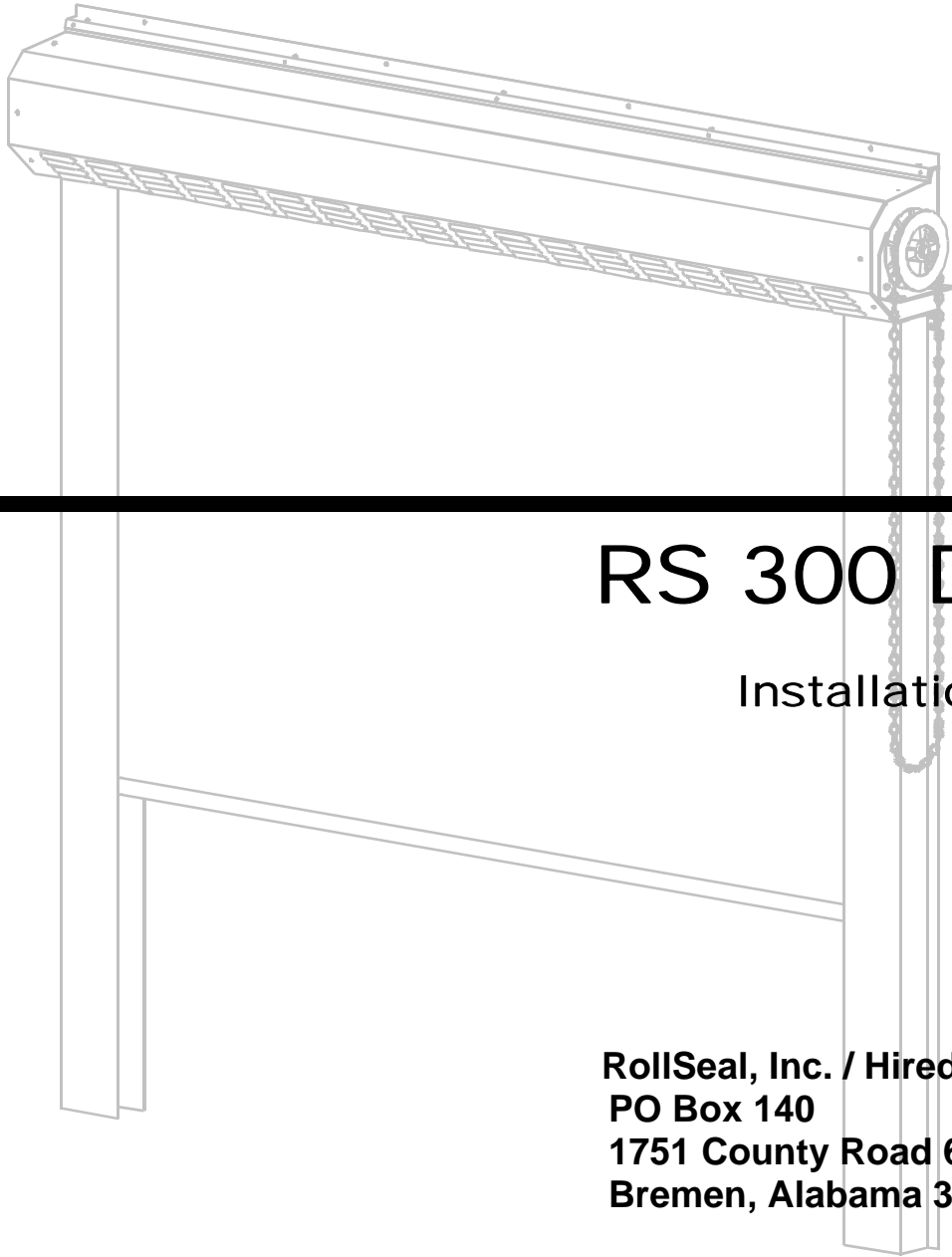




*Automated Systems*



# RS 300 DOOR

Installation Manual

**RollSeal, Inc. / Hired-Hand Green  
PO Box 140  
1751 County Road 68  
Bremen, Alabama 35033**

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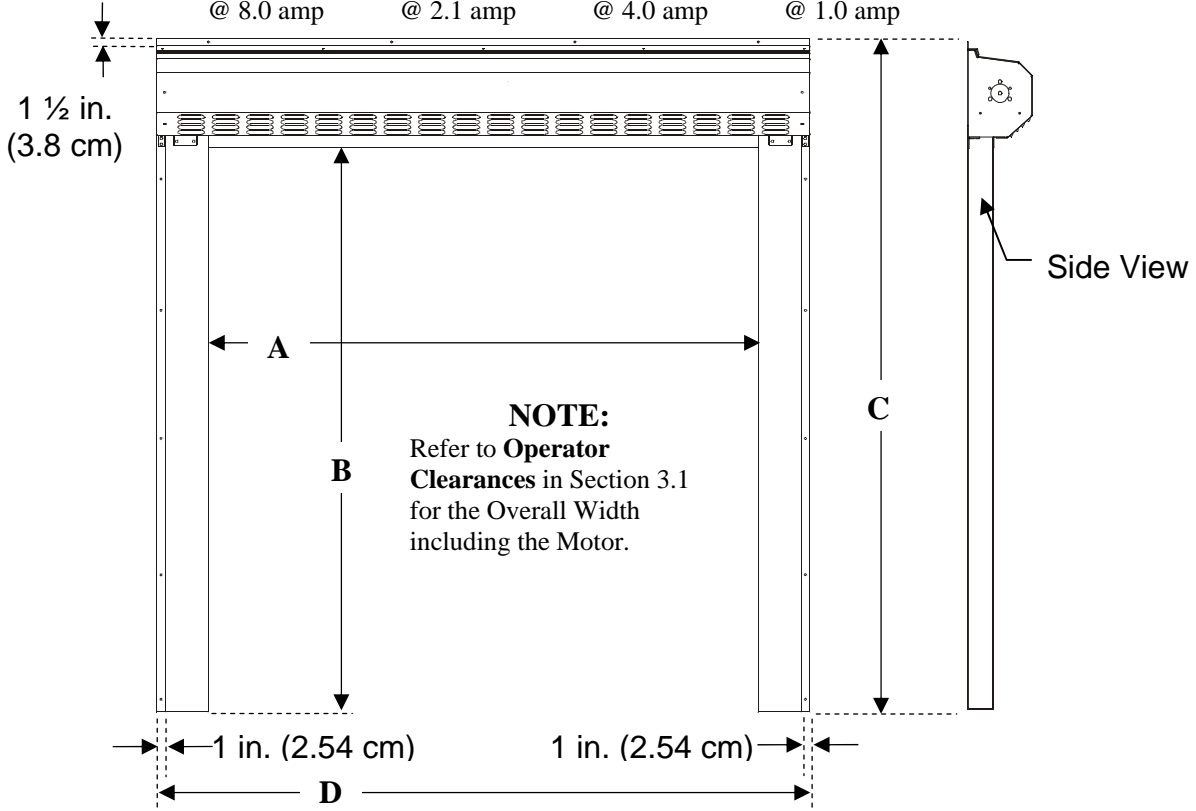
*Please Retain This Manual For Future Reference*

# 1. Specifications and Operators

## Operators:

- Manual Chain Hoist..... Power not required.
- Somfy Tube Motor Rating..... 115 VAC @ 2.0 amp
- Manaras Operator Ratings:

115 VAC	208 VAC	230 VAC	460 VAC-3ph
@ 8.0 amp	@ 2.1 amp	@ 4.0 amp	@ 1.0 amp



**Figure 1 RS 300 Door Frame & Dimensions**

**RS-300 WIDTH Related Dimensions**

Door Width	A			D (A+13 1/2")		
	Ft.	In.	cm	Ft.	In.	cm
5'(W)	5	0	153	6	1 1/2	187
6'(W)	6	0	183	7	1 1/2	218
7'(W)	7	0	214	8	1 1/2	248
8'(W)	8	0	244	9	1 1/2	279
9'(W)	9	0	274	10	1 1/2	309
10'(W)	10	0	305	11	1 1/2	339
11'(W)	11	0	336	12	1 1/2	370
12'(W)	12	0	366	13	1 1/2	400
13'(W)	13	0	397	14	1 1/2	431

**RS-300 HEIGHT Related Dimensions**

Door Height	B			C (B+12 1/2")		
	Ft.	In.	cm	Ft.	In.	cm
4'(H)	4	0	122	5	1/2	154
6'(H)	6	0	183	7	1/2	215
6' 8"(H)	6	8	203	7	8 1/2	235
7'(H)	7	0	214	8	1/2	246
7' 6"(H)	7	6	229	8	6 1/2	260
8'(H)	8	0	244	9	1/2	276
9'(H)	9	0	275	10	1/2	306
10'(H)	10	0	305	11	1/2	337
11'(H)	11	0	336	12	1/2	367
12'(H)	12	0	366	13	1/2	398
13'(H)	13	0	396	14	1/2	428
13' 4"(H)	13	4	406	14	4 1/2	438
14'(H)	14	0	427	15	1/2	459

**TABLE 1 RS 300 Door Standard Dimensions**

## 2. Warnings

### Warning!

Disconnect All Power Sources Before Installing This Equipment. Failure To Disconnect Power Source Can Result In Property Damage, Serious Injury Or Death!

### Warning!

Door assembly is heavy!  
Ensure that sufficient workers and equipment are available for safely lifting the door.

### Warning!

Dangerous Rotating Machinery!  
Keep Hands, Clothing, Etc. Clear When Operating!  
Do Not Operate Without All Guards And Covers In Place!

### Warning!

All Wiring Should Be In Accordance with National Electrical Codes Or Other Local Codes.

### Warning!

The Installer Is Responsible For Complying With All Relevant Regulations, Such As National Wiring Regulations And Accident Prevention Regulations. Particular Attention Must Be Given To The Cross-sectional Areas Of Conductors, The Selection Of Fuses Or Other Protection, And Protective Earth/Ground Connections!

### Warning!

The Voltages In The Power Cables And Certain Parts Of The Drive Can Result In Death. Whenever The Drive Has Been Used It Must Be Isolated And Disconnected For 5 Minutes Before Any Work Commences.

### Danger!

Only Qualified Electrical Personnel Familiar With The Construction And Operation Of This Equipment And The Hazards Involved Should Install, Adjust, And/Or Service This Equipment. Read And Understand This Manual In Its Entirety Before Proceeding. Failure To Observe This Precaution Could Result In Severe Bodily Injury Or Death!

### 3. Limited Warranty

All products are warranted to be free from defects in material and workmanship for a period of one (1) year from the date of purchase if installed and used in strict accordance with the installation instructions. Liability is limited to the sale price of any products proved to be defective or, at manufacturers' option, to the replacement of such products upon their return. No products are to be returned to the manufacturer, until there is an inspection and/or a return-goods authorization (RGA) number is issued.

All complaints should be directed first to the authorized distributor who sold the product. If satisfaction is not obtained or the name of the distributor is not known, write the manufacturer that appears below, directed to the attention of Customer Service Manager.

This limited warranty is expressly in lieu of any and all representations and warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. The remedy set forth in this limited warranty shall be the exclusive remedy available to any person. No person has authority to bind the manufacturer to any representation or warranty other than this limited warranty. The manufacturer shall not be liable for any consequential damages resulting from the use of our products or caused by any defect, failure or malfunction of our products. (Some areas do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.)

This warranty gives you specific legal rights and you may also have other rights that vary from area to area.

**Warrantor:**

RollSeal, Inc. / Hired-Hand Green  
PO Box 140  
1751 County Road 68  
Bremen, Alabama 35033  
Phone 256-287-7000

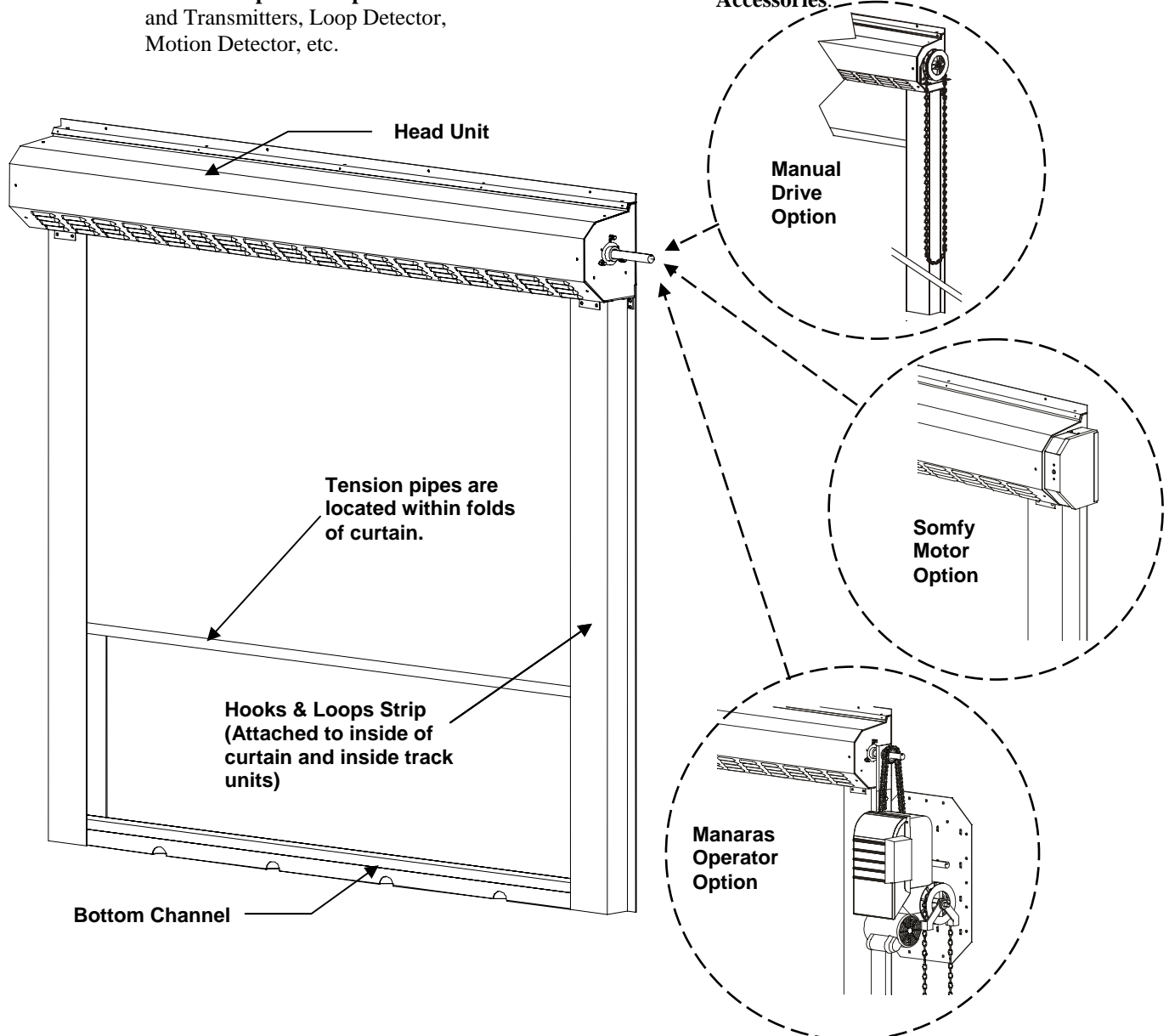
## 4. Physical Description/Options

The RollSeal-Green RS-300 Door is available with multiple features and options such as:

- **Standard Door Sizes:** Refer to Table 1, RS-300 Door Standard Dimensions.
- **Operators:** Manual Chain Hoist, Somfy Tube Motor, or Manaras Operator
- **Left or Right Side Mounting:** The manual or Manaras operators can be mounted on either the left or right side. The Somfy is limited to the right side only. The Operator Mounting Side must be selected at the time of order.
- **Manaras Operator Voltage Selection:** 115V, 208V, 230V, and 460V-3ph
- **Manaras Operator Options:** Receiver and Transmitters, Loop Detector, Motion Detector, etc.

- **Windows:** 44" high by full width of door panel.
- **Screen Door Attachment** (Uses separate Operator & Remote Control)
- **Fabric & Fabric Colors:** Frost, white, black, blue, red, tan, green, anti-static, and insect screen.
- Other accessories can be added such as a remote IR sensor, photo eye safety beams, ceiling pull switch, lock-out switch, other various types of switches, and door status / movement indicators such as lights and bells.

**NOTE:** Certain options may only be available with specific operators. Refer to Section 12, RS-300 Door Options and Accessories.



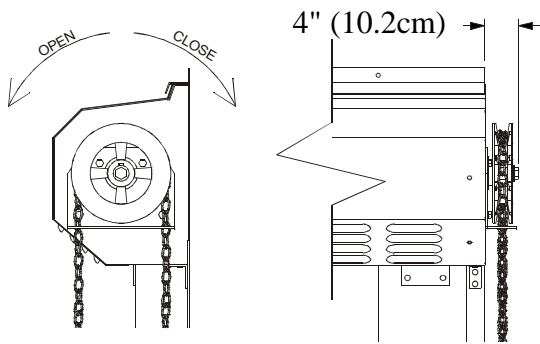
#### 4.1 Operators & Operator Clearances

The RS-300 door has three Operator Options:

**a. Manual Chain Hoist    b. Somfy Tube Motor    and    c. Manaras Operator.**

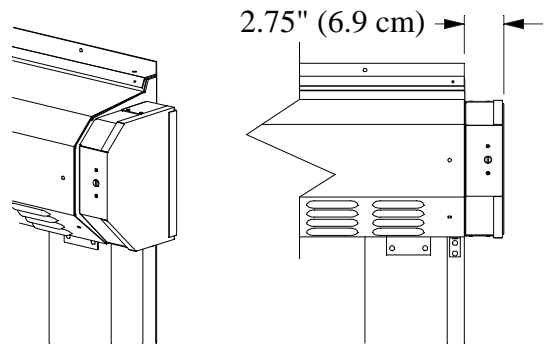
Identify the operators, mounting options, and Operator Clearance Dimensions by referring to **Figure 3** below:

##### a. Manual Chain Hoist



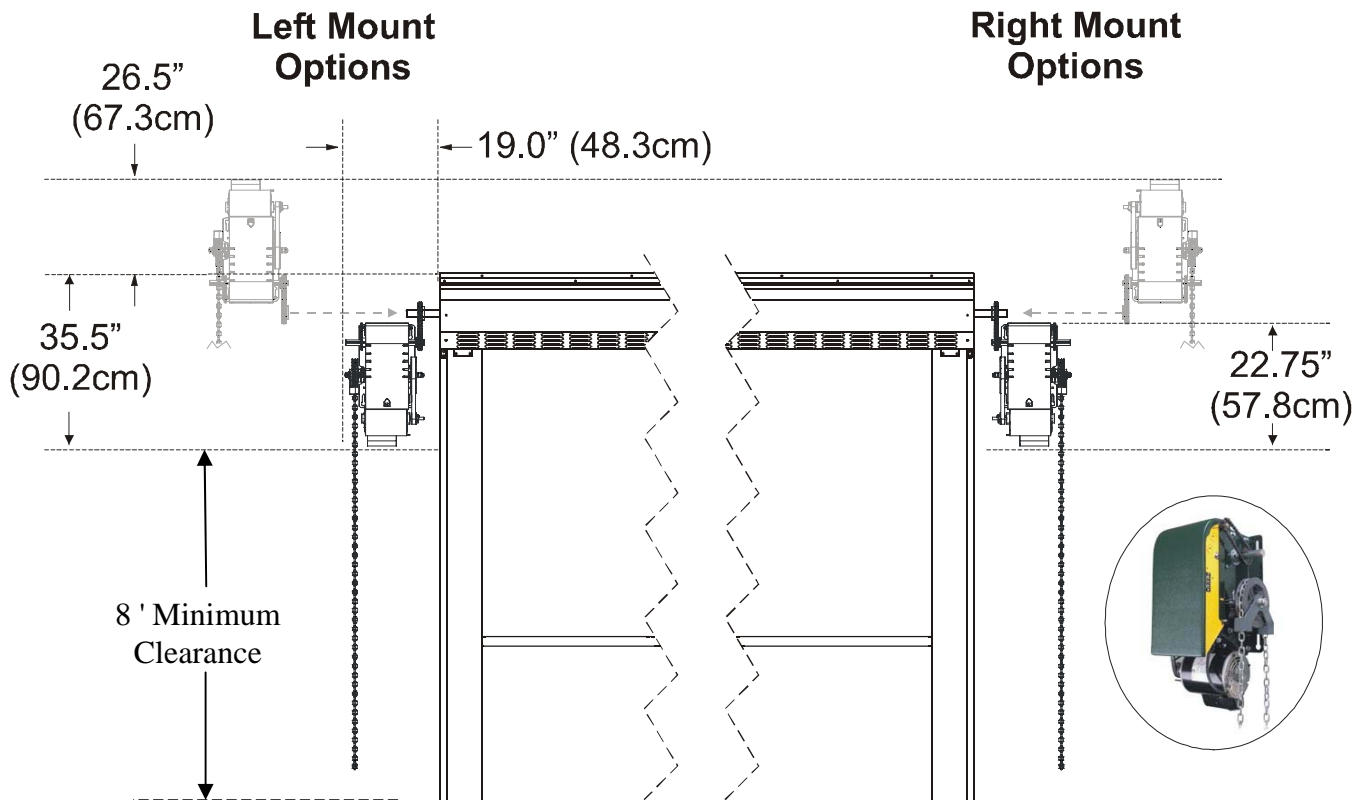
Left or Right Mount Options

##### b. Somfy Tube Motor



Right-Mounted Only

##### c. Manaras Operator



NOTE: Dimensions are approximate.

**Figure 3 RS 300 Operators, Mounting Options, and Operator Clearance Dimensions**

## 4.2 Operator Power Options

- **Manual Chain Hoist**..... Power not required.
- **Somfy Tube Motor Rating**..... 115 VAC @ 2.0 amp
- **Manaras Operator Ratings:**

115 VAC	208 VAC	230 VAC	460 VAC-3ph
@ 8.0 amp	@ 2.1 amp	@ 4.0 amp	@ 1.0 amp

# 5. Door Installation

## 5.1 Tools Required

3/8 in. (10 mm) Power screwdriver (portable) 5/16 in. (8 mm) Drive 7/16 in. (11mm) Wrench 5/16 in. x 1-1/2 in. (8mm x 38mm) Lag Screws (provided)	Tape Measure Carpenter's Level Ladder
<i>NOTE: Other Tools May Be Required According To Installation.</i>	

## 5.2 Overview

The RS-300 door is shipped with pre-assembled vertical members (left track and right track), and a pre-assembled horizontal member (roller support, roller, operator, and curtain). Identify components by the Parts/Assemblies section in back of this manual. When components are received, check for damaged, loose or missing parts. If there are damaged or missing parts contact your RollSeal-Green distributor immediately. Please read and understand all instructions in this manual before beginning installation.

## 5.3 Adjusting the Clear Opening

Locate your particular system in **Table 1, Page 1** and your specific Operator & Operator Clearance in **Section 4.1, Page 5**. Read the value of length and width of the clear opening for the door size that you are installing. This gives the required dimensions of the clear opening. If necessary, adjust the dimensions of the mounting posts or framing members to the height and width of your RS-300 door system as shown in **Table 1. Refer to Section 5.7, Page 8, Figure 4** for details of attaching door to framing members. Framing material must provide suitable support for attachment of screws.

Make sure that mounting posts or framing members are positioned so that the screw holes of the outer flanges of the vertical members will align with the mounting posts or framing members. Ensure that there is room for the motor without encountering any obstructions. **Refer to Section 4.1 for Motor Clearances.**

## 5.4 Attachment Points of Door

When sizing the clear opening for attachment of the door, pay close attention to the following guidelines. Door flanges have pre-drilled holes that serve as mounting points of door. Flange widths are shown in Figure 1.

1. Ensure the door assembly is plumb & square.
2. The horizontal member has a mounting tab on the Top Left and Top Right sides. Ensure these tabs overlap framing and are securely fastened.
3. The vertical members have outer flanges and inner flanges. The outer flanges have pre-drilled holes that serve as attachment points. Ensure the outer flanges overlap framing.
4. When the door is raised in front of the clear opening (See Section 5.6), flanges must be flush against framing for attachment of screws.



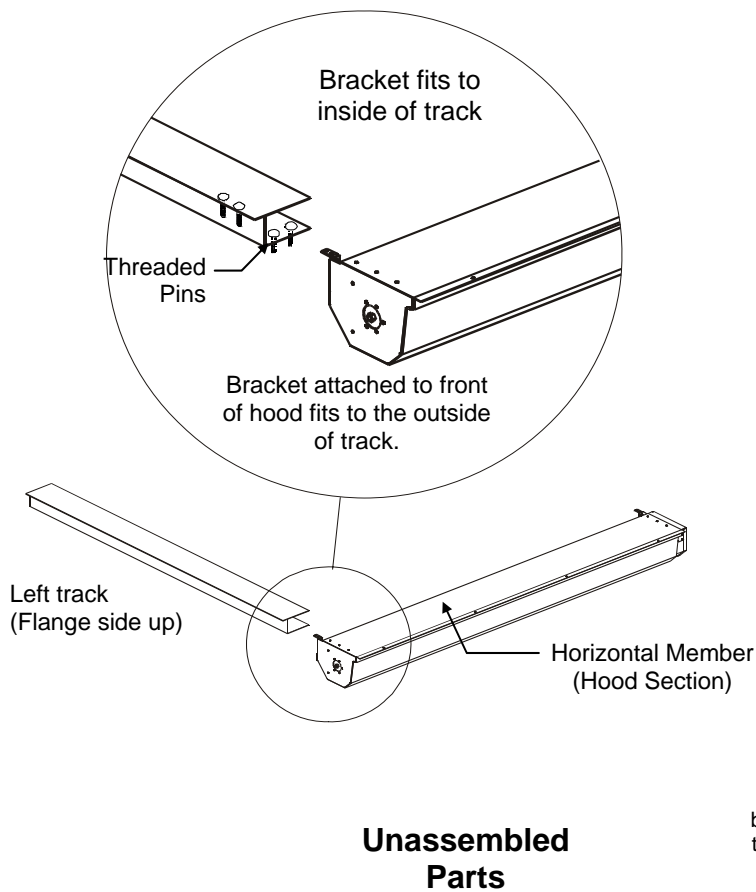
## 5.5 Assembly of Parts

**CAUTION:** Do not remove the cable tie securing the chain to the chain guide (for Manual Chain Hoist Doors) or cable ties around the horizontal member (for Manaras Operator Doors) at this point. The cable ties must hold the curtain inside the horizontal member until assembly and mounting is complete.

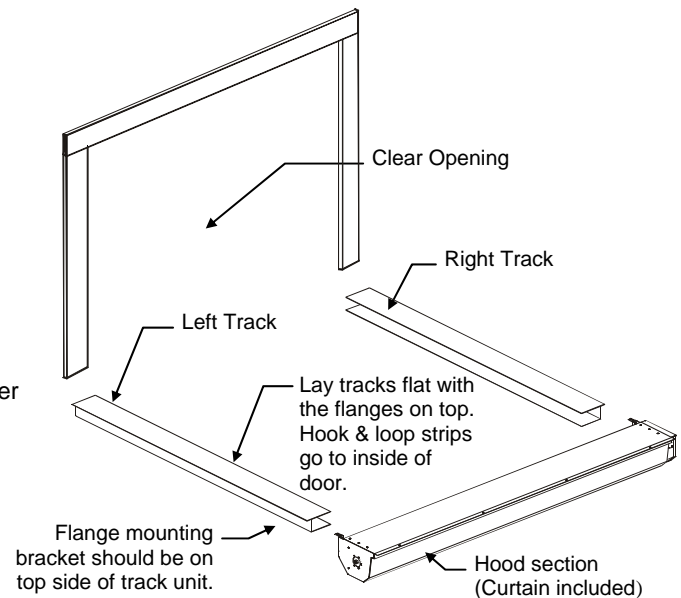
1. Arrange the horizontal member (Hood Section), left vertical member (left track), and right vertical member (right track) on the floor in front of the clear opening as shown in **Figure 4** with the flange side facing upward.
2. At each end of the Horizontal member, there are two brackets. Refer to **Figure 4** shown below. One bracket attaches to threaded pins inside the track flange. The other bracket (on the front of the hood) attaches to threaded pins on the outside of track unit. Attach hood to track unit.
3. Add nuts to threaded attachment pins. Tighten nuts securely to 90 in-lbs torque.

**CAUTION:** Excessive torque will damage the threaded pins. Do not over-tighten.

4. Repeat steps 1-3 to install right track.



**Figure 4**  
**Frame Assembly**



### Placement of Parts for Assembly

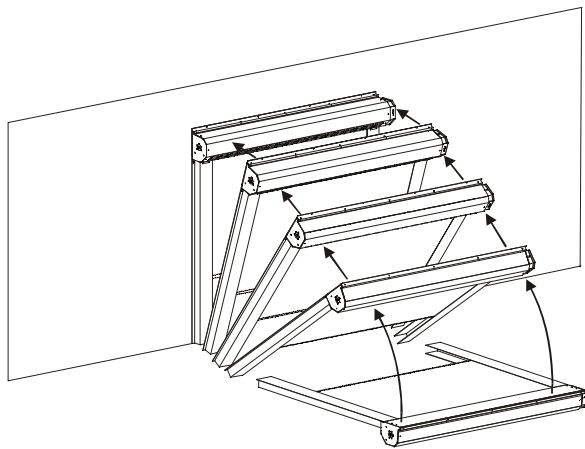
Lay left track, right track, and horizontal member face down in front of the clear opening as shown.

## 5.6 Fastening Door Assembly to Clear Opening

After attaching tracks to top section, the door assembly is ready for installation to the clear opening. Refer to **Figure 4 and Figure 5**.

1. Use a tape measure and make sure that the overall height and overall width of the clear opening meet the requirements: Overall Height = Door Opening Height + 12.5 in. (31.75 cm) Overall Width = Door Opening Width + 13.5 in. (34.29 cm)
2. Make sure that the door assembly is plumb & square. (Diagonal measurements, etc.)
3. Center door assembly on clear opening. Align the bottom of each vertical member with the respective framing board or posts of the clear opening.

**NOTE:** The vertical members should be aligned so that their outer flanges will exactly overlap with the framing boards or posts when the door assembly is raised into position.

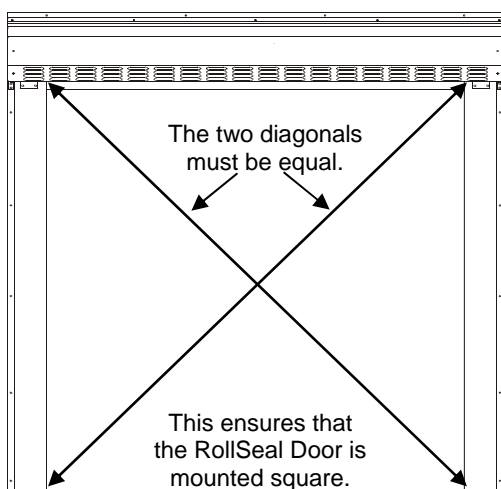


4. Assemble workers and equipment into position on each side of the door assembly. **SLOWLY LIFT TOP OF DOOR ASSEMBLY TO RAISE THE DOOR.**
5. Lean door assembly upright against clear opening.
6. Carefully press flanges of the door assembly flush against faces of framing boards or posts. When the openings are matched, level the top and sides using a float level on the header, on each track, and verify the inside diagonal measurements are the same.

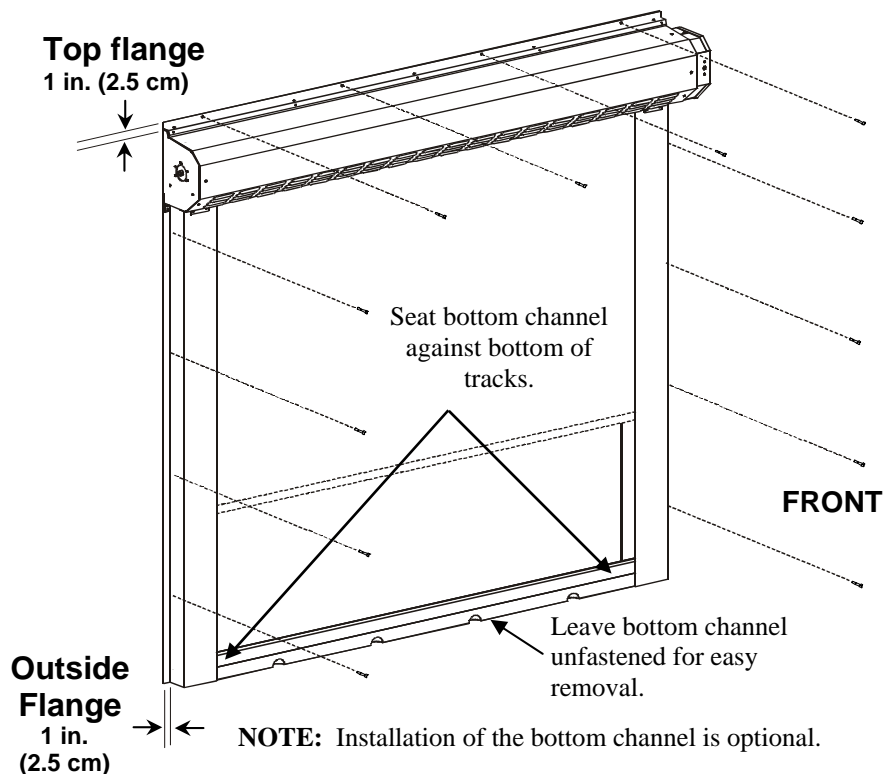
**IMPORTANT:** Leveling is very important because the curtain may bind if not leveled properly.

7. As shown in **Figure 5**, fasten Tek screws (in steel) or lag screws (in wood) through the flanges on sides of door assembly. Securely tighten all screws.
8. On the lower and upper flanges of the horizontal member there are attachment points for fastening screws. Fasten tek screws (in steel) or lag screws (in wood) through the holes. This secures the top of the door to the clear opening.
9. **INSTALLATION OPTIONAL:** Depending on the end-user's application, the bottom channel may not be required. At bottom of tracks, insert bottom channel between tracks. Check and ensure that the bottom channel is level.

**Figure 5**  
**Bottom channel**



**NOTE:** Shift bottom of door right or left until both diagonal measurements are equal. At that point, the door is square.



## 6. Manual Chain Hoist Door Operation

### 6.1 Manual Chain Hoist Option - Details

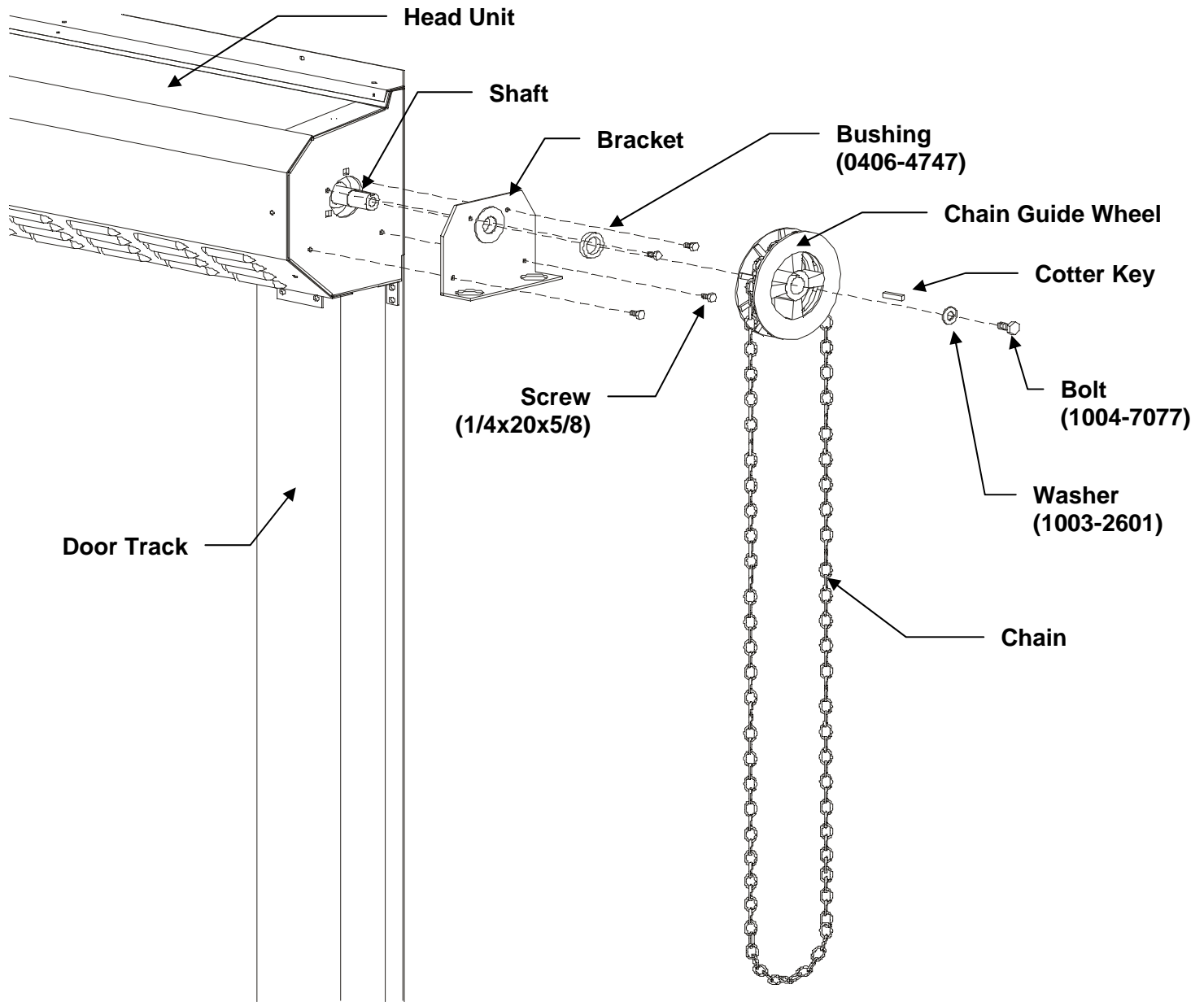


Figure 6 Manual Chain Hoist - Details

## Warning!

### NEVER RELEASE CHAIN!

If Chain Is Released, Door Will Drop With Rapid Motion. Injury May Occur If Chain Is Released!  
Do not remove the cable tie securing the chain to the chain guide until after the chain bracket is completely installed and the chain is secure.

Remove and discard the cable tie securing the chain to the chain guide prior to manual operation.

## 6.2 Manual Chain Hoist Installation

### Install Chain Bracket

1. Position chain bracket at height to allow chain to hook into bracket as shown in **Figure 7**.
2. Securely fasten chain bracket to wall with screws.

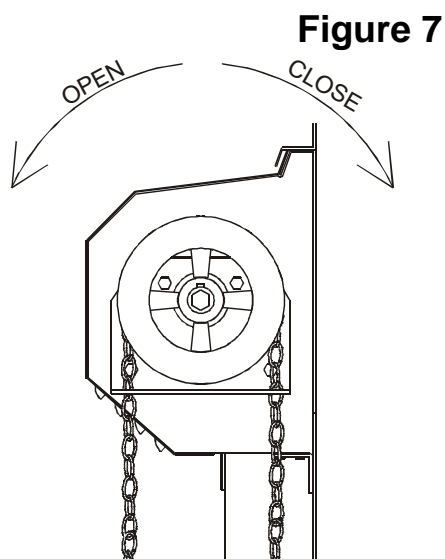
### Manual Operation

1. While securely holding the chain, cut the shipping cable tie from the chain to the chain guide.
2. Carefully pull chain in direction of arrow (**Figure 7**) to Open (Raise) door.

**CAUTION!** Never release chain while door is being raised!

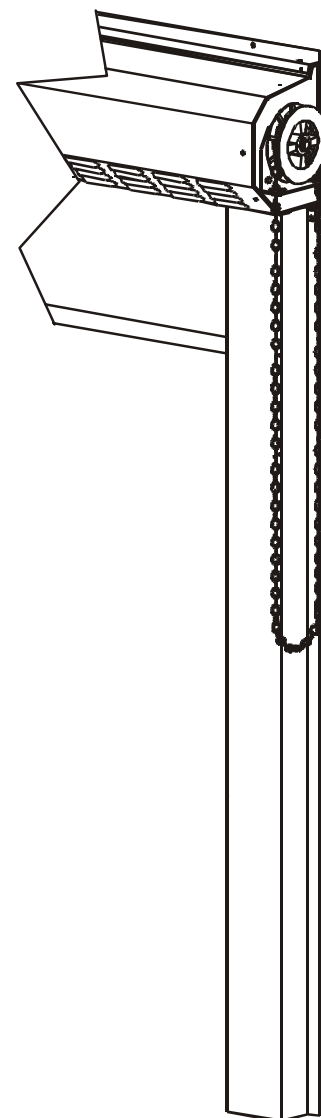
3. When door is fully raised, securely hook chain into bracket as shown in **Figure 8**.
4. To Close (Lower) door, securely hold chain. Unhook chain from bracket. Gradually close door.

**NOTE:** Maintain tension on chain while door is lowered to prevent rapid drop of door.



**Side View**

**Figure 8**

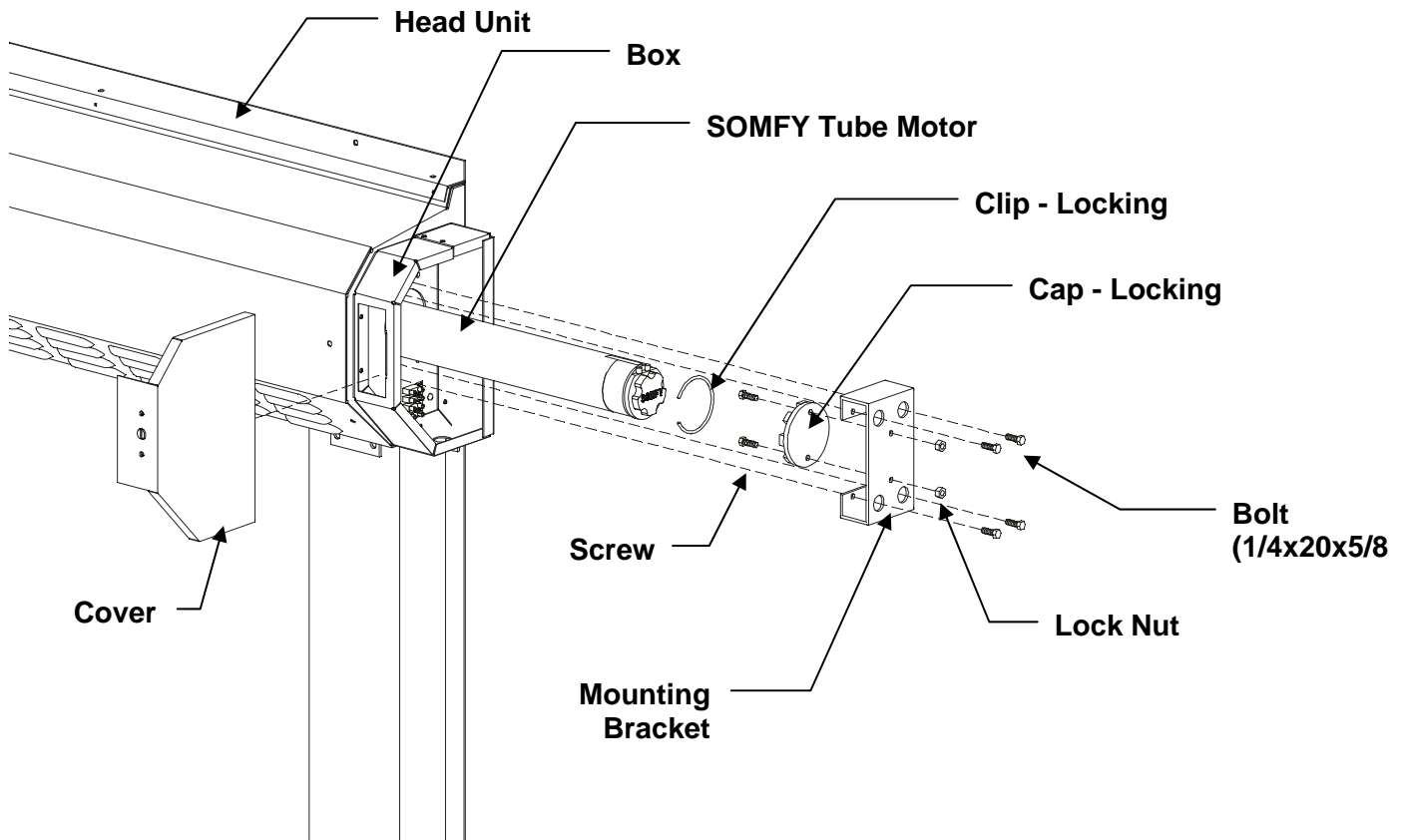


**Right Track**

## 7. Somfy Tube Motor

The Somfy Tube Motor is available in the Right Mounted option only.

### 7.1 Somfy Motor Option - Details



### 7.2 Connecting Electrical Power to the Somfy Tube Motor

#### **⚠ WARNING!**

- **Disconnect All Electrical Power Sources Before Wiring Motor.**
- **Electrical Connections And Grounding Must Comply With All Local, State, And National Codes.**

1. Disconnect all electrical power. Remove motor box door and locate terminal block.
2. Refer to **Figure 9 - Wiring Diagram** shown on next page. Connect wires from switch, power supply, and motor cable according to the electrical wiring diagram.

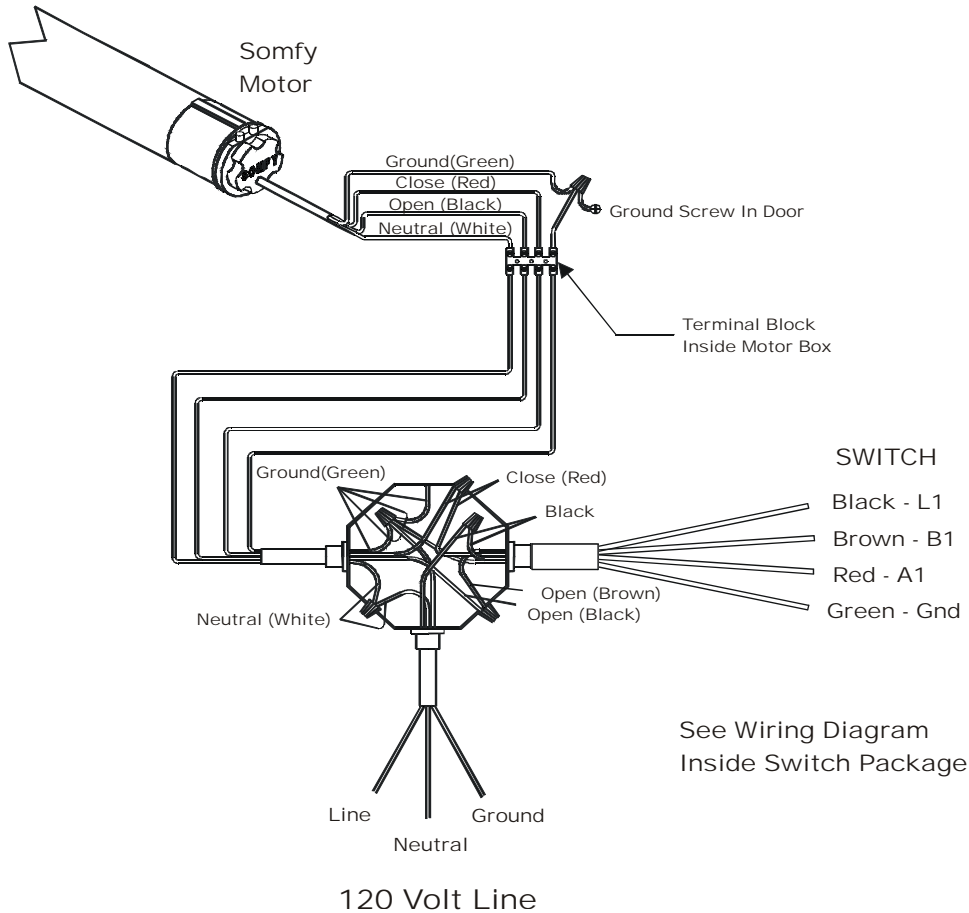
3. Install ON/OFF switch at a convenient location on the inside of the building.

**NOTE:** If more than one switch location is required, see **Section 7.3** on Sequential Relay Installation.

4. Turn on electrical power. Set limit switches. Refer to limit switch instructions in **Section 7.2**.
5. Operate door by pressing ON/OFF switch. Open and close door a few times to test limit switch settings. Reset limit switches if required.
6. Installation of door completed.

**Figure 9  
Wiring Diagram**

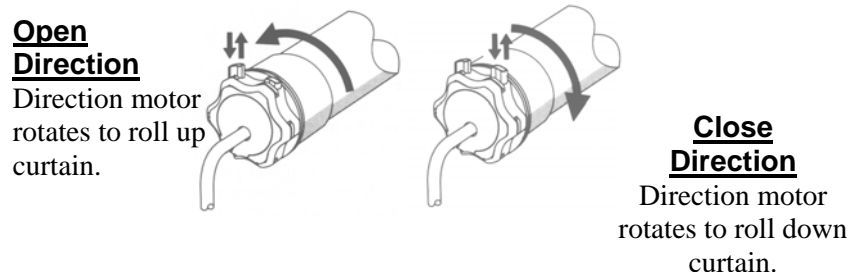
**NOTE:** These instructions apply to a Somfy Tube Motor mounted on the right-hand side of door. In this wiring diagram the motor turns in the direction shown in Figure 8 to close the curtain. The motor turns in the opposite direction to open the curtain.



### 7.3 Setting Limit Switches on the Somfy Tube Motor Option

**NOTE:** These instructions apply to a motor mounted on the right-hand side of a curtain as viewed from the front. OPEN and CLOSE directions of motor rotation are shown in **Figure 10**.

**Fig. 10 Limit Switches** (Motor mounted on the right-hand side of curtain as viewed from front)



1. Turn OFF electrical power.
2. Locate limit switches at end of motor.
3. **Refer to Figure 10.** The OPEN position and CLOSE position of the door curtain have to be set. This is where the curtain will automatically stop.
4. Remove the protective cap from the motor head. Depress fully both limit switch push buttons (if not already pushed). They will automatically lock in the down position
5. Turn ON the electrical power switch and check that the drive pipe rotates correctly. If not, put the electrical switch in the OFF position, disconnect all power sources, and reverse the black and red motor connection wires at the terminal block.
6. OPEN Limit. Bring motor rotation into desired open position. Turn OFF power switch when position is reached. Unlock the OPEN limit switch push button by

depressing and releasing it. This sets the OPEN limit.

7. CLOSE Limit. Repeat the above procedure to set the CLOSE limit.
8. Allow the motor to run in both directions, until it shuts off in the stop positions.

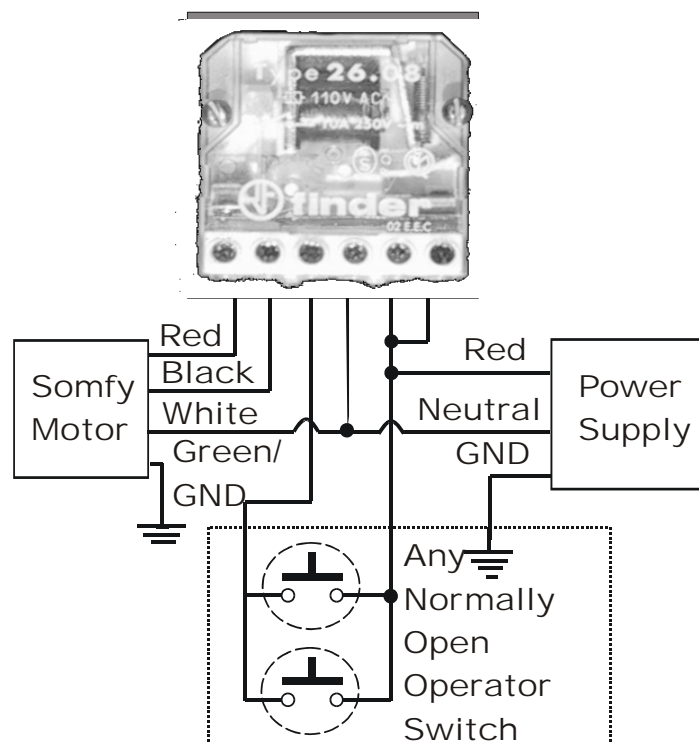
NOTE: Because of the built in thermal protection feature, the motor may shut off automatically after running without interruption for an extended period of time. Please wait until the motor has cooled off and is ready for operation again, (approximately 10-15 minutes).

9. Changing the Set Stop Position  
Press the limit switch adjustment button that lies in the direction of rotation. Bring the curtain into the desired stop position. Release the limit switch adjustment button by pressing it down again.

#### 7.4 Sequential Relay Wiring for Somfy Motor

A Sequential Relay can be used to operate an RS-300 Door's push buttons or pull switches. This is required when more than one switch is desired, for example, one on each side of the door. A kit (Switch for Tube Motor) is available as RollSeal-Green part number 6450-6004. A wiring diagram is shown at the right in **Figure 11**.

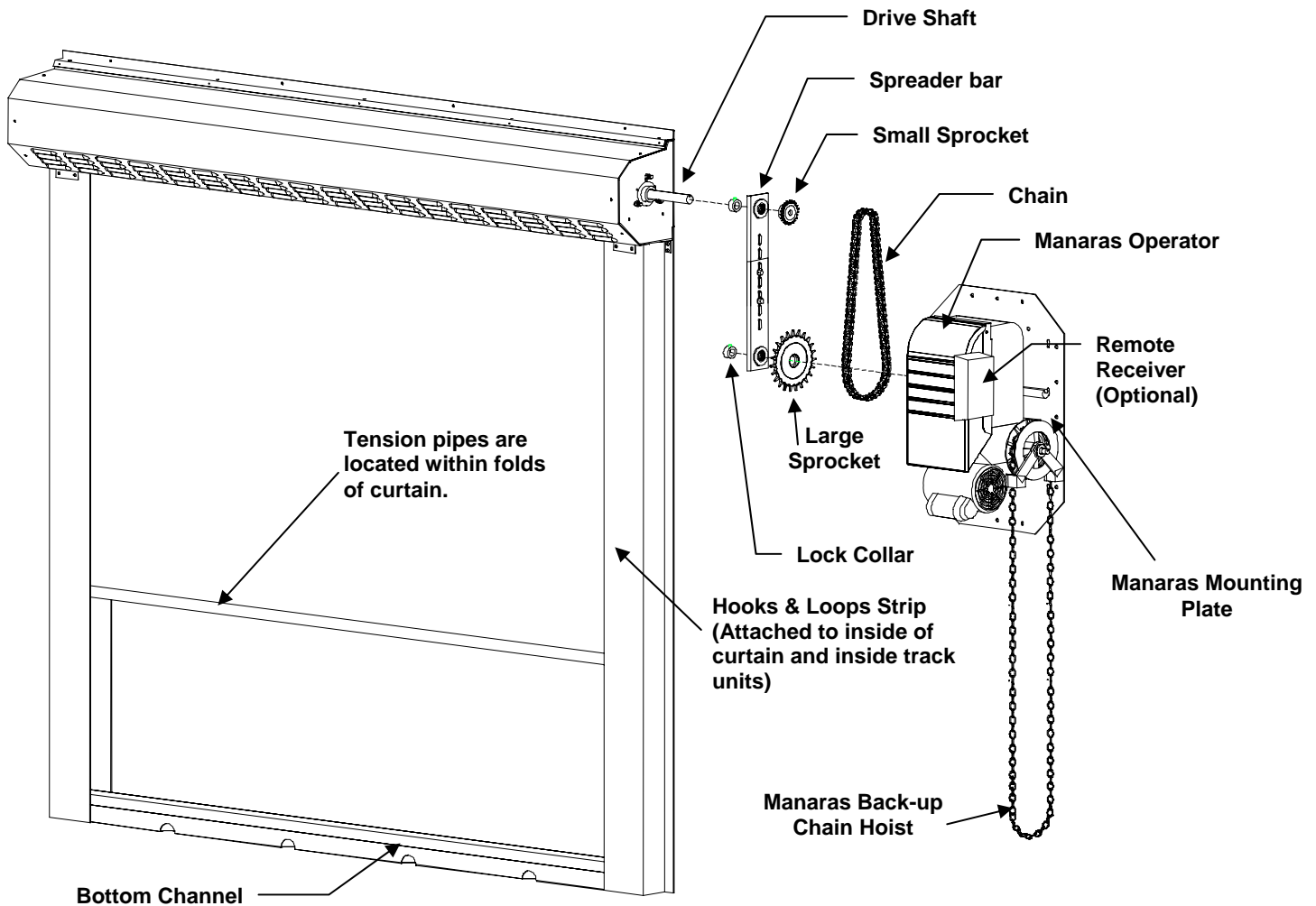
**Figure 11**  
**Sequential Relay Wiring Diagram**



## 8. Manaras Operator

### 8.1 Manaras Operator Option - Details

- IMPORTANT NOTES:**
1. This Operator Must Be Installed A Minimum Of 8 ft. (2.4m) Above Floor. See Figure 3 on Page 7
  2. Do not remove the cable ties from around the door head unit until after the Manaras Operator is completely installed and tightened to the door head unit shaft. Remove cable tie prior to operation.



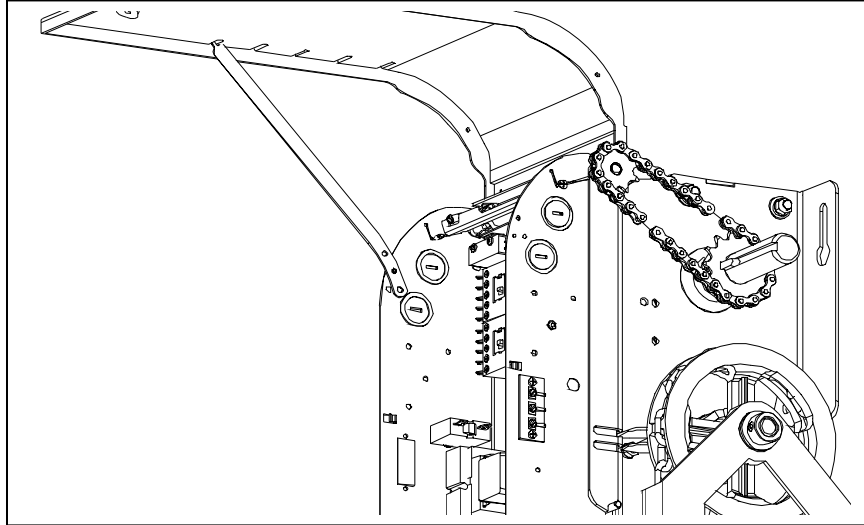
*Figure 12 RS 300 Door & Manaras Operator Option*



## 8.2 Installation of Manaras Operator

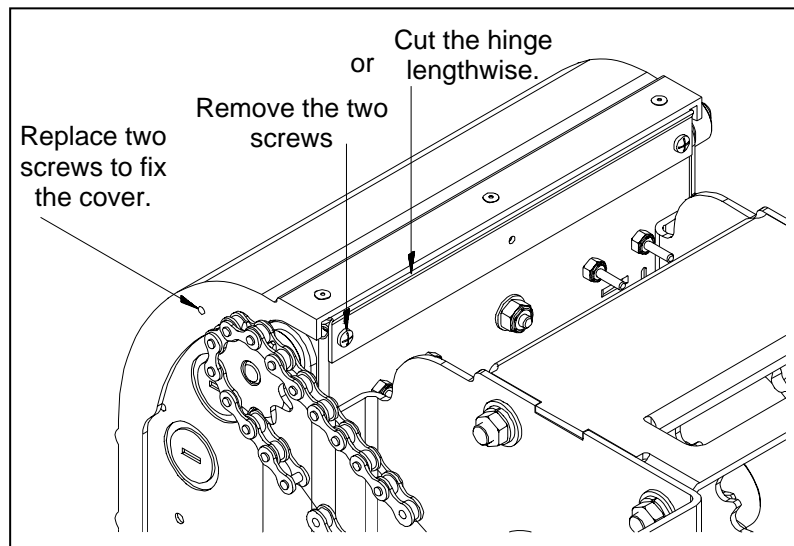
The Manaras Operator has two sets of mounting holes: outside the frame for wall mounting and inside the frame for hood mounting.

To open the control box cover, loosen the screw at the base of the cover. If the cover cannot be fully opened, the retaining cam may be used to hold the cover in other positions. **Refer to Figure 13, Control Box Cover Opening.**



*Figure 13* Control Box Cover Opening

After installation, verify that there is no obstacle in the way when opening the control box cover. If an obstacle exists preventing the cover from opening, it is possible to remove the cover by cutting the plastic hinge at its thinnest point or unscrewing it from the box before putting the operator on the wall or hood. Closing the cover will also require using two supplementary screws. **Refer to Figure 14, Hinge Elimination And Cover Fastening By Screws.**



*Figure 14* Hinge Elimination And Cover Fastening By Screws

### 8.3 Mounting The Manaras Operator

Locate the four mounting holes. The optimum distance between the door shaft and operator drive shaft is between 12" and 15". Mount the OPERA unit by fastening it to the wall, bench or hood with 3/8" or 1/2" thru-bolts or if the wall is of such construction so as to prohibit use of thru-bolts, lag bolts and shields of sufficient size may be used. Do not tighten. Refer to Figure 15, Mounting Dimensions For Wall Or Hood.

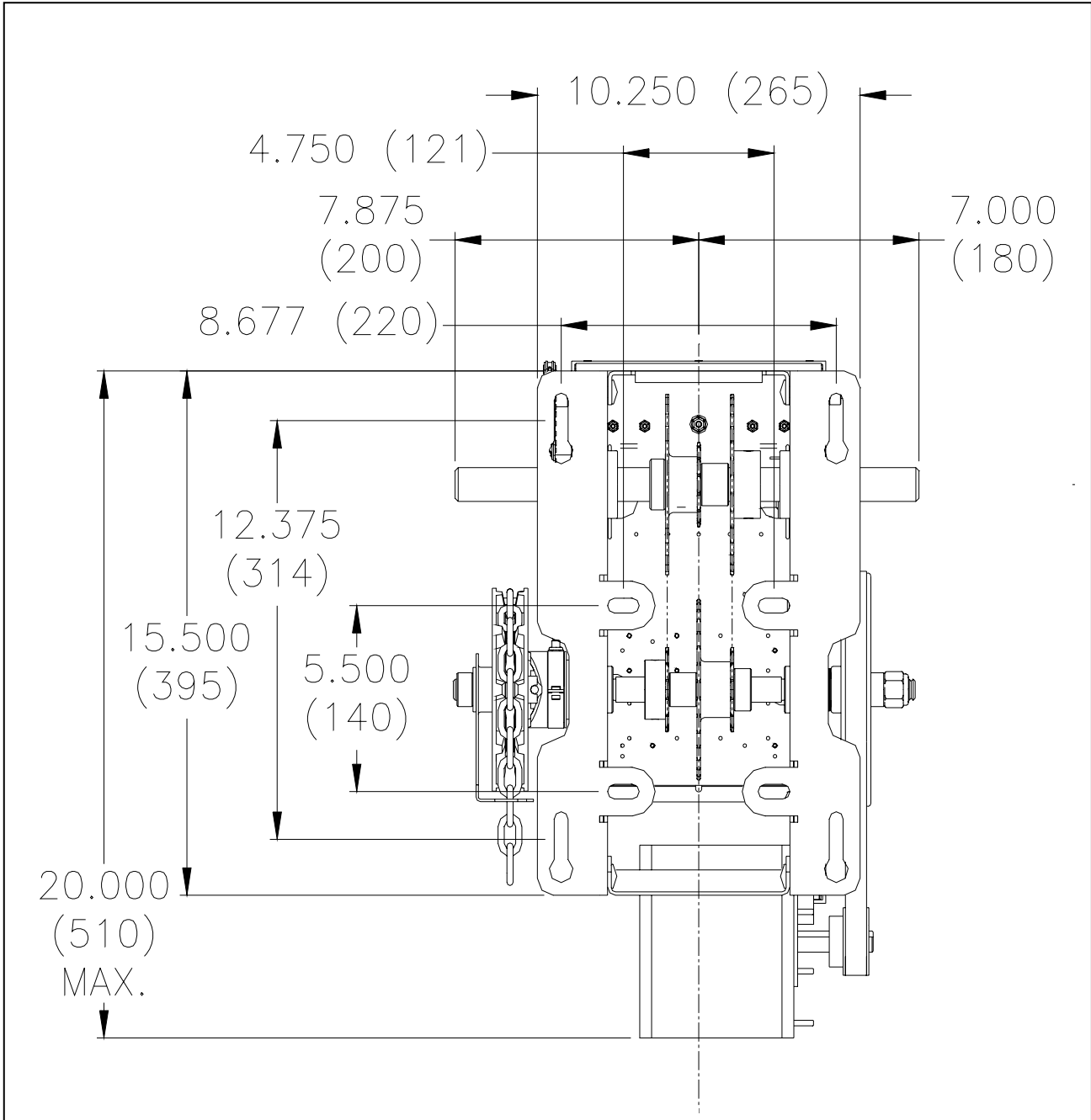


Figure 15 Mounting Dimensions For Wall Or Hood

## 8.4 Spreader, Sprocket, And Chain Installation

### CAUTION!

MAKE CERTAIN THAT THE OPERATOR IS PERFECTLY ALIGNED WITH DOOR SHAFT, OTHERWISE, DAMAGE CAN OCCUR.

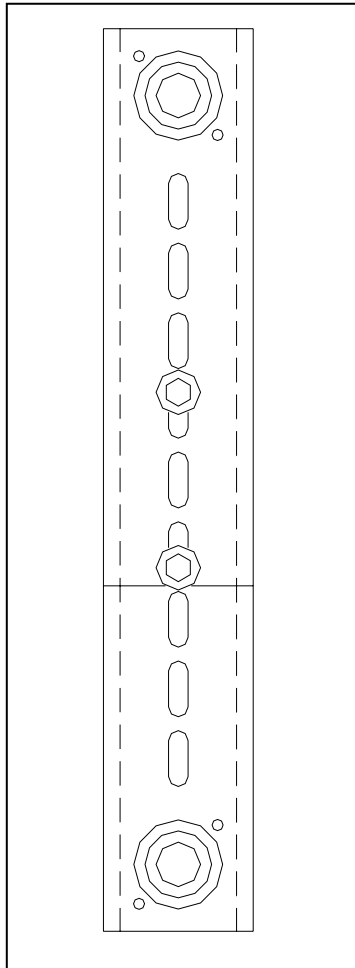


Figure 16 Chain Spreader

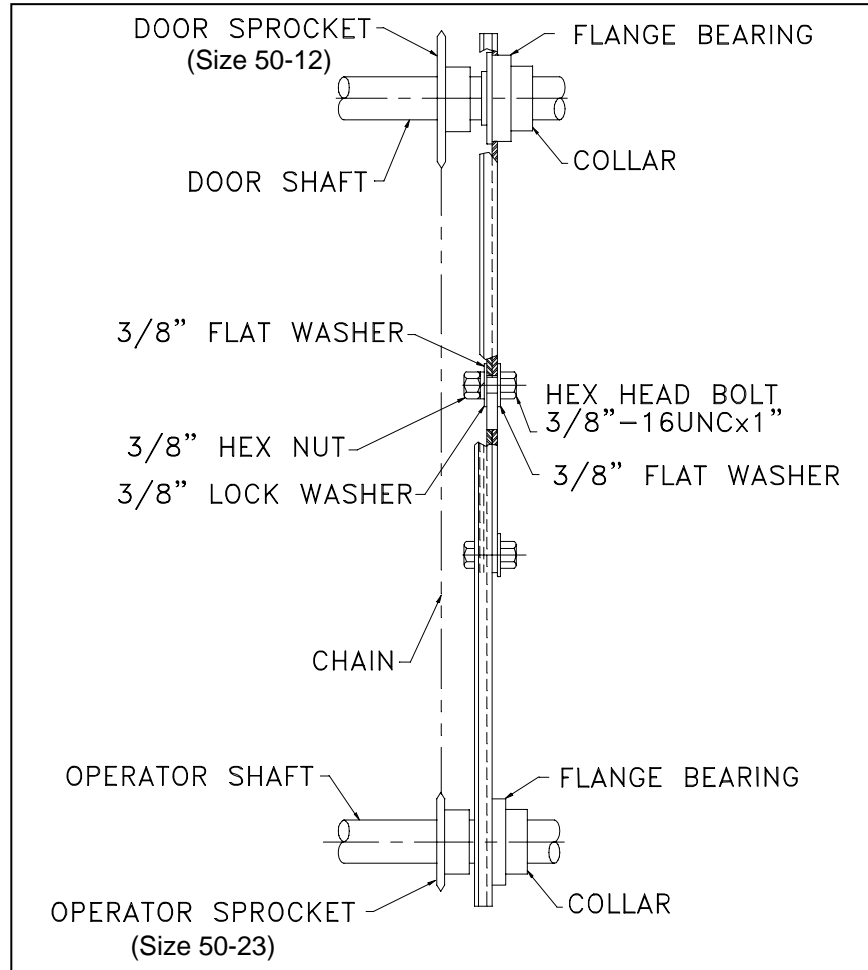
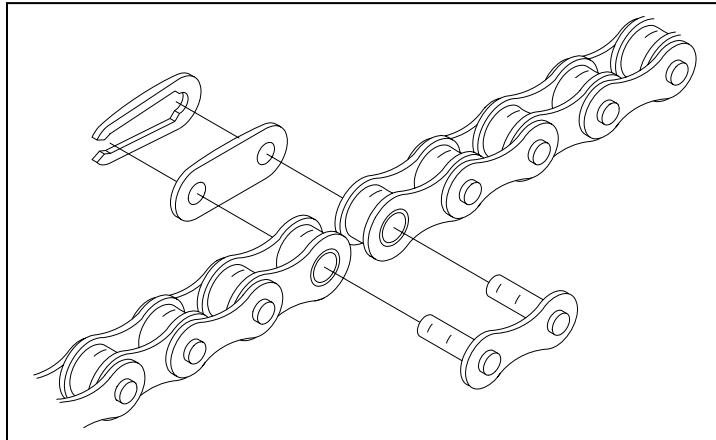


Figure 17 Chain Spreader Mounted On Door And Operator Shafts.

**NOTE:** If a chain spreader has been ordered along with your operator, Refer to Figure 16, Mounting Chain Spreader and Figure 17, Chain Spreader Mounted On Door And Operator Shafts for installation.

1. Place the driven (Size 50-12) sprocket on the door shaft loosely and align it with the drive (Size 50-23) sprocket of the Manaras operator.
2. Lock the drive and driven sprockets in place by inserting the keys and tightening their respective set screws.

3. Connect the sprockets with the drive chain, shorten to a suitable length and join together with the chain link provided in the hardware bag. To shorten the chain, punch out the pin that will leave an inside link nearest to the desired length. Connect the chain around the sprockets using the chain link. **Refer to Figure 18, Chain Link.**

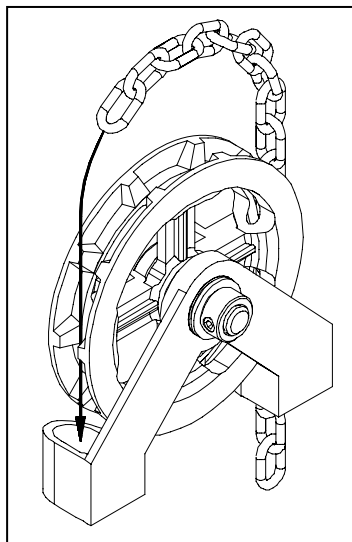


*Figure 18* Chain Link

4. Slide the operator to tighten the drive chain and then firmly tighten the mounting bolts. Check the tension on the chain and the set screws on the sprockets (there should be no more than 1/4" slack when chain is depressed between sprockets).
5. Opera-MH: Run hand chain through the pocket wheel and through the chain guide outside the frame (**Refer to Figure 19, Installing Hand Chain On Manaras Operator**), allow both ends to hang down toward the ground and cut hand chain, if necessary, so that both ends are approximately 2 feet (0.6 m) from floor. Connect both ends of hand chain.

## CAUTION!

BEFORE PULLING HAND CHAIN THROUGH POCKET WHEEL OR LIFTING THE DOOR DIRECTLY BY HAND, PULL CAM PLATE AND SPIN CAM NUTS TO CENTER OF LIMIT SHAFT SO AS TO BE SURE THE CAMS ARE NOT BEING MECHANICALLY DRIVEN THROUGH THEIR NORMAL LIMIT SWITCH END POSITIONS.



*Figure 19* Installing Hand Chain On Manaras Operator

## 8.5 Limit Switches

### ! Warning!

TO AVOID THE DANGER OF POSSIBLE DAMAGE TO THE DOOR AND OPERATOR, TRAVELLING CAMS MUST BE ADJUSTED TO THEIR APPROXIMATE POSITIONS BEFORE MANUALLY OPERATING THE DOOR OR BEFORE APPLYING POWER TO THE OPERATOR.

There are 4 limit switches. Two are used as end of travel, one is for radio-control or one-button operation and one is for reversing devices. These switches are activated by the rotary cams traveling on a threaded shaft. **Refer to Figure 20, Limit Switches.**

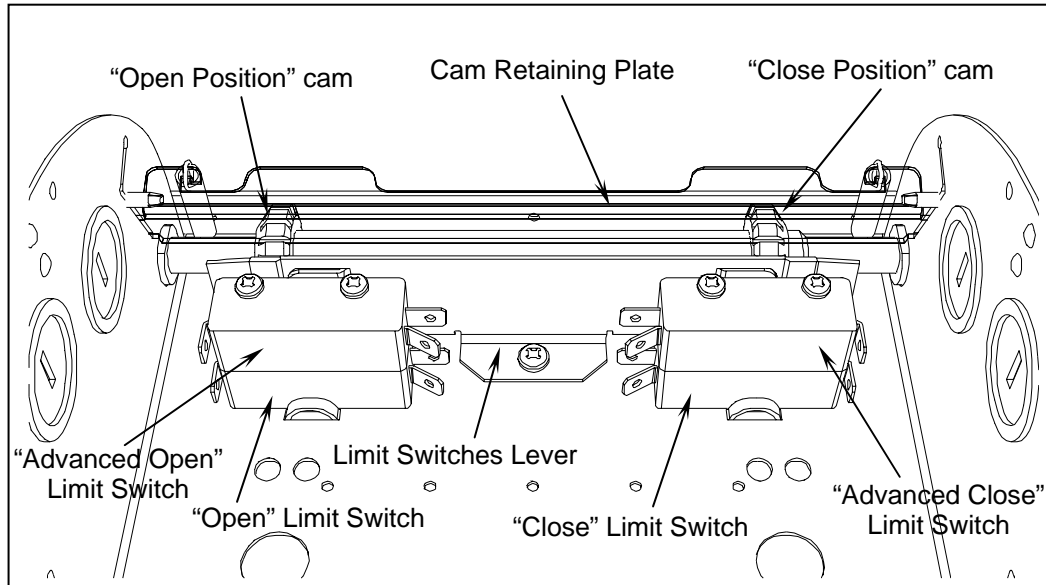


Figure 20 Limit Switches

## 8.6 Adjustment Of Limit Switches

### ! Warning!

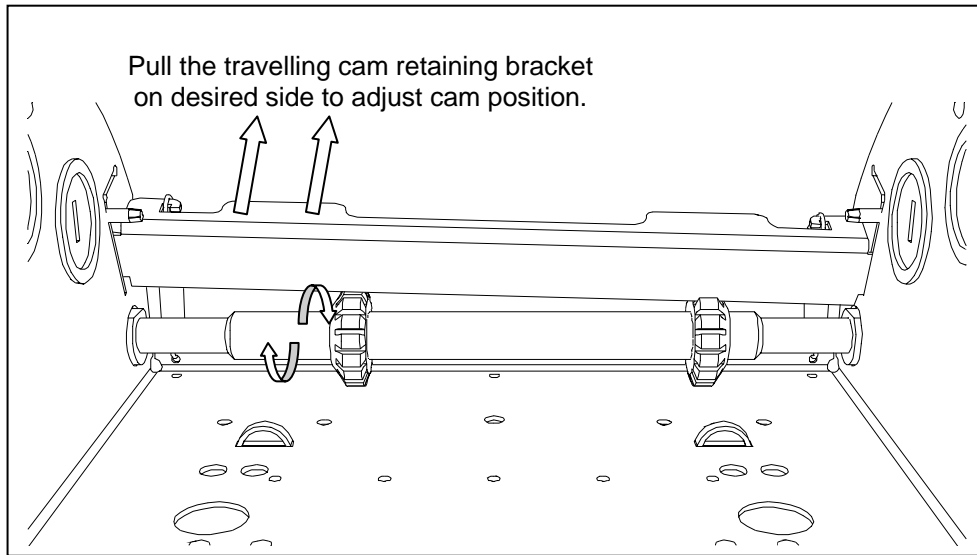
NEVER PLACE HANDS OR TOOLS INSIDE OPERATOR OR NEAR DRIVE MECHANISM UNLESS POWER IS OFF.

1. Open the cover of the electrical enclosure.
2. Manually raise the door to a nearly opened position using the Manaras manual chain. (**Refer to section 9.1, Manual Operation of Door with Manaras Operator**)
3. Pull the traveling cam retaining bracket on the Open Position cam side and rotate the Open Position cam. **Refer to Figure 21, Adjusting The Limit Cams.**

**Note:** Turning the cam towards the center of the shaft increases door travel. Turning the cam towards the switch decreases door travel.

4. Manually rotate the Open Position cam until the lever activates the Open limit switch sufficiently so as to hear the switch click.

5. Release and engage the retaining bracket. Make sure that the bracket engages in the slots of both limit cams after each adjustment.
6. Manually lower the door to a nearly closed position and repeat **steps 3 through 5** with the Close Position cam.
7. Upon completion of all wiring connections (**Section 8.5**), repeat **steps 2 through 6 of Section 8.4** using the "Stop" button for adjustments of limit switches to their final, exact positions.



*Figure 21* Adjusting The Limit Cams

## 8.7 Wiring Options To The Manaras Operator Terminal Block

- **Radio Controls:** Consists of a radio receiver unit and remote transmitters. These controls consist of an RF signal being emitted on a "pulse" basis to a mated receiver tuned to the same "pulse" rate. Once the receiver accepts the code, a relay is activated closing a set of contacts.
- **Photo-electric units:** Can be used as opening and reversing devices. An infra red light is emitted from the control to a reflector and back. If, during closing travel of the door, the light beam is broken, the door will reverse to the fully open position.
- **Digital Keypad:** Consists of a control head which is pedestal mounted. Similar to a telephone touch pad it allows the selective coding of a four number series. Once the programmed series of numbers is received in their set order, a relay closes and completes a circuit.
- **Card Reader:** A magnetic-mechanical device which accepts sealed and coded cards. The cards trigger magnets to raise in the cartridge head, releasing a lock mechanism which allows a deeper insertion of the card. The card then contacts a switch that closes the circuit.
- **Key Switch:** Momentary contact will open door. Can be wall or post mounted for interior or exterior use.

\* Refer to Figure 22, Manaras Terminal Input Connections.

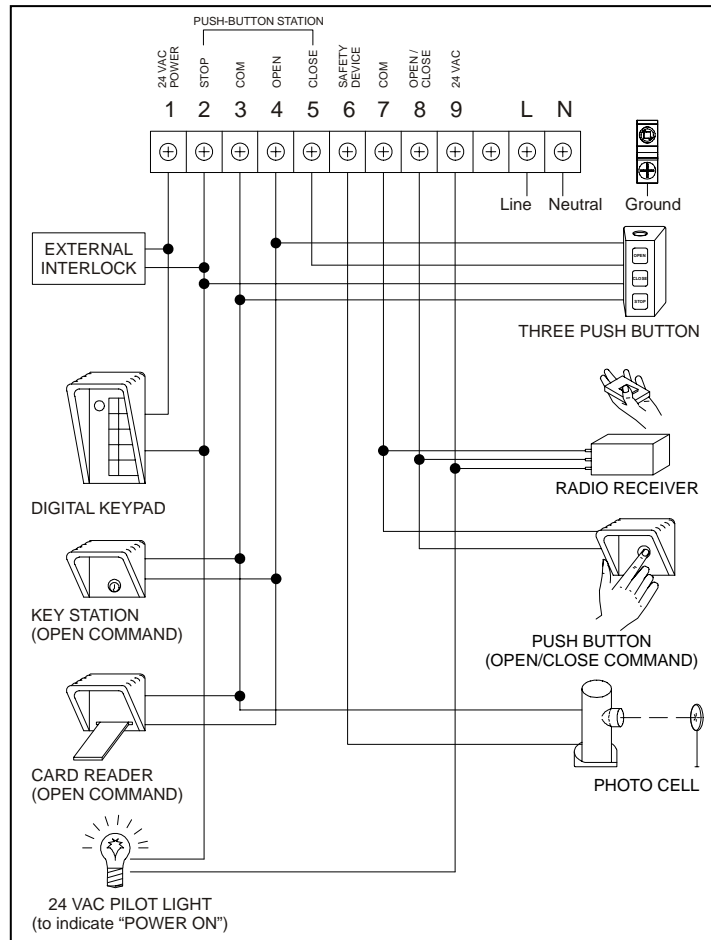


Figure 22 Manaras Terminal Input Connections

**NOTE:** Certain accessory devices may require additional power wiring.

## 8.8 Switch Operation of Door with Manaras Operator

Complete installation and operating instructions are provided with the Manaras Operator at the time of delivery. Refer to these instructions for the proper installation and alignment of the Manaras operator.

### To Operate Door:

1. Depress manual control button. Door curtain will unroll to 'closed' position.
2. Depress manual control button. Door curtain will roll up to 'open' position.
3. Depress button to open or close door as desired.
4. Open and close the door a few times to test door operation and remove any wrinkles in the door curtain.
5. If you detect any problems, STOP. Disconnect electrical power. Contact your distributor for assistance.



## Warning!

Do not remove the cable ties from around the door head unit until the door is installed to the door frame and the Manaras Operator is properly installed to the door drive shaft. Without proper support, the door will drop with rapid motion and injury may occur. Before using the Manaras Operator's UP/DOWN manual chain or switch controls, ensure the shipment cable ties are removed from around the door head unit.

## 8.9 Manual Operation of Door with Manaras Operator

The RS 300 door can be operated manually in the event of a power outage or if there is a motor malfunction. To operate the door manually, perform the following instructions.

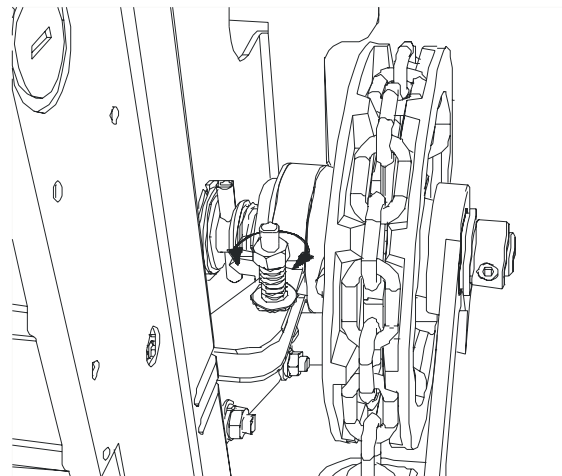


## Warning!

Do not attempt to manually operate the door while the operator is running. Do not attempt to manually force a malfunctioning door to open or close. The chain is an emergency device and is not designed to operate a door with serious mechanical problems.

1. Pull on the hand chain in the down direction. The first foot pulled will engage the chain hoist mechanism and disable the electrical circuit.
2. Continue to pull the chain in the desired direction. Repeat actions 1 and 2 in the opposite direction if the door does not run in the desired direction.
3. To return to electrical operation, pull slightly on the chain in the opposite direction.
5. Adjustment of the door is required if no door movement occurs after two feet of pulled chain. To adjust, turn the adjusting nut clockwise (See **Figure 23**) by  $\frac{1}{4}$  turn until the hoist engages after pulling one foot of chain.

**NOTE:** If the nut is too tight, the manual torque on the chain will be too heavy.)



**Figure 23** Chain Adjusting Nut



## 9. Installation of Replacement Curtain Material

1. Identify the three curtain panels as shown in **Figure 24, Detail 1**. The center panel has a hook & loop strip across the top. The center panel does not have hook & loop strips on the sides.

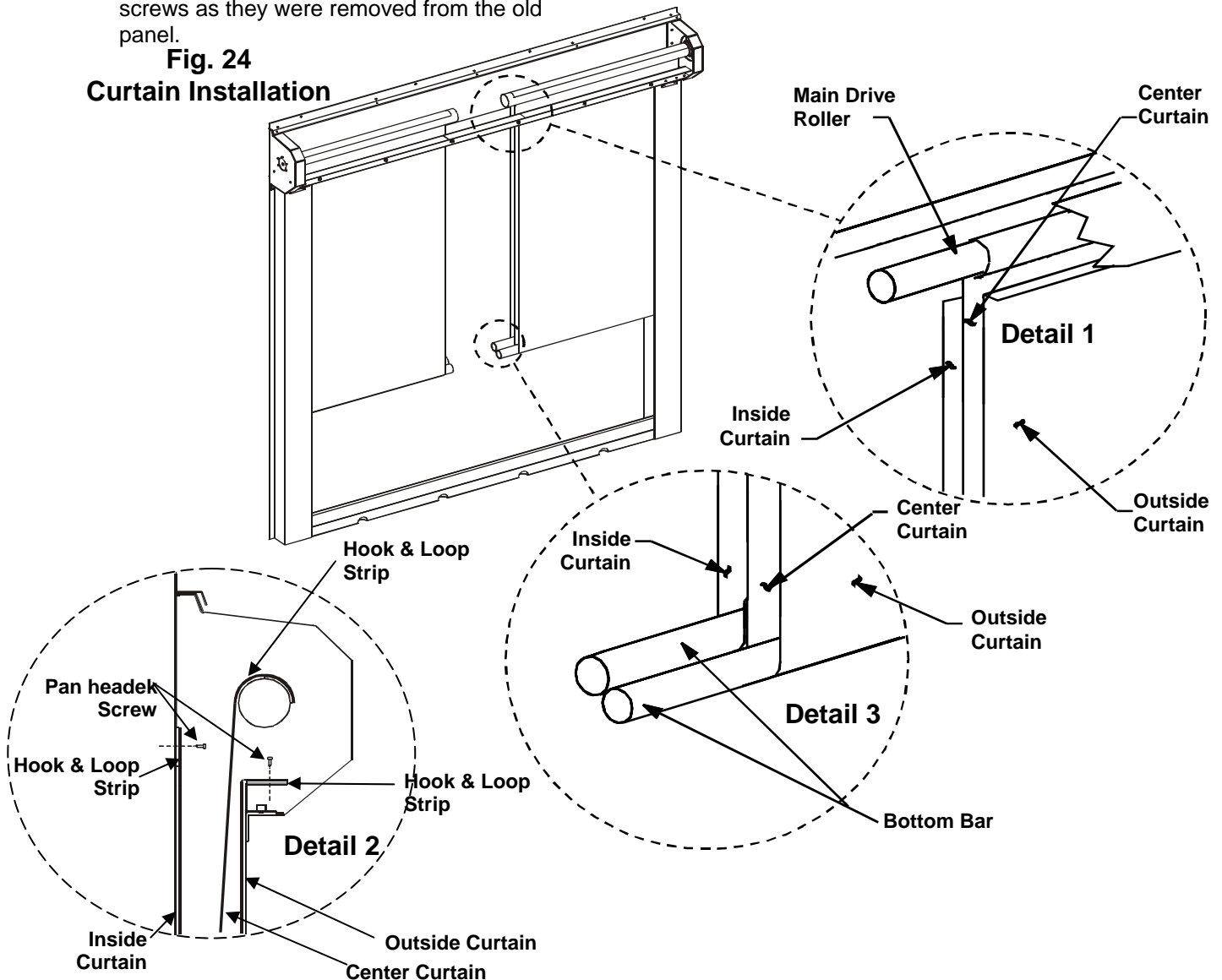
The inside & outside panels have hook & loop strips at the top, and hook and loop strips along the sides of the panels.

The outside panel may be identified as the longer of the two panels.

**NOTE:** Prior to removing the old panel, close the door (panel down) and observe how <sup>(a)</sup> the inside curtain is bolted to the back-plate, <sup>(b)</sup> how the center curtain is screwed to the main drive with pan-head screws, and <sup>(c)</sup> how the outside curtain is screwed to the front bar. Once the new panels are adjusted using the hook & loop strips, reinstall the same bolts and screws as they were removed from the old panel.

2. To install the curtain material, take the inside curtain (**Detail 1 and Detail 2**), and attach the material to the backplate.
3. After the inside curtain has been attached, take the center curtain (**Detail 1 & Detail 2**), and attach the center curtain to the drive roller.
4. Take the outside curtain, (**Detail 1 & Detail 2**), and attach the outside curtain to the top bar.
5. After the curtain has been secured, install the bottom bars in the curtain as shown in **Detail 3**. The front bar should be installed first. The back bar should then be installed, and should be above the front bar.

**Fig. 24**  
**Curtain Installation**



## 10. Door Panel Adjustments

During normal operation, the tension pipes should run in close proximity of each other. The clearance between the tension pipes should normally be between 1/4" to 1/2" (6.35 mm - 12.7 mm). There are two situations pertaining to the tension pipes that may cause problems with door operation. If the tension pipes are too far apart, the tension pipes will not repel each other. This causes poor contact between the hook & loop. On the other hand, if the tension pipes are riding one another (i.e. touching one another), the door panel material does not flow evenly, thus leaving wrinkles in the panel instead of a stretched, smooth & even appearance.

### Adjustment Procedures

The clearance between the tension pipes can be adjusted by raising or lowering the door panels. Each door has three panels: (1) The inside panel (panel facing the inside of building) is attached to the back plate. (2) The center panel is attached to the roller. (3) The outside panel (facing the outside of building) is attached to the front bar. Adjustments are made to the inside panel and/or the outside panel.

**NOTE:** The door must be in the closed position for panel adjustments. Ensure the panels are not damaged while removing or reinstalling the nuts and screws.

To adjust the height of the outside tension pipe, raise or lower the outside door panel by removing the pan-head screws, detaching the panel hook & loop from the front bar, and raising or lowering the panel. Then re-attach the panel loop to the hook on the front bar. Be sure to keep tension pipe level during this procedure. Reinstall the pan-head screws through the panel material and into the front bar to securely hold the material in place.

To adjust the height of the inside tension pipe, raise or lower the inside door panel by loosening the three nuts, detaching the panel hook & loop from the back plate, and raising or lowering panel. Then cut new holes through the panel material for the pem-studs and re-attach the panel loop to the hook on back plate. Install the nuts and washers to the back plate securely in the same order as removed to hold the material in place. Be sure to keep the tension pipe level during this procedure.

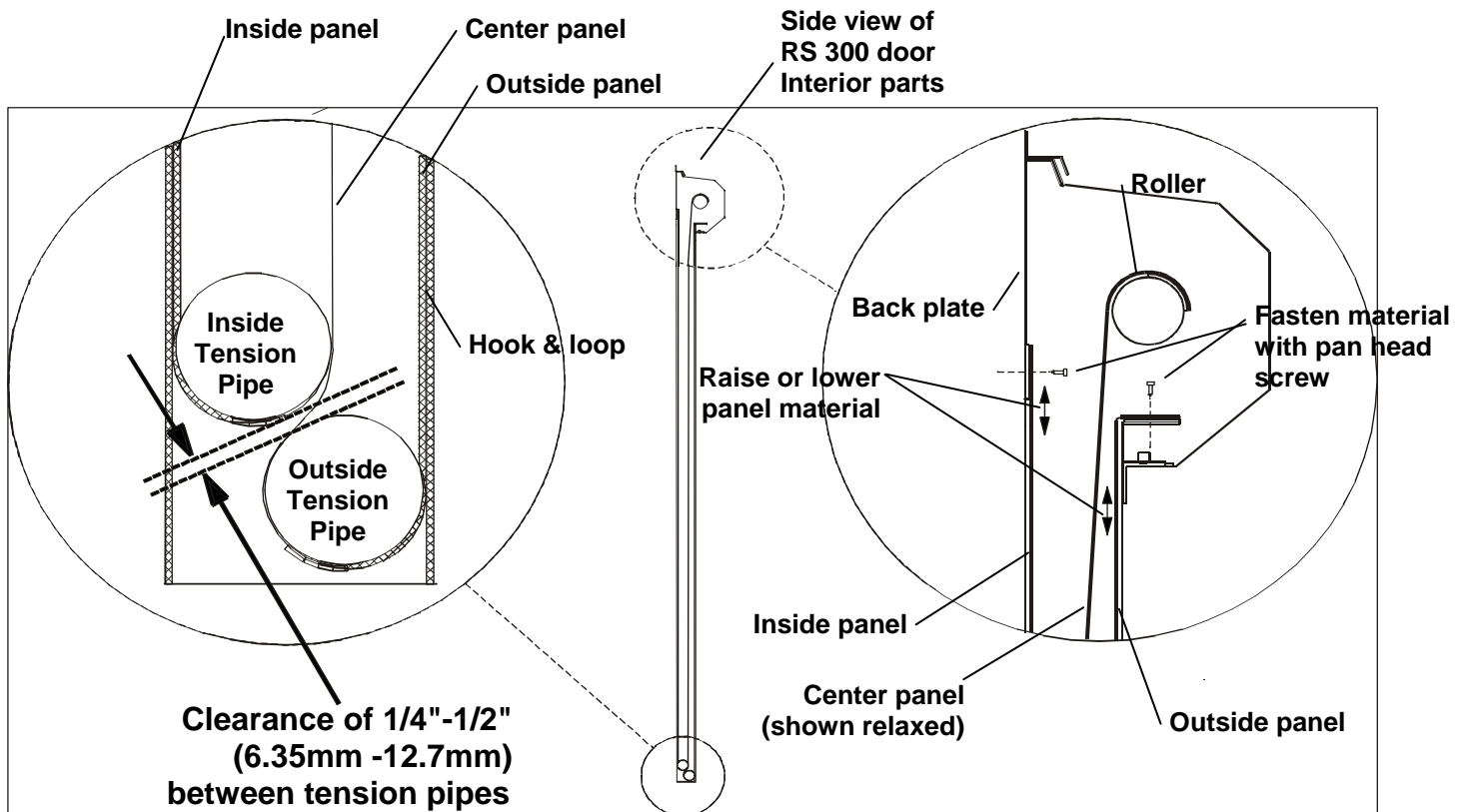
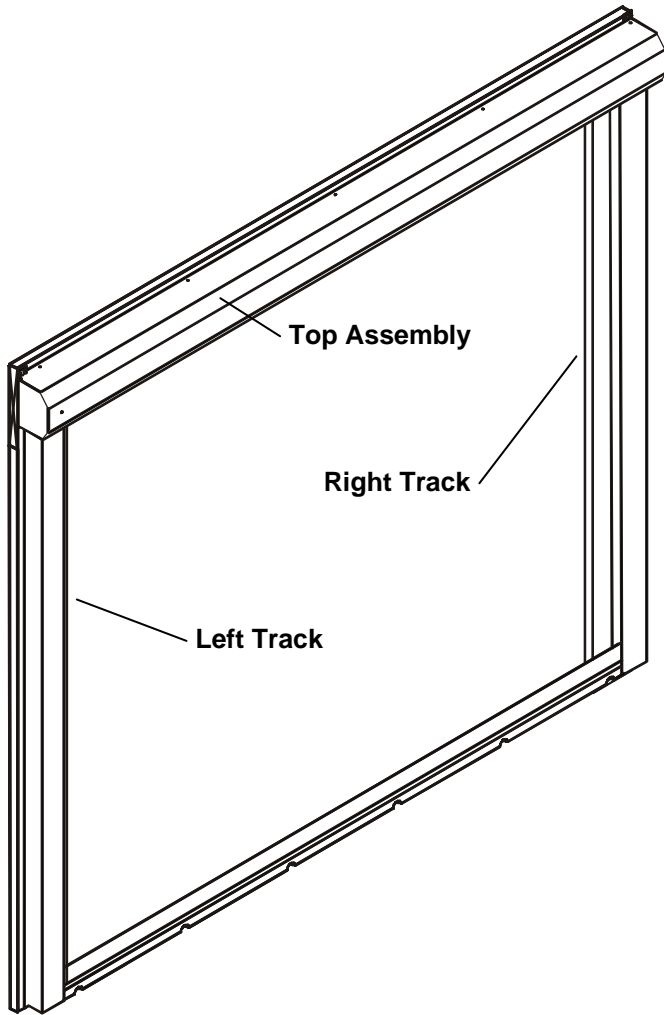


Figure 25 Door Panel Adjustments

# 11. Parts/Assemblies

## Top Unit Assembly (Horizontal Member)



<u>Item No.</u>	<u>With Somfy Motor</u>
6421-9517	Complete Top unit assy. <b>5 ft.</b> (1.5 m)
6421-9636	Complete Top unit assy. <b>6 ft.</b> (1.82 m.)
6421-9530	Complete Top unit assy. <b>7 ft.</b> (2.13 m.)
6421-6106	Complete Top unit assy. <b>8 ft.</b> (2.44 m.)
6421-4407	Complete Top unit assy. <b>9 ft.</b> (2.74 m.)
6421-6103	Complete Top unit assy. <b>10 ft.</b> (3.04 m)
6421-6259	Complete Top unit assy. <b>11 ft.</b> (3.35 m.)
6421-6099	Complete Top unit assy. <b>12 ft.</b> (3.66 m.)
6421-9349	Complete Top unit assy. <b>13 ft.</b> (3.96 m.)

	<u>With Chain or Manaras Operator mounted on RIGHT side of Door</u>
6421-9641	Complete Top unit assy. <b>5 ft.</b> (1.5 m)
6421-9642	Complete Top unit assy. <b>6 ft.</b> (1.83 m.)
6421-9643	Complete Top unit assy. <b>7 ft.</b> (2.13 m.)
6421-6250	Complete Top unit assy. <b>8 ft.</b> (2.43 m.)
6421-9770	Complete Top unit assy. <b>9 ft.</b> (2.74 m.)
6421-6253	Complete Top unit assy. <b>10 ft.</b> (3.04 m.)
6421-6260	Complete Top unit assy. <b>11 ft.</b> (3.35 m.)
6421-6256	Complete Top unit assy. <b>12 ft.</b> (3.66 m.)
6421-9644	Complete Top unit assy. <b>13 ft.</b> (3.96 m.)

	<u>With Chain or Manaras Operator mounted on LEFT side of Door</u>
6421-9645	Complete Top unit assy. <b>5 ft.</b> (1.5 m)
6421-9646	Complete Top unit assy. <b>6 ft.</b> (1.83 m.)
6421-9647	Complete Top unit assy. <b>7 ft.</b> (2.13 m.)
6421-9648	Complete Top unit assy. <b>8 ft.</b> (2.43 m.)
6421-9782	Complete Top unit assy. <b>9 ft.</b> (2.74 m.)
6421-9649	Complete Top unit assy. <b>10 ft.</b> (3.04 m.)
6421-6261	Complete Top unit assy. <b>11 ft.</b> (3.35 m.)
6421-9650	Complete Top unit assy. <b>12 ft.</b> (3.66 m.)
6421-9651	Complete Top unit assy. <b>13 ft.</b> (3.96 m.)

## Side Assemblies (Vertical Members)

<u>Item No.</u>	<u>Left Track Description</u>
6421-9784	<b>Left</b> trak assy. <b>4 ft.</b> (1.02 m.)
6421-9143	<b>Left</b> trak assy. <b>6 ft.</b> (1.83 m.)
6421-0158	<b>Left</b> trak assy. <b>6ft. 8in.</b> (1.03 m.)
6421-9523	<b>Left</b> trak assy. <b>7 ft.</b> (2.13 m.)
6421-0159	<b>Left</b> trak assy. <b>7ft. 6in.</b> (2.29 m.)
6421-6027	<b>Left</b> trak assy. <b>8 ft.</b> (2.44 m.)
6421-6032	<b>Left</b> trak assy. <b>9 ft.</b> (2.74 m.)
6421-6025	<b>Left</b> trak assy. <b>10 ft.</b> (3.05 m.)
6421-9671	<b>Left</b> trak assy. <b>11 ft.</b> (3.35 m.)
6421-6029	<b>Left</b> trak assy. <b>12 ft.</b> (3.66 m.)
6421-3700	<b>Left</b> trak assy. <b>13 ft.</b> (3.96 m.)
6421-0111	<b>Left</b> trak assy. <b>13ft. 4in.</b> (4.06 m.)
6421-9653	<b>Left</b> trak assy. <b>14 ft.</b> (4.27 m.)

<u>Item No.</u>	<u>Right Track Description</u>
6421-9783	<b>Right</b> trak assy. <b>4 ft.</b> (1.02 m.)
6421-9144	<b>Right</b> trak assy. <b>6 ft.</b> (1.83 m.)
6421-0170	<b>Right</b> trak assy. <b>6ft. 8in.</b> (1.03 m.)
6421-9522	<b>Right</b> trak assy. <b>7 ft.</b> (2.13 m.)
6421-0169	<b>Right</b> trak assy. <b>7ft. 6in.</b> (2.29 m.)
6421-6026	<b>Right</b> trak assy. <b>8 ft.</b> (2.44 m.)
6421-6031	<b>Right</b> trak assy. <b>9 ft.</b> (2.74 m.)
6421-6024	<b>Right</b> trak assy. <b>10 ft.</b> (3.05 m.)
6421-9672	<b>Right</b> trak assy. <b>11 ft.</b> (3.35 m.)
6421-6028	<b>Right</b> trak assy. <b>12 ft.</b> (3.66 m.)
6421-3701	<b>Right</b> trak assy. <b>13 ft.</b> (3.96 m.)
6421-0112	<b>Right</b> trak assy. <b>13ft. 4in.</b> (4.06 m.)
6421-9652	<b>Right</b> trak assy. <b>14 ft.</b> (4.27 m.)

## 12. RS-300 Door Options and Accessories

Description	Notes
<b>Operators</b>	
Manual Chain Hoist	Optional - Left or Right Side Mounting
Somfy Tube Motor	Optional - Right Side Mounting Only
<b>Manaras Operator:</b>	
115 VAC, Right-Mount, ½ hp	Optional - Select prior to order
115 VAC, Left-Mount, ½ hp	Optional - Select prior to order
208 VAC, Left-Mount, ½ hp	Optional - Select prior to order
208 VAC, Right-Mount, ½ hp	Optional - Select prior to order
230 VAC, Right-Mount, ½ hp	Optional - Select prior to order
230 VAC, Left-Mount, ½ hp	Optional - Select prior to order
460 VAC, Right-Mount, ½ hp	Optional - Select prior to order
460 VAC, Left-Mount, ½ hp	Optional - Select prior to order
Mounting Plate, Galvanized	Optional - (Manaras Operators Only)
Mounting Plate, Aluminum	Optional - (Manaras Operators Only)
Safety Cover, NEMA 1	Optional - (Manaras Operators Only)
Radio Remote Receiver	Optional - (Manaras Operators Only)
Radio Remote Transmitter	Optional - (Manaras Operators Only)
Motion Detector, All Motion	Optional - (Manaras Operators Only)
Motion Detector, Programmable	Optional - (Manaras Operators Only)
Loop Detector, Single Loop	Optional - (Manaras Operators Only)
Loop Detector, Dual Loop	Optional - (Manaras Operators Only)
<b>Fabric</b>	
Frost, white, blue, green, tan, black, red, anti-static	Optional - Select prior to order
Insect Screen Material	Optional -
Fabric Repair Kit, 18" x 18" (Clear/Frost, White, Blue, Black, etc.)	Optional - Specify required color.
Screen Attachment Assembly	Optional - (Screen door piggy-back)
<b>Window</b>	
44" Height x Full Width of Door	Optional -
<b>Switches</b>	
Push-Button Switch (Additional)	One included with Door; Extra switches Optional
3 Position Switch, encl button (Open / Close / Stop)	Optional -
3 Position Switch, with <u>Lockout</u>	Optional -
Ceiling Pull Switch, SPST	Optional -
Open / Close Indicator Switch Assembly	Optional -
Photo Eyes	Optional - (Safety Beams)
<b>Misc.</b>	
Clip Board Holder	Optional -



