



Installation Guide - **AccuMaxTM4P** with HydroGapTM Air Gap Eductor (ASSE 1055 Approved)

Package Contents

1. Proportioner unit
2. Wall bracket
3. Supply tubing
4. Metering tip kit(s)
5. Discharge tube for each eductor
6. Instruction sheet
7. Install Kit including:
 - (5) Screws, (5) Anchors, (3) Washers,
 - (1) Hosebarb "Y", (5) In-line check valves,
 - (4) weights, (4) Foot strainers,
 - (8) Product labels, (1) Hose hook

Safety Precautions



Warning, Please read precautions thoroughly before operation. Must meet all applicable local codes and regulations.

THANK YOU FOR YOUR INTEREST IN OUR PRODUCTS	
Please use this equipment carefully and observe all warnings and cautions.	
*****NOTE*****	
WEAR	protective clothing and eyewear when dispensing chemicals or other materials or when working in the vicinity of all chemicals, filling or emptying equipment, or changing metering tips.
ALWAYS	observe safety and handling instructions of the chemical manufacturer. direct discharge away from you or other persons or into approved containers. dispense cleaners and chemicals in accordance with manufacturer's instructions. Exercise CAUTION when maintaining your equipment. reassemble equipment according to instruction procedures. Be sure all components are firmly screwed or latched into position.
KEEP	equipment clean to maintain proper operation.
ATTACH	only to water tap outlets (25 PSI Minimum, 85 PSI Maximum and Maximum water temperature 120° F).
NOTE	if the unit is used to fill a sink, or the discharge hose can be placed into a sink. The unit must be mounted so that the bottom of the cabinet is above the overflow rim of the sink.

Installation/Maintenance:

1. Find suitable place close to a water source for unit. Remove wall bracket from packaging, place level on wall and mark (3) mounting holes. Drill (3) 5/16" holes and install anchors in wall. Secure wall bracket to wall with screws and washers provided.
NOTE: The distance from the top of the wall bracket to the top of the cabinet is 1/8".
2. Place the cabinet onto the wall bracket aligning the tabs with the slots in the top of the cabinet. Also ensure the central snap on top of the wall bracket engages the cabinet. Mark the wall using the (2) lower holes, as guides, then remove cabinet from wall. Drill (2) 5/16" holes and install anchors in wall.
3. Select metering tips (up to four) for each selector valve (see next two sections). Push each tip firmly into a separate hose barb extending from the selector valve. A tip with no hole (clear plastic) can be used to block any valve port not being used for chemical. (This may be used for dispensing water only). (See Metering Tip Chart below)
4. Cut supply tube provided into separate supply tubes for each product dispensed. Use "Y" fittings to connect both high and low flow eductor to single container. Supply tubes should reach from hose barb on educator to the bottom of container for easy replacement of chemical. (See diagram page 3.) Prepare a tube for each barb of select valve. Supply tube routing to lower containers should pass through circular notch in the shelf back. **NOTE: ARROW ON CHECK VALVES SHOULD BE POINTED TOWARD THE EDUCTOR.**
5. Install the short, whitish inner discharge tube on the outlet of the eductor. It goes over the smaller barbed part on the bottom of the eductor. This tube must be in place for the eductor to function. The inner discharge tube for a 3.5 GPM (yellow) eductor has a yellow flooding ring inside it. The inner discharge tube for a 1.0 GPM (grey) eductor has a grey flooding ring inside of it. Install the end of the tube nearest the flooding ring on the eductor's inner discharge barb.
To ensure the IDT is on correctly, see that the metal ring gets positioned above the small barb. (Repeat for all eductors).
6. A short discharge tube is used with the 1GPM eductor; minimum tube length is 8 inches (20cm) for proper operation. Longer tubes (4 feet) are used with a 3.5GPM eductor. Do not remove the flooding rings from inside the tubes. Install hose hook on longer tube to allow discharge tube to conveniently hang from dispenser when not in use.
7. Connect water supply hose of at least 3/8" ID to water inlet swivel. (Minimum 25 PSI pressure, with water running, is required for proper operation. Maximum Pressure 85 PSI, Maximum water Temperature 120° F.)
8. Place the cabinet back onto the wall bracket (see #2) and secure the bottom of the cabinet to the wall with the screws provided.
NOTE: IT IS REQUIRED THAT THE BOTTOM (2) SCREWS BE INSTALLED.
9. Install optional drip tray by aligning the four tabs on the tray with the four slots in the lower cabinet and push down.
10. If maintenance is required, remove the medallion cover from the unit by pushing inward on the two snap features located inside near the bottom of the medallion and rotate upwards. These snaps can be accessed by unlocking and opening the doors (See Page 3).
11. Replace medallion cover. Insert the upper medallion tabs into the cabinet slots and swing down to engage lower medallion snaps on the inside of the cabinet. Ensure selector knobs are properly aligned. (See Diagram Page 3).

Operation:

1. Connect opposite end of water inlet hose to water supply. Turn on water supply.
2. Purge air from the system by depressing the buttons briefly. There may be some water discharge from the eductor vents until the air is purged.
3. To operate button fill units, depress button to dispense product, release button to stop flow. **IF YOU WISH TO BE ABLE TO LOCK THE BUTTON IN THE "ON" POSITION:** Depress button and slide button lock up, **TO UNLOCK, DEPRESS BUTTON AND RELEASE.**

Tip Chart:

Metering Tip Selection:

The final concentration of the dispensed solution is related to both the size of the metering tip opening and the viscosity of the liquid being siphoned. For water-thin products, the chart at right can be used as a guideline. If product is noticeably thicker than water, consult the Measurement of Concentration Procedure below to achieve your desired water-to-product ratio. Because dilution can vary with water temperature and pressure, actual dilution achieved can only be ascertained by using the Measurement of Concentration Procedure. The clear, undrilled tip is provided to permit drilling to size not listed should you need a dilution ratio that falls between standard tip sizes.

NOTE: A 1 GPM eductor is grey; a 3.5 GPM eductor is yellow. Refer to parts diagram if unfamiliar with names of system components.

Measurement of Concentration:

You can determine the dispensed water-to-product ratio for any metering tip size and product viscosity. All that is required is to operate the primed dispenser for a minute or so and note two things: the amount of dispensed solution, and the amount of concentrate used in preparation of the solution dispensed. The water-to-product ratio is then calculated as follows:

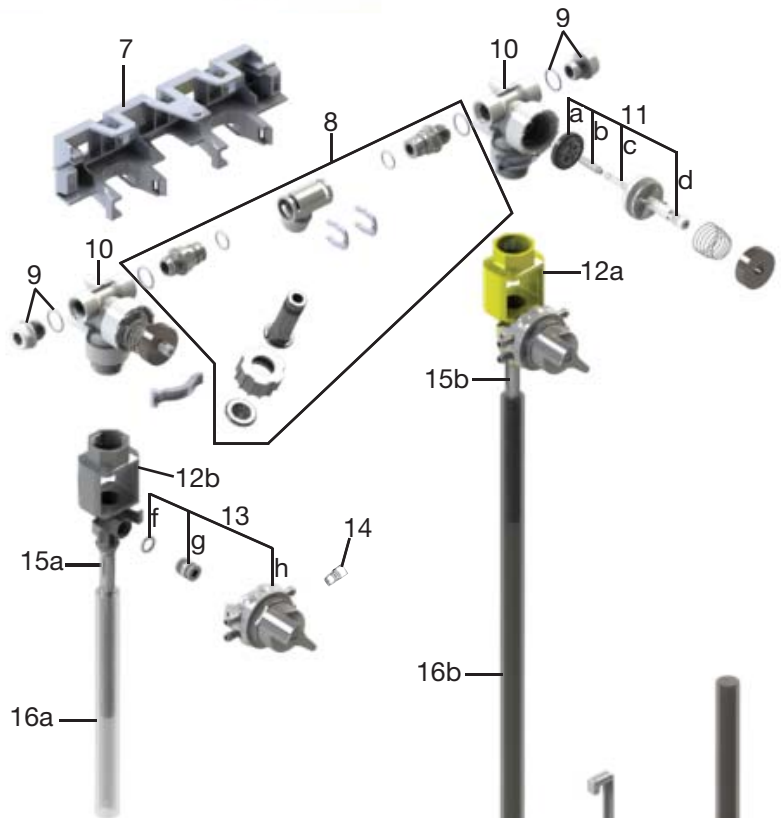
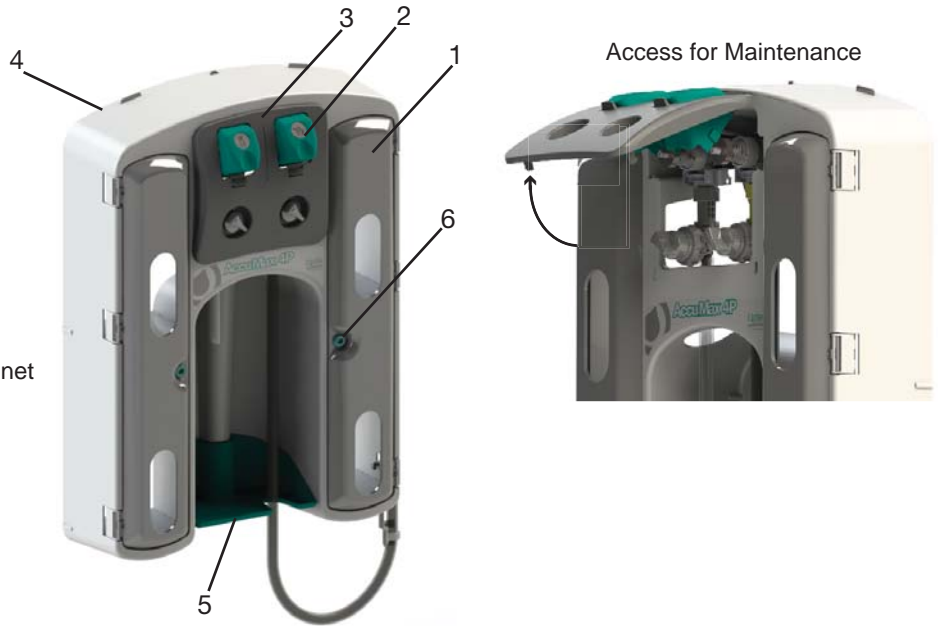
APPROXIMATE DILUTIONS AT 40 PSI FOR WATER-THIN PRODUCTS (1.0 CP)			
Tip Color	Orifice Size	Ratio (per Eductor Flow)	
		1 GPM	3.5 GPM
No Tip	.187	2.6:1	4:1
Grey	.128	2.6:1	4:1
Black	.098	2.5:1	5:1
Beige	.070	3:1	8:1
Red	.052	5:1	13:1
White	.043	7:1	22:1
Blue	.040	9:1	26:1
Tan	.035	11:1	34:1
Green	.028	17:1	52:1
Orange	.025	19:1	64:1
Brown	.023	22:1	71:1
Yellow	.020	32:1	102:1
Aqua	.018	39:1	128:1
Purple	.014	64:1	213:1
Pink	.010	128:1	447:1

Dilution Ratio (X:1) where $X = \frac{\text{Amount of Mixed Solution} - \text{Amount Concentrate Drawn}}{\text{Amount of Concentrate Drawn}}$

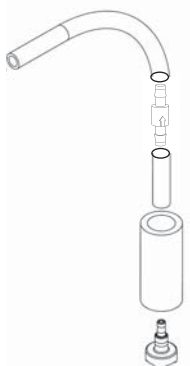
Dilution Ratio, then, equals X parts water to one part concentrate (X:1). If the test does not yield the desired ratio, choose a different tip and repeat the test. Alternative methods to this test are 1) pH (using litmus paper), and 2) titration. Contact your concentrate supplier for further information on these alternative methods and the materials required to perform them.

Part list/diagram:

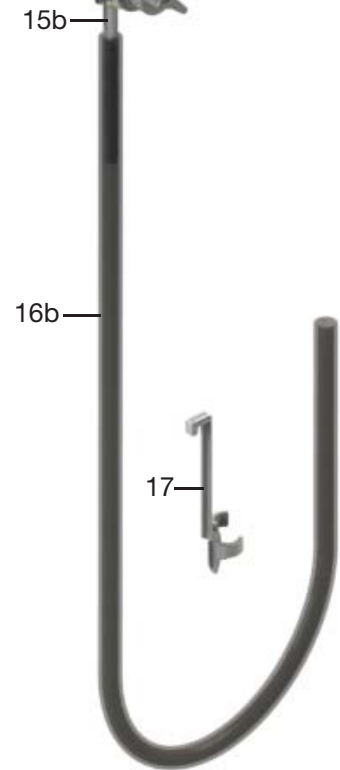
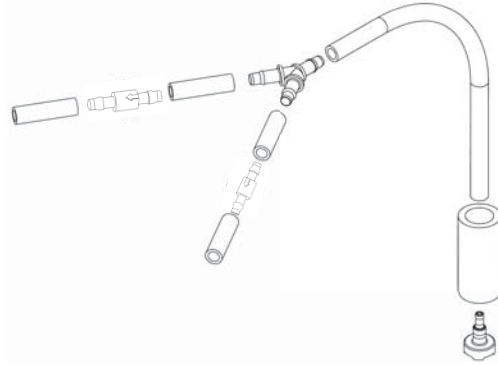
Key	Part number	Description
1	10098395	Door, right side
	10098394	Door, left side
2	10096644	Button, Hi-flow
	10096641	Button, Low-Flow
3	10098396	Medallion, AccuMax
4	10098393	Cabinet, AccuMax
5	10098403	Drip Tray, dark grey (Optional)
6	90094105	Lock
7	10098571	Kit, Bracket, valve, 2 button
8	10098572	Kit, water inlet
9	10098573	Kit, Pipe plug, 3/8 plastic
10	10098574	Kit, ASM water valve, spring, magnet
11	10075980	Valve parts kit
		a. diaphragm
		b. armature
		c. spring
		d. valve bonnet
12a	161	3.5 GPM eductor assembly
b	160	1.0 GPM eductor assembly
13	10094319	Select valve replacement kit
e	10088805	Clip, E-Gap select
f	329902	O-ring
g	10061430	Suction inlet
h	10094305	Select valve
14	690014	Metering tip kit
15 a	10070170	1 GPM inner discharge tube
b	10070470	3.5 GPM inner discharge tube
16a	10088822	1.0 GPM discharge tube with flooding ring (8")
		b. 90048495 3.5 GPM discharge tube with flooding ring (4')
17	10080730	Hose Hook, 1/2"
18	10098575	Kit, single pick-up
19	10098576	Kit, dual pick-up



18
Single Pick-up



19
Dual Pick-up



Troubleshooting Chart:

Problem	Cause	Solution
1. No discharge	<ul style="list-style-type: none"> a. No water b. Magnetic valve not functioning c. Eductor clogged d. Clogged water inlet strainer 	<ul style="list-style-type: none"> a. Open water supply b. Install valve parts kit c. Clean* or replace d. Disconnect inlet water line and clean strainer
2. No concentrate draw	<ul style="list-style-type: none"> a. Metering tip or eductor has scale build-up b. Low water pressure c. Discharge tube and/or flooding ring not in place d. Concentrate container empty e. Inlet hose barb not screwed into eductor tightly f. Clogged water inlet strainer g. Incorrect check valve installation h. Air leak in chemical pick-up tube i. Selector out of position 	<ul style="list-style-type: none"> a. Clean (descale)* or replace b. Minimum 25 PSI (with water running) required to operate unit properly c. Push tube firmly onto eductor discharge hose barb, or replace tube if it doesn't have a flooding ring. d. Replace with full container e. Tighten, but do not overtighten f. Disconnect inlet water line and clean strainer g. See diagram page 3 h. Put clamp on tube or replace tube if brittle i. Assure selector is in position desired
3. Excess concentrate draw	<ul style="list-style-type: none"> a. Metering tip not in place 	<ul style="list-style-type: none"> a. Press correct tip firmly into barb on eductor
4. Failure of unit to turn off	<ul style="list-style-type: none"> a. Water valve parts dirty or defective b. Magnet doesn't fully return c. Push button stuck 	<ul style="list-style-type: none"> a. Clean* or replace with valve parts kit b. Make sure magnet moves freely. c. Remove button and clean cabinet/button to remove any dirt lodged in slide recess
5. Excess foaming in discharge	<ul style="list-style-type: none"> a. Air leak in pick-up tube 	<ul style="list-style-type: none"> a. Put clamp on tube or replace tube if brittle
6. Door will not close properly	<ul style="list-style-type: none"> a. Hinges disengaging from cabinet 	<ul style="list-style-type: none"> a. Re-snap hinges into cabinet before closing door

* In hard water areas, scale may form inside the discharge end of the eductor, as well as in other areas of the unit that are exposed to water. This scale may be removed by soaking the eductor in a descaling solution (deliming solution). To remove an eductor located in the cabinet, firmly grasp water valve and unthread eductor. Replace in same manner. Alternatively, a scaled eductor can be cleaned (or kept from scaling) by drawing the descaling solution through the unit. Operate the unit with the suction tube in the descaling solution. Operate the unit until solution is drawn consistently, then flush the unit by drawing clear water through it for a minute. Replace concentrate container and put suction tube into concentrate.



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