

LAFFERTY EQUIPMENT MANUFACTURING, INC. Installation & Operation Instructions

Model # 914120 • 1035 / Ultimate Hose Drop Station Complete

REQUIREMENTS

Water:

Supply line..... 3/4" I.D. minimum
Temp. range..... Ambient to 160° F
Pressure range..... 35 to 125 PSI
Flow range:

1035 Sanitizer..... 9.8 to 15.4 GPM
Ultimate Foamer 1.34 to 1.91 GPM

Compressed Air..... 1.5 to 5 CFM

Nozzlesize 50250

Hose:

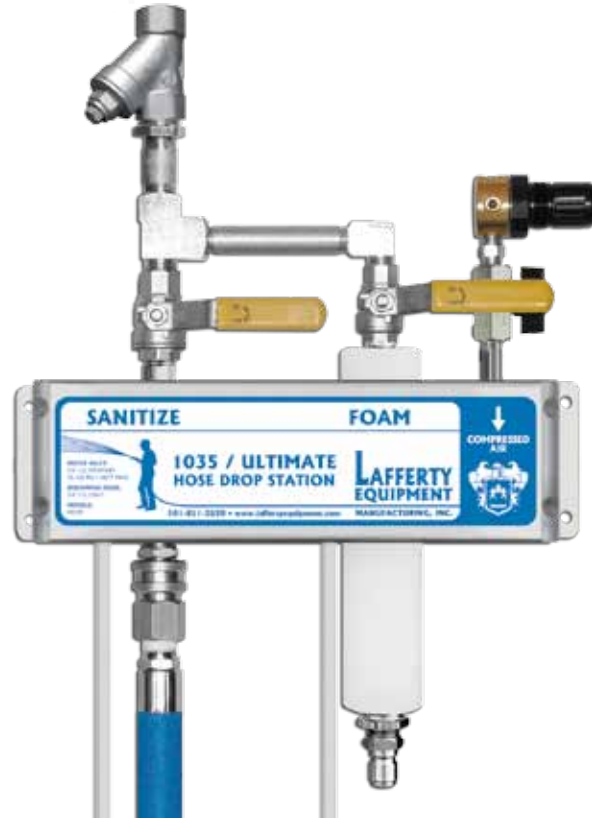
I.D. 3/4" ONLY
Length 50'

OPTIONS

- Red Hose Assembly..... # 801753RQD
(for chemicals that are not compatible) -
includes 50' hose w/QD, ball valve, wand, &
nozzle

All Stainless Steel Accessories

- Hose Rack, Large # 224150
- Hose Rack, Small # 224145
- Jug Racks
 - 1 Gallon
 - Round # 224200
 - Square # 224205
 - 2 ½ Gallon (8 ½" x 10 ½")..... # 224210
 - 5 Gallon (12" x 12")..... # 224215



**READ ALL
INSTRUCTIONS BEFORE
USING EQUIPMENT!**

www.LaffertyEquipment.com

501-851-2820



Safety & Operational Notes

- **Manufacturer Assumes No Liability For The Use Or Misuse Of This Unit.**
- **Use only compatible chemicals. If chemicals are not compatible, order the additional Red Hose Assembly (see Options above).**
- **Backflow Prevention:** Follow all local codes for preventing backflow into the water supply before installing/ operating equipment.
- Turn off inlet ball valves when unit is not in use.
- For pressures over 100 PSI, remove the discharge ball valve.
- Follow the chemical manufacturer's safe handling instructions.
- Regular equipment maintenance should include checking all hoses, tubes, clamps, strainers and connections.

Personal Safety:

- Wear protective clothing, gloves and eyewear when working with chemicals.
- Always direct the discharge away from people and electrical devices.

OPERATION

- Do not substitute nozzle or hose sizes. (See "Requirements".) The unit **will not** work properly with smaller nozzles or hose sizes.
- Mount unit above chemical supply to prevent siphoning.

Principles of Operation: This is a combination venturi foamer & sanitizer that will siphon chemical concentrates from any sized container, providing up to 21 different dilution ratios using the supplied metering tips. The foamer requires water pressure *and* compressed air to generate a powerful cleaning, clinging foam and project it onto any surface. The sanitizer requires water pressure and enough flow to create a "no rinse" dilution ratio.

TO INSTALL (Refer to Diagram, Next Page.)

Read all Safety and Operational Precautions on page 1.

Backflow prevention: Follow all local codes for preventing backflow into the water supply before installing/operating equipment.

1. Mount the unit to a suitable surface above chemical supply to prevent siphoning.
2. Connect the hose as shown in the diagram.
3. Connect water supply. **DO NOT TURN ON**
4. Connect compressed air supply. **DO NOT TURN ON**

To set the desired water to chemical dilution ratio you will have to select and install a metering tip into each chemical check valve.

For the strongest possible chemical dilution ratio, do not install a metering tip.

How to Select the Correct Metering Tip - See chemical label for dilution ratio recommendation or consult your chemical supplier.

- The dilution ratios provided in the *Metering Tip Selection Chart*, at right, are based on water-thin chemical.
 - Due to varying chemical viscosities, you may need to increase/decrease the metering tip size.
 - If you have water pressure other than the example, use the *Metering Tip Selection Formula*.
5. After metering tip is installed, push the chemical tube over the check valve and immerse the chemical strainer into your chemical concentrate.

TO FOAM

1. **Securely quick connect** the hose to the foam quick disconnect plug. **Hold the wand firmly** and direct the discharge in a safe direction. Open the discharge ball valve, the foam ball valve, and the air ball valve.
2. **WAIT SEVERAL SECONDS for foam output to stabilize. Air pressure adjustment is the most important element of proper operation. Air pressure must be kept lower than water pressure. Use the least amount of air pressure necessary to achieve good foam quality. Keeping air pressure to a minimum will prevent water pressure fluctuations from affecting foamer performance. Medium wet foam will give the best cleaning results! Real dry foam will NOT clean as good!**

To adjust foam quality, pull out adjustment knob on air regulator and turn it **very, very slightly clockwise for dryer foam and counterclockwise for wetter foam**. Wait several seconds to see the results of EACH adjustment. **Once properly adjusted the air should not have to be adjusted again.**

If the flow of foam surges, the air pressure is too high. Slightly turn the air regulator counterclockwise. When foam is the desired consistency, push-lock the air regulator. (*Surging can also indicate too small of a metering tip has been selected; select a larger one.*)

3. When foaming is completed, close the discharge ball valve; return to the unit and close the foam ball valve. Slowly re-open the discharge ball valve and expect a **strong blast** of foamy solution. After the air blows the solution out of the hose, close the air ball valve. Close the discharge ball valve and rinse the work surface before foam dries.

TO SANITIZE

1. **Make sure to relieve pressure in the hose by briefly opening the discharge ball valve.** Then, disconnect the hose from the foamer and *securely quick connect it* to the sanitizer quick disconnect plug. With the discharge ball valve closed, open the sanitize ball valve, and move to the area to be sanitized. Open the discharge ball valve and begin sanitizing.
2. When sanitizing is completed, close the discharge ball valve. Return to the unit and close the sanitize ball valve. Briefly re-open the discharge ball valve to relieve pressure in the hose.

Metering Tip Selection			
Metering Tip Color	Oz. per Min.	EXAMPLE: Dilution Ratio @ 40 PSI	
		1035	ULT
Brown	.62	2017:1	277:1
Clear	.91	1374:1	188:1
Bright Purple	1.7	758:1	104:1
White	2.3	556:1	76:1
Pink	3.3	379:1	52:1
Corn Yellow	4.0	313:1	43:1
Dark Green	5.0	250:1	34:1
Orange	6.0	208:1	29:1
Gray	6.8	184:1	25:1
Light Green	8.1	155:1	21:1
Med. Green	9.1	137:1	19:1
Clear Pink	11.9	105:1	14:1
Yellow Green	13.4	93:1	13:1
Burgundy	15.3	82:1	11:1
Pale Pink	16.9	74:1	10:1
Light Blue	18.0	69:1	10:1
Dark Purple	22.5	56:1	8:1
Navy Blue	33.1	38:1	5:1
Clear Aqua	39.3	32:1	4:1
Black	59.9	21:1	3:1
No Tip	—	—	—

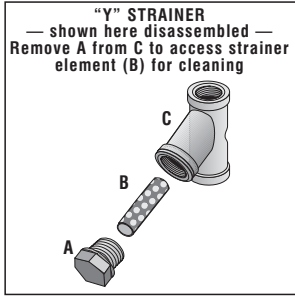
The dilution ratios provided above are approximate values. Your actual dilution ratio may be higher or lower due to variation in chemical viscosity.

Metering Tip Selection Formula	
(GPM x 128)	See chart below for GPM and convert to oz. per min.
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Dilution Ratio	20:1, 30:1, etc.
=	
Oz. per Min.	Match to nearest number in chart above.

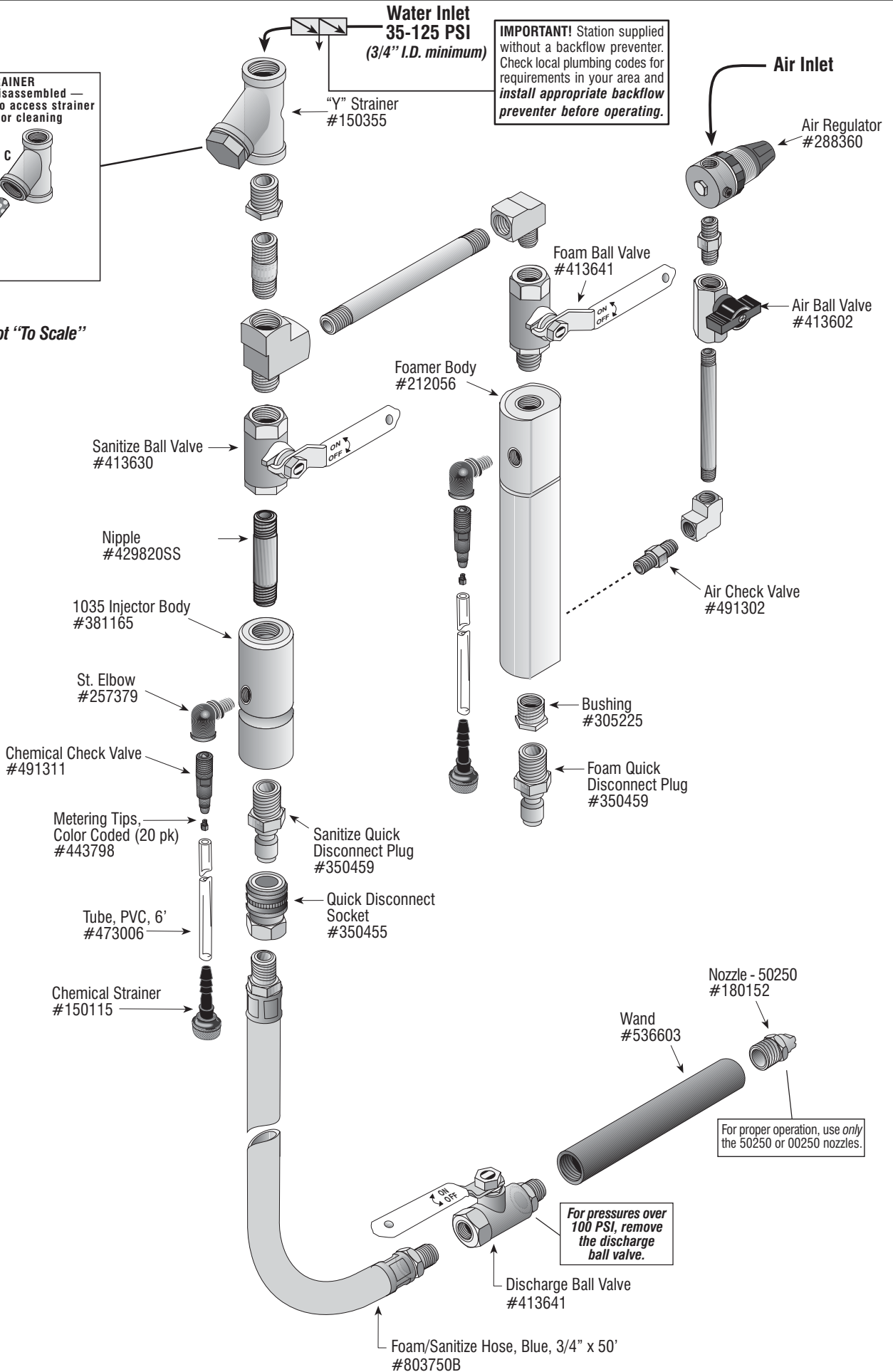
Water Flow Rate Chart		
Water Pressure	Water Flow Rate	
PSI	GPM	
	1035	ULT
40	9.77	1.34
50	10.92	1.46
60	11.97	1.54
70	12.92	1.59
80	13.82	1.76
90	14.66	1.80
100	15.45	1.91

⚠ Turn Off Inlet Ball Valves When Not In Use.

Model # 914120 • 1035 Sanitize / Ultimate Foam Hose Drop Station Complete



Drawing not "To Scale"



Troubleshooting Guide

Model # 914120 • 1035 / Ultimate Hose Drop Station Complete

PROBLEMS WITH FOAMER	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, 10	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.		12
H) Air or chemical solution backing up into water line.		20

PROBLEMS WITH SANITIZER	Possible Cause / Solution	
	Startup	Maintenance
A) Sanitizer will not draw chemical	3, 7, 8, 9, 10	13, 14, 15, 18, 19
B) Dilution too strong.	5	
C) Dilution too weak.	4	
D) Water backing up into chemical container.		12

Possible Cause / Solution	
Startup	Maintenance
<ol style="list-style-type: none"> 1. Air pressure too high <ul style="list-style-type: none"> • Adjust the air regulator slowly counterclockwise until output stabilizes. 2. Use of an oiler in the airline will cause poor foam quality <ul style="list-style-type: none"> • Use only clean, dry air. 3. Inlet ball valve or discharge ball valve not completely open <ul style="list-style-type: none"> • Completely open the foam/sanitize and discharge ball valves. 4. Not enough chemical - metering tip too small <ul style="list-style-type: none"> • Install larger metering tip. 5. No metering tip installed or metering tip too large <ul style="list-style-type: none"> • Install smaller metering tip. 6. Improper chemical <ul style="list-style-type: none"> • Ensure product is recommended for foaming and/or the application 7. Chemical tube not immersed in chemical or chemical depleted <ul style="list-style-type: none"> • Immerse tube or replenish. 8. Discharge hose too long or wrong size or kinked (SEE REQUIREMENTS) <ul style="list-style-type: none"> • Straighten the hose - Replace hose with correct size. 9. Nozzle size too small (SEE REQUIREMENTS) 10. Water pressure or water volume too low / inlet piping too small <ul style="list-style-type: none"> • Increase water pressure or water volume (SEE REQUIREMENTS). 11. Soil has hardened on surface; always rinse foam before it dries <ul style="list-style-type: none"> • Reapplication may be necessary. 	<ol style="list-style-type: none"> 12. Chemical check valve stuck or failed <ul style="list-style-type: none"> • Clean or replace. 13. Chemical strainer or metering tip partially blocked <ul style="list-style-type: none"> • Clean or replace chemical strainer and/or metering tip. 14. Chemical tube stretched out or pin hole / cut in chemical tube (sucking air in) <ul style="list-style-type: none"> • Cut off end of tube or replace tube. 15. Vacuum leak in chemical pick-up connections <ul style="list-style-type: none"> • Tighten the connection(s). 16. Air regulator failed allowing too much air or not enough air <ul style="list-style-type: none"> • Clean or replace. 17. Air check valve failed <ul style="list-style-type: none"> • Replace. 18. Water strainer element clogged or missing; foamer / sanitizer inlet orifice clogged <ul style="list-style-type: none"> • Clean or replace strainer element. Check / clean inlet orifice for obstructions. DO NOT DRILL OUT. 19. Chemical build-up may have formed in the body causing poor or no chemical pick-up <ul style="list-style-type: none"> • Follow Preventive Maintenance instructions below, using hot water and / or descaling acid. When there is no draw at all carefully remove fittings and soak entire body in descaling acid. 20. 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.

PREVENTIVE MAINTENANCE: When the unit will be out of service for extended periods, remove chemical tubes from chemical concentrates and place in water. Completely open the foam / sanitize ball valves (separately) and discharge ball valve for several seconds to flush chemical and help prevent chemical build-up. Check and / or clean chemical strainer; replace if missing.