

LAFFERTY EQUIPMENT MANUFACTURING, INC. Installation & Operation Instructions

Portable 20 Gallon Conveyor Mate Foamer Model # 912820

REQUIREMENTS

Water:

Pressure range..... 30 to 250 PSI
Temp. range..... Ambient to 160° F

Compressed Air.....up to 6 SCFM

Nozzles (x 2).....size 80150

Hose:

I.D.3/4"

Foaming Chemical



www.LaffertyEquipment.com
501-851-2820



Safety & Operational Precautions

SAFETY PRECAUTIONS

- **Backflow prevention:** If using municipal water, follow all local codes for preventing backflow into the water supply before installing / operating equipment.
- **Personal Safety:**
 - Wear protective clothing, gloves and eyewear when working with chemicals.
 - **Turn off** all ball valves when unit is not in use.
 - Follow the chemical manufacturer's safe handling instructions.

- **Regular equipment maintenance** should include checking all hoses, nozzles, tubes, clamps and connections. (See also, *Preventive Maintenance, page 4.*)

OPERATIONAL PRECAUTIONS

- Do not substitute nozzle or hose sizes. (See "Requirements.") The unit **will not** work properly with nozzles or hoses of any other size.

MANUFACTURER ASSUMES NO LIABILITY FOR THE USE OR MISUSE OF THIS UNIT.

TO SET UP *(Refer to Diagram, Next Page.)*

Read all Safety and Operational Precautions on page 1.

Backflow prevention: If using municipal water, follow all local codes for preventing backflow into the water supply before installing / operating equipment.

1. Remove lid of chemical container and fill with desired quantity of concentrated chemical, up to 20 gallons.
2. Push Conveyor Mate system to desired location, then lock the front casters to prevent movement during operation.
3. **Connect the water supply and compressed air supply** as shown in the diagram.
4. Set arms over and under the center of the conveyor by loosening the L-handles on each arm and adjusting the arms to desired horizontal and vertical positions.
5. **Connect the hoses** to the foam bars as shown.

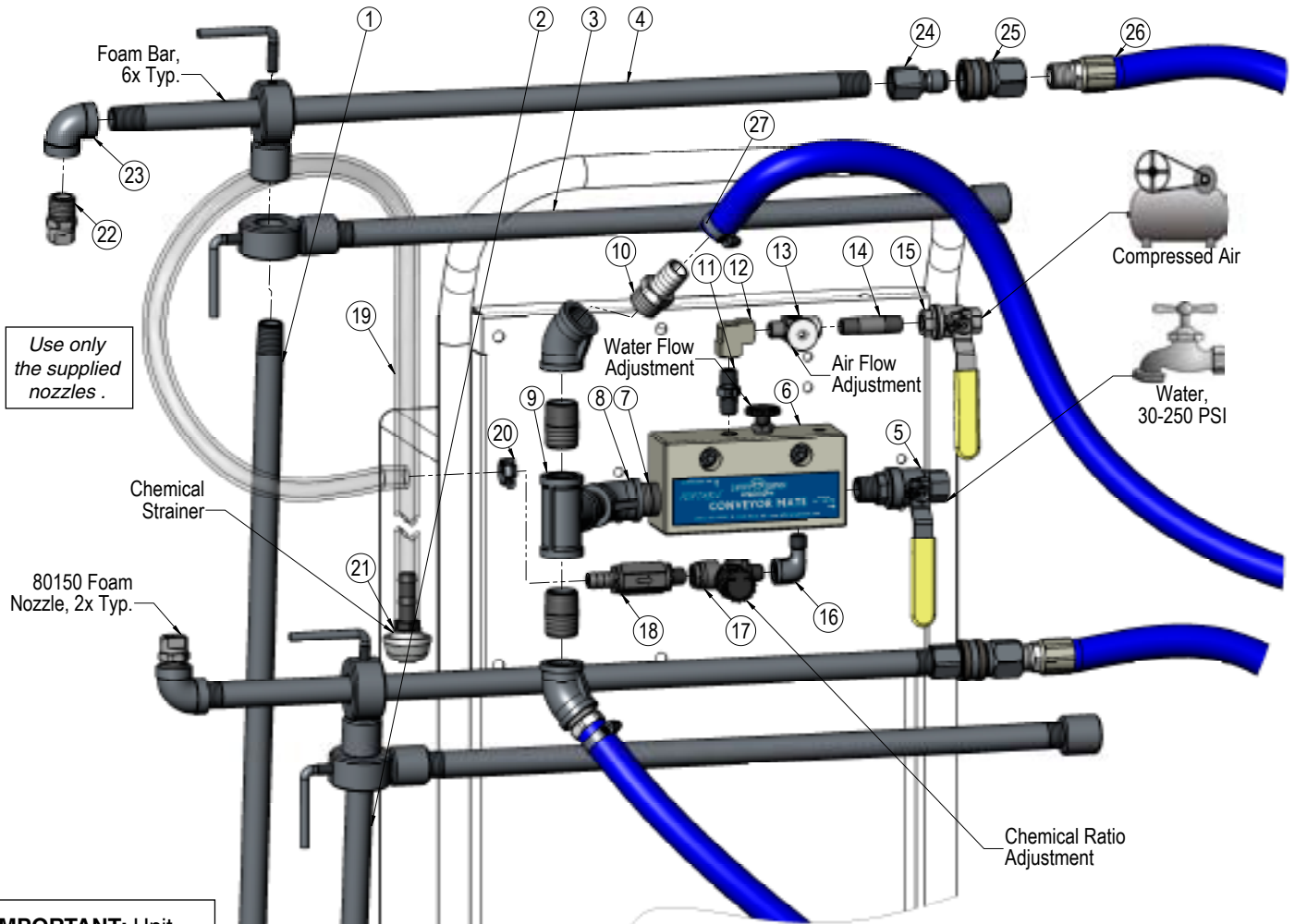
PRINCIPLES OF OPERATION

The heart of the Conveyor Mate is a Lafferty adjustable foamer which features needle valve control over water flow, air flow and chemical injection. This capability allows the user to determine the desired width of the foam discharge pattern by adjusting the water flow rate and then to balance the system via fine control of the air flow and chemical ratio. The foamer can be set to achieve the desired foaming consistency on conveyor belts up to 4' wide.

TO OPERATE

1. **To set the needle valves** - Close the needle valves by turning them completely clockwise. Then, turn the air needle valve and the chemical needle valve *slightly* counterclockwise. *Every 1/4 turn of the air needle valve equals approximately 2.5 cfm. For optimum performance, 3 cfm at 40 psi is recommended.*
2. **Completely open** the water and air ball valves.
3. Observe foam output.
 - A. To adjust the width of the discharge pattern, turn the **water needle valve** counterclockwise for a wider pattern or clockwise for a more narrow pattern. You may also adjust the width of the discharge pattern by rotating the foam bar from the vertical position to change the angle of the nozzle.
 - B. To adjust foam quality, **turn the air needle valve only slightly.**
 - C. If the foam surges, turn the chemical needle valve counterclockwise to adjust the chemical dilution ratio, or turn the air needle valve *very slightly* clockwise to "fine tune" the air volume. *(Also see the Troubleshooting Guide, page 4.)*
4. When foaming is complete, close water ball valve; allow the hoses to clear out with air. Close the air ball valve.

⚠ Always turn off all ball valves when unit is not in use.



IMPORTANT: Unit supplied without a backflow preventer. If using municipal water, follow all local codes for requirements in your area and **install appropriate backflow preventer before operating.**

NOTE: Hardware and wheels removed for clarity.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	429937T	Nipple, Toe, SS, 1/2" x 37"	1
2	429925T	Nipple, Toe, SS, 1/2" x 25"	1
3	429922	Nipple, SS, 1/2" x 22"	2
4	429925	Nipple, SS, 1/2" x 25"	2
5	413641	Ball Valve, SS, 1/2" FM	1
6	212135HCA1	Foamer Body, PPB, 1/2" x 3/4" LCHC Adjustable	1
7	430000SS	Nipple, Close, SS, 3/4"	4
8	257610SS	Elbow, 45°, SS, 3/4"	3
9	677010SS	Tee, SS, 3/4"	1
10	119288	Hose Barb, NPB, 3/4" x 3/4" MPT	2
11	491306	Check Valve, SS, 1/4"	1
12	257358	Elbow, 90°, NPB, 1/4"	1
13	660797	Needle Valve, NPB, 1/4" FM	1
14	429420SS	Nipple, SS, 1/4" x 2"	1
15	413620	Ball Valve, SS, 1/4" FF	1
16	257378SS	Elbow, St., SS, 1/4"	1
17	660781	Needle Valve, PVC, 1/4" FM	1
18	491404	Check Valve, Chemical, PVC, 1/2" HB	1
19	473406	Tube, PVC, 1/2" x 6'	1
20	134302	Hose Clamp, 1/2"	1
21	150119	Strainer, Chemical, Hastelloy, 1/2"	1
22	180148	Nozzle, NPB, 1/2" - 80150	2
23	257362SS	Elbow, 90°, SS, 1/2"	2
24	350452	QD, SS, Plug, 1/2" FPT	2
25	350455	QD, SS, Socket, 1/2" FPT	2
26	803705	Hose, Blue, 3/4" x 5', 1/2" MPT (One End)	2
27	134306	Hose Clamp, 3/4"	2

<p>PROPRIETARY AND CONFIDENTIAL</p> <p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LAFFERTY EQUIPMENT MFG., INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF LAFFERTY EQUIPMENT MFG., INC. IS STRICTLY PROHIBITED.</p>	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ±1/8" ANGULAR: MATCH ±1° BEND: ±5° FINISH: THREE PLACE DECIMAL ±0.031	Lafferty Equipment Mfg., Inc.	
	TITLE: Portable 20 Gallon Conveyor Mate Foamer	DWG. NO.	REV
	See BOM	912820	00
	DO NOT SCALE DRAWING	SCALE: 1:2.5	SHEET 1 OF 1

Troubleshooting Guide

Model # 912820 • Portable 20 Gallon Conveyor Mate Foamer

Problem	Startup Issues	Maintenance Issues
A) Foam surges and/or hose "bucks".	1, 2, 3, 4, 5	7, 8, 9, 11, 12, 14
B) Foam output too wet.	3, 4, 5, 6	7, 8, 9, 11, 12, 14
C) Foamer will not draw chemical.	1, 2	8, 9, 11, 12, 14
D) Foam output too dry / using too much chemical.	1, 10	10
E) Water flowing into chemical container.		11
F) Foam does not clean properly.	3, 4	8, 9, 13, 14

Possible Cause / Solution

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Air volume too high <ul style="list-style-type: none"> • Adjust the air needle valve <i>slowly</i> clockwise. 2. Chemical tube not immersed in chemical or chemical depleted 3. Dilution too weak <ul style="list-style-type: none"> • Adjust needle valve 4. Improper chemical <ul style="list-style-type: none"> • Ensure product is recommended for foaming and/or the application. 5. Use of an oiler in the airline will cause poor foam quality <ul style="list-style-type: none"> • Use only clean, dry air. 6. Air adjustment too low <ul style="list-style-type: none"> • Open air ball valve fully/adjust air needle valve slowly counterclockwise. | <ol style="list-style-type: none"> 7. Chemical strainer blocked <ul style="list-style-type: none"> • Clean or replace chemical strainer. 8. Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube (sucking air in) <ul style="list-style-type: none"> • Cut off end of tube or replace tube. 9. Vacuum leak in chemical pick-up connection <ul style="list-style-type: none"> • Tighten the connection. 10. Dilution too strong <ul style="list-style-type: none"> • Adjust needle valve 11. Chemical check valve stuck open or clogged <ul style="list-style-type: none"> • Clean or replace. 12. Nozzle size too small <ul style="list-style-type: none"> • Use only the supplied nozzle. 13. Soil has hardened on surface <ul style="list-style-type: none"> • Reapplication may be necessary. Always rinse foam <i>before</i> it dries. 14. Chemical build-up or scale may have formed in the body causing poor or no chemical pick-up <ul style="list-style-type: none"> • Remove scale or prevent formation with acid cleaner. • To descale, pull acid cleaner through the chemical tube using water only, no air. • In extreme cases, remove the fittings and soak entire body in descaling acid. Replace fittings being careful not to cross thread or overtighten. |
|--|---|

PREVENTIVE MAINTENANCE: When the unit will be out of service for extended periods, remove chemical tube from chemical concentrate and place it in water. Completely open the water ball valve for a few seconds to flush chemical and help prevent chemical build-up. If using hard water supply, flush descaling acid through the body every 3-4 weeks. Check and/or clean chemical strainer; replace if missing.