

Smoke Vent With Manual Winch Installation, Operation and Maintenance

Part Number: IOM-SVW
Revision B

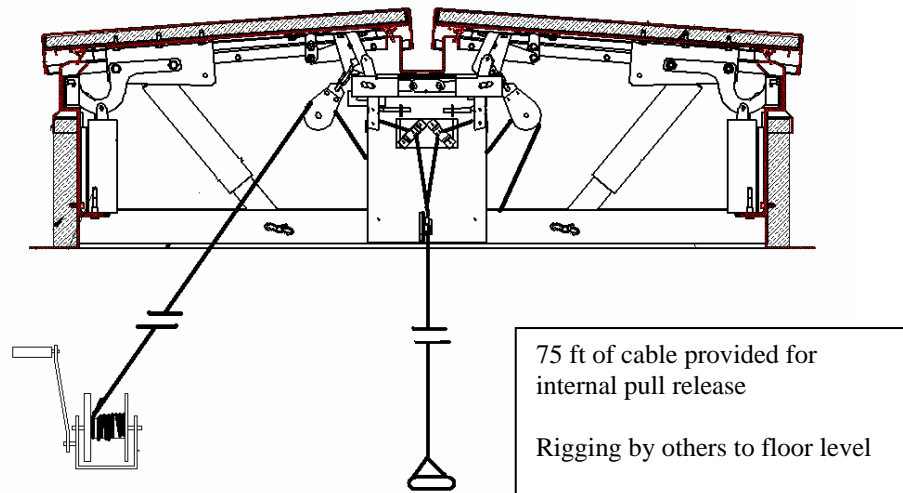
Smoke Vent with Manual Winch

I. Overview

Smoke vents are used, upgraded with manual winches, typically installed in theater applications. The winch is used to manually close the smoke vent from a remote location inside the structure. **The winches are not used to open the smoke vent. Manual winches are not a functional component for the venting of smoke.** The internal manual pull release opens the smoke vent from an internal remote location. Proper mounting and installation must be followed to assure safety of operation and proper functionality of the smoke vent.

Smoke vents ship with 75ft of manual winch cable and 75 ft of the manual pull cable. The cables are coiled up and attached inside of the smoke vent. The manual winch will ship as a separate item. Rigging and the rigging design will be required- by others. Each installation is unique and dependant upon the space available.

Additional rigging materials such as extra cable, pulleys, cable clamps, etc. will be required to properly install the smoke vents to operate as designed. It is recommended to keep the rigging lines short and simple by using the most direct line with the least amount of pulleys. In certain installations, it may be beneficial to have a rigging contractor perform this function.

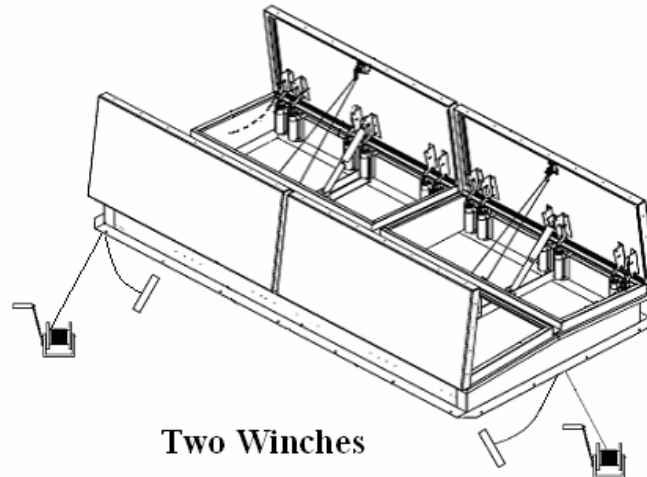


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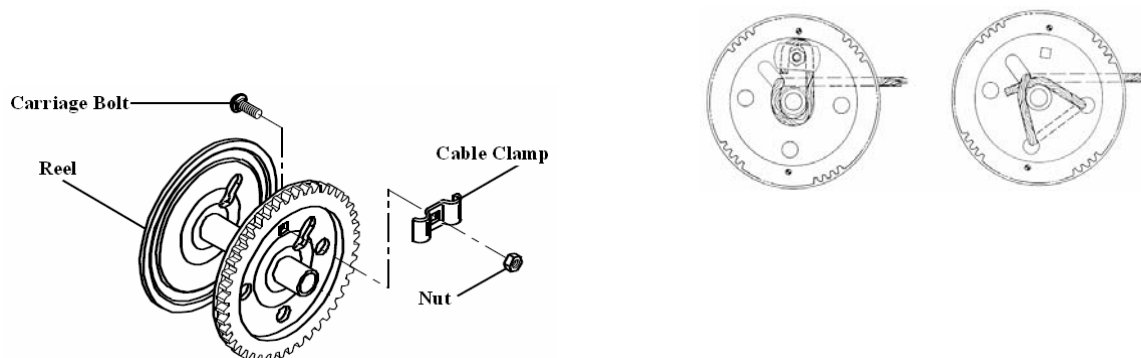
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II. Installation

- a. The winch will be shipped loose arriving with the smoke vents. One winch is recommended per set of doors, so the quad door design (shown below) will ship with two (2) winches as shown below.



- b. Included in the winch package is a cable clamp kit consisting of a cable clamp (Qty. 1), a carriage bolt (Qty. 1), and a nut (Qty. 1). There will also be a lock nut (Qty. 1), to assemble the removable crank handle.
 1. A removable winch crank handle is required for safety purposes. When the doors open (manually, thermally or electrically) the winch pulley will quickly unwind, rotating the winch assembly to release cable.
- c. Remove the carriage bolt, nut and cable clamp from package. Attach the end of the cable to the winch spool as shown below.

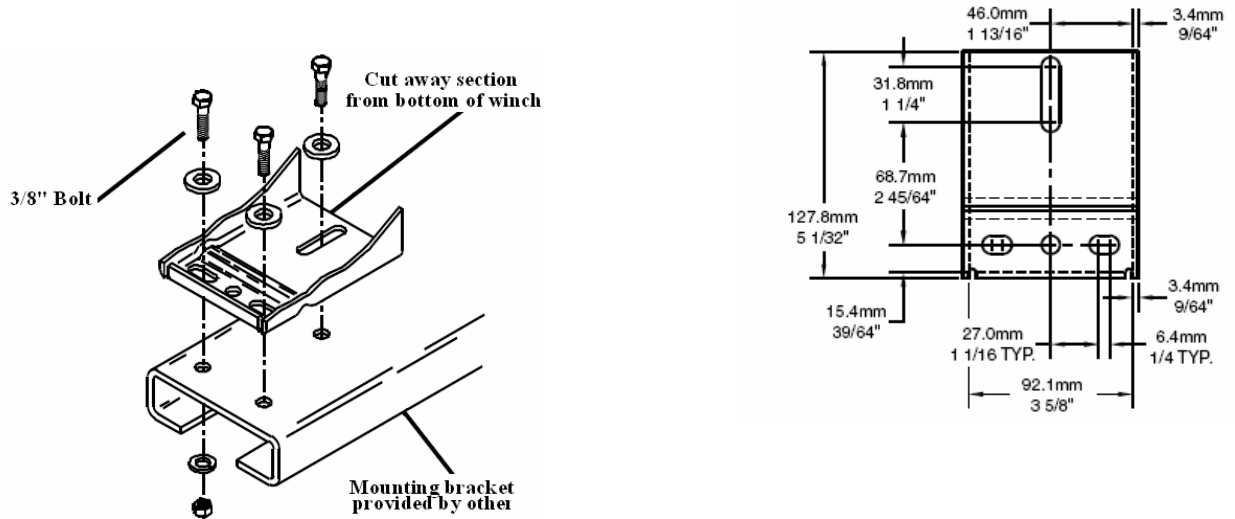


These instructions are meant as a general guide only. Some variations may occur, refer to construction drawings before proceeding.

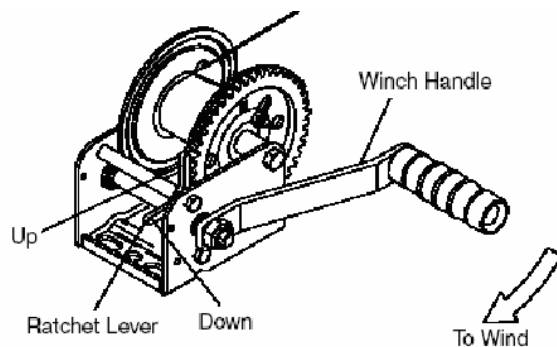
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- d. The winch package includes 3/8" bolts for mounting the winch frame. Most installations will require an additional mounting bracket, provided by others. The location and dimensions of the bottom winch frame are detailed below.
1. Design considerations include; mounting bracket and attachment to wall must be structurally sound, also note the proper distance and orientation necessary to compensate for the 9-1/2 inch crank handle.



- e. Assemble the removable handle to the winch drive shaft using the lock nut.
- f. **HANDLE MUST BE TIGHTENED AGAINST DRIVE SHAFT BEFORE OPERATING WINCH.** To wind in the line on the wheel turn the winch handle clockwise with the ratchet lever in the up position. The up position of the ratchet lever will create a loud clicking and prevent the handle from unwinding.



- g. After installing the manual winch you should install the internal manual release handle in the vicinity (within arms reach) of the manual winch. This is required to manually open the smoke vent.

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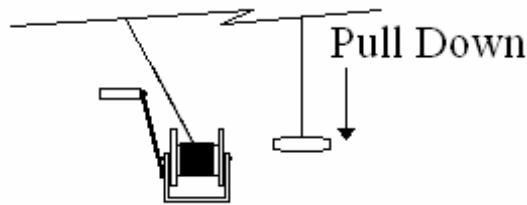
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III. Opening Smoke Vent

The smoke vent is designed to open automatically; manually with pull handles and thermally with melt out fusible links. This specific smoke vent **does not** have electrical provisions to open with an electrical signal from a fire alarm or smoke detector.

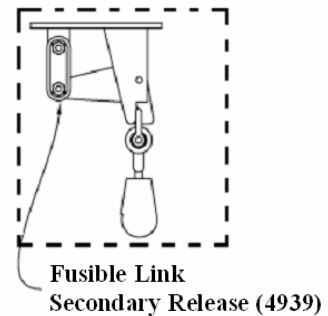
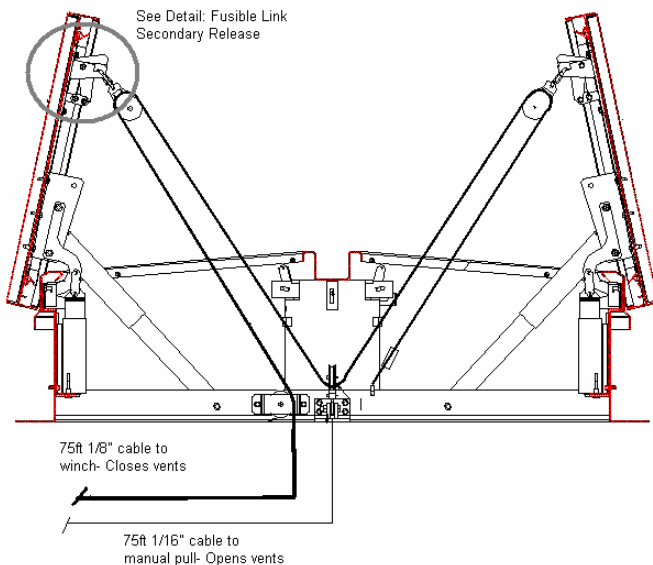
a. Manual Vent Opening with Internal and External pull handles

- i. Upon manual winch and internal manual pull installation completion, the smoke vent is now operable. Make sure the smoke vent is closed and the hooks are secure before opening. **REMOVE** Winch Handle.
- ii. Place the ratcheting mechanism down allowing the spool to release freely.
- iii. Pull the internal manual release with the red handle mounted near the manual winch. This will release the smoke vent hooks from the locking mechanism (pyrolatch) and door will open.
- iv. To open the smoke vent from the roof lever follow steps 1-2. Pull external manual release.



b. Thermal opening methods

- a. Pyrolatch incorporates thermal fusible links (standard temperature 165F) that automatically release doors in the event of a fire.
- b. Emergency latch pulley- secondary release
 1. In the event that the ratcheting mechanism is left in the up position the vents will not fail to open in an emergency. The fusible links will melt in our secondary release freeing the winch from hindering the smoke vents operation



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c. Closing Smoke Vent

1. Place the ratcheting mechanism in the up position preventing the winch handle from turning freely.
2. Turn the winch handle in the clockwise direction winding the cable on the reel.
3. Turn handle until the hooks fully engage with the locking mechanism (pyrolatch) and cable is tight.
4. Once door is closed remove nut. Remove winch handle and place in a secure location.
5. Place the ratcheting mechanism in the down (unlocked) position.

IV. Additional Part List

Refer to the following listed additional components parts to assist with rigging installations, such as handles, cable, crimps and miscellaneous pulleys.

- 4946: Manual winch with removable handle
- 3184: 1/8" Gal aircraft cable
- 2460: 1/8" Cable saddle clamp
- 2934: Red plastic grip handle
- 3064: 1/16" steel aircraft cable
- 3065: 1/16" crimp ferrule (crimp tool required)
- 2459: 1/16" saddle clamp



P/N 4773



P/N 4774



P/N 3421

V. Maintenance

Products should be manually operated once a year to check performance and lubricate moving parts as required. If there are questions regarding the operation or maintenance of our products, please contact us for assistance. Smoke vent spring hinge packs and winch has been shipped fully lubricated. For continual smooth performance and longevity of product occasionally grease.