Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 973718 · Rinse / 517 Sanitize Hose Drop Station

REQUIREMENTS

Water	
Temperature	up to 160°F
Pressure	35 to 125 PSI
Flow	7.2 GPM @ 40 PSI
Supply Line	3/4"
Hose	
Rinse	3/4" ID x 50'
Sanitize	3/4" ID x 50'
Nozzle	
Rinse	4 Hole Rinse Nozzle
Sanitize	40100

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
Alternate Check Valve - EPDM Standard	
Check Valve, Chemical, PP/Viton, 1/4"	# 491315
Water Pressure Gauge	
Water Pressure Gauge, 3/4" Inlet	# 336348



Lafferty EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

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WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Rinse / 517 Sanitize Hose Drop Station is a combination rinse/sanitizer applicator for applying one chemical as sanitizing spray and for rinsing. This venturi injection system uses standard city water pressure (35 - 125 PSI) to draw and blend chemical concentrate into the water stream to create an accurately diluted solution. The sanitizer solution flows through the sanitizer hose and is projected as a fan pattern spray in the lean ratios required for no-rinse sanitizing in food plants. Rinse at full pressure through a separate hose and a unique and powerful stainless steel 4-hole nozzle.

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 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.

TO SANITIZE

1. With spray wand in hand and the discharge ball valve closed open the inlet ball valve.
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. Briefly re-open the discharge ball valve to relieve pressure in hose. If applicable rinse the work surface before solution dries.

TO RINSE

1. With spray wand in hand and the discharge ball valve closed open the inlet ball valve.
2. Open the discharge ball valve to rinse.
3. When complete, close the discharge ball valve then close the inlet ball valve.
4. Briefly re-open the discharge ball valve to relieve pressure in hose.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 40 PSI	
		RINSE	SANITIZE
Brown	0.56	—	1234:1
Clear	0.88	—	785:1
Bright Purple	1.38	—	501:1
White	2.15	—	321:1
Pink	2.93	—	236:1
Corn Yellow	3.84	—	180:1
Dark Green	4.88	—	142:1
Orange	5.77	—	120:1
Gray	6.01	—	115:1
Light Green	7.01	—	99:1
Med. Green	8.06	—	86:1
Clear Pink	9.43	—	73:1
Yellow Green	11.50	—	60:1
Burgundy	11.93	—	58:1
Pale Pink	13.87	—	50:1
Light Blue	15.14	—	46:1
Dark Purple	17.88	—	39:1
Navy Blue	25.36	—	27:1
Clear Aqua	28.60	—	24:1
Black	50.00	—	14:1
No Tip Ratio Up To:		—	11:1

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

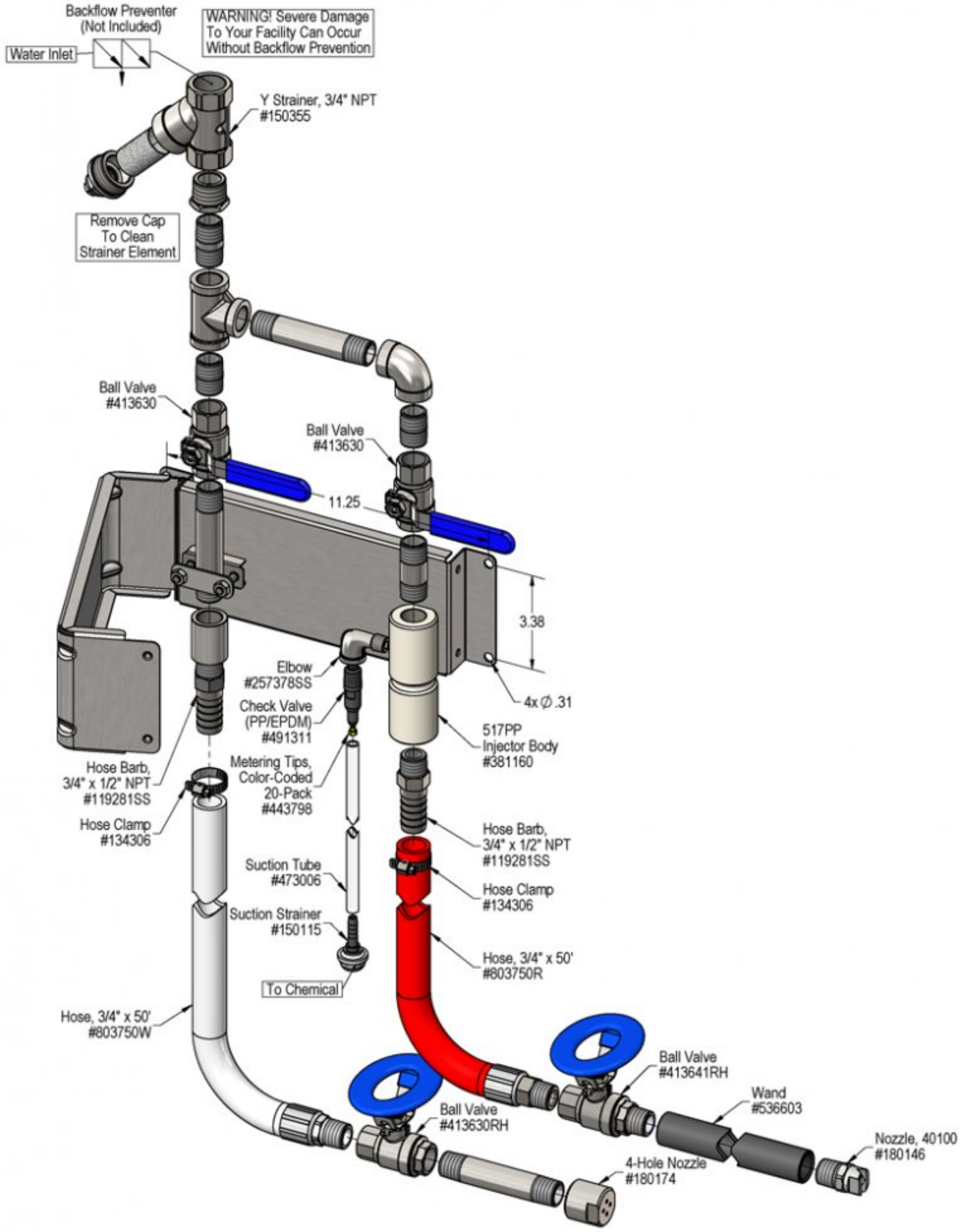
FORMULA

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	
	RINSE	SANITIZE
35	6.73	5.05
40	7.20	5.40
50	8.05	6.04
60	8.82	6.61
70	9.52	7.14
80	10.18	7.64
90	10.80	8.10
100	11.38	8.54
110	11.94	8.95
120	12.47	9.35
125	12.73	9.55


Backflow Preventer
(Not Included)
Water Inlet
WARNING! Severe Damage
To Your Facility Can Occur
Without Backflow Prevention
Y Strainer, 3/4" NPT
#150355
Remove Cap
To Clean
Strainer Element
Ball Valve
#413630
Ball Valve
#413630
11.25
3.38
4x Ø .31
Elbow
#257378SS
Check Valve
(PP/EPDM)
#491311
517PP
Injector Body
#381160
Hose Barb,
3/4" x 1/2" NPT
#119281SS
Metering Tips,
Color-Coded
20-Pack
#443798
Hose Clamp
#134306
Hose Barb,
3/4" x 1/2" NPT
#119281SS
Suction Tube
#473006
Hose Clamp
#134306
Suction Strainer
#150115
Hose, 3/4" x 50'
#803750R
To Chemical
Hose, 3/4" x 50'
#803750W
Ball Valve
#413641RH
Wand
#536603
Ball Valve
#413630RH
Nozzle, 40100
#180146
4-Hole Nozzle
#180174

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, 5	8, 9, 10, 11, 12, 13, 14
C) Dilution too strong	3	14
D) Water backing up into chemical container		8

Possible Cause / Solution

Startup

1. **Inlet or discharge ball valves not completely open**
   - Completely open both ball valves.
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 too long for available water pressure, kinked or wrong size**
   - Straighten the hose or replace hose.
6. **Nozzle size too small (SEE REQUIREMENTS)**
7. **Water pressure or water volume too low/inlet piping too small causing poor chemical pick up**
   - Increase water pressure or water volume

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. **More than one chemical ball valve is open**
    - 2-Way and 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.