

Lafferty Equipment Manufacturing, Inc. Installation & Operation Instructions

Model # 916115 • HVHC Foamer

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	35 to 125 PSI
Flow	3.5 GPM @ 50 PSI
Supply Line	1/2"

Compressed Air up to 7 CFM

Hose 1" x 50'

Nozzle 50400

OPTIONS

Stainless Steel Hose Rack

Large # 224150

Stainless Steel Jug Racks

2 ½ Gallon (8 ½" x 10 ½") # 224210

5 Gallon (12" x 12") # 224215

5 Gallon Round Locking # 224216

Lid & Suction Hose for 1 & 5 Gallon Pails

Pail Lid Suction Hose Assembly # 709101

Optional Zero Degree Nozzle

Nozzle, NPB, 3/4" - 00400 # 180154

WEIGHT & DIMENSIONS

Shipping Weight: 34 lbs.

Shipping Dimensions: 28" x 28" x 8"



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Warning! Read All Instructions
Before Using Equipment!

OVERVIEW

The HVHC Foamer is a high volume, "high concentrate" foam applicator that will produce strong dilution ratios for the toughest cleaning jobs. Weaker dilution ratios are achieved with metering tips. This venturi injection system uses standard city water pressure (35 - 125 PSI) to draw and blend a high concentration of chemical concentrate into the water stream to create a very strong chemical solution. A high volume of 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 discharge hose

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SAFETY & OPERATIONAL PRECAUTIONS

- **When connecting to a potable water supply follow all local codes for 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 eye wear 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)

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.
4. 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 installing the inline tip holder and a metering tip into chemical pick up tube. See chemical label for dilution ratio recommendation or consult your chemical supplier.

- For the strongest possible chemical dilution ratio, do not install a metering tip.
- The dilution ratios in the metering tip chart are based on chemical with a viscosity of 1CPS.
- For water pressure other than the example, use the Metering Tip Selection Formula.
- Due to varying chemical viscosity and applications, you may need to increase/decrease the tip size to get the best result.
- Install a colored metering tip in the inline tip holder and insert into the chemical pick up tube as shown in the drawing. Use the provided clamp.
- Once metering tip is installed immerse the chemical strainer into your chemical concentrate.

TO OPERATE

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

Metering Tip Selection Chart

Metering Tip Color	Oz. per Min.	Example: Dilution Ratio @ 40 PSI
Brown	0.56	720:1
Clear	0.88	458:1
Bright Purple	1.38	292:1
White	2.15	188:1
Pink	2.93	138:1
Corn Yellow	3.84	105:1
Dark Green	4.88	83:1
Orange	5.77	70:1
Gray	6.01	67:1
Light Green	7.01	58:1
Med. Green	8.06	50:1
Clear Pink	9.43	43:1
Yellow Green	11.50	35:1
Burgandy	11.93	34:1
Pale Pink	13.87	29:1
Light Blue	15.14	27:1
Dark Purple	17.88	23:1
Navy Blue	25.36	16:1
Clear Aqua	28.60	14:1
Black	50.00	8:1
No Tip Ratio Up To:		2.8:1

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

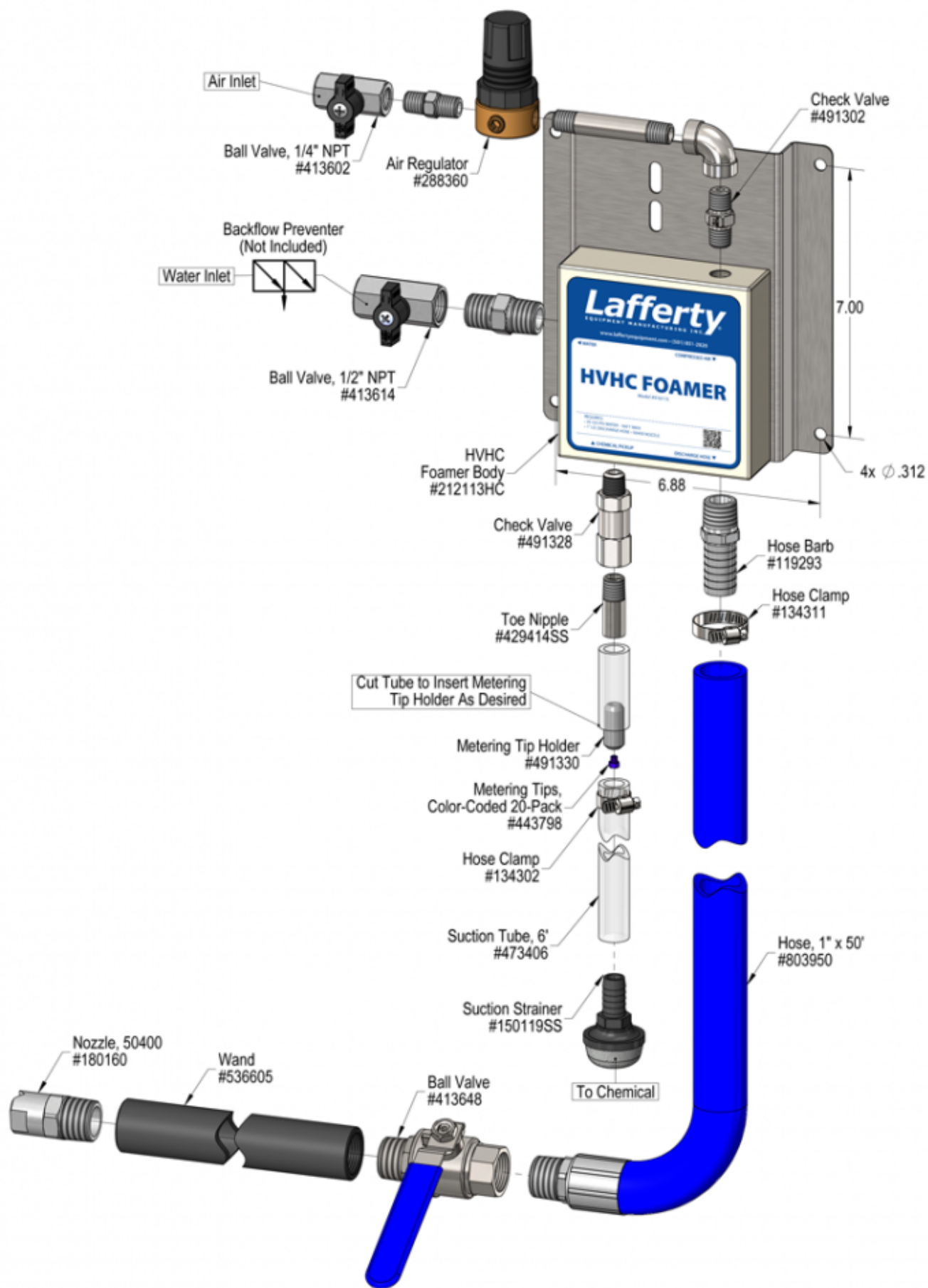
Metering Tip Selection Formula

$$(GPM \times 128) / \text{Dilution Ratio} = \text{Oz per Min}$$

Flow Rate Chart

Pressure	Flow Rate
PSI	GPM
40	3.15
50	3.52
60	3.86
70	4.17
80	4.45
90	4.73
100	4.98
110	5.22
120	5.46

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Problem	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.		18
H) Air/chemical solution backing up into water line.		20

Possible Cause / Solution	
Startup	Maintenance
<ol style="list-style-type: none"> 1. Air pressure too high <ul style="list-style-type: none"> ◦ Adjust the air regulator slowly counterclockwise until output stabilizes. 2. Water pressure or water volume too low/inlet piping too small causing poor chemical pick up <ul style="list-style-type: none"> ◦ Increase water pressure or water volume (SEE REQUIREMENTS). 3. Inlet, discharge ball valve not completely open, or chemical ball valve not open (2 & 3-Way) <ul style="list-style-type: none"> ◦ Completely open the inlet, discharge and chemical. ball valves. 4. Not enough chemical - metering tip too small <ul style="list-style-type: none"> ◦ Install larger metering tip. 5. No metering tip installed or metering tip too large <ul style="list-style-type: none"> ◦ Install smaller metering tip. 6. Improper chemical <ul style="list-style-type: none"> ◦ Ensure product is recommended for foaming and the application. 7. Chemical tube not immersed in chemical or depleted <ul style="list-style-type: none"> ◦ Immerse tube or replenish. 8. Discharge hose too long or wrong size or kinked <ul style="list-style-type: none"> ◦ Straighten the hose or replace hose with correct size and length. ◦ If a longer than the standard hose length provided is needed water pressure must be at or above 65 PSI for up to a 75' hose 9. Nozzle size too small <ul style="list-style-type: none"> ◦ Replace nozzle with correct size. 10. Use of an oiler in the airline will cause poor foam quality <ul style="list-style-type: none"> ◦ Use only clean, dry air. 11. Soil has hardened on surface, rinse foam before it dries <ul style="list-style-type: none"> ◦ Reapplication may be necessary. 	<ol style="list-style-type: none"> 12. Foamer inlet orifice clogged <ul style="list-style-type: none"> ◦ Check/clean inlet orifice for obstructions. DO NOT DRILL OUT. Install a water filter. 13. Chemical strainer or metering tip partially blocked <ul style="list-style-type: none"> ◦ Clean or replace chemical strainer and/or metering tip. 14. Chemical tube stretched out or pin hole/cut in chemical tube sucking air. <ul style="list-style-type: none"> ◦ Cut off end of tube or replace tube. 15. Vacuum leak in chemical pick-up connections <ul style="list-style-type: none"> ◦ Tighten the connection. 16. Air regulator failed allowing too much air or not enough air <ul style="list-style-type: none"> ◦ Clean or replace. 17. Air check valve failed - Discharge ball valve left closed with inlet ball valves open <ul style="list-style-type: none"> ◦ Clean or replace. 18. Chemical check valve stuck or failed <ul style="list-style-type: none"> ◦ Clean or replace. 19. Hard water scale or chemical build-up may have formed in the foamer body causing poor or no chemical pick-up <ul style="list-style-type: none"> ◦ Follow Preventive Maintenance instructions below, using hot water or descaling acid. When there is no draw at all, carefully remove fittings and soak entire body in descaling acid. 20. No backflow preventer installed and/or inlet ball valve left on when not in use <ul style="list-style-type: none"> ◦ Install appropriate backflow preventer into water line.

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.