AFCO
Installation & Operation Instructions

Model #AF 976560 •Timed Entryway HV Foam Sanitizer

REQUIREMENTS

Chemical Concentrate

Water:

Temperature	up to 160°F
Pressure	35-125 PSI
Flow	4 GPM @ 40 PSI
Supply Line	1/2" Min
Compressed Air	up to 5 CFM
Hose/Pipe	Minimum 35' of 1" & 3/4" ID
Nozzle	HV Entryway Spreader (2 - use both)
Electric	120V

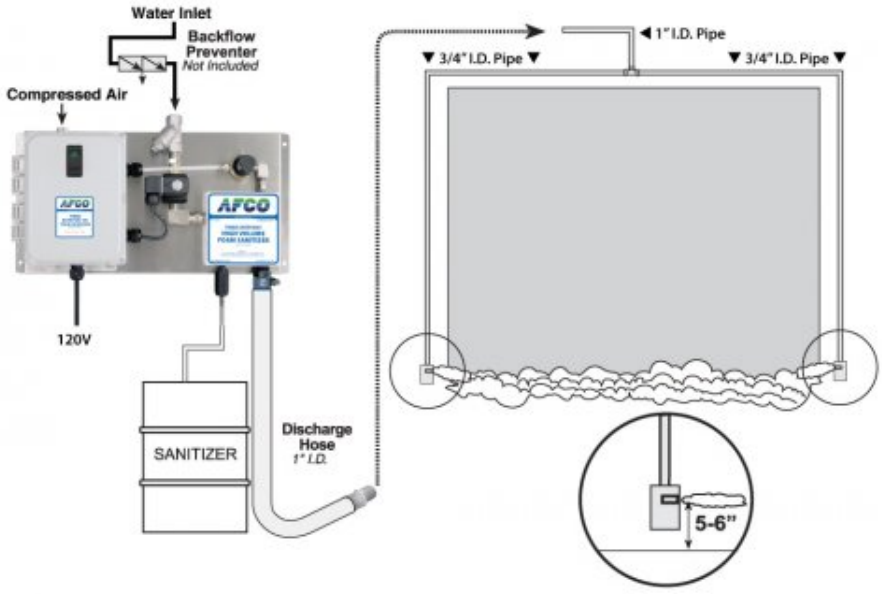
OPTIONS

Stainless Steel Jug Racks	
1 Gallon Round/Square	# 224200
1 Gallon Round/Square Locking	# 224200-L
2 ½ Gallon (8 ½" x 10 ½")	# 224210
5 Gallon (12" x 12")	# 224215
5 Gallon Round Locking	# 224216
Dual Pick-up Assembly	
HV Entryway Dual Chemical Pick-up Assembly	# 976013
Alternate Check Valve - Viton Standard	
Check Valve, Chemical, PP, 1/4" (EPDM)	# 491401

WEIGHT & DIMENSIONS

Shipping Weight: 25 lbs.

Shipping Dimensions: 22" x 19" x 9"



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http://www.afcocare.com

READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

Overview

The Timed Entryway HV Foam Sanitizer is an automated foam applicator for projecting sanitizing chemicals on to floors of 8' - 16' wide overhead doors to prevent cross contamination. When activated, this venturi injection system uses city water pressure (35 - 125 PSI) to draw and blend chemical concentrate into the water stream to create an accurately diluted solution. A high volume of rich, clinging foam is created by injecting compressed air into the solution to greatly increase volume and coverage ability. The foam is then projected through the discharge hose and unique Spreader™ nozzles. The system timer is user-programmable to meet the needs of any facility.

⚠ Safety & Operational Precautions

- **When connecting to a potable water supply follow all local codes for backflow prevention.**
- **Always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified Electrician.**
- For proper performance do NOT modify, substitute nozzle, hose diameter or electrical control box.
- Manufacturer assumes no liability for the use or misuse of this unit.
- Wear protective clothing, gloves and eye wear when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- Follow the chemical manufacturer's safe handling instructions.
- NEVER mix chemicals without first consulting chemical manufacturer.
- Disconnect electrical power to the control box prior to opening it.

TO INSTALL (REFER TO DIAGRAM, NEXT PAGE.)

It is very important to use at least a 15' length of 1" hose or pipe from the foamer body to the 3/4" pipe going around the entryway to both nozzles. USE BOTH NOZZLES

1. Mount the unit to a suitable surface above chemical supply to prevent siphoning.
2. See Page 1 for proper foam discharge installation layout.
3. Connect the supplied section of 1" discharge hose to the foamer and to your plumbing or use 1" pipe from the foamer to the 3/4" going around the entryway.
4. Minimum total 1" and 3/4" discharge length is 35'. Use as few elbows as possible.
5. Use **both** spreader nozzles and equal 3/4" plumbing lengths to each nozzle.
6. Mount the spreader nozzle slots at 5” off the floor, a little higher for wider entryways.
7. Connect water and compressed air to the unit.

Set the chemical dilution ratio by threading one of the color coded metering tips into each chemical check valve. See chemical labels for dilution ratio recommendation or consult your chemical supplier.

- For the strongest dilution ratio do NOT install a colored metering tip.
- The dilution ratios in the metering tip chart are based on water thin chemicals with a viscosity of 1CPS.
- **Thicker chemicals will require a larger tip than the ratios shown in the chart.**
- Application results will ultimately determine final tip color.
- Select the tip color that is closest to your desired chemical strength and thread it into the tip holder. DO NOT OVER TIGHTEN.
- Push the chemical tube over the check valve barb and place the strainer in the chemical concentrate.

Metering Tip Selection Chart

Metering Tip Color	Oz. per Min.	Example: Dilution Ratio @ 40 PSI
Brown	.56	914:1
Clear	.88	582:1
Bright Purple	1.38	371:1
White	2.15	238:1
Pink	2.93	175:1
Corn Yellow	3.84	133:1
Dark Green	4.88	105:1
Orange	5.77	89:1
Gray	6.01	85:1
Light Green	7.01	73:1
Med. Green	8.06	64:1
Clear Pink	9.43	54:1
Yellow Green	11.50	45:1
Burgundy	11.93	43:1
Pale Pink	13.87	37:1
Light Blue	15.14	34:1
Dark Purple	17.88	29:1
Navy Blue	25.36	20:1
Clear Aqua	28.60	18:1
Black	50.00	10:1
No Tip Ratio	up to 6.0:1	

The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.

Metering Tip Selection Formula

(GPM x 128) / Dilution Ratio = Oz. per Min

Flow Rate Chart

Pressure PSI	Flow Rate GPM
40	4.00
50	4.47
60	4.90
70	5.29
80	5.66
90	6.00
100	6.32
110	6.63
120	6.93

TO OPERATE

TO TEST

1. Plug the power cord into 120 VAC outlet.
2. The unit has been tested and the timer is preset to run for 60 seconds to allow for final adjustments. (ON TIME will activate first.) Open your water supply valve and your air supply valve, and then turn on the power switch.
3. The unit will activate.
4. Final chemical dilution and air adjustments will now have to be made.
5. Wait a few seconds and observe foam consistency.
    - Use the least amount of air needed to achieve good foam quality to prevent water pressure fluctuations from affecting performance. Air pressure must be kept lower than water pressure.
    - To adjust foam consistency pull out on the air regulator knob, turn slightly clockwise for dryer foam and counterclockwise for wetter foam. Wait a few seconds to see each adjustment.
    - You may also have to try different sized metering tips and air settings until foam consistency is acceptable. Once this is set and desired foam consistency is achieved push lock the knob. You are ready to start.

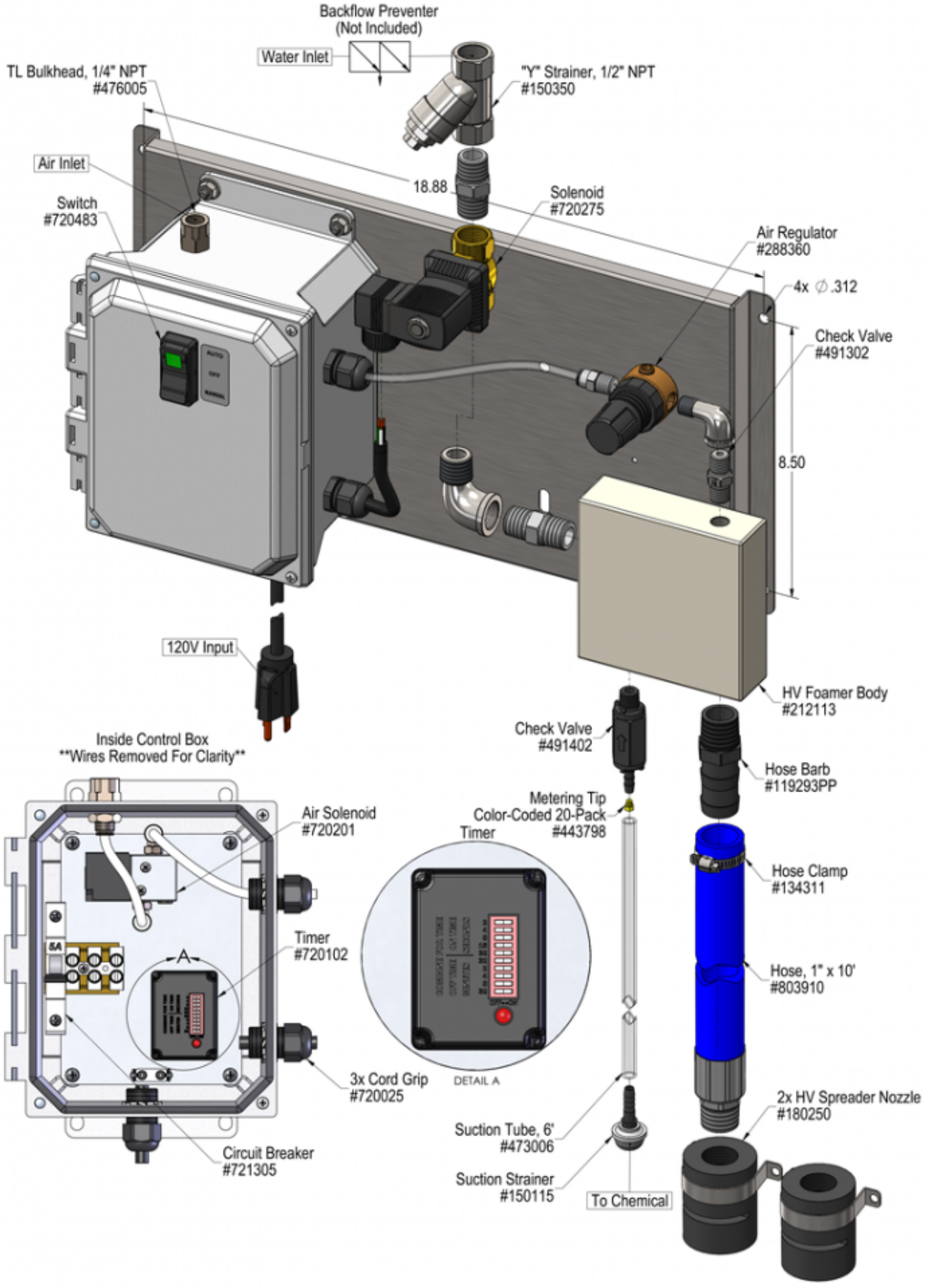
TIMER ADJUSTMENT

1. CAUTION! UNPLUG THE POWER CORD! Then open control box and adjust the timer. The ON TIME dip switches control how long the foam will be applied. The OFF TIME dip switches control how long the unit will stay off between foam applications. Add up the seconds for each activated dip switch to arrive at the desired duration of the ON cycle. Usually 8-10 seconds is sufficient to foam the floor (longer plumbing runs will require a longer application cycle). Add up the minutes for each activated dip switch to arrive at the desired duration of the OFF cycle. Set your OFF TIME to maintain the foam’s presence according to your flow (anywhere from 6 to 15 minutes).
2. Close control box and plug in the power cord. Turn on the power switch. The unit will now function according to the timer settings. (ON TIME will activate first.)

    - Note: The unit will run 24 hours a day unless the power switch is manually turned off.
    - For extra foam at any time, press and hold the lower end (Momentary control) of the door switch. (See Switch Settings, below.)

SWITCH SETTINGS

- Automatic control – Top of switch is depressed. Green light glows.
- OFF – Switch is in middle position; green light is off
- Momentary control – Press bottom of switch. Unit is active only while switch is pressed. When released, the switch returns to the OFF position.


Backflow Preventer
(Not Included)
Water Inlet
TL Bulkhead, 1/4" NPT
#476005
"Y" Strainer, 1/2" NPT
#150350
Air Inlet
18.88
Switch
#720483
Solenoid
#720275
Air Regulator
#288360
4x ∅.312
Check Valve
#491302
8.50
120V Input
HV Foamer Body
#212113
Check Valve
#491402
Hose Barb
#119293PP
Inside Control Box
Wires Removed For Clarity
Air Solenoid
#720201
Metering Tip
Color-Coded 20-Pack
#443798
Timer
Hose Clamp
#134311
Timer
#720102
Hose, 1" x 10'
#803910
3x Cord Grip
#720025
DETAIL A
2x HV Spreader Nozzle
#180250
Suction Tube, 6'
#473006
Suction Strainer
#150115
To Chemical
Circuit Breaker
#721305

Troubleshooting Guide

AF 976560 ● Timed Entryway HV Foam Sanitizer

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Foamer will not draw chemical.	1, 7, 8, 9, 10	13, 14, 15, 16, 17, 19, 20
B) Foam surges.	1, 2, 3, 4, 6, 7, 8, 9, 10	13, 14, 15, 16, 17, 19, 20
C) Foam output too wet.	2, 3, 4, 6, 7, 8, 9, 10	13, 14, 15, 16, 17, 18, 19, 20
D) Foam output too dry.	1, 5	17
E) Doesn't come on when switch is turned on.	11,12	
F) Comes on and runs continuously.	11	
G) Comes on but no water through solenoid.	10	19
H) Air or solution backing up into water line.		21

Possible Cause / Solution

Startup

1. **Air pressure too high**
   - Adjust air regulator slowly counterclockwise until output stabilizes.
2. **Air adjustment too low**
   - Adjust air regulator very slowly clockwise.
3. **Use of an oiler in the airline will cause poor foam quality**
   - Use only clean, dry air.
4. **Not enough chemical - metering tip too small**
   - Install larger metering tip.
5. **No metering tip installed or metering tip too large**
   - Install smaller metering tip.
6. **Improper chemical**
   - Ensure product is recommended for foaming and/or the application.
7. **Chemical tube not immersed in chemical or chemical depleted**
   - Immerse tube or replenish
8. **Foam hose kinked or hose/plumbing too short or wrong size**
   - (See REQUIREMENTS on page 1)
   - Use BOTH spreader nozzles
9. **Water pressure too low or water volume too low/inlet piping too small**
   - Increase water pressure or water volume. (See REQUIREMENTS on page 1)
10. **No water to the unit**
    - Ensure that the water supply is not shut off to the unit.
11. **Timer failed/Controller not set properly or malfunctioned**
    - Replace timer. See Controller manual.
12. **May have electrical problems**
    - Ensure circuit breaker (5 Amp) has not been tripped.
    - Have a qualified electrician check electrical connections.

Maintenance

13. **Chemical check valve stuck or failed**
    - Clean or replace.
14. **Chemical strainer or metering tip partially blocked**
    - Clean or replace chemical strainer and/or metering tip.
15. **Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube (sucking air in)**
    - Cut off end of tube or replace tube.
16. **Vacuum leak in chemical pick-up connections**
    - Tighten the connections.
17. **Air regulator failed allowing too much air or not enough air**
    - Clean or replace.
18. **Air check valve or air solenoid clogged or failed**
    - Clean or replace.
19. **Water solenoid clogged or failed**
    - Clean or replace the water solenoid.
20. **Chemical build-up may have formed in the body, causing poor or no chemical pick-up**
    - Follow PREVENTIVE MAINTENANCE instructions below, using hot water or descaling acid. When there is no draw at all, carefully remove fittings and soak entire body in descaling acid.
21. **No backflow preventer installed**
    - Install appropriate backflow preventer into water line.

PREVENTIVE MAINTENANCE: When the unit will be out of service for extended periods, place chemical tube(s) in water and flush the chemical out of the unit to help prevent chemical from drying out and causing build-up. Periodically check and clean chemical strainer and replace if missing.