

# Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # 933604-V · 2-Way FPV-PD Concrete Foamer

## REQUIREMENTS

Ready-to-Use Chemical Solution

Compressed Air	up to 6 CFM
Hose	3/4" ID x 50'
Nozzle	40150

## OPTIONS

Stainless Steel Hose Racks

Large Stainless Steel Hose Rack	# 224150
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Stainless Steel Jug Racks Available

To Dilute and Dispense Ready-To-Use Acid Solution

414HC Acid Mixing Station	# 980415
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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



**Lafferty**  
EQUIPMENT MANUFACTURING LLC  
CFS TECHNOLOGIES

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



## OVERVIEW

The 2-Way FPV-PD Concrete Foamer is a foam applicator for projecting 2 highly corrosive chemicals such as those used to remove concrete and for aluminum brightening. This acid-resistant system uses a cost-effective Flojet air-operated, double-diaphragm pump to draw 2 ready-to-use acid solutions from static tanks and inject compressed air to greatly increase volume and coverage ability. Rich, clinging foam is projected through the hose, wand and fan nozzle on to any surface. Use the ball valves to apply the chemicals separately or simultaneously.

**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 Viton diaphragms.

**UNIT FLOW RATES**

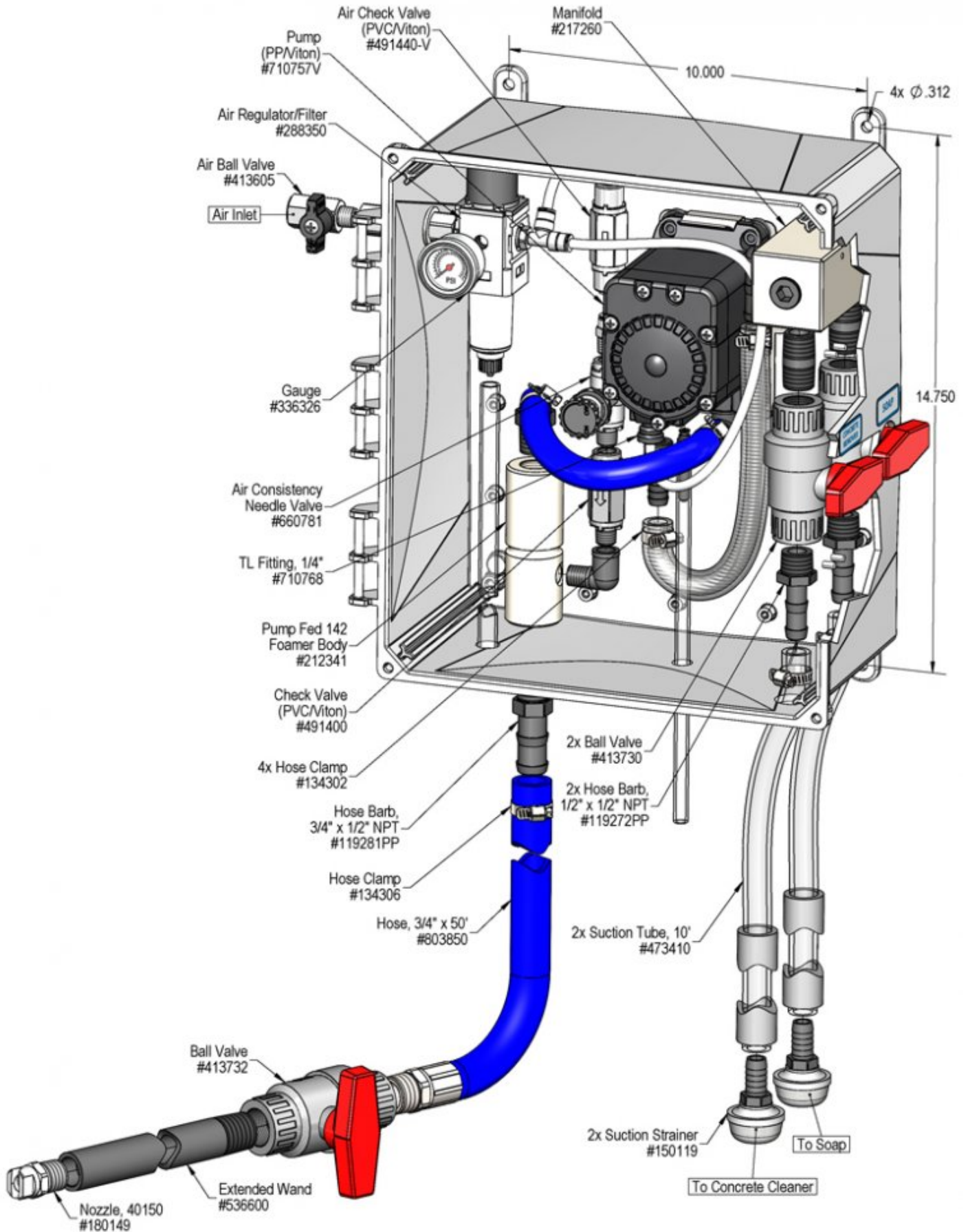
PSI	GPM
60	1.20

**TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)**

1. Mount the unit above solution supply level to prevent siphoning.
2. Place the strainer in the chemical solution(s).
3. Attach the discharge hose.
4. Attach a compressed airline to the air inlet ball valve. DO NOT TURN ON.
5. Air Filter/Dryer recommend.

**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 air pressure preset at 60 PSI. This is the optimum pump pressure. Test "as is" before making any adjustments.
  - The foam consistency knob is pre-set at 1/2 turn. To adjust foam consistency, turn the foam consistency needle valve counterclockwise a maximum of 1 turn for dryer foam and clockwise for wetter foam. Wait several seconds after each adjustment to see the results. Wet foam WILL remove concrete better than dry foam!
1. With the foam wand in hand direct the discharge in a safe direction **open the discharge ball valve and one of the blue chemical ball valves.**
  2. Open air ball valve, wait a few seconds for the pump to prime and start foaming.
  3. If the flow of foam surges, the foam consistency needle valve is open too much or the chemical concentration is too weak, reduce the air flow by turning the needle valve slowly clockwise until the foam flow stabilizes. Or add more chemical concentrate.
  4. A medium-wet foam will give the best cleaning results! Very dry foam will NOT clean as well!
  5. When foaming is complete:
    - Close the discharge ball valve.
    - Promptly return to the unit and close the air ball valve and the chemical ball valve. NEVER leave the air ball valve on when not in use.
    - Briefly re-open the discharge ball valve to relieve pressure in the hose.
  6. Rinse the work surface before the foam dries.



## Troubleshooting Guide

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

Possible Cause / Solution	
Startup	Maintenance
<ol style="list-style-type: none"> <li><b>1. Inlet ball valve partially closed or air pressure too low.</b> <ul style="list-style-type: none"> <li>◦ Completely open air inlet ball valve.</li> </ul> </li> <li><b>2. Foam consistency needle valve open too much</b> <ul style="list-style-type: none"> <li>◦ Adjust the needle valve slowly clockwise until foam stabilizes. Turn round handle slightly clockwise for wetter foam; open counterclockwise for dryer foam. Open a maximum of 1 turn.</li> </ul> </li> <li><b>3. Discharge ball valve not completely open or Discharge hose kinked</b> <ul style="list-style-type: none"> <li>◦ Completely open the discharge ball valve / straighten hose</li> </ul> </li> <li><b>4. Solution tube not completely immersed in chemical or container empty</b> <ul style="list-style-type: none"> <li>◦ Immerse tube or replenish chemical.</li> </ul> </li> <li><b>5. Dilution too weak</b> <ul style="list-style-type: none"> <li>◦ Add more chemical to solution container.</li> </ul> </li> <li><b>6. Improper chemical</b> <ul style="list-style-type: none"> <li>◦ Ensure product is recommended for foaming and/or the application</li> </ul> </li> <li><b>7. Ice particles from condensation in air line — Air pump can periodically "freeze up" (stall) due to ice particles in the pump's exhaust (depending on air humidity &amp; other factors)</b> <ul style="list-style-type: none"> <li>◦ WAIT several seconds to allow the ice particles to melt and blow out, at which time the pump will automatically resume pumping.</li> </ul> </li> <li><b>8. Soil has hardened on surface</b> <ul style="list-style-type: none"> <li>◦ Always rinse foam before it dries.</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li><b>9. Solution strainer blocked</b> <ul style="list-style-type: none"> <li>◦ Clean or replace</li> </ul> </li> <li><b>10. Air regulator failed</b> <ul style="list-style-type: none"> <li>◦ Clean or replace</li> </ul> </li> <li><b>11. Air or water check valve(s) failed</b> <ul style="list-style-type: none"> <li>◦ Clean or replace</li> </ul> </li> <li><b>12. Discharge hose wrong size or kinked (See REQUIREMENTS, page 1).</b> <ul style="list-style-type: none"> <li>◦ Straighten the hose</li> </ul> </li> <li><b>13. Nozzle size too small or missing</b> <ul style="list-style-type: none"> <li>◦ See REQUIREMENTS, page 1.</li> </ul> </li> <li><b>14. Problem with air pump</b> <ul style="list-style-type: none"> <li>◦ Refer to air pump instruction manual.</li> <li>◦ <a href="https://www.xylem.com/en-us/brands/Flojet/flojet-products/g57-air-operated-double-diaphragm-pump">https://www.xylem.com/en-us/brands/Flojet/flojet-products/g57-air-operated-double-diaphragm-pump</a></li> <li>◦ Replace pump.</li> </ul> </li> </ol>

**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.

