



Valiant Products, Inc.
Owner's Chute Documentation

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Owner's Chute Documentation

Sections

- I. Operation of chutes
- II. Installation Instructions
- III. Interlock System
- IV. Plumbing Hookups with Sanitizer
- V. Maintenance
- VI. Sample Warranty
 - a. Materials
 - b. Installation

Owner's Chute Documentation

I. Operations of Chute

Valiant chutes are designed to convey trash or linen from many locations to one central location for disposal. Each floor is equipped with an intake door. To use the chute, the operator simply steps up to the intake door, opens the door with one hand and deposits the trash or linen into the intake. The operator may then release the door and the job is complete. Valiant's doors are designed per NFPA 82 fire codes and are required to be self-closing.

Owner's Chute Documentation

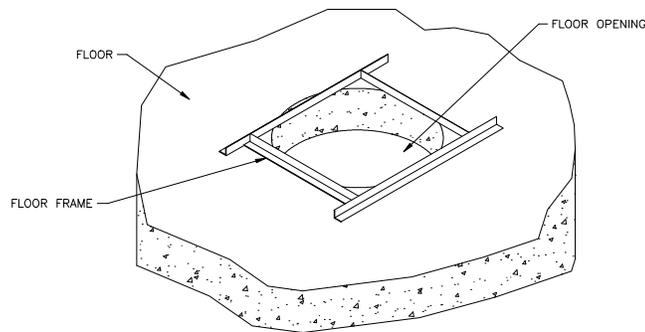
II. Installation Instructions

Installation of a Valiant chute requires very few tools; hammer, screwdriver, drill, wrench and level.

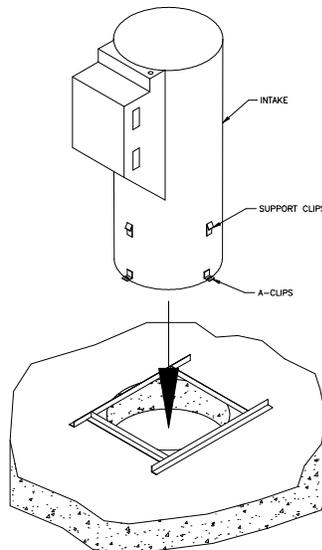
Materials are prefabricated to dimensions shown on shop drawings; therefore, no field cutting or fitting is required. The joints are "slip joints" to permit slight field height variations.

Intake doors, frames and hardware are prefabricated and installed on each intake section throat, fully assembled. Doors and pneumatic closure tension are adjusted. The protective covering on the doors should be removed only after completion of plastering and painting.

1. Distribute chute sections, typically one intake and one "b" section per floor, noting that the top intake section will have a flushing head and a sprinkler head.
2. On the first floor above the discharge room, place a floor support angle over floor opening with cross members parallel to the intake door.

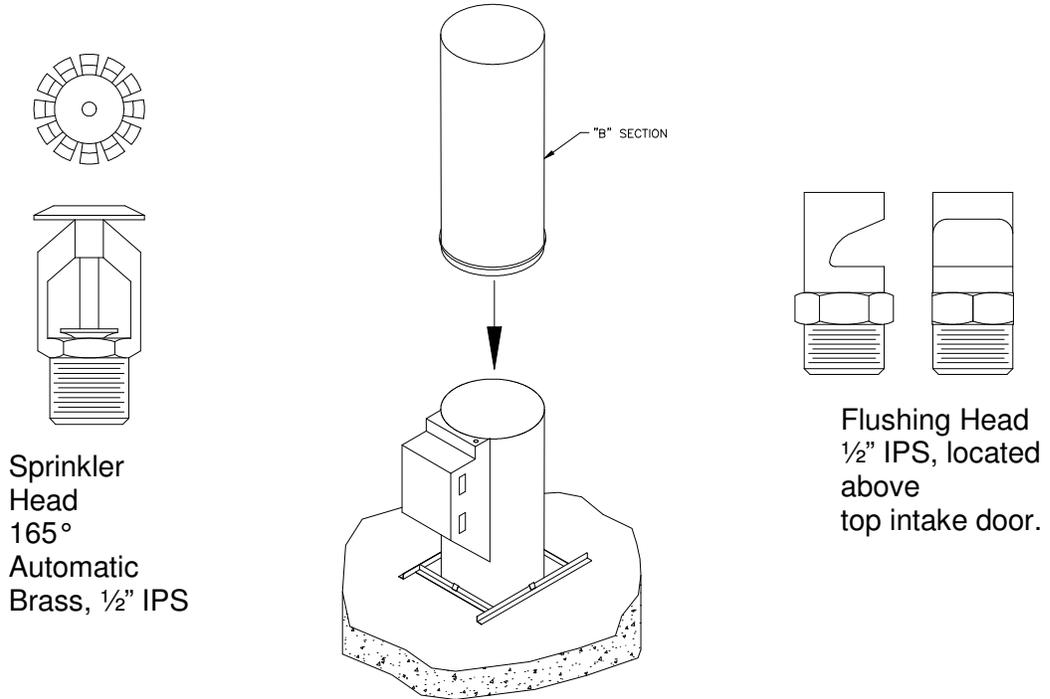


3. Set the first intake section, this section has 4 a-clips with slots welded to the bottom of it; into the floor opening and seat the support clips over the floor support.

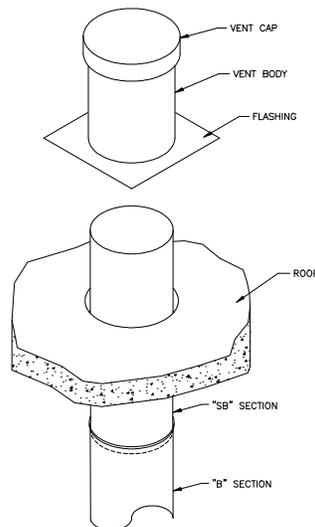


Owner's Chute Documentation

4. After first intake section has been set, slip the beaded end of the plain chute section ("b" section) into the intake section making sure it is sealed all around. Some floor heights may require multiple "b" sections. Check with level to plumb chute as installation proceeds.



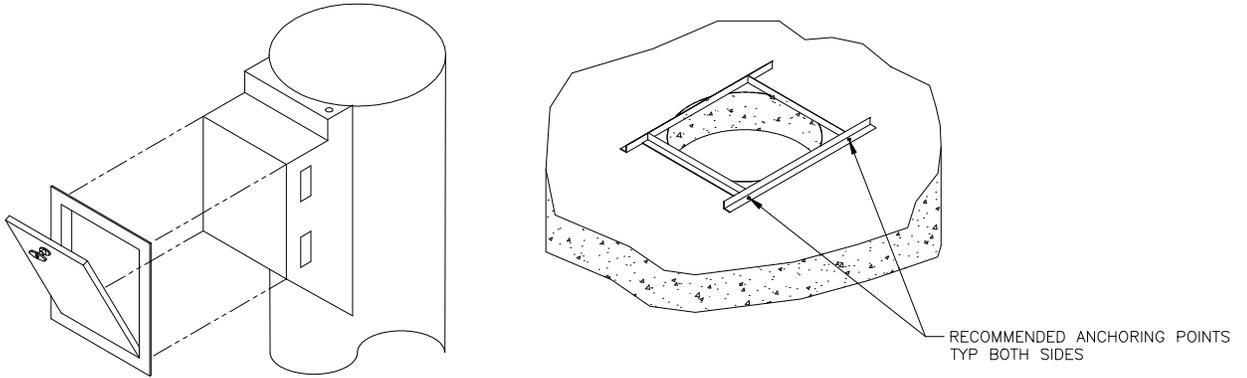
5. Repeat steps #2, #3 and #4 on the remaining floors. Note the floors requiring intakes with sprinkler heads. Per NFPA, this means the top floor and at alternate floor levels with a mandatory one at the first intake floor.
6. After installation of the top intake section and final "b" sections, the final beaded section or "sb" section of chute is installed to protrude above the roof.



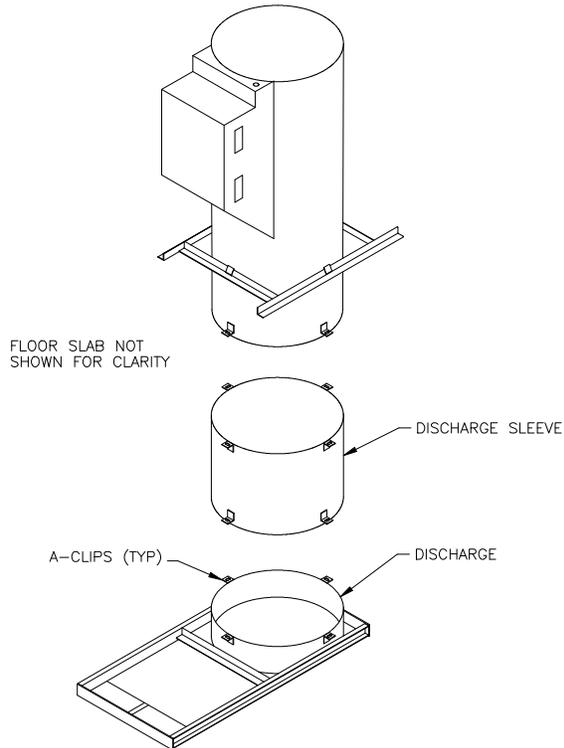
7. Place vent assembly over the "sb" section protruding through the roof, until the vent is seated onto the roof. Secure the vent body to the "sb" section using 3/4" long tek-screws. Attach flashing to the roof; the roofer may then finish over the flashing assembly.

Owner's Chute Documentation

8. After all floors of chute have been installed, starting at the first intake floor, plumb and level intake doors. Make sure that the face of the doors will be flush to the proposed wall. Fasten the floor support frames to the floor slab. The frames are to be anchored per local building codes.

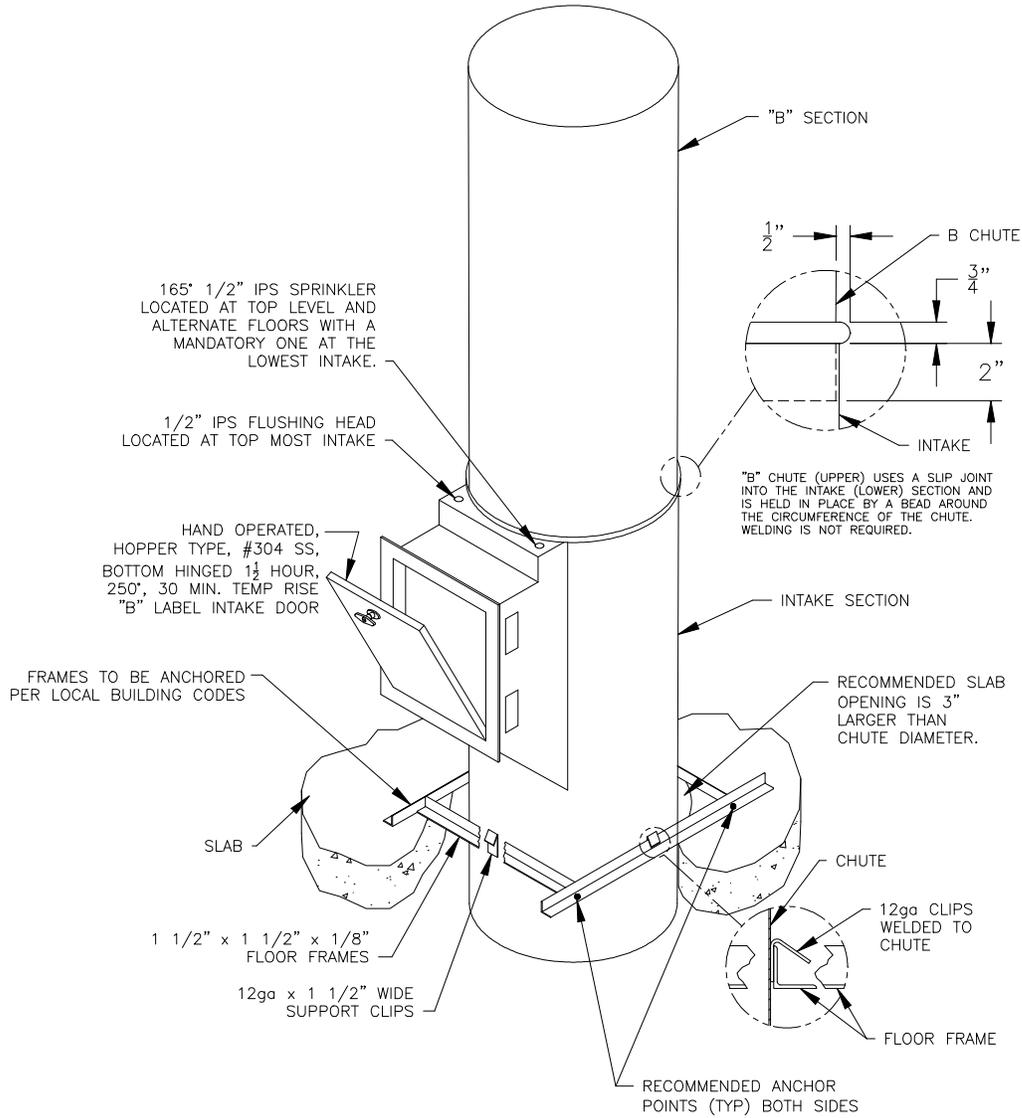


9. Complete installation in the discharge room. Slip the discharge sleeve; this sleeve has 4 angle clips on each end, over the section of chute projecting through the first floor slab. Match the clips and secure with (4) 2 1/2" long bolts and nuts. Secure the discharge in the same manner to the sleeve. If the discharge is a horizontal rolling type, slide the door back and connect the fusible link to the angle clip on the bottom of the door. If the discharge is hopper style, attach the top hinged door to the throat of the hopper. Attach the door support arm to the flange of the door using the bolts and nuts supplied. Open the door and connect the fusible link to the eye ring located on the door.



Owner's Chute Documentation

Standard Floor Elevation



Owner's Chute Documentation

III. Interlock System (optional)

To reduce the risk of electric shock, this equipment has a grounding type plug that has a third grounding pin. This plug will only fit into a grounding type outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet.

1. Overview

Electric interlocks are designed to lock out all the intake doors on a chute when one door is opened. When an intake door is in an opened position, the locked intakes are signified by a light above the door, indicating the chute is in use.

The power supply box is equipped with a toggle switch that allows the ability to lock out all the doors when servicing the equipment.

The interlock system comes pre-wired and is designed to use 110VAC. The power supply box is equipped with a transformer so that the power is stepped down to 24VDC.

2. Installation

Note: Before attaching any wires, be sure that the power supply box is not plugged in.

Once the chute has been installed, do the following:

1. Go to the top intake floor of the chute; secure the tri-strand color-coded wire (trunk).
2. Drop the trunk down the shaft, outside of the chute.
3. Separate the 3 wires. Allow about 12" slack of wire. Attach a blue wiretap, which is supplied, to each of the ends. Plug the wires into the corresponding color wire of the lockout box on the intake door. Secure the slack at the intake using an adhesive tape.
4. Repeat step 3 at each intake level.
5. In the discharge area, mount the supplied shelf in the desired location.
6. Set the power supply box on the provided shelf.
7. Remove any excess trunk wire and separate the 3 wires.
8. Strip each wire's sheathing approximately 3/16" from the end and attach the provided male insulated solderless connectors to each wire that was just stripped and crimp them on securely.
9. Plug the wires that the ends were put on, into the corresponding color wire.
10. Power may now be supplied by plugging in the power supply box into a 110-volt AC grounded outlet.

3. Proper Care During Construction Phase

1. Seal around the door gap with duct tape.
2. Keep the doors from being exposed to water.
3. Keep the doors locked.
4. Keep the main power trunk out of the way during the masonry or drywall phase.
5. Secure the discharge level wires until the power supply box shelf is mounted in the desired location and you are ready to wire the power supply box.

Owner's Chute Documentation

4. Preparing the System for Intended Use

1. Clean the exterior of the doors to eliminate debris from causing obstructions.
2. Remove the sealant tape from around the doors.
3. Attach the trunk to the power supply box.
4. Inspect the microswitch and solenoid at each intake. Check for rust, construction dust and ease of movement.

5. Troubleshooting

When the chute is working correctly, two things should happen.

1. When you open one door, all other doors should lock out. All doors should have their indicator lights on and the power supply box should also have its indicator light on.
2. When the power supply box is turned on, so the trash or linen may be taken care of, all of the doors should lock above so that the chute is not usable while being serviced.

There are a variety of things to look for when either of these two things is not working correctly.

1. Check to see if the circuit reset button has been tripped.
2. If nothing is working from the doors to the box, check the wiring. Make sure that all the wires are going to the appropriate places. Make sure that the power supply box is plugged in and the outlet has power.

If your problem is contained to one door not working:

1. The first thing you want to do is make sure that your door is opening and closing correctly.
2. Next, open and close the door slowly, you should hear a clicking noise. If you hear this noise, the micro switch is working properly. If you do not hear this noise, close the door and look in the gap between the door and the frame, you will be able to see the roller. There is a nut holds the micro switch in place. If you loosen that nut, you will be able to move the micro switch to where it is touching the door. Once you have moved it, close the door and repeat this step. Once you have made sure that the micro switch is touching the door and you still do not hear a clicking noise, you have a bad micro switch. If you hear a clicking noise, move on to step 3.
3. Open the door and look inside right where the lockout box is, you will see the micro switch and the solenoid. Take your finger and press up on the roller to the micro switch. You should hear a clicking noise. This should also engage the solenoid. Every time that the micro switch is pressed up, the solenoid should engage as though it were going into the door. If this does not happen, you will need to take the faceplate off of the door, so that you may get inside the lockout box.
4. Once inside the lockout box, make sure that all wires are connected to the corresponding color and that there is not a loose connection. The solenoid should also be connected.
5. If all the wires are connected securely and the colors are corresponding, check to make sure that the solenoid is working. Take your finger and press down on the black washer that is connected to the solenoid pin. Do this a few times quickly to loosen up the pin. It is also advisable to try blowing out any debris that may be in

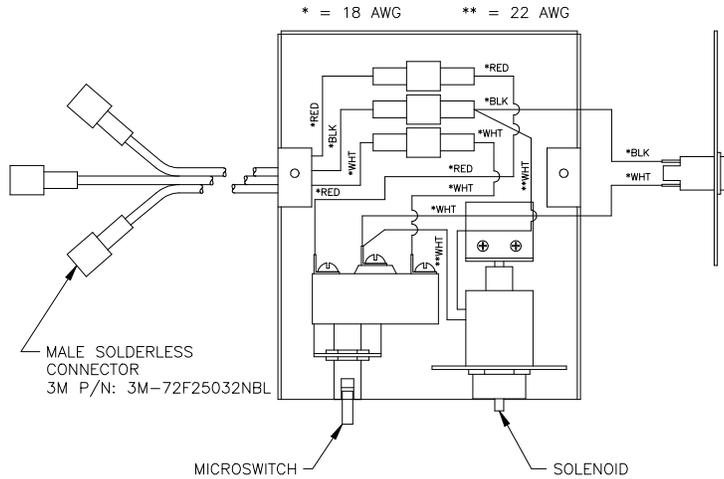
Owner's Chute Documentation

the lockout box from construction. Once this is done, push up on the roller switch again and the solenoid should engage.

If this does not resolve the problem, please contact Valiant Products.

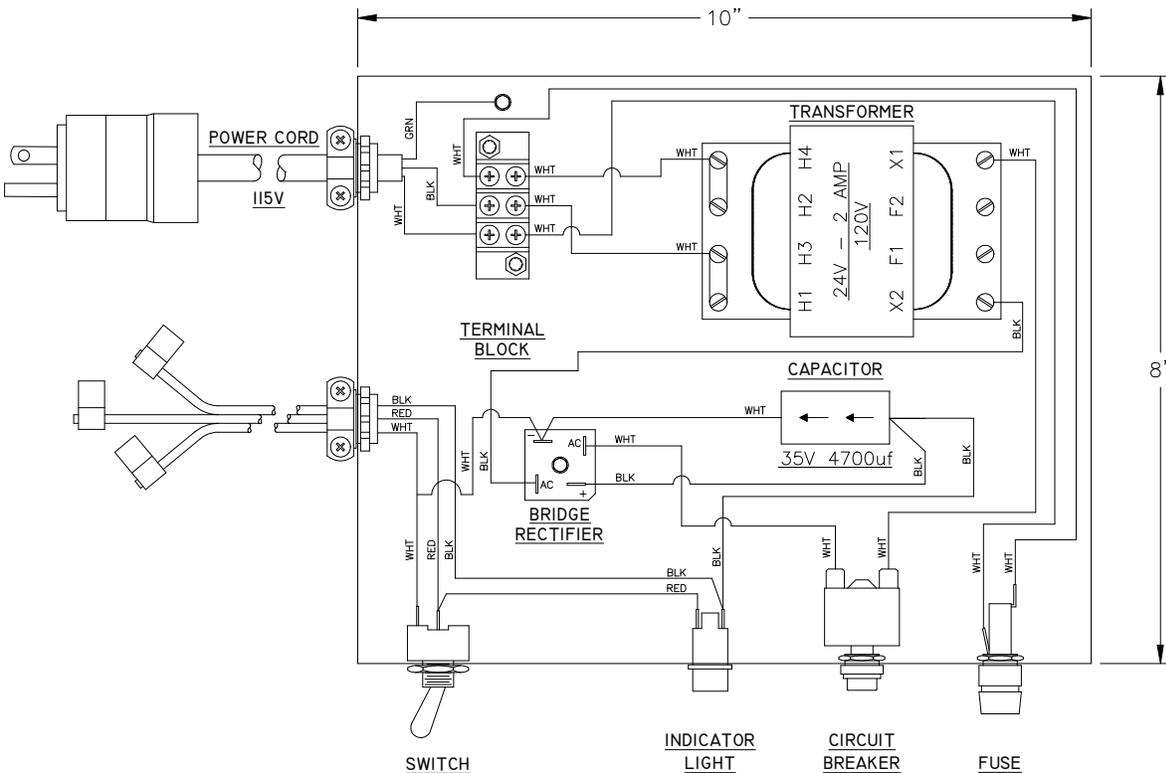
6. Schematics

1. This is the schematic for a typical lockout box, located above the intake door.



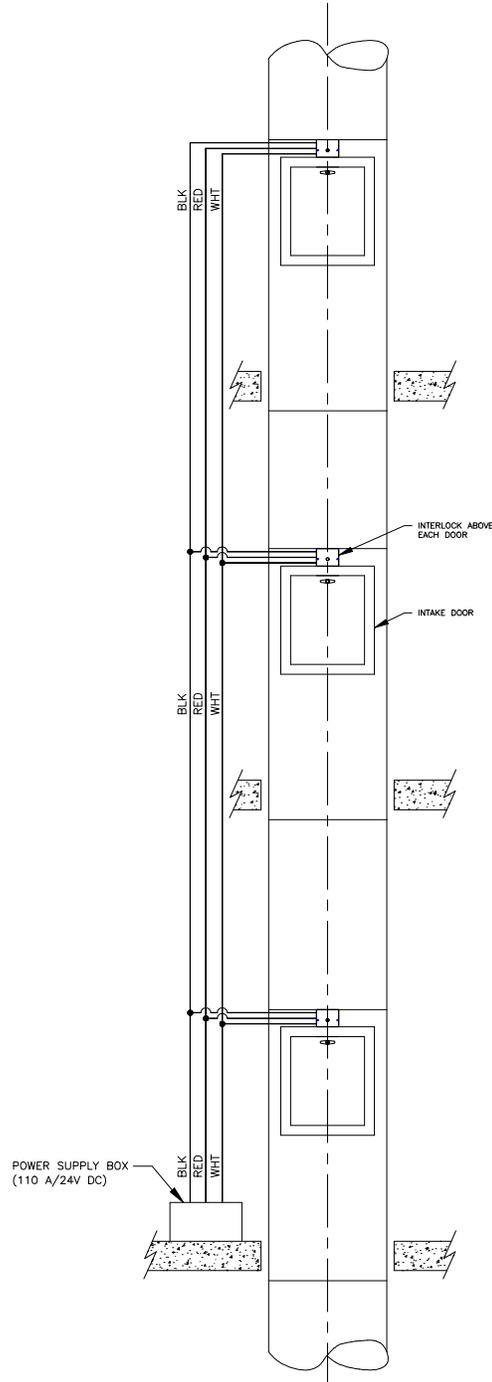
*WIRING DIAGRAM
TYPICAL LOCK-OUT BOX*

2. This is the schematic for the power supply box, located in the discharge room.



Owner's Chute Documentation

3. This is the schematic for the trunk, which is dropped from the top floor, down the chase, outside of the chute and into the discharge room.



*TYPICAL WIRING DIAGRAM
FOR ELECTRIC INTERLOCKS*

Owner's Chute Documentation

7. Replacement Parts List

The wiring that Valiant provides meets UL 1015/CSA.

List of replaceable parts in the system.

1. Power Supply Box

- a. Capacitor: Mallory Inc. P/N TC50500 Type TC, 50WVDC; 65VDC
- b. Fuse Holder: Littlefuse P/N 342001, panel mount, fingerrip, type 3AG
- c. Fuse: 4 amp Littlefuse P/N 312004, type 3AG, fast-acting, 120/240VAC
- d. Switch: GC Waldom P/N 35-0119-0000, SPST
- e. Terminal strip: Molex-Beau P/N 78003, double row, 3 pole
- f. Rectifier: Fagor P/N FB5006
- g. Transformer: Acme P/N TA-2-81143, 120/240VAC Pri, 24VDC Sec 50Hz
- h. Breaker: GC Waldom P/N 35-2103, 120VAC, 3A
- i. Light: Solico P/N 3039-3-11-38310, 28V

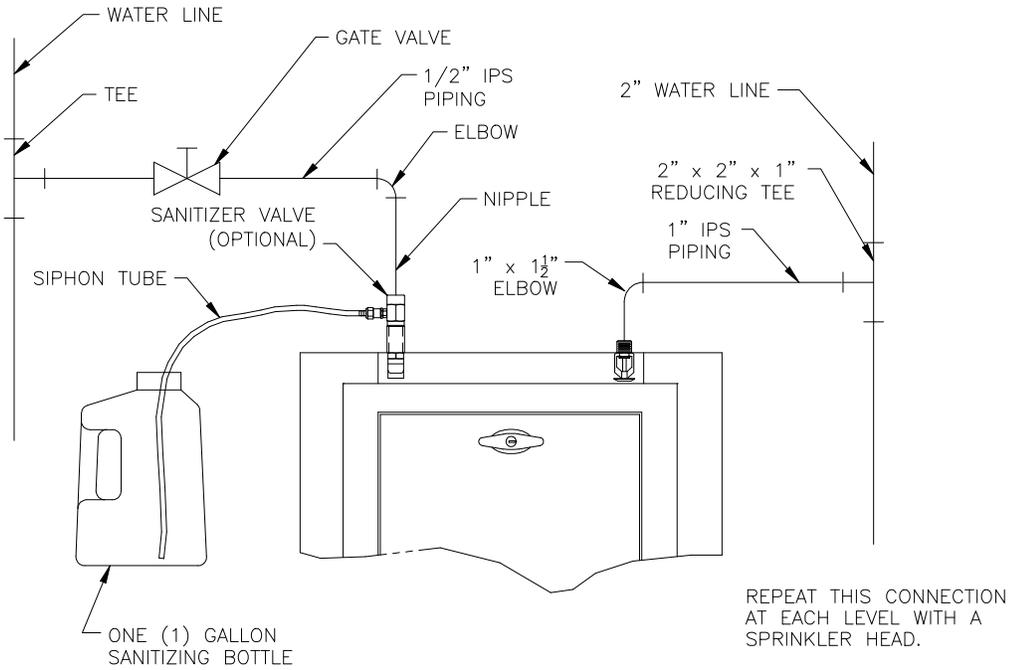
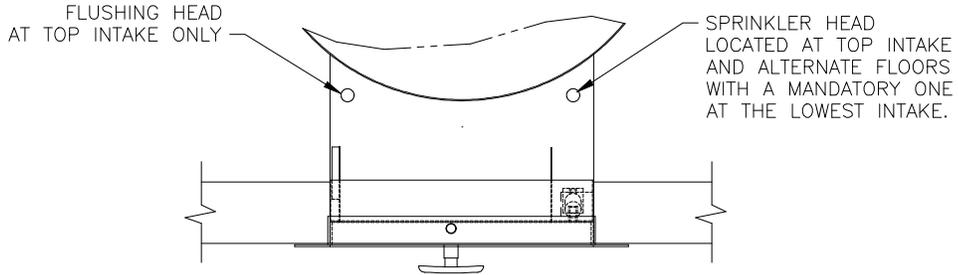
2. Lock-out Box

- a. Light: Solico P/N 3039-3-11-38310, 28V
- b. Solenoid: Guardian P/N TP8X9-C-24VD
- c. MicroSwitch: Honeywell P/N BZ-2RQ181-A2, 15A, 125VAC

Owner's Chute Documentation

IV. Plumbing Hook-ups and Sanitizer (optional)

1. Typical Plumbing hook-up

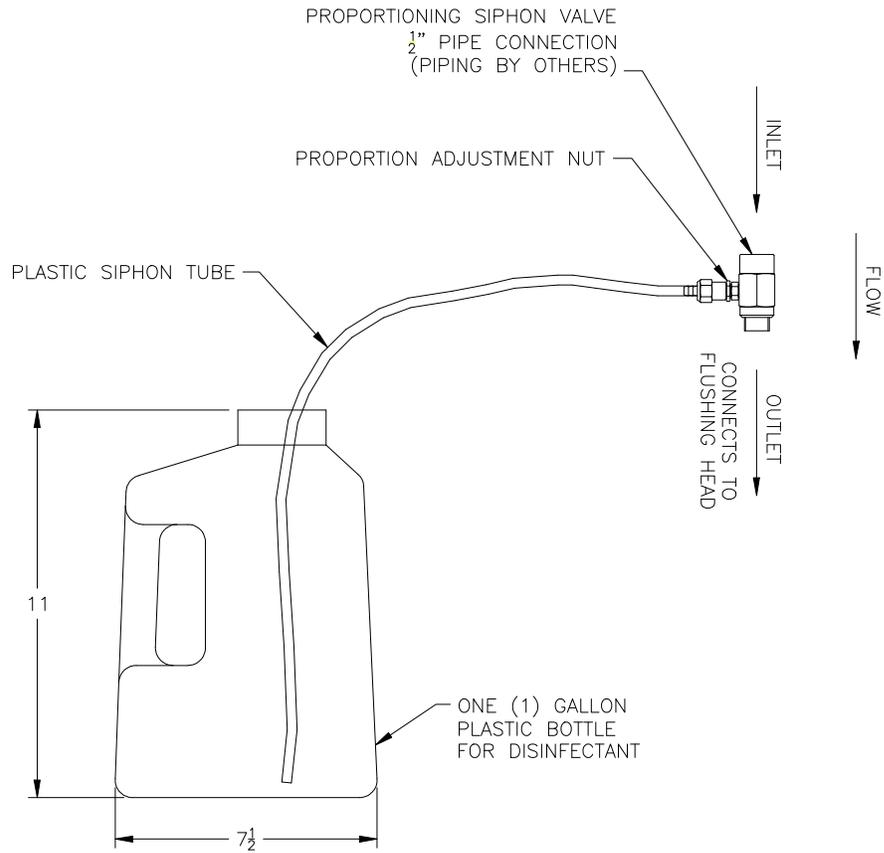


PLUMBING HOOKUPS

BY OTHERS

Owner's Chute Documentation

2. Sanitizer System



SANITIZING UNIT

Owner's Chute Documentation

V. Maintenance

The Valiant trash/linen chute installed in your building has been manufactured and installed to comply with all building codes and fire regulations currently in effect in your area. It is very important to the safety of your building and tenants that you maintain your chute to stay in compliance with the fire codes. Failure to do so will result in the chute being permanently sealed or the building being closed and evacuated until the proper repairs are made.

To insure that your chute is working properly, and in compliance with the fire codes, you must:

1. **Make sure all doors close completely and latch** – To do this, make sure the shaft hinges are well oiled, the hydraulic door closer is working properly, the door frame is free of debris and the door handles and latches are in good repair.
2. **Make sure the fire door at the bottom of the chute will close in case of fire** – On a trash chute, the bottom of the chute is equipped with a fire door that closes if a fire occurs in the room and the temperature exceeds 155°F. The door consists of a sliding or rolling panel that is held in the open position by (2) 1" x 12" springs and a 155° lead fusible link. The fire door should be inspected annually. Make sure the springs have retained their tension, the fusible link is intact and the track that the door slides or rolls on is free of debris and corrosion. To test the door, remove the springs and fusible link and manually roll or slide the door back and forth on the track. If the door does not move freely, clean the track and apply oil or WD-40. Once you test the door, reattach the springs and fusible link. For a linen chute with top hinged door, make sure the chain holding the door open is equipped with a 155° fusible link and the door is free from any obstruction that would prevent the door from closing in the case of a fire.
3. **Make sure the roof vent is clear of obstructions and open to free air** – The vent located on the roof is designed to vent smoke out of the chute in case of fire. Check the vent periodically and make sure nothing is preventing the free flow of smoke.
4. **Fire sprinklers** – Your chute is equipped with 155° automatic fire sprinklers; located on the top floor, alternate floors down and the first intake level. If a fire does occur in the chute, the fire sprinklers will automatically turn on to extinguish the fire. Once the sprinklers are used, they need to be replaced. Fire sprinklers are located inside the chute doors in the upper left hand corner. To install new sprinklers, unscrew the old sprinkler and replace with a new one. It is recommended you wrap the threaded section of the new sprinkler with Teflon tape before inserting the new sprinklers.

TO KEEP THE CHUTE CLEAN AND FREE FROM ODOR, IT IS RECOMMENDED THAT ALL GARBAGE BE BAGGED AND SECURED BEFORE BEING DEPOSITED INTO THE CHUTE.

Owner's Chute Documentation

VI. Sample Warranty

A. Material

Guarantee

Customer Name

Address

City, State Zip

Re: Project Name

We, Valiant Products, Inc. P.O. Box 405, Lakeland, FL 33802, were a supplier for the product line on the above job located on the premises of the owners.

Do hereby guarantee all materials furnished and labor to fabricate such materials for a period of one (1) year from the date of substantial completion of the project.

Any defects due to improper materials, workmanship or arrangement, the same shall, upon written notice by the owner, be made good by us at no expense to the owner excluding repairs to drywall, caulking, stucco, etc.

Valiant Products, Inc.

Valiant Representative Signature

Owner's Chute Documentation

VI. Sample Warranty

B. Installation

Guarantee

Customer Name

Address

City, State Zip

Re: Project Name

We, Valiant Products, Inc. P.O. Box 405, Lakeland, FL 33802, subcontractor for the product line on the above job located on the premises of the owners, do hereby guarantee that all labor and materials furnished by Valiant are in accordance with the contract, drawings and specifications and authorized alterations and additions thereto.

Should any defect develop within one (1) year from the date of substantial completion of our work on the job due to improper materials, workmanship or arrangement, the same shall, upon written notice by the owner, be made good by us at no expense to the owner excluding repairs to drywall, caulking, stucco, etc.

Valiant Products, Inc.

Valiant Representative Signature