



MaxiMizer II Proportioning System

Models 28741GB & 28751GB

Package Contains:

1. Proportioner unit.
2. Supply tube (4.25m).
3. Foot valves and weights.
4. Discharge tube.
5. Metering tip kits.
6. Mounting anchor kit.
7. Drip tray (Model 28751GB only)
8. Instruction sheet.

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 correct operation.) Push hose out of 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 28741GB:* Connect the long, flexible discharge tube to the bottom of the 14 LPM (yellow) eductor, applying the end opposite the hook. Slide the hose out of the bottom of the unit, through the hole provided. The hook allows the discharge tube to hang neatly when not in use. Make sure discharge tube is fully engaged onto the eductor.
For Model 28751GB: A short discharge tube has already been installed on the 4 LPM (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 clear plastic tip with no hole can be used to block any valve port not being used. (This may be used for dispensing water only.)
6. Suction tubes are assembled as follows:
 - Tubes should be long enough to reach from the selector valve hose barbs to the bottom of each concentrate container. Cut the tubing provided to lengths required.
 - Slide a weight over the one end of each piece of tube.
 - Attach a foot valve to the end of each piece of tube and slide the weight down to the foot valve.
 - Attach the other (open) end of each tube to one of the hose barbs on the selector valve.
7. Place foot valve ends of suction tubes into the concentrate containers and put containers into MaxiMizer cabinet.
 - REMEMBER TO CHECK FOOT VALVE STRAINERS FOR CLOGGING PERIODICALLY. CLEAN AS NECESSARY.
8. Close front door panel and lock. For Model 28751GB, make sure the drip tray is in its place at the bottom of the shelf, below concentrate container under the selector valve.
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. Turn knob to select desired product. Push button to start flow of desired water/concentrate solution, and hold until supply tube is primed (filled). (Make sure there is a bottle or other receptacle under the discharge tube.) Prime each tube in the same way. Push the button whenever dispensing is desired. Release button to stop flow of solution. Button on Model 28741GB 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.

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. Simply 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:

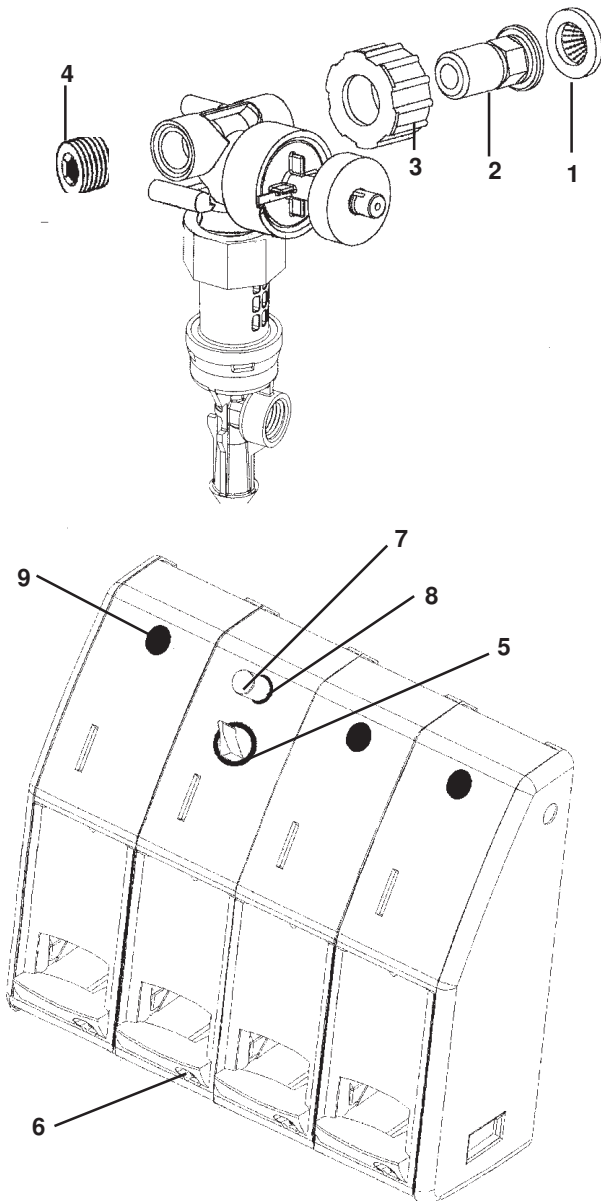
$$\text{Dilution Ratio (X:1) where X} = \frac{\text{Amount of Mixed Solution} - \text{Amount of Concentrate Drawn}}{\text{Amount of Concentrate Drawn}}$$

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.

**APPROXIMATE DILUTIONS
AT 2.86 BAR FOR WATER-THIN PRODUCTS (1.0 CP)**

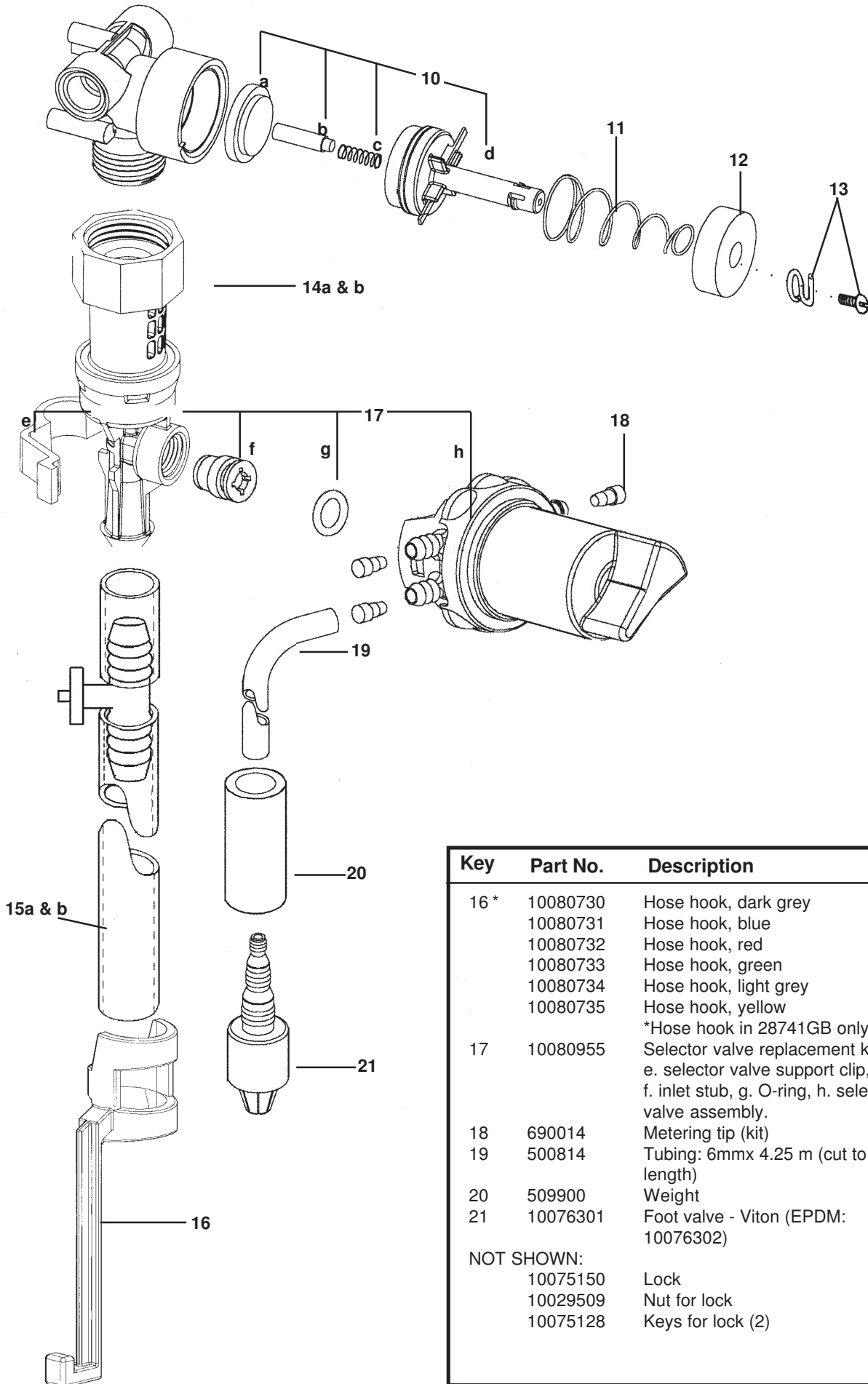
| Tip Colour | Orifice Size | Std. Drill Number | Ratio (per Eductor Flow) | |
|------------|--------------|-------------------|--------------------------|--------|
| | | | 4 LPM | 14 LPM |
| No Tip | .187 | (3/16) | 3:1 | 6.5:1 |
| Grey | .128 | (30) | 3:1 | 6.5:1 |
| Black | .098 | (40) | 3:1 | 7:1 |
| 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 |

MaxiMizer II Parts Diagram/List:



| Key | Part No. | Description | |
|------|----------|--|--------------------------------|
| 1 | 238100 | Strainer washer | |
| 2 | 10082806 | Swivel stem | |
| 3 | 10082835 | Swivel collar | |
| 4 | 10075925 | Pipe plug | |
| 5 | 10020700 | Grommet for selector valve | |
| | 10020900 | Retainer for selector valve grommet | |
| 6 | 10075160 | Drip tray (Model 28751GB) | |
| 7 | 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 | |
| 8 | 10068810 | Grommet | |
| 9 | 10068885 | Hole plug | |
| 10 | 10075980 | Water valve parts kit: a. diaphragm, b. armature, c. spring, d. valve bonnet | |
| 11 | 10079010 | Spring | |
| 12 | 10079000 | Magnet | |
| 13 | 10068835 | Locking button kit 28741GB | |
| 14 a | 290GB | 4 LPM eductor assembly kit | |
| | b | 291GB | 14 LPM eductor assembly kit |
| 15 a | 10088823 | 4 LPM discharge tube assembly | |
| | b | 10088827 | 14 LPM discharge tube assembly |

MaxiMizer II Parts Diagram/List:



| Key | Part No. | Description |
|------------|----------------------------|--|
| 16 * | 10080730 | Hose hook, dark grey |
| | 10080731 | Hose hook, blue |
| | 10080732 | Hose hook, red |
| | 10080733 | Hose hook, green |
| | 10080734 | Hose hook, light grey |
| | 10080735 | Hose hook, yellow |
| | *Hose hook in 28741GB only | |
| 17 | 10080955 | Selector valve replacement kit: e. selector valve support clip, f. inlet stub, g. O-ring, h. selector valve assembly. |
| 18 | 690014 | Metering tip (kit) |
| 19 | 500814 | Tubing: 6mmx 4.25 m (cut to length) |
| 20 | 509900 | Weight |
| 21 | 10076301 | Foot valve - Viton (EPDM: 10076302) |
| NOT SHOWN: | | |
| | 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"> a. No water b. Magnetic valve not functioning c. Excessive water pressure d. Eductor clogged | <ul style="list-style-type: none"> a. Open water supply b. Install valve parts kit c. Install regulator if water pressure exceeds 5.7 Bar d. Clean* or replace |
| 2. No concentrate draw | <ul style="list-style-type: none"> a. Clogged foot valve b. Metering tip or eductor has scale build-up c. Low water pressure d. Discharge tube and/or flooding ring not in place e. Concentrate container empty f. Inlet stub not screwed into eductor tightly g. Clogged water inlet strainer h. Selector out of position | <ul style="list-style-type: none"> 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; replace tube if it does not have a flooding ring e. Replace with full container f. Tighten, but do not overtighten g. Disconnect inlet water line and clean strainer h. Ensure selector is in position required |
| 3. Excess concentrate draw | <ul style="list-style-type: none"> a. Metering tip not in place b. Orifice seals not secure | <ul style="list-style-type: none"> a. Press correct tip firmly into hose barb b. Ensure correct sealing in selector valve |
| 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 d. Excessive water pressure | <ul style="list-style-type: none"> a. Clean* or replace with valve parts kit b. Make sure magnet moves freely. Replace spring if short or weak c. Realign cabinet or clean button grommet d. Install regulator if pressure exceeds 5.7 Bar |

* 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 vacuum breaker and unthread eductor. Replace in same manner. This will avoid loosening the vacuum breaker. 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.

