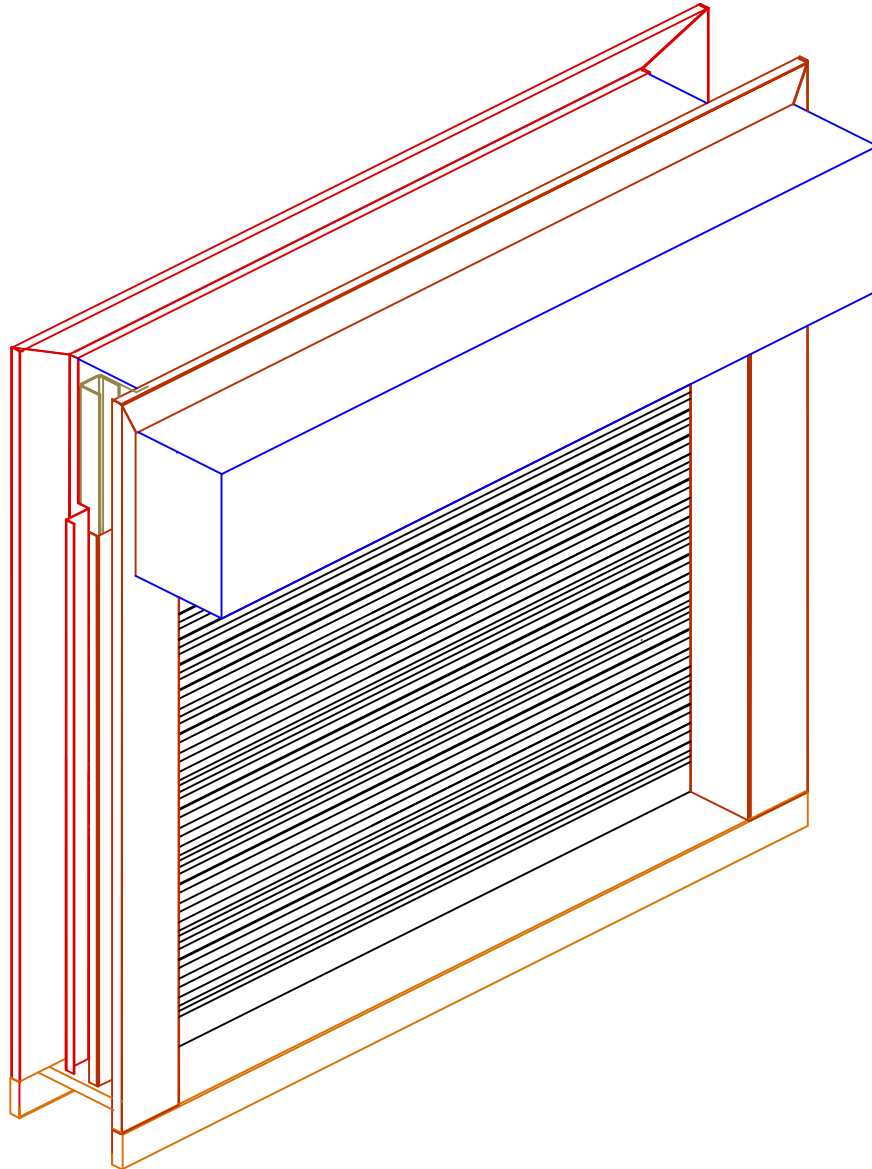




OVERHEAD DOORS, INC.

8 HULSE ROAD, EAST SETAUKET, NY 11733  
TEL (831) 473-9300 FAX (831) 642-0800

INTEGRAL FRAME FIRE DOOR  
INSTALLATION INSTRUCTIONS



Docket # \_\_\_\_\_ Date \_\_\_\_\_

GUIDE SECTION							
QUA- NTITY	MARK	CLEAR OPENING		OVERALL GUIDE	UNDER BRACKET	OVERALL FRAME	
Q	M	C O W IDTH	C O H EIGHT	O G W IDTH	U B H EIGHT	O F W IDTH	O F H EIGHT

# INTRODUCTION

---

Dear Customer,



***Congratulations on your purchase of the Alpine Integral frame door. You have selected a product that has been manufactured with the latest and most advanced technology available within the industry. Computer aided design and LASER quality machining have been incorporated into all Alpine products.***

## **SAFETY INSTRUCTIONS**



**IT IS IMPORTANT TO READ ALL SAFETY INSTRUCTIONS BEFORE BEGINNING INSTALLATION!**

### **UPON ARRIVAL OF THE SHIPMENT TO THE PROJECT LOCATION**

1. Check all materials against the packing list. Inspect all materials for any visible or concealed signs of freight damage. Should omissions or freight damage be present, you must file a freight claim.
2. If you have received more than one door, you will notice that all major parts and components of that door are marked with corresponding numbers. A complete door should be composed of all parts bearing the same numbers.

 **IMPORTANT**  Do not interchange door parts from one door to another!

3. Before leaving the project site, make certain that you have read and have fully complied with the safety checklist. Complete the fire door drop test report and return it to the Alpine office.

 **IMPORTANT**  **INSTALLATION OF THIS DOOR MUST BE PERFORMED BY AN EXPERIENCED INSTALLER!**

### **NOTE TO THE INSTALLER:**

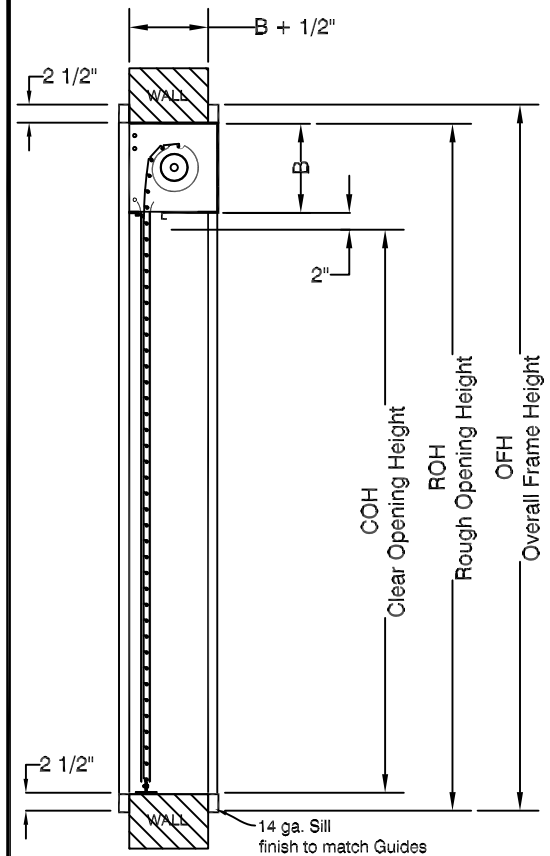
In order to assure your customer that this door has been installed in a safe and efficient manner, Alpine recommends that you thoroughly check the following areas before leaving the project site.

1. Make certain that the proper amount of tension has been applied to the torsion spring assembly, in order to counterbalance the weight of the curtain.
2. Make sure that the tension wheel is securely fastened in place.
3. Make sure that all keys have been installed in any sprockets or gears that require them. Make sure that all set screws have been installed and are properly tightened.
4. Check all fasteners that hold the guides to the building structure.
5. Check all fasteners used in assembling the various door components.
6. Be sure that the door has been drop tested and reset to it's exact position that existed prior to the successful drop test and the drop speed is in accordance with NFPA 80.
7. A successful drop test is characterized by a break in any of the fusible links and Including any signals from the fire alarm system which will allow the door to close completely without any interruptions to it's downward travel. (NFPA 80 chapter6)
8. Do not perform a drop test by any manual methods, for example, physically releasing each drop-arm mechanism at the same time.

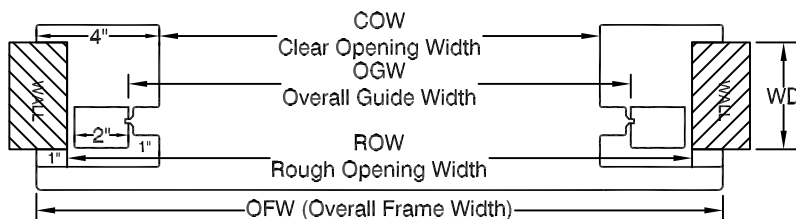
# PREPARATION



COIL SIDE ELEVATION



VERTICAL SECTION



GUIDE SECTION

CURTAIN

BOTTOM BAR

QUANTITY	MARK	CLEAR OPENING		OVERALL GUIDE	ROUGH OPENING		OVERALL FRAME		Bracket	Wall Depth	DRIVE	OPERATION
Q	M	COW	COH	OGW	ROW	ROH	OFW	OFH	B	WD	DR	OP

Manual (Push up)

- a. **Wind Load:** Doors are designed to withstand P.S.F while in fully closed position
- b. 1-1/2 Hours fire-Rated.

## BUILDINGS NOTES:

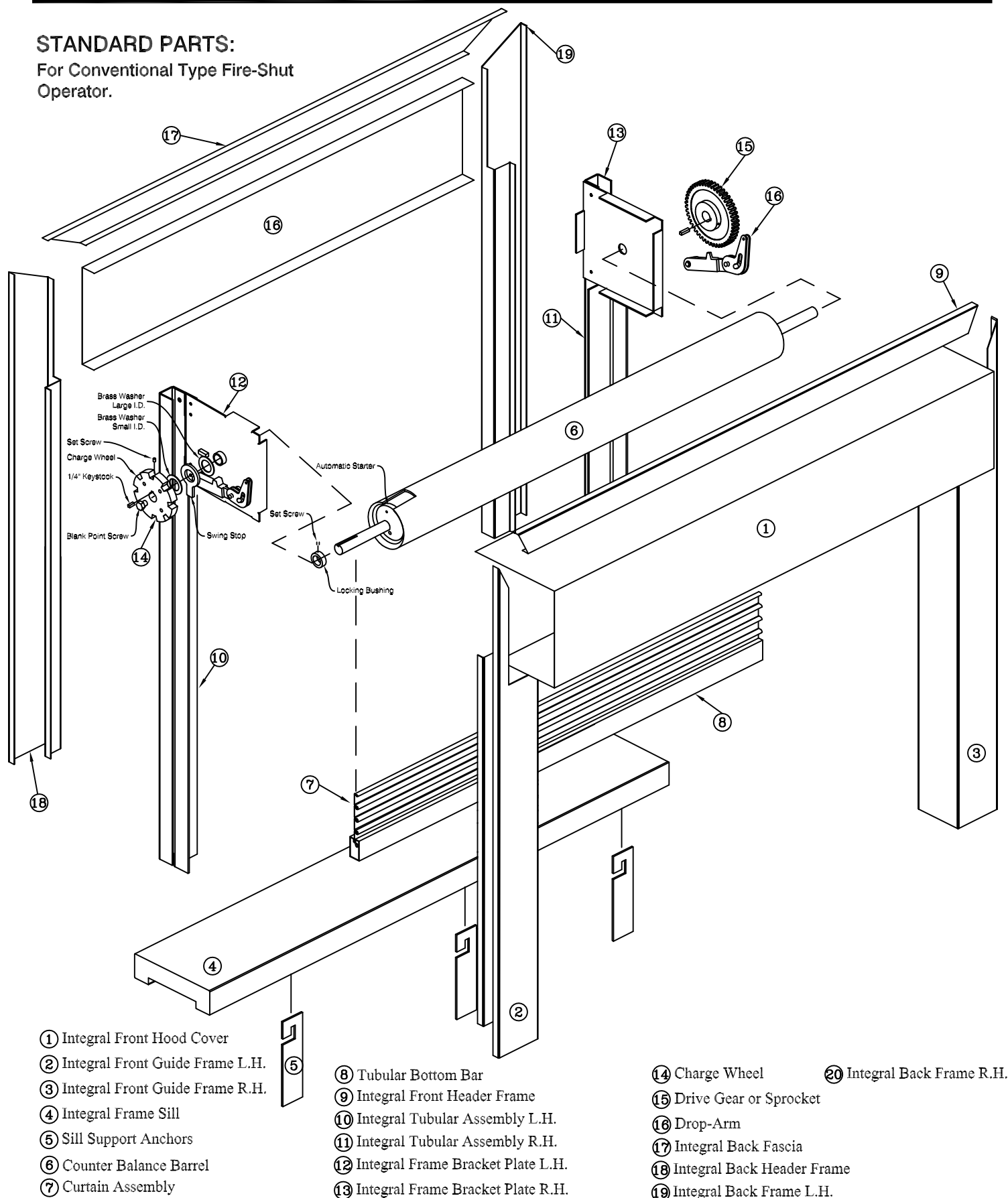
- Jambs, Lintels, Sills or other structural elements required to prepare opening are not included by **Alpine Overhead Doors, Inc.**
- Opening of sound and suitable construction will be provided by the purchaser for the support of **Alpine Overhead Doors, Inc.**
- In the construction of new openings, the purchaser will be responsible for the maintenance of certified dimensions on approved shop drawings or as guaranteed otherwise.
- Set Frame to the (ROW) x (ROH) dimension. Note: The Opening must be built in accordance with NFPA 80.

# PREPARATION

Note: Governor and Drop-Arms not used with a Redi-Reset Operator.

## STANDARD PARTS:

For Conventional Type Fire-Shut Operator.



① Integral Front Hood Cover

② Integral Front Guide Frame L.H.

③ Integral Front Guide Frame R.H.

④ Integral Frame Sill

⑤ Sill Support Anchors

⑥ Counter Balance Barrel

⑦ Curtain Assembly

⑧ Tubular Bottom Bar

⑨ Integral Front Header Frame

⑩ Integral Tubular Assembly L.H.

⑪ Integral Tubular Assembly R.H.

⑫ Integral Frame Bracket Plate L.H.

⑬ Integral Frame Bracket Plate R.H.

⑭ Charge Wheel

⑮ Drive Gear or Sprocket

⑯ Drop-Arm

⑰ Integral Back Fascia

⑱ Integral Back Header Frame

⑲ Integral Back Frame L.H.

⑳ Integral Back Frame R.H.

# PREPARATION

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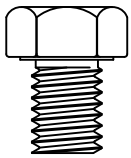
## STANDARD PARTS:

Hardware Package

Note: Supplied with Conventional Fire Doors only.

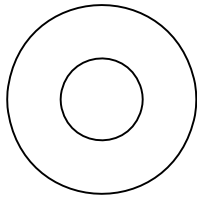
### Redi-Reset

Charge Wheel (1)



3/8"x 1/2"  
Hex Head Bolt

Swing Stop (1)  
& Bronze Washers (2)



3/8" Hot Dipped  
Galvanized, Vinyl or  
Fiber Washer

Star Gear (1)  
(for doors over 4'-0" high)

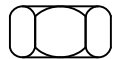


1/4"sq x 3/4" Key

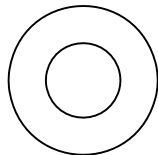
Locking Bushing



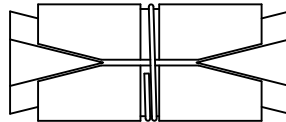
#10 x 3/8"  
Sheet Metal Screw



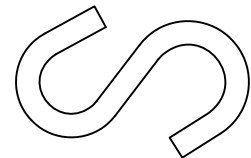
5/16" Nut



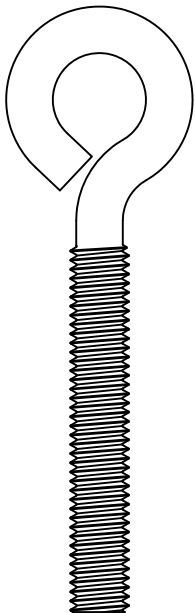
5/16" Hot Dipped  
Galvanized, Vinyl or  
Fiber Washer



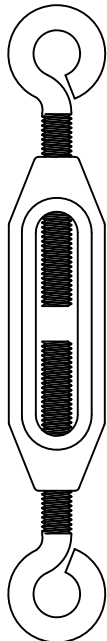
5/16" Expansion Nut



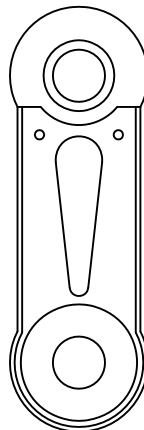
#8-10 Ga S-Hook



5/16" Eye Screw



Turnbuckle



160° F - Fusible Link  
3 pcs for interior mounted  
2 pcs for exterior mounted



Sash Chain

# INSTALLATION

## 1

### Frame Assembly

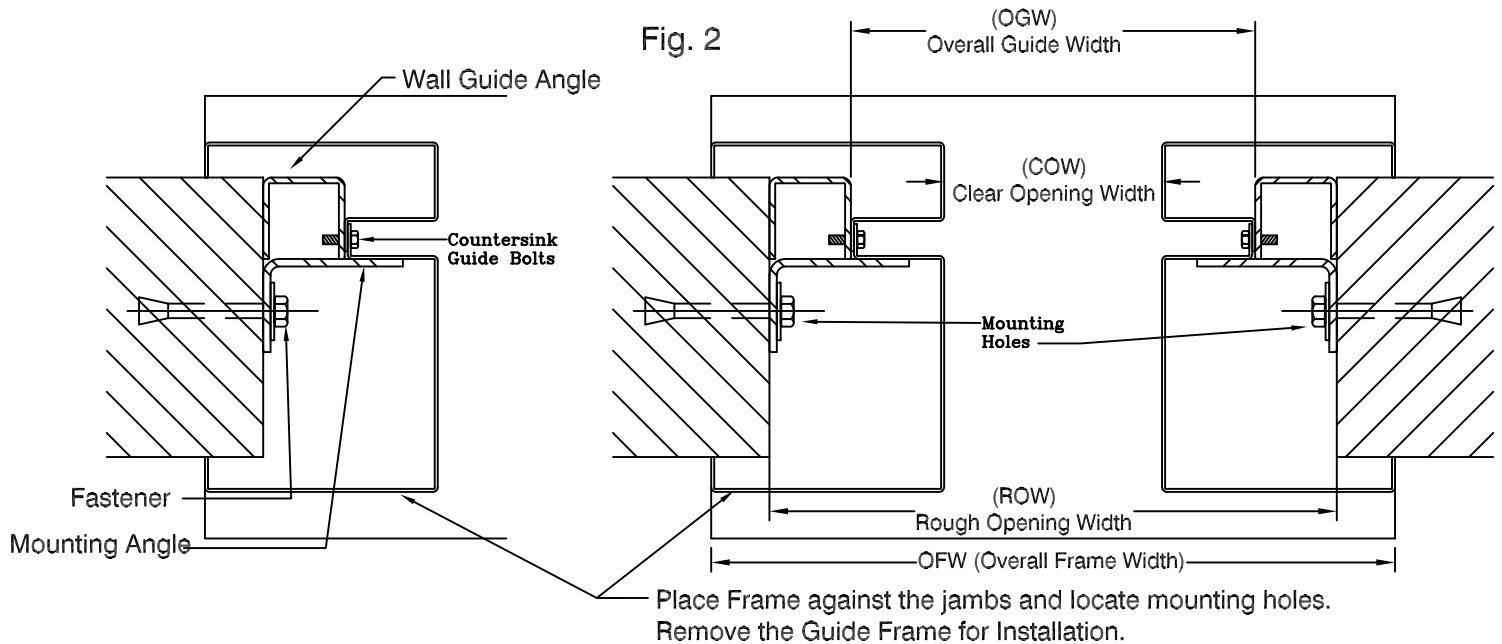
Verify the opening size, width and height, and mounting condition of the opening. Your opening must comply with NFPA 80 standards.



**IMPORTANT** Determine your mounting configuration to ensure compliance with fig. 3 through fig. 11, for proper mounting conditions, in accordance with NFPA 80 (latest edition)

#### B. Frame Mounting Assembly

Fig. 2



## 1A

### Frame Disassembly (disassemble the Knock-Down Door)

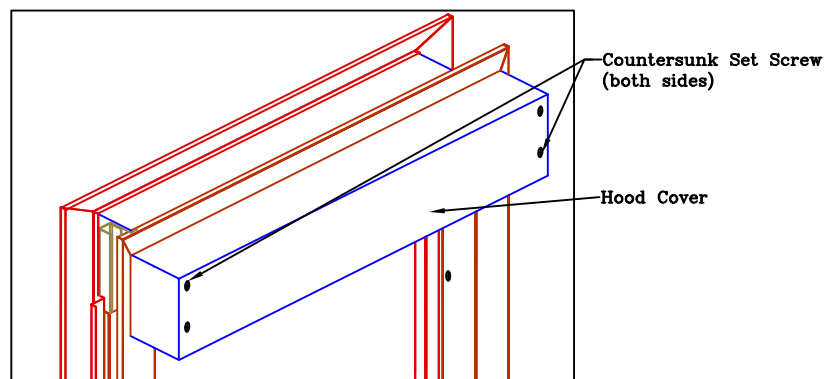
Verify the opening size, width and height, and mounting condition of the opening. Your opening must comply with NFPA 80 standards.

Verify the ROW x ROH for the opening space in the wall.

**Note:** The Integral Frame is shipped fully assembled. In order to install the frame, the Installer must Knock-Down the frame by :

- 1) Remove the Hood Cover by locating the two screws on front of hood (fig.3)

Fig. 3



## INSTALLATION

- 2) Remove the two set screws located on the side of the frame and the underside of the top frame. Now you will be able to lift and slide the top of the frame off of the unit. (fig. 4)
- 3) Roll Curtain up, while in a rolled up position tie it up so it will not uncoil. (fig. 4A)
- 4) Remove the set screws that are located inside the guide on each side of the frame. (these screws are countersunk). (fig. 4B)

Fig. 4

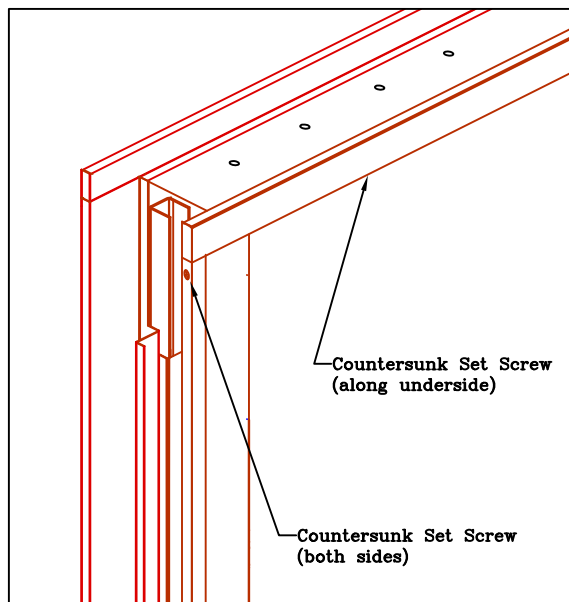


Fig. 4B

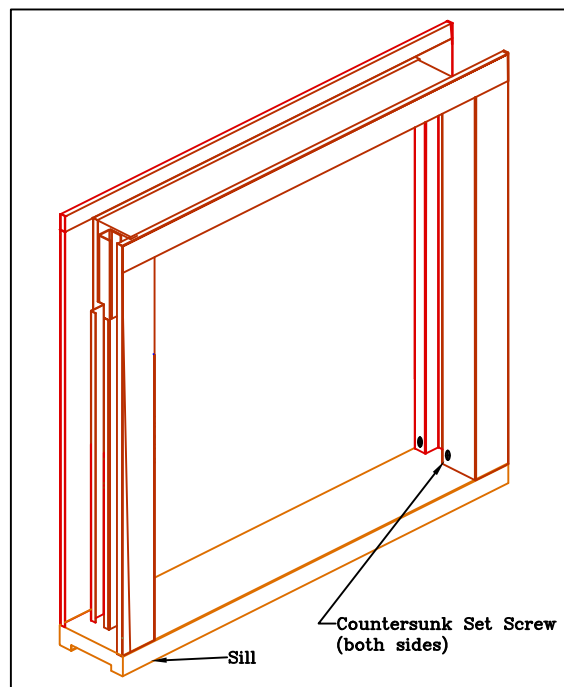
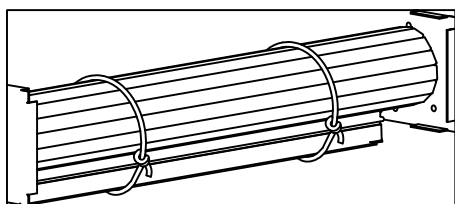


Fig. 4A



- 5) Remove the bolts and set screws located on the bottom of the sill, which are also countersunk screws. (fig. 5 & fig. 6)

Fig. 5

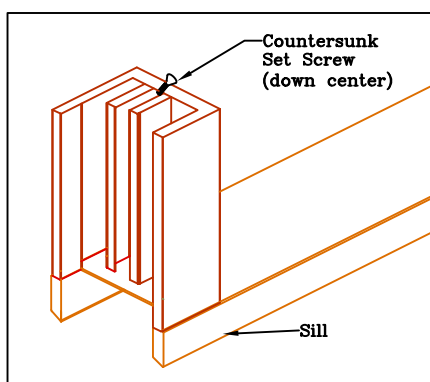
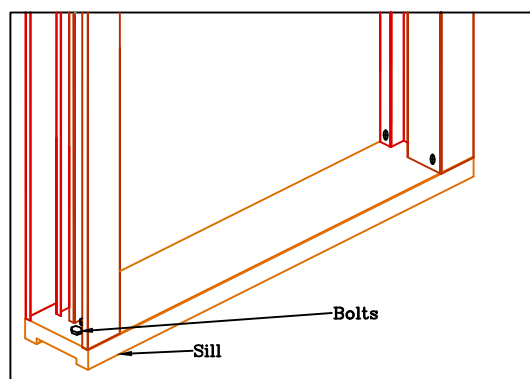


Fig. 6

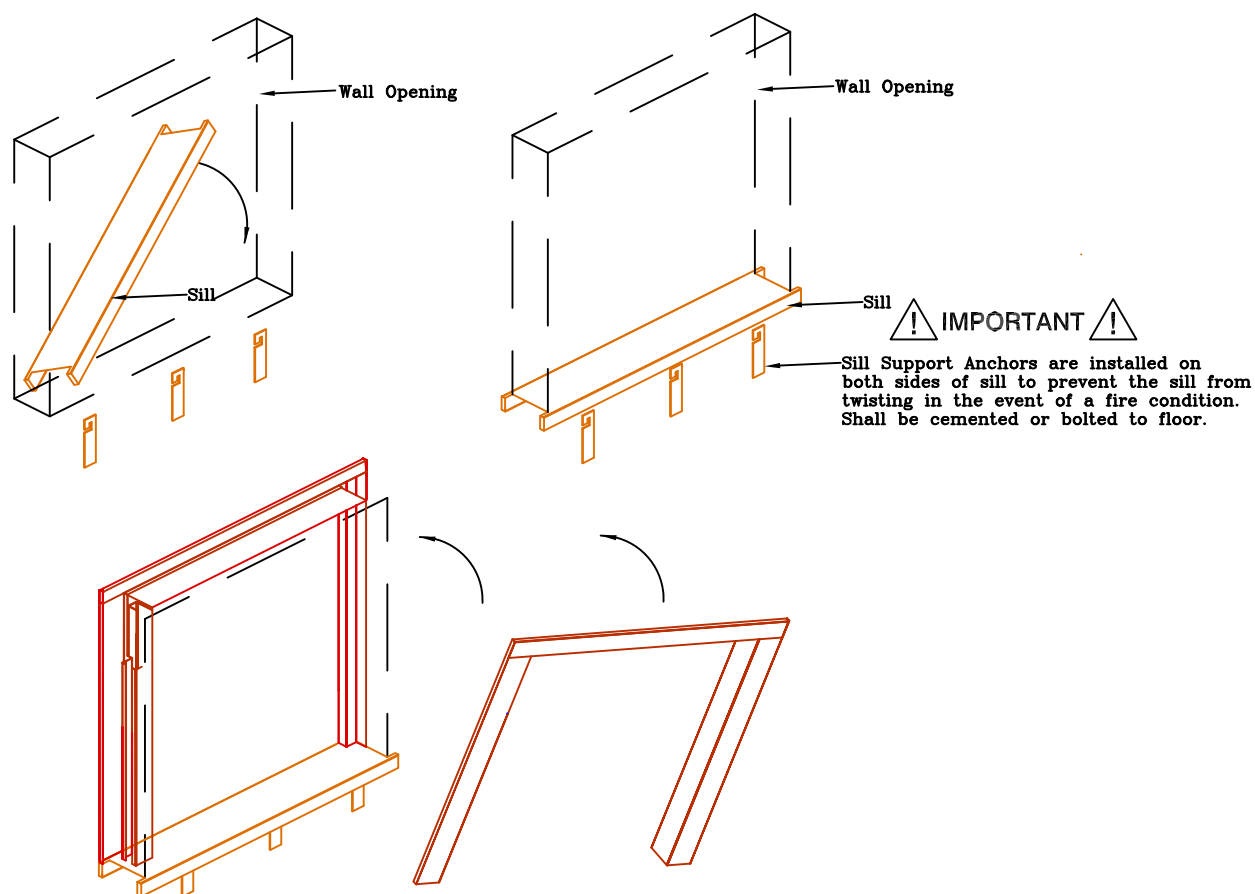


# INSTALLATION

⚠ IMPORTANT ⚠ THE TOP OF EACH WALL/GUIDE ASSEMBLY MUST BE LEVEL AND SQUARE.

6) Remove the Bottom Sill and install sill in the new opening, Tilted up on one side, so one side at a time may be lowered into wall opening. (fig.7) Tilt and install the Knock Down Frame into the opening and bolt the sill to the frame using the disassembly instructions of the Knock-Down Frame in reverse.

Fig. 7

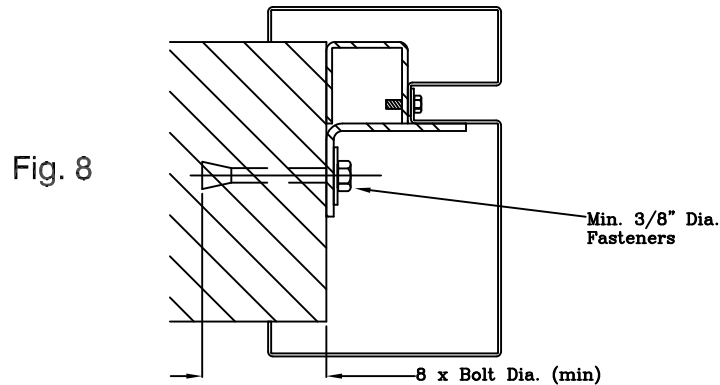


**Note:** Upon Completion, If any gaps or spacing exists between the tube and jamb, an approved method of fire-proofing must be applied.

# INSTALLATION

7) a. When fastening to masonry (brick, block or concrete) using expansion anchors, anchorage depth is not to be less than 8 times the bolt dia. and not less than 6 times the bolt dia. from the edge of the opening, as shown in Fig. 8. Fasten using a minimum of 3/8" dia. fasteners equal to that specified in the latest edition of NFPA 80 section 6-4.1.3.

b. When fastening to a wall to masonry (brick, block or concrete) drill holes completely through the wall with a 1/2" dia. masonry drill or with the mfg. suggested drill size (see fasteners Instructions). Fasten with a minimum 3/8" bolt, as shown in Fig. 8.



c. When fastening to a steel frame, drill and tap holes for the appropriate fastener size. Fasten as shown in Fig. 9 with a min. of 3/8" dia. fasteners equal to that specified in the latest edition of NFPA 80 section 6-4.1.4. Note: Steel frame member must be embedded or secured to the masonry wall prior to the wall / guide assembly to them.

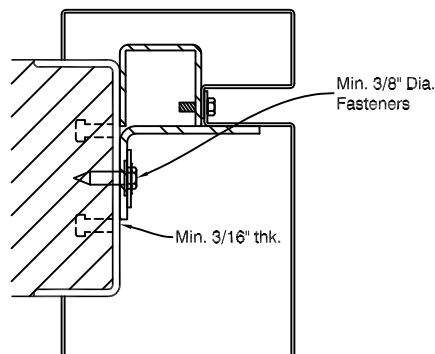


Fig. 9

d. When fastening to a double(2) metal stud jamb, each stud is to be minimum of 14 gauge. Fasten using a min. of 3/8" dia. self-tapping screws, as shown in Fig. 10.

e. When fastening to a double(2) wood stud jamb, each stud is to be a min. 2"x 4". Fasten using a min. of 3/8" dia lag screws, as shown in Fig. 11.

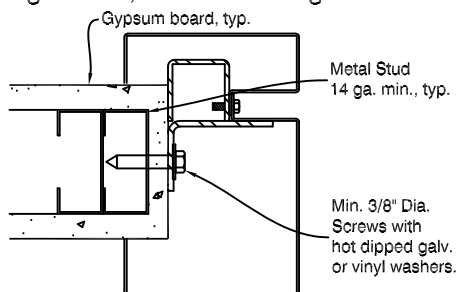


Fig. 10

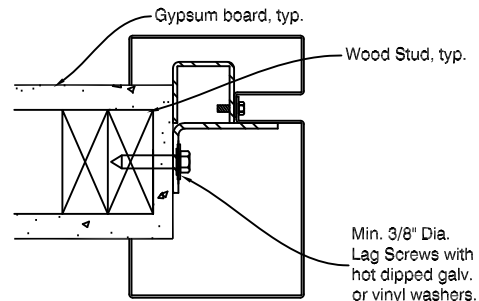


Fig. 11

**Note:** When all fasteners have been attached and the Knock Down Frame is assembled into the opening, Verify that the Counterbalance assembly is balanced by making necessary adjustments for ease of operation. Also insure that all screws and fasteners are not loose from shipping.

# INSTALLATION

## 2

### Counterbalance Assembly

Verify the operational type of pipe assembly you have: push-up, motor or hand crank. Redi-Reset check the drive side (left or right hand), as per the markings on the product you received, then refer to the appropriate instructions.

Integral Frame Shutters are fully assembled and tested at the factory. Technician should refer to the installation instructions that are supplied with the door order for the specific operator that is attached to the door.

#### A. Charge assembly

**Charge side is the side with the automatic starter, as shown in Fig. 12. Insert the key stock and lock all set screws in place. NOTE: Brackets are shown as right hand drive; left hand drive is opposite.**

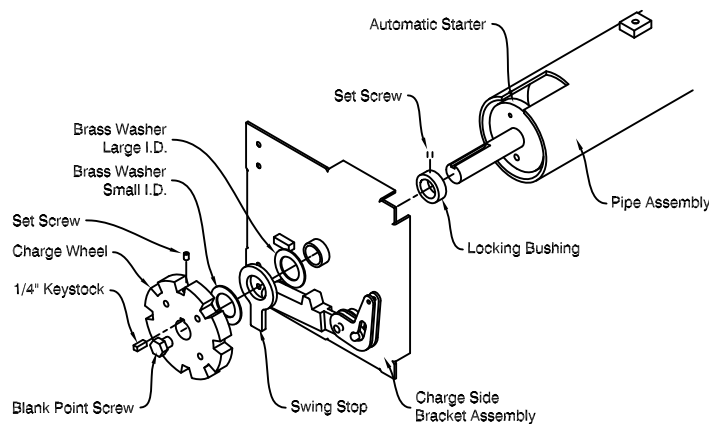


Fig. 12

**Note: For reference only (Conventional type shown)**

#### B. Drive assembly

**a) Push-up operation - Assemble the drive (governor) bracket on the drive side shaft of the pipe assembly (drive side is the side with the shaft welded to the pipe) as shown in Fig. 13. Align the star gear with the governor. Insert the key stock and lock all set screws in place. NOTE: Brackets are shown as right hand drive, left hand drive is opposite. \*Doors under 4'-0" high are not supplied with a governor.**

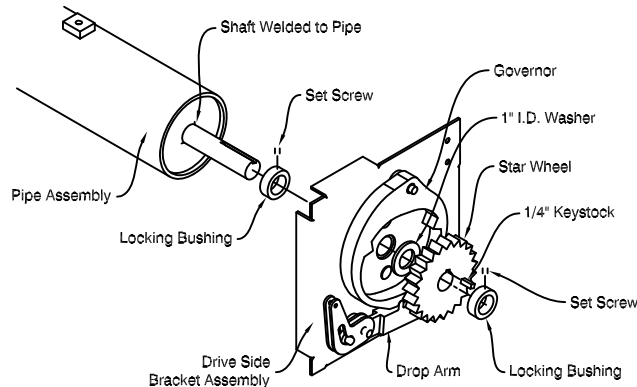


Fig. 13



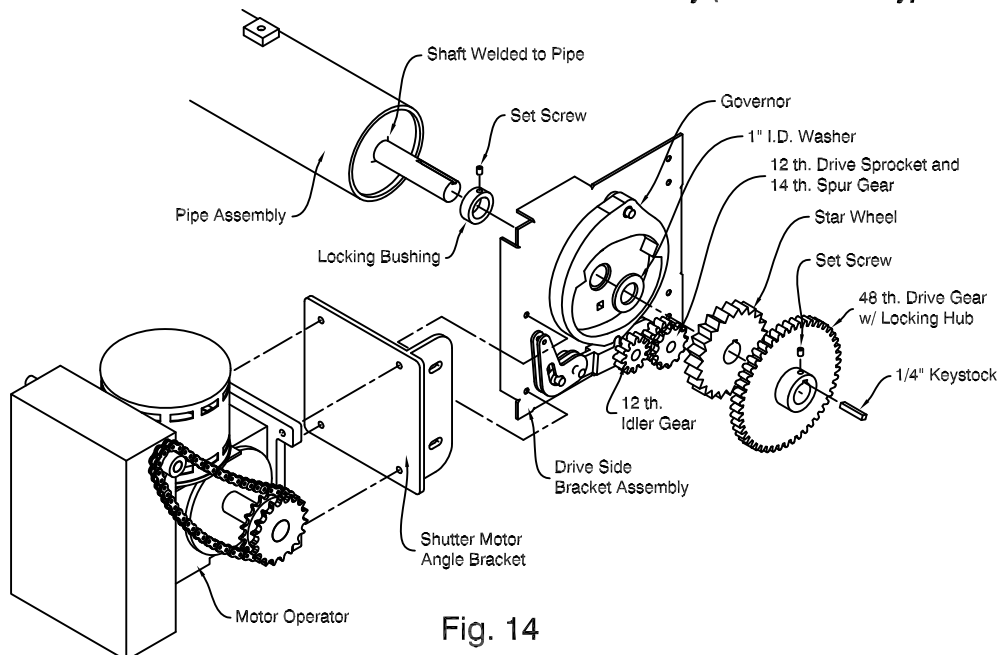
**IMPORTANT**

**PIPE AND BRACKETS SHOULD BE ASSEMBLED IN ACCORDANCE WITH THE SAME HAND DRIVE. DAMAGE WILL OCCUR IF ASSEMBLED OTHERWISE.**

# INSTALLATION

**b) Motor operation** - Assemble the drive (governor) bracket on the drive side shaft of the pipe assembly (drive side is the side with the shaft welded to the pipe) as shown in Fig. 14. Align the star gear with the governor and align the drive gear to mesh with the idler gear. Insert the key stock and lock all set screws in place. **NOTE:** Brackets are shown as right hand drive, left hand drive is opposite. \*Doors under 4'-0" high are not supplied with a governor.

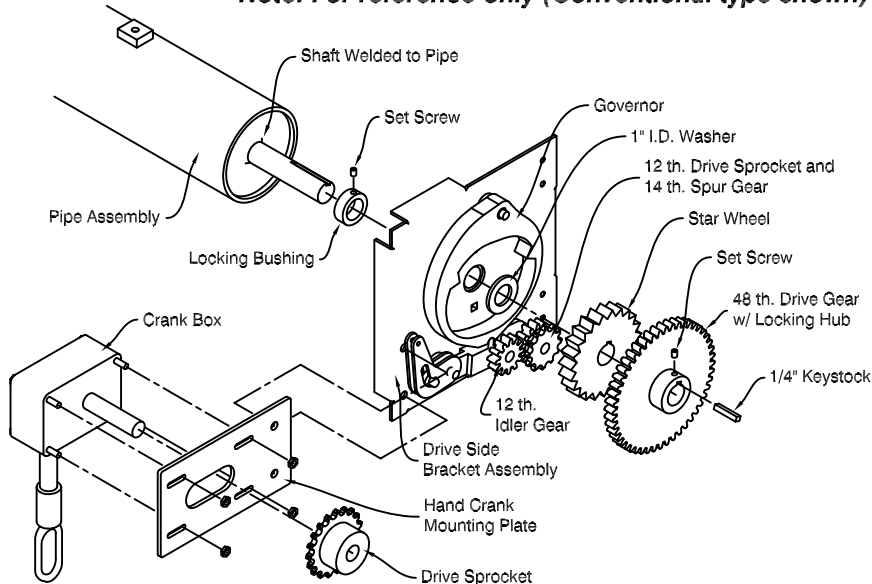
**Note: For reference only (Conventional type shown)**



**Fig. 14**

**c) Hand crank operation** - Assemble the drive (governor) bracket on the drive side shaft of the pipe assembly (drive side is the side with the shaft welded to the pipe) as shown in Fig. 15. Align the star gear with the governor and align the drive gear to mesh with the idler gear. Insert the key stock and lock all set screws in place. **NOTE:** Brackets are shown as right hand drive, left hand drive is opposite. \*Doors under 4'-0" high are not supplied with a governor.

**Note: For reference only (Conventional type shown)**



**Fig. 15**



**PIPE AND BRACKETS SHOULD BE ASSEMBLED IN ACCORDANCE WITH THE SAME HAND DRIVE. DAMAGE WILL OCCUR IF ASSEMBLED OTHERWISE.**

# INSTALLATION

## 3 Adjusting Tension

⚠ WARNING ⚠  
USE EXTREME CAUTION WHEN  
GIVING TENSION TO THE  
CHARGE WHEEL, SERIOUS  
INJURY OR DEATH MAY OCCUR.

- 1) Secure the curtain from unrolling and engage the drop arm for the charge wheel.
- 2) Using a pipe wrench, begin to give tension. One or two turns will begin to roll the curtain up on the pipe assembly. (fig. 16)

⚠ CAUTION ⚠ ON SMALLER DOORS ESPECIALLY, THE TORSION SPRING IS VERY EASY TO OVER TENSION. IF YOU OVER TENSION THE CHARGE WHEEL, THE SPRING WILL COLLAPSE INTERNALLY, RESULTING IN IMPROPER OPERATION OF THE DOOR.

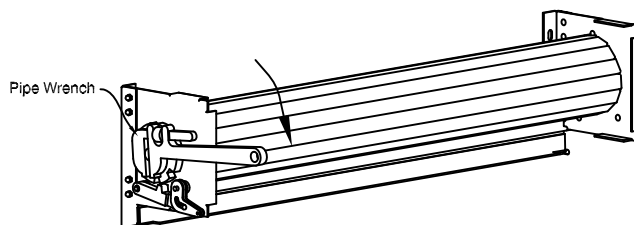


Fig. 16

**Note:** Lift the drop arm in the engaged position, to lock the charge wheel, in between turns.

### 3) Test Door for optimum operation.

For optimum operation, you may find additional turns are required. In some cases, less turns are required.

#### ALTERNATE METHODS:

- b. Pull ropes by hand
- c. Lift using hand crank
- d. Powered by motor

NOTE: ON ABOVE, YOU MUST ENSURE THAT THE CHARGE WHEEL IS DISENGAGED.

⚠ CAUTION ⚠

MAKE SURE TO SECURE THE CURTAIN FROM UNROLLING.

⚠ CAUTION ⚠

# INSTALLATION

---

⚠ IMPORTANT ⚠ UNDER NO CIRCUMSTANCES SHOULD TENSION BE APPLIED WHEN THE DOOR IS IN THE CLOSED POSITION.

## 4

### Mount Hood

*Install the hood to the flanges on the brackets by using #10 self-drilling sheet metal screws.*

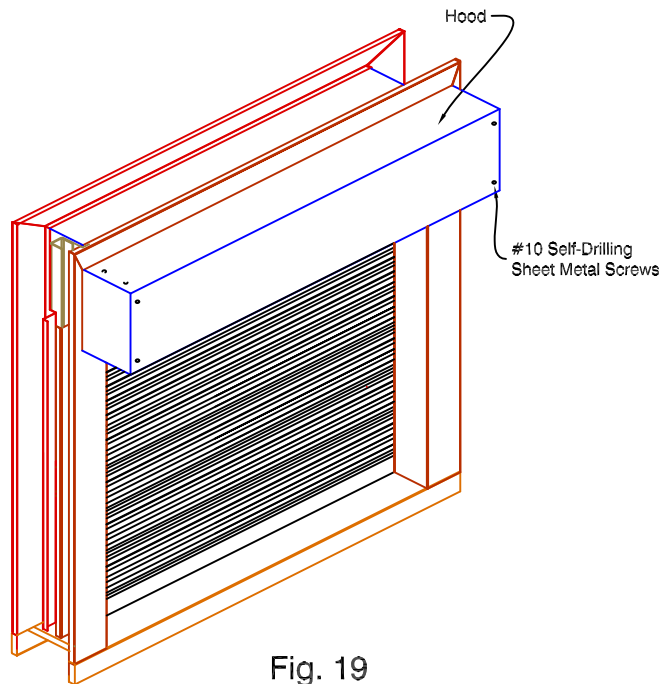


Fig. 19

# INSTALLATION

## 5

### Release Assembly

Routing of the rolling fire door release assembly is a vital part of the door system. If the assembly is installed incorrectly, it may prevent the rolling fire door from closing automatically. The provisions for installation of fusible links are found in the National Fire Protection Association Standard 80 (NFPA 80).

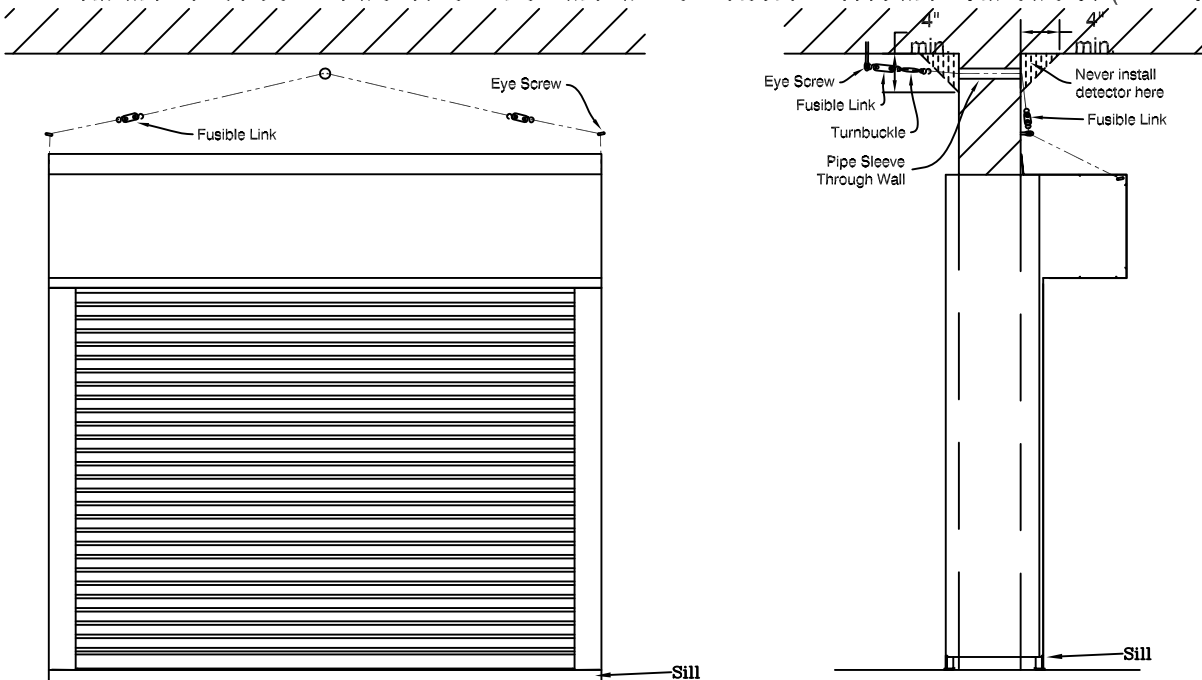


Fig. 20

**1) Locate the first fusible link near one of the bracket plates and allow for sufficient movement of the sash chain to release the drop mechanism.**

2) Locate the second fusible link or detector within 12 inches of the ceiling on the coil side of the wall. Do not install a link or detector within four inches of the intersection of the wall and ceiling as shown in Fig. 20.

3) Locate the third fusible link or detector on the opposite side of the wall at a distance from the wall that will allow sufficient travel of the chain to completely release the fire door. Attach the fusible link near the ceiling straight out from the through wall hole. The detector must be more than four inches from the intersection of the wall and ceiling as shown in Fig. 20.

4) Check with the local authority having jurisdiction regarding the through wall hole. Consider using 1/2 inch EMT.

5) Use S-hooks for attaching fusible links. This will allow ease of installation and adjustments.

6) When routing the sash chain, DO NOT make more than 90 degree bends.

7) Use the turnbuckle to take up the slack in the sash chain.

8) Attach eye screws to the wall to help route the sash chain to a given location.

9) The fusible links should be interconnected such that disconnection of any link will cause the door to close.



**IMPORTANT**

**DO NOT INSTALL ANY DETECTOR WITHIN FOUR INCHES OF THE INTERSECTION OF THE WALL AND CEILING.**

# INSTALLATION

---

## 6



### Operational Test

***After the installation is completed, an operational test must be conducted. This test is to determine that the system has been installed and functions as intended. Testing of each fusible link shall be conducted separately to ensure that a successful drop test will be achieved at each fusible link / detector device.***

#### **A. Drop Test Procedure**

- 1) Release the fusible link by disengaging the "S" hook that is holding the chain to the link.
- 2) Insure that the drop arm or plunger mechanisms and sash chain is not obstructed for this will cause incomplete disengagement.
- 3) If the door unit drops too fast, relocate the blank point screw(for Conventional Fire Shutter) on the charge wheel to a position that relieves less tension. If the door unit drops too slow, with the door in the open position, relocate the blank point screw to a position that relieves more tension. NOTE: Rolling fire doors shall have an average closing speed of not less than 6 in. per second nor more than 24 in. per second. (NFPA 80 - Latest Edition)

Special note: If Redi-Reset Fire Shutter is used, pre-wound turns are not used.

 **IMPORTANT**  **UNDER NO CIRCUMSTANCES SHOULD TENSION BE APPLIED WHEN THE DOOR IS IN THE CLOSED POSITION.**

NOTE: Each rolling fire Shutter installed must be test dropped and an Alpine fire shutter drop test report must be filled out (see below). A copy of the report must be forwarded to the Alpine office otherwise the door warranty is considered VOID.

#### **FIRE SHUTTER DROP TEST REPORT**

Job Number: \_\_\_\_\_ Door Marks: \_\_\_\_\_

Job Name: \_\_\_\_\_

Building: \_\_\_\_\_

U.L. Label #: \_\_\_\_\_ Alpine Serial #: \_\_\_\_\_

#### **CUSTOMER REPRESENTATIVE WITNESSING THE FIRE TEST**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### **TEST PERFORMED BY:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**PLEASE COMPLETE THIS FORM AND SEND A COPY TO THE FOLLOWING ADDRESS.**

Alpine Overhead Doors, Inc.  
8 Hulse Road  
E. Setauket, N.Y. 11733  
OR FAX: (631) 642-0800

# INSTALLATION

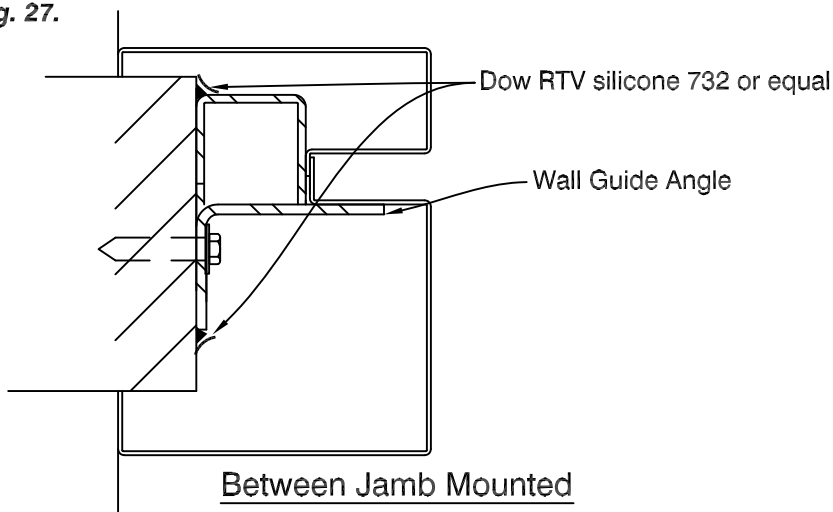
## 7

### Smoke Door Modification (for smoke doors only)

*Additional requirements must be added to the fire door to classify the door as a "smoke door".*

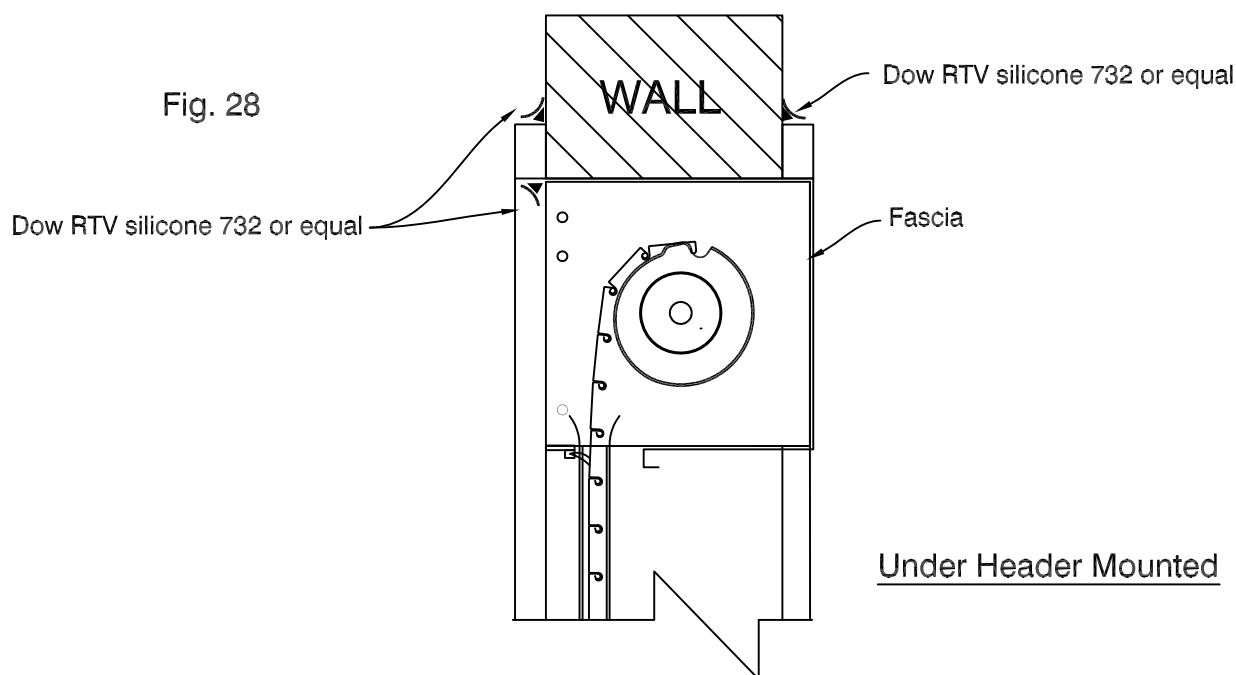
- 1) *Apply silicone along the full length of the guides and along each edge that comes in contact with the jamb. For between jamb mounting, silicone must be applied in between the tube and the wall guide angle as shown in Fig. 27.*

Fig. 27



- 2) *Apply silicone around the entire perimeter of the hood along the edge that comes in contact with the wall. For under header mounting, apply silicone around the entire perimeter of the fascia and tube as shown in Fig. 28.*

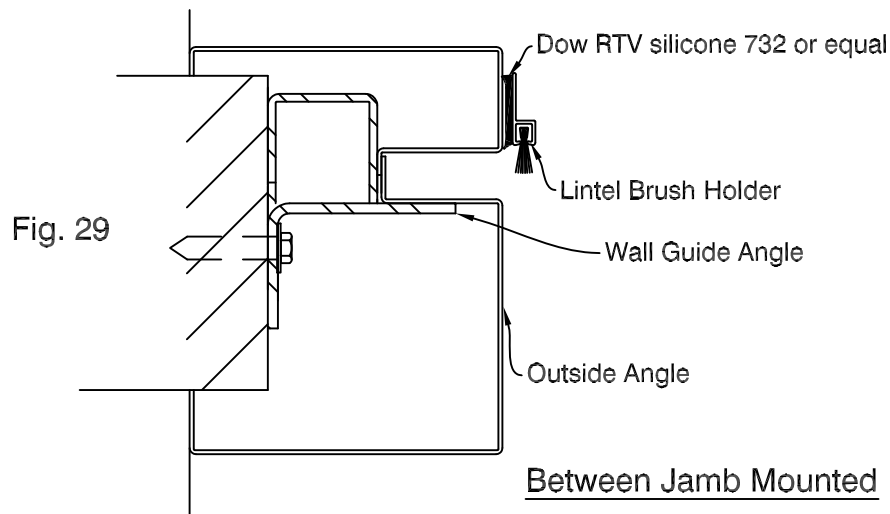
Fig. 28



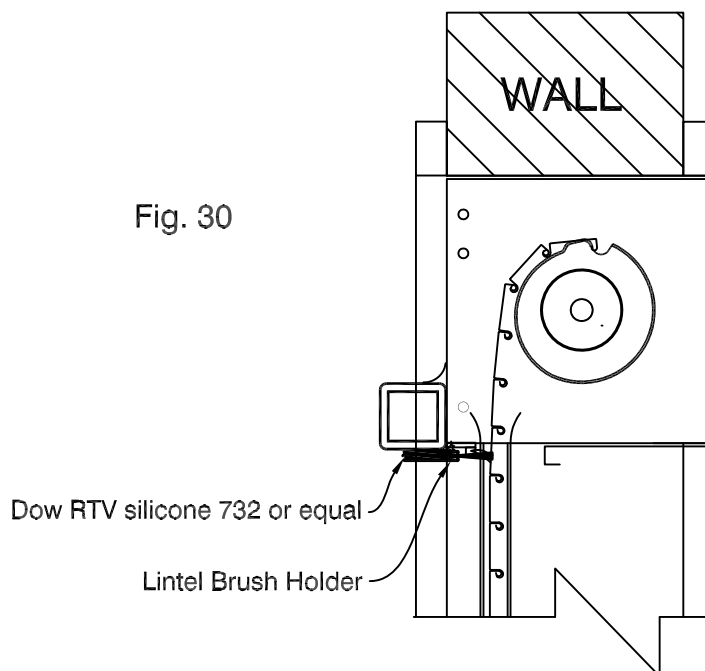
**ALL GAPS, EDGES AND SEAMS MUST BE SEALED AROUND THE FULL PERIMETER OF THE DOOR WITH DOW RTV SILICONE 732 OR EQUAL.**

# INSTALLATION

- 3) Mount the guide brush holder to the inside edge of the wall guide angle as shown in Fig. 29 **NOTE:** apply silicone along the full length between the guide brush holder and the wall guide angle.



- 4) Mount the lintel brush holder to the lintel as shown in Fig 30. For under header mounting, mount the lintel brush holder to the tube lintel. **NOTE:** Apply silicone along the length between the lintel brush holder and the lintel.



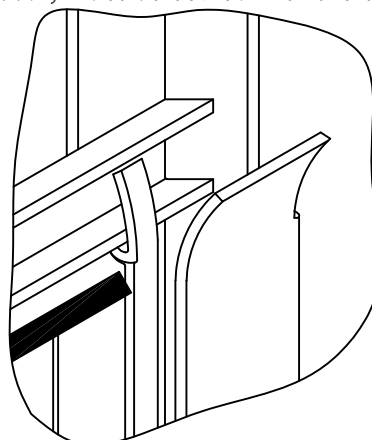
**ALL GAPS, EDGES AND SEAMS MUST BE SEALED AROUND THE FULL PERIMETER OF THE DOOR WITH DOW RTV SILICONE 732 OR EQUAL.**

# INSTALLATION

5) Sealing compound must be placed at the bottom of each guide where the guide comes in contact with the floor or counter. Any other area where air leakage may occur, must be sealed with the sealing compound.

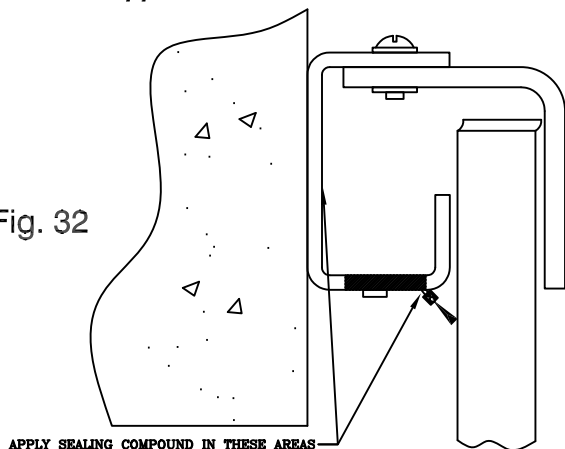
Figure 31 shows the location of the support channel for mounting the lintel brush. This mounting is similar for both face of wall and between jambs units.

Fig. 31



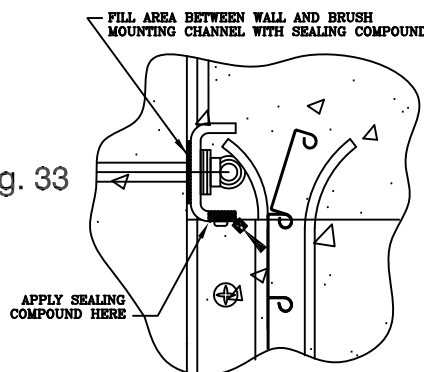
Figures 32 & 33 show where the sealing compound must be applied to a face of wall unit.

Fig. 32



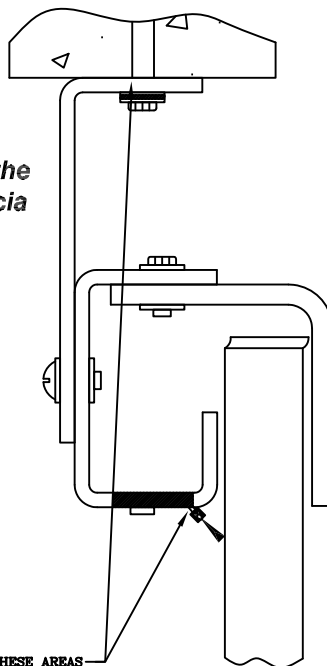
APPLY SEALING COMPOUND IN THESE AREAS

Fig. 33



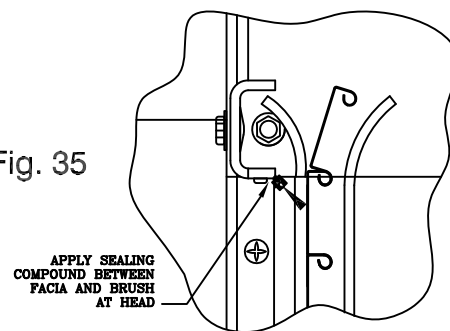
Figures 34 & 35 show where the sealing compound must be applied to a between the jambs unit, the entire perimeter of the fascia must be sealed with a bead of the sealing compound.

Fig. 34



APPLY SEALING COMPOUND IN THESE AREAS

Fig. 35



IMPORTANT



ALL GAPS, EDGES AND SEAMS MUST BE SEALED AROUND THE FULL PERIMETER OF THE DOOR WITH DOW RTV SILICONE 723 OR EQUAL.

## MAINTENANCE INSTRUCTIONS

**CAUTION****ONLY EXPERIENCED PERSONNEL SHOULD PERFORM MAINTENANCE**

### LUBRICATION

The most important maintenance item on doors of this type is lubrication.

The curtain, guides and teeth of the gears contained in motor or hand crank mechanism (if supplied) should be lubricated at least twice a year (more often if door works very frequently) with one of the following greases, or equivalent:

- Dixon's #2 Graphite Cup Grease (#1 for summer weather)
- Alemite MP Lithium Grease (#1 for winter weather, #2 for normal)
- Texaco #904 Graphite Grease

If door is electrically operated, check the oil level in the worm gear speed reducer every six months and replenish if necessary with S.A.E 140 gear oil, for normally heated buildings, thinner grades for outside installations exposed to low temperatures.

### PAINT

All non-lubricated steel surfaces should be painted annually (more often if required in corrosive atmospheres) with a good grade of rust inhibiting metallic base paint.

### SPRING ADJUSTMENT

In time, the counter balancing springs may lose some of their initial tension; this condition imposes an extra load on the operator and should be corrected as follows:

- 1a) Manually operated doors should be opened fully by hand and held open by "C" clamps or Vice grip pliers on each guide.
- 1b) Mechanically operated doors should be opened fully and the crank or hand chain should be locked to hold the door open.
- 1c) Electrically operated doors should be open fully by pushing the UP or OPEN button (motor brake will hold the door open) shut off power supply to the motor during adjustment.
- 2) With suitable tool (18" or 24" pipe wrench or larger spanner) turn the spring adjusting wheel (1/8 turn at a time) until the door is balanced properly. Make sure pawl is properly engaged in spring adjusting wheel.

NOTE: For door with adjusting wheel on left hand side, wind spring clockwise (downward), for door with adjusting wheel on right hand side, wind spring counter clockwise (downward).

### DROP TEST

After spring adjustment is made, the door must be drop tested to assure the normal function of the ALPINE fire door.

**CAUTION: ONLY EXPERIENCED PERSONNEL SHOULD TEST AND RESET FIRE DOORS.**