

Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # 916875 · Portable Gas Powered 16 Gallon HV Foamer

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	35 to 125 PSI
Flow	3.5 GPM @ 50 PSI
Supply Line	3/4"

Compressed Air

up to 5 CFM

Hose

1" ID x 50'

Nozzle

00400 or 50400

OPTIONS

Alternate Chemical Check Valve - Viton Standard

Check Valve, Chemical, PP(W), 1/4" (EPDM) # 491401

Alternate Air Check Valve - EPDM Standard

Check Valve, Air, SS, 1/4" MM (Viton / Hast) # 491306



www.laffertyequipment.com

501-851-2820

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

OVERVIEW

The Portable Gas Powered 16 Gallon HV Foamer is a high volume foam applicator featuring a 4-wheel, all stainless steel cart assembly, an integrated gas powered Honda air compressor and a 16 gallon chemical concentrate tank. This venturi injection system uses standard city water pressure (35 - 125 PSI) to draw and blend chemical concentrate from the tank into the water stream to create an accurately diluted 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 and fan nozzle on to any surface up close or at distances up to 15 feet (25 feet with zero degree nozzle).

SAFETY & OPERATIONAL PRECAUTIONS

- Prepare the gas powered air compressor for use, in line with the separately included instructions. Follow all safety precautions as presented in the gas powered air compressor manual.
- 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 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.
- Follow the chemical manufacturer's safe handling instructions.
- NEVER mix chemicals without first consulting chemical manufacturer.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

Fill the air compressor with oil and gas, according to the instructions supplied with the unit before operating.

1. Remove the lid on the chemical tank and fill the tank with the desired amount of chemical concentrate. Replace the lid.
2. Move to the area to be foamed.
3. Connect water supply. **If you are connecting to a potable water supply follow all local codes for backflow prevention.**

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 discharge is closed or pointed in a safe direction before turning water on. Discharge can be shut off at any time during operation but should not be left unattended for long periods of time. Expect a strong blast when re-opening the discharge ball valve or trigger gun.

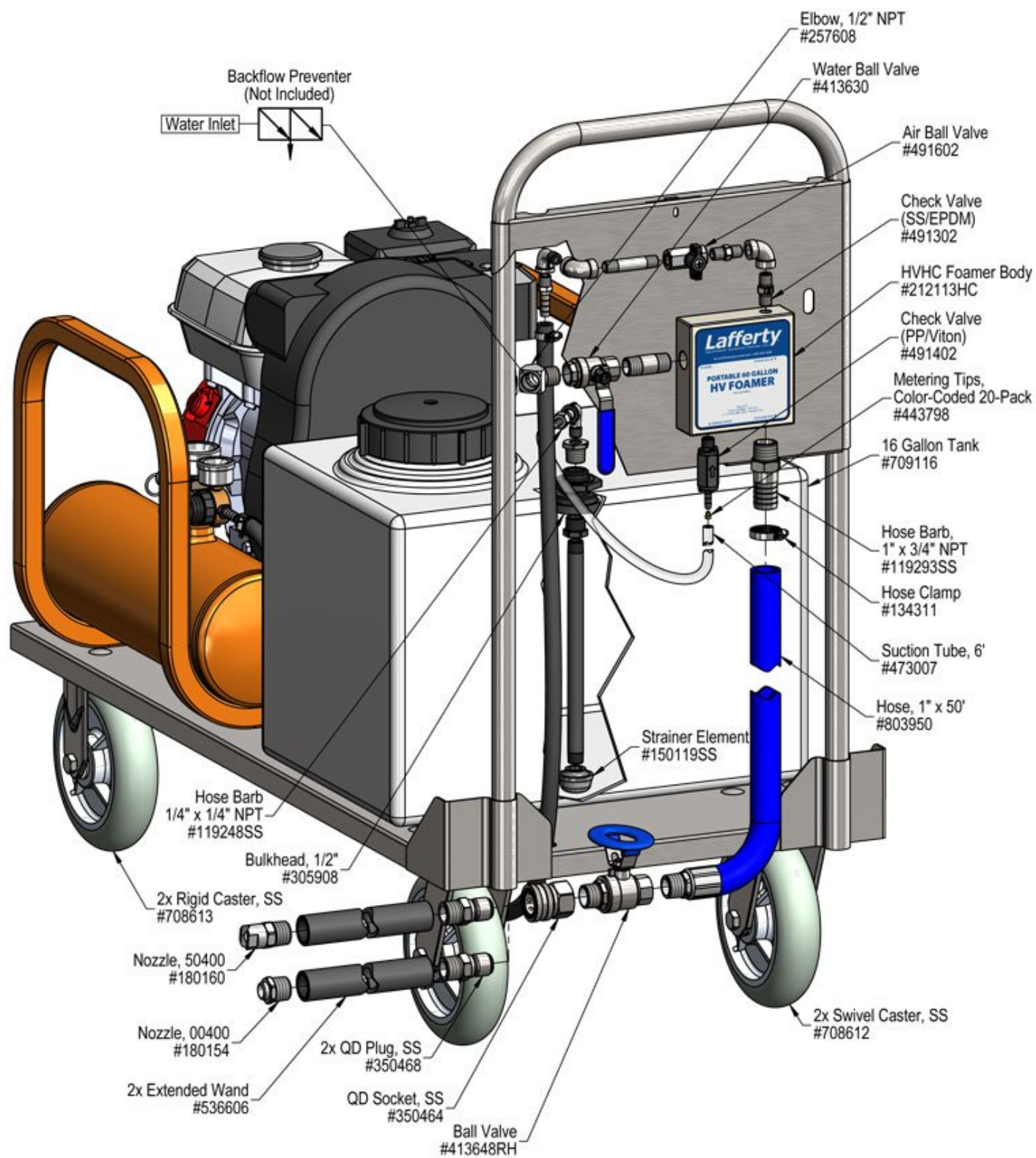
1. Make final metering tip adjustments based on application results.
2. Start the air compressor.
3. With wand in hand open the water ball valve, and the air ball valve.
4. Open the discharge ball valve.
 - Wait a few seconds and observe foam consistency.
 - The air regulator is set to maximum flow and this is the optimum level for foaming with this unit.
 - Medium wet foam will give the best cleaning results! Dry foam will NOT clean as well!
 - You may have to try different sized metering tips until foam consistency and cleaning results are acceptable.
5. To change from using the fan nozzle wand to the zero degree nozzle wand, close the discharge ball valve, quick disconnect the fan nozzle wand and firmly quick connect the zero degree nozzle wand. Reopen the discharge ball valve and continue foaming.
6. When foaming is completed, close the discharge ball valve, return to the unit and close the water and air ball valves. Briefly re-open the discharge ball valve to relieve pressure in the hose.
7. Turn off the air compressor.
8. Rinse before the foam dries.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	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
Burgundy	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.		
FORMULA		
$GPM \times 128 \div \text{Desired Dilution Ratio} = \text{oz/min}$ <ul style="list-style-type: none"> • 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
35	2.95
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
125	5.57



Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Foam surges and/or hose "bucks".	1, 2, 3, 4, 6, 7, 8, 9,	11, 12, 13, 14, 15, 17, 18
B) Foamer will not draw chemical.	1, 3, 4, 7, 8, 9	11, 12, 13, 14, 15, 17, 18
C) Foam too wet.	2, 3, 4, 6, 7, 8, 9	12, 13, 14, 15, 17, 18
D) Foam does not clean properly (too dry).	1, 4, 6, 10	
E) Using too much chemical.	5	16
F) Water/chemical backing up into air line.		17
G) Water backing up into chemical container.		19
H) Air/chemical solution backing up into water line.		20
I) Air compressor will not start up		

Possible Cause / Solution	
Startup	Maintenance
1. Air pressure too high <ul style="list-style-type: none"> Adjust the air regulator slowly counterclockwise until output stabilizes. 	11. Foamer inlet orifice clogged <ul style="list-style-type: none"> Check/clean inlet orifice for obstructions. DO NOT DRILL OUT. Install a water filter.
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). 	12. Chemical strainer or metering tip partially blocked <ul style="list-style-type: none"> Clean or replace chemical strainer and/or metering tip.
3. Inlet or discharge ball valves not completely open <ul style="list-style-type: none"> Completely open the inlet, discharge and chemical ball valves. 	13. 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.
4. Not enough chemical - metering tip too small <ul style="list-style-type: none"> Install larger metering tip. 	14. Vacuum leak in chemical pick-up connections <ul style="list-style-type: none"> Tighten the connection.
5. No metering tip installed or metering tip too large <ul style="list-style-type: none"> Install smaller metering tip. 	15. Air regulator failed allowing too much air or not enough air <ul style="list-style-type: none"> Clean or replace.
6. Improper chemical <ul style="list-style-type: none"> Ensure product is recommended for foaming and the application. 	16. Air check valve failed - Discharge ball valve left closed with inlet ball valves open <ul style="list-style-type: none"> Clean or replace.
7. Chemical tube not immersed in chemical or depleted <ul style="list-style-type: none"> Immerse tube or replenish. 	17. Chemical check valve stuck or failed <ul style="list-style-type: none"> Clean or replace.
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. 	18. 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.
9. Nozzle size too small <ul style="list-style-type: none"> Replace nozzle with correct size. 	19. 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.
10. Soil has hardened on surface, rinse foam before it dries <ul style="list-style-type: none"> Reapplication may be necessary. 	20. Problem with air compressor <ul style="list-style-type: none"> Refer to air compressor instruction manual.

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.

