Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 974212 · Electric W-25 Asphalt Release Sprayer

REQUIREMENTS

Chemical Concentrate
Static Tank of Water

Hose	1/2" ID x 25'
Nozzle	2540
Electric	120V

OPTIONS

Stainless Steel Hose Racks

Small Stainless Steel Hose Rack	# 224145

Drum & Tote Stick Lengths & Seal Materials

Drum Stick, 33" (Viton or EPDM)	# 491643 / 491643-E
Drum Stick, 48" (Viton or EPDM)	# 491648 / 491648-E
Drum Stick, 54" (Viton or EPDM)	# 491645 / 491645-E
Tote Stick, 33" (Viton or EPDM)	# 491653 / 491653-E
Tote Stick, 48" (Viton or EPDM)	# 491654 / 491654-E
Tote Stick, 54" (Viton or EPDM)	# 491656 / 491656-E

Alternate Chemical Check Valve - Viton Standard

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

Lafferty EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

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WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Electric W-25 Asphalt Release Sprayer is a spray applicator for diluting and spraying asphalt release chemicals on to truck beds or tools to prevent asphalt from sticking. Designed for facilities with low or no water pressure. An electric pump draws water from a static tank and provides the water pressure to power a venturi injector. The injector draws chemical concentrate from any container and blends it into the water stream to create an accurately diluted solution using precision metering tips. The solution is then projected through the discharge hose, wand and fan nozzle.

SAFETY & OPERATIONAL PRECAUTIONS

- For proper performance do NOT modify, substitute nozzle, hose diameter or length.
- Manufacturer assumes no liability for the use or misuse of this unit.
- When connecting to a potable water supply follow all local codes for backflow prevention.
- Wear protective clothing, gloves and eye wear when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- Follow the chemical manufacturer's safe handling instructions.
- NEVER mix chemicals without first consulting chemical manufacturer.
- Do not operate the pump above the pressure limitations specified on the data label.
- Never operate the pump in a harsh environment or hazardous atmosphere, since motor brush and switch may cause electrical arcing.
- Consult with the factory if the pump is to be used with fluids other than water. Do not use with flammable or hazardous fluids.
- As long as there is inlet water pressure, the pump will not stop forward flow of water even if the motor is turned off. Be sure the system has positive means of shutting off water supply.
- Always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified Electrician per Local and State Electrical Codes.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

- **This system can be fed with 10-50 PSI water OR it will draw water from a static tank. Positive inlet pressure will increase the pump outlet pressure by a similar amount, for a given flow.**

1. Mount the unit above chemical (and water container) to prevent siphoning.
2. Attach discharge hose to the hose barb and secure it with a clamp.
3. To ensure the dry pump will prime, fill the larger clear suction tube with water. Securely attach the full suction tube to the pump as shown in the drawing and place the strainer in a static container of water.
4. DO NOT PLUG IN YET.

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 inlet valve on. Discharge can be shut off at any time during operation but should not be left off for long periods of time with the inlet valve on.

1. With wand in hand and the discharge ball valve closed open the inlet ball valve and flip the switch to the on position.
2. Open the discharge ball valve to begin application.
3. Make final metering tip adjustments based on application results.
4. When application is completed, close the discharge ball valve then close the inlet ball valve.
5. Flip the switch to the off position.
6. Briefly re-open the discharge ball valve to relieve pressure in hose. If applicable rinse the work surface before solution dries.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 50 PSI
Brown	0.56	343:1
Clear	0.88	218:1
Bright Purple	1.38	139:1
White	2.15	89:1
Pink	2.93	66:1
Corn Yellow	3.84	50:1
Dark Green	4.88	39:1
Orange	5.77	33:1
Gray	6.01	32:1
Light Green	7.01	27:1
Med. Green	8.06	24:1
Clear Pink	9.43	20:1
Yellow Green	11.50	17:1
Burgundy	11.93	16:1
Pale Pink	13.87	14:1
Light Blue	15.14	13:1
Dark Purple	17.88	11:1
Navy Blue	25.36	8:1
Clear Aqua	28.60	7:1
Black	50.00	4:1
No Tip Ratio Up To:		3:1

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

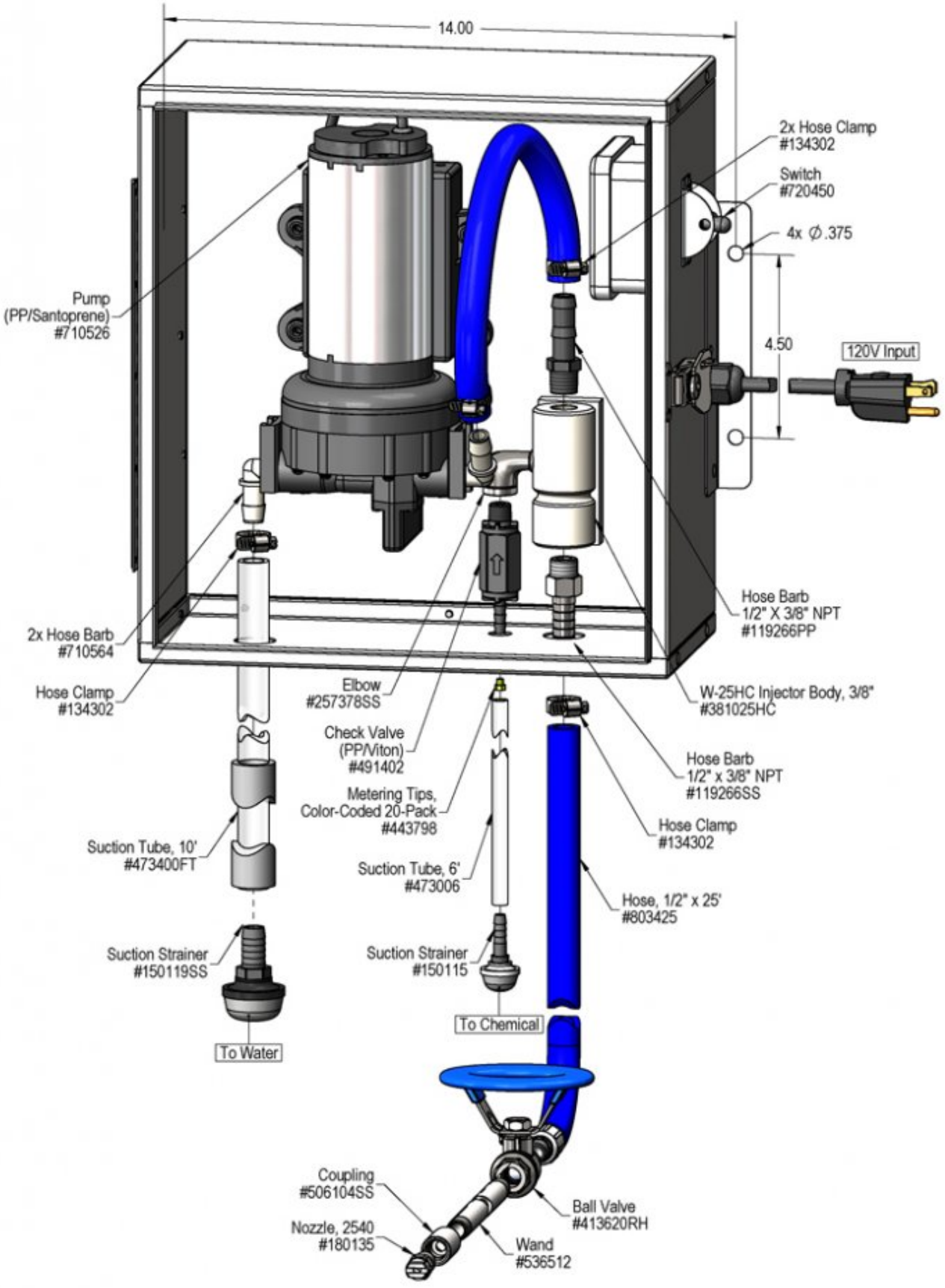
FORMULA

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
50	1.50


14.00
2x Hose Clamp
#134302
Switch
#720450
4x Ø.375
4.50
120V Input
Pump
(PP/Santoprene)
#710526
Hose Barb
1/2" X 3/8" NPT
#119266PP
2x Hose Barb
#710564
Hose Clamp
#134302
Elbow
#257378SS
W-25HC Injector Body, 3/8"
#381025HC
Check Valve
(PP/Viton)
#491402
Hose Barb
1/2" x 3/8" NPT
#119266SS
Metering Tips,
Color-Coded 20-Pack
#443798
Hose Clamp
#134302
Suction Tube, 10'
#473400FT
Suction Tube, 6'
#473006
Hose, 1/2" x 25'
#803425
Suction Strainer
#150119SS
Suction Strainer
#150115
To Chemical
To Water
Coupling
#506104SS
Ball Valve
#413620RH
Nozzle, 2540
#180135
Wand
#536512

Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Unit will not draw chemical	1,4,5,6,7	8,9,10,11,12,13,14
B) Dilution too weak	2,4	9,10,11,12,13
C) Dilution too strong	3	
D) Water backing up into chemical container		8

Possible Cause / Solution

Startup

1. **Switch not in the on position or discharge ball valve not completely open**
   - Completely open discharge ball valve.
   - Electric problems, ensure unit is plugged in (GFI recommended)
   - Turn Switch to the "On" position.
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. **Chemical tube not immersed in chemical or chemical depleted**
   - Immerse tube or replenish.
5. **Discharge hose kinked**
   - Straighten the hose.
6. **Nozzle size too small (SEE REQUIREMENTS)**
7. **Water supply or water tank empty.**
   - Fill watertank
   - Turn water supply on.

Maintenance

8. **Chemical check valve stuck or failed**
   - Clean or replace.
9. **Chemical strainer or metering tip partially blocked**
   - Clean or replace chemical strainer and/or metering tip.
10. **Chemical tube stretched out or pin hole/cut in chemical tube**
    - Cut off end of tube or replace tube.
11. **Vacuum leak in chemical pick-up connections**
    - Tighten the connection.
12. **Water strainer clogged or missing/injector inlet orifice clogged**
    - Clean or replace strainer; check/clean inlet orifice for obstructions. DO NOT DRILL OUT.
13. **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.
14. **May have pump problems**
    - Refer to pump 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.