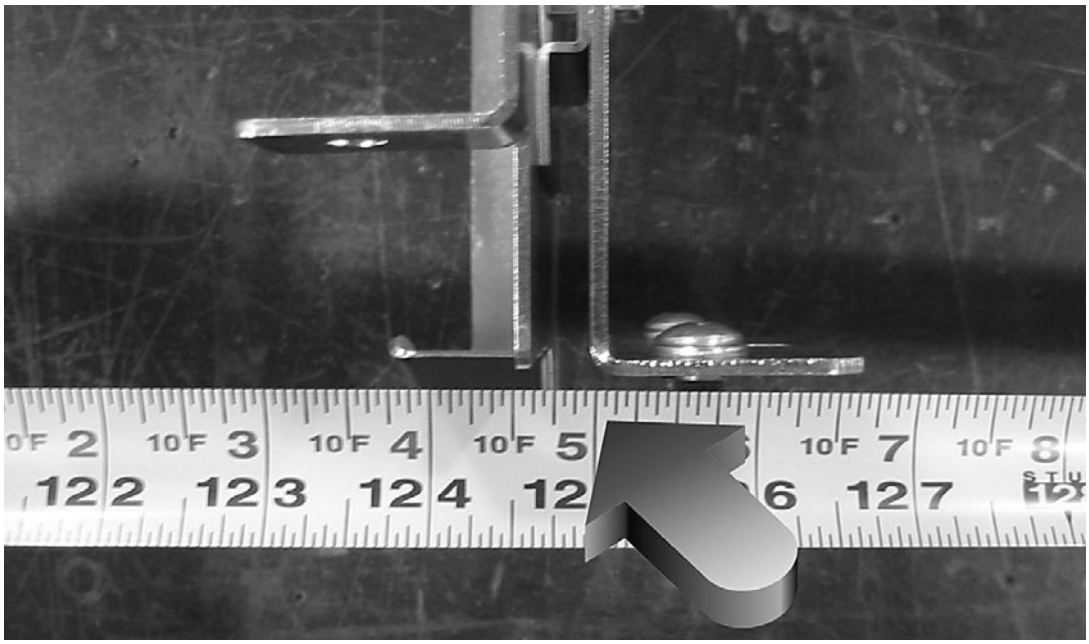

Photo #1
(Measuring Dim "A")

Now measure the length of your Shaver's Custom Vertical Extrusions. This dimension will typically be the same as the vertical height of your door opening. Subtract 1¼" (1.25 inches) from this length. This dimension will be referred to as DIM "B".

Secure the projection supports to your building fascia per the following diagram (Diagram 1). The width of the mounting locations (DIM "A") should be centered about your existing door opening or overhead door track locations. Use a strong and rigid fastening method since there will be a substantial cantilever load applied to these supports.

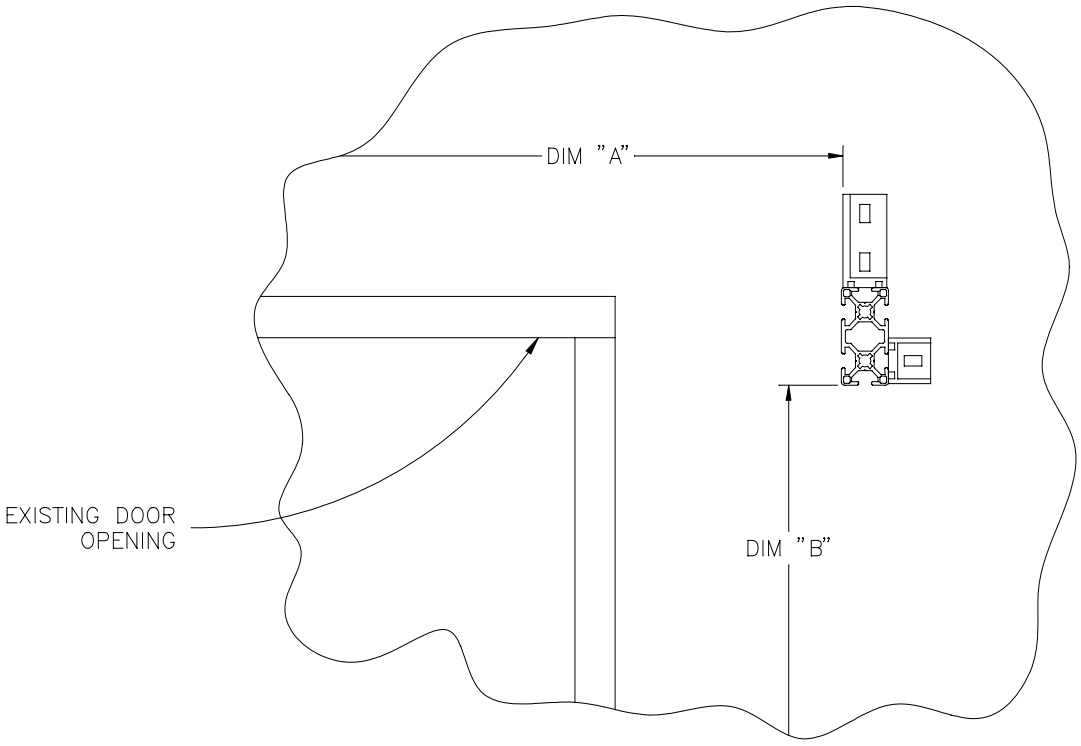

Diagram #1
(Projection Support Mounting Location)

When you're done your projection support installation should resemble the following photo (Photo 2):

Photo #2
(Projection Support Mounting)

Before installing the Roll Tube Enclosure orient the “T-Nuts” so that they will easily drop down into the slots in the projection supports. This can be accomplished by loosening the four 1/4 -20 Phillips head fasteners and rotating the “T-Nuts” as shown in the following photo (Photo 3):

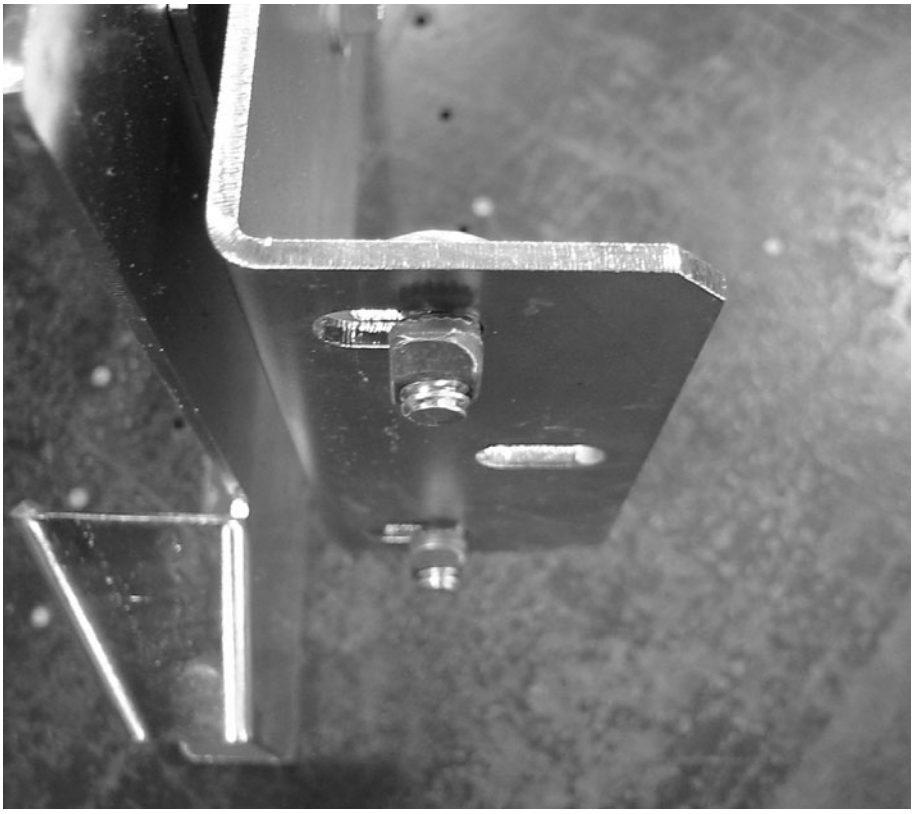

Photo #3
(T-Nut Orientation)

The Roll Tube Enclosure can now be installed by carefully placing it on top of the projection supports. The Roll Tube Enclosure should be orientated so that the Shaver logo on the valence faces away from the door opening. Ensure that the T-Nuts drop down into the slots in the projection supports. Slide the Roll Tube Enclosure along the projection support until there is approximately 1” of clearance between the enclosure and the existing overhead door tracks. Your installation should resemble the following photo (Photo 4) (Spring Roll-Up doors will not have a power cord):

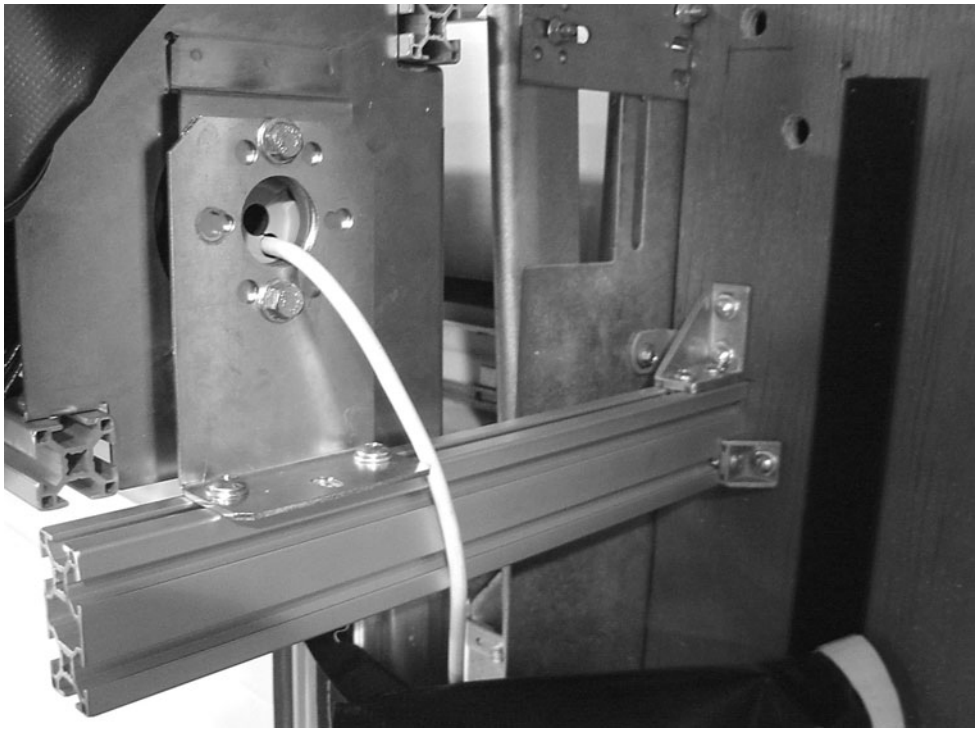

Photo #4
(Roll Tube Enclosure Installation)

Secure the Roll Tube Enclosure brackets to the projection supports via the T-Nuts. This can easily be accomplished by loosening the ¼-20 Phillips head screws a few turns, and then re-tightening them completely. Ensure that the T-Nuts have properly rotated and are fully engaging the slots in the projection supports. See the following photo (Photo 5):

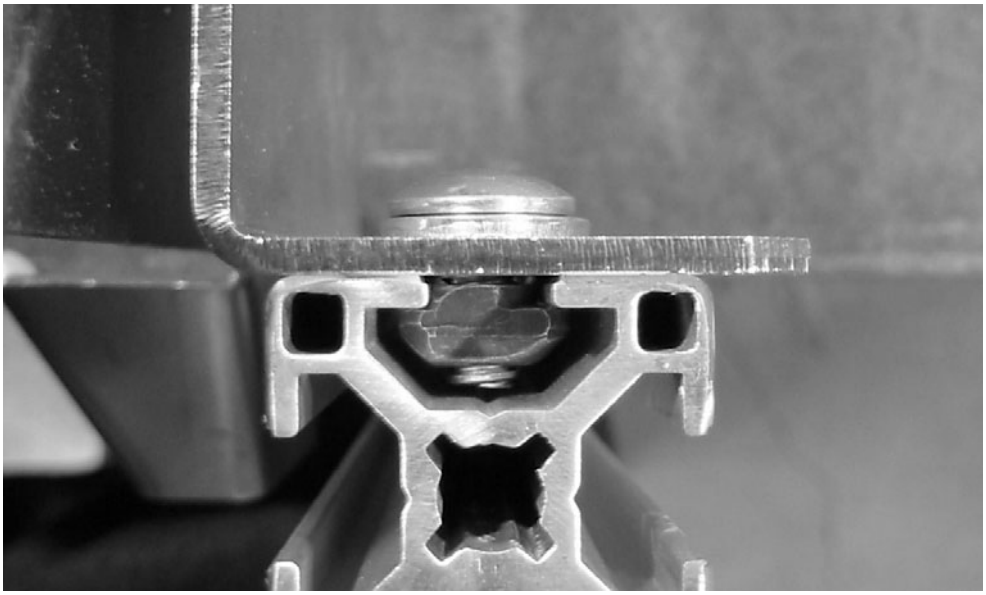

Photo #5
(T-Nut Engagement)

Vertical Extrusion Mounting:

The Vertical Extrusions mount to the upper projection support and are further supported by projection bars mounted at their base and approximate midpoint. The proper orientation of the Vertical Extrusions is crucial to the proper operation of your door assembly. Please refer to the following diagram (Diagram 2) for the correct orientation:

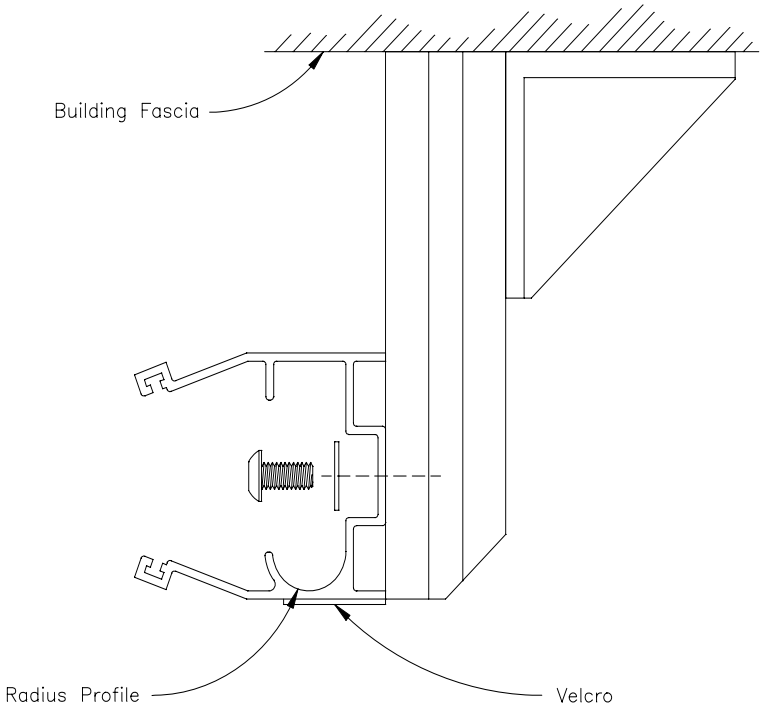

Diagram #2
(Vertical Extrusion Orientation)

After selecting the proper Vertical Extrusion and ensuring its orientation, secure it to the projection support as shown in the following photo (Photo 6)(EPDM side seals removed for clarity). Use the slots in the projection support and Roll Tube Enclosure mounting brackets to adjust the units so that there is a smooth and uniform transition between the "funnel lead-in" on the enclosure bracketry and the Vertical Extrusion. Any abrupt transition may "snag" a door wheel and cause the door to malfunction. Manually unwrap one to two turns of material from the roll and check the engagement and transition of the roller from the side brackets into the custom extrusion. Adjust and/or shim the brackets or vertical extrusions as required to ensure a smooth and repeatable roller transition into the extrusion. See Photo 7.

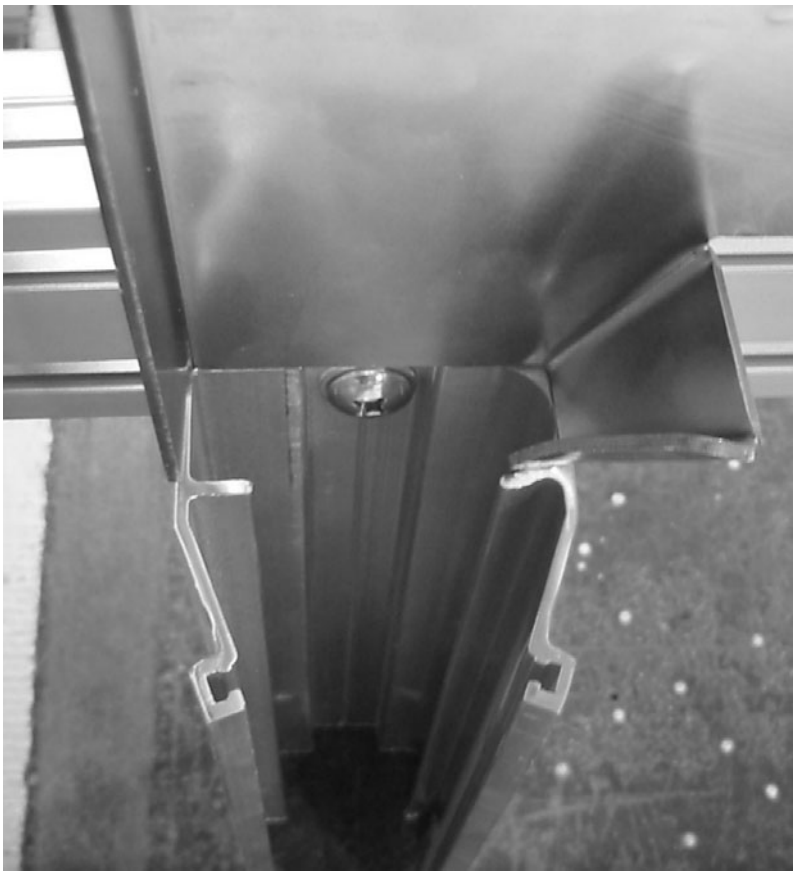

Photo #6
(Bracketry to Extrusion Transition)

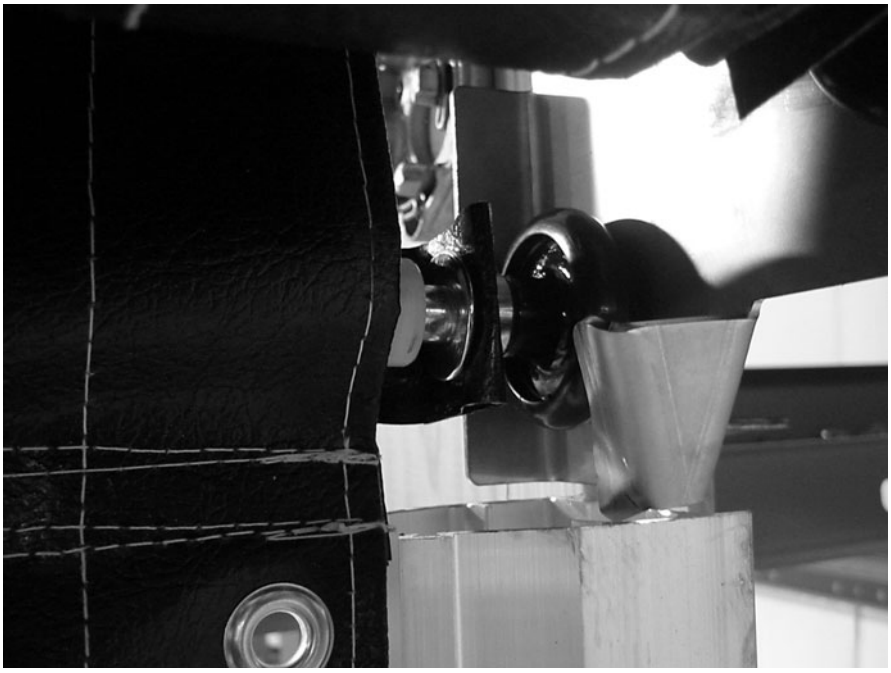

Photo #7
(Roller into Extrusion Transition)

Locate the lower extrusion mounting projection bar. The lower unit has a full-size (four fastener) corner gusset and is occasionally shorter then the midpoint unit. Secure the bar to the bottom hole in the Vertical Extrusion and then mount the bar gusset firmly to the building fascia per the following photo (Photo 8). Ensure that the Vertical Extrusion is completely vertical (left to right) before securing the gusset to the building. The Vertical Extrusions must be parallel to one another within ¾" (.75 inch) from proper operation of the curtain door.

Photo #8
(Bottom Support Bar Mounting)

Select an appropriate location at the approximate midpoint of the Vertical Extrusion for mounting the center (mid) projection bar. It will be necessary to drill a ¼" (.25 inch) hole through the extrusion for the fastener. Be very careful when drilling the Vertical Extrusions as to not damage the EPDM side seals. The center projection bar only uses a half-size (two fastener) corner gusset. The assembly should resemble the following photo (Photo 9):

Photo #9
(Middle Support Bar Mounting)

Repeat the above procedure for the other Vertical Extrusion. Double check the parallelism of the two Vertical Extrusion and ensure that they are within ¾" (.75 inch). The angle of the Vertical Extrusion with respect to the building fascia can be adjusted using the slots in the projection bars. If the angle is extreme it may be necessary to adjust the mounting angle of the Roll Tube Enclosure to ensure a smooth transition between the funnel lead-in and the tops of the Vertical Extrusions. The mounting holes in the angle brackets on the Roll Tube Enclosure are slightly slotted, and it is possible to adjust its angle by loosening the mounting bolts/nuts and rotating the entire enclosure as shown in the following photo (Photo 10). Be sure to re-tighten the fasteners after the adjustment has been made.

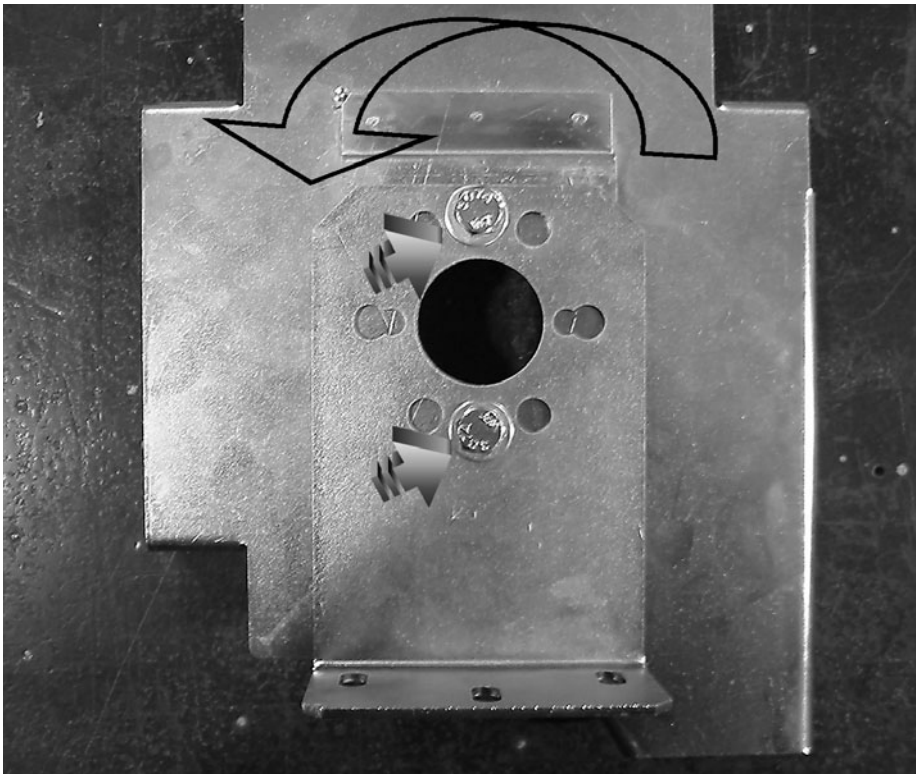

Photo #10
(Rotating Enclosure Bracketry)

At this point the curtain door should be slightly "unrolled" and the bottom set of rollers should be engaged with the vertical extrusions. Completely unwrap both "pull straps" and secure the ends to the "strap saddles" using the buckles as shown in the following photo (Photo 11). Both straps should be adjusted to have a slight and equal amount of tension in them.

Photo #11
(Pull Strap and Buckle)

It is very important to note that the pull straps not only provide for a mechanism to close the curtain door, they also provide the “up limit position” for the unit. If these straps are not properly secured or adjusted the curtain door can “over-travel” when being raised. This may damage the curtain or spring mechanism.

Do no trim the pull straps to their final length at this time.

Final Mechanical Assembly:

Door-Seal Modification:

We have installed a moly-filled nylon “flap-seal” on the rear of the Roll Tube Enclosure to provide a bridge between the projection mount and your existing overhead door. This seal can easily be trimmed with a standard scissors to create clearance for items such as your vertical overhead door tracks. The overall extension of the flap-seal can also be adjusted (via trimming) to create a reasonable amount of deflection (typically about ½” interference) when it contacts your overhead door. Please see the following photos (Photo 12 & 13) for a typical installation:

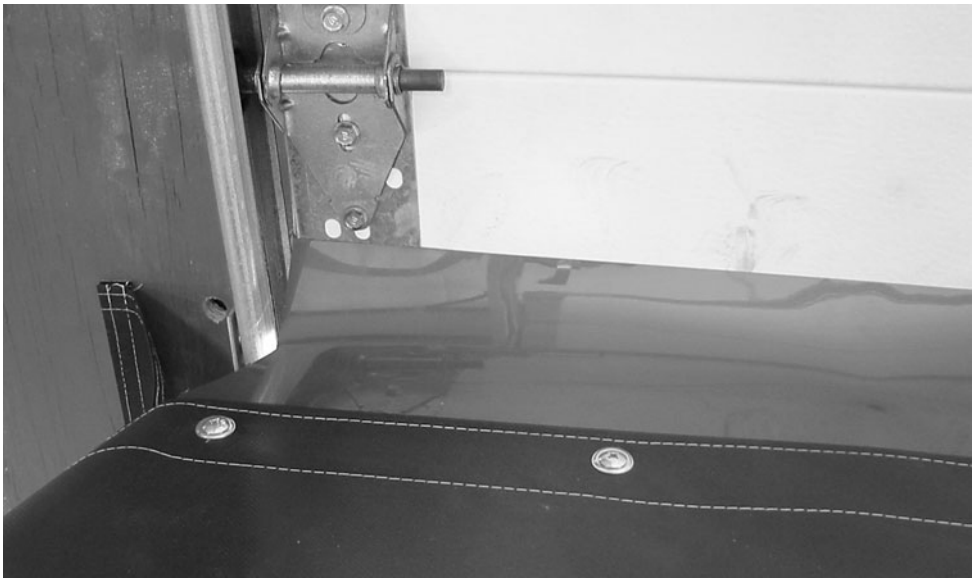

Photo #12
(Flap Seal Modification)

Photo #13
(Flap Seal Deflection)

Side Seal Installation:

We have provided you with two vinyl side-seals to bridge the gap between the Custom Vertical Extrusions and the fascia of your building. These seals may have a taper profile which is designed to match the anticipated installation angle of your specific installation. One vertical edge of the side seal (the edge with the "notch") will attach to the Vertical Extrusion via the "Velcro™" style loop fastener that has been pre-installed on the edge of the extrusion. For the other vertical edge we have included a number of 4' (four foot) sections of Velstick™ industrial loop material. This material can be cut to the appropriate length and attached to the fascia of your building via any "best practices" methodology. Typical attachment processes include nails, sheet-metal screws, industrial double-faced adhesive tape, and construction adhesives. The Velstick™ should be installed just "outboard" of the projection bar gussets as shown in the following photo (Photo 14):

Photo #14
(Velstick Installation)

With the side-seals installed you should have a configuration that resembles the following photo (Photo 15):

Photo #15
(Velstick Installation)

We have also included a number of sections of adhesive-backed "hook and loop" fasteners which should be used to attach the side flap of the Roll Tube Enclosure vinyl cover to the top section of the side-seals. This will create an integrated and "finished" appearance.

Final Setup and Operation:

Operation:

The operation of your Shaver's Spring-Assist Bug Blocking door is quite simple, although a little training is sometimes required.

To lower the door, simply grab one of the pull strap handles (either interior or exterior) and pull the door down in a hand-over-hand manner. Continue to pull the door down until the bottom seal comes in contact with the floor or compresses slightly. Relieve the downward force on the handle and allow the door to slowly move upward. It will "catch and detent" (much like a window shade) at the first available latch position (adjusting the location of these latch positions is discussed in a later section of this document).

Warning: The curtain door is attached to the roller tube with Velcro™ for ease of field replacement. There is an additional "safety wrap" of approximately 18" of material around the roller tube when the door is in the fully closed position. If an operator continues to pull down on the door after it has reached the closed position it is possible for the Velcro™ to "unzip" allowing the door to become detached from the roller tube. This will cause the roller tube spring to lose all of its spring pre-load and a complete re-installation will be required.

To raise or open the door, grab one of the handles and pull the door down an additional 3-4" (three to four inches). Completely release the handle. The door should completely roll up, being stopped by the tension in the pull straps. It is not necessary to "jerk" or "snap" the door in order to get it to open. It is not generally possible to get the door to open from a middle or intermediate position. It must start from the "completely closed" position in order to open properly.

Spring Pre-Load:

If the door does not reliably open all of the way it is necessary to increase the spring pre-load. This adjustment must be done after the EPDM strips and Double Baffle have been installed. During this adjustment you will be dealing with a pre-loaded spring assembly and will be fighting the effects of gravity on the door. Be sure to have solid footing, a good grasp on the roller tube, and use all due caution.

Pull the door down until it is approximately halfway closed. Ensure that it has "latched" into this position and that one or both of the "catches" are locked into the notches of the spring tab mechanism. Grasp the roller tube firmly with one hand and slowly rotate it in a CCW (counter clockwise) direction as indicated in the following diagram (Diagram 3):

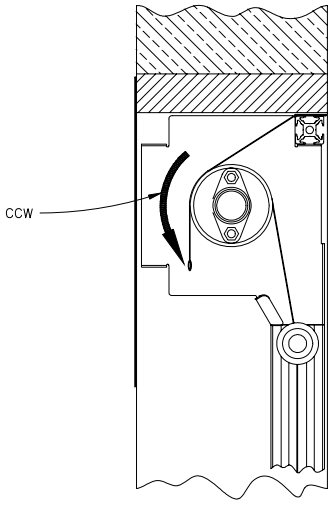

Diagram #3
(CCW Rotation)

This action should unload the force on the cotter pin and I will be possible to pull it out of the spring adapter assembly. Carefully continue to rotate the roller tube an additional ½ to 1 turns in the CCW direction until the hole in the aluminum adapter housing aligns with the corresponding hole in the plastic insert. Reinstall the cotter pin as shown in the following photo (Photo 16):

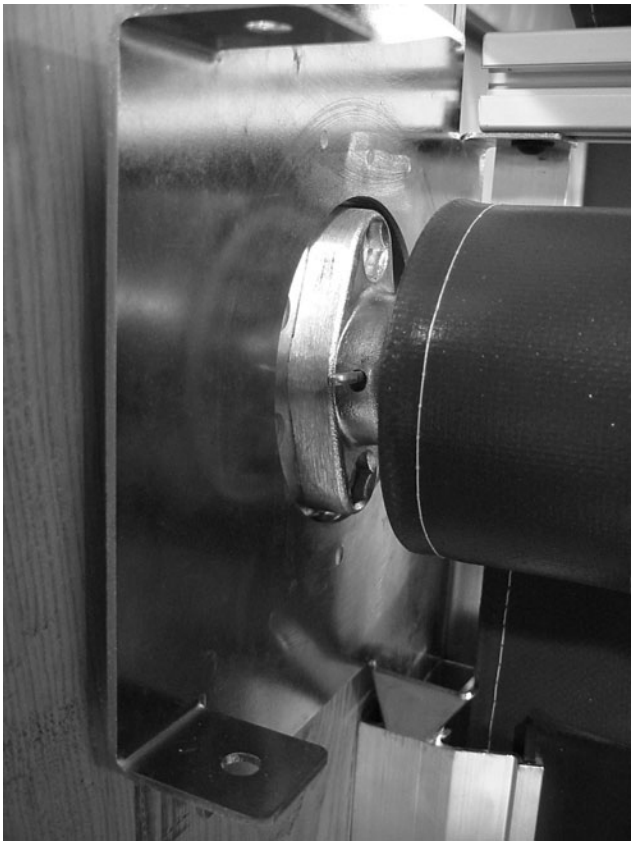

Photo #16
(Cotter Pin Installation)

Test the action and operation of the door. If additional spring pre-load is required repeat the above procedure. The final adjustment should be "just enough" pre-load to ensure a reliable and repeatable opening of the door plus ½-1 additional turns of pre-load.

If the door opens too aggressively (speed) or if it is too hard to operate it may be necessary to reduce the spring pre-load on the door. During this adjustment you will be dealing with a pre-loaded spring assembly and will be fighting the effects of gravity on the door. Be sure to have solid footing, a good grasp on the roller tube, and use all due caution.

Pull the door down until it is approximately halfway closed. Ensure that it has "latched" into this position and that one or both of the "catches" are locked into the notches of the spring tab mechanism. Grasp the roller tube firmly with one hand and slowly rotate it in a CCW (clockwise) direction as indicated in Diagram 3 (above). This action should unload the force on the cotter pin and I will be possible to pull it out of the spring adapter assembly.

Carefully rotate the roller tube ½ to 1 turns in the CW direction as indicated in the following diagram (Diagram 4) until the hole in the aluminum adapter housing aligns with the corresponding hole in the plastic insert. Reinstall the cotter pin as shown in Photo 16 (above).

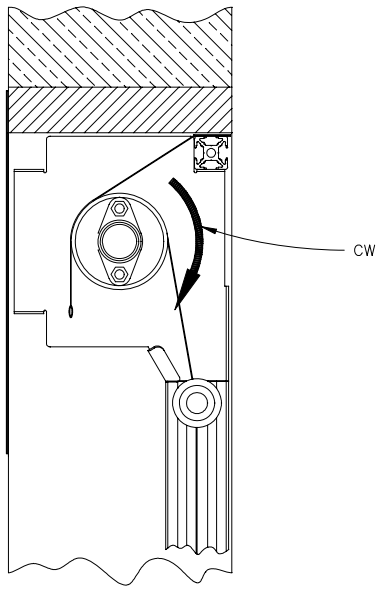

Diagram #4
(CW Rotation)

"Closed" Position Adjustment:

When the door is fully closed the bottom seal should be in contact with the floor or slightly compressed (1-2"). If there are no detent latch position that correspond to this position it will be necessary to adjust the angular position of the spring tab mount. During this adjustment you will be dealing with a pre-loaded spring assembly and will be fighting the

effects of gravity on the door. Be sure to have solid footing, a good grasp on the roller tube, and use all due caution.

Pull the door down until it is approximately halfway closed. Ensure that it has "latched" into this position and that one or both of the "catches" are locked into the notches of the spring tab mechanism. Grasp the roller tube firmly with one hand and slowly rotate it in a CCW (clockwise) direction as indicated in Diagram 3 (above). This action should unload the force on the cotter pin and I will be possible to pull it out of the spring adapter assembly. In the stock configuration it is at the "9 o'clock" (horizontal) position.

Carefully rotate the roller tube in the CW or CCW directions until the holes in the aluminum adapter housing at the "7 o'clock" or "11 o'clock" positions aligns with the corresponding hole in the plastic insert. Reinstall the cotter pin. Each alternate position will raise or lower the bottom latch position by approximately 2". Standard latching positions are located approximately every 5". Note that there is also a hole at the 12 o'clock (vertical) position. This hole should be used with caution since it reduces the aggressiveness and reliability of the latches.

"Open" Position Adjustment:

When the door is fully open the lower set of rollers should be within a few inches of the top of the vertical extrusions. Allowing the rollers to travel up into the "funnel lead-in" of the Spring and Idler brackets may lead to unreliable operation.

The open position is established by adjusting the buckles at the pull strap mounting location. Lengthen the straps to raise the door, shorten the straps to lower it. Both straps should be adjusted in an equal manner and the final tension on both straps when the door is in the open position should be roughly equal.

After the final open position has been established the pull straps can be trimmed and the ends of the webbing "flame fused".

Final Check:

Double check the operation and end-stop positions on your door. **If everything is satisfactory, flair or bend the ends of the cotter pin to lock it into position.** If the cotter pin is not properly secured it may fall out, damaging the door unit and perhaps causing bodily harm.

Periodic Maintenance:

Over time the action of the door may become sluggish and the unit may not retract to the "full up" position. This is usually due to the accumulation of surface contaminates on the double baffle and the evaporation of the natural surface lubricant on the vinyl material. Increasing the spring pre-load may compensate for this problem, but the preferred remedy is to re-coat the vinyl door and double baffle with a dry lubricant. Shaver's recommends lightly spraying the upper ⅓ of the "inside" door material with a silicone lubricant

(available at most hardware stores). Operating the door will transfer some of this lubricant to the surface of the double baffle. Repeating this process every 6 to 12 months will keep your door operating in a smooth and reliable manner.

The assembly, installation, and set-up of your Shaver's Spring-Assist Curtain Door is now complete and it is ready for typical operation. It is a virtually maintenance free unit and should give you years of reliable service.

We want to thank you again for your business and the opportunity to partner with your firm on this project. Please don't hesitate to contact us if you have any questions regarding these instructions or encounter any problems with the installation or performance of your door.