

Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # 933515-YPT · 1-Way YPT-LV Concrete Foamer

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	80 to 80 PSI
Flow	0.99 GPM @ 80 PSI
Supply Line	1/2"

Compressed Air

up to 4 CFM

Hose

3/4" ID x 50'

Nozzle

40150

OPTIONS

Stainless Steel Hose Racks

Large Stainless Steel Hose Rack # 224150

Stainless Steel Jug Racks Available

Drum & Tote Stick Lengths & Seal Materials

Drum Stick, 33" (Viton or EPDM)	# 491643 / 491643-E
Drum Stick, 48" (Viton or EPDM)	# 491648 / 491648-E
Drum Stick, 54" (Viton or EPDM)	# 491645 / 491645-E
Tote Stick, 33" (Viton or EPDM)	# 491653 / 491653-E
Tote Stick, 48" (Viton or EPDM)	# 491654 / 491654-E
Tote Stick, 54" (Viton or EPDM)	# 491656 / 491656-E



www.laffertyequipment.com

501-851-2820

**WARNING! READ ALL
INSTRUCTIONS BEFORE
USING EQUIPMENT!**

OVERVIEW

The 1-Way YPT-LV Concrete Foamer is a foam applicator for projecting highly corrosive chemicals such as those used to remove concrete and for aluminum brightening. This acid-resistant system uses a rugged 1/4" Yamada air-operated, double-diaphragm pump to pump water and drive the venturi LVHC foamer which draws chemical concentrate through precision metering tips to create dilution ratios of 2.5:1 (or weaker) with no chemical passing through the air pump. If a stronger ratio is required, this system includes an extra chemical pickup on the suction side of the pump for up to a 1:1 ratio. Compressed air is injected into the solution to create rich, clinging foam which is then projected through the foam hose, wand and fan nozzle.

SAFETY & OPERATIONAL PRECAUTIONS

- For proper performance do NOT modify, substitute nozzle, hose diameter or length
- 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.
- DO NOT use chemicals that are not compatible with glass filled polypropylene or the Teflon diaphragms.
- Do not use products that contain sodium hypochlorite (bleach) or strong alkaline
- Do NOT run the pump dry. This can cause damage to the pump.
- Always slightly open the inlet ball valve until the pump primes.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

1. Mount the unit to a suitable surface above the chemical supply to prevent siphoning.
2. Connect the discharge hose.
3. When connecting to a potable water supply follow all local codes for backflow prevention.
4. Connect water supply, flush any new plumbing of debris before connecting. If water piping is older and has known contaminants install a filter.
5. Turn on water supply and fill the integral tank. Ensure the float turns off properly and does not overflow. It has been factory set. If it overflows remove lid and adjust the float.
6. Connect air supply, if air line is older and has known contaminants install a filter.

See chemical labels for dilution ratio recommendation or consult your chemical supplier.

Set the chemical dilution ratio by:

- For the strongest dilution ratio (2.2-1) without chemical going through the pump do NOT install a colored metering tip in the "foamer check valve".
- The dilution ratios in the metering tip chart are based on water thin chemicals with a viscosity of 1CPS.
- Application results will ultimately determine tip color if one is used.
- Select the tip color that is closest to your desired chemical strength from the chart and thread it into the tip holder. DO NOT OVER TIGHTEN.
- Push the chemical tubes over both the foamer check valve barb and the chemical dilution check valve barb, then place both strainers in the chemical concentrate.
- NOTE: IF a ratio stronger than 2.2-1 will not be needed do not install the second pick up tube on the needle valve. And ensure needle valve is completely closed or you can remove and plug the hole.

Setting the Dilution Ratio for stronger than 2.2-1

- By turning the "chemical dilution needle valve" counterclockwise you control the chemical dilution ratio, thus allowing you to achieve dilution ratio stronger than 2.2 -1 for heavy duty jobs.

TO OPERATE

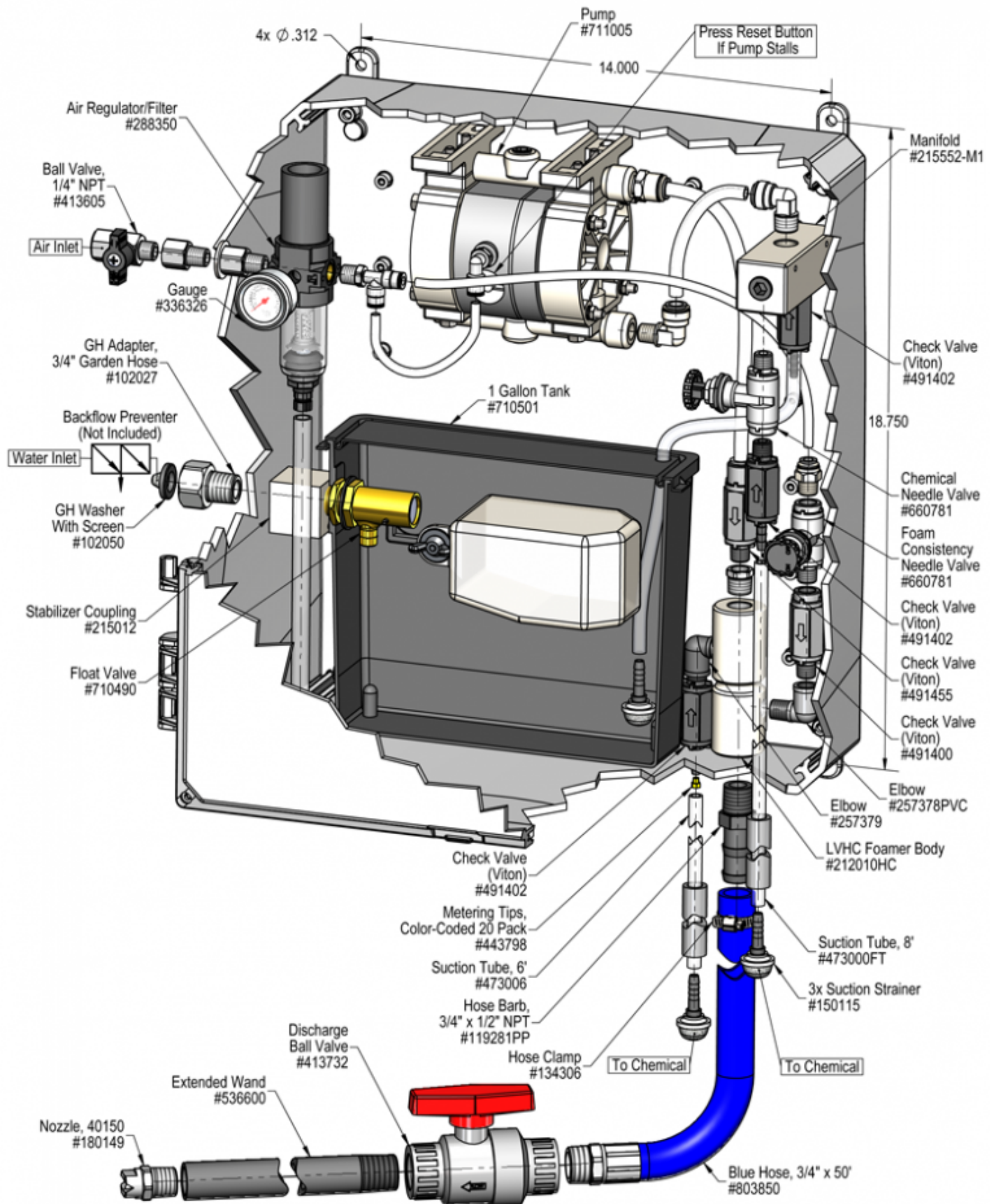
- **Always make sure the discharge ball valve is closed or pointed in a safe direction before turning the air on. Ball valve can be shut off at any time during operation but should not be left unattended for long periods of time. Expect a strong blast when re-opening ball valve.**
 - The unit has been tested and is ready to operate. The pump air pressure regulator is preset and locked at 90 PSI. This is the optimum pump pressure. Test "as is" before making any foam consistency adjustments.
1. Final dilution ratios and air adjustments will now have to be made.
 - With no tip installed and a low air setting the ratio will be approximately 2.2-1
 - For stronger ratios turn the chemical needle valve counterclockwise to add extra chemical.
 2. The foam consistency knob is pre-set at 1/3 turn counterclockwise. Do not open more than 1/2 turn or the foamer will not draw chemical. IF adjustments are needed turn the foam consistency needle valve a maximum of 1/2 turn counterclockwise for dryer foam and clockwise for wetter foam. Wait several seconds after each adjustment to see the results.
 - Too much foam consistency air can cause: the ratio to be weaker, the pump to stall; the hose to buck and jump; poor foam; the venturi to fail.
 - Medium-wet foam will give the best results! Dry foam will NOT clean as well!
 3. With wand in hand direct the discharge in a safe direction, open the discharge ball valve.
 4. To prime the pump, slightly open the air inlet ball valve to make the pump cycle very slow where it will prime, once the solution reaches the pump open the air valve all the way.
 5. IF after several seconds the pump hasn't primed, turn off the air, remove the suction tube and fill with water and replace. Once the diaphragms are wet priming is not an issue. Open air ball valve to resume set up.
 6. You may have to try different sized metering tips and air settings until foam consistency and cleaning results are acceptable. Once this is set you are ready to start application.
 7. When foaming is complete, close the discharge ball valve. Return to the unit and close the air ball valve. Briefly re-open the discharge ball valve to relieve pressure in the hose.
 8. Rinse the work surface before the foam dries.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 80 PSI
Brown	0.56	—
Clear	0.88	—
Bright Purple	1.38	—
White	2.15	—
Pink	2.93	—
Corn Yellow	3.84	—
Dark Green	4.88	—
Orange	5.77	—
Gray	6.01	—
Light Green	7.01	—
Med. Green	8.06	—
Clear Pink	9.43	—
Yellow Green	11.50	—
Burgundy	11.93	—
Pale Pink	13.87	—
Light Blue	15.14	—
Dark Purple	17.88	—
Navy Blue	25.36	—
Clear Aqua	28.60	—
Black	50.00	—
No Tip Ratio Up To:		—
The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.		
FORMULA		
$GPM \times 128 \div \text{Desired Dilution Ratio} = \text{oz/min}$ <ul style="list-style-type: none"> • See Unit Flow Rates chart for GPM • Use 20 for 20:1 dilution ratio, 30 for 30:1, etc. • Match calculated ounces per minute (oz/min) to nearest oz/min in Metering Tip Selection chart. 		

UNIT FLOW RATES

PSI	GPM
80	0.99



Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Air pump will not prime or runs with no output.	1, 2, 3, 4, 5	9, 10, 12, 13, 14
B) Will not draw chemical.	1, 2, 3, 4, 5	9, 12, 13
C) Foam surges and / or hose "bucks".	1, 2, 4, 5, 6, 7	9, 10, 11, 12
D) Foam output too wet.	1, 2, 4, 5, 6, 7	9, 12, 13
E) Foam output too dry.	2	
F) Cleaning results not acceptable.	6, 7, 8	

Possible Cause / Solution	
Startup	Maintenance
1. Inlet ball valve partially closed or air pressure too low. ◦ Make sure air pressure is set at 90 PSI.	9. Water or chemical strainers blocked ◦ Clean or replace.
2. Foam consistency needle valve open too much ◦ Adjust the needle valve slowly clockwise till foam stabilizes. ◦ Turn round handle slightly clockwise for wetter foam; open counterclockwise for dryer foam. ◦ Open a maximum of 1/2 turn or the foamer will not draw chemical.	10. Air regulator failed ◦ Clean or replace.
3. Pump requires manual priming on initial startup or has run dry. (Priming may take up to 30 seconds.) ◦ Remove the clear water suction tube and fill the tube with water and reconnect. The pump should readily prime. Once the pump's internal valves are wet, the pump will prime by itself.	11. Discharge hose kinked ◦ Straighten the hose.
4. Discharge ball valve not completely open or discharge hose kinked ◦ Completely open the discharge ball valve / straighten hose.	12. Nozzle size too small or missing ◦ Use only nozzles specified. (See Requirements, page 1.)
5. Water or chemical tubes not completely immersed or container(s) empty ◦ Immerse tubes or replenish. ◦ If pump has run dry, re-prime the pump. (See #3, above.)	13. Problem with air pump ◦ Refer to air pump instruction manual/CD. ◦ If spool stopped in neutral position, press the RESET button
6. Dilution too weak ◦ Install a larger metering tip (chemical viscosity is thicker than water).	
7. Improper chemical ◦ Ensure product is recommended for foaming and/or the application.	
8. Soil has hardened on surface ◦ Always rinse foam before it dries	

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.

