



## AccuDose Series Proportioner Model 3876GBA-2 with HydroGap Air Gap Eductors

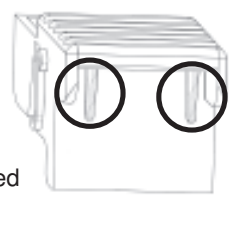
### Package Should Contain:

1. Proportioner unit.
2. Supply tubing : 6.4m total.
3. Foot valve assemblies & weights (5).
4. Discharge tube for each eductor.
5. Metering tip kits.
6. Mounting anchor kit.
7. Hook for 14 LPM discharge tube.
8. Instruction sheet.

### Installation and Operation:

1. Remove cabinet cover. Install the short, white inner discharge tubes on the outlets of the eductors. They go over the smaller barbed parts on the bottom of the eductors. These tubes must be in place for the eductors to function. The inner discharge tube for the 14 LPM (yellow) eductor has a yellow flooding ring inside it. The inner discharge tube for the 4.0 LPM (grey) eductor has a grey flooding ring inside it. Install the end of the tube nearest the flooding ring on the eductor's inner discharge barb. **To ensure the IDTs are on correctly, the metal rings should be above the small barbs.**
2. Drill holes for the three wall anchors with a 8mm drill bit, using the cabinet back as a template for correct spacing of the mounting screws. Install mounting anchors, and then screws in top two anchors. Slide key holes in cabinet back over screw heads, tighten screws, then install bottom screw. Do not mount more than 1.8 metres above the bottom of the concentrate container, nor below the highest concentrate level (never mount your concentrate higher than the proportioner).
3. Select metering tips (up to 4) for the 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. (This may be used for dispensing water only.) Select and install a metering tip for the single product eductor (on right hand side) in the same manner.
4. Cut tubing provided into separate supply tubes for each product to be dispensed (tubing allows for 2.1 m of tube per product). Supply tubes should reach from hose barb on the selector valve body and eductor to bottom of concentrate containers. Slide ceramic weights over one end of each tube and slide foot valves into the same ends of the tubes.
5. Slip open end of each supply tube through an opening in either side of the cabinet and push over a hose barb/metering tip on the selector valve and on the eductor.
6. Place foot valve ends of supply tubes into concentrate containers. **REMEMBER TO CHECK FOOT VALVE STRAINERS PERIODICALLY FOR CLOGGING: CLEAN IF NECESSARY.**
7. A short discharge tube is used with the 4 LPM eductor (selector valve); minimum tube length is 20 cm for correct operation. A longer tube (1.2 m) is used with the 14 LPM eductor. Slide end of tube over inner discharge tube and onto eductor discharge outlet. The hose hook supplied may be installed on the long tube to allow it to hang conveniently from dispenser when not in use.
8. Replace 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.
9. Connect water supply hose of at least 13 mm ID to water inlet swivel. (Minimum 1.7 bar pressure, **with water running**, is required for correct operation.) Connect opposite end of hose to water supply. Turn water supply on.
10. 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.
11. 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: Clip or bend the two tabs behind the lower front portion of the button. (See diagram at right.) This allows the button to be fully depressed and allows it to latch in the "on" position. **To unlock, PULL THE BUTTON OUT.**
12. **It is essential that the discharge hose is not obstructed. If discharge is restricted, water will flow out of the eductor vents. Do not start to operate the dispenser with liquid in the discharge tube.**

Clip or bend these tabs to depress button into locked position.



**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 4 LPM eductor is grey; a 14 LPM eductor is yellow. Refer to parts diagram if unfamiliar with names of system components.

APPROXIMATE DILUTIONS AT 40 PSI FOR WATER-THIN PRODUCTS (1.0 CP)				
Tip Colour	Orifice Size	Std. Drill Number)	Ratio (per Eductor Flow)	
			4 LPM	14 LPM
No Tip	.187	(3/16)	3:1	6.5:1
Grey	.128	(30)	3:1	6.5:1
Black	.098	(40)	3:1	7:1
Beige	.070	(50)	4:1	10:1
Red	.052	(55)	5:1	16:1
White	.043	(57)	7:1	20:1
Blue	.040	(60)	8:1	24:1
Tan	.035	(65)	10:1	30:1
Green	.028	(70)	16:1	45:1
Orange	.025	(72)	20:1	56:1
Brown	.023	(74)	24:1	64:1
Yellow	.020	(76)	32:1	90:1
Aqua	.018	(77)	38:1	128:1
Purple	.014	(79)	64:1	180:1
Pink	.010	(87)	128:1	350:1

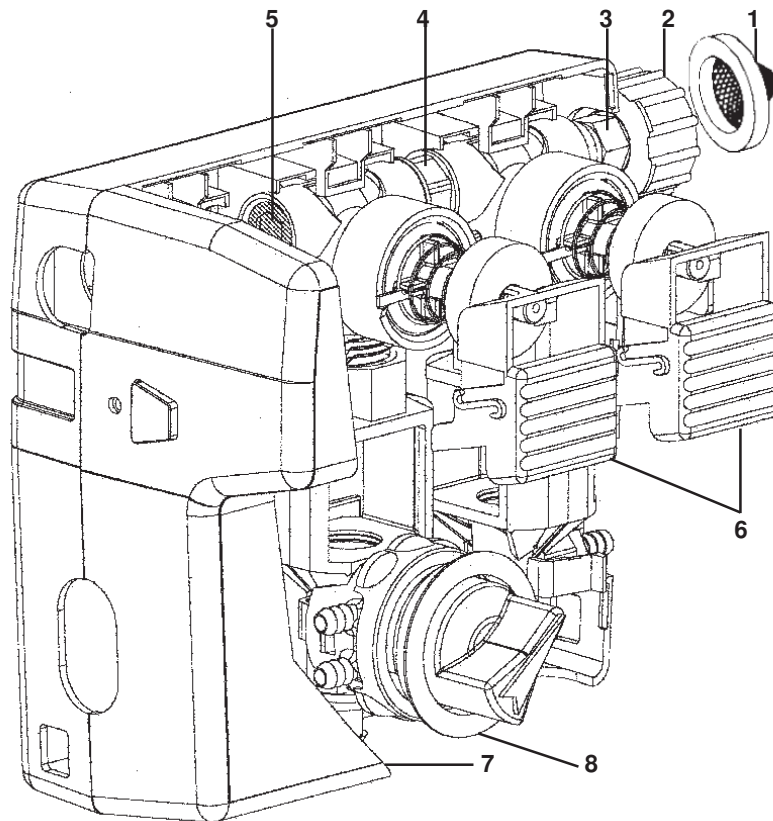
**Measurement of Concentration:**

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:

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

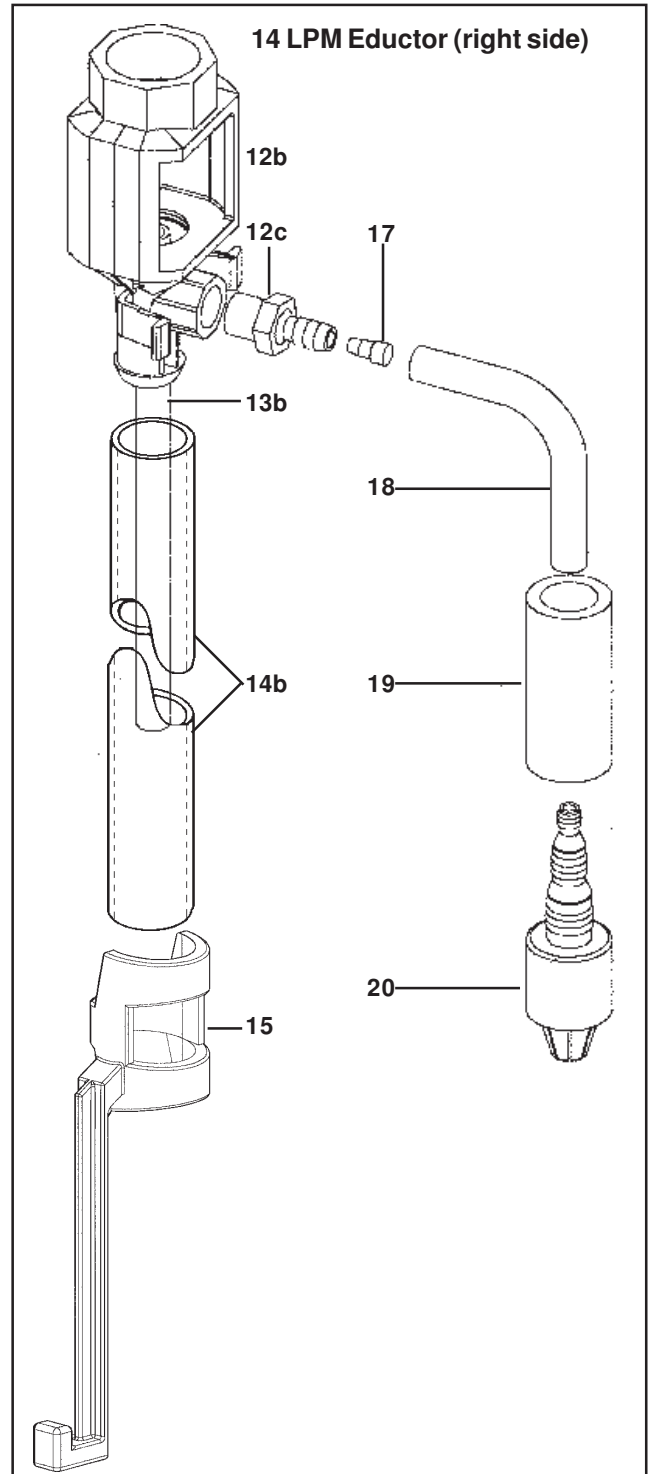
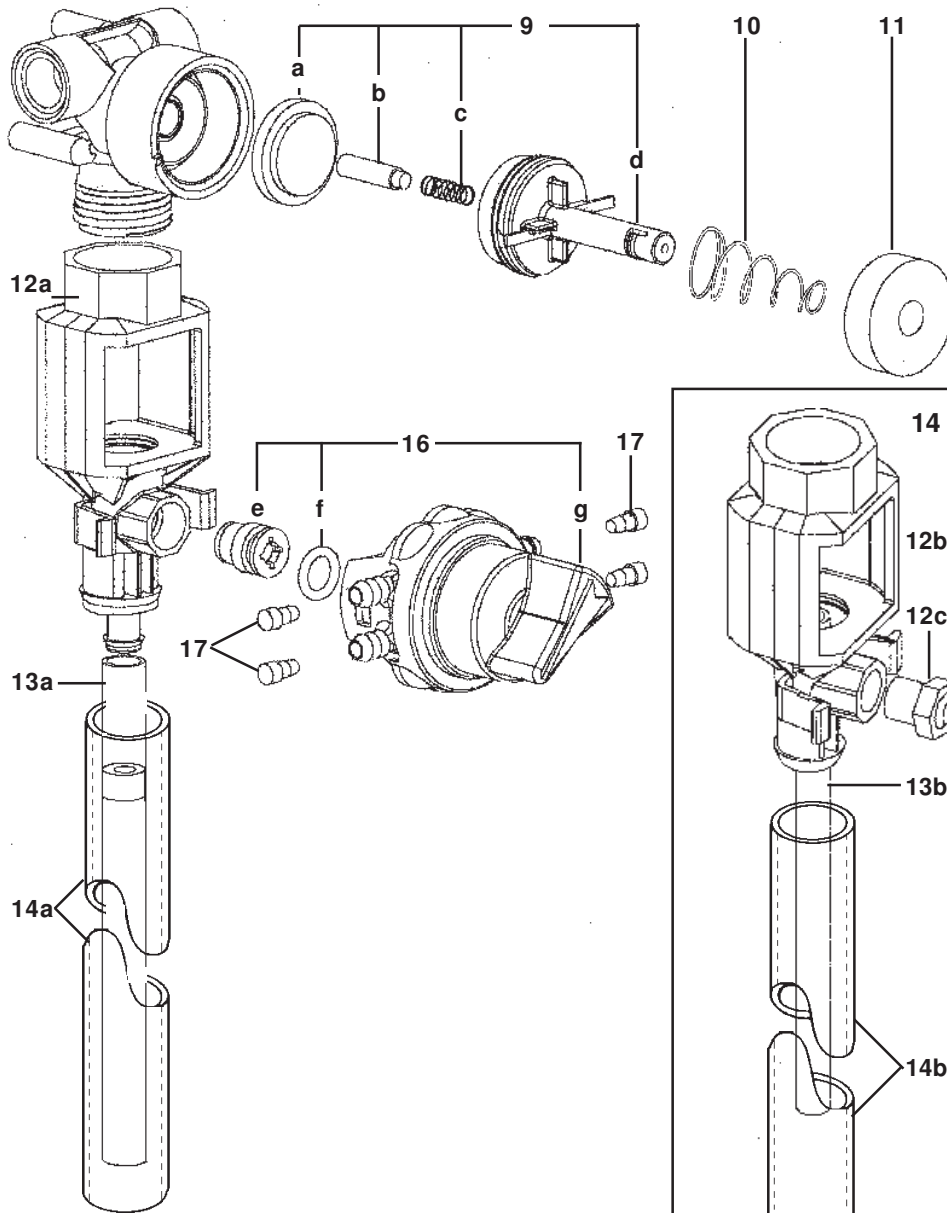
Dilution Ratio, then, equals X parts water to one part concentrate (X:1). If the test does not yield the desired ratio, choose a different tip and repeat the test. Alternative methods to this test are 1) pH (using litmus paper), and 2) titration. Contact your concentrate supplier for further information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

**AccuDose Parts Diagram:**



Key	Part No.	Description
1	238100	Strainer washer
2	10082835	Swivel collar
3	10082806	Swivel stem
4	10075911	Hex nipple
	10075950	O-ring (two per nipple)
5	10075925	Pipe plug
6	10080710	Button, dark grey (standard)
	10080711	Button, sky blue
	10080712	Button, red
	10080713	Button, green
	10080714	Button, light grey
	10080715	Button, yellow
7	10080895	Cabinet
8	10020700	Selector valve grommet
	10020900	Back up ring for grommet
9	10075980	Valve parts kit
		a. diaphragm, b. armature, c. spring, d. valve bonnet
10	10079010	Spring
11	10079000	Magnet
12a	160GB	4 LPM Eductor assembly
	b 161GB	14 LPM Eductor assembly
	c 3401-R	Eductor hose barb only
13a	10070170	4 LPM inner discharge tube
	b 10070470	14 LPM inner discharge tube
14a	10064794	4 LPM outer discharge tube (18cm)
	b 10077315	14 LPM outer discharge tube (1.2 m)

**AccuDose Parts Diagram/List:**



**Key Part No. Description**

- 15\* 10080720 Hose hook, dark grey (standard)
- 10080721 Hose hook, sky blue
- 10080722 Hose hook, red
- 10080723 Hose hook, green
- 10080724 Hose hook, light grey
- 10080725 Hose hook, yellow
- \* Hose hooks are for 14 LPM discharge tubes
- 16 10080920 Selector valve replacement kit:
  - e. Suction stub, f. O-ring, g. selector valve assembly
- 17 690014 Metering tip (kit)
- 18 500870 Tubing, 6mm x 2.1 m
- 19 509900 Weight
- 20 10076301 Foot valve -- Viton (EPDM also available. Order 10076302.)

**NOT SHOWN:**

- 641750 Security screws (for cabinet sides)

**Troubleshooting Chart:**

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
1. No discharge	a. No water b. Magnetic valve not functioning c. Excessive water pressure  d. Eductor clogged	a. Open water supply b. Install valve parts kit c. Install regulator if water pressure exceeds 4.3 bar (flowing) d. Clean* or replace
2. No concentrate draw	a. Clogged foot valve b. Metering tip or eductor has scale build-up c. Low water pressure  d. Discharge tube(s) not in place or flooding ring missing from inner discharge tube e. Concentrate container empty f. Inlet hose barb not screwed into eductor tightly g. Clogged water inlet strainer  h. Selector out of position	a. Clean or replace b. Clean (descale)* or replace  c. Minimum 1.76 bar (with water running) required to operate unit correctly d. Push tube firmly onto eductor discharge hose barb; ensure inner discharge tube is installed and has flooding ring. e. Replace with full container f. Tighten, but do not overtighten  g. Disconnect inlet water line and clean strainer h. Assure selector is in position desired
3. Excess concentrate draw	a. Metering tip not in place b. Chemical above eductor	a. Press correct tip firmly into barb on eductor b. Place concentrate below the eductor
4. Failure of unit to turn off	a. Water valve parts dirty or defective b. Magnet doesn't fully return c. Push button stuck	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	a. Air leak in pick-up tube b. Inner discharge tube not in place	a. Put clamp on tube or replace tube if brittle b. Install inner discharge tube
6. Water discharge from air vents on eductor	a. Restricted discharge hose  b. High water pressure	a. Ensure discharge tube is not immersed, kinked or elevated. Ensure there is no liquid in the discharge tube when beginning to operate dispenser b. Install pressure regulator if flowing water pressure exceeds 4.3 bar (flowing)

\* In hard water areas, scale may form inside the discharge end of the eductor, as well as in other areas of the unit which 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.

