

# LAFFERTY EQUIPMENT MANUFACTURING, INC.

## Installation & Operation Instructions

### Low Pressure Airless Foamers

Model # 970525, A-25 Airless Foamer Complete

Model # 970550, A-50 Airless Foamer Complete

### REQUIREMENTS

#### Water:

Supply line ..... 1/2" I.D. minimum

Temp. range ..... Ambient to 160° F

Pressure range ..... 35 to 125 PSI

Flow range:

A-25 ..... 1.3 to 1.9

A-50 ..... 2.3 to 3.4

#### Wand:

A-25 White

A-50 Black

#### Hose:

I.D. .... 1/2" ONLY

Standard Length ..... 50'

### OPTIONS

#### All Stainless Steel Accessories

- Hose Rack, Large ..... # 224150
- Hose Rack, Small ..... # 224145
- Jug Racks
  - 1 Gallon
    - Round ..... # 224200
    - Square ..... # 224205
  - 2 ½ Gallon (8 ½" x 10 ½") ..... # 224210
  - 5 Gallon (12" x 12") ..... # 224215



**READ ALL  
INSTRUCTIONS BEFORE  
USING EQUIPMENT!**

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## Principles of Operation

This is a venturi airless foamer that will siphon chemical concentrates from any sized container and provide up to 21 different dilution ratios using the supplied metering tips. It uses standard city water pressure to project a wet foam onto any surface.



## Safety & Operational Precautions

- Manufacturer assumes no liability for the use or misuse of this unit.
- Backflow Prevention: If you are connecting to a potable water supply, be sure to follow all local codes for backflow prevention.
- Wear protective clothing, gloves and eyewear when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- For pressures over 100 PSI, remove the discharge ball valve.
- Follow the chemical manufacturer's safe handling instructions.

### TO INSTALL *(Refer to diagram, next page.)*

1. Mount the unit to a suitable surface above chemical supply to prevent siphoning.
2. Connect the hose as shown in the diagram.
3. Select chemical dilution ratio by selecting and installing a metering tip into each chemical check valve. (For the strongest possible chemical dilution ratio, do not install a metering tip.)

**How to Select the Correct Metering Tip** - See chemical label for dilution ratio recommendation or consult your chemical supplier.

- The dilution ratios provided in the Metering Tip Selection Chart, at right, are based on water-thin chemical.
  - Due to varying chemical viscosities, you may need to increase/decrease the metering tip size.
  - If you have water pressure other than the example, use the Metering Tip Selection Formula.
4. After metering tip is installed, push the chemical tube over the check valve and immerse the chemical strainer into your chemical concentrate.
  5. Connect water supply.

### TO OPERATE

1. Make sure the discharge ball valve is closed. Completely open the water ball valve and move to the area to be foamed. Open the discharge ball valve and begin application.
2. When finished, close the discharge ball valve. Return to the unit and close the water ball valve. Briefly re-open the discharge ball valve to relieve pressure in the hose. Rinse before the foam dries.

Metering Tip Selection			
Metering Tip Color	Oz. per Min.	EXAMPLE: Dilution Ratio @ 40 PSI	
		A-25	A-50
Brown	.62	277:1	475:1
Clear	.91	188:1	324:1
Bright Purple	1.7	104:1	178:1
White	2.3	76:1	131:1
Pink	3.3	52:1	89:1
Corn Yellow	4.0	43:1	74:1
Dark Green	5.0	34:1	59:1
Orange	6.0	29:1	49:1
Gray	6.8	25:1	43:1
Light Green	8.1	21:1	37:1
Med. Green	9.1	19:1	32:1
Clear Pink	11.9	14:1	25:1
Yellow Green	13.4	13:1	22:1
Burgundy	15.3	11:1	19:1
Pale Pink	16.9	10:1	17:1
Light Blue	18.0	10:1	16:1
Dark Purple	22.5	8:1	13:1
Navy Blue	33.1	5:1	9:1
Clear Aqua	39.3	4:1	—
Black	59.0	—	—
No Tip	—	3:1	8:1

The dilution ratios provided above are approximate values. Your actual dilution ratio may be higher or lower due to variation in chemical viscosity.

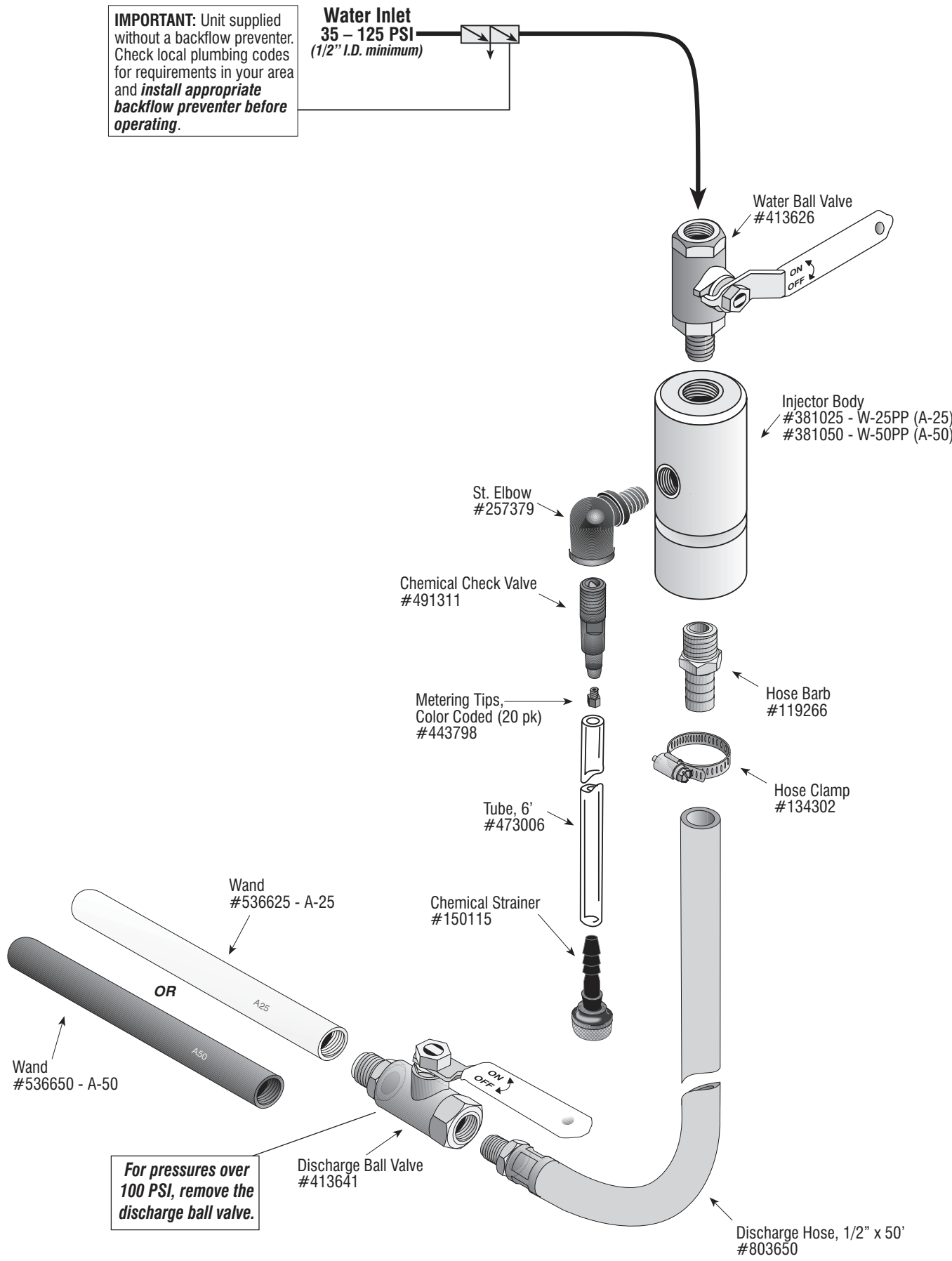
Metering Tip Selection Formula	
(GPM x 128)	See chart below for GPM and convert to oz. per min.
÷	
Dilution Ratio	20:1, 30:1, etc.
=	
Oz. per Min.	Match to nearest number in chart above.

Water Flow Rate Chart		
Water Pressure	Water Flow Rate	
	GPM	
PSI	A-25	A-50
40	1.34	2.30
50	1.46	2.53
60	1.54	2.70
70	1.59	2.88
80	1.76	3.07
90	1.80	3.18
100	1.91	3.41

**⚠ Turn Off Inlet Ball Valves When Not In Use.**

**IMPORTANT:** Unit supplied without a backflow preventer. Check local plumbing codes for requirements in your area and *install appropriate backflow preventer before operating.*

**Water Inlet**  
**35 – 125 PSI**  
*(1/2" I.D. minimum)*



**For pressures over 100 PSI, remove the discharge ball valve.**

# Troubleshooting Guide

## Low Pressure Airless Foamers

PROBLEMS	Possible Cause / Solution	
	Startup	Maintenance
A) Will not draw chemical.	1, 4, 5, 6, 7	8, 9, 10, 11, 12, 13, 14, 15, 17, 18
B) Dilution too weak.	2	
C) Dilution too strong.	3	
D) Water backing up into chemical container.	8	
E) Chemical solution backing up into water line.		14

### Possible Cause / Solution

Startup	Maintenance
<ol style="list-style-type: none"> <li>1. <b>Inlet ball valve or discharge ball valve not completely open</b> <ul style="list-style-type: none"> <li>• Completely open the inlet and discharge ball valves.</li> </ul> </li> <li>2. <b>Not enough chemical - metering tip too small</b> <ul style="list-style-type: none"> <li>• Install larger metering tip.</li> </ul> </li> <li>3. <b>No metering tip installed or metering tip too large</b> <ul style="list-style-type: none"> <li>• Install smaller metering tip.</li> </ul> </li> <li>4. <b>Chemical tube not immersed in chemical or chemical depleted</b> <ul style="list-style-type: none"> <li>• Immerse tube or replenish.</li> </ul> </li> <li>5. <b>Discharge hose too long, wrong size, kinked or spliced/sectioned together (SEE REQUIREMENTS)</b> <ul style="list-style-type: none"> <li>• Straighten the hose - Replace hose with correct size or one-piece continuous hose.</li> </ul> </li> <li>6. <b>Foam wand size too small (SEE REQUIREMENTS)</b></li> <li>7. <b>Water pressure or water volume too low / inlet piping too small</b> <ul style="list-style-type: none"> <li>• Increase water pressure or water volume (SEE REQUIREMENTS).</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>8. <b>Chemical check valve stuck or failed</b> <ul style="list-style-type: none"> <li>• Clean or replace.</li> </ul> </li> <li>9. <b>Chemical strainer or metering tip partially blocked</b> <ul style="list-style-type: none"> <li>• Clean or replace chemical strainer and/or metering tip.</li> </ul> </li> <li>10. <b>Chemical tube stretched out or pin hole/cut in chemical tube (sucking air in)</b> <ul style="list-style-type: none"> <li>• Cut off end of tube or replace tube.</li> </ul> </li> <li>11. <b>Vacuum leak in chemical pick-up connections</b> <ul style="list-style-type: none"> <li>• Tighten the connections.</li> </ul> </li> <li>12. <b>Inlet orifice clogged</b> <ul style="list-style-type: none"> <li>• Check/clean inlet orifice for obstructions. DO NOT DRILL OUT.</li> </ul> </li> <li>13. <b>Chemical build-up or water scale may have formed in the injector body or foam wand causing poor or no chemical pick-up</b> <ul style="list-style-type: none"> <li>• Follow Preventive Maintenance instructions below, using hot water and/or descaling acid. When there is no draw at all, carefully remove fittings and soak entire body in descaling acid.</li> </ul> </li> <li>14. <b>No backflow preventer installed and/or inlet ball valve left on when not in use.</b> <ul style="list-style-type: none"> <li>• Install appropriate backflow preventer into water line.</li> </ul> </li> </ol>

**PREVENTIVE MAINTENANCE:** When the unit will be out of service for extended periods, remove chemical tube from chemical concentrate and place in water. Completely open the sanitize and discharge ball valves for several seconds to flush chemical and help prevent chemical build-up. Check and/or clean chemical strainer; replace if missing.