Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # 917105 · Hyper Foamer

REQUIREMENTS	
Chemical Concentrate	
Water	
Temperature	up to 160°F
Pressure	400 to 700 PSI
Flow	3.3 GPM @ 700 PSI
Supply Line	3/8"
Compressed Air	up to 5 CFM
Hose	3/4" ID x 50'
Nozzle	65300

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Nozzle	65300
OPTIONS	
Stainless Steel Hose Racks	
Large Stainless Steel Hose Rack	# 224150
Stainless Steel Jug Racks	
1 Gallon Round/Square	# 224200
1 Gallon Round/Square Locking	# 224200-L
2 ½ Gallon (8 ½" x 10 ½")	# 224210
5 Gallon Round/Square Locking (12" x 12")	# 224214
5 Gallon Round/Square (12" x 12")	# 224215
Safe Flow Lid™ for 1 Gallon Jugs	
Lid, Suction Tube, and Strainer	# 709101
Optional Zero Degree Nozzle (For Inc	creased Range)
Nozzle, NPB, 3/4" - 00400	# 180154
Alternate Check Valves - EPDM Stan	dard
Check Valve, Chemical, PP/Viton, 1/4"	# 491315
Check Valve, Air, SS/Viton, 1/4"	# 491306







CFS TECHNOLOGIES



OVERVIEW

The Hyper Foamer is a 3.3 GPM @ 700 PSI foam applicator for quickly projecting foaming chemicals on to any surface up close or at a distance. This venturi injection system uses high water pressure (400 - 700 PSI) to draw and blend chemical concentrate into the water stream to create an accurately diluted solution. Rich, clinging foam is created by injecting compressed air into the solution to greatly increase volume and coverage ability. The foam is then projected through the foam hose, wand and fan nozzle at distances up to 13 feet.

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 put a discharge ball valve on this unit or kink the hose to stop the flow of foam.

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.
- Connect water supply. To prevent blocking the small water jets in the foamer body, flush any new plumbing of debris before connecting. If water piping is older and has known contaminants, install a filter.
- 5. Connect air supply. If air line is older and has known contaminants install a filter.

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 OPERATE

Always make sure the wand is in hand and pointed in a safe direction before turning water and air on. DO NOT kink the hose to stop foam flow, return to the unit and close the water and air ball valves.

- 1. Final chemical dilution and air adjustments will now have to be made.
- 2. With wand in hand open the water ball valve, and the air ball valve.
 - Wait a few seconds and observe foam consistency.
 - To adjust the foam consistency turn the needle valve knob slightly counterclockwise for dryer foam and clockwise for wetter foam.
 - Medium wet foam will give the best cleaning results! Very dry foam will NOT clean as well!
 - You may also 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.
- When foaming is completed return to the unit and close the water and air ball valves. Do NOT kink the hose to stop foam flow. Rinse the work surface before foam dries.

METERING TIP SELECTION			
METERING COLOR	ПР	OZ/MIN	DILUTION RATIO @ 700 PSI
Brown		0.56	756:1
Clear		0.88	481:1
Bright Purple		1.38	307:1
White		2.15	197:1
Pink		2.93	144:1
Corn Yellow		3.84	110:1
Dark Green		4.88	87:1
Orange		5.77	73:1
Gray		6.01	70:1
Light Green		7.01	60:1
Med. Green		8.06	53:1
Clear Pink		9.43	45:1
Yellow Green		11.50	37:1
Burgundy		11.93	35:1
Pale Pink		13.87	31:1
Light Blue		15.14	28:1
Dark Purple		17.88	24:1
Navy Blue		25.36	17:1
Clear Aqua		28.60	15:1
Black		50.00	8:1
No Tip Ratio Up	To:		8:1
The dilution ratios above are approximate values. Due to			

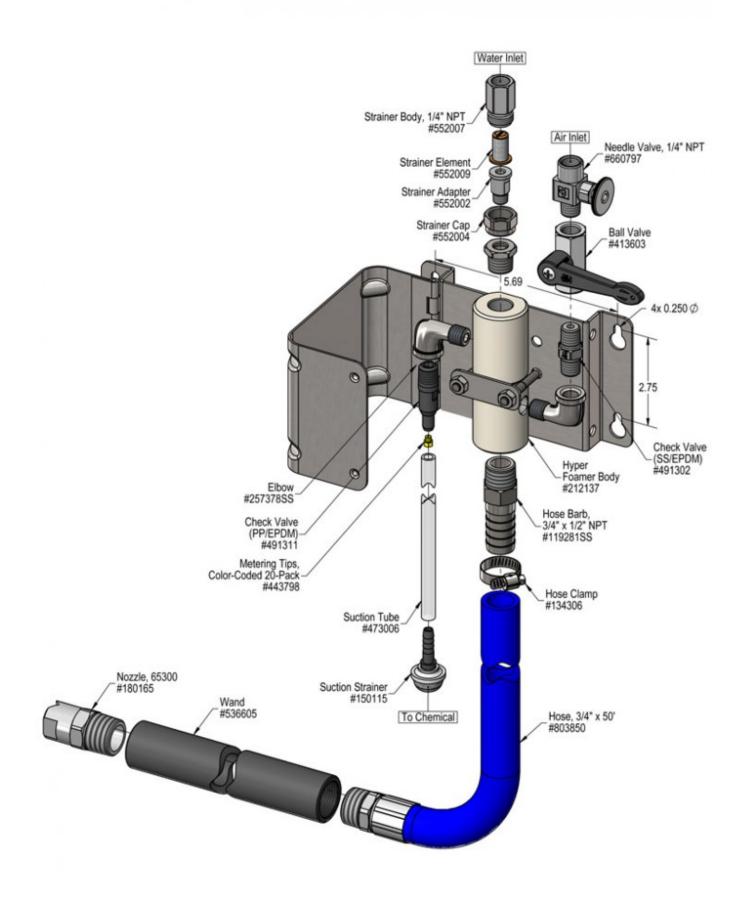
The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.

FORMULA

GPM × 128 ÷ Desired Dilution Ratio = oz/min

- 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		
400	2.50		
500	2.80		
600	3.06		
700	3.31		



Troubleshooting Guide

Problem	Possi	Possible Cause / Solution	
	Startup	Maintenance	
A) Foam surges and/or hose "bucks".	1, 2, 3, 4, 6, 7, 8, 9, 10	12, 13, 14, 15, 16, 18, 19	
B) Foamer will not draw chemical.	1, 3, 4, 7, 8, 9, 10	12, 13, 14, 15, 16, 18, 19	
C) Foam too wet.	2, 3, 4, 6, 7, 8, 9, 10	13, 14, 15, 16, 18, 19	
D) Foam does not clean properly (too dry).	1, 4, 6, 11		
E) Using too much chemical.	5		
F) Water/chemical backing up into air line.		17	
G) Water backing up into chemical container.		12	

Possible Cause / Solution

	Startup	Maintenance
1.	Air volume too high • Adjust the needle valve slowly clockwise.	12. Chemical check valve stuck or failed ∘ Clean or replace.
2.	Use of an oiler in the airline will cause poor foam quality	13. Chemical strainer or metering tip partially blockedClean or replace chemical strainer and/or metering tip.
3.	Inlet ball valve not completely open o Completely open the ball valve.	14. Chemical tube stretched out or pin hole/cut in tubeCut off end of tube or replace tube.
4.	Not enough chemical - metering tip too small o Install larger metering tip.	15. Vacuum leak in chemical pick-up connectionsTighten the connection.
5.	 Chemical Ball valves closed (2-Way) No metering tip installed or metering tip too large Install smaller metering tip. 	16. Needle valve clogged not allowing enough air ○ Clean or replace. 17. Air check valve failed
6.	Improper chemical • Ensure product is recommended for the application.	∘ Replace.
7.	Chemical tube not immersed or chemical depleted • Immerse tube or replenish.	Water strainer element clogged or missing/foamer inlet orifice clogged
8.	Discharge hose too long or wrong size or kinked • Straighten the hose or replace with correct hose.	orifice for obstructions. DO NOT DRILL OUT. 19. Chemical build-up may have formed in the foamer body
9.	Nozzle size too small • Replace with correct size nozzle.	causing poor or no chemical pick-up • Follow Preventive Maintenance instructions below, using hot water and/or descaling acid. When there is no
10.	Water pressure or water volume too low/inlet piping too small causing poor chemical pick up o Increase water pressure or water volume.	draw at all, carefully remove fittings and soak entire foamer body in descaling acid.
11.	Soil has hardened on surface • Always rinse foam before it dries • Reapplication may be necessary.	

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.

