

LAFFERTY EQUIPMENT MANUFACTURING, INC. Installation & Operation Instructions

Models # 918105 • HP Foamer Complete #918115 HPSS Foamer Complete

REQUIREMENTS

Water:

Supply line..... 1/2" I.D. minimum
Temp. range..... Ambient to 160° F
Pressure range..... HP - 400 to 700 PSI
..... HPSS - 400 to 1000 PSI
Flow range 1.0 to 1.42 GPM

Compressed Air..... up to 5½ CFM

Nozzlesize 50250

Hose:

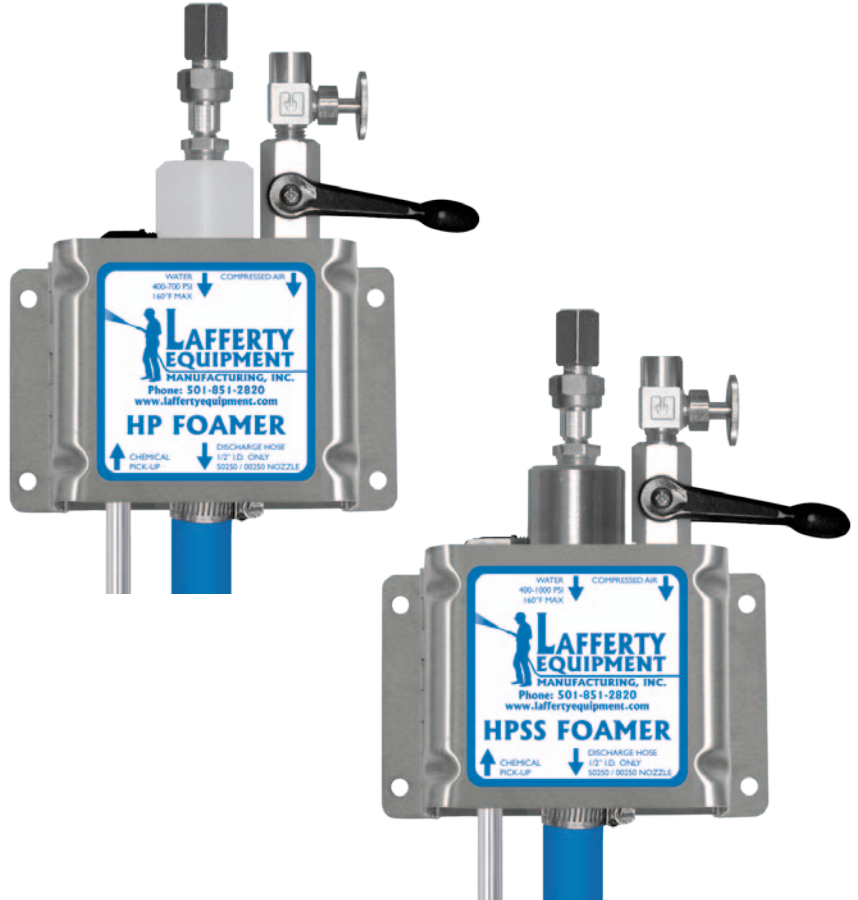
I.D.1/2"
Length 50'

OPTIONS

- 00250 Nozzle # 180153
(for increased foam throw)

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



www.LaffertyEquipment.com

501-851-2820

**READ ALL
INSTRUCTIONS BEFORE
USING EQUIPMENT!**



Safety & Operation Notes

- **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.
- Follow the chemical manufacturer's safe handling instructions.

PRINCIPLES OF OPERATION:

This is a venturi foamer that will siphon chemical concentrates from any sized container and produce up to 21 different dilution ratios using the supplied metering tips. It requires high pressure water and compressed air to generate a powerful cleaning, clinging foam and project it onto any surface.

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(s) as shown in the diagram.
3. Connect water supply. **DO NOT TURN ON**
4. Connect compressed air supply. **DO NOT TURN ON**

To set the desired water to chemical dilution ratio you will have to select and install 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*.
5. After metering tip is installed, push the chemical tube over the check valve and immerse the chemical strainer into your chemical concentrate.

TO FOAM

1. **Hold the wand firmly** and direct the discharge in a safe direction. Open the water ball valve, then the air ball valve.
2. WAIT SEVERAL SECONDS for the foamer to draw the chemical and the foam output to stabilize. For dryer foam turn the needle valve knob *slightly* counterclockwise. For wet foam, turn the needle valve slightly clockwise. *(Surging can indicate too small of a metering tip has been selected; select larger one.)* Wait several seconds after each adjustment. Once the desired foam consistency is achieved tighten up the packing nut on the needle valve stem to prevent accidental employee adjustment; there should be no need to adjust the needle valve again. **A medium wet foam will give the best cleaning results! Very dry foam will NOT clean as well!**
3. When foaming is completed, do not attempt to cut off flow of foam by restricting or "kinking" hose. Return to the unit and close the water ball valve. After the air blows the solution out of the hose, close the air ball valve. Rinse the work surface before foam dries.

Metering Tip Selection		
Metering Tip Color	Oz. per Min.	EXAMPLE: Dilution Ratio @ 700 PSI
		HP/HPSS
Brown	.84	358:1
Clear	1.16	259:1
Bright Purple	1.4	215:1
White	2.0	150:1
Pink	2.7	111:1
Corn Yellow	3.4	88:1
Dark Green	4.0	75:1
Orange	5.3	57:1
Gray	6.1	49:1
Light Green	7.0	43:1
Med. Green	8.5	35:1
Clear Pink	9.2	33:1
Yellow Green	11.2	27:1
Burgundy	12.5	24:1
Pale Pink	12.9	23:1
Light Blue	14.2	21:1
Dark Purple	17.6	17:1
Navy Blue	21.4	14:1
Clear Aqua	30.2	10:1
Black	40.4	7:1
No Tip	—	4:1

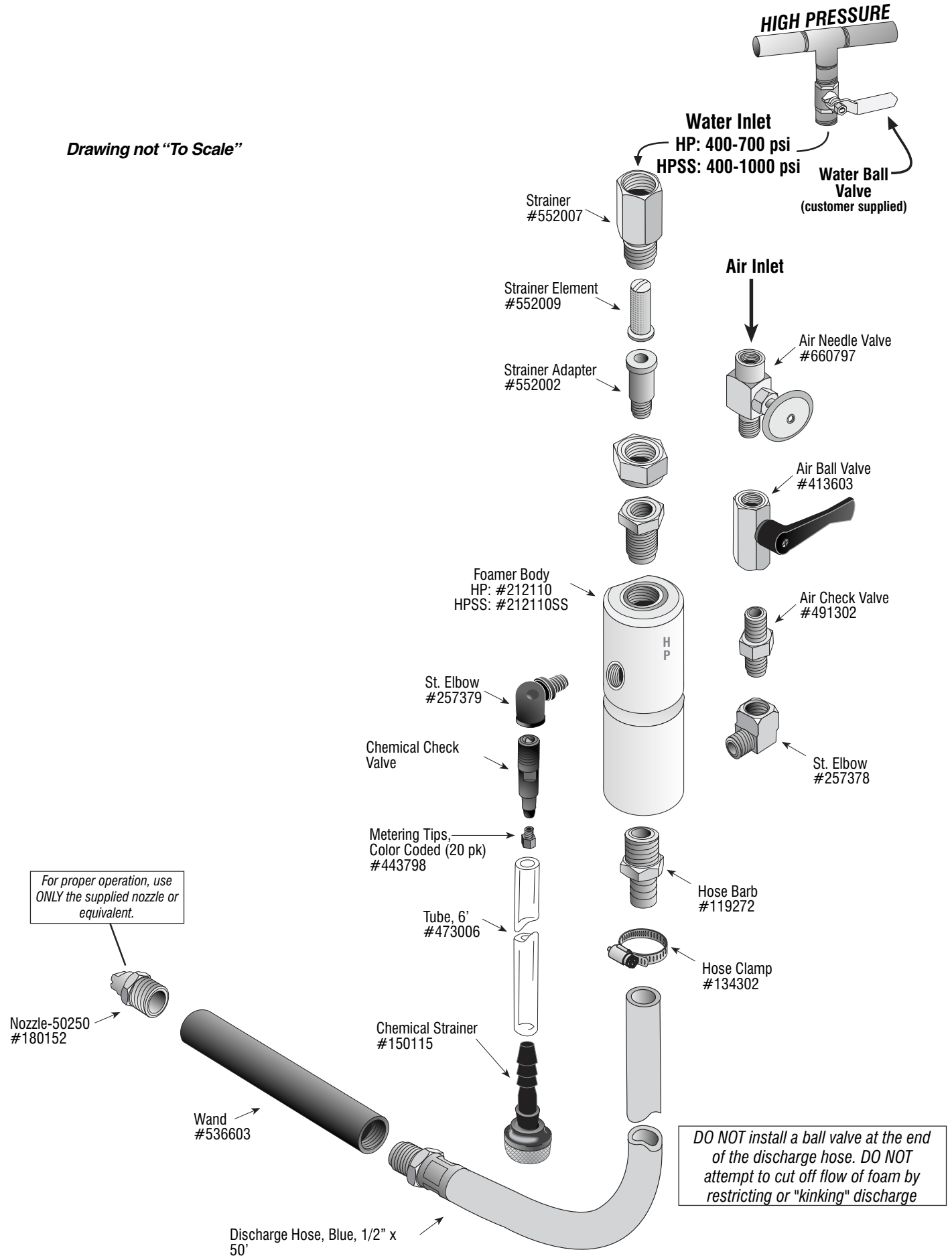
The dilution ratios provided above are approximate values. Your actual dilution ratio may be higher or lower due to variation in chemical viscosity.

Metering Tip Selection Formula	
$(\text{GPM} \times 128) \div$	See chart below for GPM and convert to oz. per min.
Dilution Ratio =	100:1, 50:1, etc.
Oz. per Min.	Match to nearest number in chart above.

Water Flow Rate Chart		
Water Pressure PSI	Water Flow Rate GPM	
	HP	HPSS
400	1.50	1.50
500	1.64	1.64
600	1.81	1.81
700	1.95	1.95
800	—	2.07
900	—	2.20
1000	—	2.35

⚠ Turn Off Inlet Ball Valves When Not In Use.

Drawing not "To Scale"



Troubleshooting Guide

Model #918105 HP & #918115 HPSS Foamer Complete

PROBLEMS WITH FOAMER	Possible Cause / Solution	
	Startup	Maintenance
A) Foam surges and/or hose "bucks".	1, 2, 3, 4, 6, 7, 8, 9, 10	13, 14, 15, 17, 18
B) Foamer will not draw chemical.	1, 3, 4, 7, 8, 9, 10	13, 14, 15, 17, 18
C) Foam too wet.	2, 4, 6, 8, 9, 10	13, 14, 15, 17, 18
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.		16
G) Water backing up into chemical container.		12

Possible Cause / Solution

Startup	Maintenance
<ol style="list-style-type: none"> 1. Air volume too high <ul style="list-style-type: none"> • Adjust the needle valve slowly clockwise until output stabilizes. 2. Use of an oiler in the airline will cause poor foam quality <ul style="list-style-type: none"> • Use only clean, dry air. 3. Inlet ball valve not completely open <ul style="list-style-type: none"> • Completely open the foam/sanitize and discharge 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/or the application. 7. Chemical tube not immersed in chemical or chemical depleted <ul style="list-style-type: none"> • Immerse tube or replenish. 8. Discharge hose too long or wrong size or kinked (See <i>REQUIREMENTS</i> on page 1) <ul style="list-style-type: none"> • Straighten the hose - Replace hose with correct size. 9. Nozzle size too small (See <i>REQUIREMENTS</i> on page 1) 10. Water pressure or water volume too low/inlet piping too small <ul style="list-style-type: none"> • Increase water pressure or water volume (See <i>REQUIREMENTS</i> on page 1). 11. Soil has hardened on surface; always rinse foam before it dries <ul style="list-style-type: none"> • Reapplication may be necessary. 	<ol style="list-style-type: none"> 12. Chemical check valve stuck or failed <ul style="list-style-type: none"> • Clean or replace. 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 in) <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 check valve failed <ul style="list-style-type: none"> • Replace. 17. Water strainer element clogged or missing/foamer inlet orifice clogged <ul style="list-style-type: none"> • Clean or replace strainer element; check/clean inlet orifice for obstructions. DO NOT DRILL OUT. 18. 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 and/or descaling acid. When there is no draw at all, carefully remove fittings and soak entire foamer body in descaling acid.

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 water ball valve for several seconds to flush chemical and help prevent chemical build-up. Check and/or clean chemical strainer; replace if missing.