

AFCO Installation & Operation Instructions

Model #AF 985500 • Drum Mount Mixing Station

REQUIREMENTS

Chemical Concentrate

Water	
Temperature	up to 160°F
Pressure	35 - 125 PSI
Flow	4 GPM @ 40 PSI
Supply Line	1/2"

OPTIONS

Alternate Chemical Check Valve - EPDM Standard	
Check Valve, Chemical, PP, 1/4" (Viton)	# 491402

WEIGHT & DIMENSIONS

Shipping Weight: 4 lbs.

Shipping Dimensions: 15" x 8" x 5"



<http://www.afcocare.com>

**READ ALL
INSTRUCTIONS BEFORE
USING EQUIPMENT!**

Overview

The Drum Mount Mixing Station is a drum-mounted chemical proportioner for accurately diluting chemical concentrates to required ratios and filling any sized container with diluted, ready-to-use chemical solutions. This venturi injection system uses standard city water pressure (35 - 125 PSI) to draw and blend chemical concentrate directly from the drum into the water stream to create an accurately diluted solution. 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.
- 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.

TO INSTALL (REFER TO DIAGRAM, NEXT PAGE.)

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

1. Choose and install the chemical pick up configuration you want to use.
2. Screw the unit to drum or tote bung.
3. Connect the discharge hose as shown in the diagram and close the ball valve.
4. To prevent blocking the small water jets in the injector flush any new plumbing of debris before connecting. If water piping is older and has known contaminants install a water filter.
5. Connect water supply.

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 strainer in the chemical concentrate.

TO OPERATE

1. Hold the discharge tube inside the container to be filled, do not release it, and completely open the (appropriate) inlet ball valve.
2. When container is filled to the desired level, close the ball valve and keep the discharge tube in the container till it completely drains before removing it.
3. Make final metering tip adjustments based on application results. Try the next larger or smaller sized metering tip until the results are acceptable.

Metering Tip Selection Chart

Metering Tip Color	Oz. per Min.	Example: Dilution Ratio @ 40 PSI
Brown	.56	914:1
Clear	.88	582:1
Bright Purple	1.38	371:1
White	2.15	238:1
Pink	2.93	175:1
Corn Yellow	3.84	133:1
Dark Green	4.88	105:1
Orange	5.77	89:1
Gray	6.01	85:1
Light Green	7.01	73:1
Med. Green	8.06	64:1
Clear Pink	9.43	54:1
Yellow Green	11.50	45:1
Burgundy	11.93	43:1
Pale Pink	13.87	37:1
Light Blue	15.14	34:1
Dark Purple	17.88	29:1
Navy Blue	25.36	20:1
Clear Aqua	28.60	18:1
Black	50.00	10:1
No Tip Ratio	up to 9.0:1	

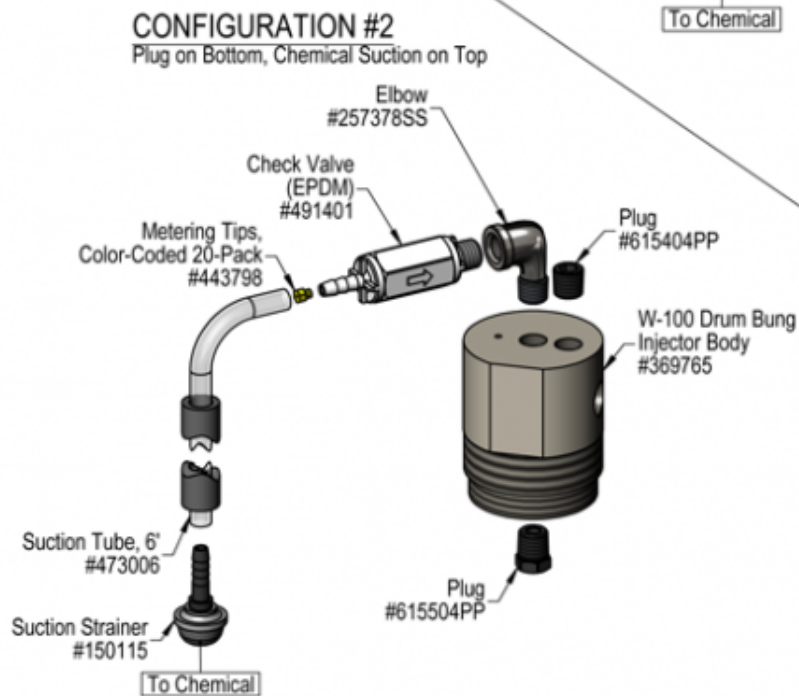
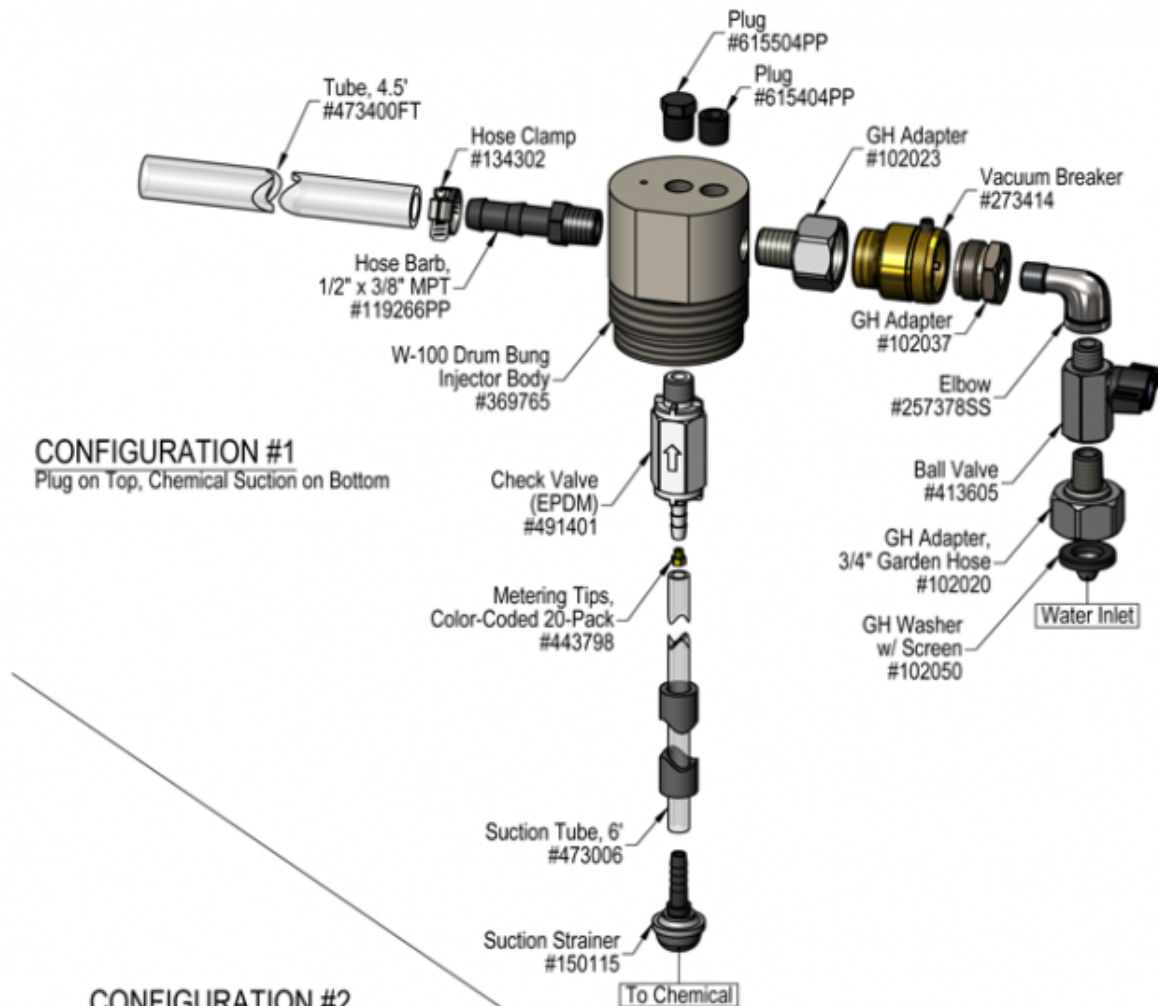
The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.

Metering Tip Selection Formula

$$(\text{GPM} \times 128) / \text{Dilution Ratio} = \text{Oz. per Min}$$

Flow Rate Chart

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



Troubleshooting Guide

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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	11
C) Dilution too strong	5	
D) Water backing up into chemical container.		8
E) Backflow preventer constantly dripping / leaking.		12

Possible Cause / Solution	
Startup	Maintenance
<ol style="list-style-type: none"> 1. Water pressure too low or water temperature too high <ul style="list-style-type: none"> ◦ See requirements. 2. Ball valve not completely open <ul style="list-style-type: none"> ◦ Completely open the ball valve. 3. Chemical tube not immersed in chemical or chemical depleted <ul style="list-style-type: none"> ◦ Immerse tube or replenish. 4. Metering tip too small <ul style="list-style-type: none"> ◦ Install larger metering tip. 5. No metering tip installed or metering tip too large <ul style="list-style-type: none"> ◦ Install smaller metering tip. 	<ol style="list-style-type: none"> 6. Water inlet strainer screen clogged <ul style="list-style-type: none"> ◦ Disconnect water and clean the screen. 7. Chemical strainer or metering tip partially blocked <ul style="list-style-type: none"> ◦ Clean or replace chemical strainer and/or metering tip. 8. Check valve stuck or failed <ul style="list-style-type: none"> ◦ Clean or replace. 9. Vacuum leak in chemical pick-up connections <ul style="list-style-type: none"> ◦ Tighten the connection. 10. Chemical tube stretched out where tube slides over metering tip holder or pin hole/cut in chemical tube (sucking air in) <ul style="list-style-type: none"> ◦ Cut off end of tube or replace tube. 11. Water scale or chemical build-up may have formed in the body causing poor or no chemical pick-up <ul style="list-style-type: none"> ◦ Follow Preventive Maintenance instructions below, using hotwater and/or descaling acid. When there is no draw at all carefully remove fittings and soak entire body in descaling acid. 12. Backflow preventer failed or defective <ul style="list-style-type: none"> ◦ Replace backflow preventer.

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.

