

# Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

## Model # 931210 · Manual / Timed Recycle SPT-MM Slat Conveyor Sprayer

### REQUIREMENTS

Chemical Concentrate  
Static Tank of Water

Compressed Air up to 4 CFM

Hose 1/2" ID x 25'

Nozzle 2520

### OPTIONS

Stainless Steel Hose Racks  
Small Stainless Steel Hose Rack # 224145

Heater Assembly  
Retro-Fit Heater Assembly # 720981

Discharge Hose to Spray Bar  
Hose, Blue, 1/2" x 1' (By Foot) # 803400FT



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**WARNING! READ ALL  
INSTRUCTIONS BEFORE  
USING EQUIPMENT!**

### OVERVIEW

The Manual / Timed Recycle SPT-MM Slat Conveyor Sprayer is an asphalt release system for slat conveyors that applies chemical and recycles automatically, with a manual override. This system is designed for facilities that have no, low, or fluctuating water pressure. It uses a rugged 1/2" Sandpiper air-operated, double-diaphragm pump to draw water and chemical concentrate from user-supplied static containers and blend them "on-the-fly" using a metering manifold to achieve virtually any dilution ratio. When the adjustable recycle timer activates the system, solution flows to a spray bar suspended over the slat conveyor. In override mode, release agent is projected through a trigger gun and fan nozzle.

## SAFETY & OPERATIONAL PRECAUTIONS

- See Additional Safety Precautions included with the Electrical Control Box Installation Information
- 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.
- For proper performance do NOT modify, substitute nozzle, hose diameter or length.
- For proper performance do NOT modify electrical control box.
- Manufacturer assumes no liability for the use or misuse of this unit.
- 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.
- DO NOT use chemicals that are not compatible with the Teflon diaphragms (Santoprene available)
- NEVER mix chemicals without first consulting chemical manufacturer.
- Disconnect electrical power to the control box prior to opening it.
- Remove any packing material from inside the control box before operating.

## TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

1. Mount the unit above chemical and / or water containers.
2. Securely attach the suction tubes to the check valves as shown in the drawing.
3. Place one strainer in chemical and one in a static container of water.
4. Attach the discharge hose assembly with trigger gun to the hose barb.
5. Mount the spray bar over the conveyor high enough for complete coverage. The bar can be rotated to adjust the spray angle and coverage.
6. Attach a compressed airline to the inlet ball valve. DO NOT TURN ON.

### How to Set Your Dilution Ratio:

- The adjustment knobs allow you to achieve wide range of dilution ratios.
- Turn adjustment knobs counterclockwise to increase flow or clockwise to decrease flow.
- For a starting place turn the water knob completely clockwise (closed) then turn 2 turns counterclockwise (open).
- Then turn the chemical knob completely clockwise (closed) then counterclockwise (open) in 1/4 to 1/2 turn increments until required dilution ratios are achieved.
- If ratios can't be achieved with the chemical knob all the way counterclockwise start turning water knob clockwise to shift more draw to the chemical side.

## SETTING THE TIMER

1. Make sure the system is not plugged in to a power source. Remove control box cover. The box contains one timer with "On" & "Off" adjustment knobs.  
**On:** This mode allows you to set the length of time you want the unit to run each time the recycle timer activates. Set the timer by turning the knob to the amount of "On" time that you require. (0-6 Minutes)  
**Off:** This mode allows you to set the length of time you want the unit to be inactive for after each application. Set the timer by turning the knob to the amount of "Off" time that you require. (0-60 Minutes)
2. Replace the control box cover.
3. Plug the power cord into a 120 VAC power outlet. GFI recommended.
4. Turn off both of the outlet ball valves to the trigger gun and spray bar
5. Turn on your air supplies.
6. Turn on the power switch.
  - Note: The unit will run 24 hours a day unless the power switch is manually turned off.

### SWITCH SETTINGS

"Automatic" control – Top of switch is depressed. Green light glows. The unit will now function according to the timer settings. (ON TIME will activate first.)

"OFF" – Switch is in middle position; Green and Red Lights are off

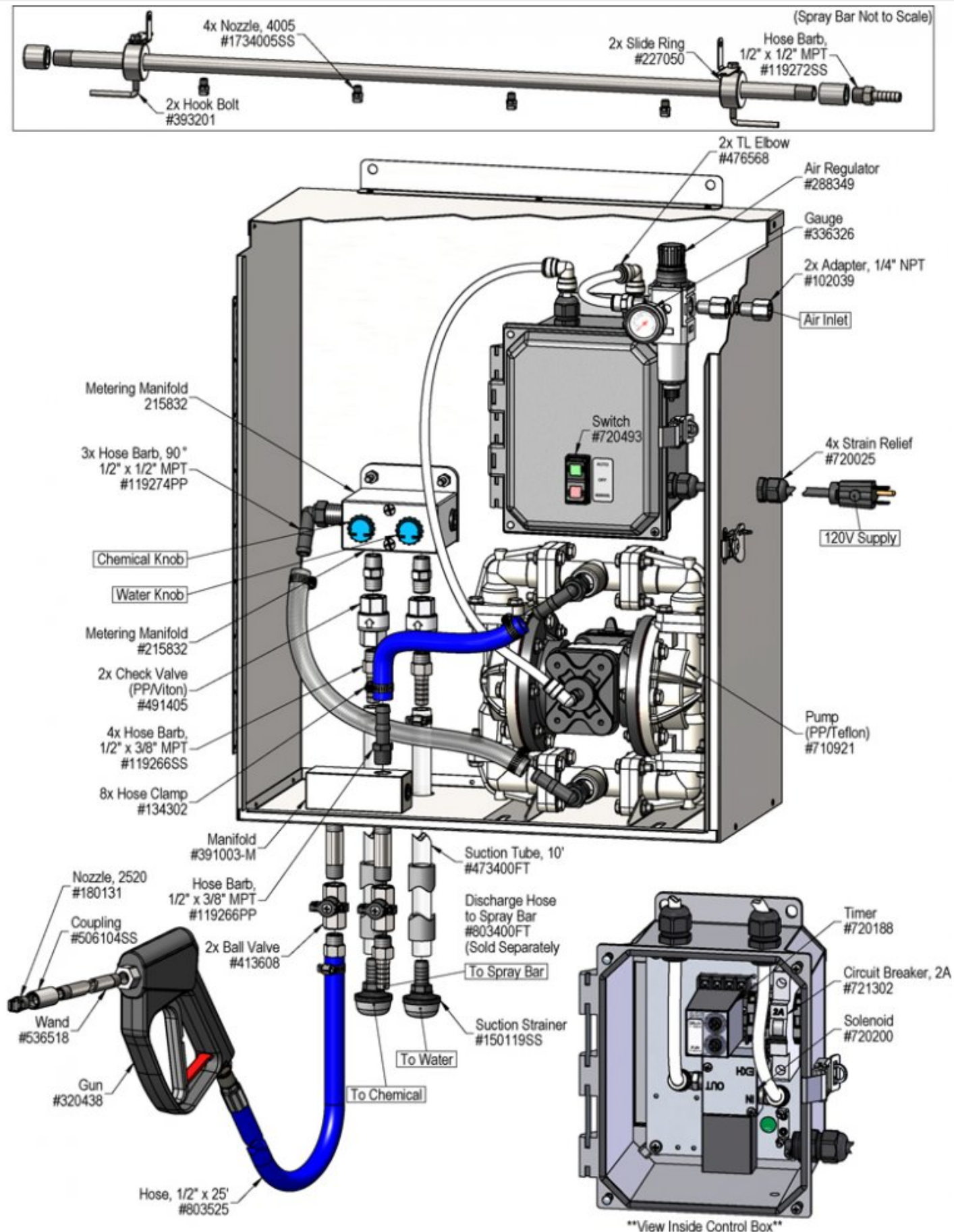
"Manual" – Press bottom of switch. Red light glows. Timer is bypassed and the unit is manual mode for the trigger gun application,

### TO OPERATE

1. Close the outlet ball valves to the trigger gun and the spray bar.
2. Set the switch on the timer control box to Manual; the Red light glows.
3. Point the wand in a safe direction, open the outlet ball valve to the trigger gun and pull the trigger on the gun.
4. Final chemical dilution adjustments will now have to be made. Make adjustments to the knobs based on results.
5. If the solution seems to be too weak slowly turn the chemical knob counterclockwise.
6. Continue opening till the solution is strong enough for the application.
7. Once dilution ratio is set, release the trigger gun or begin application.
8. When finished, return to the unit and turn off the outlet ball valve to the trigger gun

### To Set the Spray Bar for Automatic Operation

9. Close the outlet ball valve to the trigger gun and open the outlet ball valve to the spray bar.
10. Set the switch on the timer control box to Automatic; the Green light glows.
11. The recycle timer will activate and spraying will start
12. The unit will function according to the timer settings until the switch on the control box is set to off or the power is turned off.



## Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Air pump will not run or pump solution.	1,5	8,13,14
B) Unit will not draw chemical or water.	2,5	9,10,11,12,13
C) Using too much chemical	3	
D) Cleaning results unacceptable	4	
E) Pump runs too fast with no output.		9,10,11,12,13
F) Unit doesn't come on when button is pushed.	6,7	

Possible Cause / Solution	
Startup	Maintenance
<b>1. Air adjustment too low</b> <ul style="list-style-type: none"> <li>Open air ball valve fully. Adjust air regulator slowly clockwise. Optimum air pressure is 90 PSI.</li> </ul> <b>2. Water or chemical tube not immersed in container or container empty</b> <ul style="list-style-type: none"> <li>Immerse tube or replenish.</li> </ul> <b>3. Dilution too strong</b> <ul style="list-style-type: none"> <li>Turn chemical knob slightly clockwise or water knob counterclockwise</li> </ul> <b>4. Dilution too weak</b> <ul style="list-style-type: none"> <li>Turn chemical knob slightly counterclockwise or water knob clockwise</li> </ul> <b>5. Discharge hose kinked</b> <ul style="list-style-type: none"> <li>Straighten the hose.</li> </ul> <b>6. Timer failed/Controller not set properly or malfunctioned</b> <ul style="list-style-type: none"> <li>Replace timer.</li> <li>See Controller manual.</li> </ul> <b>7. May have electrical problems</b> <ul style="list-style-type: none"> <li>Ensure circuit breaker (5 Amp) has not been tripped.</li> <li>Have a qualified electrician check electrical connections.</li> </ul>	<b>8. Air regulator clogged or failed</b> <ul style="list-style-type: none"> <li>Clean or replace.</li> </ul> <b>9. Water or chemical check valve stuck or clogged</b> <ul style="list-style-type: none"> <li>Clean or replace.</li> </ul> <b>10. Chemical or water strainer clogged up</b> <ul style="list-style-type: none"> <li>Clean or replace.</li> </ul> <b>11. Vacuum leak in metering manifold or suction side of the pump</b> <ul style="list-style-type: none"> <li>Check and tighten the hose clamp connections. After unit has been in service the plastic fittings could have "relaxed" and may need tightened too.</li> <li><b>NOTE: This is the most common problem when the unit will not draw water or chemical</b></li> </ul> <b>12. Chemical or water tube stretched out where tube slides over hose barbs or pin hole/cut in tube sucking air.</b> <ul style="list-style-type: none"> <li>Cut off end of tube or replace tube, add a hose clamp. Do not over tighten</li> </ul> <b>13. Problem with air pump</b> <ul style="list-style-type: none"> <li>Refer to air pump instruction manual</li> <li>Pump suction and discharge manifolds are loose, tighten bolts.</li> </ul> <b>14. Use of an oiler in the airline will cause pump to stall</b> <ul style="list-style-type: none"> <li>Use only clean, dry air.</li> </ul>

**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.

