

LAFFERTY EQUIPMENT MFG., INC. INSTALLATION / OPERATION INSTRUCTIONS

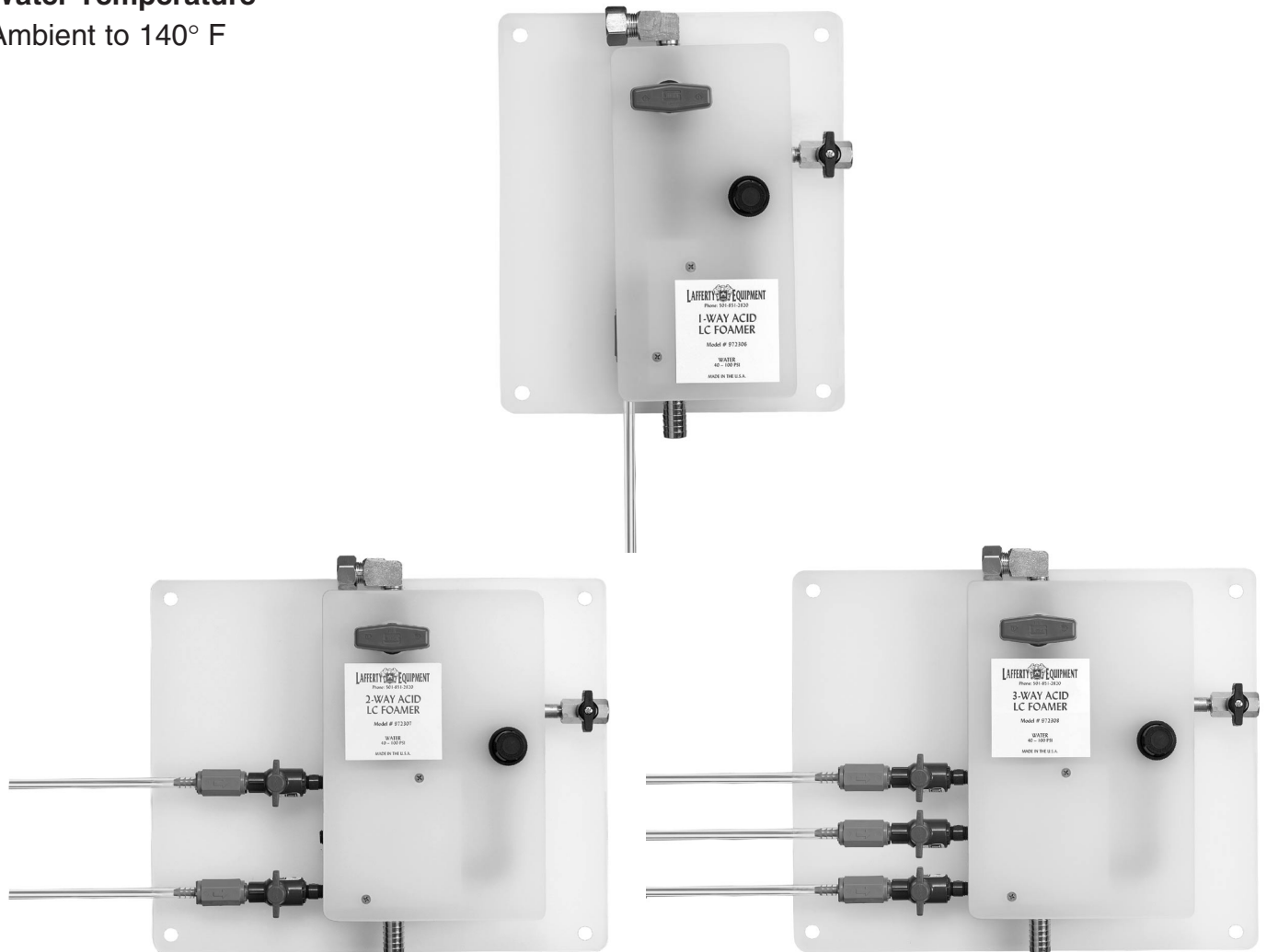
ACID LC FOAMERS

Requirements

- 35 – 100 PSI Water — Up to 3 GPM
- 30 – 75 PSI Air — Up to 8 SCFM
- 3/4" I.D. Discharge Hose

Water Temperature

Ambient to 140° F



Model # 972306, 1-Way Acid LC Foamer Complete
Model # 972307, 2-Way Acid LC Foamer Complete
Model # 972308, 3-Way Acid LC Foamer Complete
(with 40' hose, PVC ball valve, 28" foam wand, and nozzle)

Ask about our Acid Spray-Alls

INSTALLATION AND OPERATION INSTRUCTIONS ACID LC FOAMERS

CAUTION: ALWAYS OBSERVE GOOD SAFETY HABITS. WEAR PROTECTIVE CLOTHING, GLOVES, AND EYE WEAR. DIRECT DISCHARGE AWAY FROM YOURSELF AND OTHERS.

TO INSTALL *(See Parts Diagram, Facing Page)*

1. Mount the Acid LC Foamer to a suitable surface.
 2. **Foamer supplied without a backflow preventer. To prevent possible chemical back up into the water system, comply with local plumbing codes and install appropriate backflow preventer.** Then, connect your 35 – 100 PSI water and air lines to the foamer.
 3. Connect the foam hose to the hose barb and secure with the clamp. **[Foam hose must be 3/4" I.D.]**
 4. Connect the foam wand assembly to the hose. **[Use only the 50250 nozzle supplied with the foamer. If your water pressure exceeds 100 PSI remove the discharge ball valve.]**
 5. *Stapled to these instructions, with a matching color-coded chart, are metering tips which control your chemical to water dilutions. [THIS IS A HIGH CONCENTRATE UNIT. Although metering tips and selection instructions are provided, do not install a tip if you want to achieve the strongest possible chemical concentration.]* If you will **not** be using a metering tip go to step E. If you will be using a metering tip, you will need to know the water pressure and the number of ounces of chemical needed per gallon of water to determine the correct tip color. *(See chemical label for manufacturer's recommendation.)*
- A. Locate your water pressure in the chart. The number below it is your water flow rate in **gallons per minute**.
 - B. Multiply the **gallons per minute** by the number of **ounces of chemical needed per gallon** of water.
 - C. Match answer(s) to the nearest number in the metering tip selection chart. **[The tip selection chart is based on water-thin chemical. Thicker chemicals will require a larger metering tip. If the selected metering tip does not produce desired foam consistency, increase tip size until desired foam consistency and cleaning results are achieved.]**
 - D. Install selected metering tips into solution check valves.

EXAMPLE OF METERING TIP SELECTION ACID LC Foamer at 50 PSI

- 50 PSI = 1.46 GPM
- 2 ounces of chemical per gallon of water
- 1.46 x 2 = 2.92
- 2.92 ≈ 2.7 for thin chemical (pink tip)
(thicker chemicals will require a larger tip)

- E. Push the chemical tubes over the check valves. Immerse the chemical strainers into your chemical concentrates.

TO OPERATE

1. If you are using a 2-Way or 3-Way Acid LC Foamer, open the appropriate chemical ball valve. **[Open only one chemical ball valve at a time.]**
2. While firmly holding foam wand, **point the discharge away from yourself and others.** Then, open the discharge ball valve. Open the water ball valve and the air ball valve and observe foam quality.
3. Foam consistency can be changed by adjusting the air pressure.

AIR REGULATION PROCEDURES

Air pressure is very important for proper operation; air pressure must be **LOWER** than water pressure. Pull out adjustment knob on **air regulator**, and turn it *slowly clockwise* to increase air pressure until desired foam consistency is achieved. Make only slight adjustments, then wait to see the results. If the flow of foam surges and/or hose "bucks," you must decrease the air pressure by *slightly* turning the regulator **counterclockwise** until the foam stabilizes. "Fine tune" your adjustments by making *slight* turns **clockwise and/or counterclockwise** until foam is desired consistency. Once adjustments are made, push lock **air regulator**. If foam consistency is too wet or hose is still "bucking," try installing a larger **metering tip** and/or see Troubleshooting Guide (pg. 4).

4. Foam from the bottom and work up to prevent streaking.
5. When foaming is completed, close the discharge ball valve. Return to foamer and close the chemical ball valve.
6. Then, open the next chemical ball valve. Return to the area to be cleaned. Re-open the discharge ball valve, expecting a strong blast, and apply remaining chemical, allowing 20 seconds for the last chemical used to clear the line. Then, begin next application. Repeat steps 1-6 for each chemical used.
7. When finished foaming with the Acid LC Foamer, **close all ball valves** (i.e., water ball valve, all chemical ball valves, air ball valve, and discharge ball valve). Reopen the discharge ball valve to relieve pressure on the hose! Close the discharge ball valve and store the hose.
8. Rinse the work surface before the foam dries.

SUGGESTION: In order to prevent excess stress on the unit, secure the discharge hose and the water feed hose to your mounting surface.

WATER PRESSURE	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI	100 PSI
ACID LC FOAMER WATER FLOW RATE	1.34 GPM	1.46 GPM	1.54 GPM	1.59 GPM	1.76 GPM	1.80 GPM	1.91 GPM

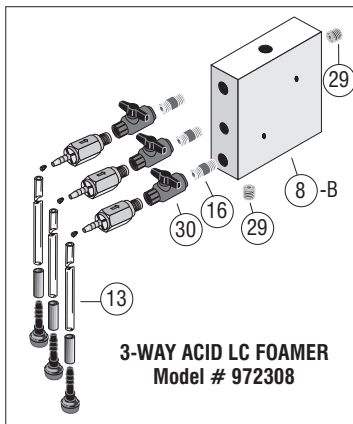
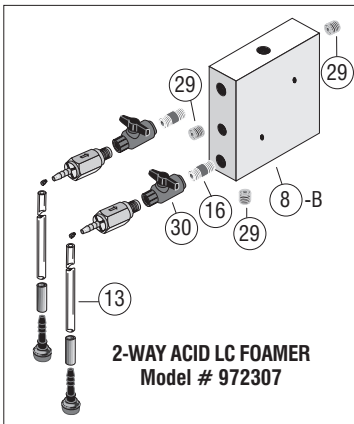
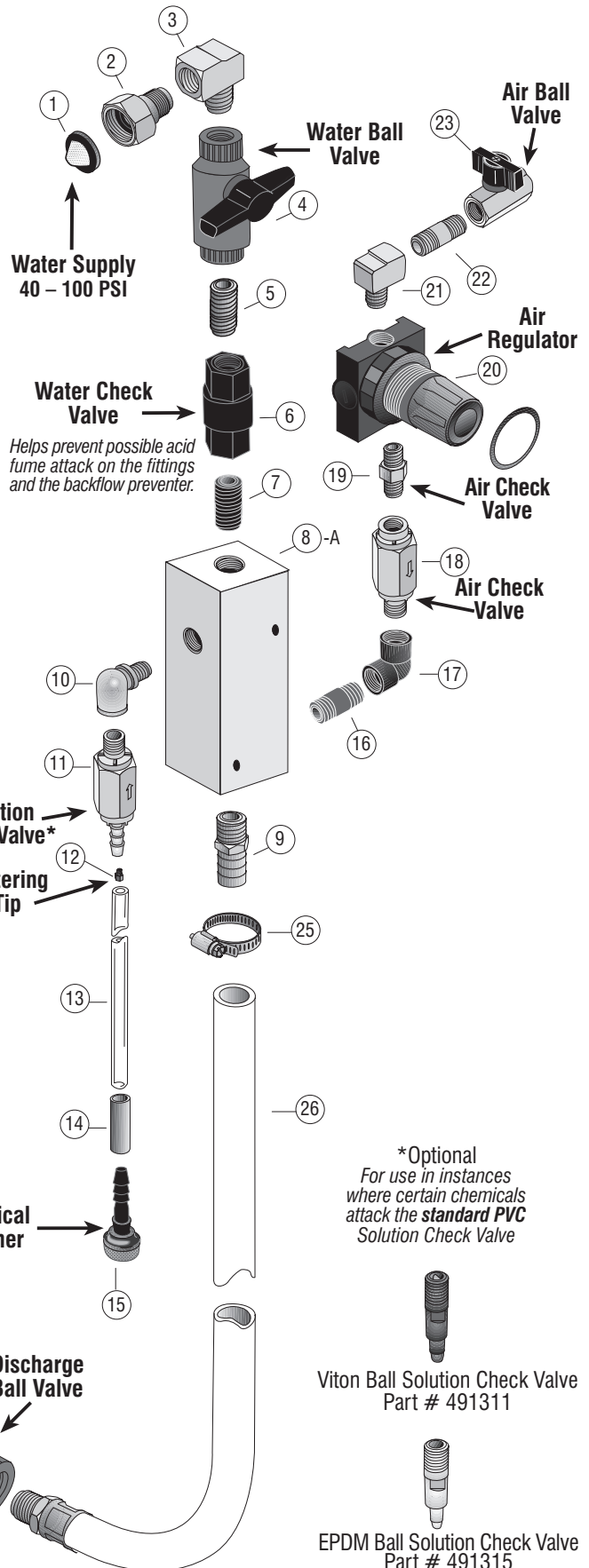
The number under each color in the chart below represents the **average ounces of water-thin chemical which will pass through the tip per minute.**

METERING TIP SELECTION IN OUNCES PER MINUTE (AVERAGE)

COLOR	Brown	Clear	Bright Purple	White	Pink	Corn Yellow	Dark Green	Orange	Gray	Light Green	Medium Green	Clear Pink	Yellow Green	Burgundy	Pale Pink	Light Blue	Dark Purple	Navy Blue	Clear Aqua	Black
Thin Chemical	0.84	1.16	1.4	2.0	2.7	3.4	4.0	5.3	6.1	7.0	8.5	9.2	11.2	12.5	12.9	14.2	17.6	21.4	30.2	40.4

ACID LC FOAMERS

QTY. 1WAY	QTY. 2WAY	QTY. 3WAY	CALL #	DESCRIPTION	PART #
1	1	1	1	ADAPTER, WASHER, GH W/ SCREEN	102050
1	1	1	2	ADAPTER, FGH x 1/2" MPT	102027
1	1	1	3	ELBOW, ST., 1/2"	257383
1	1	1	4	BALL VALVE, PVC, 1/2" FF	413730
1	1	1	5	NIPPLE, SS, CLOSE, 1/2"	429742
1	1	1	6	CHECK VALVE, POLY W/ HASTELLOY, 1/2" FF	491410
1	1	1	7	NIPPLE, POLY, 1/2" x 1 1/2"	429974
1			8-A	FOAMER BODY, ACID LC, 2" x 5"	212515
1	1	1	8-B	FOAMER BODY, ACID LC, 2 / 3-WAY, 5" x 5"	212525
1	1	1	9	HOSE BARB, 3/4" x 1/2" MPT	119281
1			10	ELBOW, PVC, ST., 1/4"	750284
1	2	3	11	CHECK VALVE, SOLUTION, PVC, 1/4"	491402
1	1	1	12	METERING TIPS, SET (20)	443798
1			13	TUBE, CHEMICAL, 1/4" x 10'	474746
1			13	TUBE, CHEMICAL, 1/4" x 20'	474768
1			13	TUBE, CHEMICAL, 1/4" x 30'	474770
1	2	3	14	WEIGHT, CHEMICAL TUBE	475100
1	2	3	15	STRAINER, CHEMICAL, HASTELLOY, 1/4"	150115
1	3	4	16	NIPPLE, PVC, 1/4" x 1 1/2"	429900
1	1	1	17	ELBOW, 90°, PVC, 1/4"	750282
1	1	1	18	CHECK VALVE, 1/4" MF, PVC W/ HAST SPRING	491400
1	1	1	19	CHECK VALVE, AIR, NPB, 1/4"	491302
1	1	1	20	REGULATOR, AIR, PLASTIC, 1/4" W/ RING	288365
1	1	1	21	ELBOW, ST., 1/4"	257378
1	1	1	22	NIPPLE, SS, 1/4" x 1 1/2"	429703
1	1	1	23	BALL VALVE, CPB, 1/4" FFB	413602
4	4	4	not shown	SCREW, #12 x 3/4"	396488
1			not shown	COVER, POLY, 6" x 12"	220159
1			not shown	BASE, POLY, 12" x 14"	221256
1			not shown	COVER, POLY, 8" x 12"	220183
1			not shown	BASE, POLY, 17" x 14"	221382
1	1	1	24	NOZZLE, 1/2" - 50250	180152
1	1	1	25	HOSE CLAMP, 3/4"	134306
1	1	1	26	HOSE, 3/4" x 40', 3/4" MPT (ONE END)	803840
1	1	1	27	BALL VALVE, PVC, 3/4" FF	413732
1	1	1	28	WAND, FOAM, POLY, 28" M x F	536600
1	3	2	29	PLUG, ALLEN HEAD, POLY, 1/4"	615400
1	2	3	30	BALL VALVE, PVC, 1/4" FF	413651



Nozzle
For proper operation, use ONLY the 50250 nozzle supplied with your Acid LC Foamer.

28" Foam Wand

Chemical Strainer

Discharge Ball Valve

*Optional
For use in instances where certain chemicals attack the standard PVC Solution Check Valve

Viton Ball Solution Check Valve
Part # 491311

EPDM Ball Solution Check Valve
Part # 491315

TROUBLESHOOTING GUIDE

for

ACID LC FOAMERS

PREVENTIVE MAINTENANCE: When the foamer will be out of service for extended periods, remove the chemical tubes from your chemical concentrates and place in warm water. Completely open the water ball valve for approximately 30 seconds to flush the foamer, then close the water ball valve. Check and/or clean the chemical strainers; replace if missing.

PROBLEMS	POSSIBLE CAUSE / SOLUTION																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A) Foamer will not draw chemical.	•			•		•	•	•	•	•	•		•	•	•	•			
B) Foam surges and/or hose "bucks."	•	•	•	•		•	•	•	•		•	•		•	•	•		•	
C) Foam output too wet.		•	•	•	•	•	•	•	•		•	•	•	•	•	•		•	
D) Foam output too dry.	•			•													•		
E) Water flowing into chemical container.										•									
F) Foam does not clean properly.												•						•	•
G) Water/chemical backing up into air line.					•														

POSSIBLE CAUSE / SOLUTION

- Air pressure too high for available water pressure** – Adjust the air regulator slowly counterclockwise.
- Use of an oiler on the airline will cause poor foam quality** – Use only clean, dry air.
- Inadequate air supply** – Open air inlet valve fully. Adjust air regulator slowly clockwise.
- Air regulator clogged or failed** – Clean or replace air regulator.
- Air check valve clogged or failed** – Clean or replace the air check valve.
- Water pressure too low or fluctuating** – Increase water pressure or install a water regulator to stabilize pressure.
- Foam hose too long or wrong size or kinked; must be 3/4" I.D.** – For pressure below 40 PSI, 25' is the maximum length **recommended**; for pressures over 40 PSI, 40' is the maximum. Straighten the hose.
- Nozzle size too small** – Must be a 50250 nozzle.
- Water inlet and discharge ball valves not completely open** – Completely open water and discharge ball valves.
- Solution check valve clogged or failed** – Clean or replace solution check valve.
- Water inlet screen clogged** – Disconnect foamer from water source. Clean or replace screen.
- Improper chemical** – Ensure product is recommended for foaming and/or the application.
- Chemical tube not immersed in chemical or chemical depleted** – Immerse tube or replenish.
- Chemical strainer or metering tip blocked** – Clean or replace chemical strainer and/or tip.
- Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube** – Cut approximately 1/2" off end of tube or replace tube.
- Vacuum leak in chemical pick-up assembly** – Tighten the connection(s).
- Chemical to water ratio too high** – Install **smaller** tip.
- Chemical to water ratio too low** – Install **larger** tip.
- Soil has hardened on surface** – Reapplication may be necessary. Always rinse foam **before** it dries.

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