



## MaxiMizer II Proportioning System

### Models 2871GBA-2 & 2872GBA-2

#### **Package Contains:**

1. Proportioner unit.
2. Supply tubes and "Y" fittings.
3. Foot valve and weight.
4. Discharge tube.
5. Metering tip kits.
6. Mounting anchor kit.
7. Drip tray (Model 2872GBA-2 only)
8. Instruction sheet.

**Notes:** ➤ Make sure the products to be dispensed are compatible with the Viton seal on the inlet stub.

#### **Installation and Operation:**

1. Unlock the front door panel and open it. The top panel can be removed for easier access: loosen the screws at the bottom edge.
2. To mount the unit to a wall, drill mounting holes and insert the plastic toggle anchors provided into the holes. Use the screws provided to secure the unit to the wall.
3. Connect water supply hose of at least 13mm ID to water inlet swivel at right side of manifold. (Minimum 1.76 Bar pressure, with water running, is required for proper operation.) Route hose out the side of the cabinet, through the hole provided, and attach the hose to the water supply source. Turn water supply on.
4. *For Model 2871GBA-2:* Connect the long, flexible discharge tube to the bottom of the 14 LPM (yellow) eductor, applying the end opposite the hook. Route the hose out the bottom of the unit, through the hole provided. A hook is provided which may be attached to the bottom of the discharge tube. The hook allows the discharge tube to hang neatly when not in use. Twist the hose hook gently while guiding it onto the tube. Make sure discharge tube is fully engaged onto the eductor. *For Model 2872GBA-2:* A short, discharge tube has already been installed on the grey eductor. Make sure discharge tube is fully engaged onto the eductor.
5. 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.)
6. Rig the suction tube assembly as follows:
  - Put the 6mm x 60mm tubes on the selector valve barbs.
  - Install "Y" fitting to join the two 60 mm tubes on the right side of the selector valve so that the single leg of the "Y" points away from the selector valve. Install a second "Y" fitting in the same manner on the left side of the selector valve.
  - Install one of the 150mm pieces of tubing on the right "Y" fitting and the other on the left "Y" fitting.
  - Install the remaining "Y" fitting between the two pieces of tubing to connect them.
  - From the 600mm piece of tubing, cut a piece that will reach from the "Y" fitting to the bottom of the concentrate container when it's in place in the cabinet. Install this piece of tubing on the bottom leg of the "Y" fitting, then slide a weight over the open end of the tube. Put the foot valve hose barb into the open end of the tube.
7. Place foot valve end of suction tube into the concentrate container and put container into MaxiMizer cabinet.
  - **REMEMBER TO CHECK FOOT VALVE STRAINER FOR CLOGGING PERIODICALLY. CLEAN AS NECESSARY.**
8. Close front door panel and lock. For Model 2872GBA-2, be sure the drip tray is in its place at the bottom of the shelf, below concentrate container.
9. Write product dilutions or uses on the label that has been pre-applied to the system cabinet so that they correspond to the selector positions.
10. Purge air from the system by depressing the button briefly. There may be some water discharge from the eductor vent until the air is purged.
11. Turn knob to select desired product. Push button to start flow of desired water/concentrate solution, and hold until supply tube is primed (filled). (Be sure to have a bottle or other receptacle under the discharge tube.) Prime each tube in the same fashion. Push the button whenever dispensing is desired. Release button to stop flow of solution. Button on Model 2871GBA-2 may be converted to twist-to-latch locking button by installing the latch spring provided (see parts diagram for placement). This allows continuous dispensing without holding button.
12. **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.**

**Metering Tip Selection:**

The final concentration of the dispensed liquid is related to both the size of the metering tip opening and the viscosity of the liquid being siphoned. If product viscosity is noticeably greater than that of water, consult the procedure for Measurement of Concentration on the next page to achieve your desired water-to-product ratio. For water-thin products, use the chart on the next page as a **guideline**. Use undrilled, clear tip for drilling orifices to sizes not listed, or as a plug for ports not used.

**Measurement of Concentration:**

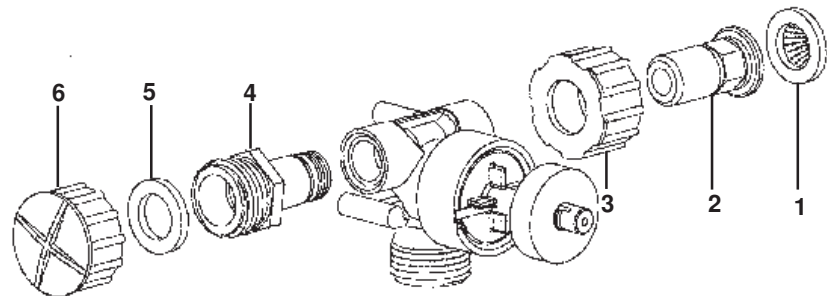
You can determine the dispensed water-to-product ratio for any metering tip size and product viscosity. All that is required is to operate the primed dispenser for a minute or so and note two things: the amount of dispensed solution, and the amount of concentrate used in preparation of the solution dispensed.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

APPROXIMATE DILUTIONS AT 2.86 BAR 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

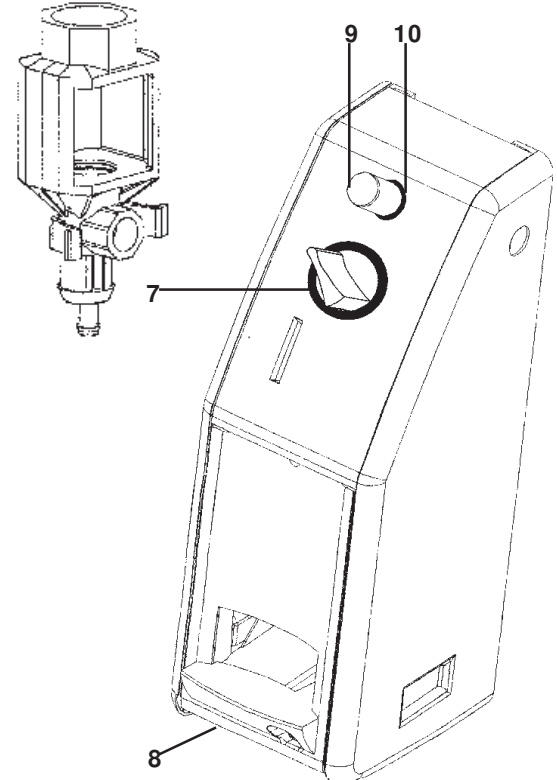
Dilution Ratio (X:1) where X =  $\frac{\text{Amount of Mixed Solution} - \text{Amount of Concentrate Drawn}}{\text{Amount of Concentrate Drawn}}$

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.

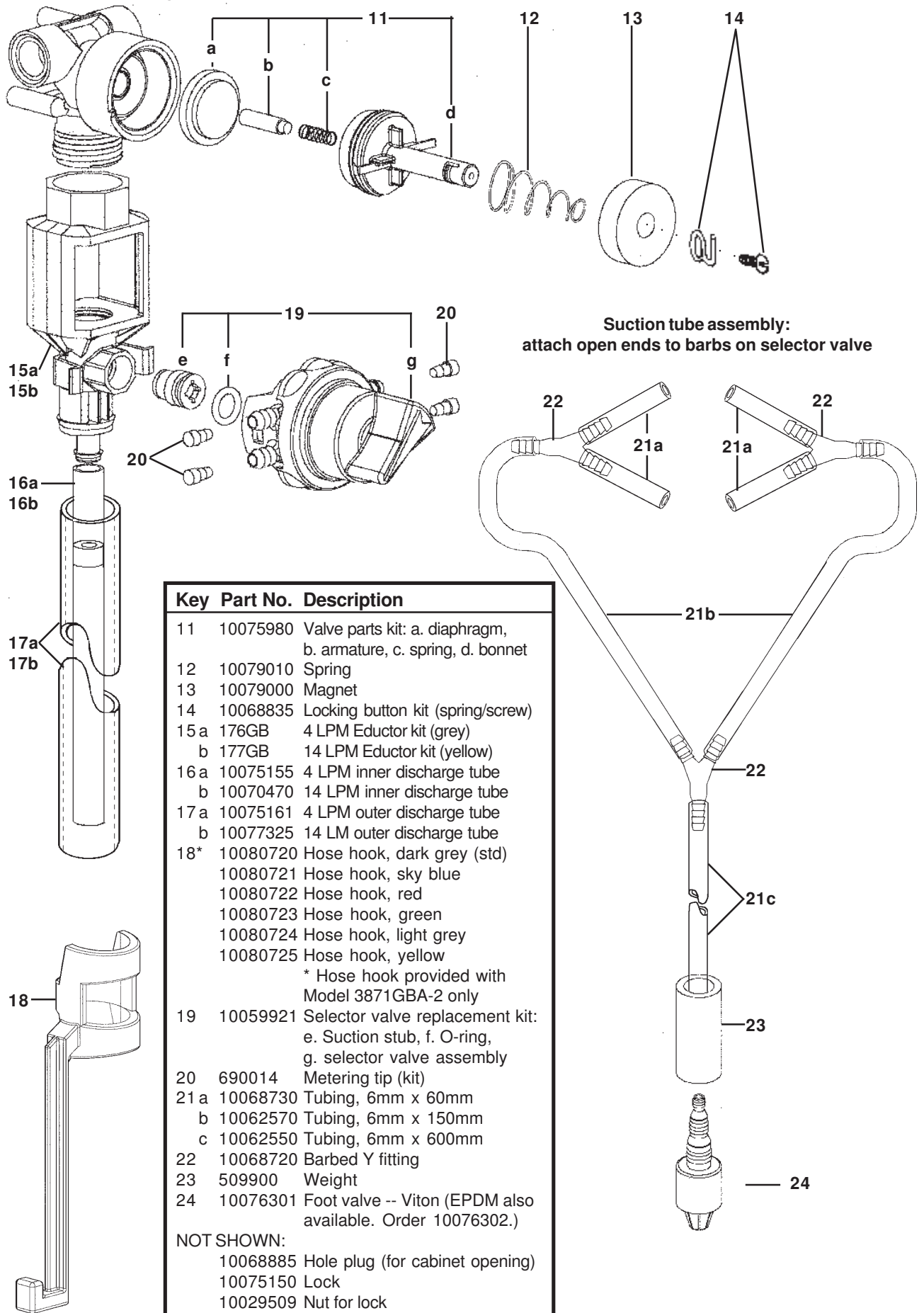
**MaxiMizer II Parts Diagram/List:**



Key	Part No.	Description
1	238100	Strainer washer
2	10082806	Swivel stem
3	10082835	Swivel collar
4	10082826	Male hose fitting
5	10087394	Washer (inside plastic cap)
6	10082845	Plastic cap
7	10020700	Grommet for selector valve
	10020900	Back-up ring for grommet
8	10075160	Drip tray (Model 2872GBA-2)
9	10077480	Button, dark grey
	10077481	Button, blue
	10077482	Button, red
	10077483	Button, green
	10077484	Button, yellow
	10077485	Button, light grey
	10082750*	Button, dark grey locking
	10082751*	Button, blue locking
	10082752*	Button, red locking
	10082753*	Button, green locking
	10082754*	Button, yellow locking
	10082755*	Button, light grey locking
		* Locking button parts kits include 10 and 14
10	10068810	Grommet



**MaxiMizerII Parts Diagram/List:**



**Suction tube assembly:**  
attach open ends to barbs on selector valve

Key	Part No.	Description
11	10075980	Valve parts kit: a. diaphragm, b. armature, c. spring, d. bonnet
12	10079010	Spring
13	10079000	Magnet
14	10068835	Locking button kit (spring/screw)
15 a	176GB	4 LPM Eductor kit (grey)
15 b	177GB	14 LPM Eductor kit (yellow)
16 a	10075155	4 LPM inner discharge tube
16 b	10070470	14 LPM inner discharge tube
17 a	10075161	4 LPM outer discharge tube
17 b	10077325	14 LM outer discharge tube
18*	10080720	Hose hook, dark grey (std)
	10080721	Hose hook, sky blue
	10080722	Hose hook, red
	10080723	Hose hook, green
	10080724	Hose hook, light grey
	10080725	Hose hook, yellow
	* Hose hook provided with Model 3871GBA-2 only	
19	10059921	Selector valve replacement kit: e. Suction stub, f. O-ring, g. selector valve assembly
20	690014	Metering tip (kit)
21 a	10068730	Tubing, 6mm x 60mm
21 b	10062570	Tubing, 6mm x 150mm
21 c	10062550	Tubing, 6mm x 600mm
22	10068720	Barbed Y fitting
23	509900	Weight
24	10076301	Foot valve -- Viton (EPDM also available. Order 10076302.)
<b>NOT SHOWN:</b>		
	10068885	Hole plug (for cabinet opening)
	10075150	Lock
	10029509	Nut for lock
	10075128	Keys for lock (2)

## TROUBLESHOOTING CHART:

Problem	Cause	Solution
1. No discharge	<ul style="list-style-type: none"> <li>a. No water</li> <li>b. Magnetic valve not functioning</li> <li>c. Excessive water pressure</li> <li>d. Eductor clogged</li> </ul>	<ul style="list-style-type: none"> <li>a. Open water supply</li> <li>b. Install valve parts kit</li> <li>c. Install regulator if flowing water pressure exceeds 4.3 Bar</li> <li>d. Clean* or replace</li> </ul>
2. No concentrate draw	<ul style="list-style-type: none"> <li>a. Clogged foot valve</li> <li>b. Metering tip or eductor has scale build-up</li> <li>c. Low water pressure</li> <li>d. Discharge tube (inner or outer) and/or flooding ring not in place</li> <li>e. Concentrate container empty</li> <li>f. Inlet hose barb not screwed into eductor tightly</li> <li>g. Clogged water inlet strainer</li> <li>h. Selector out of position</li> </ul>	<ul style="list-style-type: none"> <li>a. Clean or replace</li> <li>b. Clean (descale)* or replace</li> <li>c. Minimum 1.76 Bar (with water running) required to operate unit correctly</li> <li>d. Push tube firmly onto eductor discharge hose barb, or replace inner discharge tube if it does not have a flooding ring</li> <li>e. Replace with full container</li> <li>f. Tighten, but do not overtighten</li> <li>g. Disconnect inlet water line and clean strainer</li> <li>h. Assure selector is in position desired</li> </ul>
3. Excess concentrate draw	<ul style="list-style-type: none"> <li>a. Metering tip not in place</li> </ul>	<ul style="list-style-type: none"> <li>a. Press correct tip firmly into barb on eductor</li> </ul>
4. Failure of unit to turn off	<ul style="list-style-type: none"> <li>a. Water valve parts dirty or defective</li> <li>b. Magnet doesn't fully return</li> <li>c. Push button stuck</li> <li>d. Excessive water pressure</li> </ul>	<ul style="list-style-type: none"> <li>a. Clean* or replace with valve parts kit</li> <li>b. Make sure magnet moves freely. Replace spring if short or weak</li> <li>c. Realign cabinet or clean grommet that button passes through</li> <li>d. Install regulator if pressure (with water flowing) exceeds 4.3 Bar</li> </ul>
5. Excess foaming in discharge	<ul style="list-style-type: none"> <li>a. Air leak in pick-up tube</li> <li>b. Inner discharge tube not in place</li> </ul>	<ul style="list-style-type: none"> <li>a. Put clamp on tube or replace tube if brittle</li> <li>b. Install inner discharge tube</li> </ul>
6. Water discharge from air vents of eductor	<ul style="list-style-type: none"> <li>a. Restricted discharge hose</li> <li>b. High water pressure</li> </ul>	<ul style="list-style-type: none"> <li>a. Ensure discharge hose is not immersed, kinked or elevated. Make sure there is no liquid in the discharge hose when beginning to operate the dispenser</li> <li>b. Install pressure regulator if flowing water pressure exceeds 4.3 Bar</li> </ul>

\* 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 valve and unscrew 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.

