

# AFCO Installation & Operation Instructions

## Model #AF 980414 •414HC Mixing Station

### REQUIREMENTS

#### Chemical Concentrate

<b>Water</b>	
Temperature	up to 160°F
Pressure	40 - 80 PSI
Flow	4 GPM @ 40 PSI
Supply Line	3/4"

<b>Hose</b>	3/4" x 10'
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### OPTIONS

<b>Small Stainless Steel Hose Rack</b>	# 224145
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<b>Stainless Steel Jug Racks</b>	
2 ½ Gallon (8 ½" x 10 ½")	# 224210
5 Gallon (12" x 12")	# 224215
5 Gallon Round Locking	# 224216

<b>Lid &amp; Suction Hose for 1 &amp; 5 Gallon Pails</b>	
Pail Lid Suction Hose Assembly	# 709101

### WEIGHT & DIMENSIONS

**Shipping Weight: 8 lbs.**

**Shipping Dimensions: 15" x 15" x 5"**



<http://www.afcocare.com>

**READ ALL  
INSTRUCTIONS BEFORE  
USING EQUIPMENT!**

## Overview

The 414HC Mixing Station has a water flow rate of 4 GPM @ 40 PSI and is a "high concentrate" chemical proportioner for filling any sized containers 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.

**AFCO • 5000 Letterkenny Rd • Chambersburg, PA. 17201 • 1-800-345-1329**



## 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.
- 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 chemical that if accidentally mixed could be dangerous.

Flow Rate Chart	
Pressure	Flow Rate
PSI	GPM
<b>40</b>	<b>4.00</b>
50	4.47
60	4.90
70	5.29
80	5.66
90	6.00
100	6.32
110	6.63
120	6.93

**TO INSTALL** (REFER TO DIAGRAM, NEXT PAGE.)

**If you are connecting to a potable water supply follow all local codes for backflow prevention.**

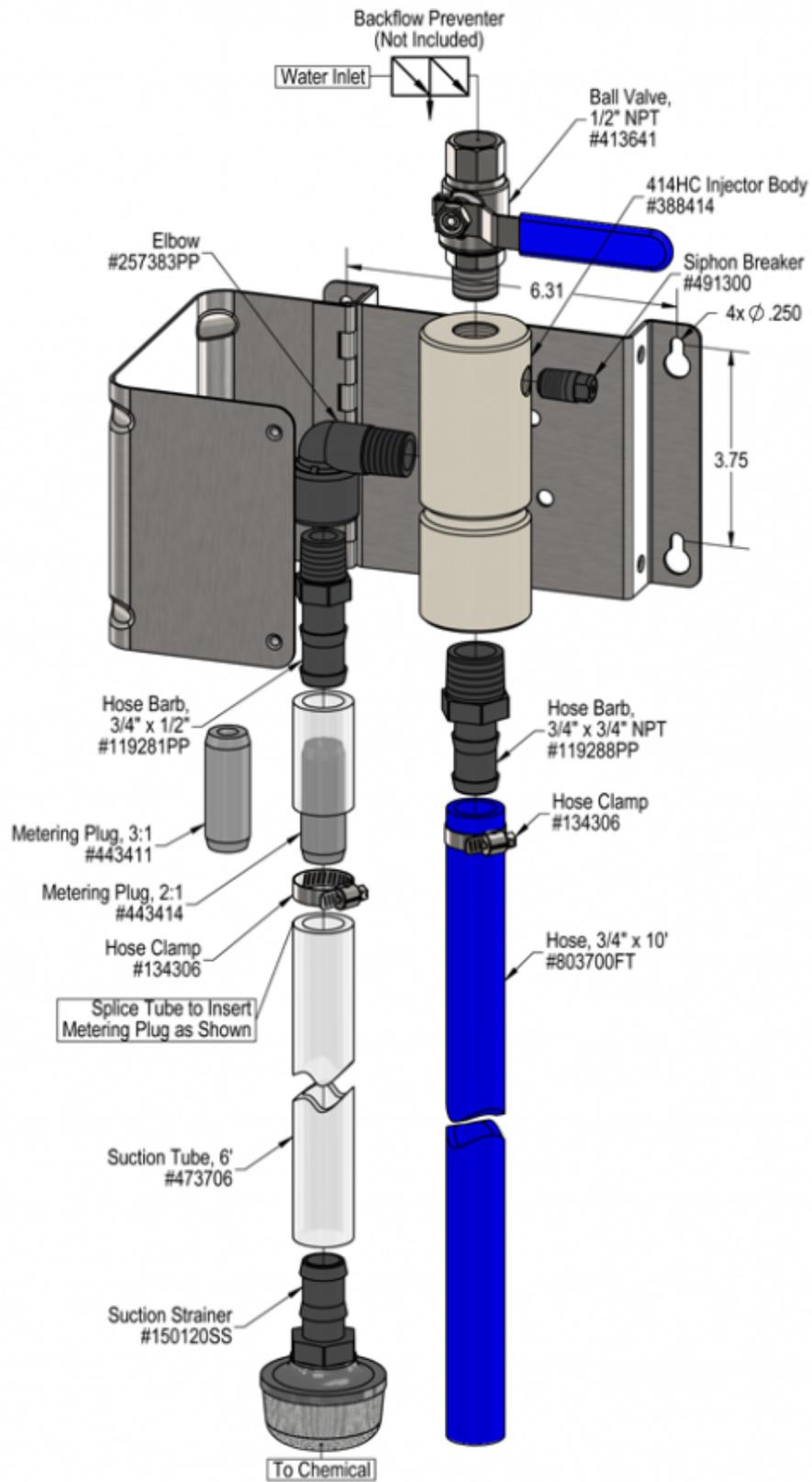
1. Mount the unit to a suitable surface above the chemical supply to prevent siphoning.
2. Connect the discharge hose(s) as shown in the diagram.
3. Flush any new plumbing of debris before connecting water.
4. Connect water supply. If water piping is older, or has known contaminants, install a water filter.

**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 plug.
- The dilution ratios are based on chemical with a viscosity of 1CPS.
- 2- plugs are supplied for a 2-1 or a 3-1 dilution ratio.
- 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 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.



# Troubleshooting Guide

## AF 980414 • 414HC Mixing Station

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

Possible Cause / Solution	
Startup	Maintenance
<p><b>1. Water pressure or volume too low</b></p> <ul style="list-style-type: none"> <li>• See requirements.</li> </ul> <p><b>2. Ball valve not completely open</b></p> <ul style="list-style-type: none"> <li>• Completely open the ball valve.</li> </ul> <p><b>3. Chemical tube not immersed in chemical or chemical depleted</b></p> <ul style="list-style-type: none"> <li>• Immerse tube or replenish.</li> </ul> <p><b>4. Metering plug too small</b></p> <ul style="list-style-type: none"> <li>• Install larger metering plug.</li> </ul> <p><b>5. No metering plug installed or metering plug too large</b></p> <ul style="list-style-type: none"> <li>• Install smaller metering plug.</li> </ul> <p><b>6. Discharge hose kinked or wrong size</b></p> <ul style="list-style-type: none"> <li>• Straighten hose / See requirements</li> </ul>	<p><b>7. Chemical strainer or metering tip partially blocked</b></p> <ul style="list-style-type: none"> <li>• Clean or replace chemical strainer and/or metering tip.</li> </ul> <p><b>8. Vacuum leak in chemical pick-up connections</b></p> <ul style="list-style-type: none"> <li>• Tighten the connection.</li> </ul> <p><b>9. Chemical tube stretched out where tube slides over the hose barb or pin hole/cut in chemical tube (sucking air in)</b></p> <ul style="list-style-type: none"> <li>• Cut off end of tube or replace tube.</li> </ul> <p><b>10. Hard water scale or chemical build-up may have formed in the body causing poor or no chemical pick-up</b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul> <p><b>11. Optional discharge ball valve or trigger gun not completely open</b></p> <ul style="list-style-type: none"> <li>• Completely open / depress trigger</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.**

