Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # 975555-GT · Uni-Body Foamer with Trigger Gun

REQUIREMENTS

Chemical Concentrate

| Water | | |
|----------------------------|-------------------|--|
| Temperature | up to 160°F | |
| Pressure | 35 to 125 PSI | |
| Flow | 1.34 GPM @ 40 PSI | |
| Supply Line | 1/2" | |
| Compressed Air | up to 3 CFM | |
| Hose | 3/4" ID x 40' | |
| Nozzle | 50250 | |
| OPTIONS | | |
| Stainless Steel Hose Racks | | |

| Stanness Steel Hose Racks | |
|--|----------|
| Large Stainless Steel Hose Rack | # 224150 |
| Stainless Steel Jug Racks | |
| 5 | # 224200 |
| Jug Rack, SS, 1 Gallon, Round/Square | |
| Jug Rack, SS, 2 1/2 Gallon | # 224210 |
| Jug Rack, SS, 5 Gallon, Round/Square | # 224215 |
| Safe Flow Lid™ for 1 Gallon Jugs | |
| Lid, Suction Tube, and Strainer | # 709101 |
| Alternate Check Valves - EPDM Standard | |
| Check Valve, Chemical, PP/Viton, 1/4" | # 491315 |
| Check Valve, Air, SS/Viton, 1/4" | # 491306 |





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WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Uni-Body Foamer with Trigger Gun is a medium volume foam applicator (1.3 GPM @ 40 PSI) for projecting foaming chemicals on to any surface up close or at a distance using a trigger gun. This venturi injection system uses standard city water pressure (35 - 125 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 discharge hose, trigger gun and fan nozzle at distances up to 12 feet. Gauges display incoming water and air pressure.

SAFETY & OPERATIONAL PRECAUTIONS

- 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 safety goggles 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.
- \bullet NEVER mix chemicals without $\underline{\text{first}}$ consulting chemical manufacturer.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

- 1. Mount the unit to a suitable surface <u>above</u> 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 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

<u>Always</u> 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 <u>should not be left unattended for long periods of time. Expect a</u> strong blast when re-opening the discharge ball valve or trigger gun.

- 1. Make final metering tip adjustments based on application results.
- 2. With wand in hand open the water ball valve, and the air ball valve.
- 3. Open the discharge ball valve.
 - Wait a few seconds and observe foam consistency.
 - Use the chart at right to set the air pressure. Do not go over the maximum air pressure based on your water pressure.
 - To adjust the foam consistency pull out on the air regulator knob, turn slightly clockwise for dryer foam and counterclockwise for wetter foam. Wait a few seconds to see each adjustment.
 - Medium wet foam will give the best cleaning results! Dry foam will NOT clean as well!
 - You may also have to try different sized metering tips until foam consistency and cleaning results are acceptable. Once this is set and desired foam consistency is achieved push lock the knob. you are ready to start application.
- 4. 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.
- 5. Rinse before the foam dries.

METERING TIP SELECTION

| METERING TIP COLOR | OZ / MIN | EXAMPLE: DILUTION RATIO @ 40 PSI |
|-----------------------|-------------|-------------------------------------|
| Brown | 0.56 | 306:1 |
| Clear | 0.88 | 195:1 |
| Bright Purple | 1.38 | 124:1 |
| White | 2.15 | 80:1 |
| Pink | 2.93 | 59:1 |
| Corn Yellow | 3.84 | 45:1 |
| Dark Green | 4.88 | 35:1 |
| Orange | 5.77 | 30:1 |
| Gray | 6.01 | 29:1 |
| Light Green | 7.01 | 24:1 |
| Med. Green | 8.06 | 21:1 |
| Clear Pink | 9.43 | 18:1 |
| Yellow Green | 11.50 | 15:1 |
| Burgundy | 11.93 | 14:1 |
| Pale Pink | 13.87 | 12:1 |
| Light Blue | 15.14 | 11:1 |
| Dark Purple | 17.88 | 10:1 |
| Navy Blue | 25.36 | 7:1 |
| Clear Aqua | 28.6 | - |
| Black | 50.00 | - |
| No Tip Ratio Up To: | | 6.0:1 |

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

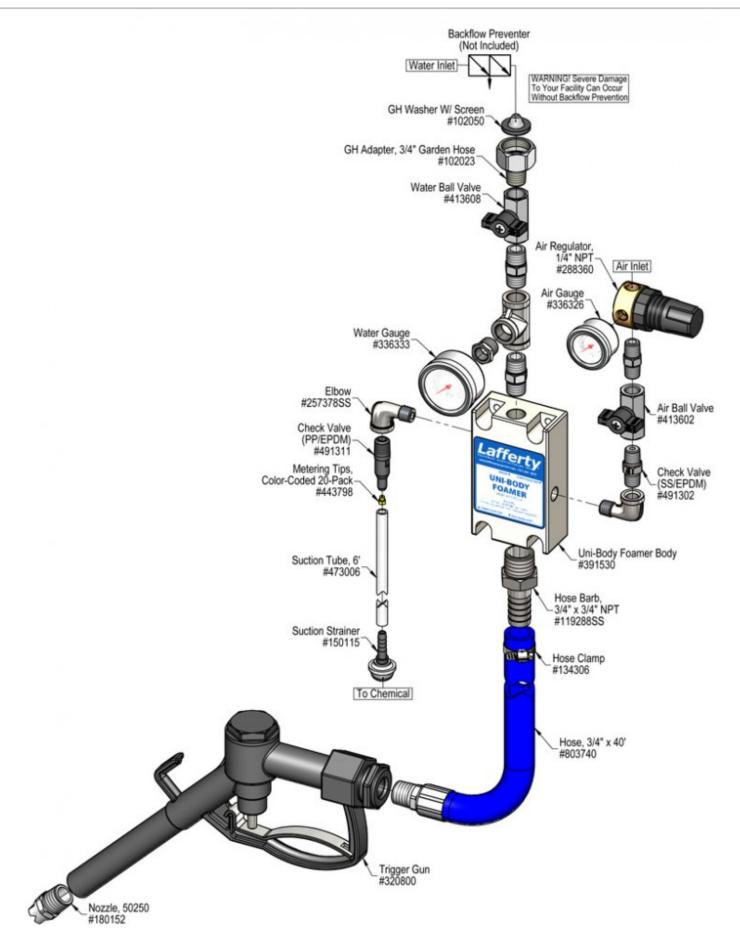
FORMULA

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 | | | | | |
|-----------------|-----------|---------------------|--|--|--|
| Water | | Air Pressure | | | |
| Pressure: PSI | Flow: GPM | Maximum PSI Setting | | | |
| 40 | 1.34 | 25 | | | |
| 50 | 1.50 | 30 | | | |
| 60 | 1.64 | 40 | | | |
| 70 | 1.77 | 45 | | | |
| 80 | 1.90 | 45 | | | |
| 90 | 2.01 | 45 | | | |
| 100 | 2.12 | 50 | | | |



Troubleshooting Guide

| Problem | Possil | 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 | 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 Maintenance Startup 1. Air pressure too high 12. Foamer inlet orifice clogged • Adjust the air regulator slowly counterclockwise until Check/clean inlet orifice for obstructions. DO NOT output stabilizes. DRILL OUT. Install a water filter. 2. Water pressure or water volume too low/inlet piping too 13. Chemical strainer or metering tip partially blocked small causing poor chemical pick up • Clean or replace chemical strainer and/or metering tip. Increase water pressure or water volume (SEE) 14. Chemical tube stretched out or pin hole/cut in chemical **REQUIREMENTS).** tube sucking air. 3. Inlet, discharge ball valve not completely open, or chemical • Cut off end of tube or replace tube. ball valve not open (2 & 3-Way) 15. Vacuum leak in chemical pick-up connections • Completely open the inlet, discharge, and chemical ball • Tighten the connection. valves. 16. Air regulator failed allowing too much air or not enough air 4. Not enough chemical - metering tip too small • Clean or replace. • Install larger metering tip. 17. Air check valve failed - Discharge ball valve left closed with 5. No metering tip installed or metering tip too large inlet ball valves open Install smaller metering tip. • Clean or replace. 6. Improper chemical 18. Chemical check valve stuck or failed • Ensure product is recommended for foaming and the • Clean or replace. application. 19. Hard water scale or chemical build-up may have formed in 7. Chemical tube not immersed in chemical or depleted the foamer body causing poor or no chemical pick-up • Immerse tube or replenish. Follow Preventive Maintenance instructions below, 8. Discharge hose too long or wrong size or kinked using hot water or descaling acid. When there is no • Straighten the hose or replace hose with correct size draw at all, carefully remove fittings and soak entire and length. body in descaling acid. • If the hose must be longer than the listed Requirement, 20. No backflow preventer installed and/or inlet ball valve left water pressure must be 65 PSI or more for up to a 75' on when not in use hose. Install appropriate backflow preventer into water line. 9. Nozzle size too small • Replace nozzle with correct size. 10. Use of an oiler in the airline will cause poor foam quality • Use only clean, dry air. 11. Soil has hardened on surface, rinse foam before it dries

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.

Reapplication may be necessary.

