Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 975310 · Uni-Body W-20 Spray-All / A-25 Airless Foamer

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	35 to 125 PSI
Flow	1.34 GPM @ 40 PSI
Supply Line	1/2"

Hose

Foam	1/2" ID x 50'
Spray	1/2" ID x 50'

Nozzle

Foam	A-25 Airless Foam Wand
Spray	2520

OPTIONS

Stainless Steel Hose Racks

Large Stainless Steel Hose Rack	# 224150

Stainless Steel Jug Racks

Jug Rack, SS, 1 Gallon, Round/Square	# 224200
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

Stainless Steel Airless Foam Wand

Wand, SS, Airless Foam, A-25SS	# 536625SS

Alternate Check Valve - EPDM Standard

Check Valve, Chemical, PP/Viton, 1/4"	# 491315

WEIGHT & DIMENSIONS

Single Package

Shipping Weight	26 lbs.
Shipping Dimensions	28" x 28" x 8"



Lafferty EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

www.laffertyequipment.com
501-851-2820

WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Uni-Body W-20 Spray-All / A-25 Airless Foamer is a combination applicator for applying one chemical as foam and another as a low-volume spray. This venturi injection system uses standard city water pressure (35 - 125 PSI) to draw and blend chemical concentrates into the water streams to create accurately diluted solutions. Precision metering tips are used to control chemical usage. Foaming chemical solution flows through the foam hose to the "airless" foam wand which draws in atmospheric air to create and project wet, clinging foam at distances up to 6 feet. The other chemical solution flows through the spray hose and is projected in a fan pattern.

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.
- NEVER mix chemicals without first consulting chemical manufacturer.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

If you are connecting to a potable water supply follow all local codes for backflow prevention.

1. Mount the unit to a suitable surface above the chemical supply to prevent siphoning.
2. Connect hose(s) as shown in the diagram.
3. Flush any new plumbing of debris before connecting water.
4. Connect water supply. Install a water filter if water piping is older or has known contaminants.

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 ball valve is closed or pointed in a safe direction before turning water on. Ball valve can be shut off at any time during operation but should not be left unattended for long periods of time.

1. Open the inlet ball valve then open the discharge ball valve to begin application.
2. Make final metering tip adjustments based on application results.
3. When application is completed, close the discharge ball valve, return to the unit and close the inlet ball valve. Re-open the discharge ball valve to relieve pressure in hose then close the discharge ball valve. If applicable rinse the work surface before solution dries.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 40 PSI	
		FOAM	SPRAY
Brown	0.56	306:1	192:1
Clear	0.88	195:1	122:1
Bright Purple	1.38	124:1	78:1
White	2.15	80:1	50:1
Pink	2.93	59:1	37:1
Corn Yellow	3.84	45:1	28:1
Dark Green	4.88	35:1	22:1
Orange	5.77	30:1	19:1
Gray	6.01	29:1	18:1
Light Green	7.01	24:1	15:1
Med. Green	8.06	21:1	13:1
Clear Pink	9.43	18:1	11:1
Yellow Green	11.50	15:1	9:1
Burgundy	11.93	14:1	9:1
Pale Pink	13.87	12:1	8:1
Light Blue	15.14	11:1	7:1
Dark Purple	17.88	10:1	6:1
Navy Blue	25.36	7:1	—
Clear Aqua	28.60	—	—
Black	50.00	—	—
No Tip Ratio Up To:		6:1	6:1

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

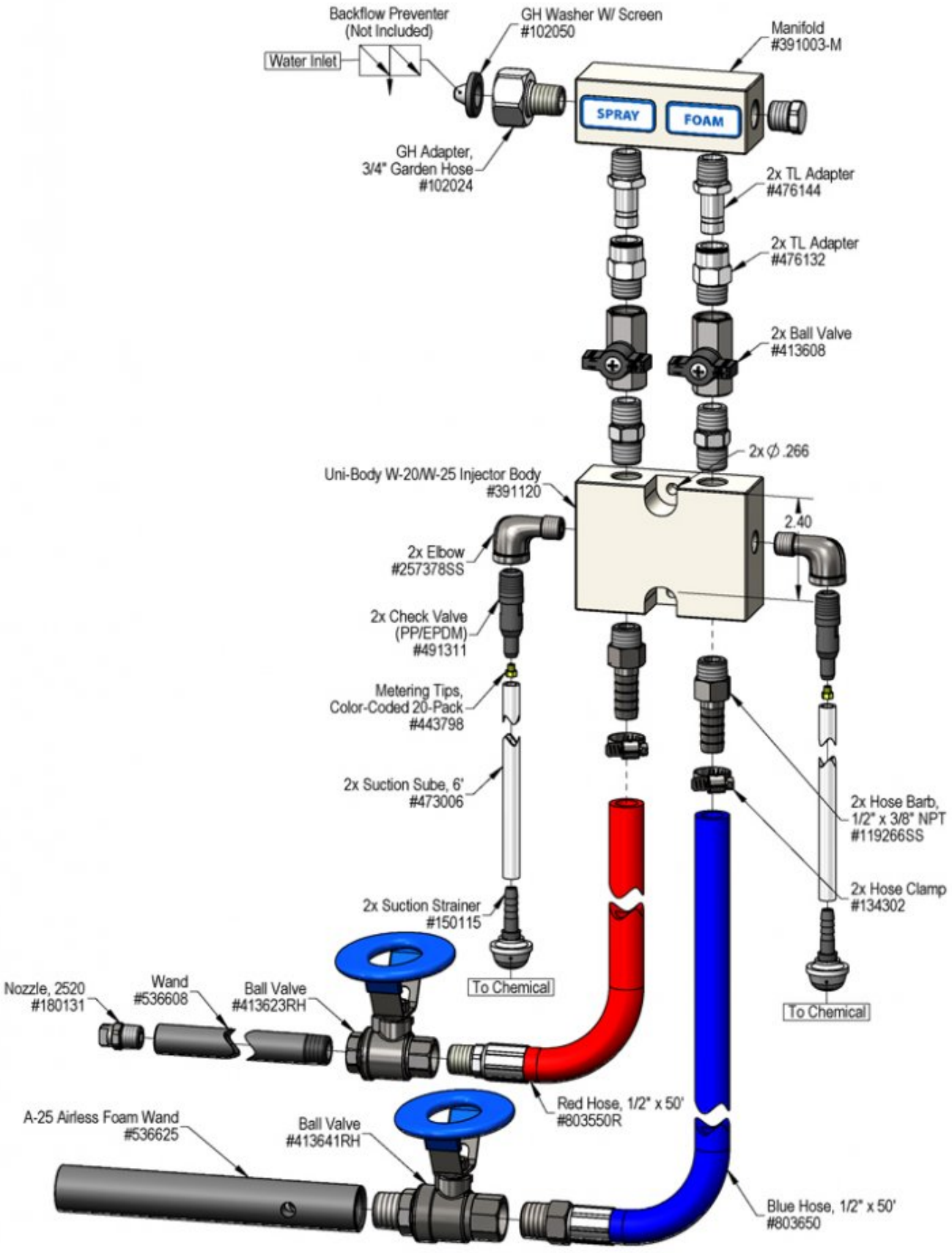
FORMULA

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

PSI	GPM	
	FOAM	SPRAY
35	1.25	0.79
40	1.34	0.84
50	1.50	0.94
60	1.64	1.03
70	1.77	1.11
80	1.90	1.19
90	2.01	1.26
100	2.12	1.33
110	2.22	1.39
120	2.32	1.45
125	2.37	1.48


Backflow Preventer
(Not Included)
Water Inlet
GH Washer W/ Screen
#102050
Manifold
#391003-M
SPRAY
FOAM
GH Adapter,
3/4" Garden Hose
#102024
2x TL Adapter
#476144
2x TL Adapter
#476132
2x Ball Valve
#413608
2x ∅ .266
Uni-Body W-20/W-25 Injector Body
#391120
2.40
2x Elbow
#257378SS
2x Check Valve
(PP/EPDM)
#491311
Metering Tips,
Color-Coded 20-Pack
#443798
2x Suction Sube, 6'
#473006
2x Hose Barb,
1/2" x 3/8" NPT
#119266SS
2x Hose Clamp
#134302
2x Suction Strainer
#150115
To Chemical
To Chemical
Nozzle, 2520
#180131
Wand
#536608
Ball Valve
#413623RH
Red Hose, 1/2" x 50'
#803550R
A-25 Airless Foam Wand
#536625
Ball Valve
#413641RH
Blue Hose, 1/2" x 50'
#803650

Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Will not draw chemical	1, 5, 6, 7, 8, 10	11, 12, 13, 14, 15, 16, 17
B) Foam does not clean or foam properly	2, 4, 5, 7, 8, 9	10, 11, 12, 13, 14, 15, 16
C) Using too much chemical	3	
D) Water backing up into chemical container	10	

Possible Cause / Solution

Startup

1. **Inlet ball valve not completely open**
   - Completely open the inlet ball valve.
2. **Not enough chemical - metering tip too small**
   - Install larger metering tip.
3. **No metering tip installed or metering tip too large**
   - Install smaller metering tip.
4. **Improper chemical**
   - Ensure product is recommended for foaming and the application.
5. **Chemical tube not immersed in chemical or chemical depleted**
   - Immerse tube or replenish.
6. **Discharge hose too long or wrong size or kinked**
   - Straighten the hose or replace hose with correct size.
7. **Discharge ball valve not completely open**
   - Completely open the discharge ball valve.
8. **Water pressure or water volume too low/inlet piping too small causing poor chemical pick up**
   - Increase water pressure or water volume
9. **Soil has hardened on surface; always rinse before chemical dries**
   - Reapplication may be necessary.

Maintenance

10. **Chemical check valve stuck or failed**
    - Clean or replace.
11. **Chemical strainer or metering tip partially blocked**
    - Clean or replace chemical strainer and/or metering tip.
12. **Chemical tube stretched out or pin hole/cut in chemical tube**
    - Cut off end of tube or replace tube.
13. **Vacuum leak in chemical pick-up connections**
    - Tighten the connection.
14. **Water strainer clogged or missing/injector inlet orifice clogged**
    - Clean or replace strainer; check/clean inlet orifice for obstructions. DO NOT DRILL OUT.
15. **Hard water scale or chemical build-up may have formed in the injector body causing poor or no chemical pick-up**
    - Follow Preventive Maintenance instructions below, using hot water and/or de-scaling acid. When there is no draw at all, carefully remove fittings and soak entire injector body in de-scaling acid.
16. **Foam wand clogged or scaled up / wrong nozzle**
    - Hard water scale or chemical build-up may have formed, soak entire foam wand in de-scaling acid / see requirements.
17. **More than one chemical ball valve open or no chemical valve open**
    - 2 & 3 Way models only

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.