

# user manual

AccuMax™ 1, 2, & 3 button units  
with HydroGap Air Gap Eductors

# index

	page
<b>1.00 introduction</b>	
package contents	2
safety precautions	2
<b>2.00 installation</b>	
installation/operation	3
<b>3.00 parts list</b>	
parts list / diagrams	4
<b>4.00 troubleshooting</b>	5

## introduction

### package contents:

1. Proportioner unit - ASSE 1055 and cUPC approved.
2. Supply tubing
3. Foot valve assembly & weight for each educator
4. Discharge tube for each educator
5. Metering tip kit(s)
6. Mounting anchor kit
7. Hose hook for discharge tube(s) - Models with 3.5 GPM educators only
8. Instruction sheet

### 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\*\*\*\*\*

<b>WEAR</b>	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.
<b>ALWAYS</b>	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.
<b>KEEP</b>	equipment clean to maintain proper operation.
<b>ATTACH</b>	only to water tap outlets (25 PSI Minimum, 85 PSI Maximum and Maximum water temperature 120° F).
<b>NOTE</b>	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 water source for unit. Mounting bracket should be installed approx. 5' from the floor. Level bracket and mark holes. Drill 9/32" holes and install mounting anchors and screws in bracket.
2. Remove cabinet cover and hang cabinet on bracket. Mark hole for lower cabinet screw. Remove cabinet and drill 9/32" hole. Install anchor and screw in lower cabinet hole. When mounting unit, do not mount more than 5 feet from the floor. Also, never mount your concentrate container higher than the unit. Keyhole slots are also provided in the cabinet back if the mounting bracket won't be used.
3. Select a metering tip (see next section), and insert into hose barb on eductor body. (Repeat for all eductors.)
4. Supply tube should reach from hose barb on eductor to bottom of the concentrate container. Cut supply tube provided to length required. Slide a ceramic weight over one end of tube and slide a foot valve into the same end of the tube. (Prepare a tube for each eductor.)
5. Push other end of supply tube over the hose barb/metering tip on the eductor. (Repeat for all eductors.)
6. Place foot valve ends of supply tubes into concentrate containers. **REMEMBER TO CHECK FOOT VALVE STRAINERS REGULARLY FOR CLOGGING; CLEAN IF NECESSARY.**
7. 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 3.5 GPM eductor. Slide end of tube over eductor discharge outlet. (Repeat for all eductors.) Hooks may be installed on longer tubes to allow discharge tube to conveniently hang from dispenser when not in use.
8. Replace cabinet cover. Guide supply tubes through slots in sides of cabinet cover. Push the sides in, behind the latch holes, to snap the cover in place. The two screws provided may be installed in the holes in the cabinet sides to prevent easy removal of cover.

## operation

1. 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.) Connect opposite end of hose to water supply. Turn water supply on.
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. Push button to start flow of desired water/concentrate solution, and hold until supply tube is primed (filled). Then push the button whenever dispensing is desired, and release button to stop flow of solution. **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.**
4. **It is essential that the discharge hose not be obstructed. If discharge is restricted, water will flow out the eductor vents. Do not start to operate the dispenser with liquid in the discharge tube.**

## 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:

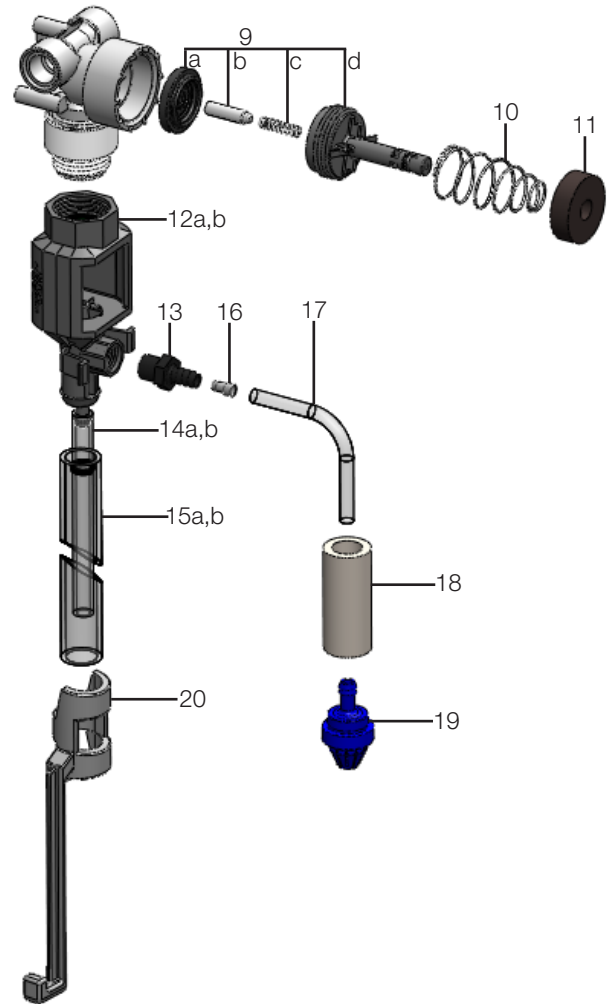
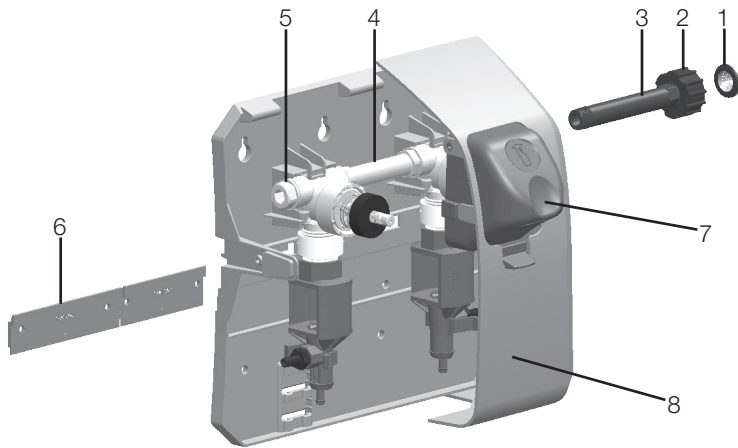
You can determine the dispensed water-to-product ratio for any metering tip size and product viscosity. All that is required is to operate the primed dispenser for a minute or so and note two things: the amount of dispensed solution, and the amount of concentrate used in preparation of the solution dispensed.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

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.

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

# parts list / diagrams



Key	Part No.	Description
1	238100	Strainer washer
2	10082830	Swivel collar (molded)
3	10082802	Swivel stm 1 btn (molded)
	10082811	Swivel stem 2 btn (molded)
4	10075902	Nipple, plastic 3/8" (2 btn models)
	10075903	Nipple, plastic 3/8" (3 btn models)
	10075950	O-ring (two required per nipple)
5	10098573	Kit, Pipe plug & o-ring
6	10091035	Wall bracket
7	10098821	Button, Low flow, process blue
	10098824	Button, High flow, process blue
8	10098539	Cabinet set, 1 button unit
	10098541	Cabinet set, 2 button unit
	10098836	Cabinet set, 3 button unit
9	10075980	Valve parts kit a. diaphragm b. armature c. spring d. valve bonnet

Key	Part No.	Description
10	10079010	Spring
11	10079000	Magnet
12a	160	1.0 GPM eductor assembly
b	161	3.5 GPM eductor assembly
13	3401-R	Hose barb assembly* included in eductor assemblies
14a	10070170	1 GPM inner discharge tube
14b	10070470	3.5 GPM inner discharge tube
15a	10064794	1 GPM outer discharge tube (7")
15b	10077310	3.5 GPM outer discharge tube (4")
16	690014	Metering tip kit
17	500870	Tubing 1/4" x 7'
18	509900	Weight
19	10089410	Footvalve -Viton (EPDM also available. Order 10076302)
20	10080720	Hose hook dark grey (standard)
	Not Shown:	
	641751	Security screws (for cabinet sides)

# troubleshooting

Problem	Cause	Solution
1. No discharge	a. No water	a. Open water supply
	b. Excessive water pressure	b. Install regulator if water pressure (with water running) exceeds 85 PSI
	c. Clogged water inlet strainer	c. Disconnect inlet water line and clean strainer
	d. Magnetic valve not functioning	d. Install valve parts kit
	e. Eductor clogged	e. Clean* or replace
2. No concentrate draw	a. Clogged foot valve	a. Clean or replace
	b. Metering tip or eductor has scale build-up	b. Clean (descale)* or replace
	c. Low water pressure	c. Minimum 25 PSI (with water running) required to operate unit properly
	d. Discharge tube and/or flooding ring not in place	d. Push tube firmly onto eductor discharge hose barb, or replace tube if it doesn't have a flooding ring
	e. Concentrate container empty	e. Replace with full container
	f. Clogged water inlet strainer	f. Disconnect inlet water line and clean strainer
	g. Inlet hose barb not screwed into eductor tightly	g. Tighten, but do not overtighten
	h. Air leak in pick-up tube	h. Put clamp on tube or replace tube if brittle
3. Excess concentrate draw	a. Metering tip not in place	a. Press correct tip firmly into barb on eductor
	b. Chemical above eductor	b. Place concentrate below eductor
4. Failure of unit to turn off	a. Water valve parts dirty or defective	a. Clean or replace with valve parts kit
	b. Magnet doesn't fully return	b. Make sure magnet moves freely Replace spring if short or weak
	c. Push button stuck	c. Remove button and clean cabinet/button to remove excess dirt lodged in slide recess
5. Excess foaming in discharge	a. Air leak in pick-up tube	a. Put clamp on tube or replace tube if brittle

\* 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.