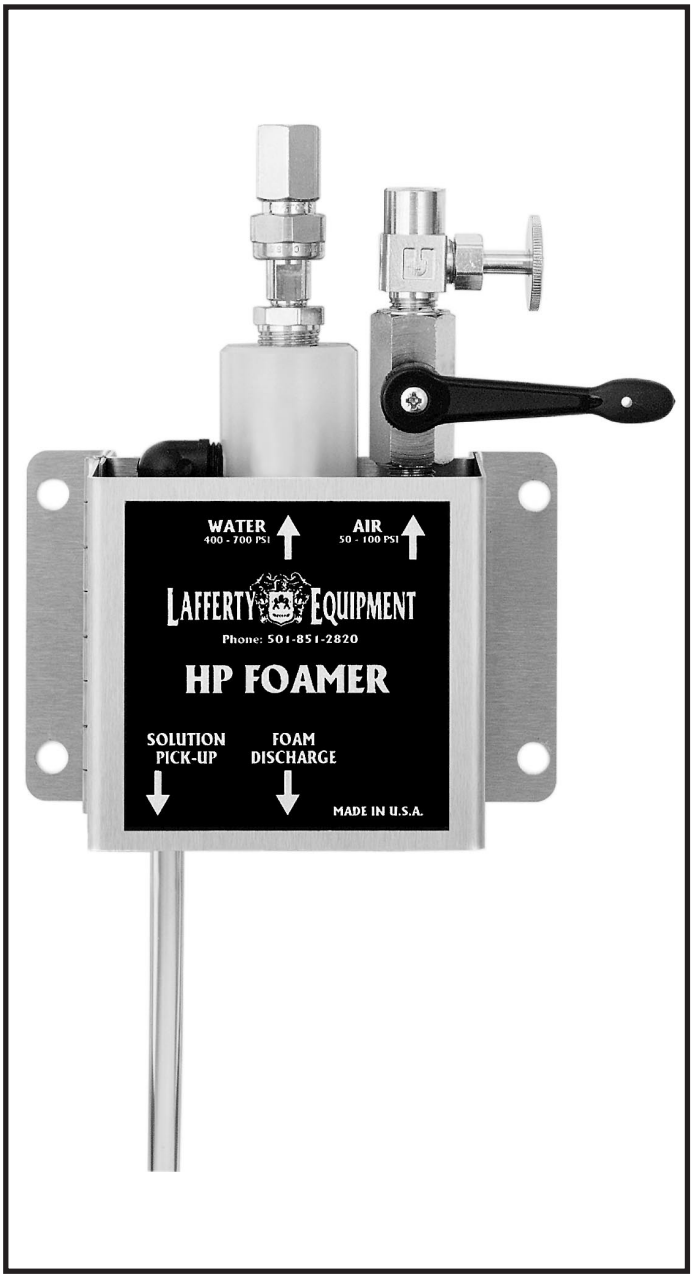
LAFFERTY EQUIPMENT MFG., INC.
INSTALLATION / OPERATION INSTRUCTIONS
HP FOAMER

Requirements

400 – 700* PSI Water — Up to 2 GPM
50 – 100 PSI Air — Up to 12 SCFM
1/2" I. D. Discharge Hose

Water Temperature

Ambient to 140° F*



OPTIONS

- ***Dual Chemical Pick-Up** (Model #s below)*
- ***00250 Nozzle, part # 180153 (increases foam throw distance from 7' with the standard 50250 fan nozzle to 20')***
- ***Stainless Steel Hose Rack***
- ***1 Gallon Stainless Steel Jug Rack (round)***
- ***1 Gallon Stainless Steel Jug Rack (square)***
- ***2 1/2 Gallon Stainless Steel Jug Rack (inside dimensions 8 ½" x 10 ½")***
- ***5 Gallon Stainless Steel Jug Rack (inside dimensions 12" x 12")***

Model # 918100, HP Foamer
** **Model # 918500, HPDU Foamer**
(with nozzle only)

Model # 918105, HP Foamer Complete
** **Model # 918505, HPDU Foamer Complete**
(with 50' hose, open-flow wand, and nozzle)

***When water temperature could exceed 140° F, or when pressure is greater than 700 psi, order our HPSS Foamer.**

HP FOAMER INSTALLATION / OPERATION INSTRUCTIONS

CAUTION: Always observe good safety habits. Wear protective clothing, gloves, and eye wear. Direct discharge away from yourself and others. DO NOT attempt to stop flow of foam by restricting or "kinking" hose. DO NOT install a ball valve at the end of the foam hose.

TO INSTALL (See Parts Diagram, Facing Page)

1. Mount the HP Foamer to a suitable surface.
2. Connect your water and air lines to the foamer (see diagram). Loosen strainer cap from strainer body to create a swivel union effect for easy installation of water hose and cleaning or replacement of **water strainer element**.
3. Connect the foam hose to the hose barb and secure with the clamp. **[Hose must be a 1/2" I.D.]**
4. Connect the foam wand with the nozzle to the hose. **[Use *only* a 50250 or 00250 nozzle with the HP foamer.]**
5. *Stapled to these instructions, with a matching color-coded chart, are metering tips which control your chemical to water dilutions.* You will need to know the water pressure and the number of ounces of chemical needed per gallon of water to determine the correct tip color. *(See chemical label for manufacturer's recommendation.)*

A. Locate your water pressure in the chart. The number below it is your water flow rate in **gallons per minute**.

B. Multiply the **gallons per minute** by the number of **ounces of chemical needed per gallon** of water.

C. Match answer(s) to the *nearest* number in metering tip selection chart. **[The tip selection chart is based on water-thin chemical. Thicker chemicals will require a larger metering tip. *If selected metering tip does not produce desired foam consistency, increase tip size until desired foam consistency and cleaning results are achieved.* For dual pick-up, it is important to install a metering tip into *each* solution check valve and immerse both chemical strainers into chemical concentrates.]**

EXAMPLE OF METERING TIP SELECTION
HP Foamer at 500 PSI

- **500 PSI = 1.4 GPM**
- **2 ounces of chemical per gallon of water**
- **1.4 x 2 = 2.8**
- **2.8 ≅ 2.7 for thin chemical (pink tip)**
  (thicker chemicals will require a larger tip)

D. Open cover. Install selected metering tip into (each) solution check valve. Next, push the chemical tube over the check valve and close cover. Immerse the chemical strainer into your chemical concentrate.

TO OPERATE

1. While firmly holding foam wand, ***point discharge away from yourself and others***. Then, completely open the water supply valve. Completely open the air ball valve and observe foam quality.
2. Foam consistency can be changed by adjusting the air volume with the needle valve. For **drier** foam, turn the needle valve **counterclockwise**. For **wetter** foam, turn the needle valve **clockwise.** If foam is still too wet or hose is "bucking" after adjustments are made, try installing a larger metering tip.
3. To prevent streaking, apply foam in a thin layer *from the bottom and work up*.
4. When foaming is completed, return to foamer and close the water supply valve and the air ball valve. **Do not attempt to cut off flow of foam by restricting or "kinking" hose.**
5. Rinse the work surface before foam dries.

PREVENTIVE MAINTENANCE: When the foamer will be out of service for extended periods, the risk of residual chemical build-up is increased. To prevent build-up, remove chemical tube from chemical concentrate and place in warm water. Completely open the water supply valve for 30 seconds to flush. Check and/or clean water strainer element and chemical strainer; replace if missing.

WATER PRESSURE	400 PSI	500 PSI	600 PSI	700 PSI
HP FOAMER WATER FLOW RATE	1.3 GPM	1.4 GPM	1.5 GPM	1.6 GPM

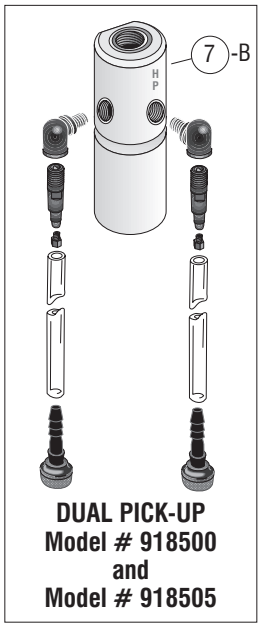
The number under each color in the chart below represents the **average *ounces of water-thin chemical* which will pass through the tip *per minute***.

METERING TIP SELECTION IN OUNCES PER MINUTE (AVERAGE)

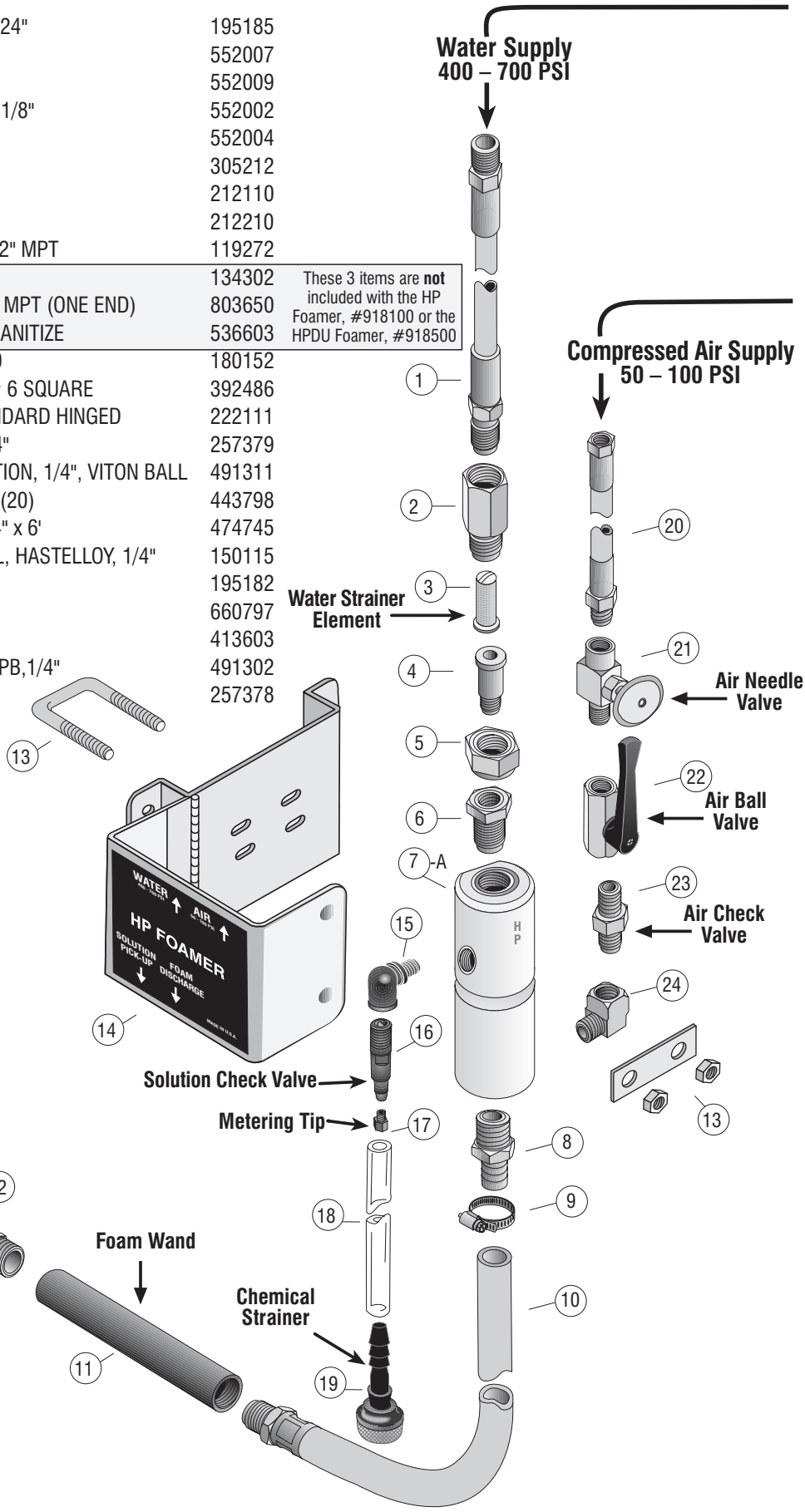
COLOR	Brown	Clear	Bright Purple	White	Pink	Corn Yellow	Dark Green	Orange	Gray	Light Green	Medium Green	Clear Pink	Yellow Green	Burg-undy	Pale Pink	Light Blue	Dark Purple	Navy Blue	Clear Aqua	Black
Thin Chemical	0.84	1.16	1.4	2.0	2.7	3.4	4.0	5.3	6.1	7.0	8.5	9.2	11.2	12.5	12.9	14.2	17.6	21.4	30.2	40.4

HP FOAMER COMPLETE - Model # 918105

QTY. HP	QTY. HPDU	CALL #	DESCRIPTION	PART #	
1	1	1	HOSE, WATER, 1/4" x 24"	195185	
1	1	2	STRAINER BODY, 1/4"	552007	
1	1	3	STRAINER ELEMENT	552009	
1	1	4	STRAINER ADAPTER, 1/8"	552002	
1	1	5	STRAINER CAP, SS	552004	
1	1	6	BUSHING, 3/8" x 1/8"	305212	
1		7-A	FOAMER BODY, HP	212110	
	1	7-B	FOAMER BODY, HPDU	212210	
1	1	8	HOSE BARB, 1/2" x 1/2" MPT	119272	
1	1	9	HOSE CLAMP, 1/2"	134302	These 3 items are **not** included with the HP Foamer, #918100 or the HPDU Foamer, #918500
1	1	10	HOSE, 1/2" x 50', 1/2" MPT (ONE END)	803650	
1	1	11	WAND, POLY, FOAM/SANITIZE	536603	
1	1	12	NOZZLE, 1/2" – 50250	180152	
1	1	13	U-BOLT ASSEMBLY, # 6 SQUARE	392486	
1	1	14	BASE & COVER, STANDARD HINGED	222111	
1	2	15	ELBOW, ST., POLY, 1/4"	257379	
1	2	16	CHECK VALVE, SOLUTION, 1/4", VITON BALL	491311	
1	1	17	METERING TIPS, SET (20)	443798	
1	2	18	TUBE, CHEMICAL, 1/4" x 6'	474745	
1	2	19	STRAINER, CHEMICAL, HASTELLOY, 1/4"	150115	
1	1	20	HOSE, AIR, 1/4" x 24"	195182	
1	1	21	NEEDLE VALVE, 1/4"	660797	
1	1	22	BALL VALVE, 1/4" FFL	413603	
1	1	23	CHECK VALVE, AIR, NPB,1/4"	491302	
1	1	24	ELBOW, ST., 1/4"	257378	



DUAL PICK-UP
Model # 918500
and
Model # 918505



TROUBLESHOOTING GUIDE *for* HP FOAMER

PROBLEMS	POSSIBLE CAUSE / SOLUTION																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A) Foamer will not draw chemical.	●					●	●	●	●	●		●	●	●	●				●
B) Foam surges and/or hose "bucks."	●	●	●	●		●	●	●		●	●		●	●	●		●		●
C) Foam output too wet.		●	●	●	●	●	●	●		●	●	●	●	●	●		●		●
D) Foam output too dry.	●															●			
E) Water flowing into chemical container.									●										
F) Foam does not clean properly.											●						●	●	
G) Water/chemical backing up into air line.					●														

POSSIBLE CAUSE / SOLUTION

1. **Air volume too high –** Slightly adjust the needle valve (clockwise).
2. **Use of an oiler on the airline will cause poor foam quality –** Use only clean, **dry** air.
3. **Inadequate air supply –** Open air inlet valve fully/adjust needle valve (counterclockwise).
4. **Air volume too low or needle valve clogged –** Adjust needle valve counterclockwise or clean/replace valve.
5. **Air check valve clogged or failed –** Clean or replace the air check valve.
6. **Temperature too high –** Decrease water temperature.
7. **Foam hose too long or wrong size or kinked; must be 1/2" I.D. –** Maximum **recommended** length is 75'. Straighten the hose.
8. **Nozzle size too small –** Must be a 50250 or 00250 nozzle.
9. **Solution check valve clogged or failed –** Clean or replace solution check valve.
10. **Water strainer element clogged –** Clean the water strainer element. [Completely unscrew strainer cap from strainer for easy cleaning or replacement of strainer element; see diagram, pg. 3.]
11. **Improper chemical –** Ensure product is recommended for foaming and/or the application.
12. **Chemical tube not immersed in chemical or chemical depleted –** Immerse tube or replenish.
13. **Chemical strainer or metering tip blocked –** Clean or replace chemical strainer and/or tip.
14. **Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube –** Cut approximately 1/2" off end of tube or replace tube.
15. **Vacuum leak in chemical pick-up assembly –** Tighten the connection(s).
16. **Chemical to water ratio too high –** Install **smaller** tip.
17. **Chemical to water ratio too low –** Install **larger** tip.
18. **Soil has hardened on surface –** Reapplication may be necessary. Always rinse foam before it dries.
19. **Water scale or chemical build-up may have formed in the foamer body causing poor pick-up –** To descale, carefully remove body and soak *entire* foamer body in descaling acid.

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