

# Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # 915925 · 517 Sanitize / Rinse / A-25 Airless Foam Hose Drop Station

## REQUIREMENTS

### Chemical Concentrate

#### Water

Temperature	up to 160°F
Pressure	35 to 125 PSI
Flow	7.2 GPM @ 40 PSI
Supply Line	3/4"

#### Hose

Sanitize	3/4" ID x 50'
Rinse	3/4" ID x 50'
Foam	1/2" ID x 50'

#### Nozzle

Sanitize	40100
Rinse	4 Hole Rinse Nozzle
Foam	A-25 Airless Foam Wand

## OPTIONS

### Stainless Steel Hose Racks

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

### Water Pressure Gauge

Water Pressure Gauge, 3/4" Inlet	# 336348
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### Stainless Steel Airless Foam Wand

Wand, SS, Airless Foam, A-25SS	# 536625SS
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### Alternate Check Valve - EPDM Standard

Check Valve, Chemical, PP/Viton, 1/4"	# 491315
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**Lafferty**  
EQUIPMENT MANUFACTURING LLC  
CFS TECHNOLOGIES

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

## OVERVIEW

The 517 Sanitize/Rinse/A-25 Airless Foam Hose Drop Station is a combination applicator for applying one chemical as foam, another as a sanitizing spray and for rinsing without compressed air. This venturi injection system uses standard city water pressure (35 - 125 PSI) to draw and blend chemical concentrates into the water streams to create accurately diluted solutions. Precision metering tips are used to control chemical usage. Foaming chemical solution flows through the foam hose to the "airless" foam wand which draws in atmospheric air to create and project wet, clinging foam at distances up to 6 feet. The sanitizer solution flows through the sanitizer hose and is projected as a fan pattern spray in the lean ratios required for no-rinse sanitizing in food plants. Rinse at full pressure using the unique and powerful 4-hole nozzle.

## SAFETY &amp; OPERATIONAL PRECAUTIONS

- When connecting to a potable water supply follow all local codes for backflow prevention.
- **WARNING:** Severe damage to your facility, or contamination of your potable water supply, can occur without proper backflow prevention.
- 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 safety goggles when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- For pressures over 100 PSI, remove the discharge valve or lower pressure.
- Never leave inlet ball valves on when unit is not in use.
- Follow the chemical manufacturer's safe handling instructions.
- NEVER mix chemicals without first consulting chemical manufacturer.

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

If you are connecting to a potable water supply follow all local codes for backflow prevention.

1. Mount the unit to a suitable surface above the chemical supply to prevent siphoning.
2. Connect hose(s) as shown in the diagram.
3. Flush any new plumbing of debris before connecting water.
4. Connect water supply. Install a water filter if water piping is older or has known contaminants.

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 suction tube in the chemical concentrate.
- If necessary, cut suction tube(s) to length before attaching suction strainer.

## TO FOAM

Always make sure the discharge ball valve is closed or pointed in a safe direction before turning water on. Ball valve can be shut off at any time during operation but should not be left unattended for long periods of time.

1. Open the inlet ball valve then open the discharge ball valve to begin application.
2. Make final metering tip adjustments based on application results.
3. When application is completed, close the discharge ball valve, return to the unit and close the inlet ball valve. Re-open the discharge ball valve to relieve pressure in hose then close the discharge ball valve. If applicable rinse the work surface before solution dries.

## TO RINSE

1. With spray wand in hand and the discharge ball valve closed open the inlet ball valve.
2. Open the discharge ball valve to rinse.
3. When complete, close the discharge ball valve then close the inlet ball valve.
4. Briefly re-open the discharge ball valve to relieve pressure in hose.

## TO SANITIZE

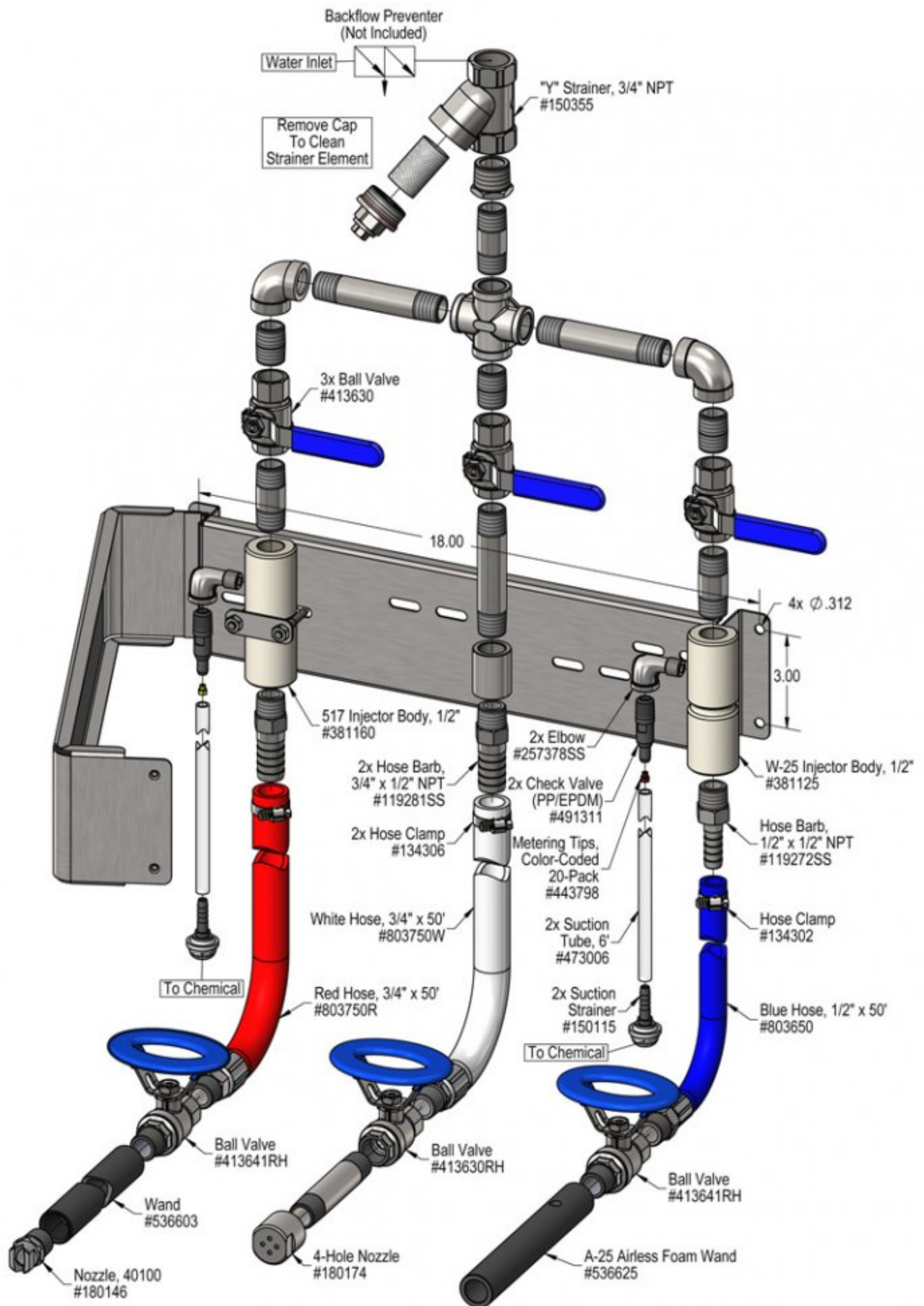
1. With spray wand in hand and the discharge ball valve closed open the inlet ball valve.
2. Open the discharge ball valve to begin application.
3. Make final metering tip adjustments based on application results.
4. When application is completed, close the discharge ball valve then close the inlet ball valve.
5. Briefly re-open the discharge ball valve to relieve pressure in hose. If applicable rinse the work surface before solution dries.

## METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 40 PSI		
		SANITIZE	RINSE	FOAM
Brown	0.56	1234:1	—	306:1
Clear	0.88	785:1	—	195:1
Bright Purple	1.38	501:1	—	124:1
White	2.15	321:1	—	80:1
Pink	2.93	236:1	—	59:1
Corn Yellow	3.84	180:1	—	45:1
Dark Green	4.88	142:1	—	35:1
Orange	5.77	120:1	—	30:1
Gray	6.01	115:1	—	29:1
Light Green	7.01	99:1	—	24:1
Med. Green	8.06	86:1	—	21:1
Clear Pink	9.43	73:1	—	18:1
Yellow Green	11.50	60:1	—	15:1
Burgundy	11.93	58:1	—	14:1
Pale Pink	13.87	50:1	—	12:1
Light Blue	15.14	46:1	—	11:1
Dark Purple	17.88	39:1	—	10:1
Navy Blue	25.36	27:1	—	7:1
Clear Aqua	28.60	24:1	—	6:1
Black	50.00	14:1	—	—
No Tip Ratio Up To:		11:1	—	5:1
The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.				
FORMULA				
<b><math>GPM \times 128 \div \text{Desired Dilution Ratio} = \text{oz/min}</math></b> <ul style="list-style-type: none"> <li>• See Unit Flow Rates chart for GPM</li> <li>• Use 20 for 20:1 dilution ratio, 30 for 30:1, etc.</li> <li>• Match calculated ounces per minute (oz/min) to nearest oz/min in Metering Tip Selection chart.</li> </ul>				

## UNIT FLOW RATES

PSI	GPM		
	SANITIZE	RINSE	FOAM
35	5.05	6.73	1.25
40	5.40	7.20	1.34
50	6.04	8.05	1.50
60	6.61	8.82	1.64
70	7.14	9.52	1.77
80	7.64	10.18	1.90
90	8.10	10.80	2.01
100	8.54	11.38	2.12
110	8.95	11.94	2.22
120	9.35	12.47	2.32
125	9.55	12.73	2.37



## Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Foamer will not draw chemical. B) Foam does not clean / too wet. C) Water back flowing into chemical container D) Solution backing up into water line.	1, 2, 4, 5 1, 2, 6, 7 9 15	9, 10, 11, 12, 13, 14, 16

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Sanitizer will not draw chemical. B) Using too much chemical. C) Water back flowing into chemical D) Solution backing up into water line.	1, 2, 3, 4, 5 8 9 15	9, 10, 12, 13, 14, 16

Possible Cause / Solution	
Startup	Maintenance
<b>1. Water pressure too low</b> ◦ Increase water pressure. (See Requirements)  <b>2. Inlet ball valve or discharge ball valve not completely open</b> ◦ Completely open the valves.  <b>3. Nozzle wrong size, too small</b> ◦ See requirements.  <b>4. Discharge too long, wrong size or kinked</b> ◦ Straighten hose, see requirements.  <b>5. Chemical tube not immersed in chemical or chemical depleted</b> ◦ Immerse or replenish chemical  <b>6. Dilution too weak</b> ◦ Install larger metering tip.  <b>7. Improper chemical</b> ◦ Ensure product is recommended for foaming and/or the application.  <b>8. Dilution too strong even with smallest metering tip</b> ◦ Some weak dilutions at lower water pressures are impossible to achieve with a single metering tip. Pre-dilute your chemical until desired dilution ratio is achieved. Or order 491307-1/4" Inline Dual Metering Tip Holder.	<b>9. Chemical check valve stuck or clogged</b> ◦ Clean or replace.  <b>10. Water "Y" strainer screen clogged</b> ◦ Clean screen or replace.  <b>11. Airless Foam Wand screen blocked</b> ◦ Dried chemical build-up may be obstructing flow through the screen. Remove fittings and soak the entire wand in de-scaling acid.  <b>12. Metering tip blocked</b> ◦ Clean or replace metering tip.  <b>13. Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube (sucking air in)</b> ◦ Cut off end of tube or replace tube.  <b>14. Vacuum leak in chemical pick-up connection</b> ◦ Tighten the connection.  <b>15. No backflow preventer installed</b> ◦ Install appropriate backflow preventer onto water line.  <b>16. Chemical build-up or scale may have formed in the body causing poor or no chemical pick-up</b> ◦ Remove fittings and soak entire body in de-scaling acid. Replace fittings being careful not to cross thread or over tighten.

**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.

