Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 980828 · 828HC Mixing Station

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	40 to 80 PSI
Flow	7.6 GPM @ 40 PSI
Supply Line	3/4"
Hose	1" ID x 10'

OPTIONS

Stainless Steel Hose Racks

Small Stainless Steel Hose Rack	# 224145

Stainless Steel Jug Racks

2 ½ Gal. (8 ½" x 10 ½")	# 224210
5 Gallon (12" x 12") Round/Square	# 224215

Safe Flow Lid™ for 1 Gallon Jugs

Lid, Suction Tube, and Strainer	# 709101

WEIGHT & DIMENSIONS

Single Package

Shipping Weight	10 lbs.
Shipping Dimensions	15" x 15" x 5"



Lafferty® EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

www.laffertyequipment.com
501-851-2820

WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The 828HC Mixing Station has a water flow rate of 7.6 GPM @ 40 PSI and is a "high concentrate" chemical proportioner for quickly filling large containers and equipment with strong solutions. This venturi injection system uses city water pressure (40 - 80 PSI) to draw and blend a high concentration of chemical into the water to create up to 1:1 dilution ratios. Ball valve activation allows for hands-free dispensing.

SAFETY & OPERATIONAL PRECAUTIONS

- For proper performance do NOT modify hose diameter or length.
- Do NOT attempt to install a discharge ball valve.
- 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.**
- **WARNING: Contamination of your potable water supply can occur without proper 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 use chemicals that could be dangerous if accidentally mixed.

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 installing a metering plug into chemical tube. See chemical label for dilution ratio recommendation or consult your chemical supplier.

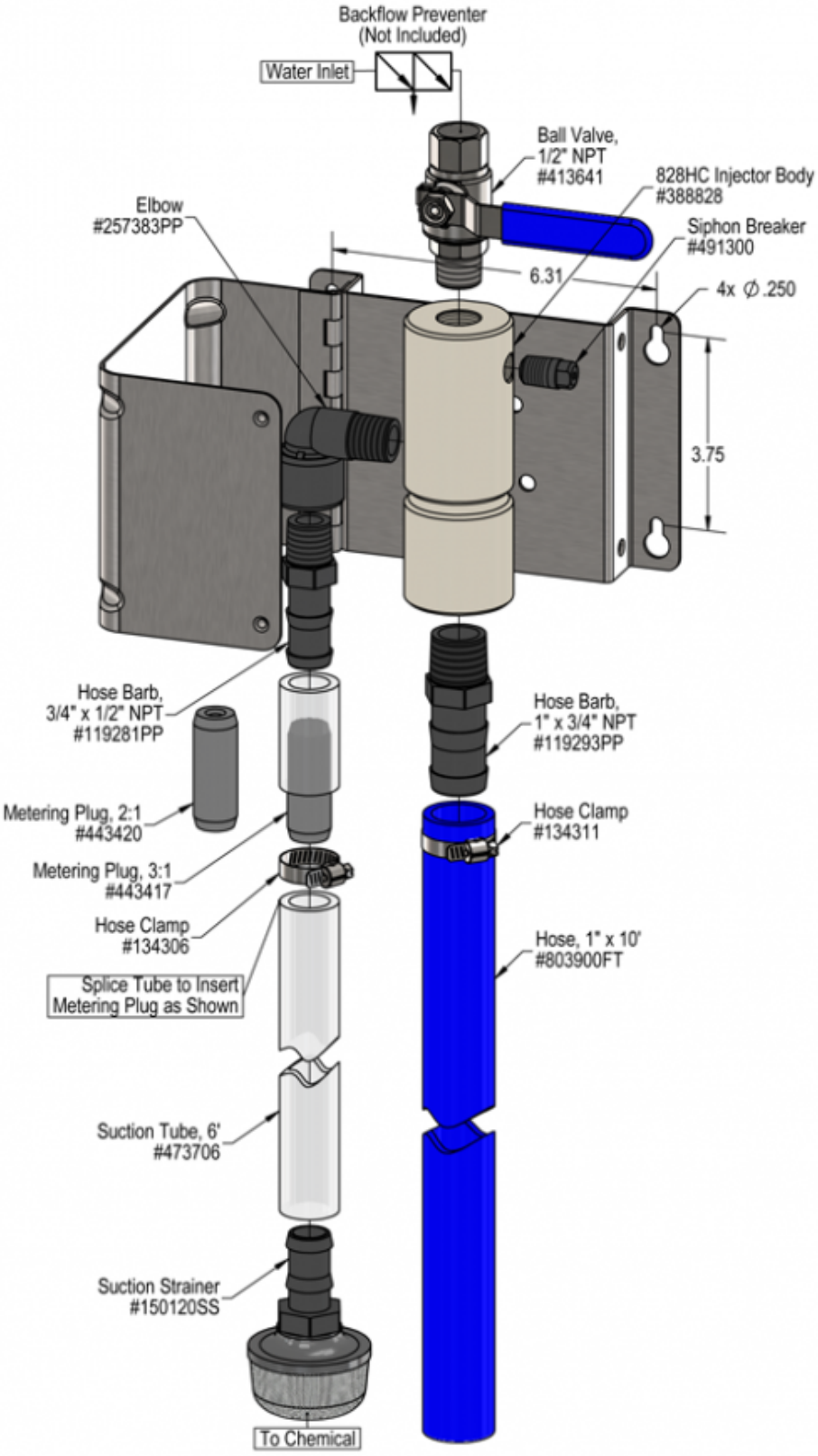
- This unit will deliver a true 1:1 ratio.
- For the strongest possible chemical dilution ratio, do not install a metering plug.
- The dilution ratios are based on chemical with a viscosity of 1CPS.
- Two plugs are supplied for a 2:1 or a 3:1 dilution ratio.
- If desired, splice a plug into the chemical pick up tube as shown in the drawing. Use the hose clamp as shown in the diagram (certain units only).
- Due to varying chemical viscosity and applications, you may need to increase (drill out) the plug size to get the best result.
- Once plug is installed, (if used) push the chemical tube over the suction hose barb and immerse the chemical strainer into your chemical concentrate.

TO OPERATE

1. Hold the discharge tube inside the container to be filled, do not release it, completely open the inlet ball valve.
2. When container is filled to the desired level, close the ball valve and keep the discharge tube in the container until it completely drains before removing it. Do NOT kink the discharge hose.
3. Make final tip metering tip / plug adjustments based on results.

UNIT FLOW RATES

PSI	GPM
40	7.60
50	8.50
60	9.31
70	10.05
80	10.75


Backflow Preventer
(Not Included)
Water Inlet
Ball Valve,
1/2" NPT
#413641
828HC Injector Body
#388828
Elbow
#257383PP
Siphon Breaker
#491300
6.31
4x ∅.250
3.75
Hose Barb,
3/4" x 1/2" NPT
#119281PP
Hose Barb,
1" x 3/4" NPT
#119293PP
Metering Plug, 2:1
#443420
Hose Clamp
#134311
Metering Plug, 3:1
#443417
Hose Clamp
#134306
Hose, 1" x 10'
#803900FT
Splice Tube to Insert
Metering Plug as Shown
Suction Tube, 6'
#473706
Suction Strainer
#150120SS
To Chemical

Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Unit will not draw chemical. B) Dilution too weak. C) Dilution too strong	1, 2, 3, 6 4 5	7, 8, 9, 10, 11 10

Possible Cause / Solution

Startup

1. **Water pressure or volume too low**
    1. **See requirements.**
2. **Ball valve not completely open**
    1. **Completely open the ball valve.**
3. **Chemical tube not immersed in chemical or chemical depleted**
    1. **Immerse tube or replenish.**
4. **Metering plug too small**
    1. **Install larger metering plug.**
5. **No metering plug installed or metering plug too large**
    1. **Install smaller metering plug.**
6. **Discharge hose kinked or wrong size**
    1. **Straighten hose / See requirements**

Maintenance

7. **Chemical strainer or metering tip partially blocked**
    - Clean or replace chemical strainer and/or metering tip.
8. **Vacuum leak in chemical pick-up connections**
    - Tighten the connection.
9. **Chemical tube stretched out where tube slides over the hose barb or pin hole/cut in chemical tube (sucking air in)**
    - Cut off end of tube or replace tube.
10. **Hard water scale or chemical build-up may have formed in the body causing poor or no chemical pick-up**
    - 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.
11. **Optional discharge ball valve or trigger gun not completely open**
    - Completely open / depress trigger

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.