

Drum Mixer/Proportioner

INSTRUCTIONS



COMPONENTS:

1. Drum mixer/proportioner
2. Suction tube (4') w/foot valve
3. Discharge tube (4')
4. Metering tip kit

WEAR protective clothing and eyewear when dispensing chemicals or other materials.

ALWAYS observe safety and handling instructions of the chemical manufacturers.

ALWAYS direct discharge away from you or other persons or into approved container.

ALWAYS dispense cleaners and chemicals in accordance with manufacturer's instructions.

ALWAYS exercise CAUTION when maintaining your equipment.

CLEAN equipment after each use in accordance with instruction sheet.

WEAR protective clothing and eyewear when working in the vicinity of all chemicals, filling, or emptying equipment or changing metering tips.

ALWAYS re-assemble equipment according to instruction procedures. Be sure all components are firmly screwed or latched into position.

ATTACH only to tap water outlets - 85 PSI maximum.

INSTALLATION & OPERATION:

See parts drawing on back page to identify parts.

1. Select a metering tip (see next section). Thread metering tip into the suction stub. Slide the open end of the suction tube through the center of the mounting bracket (from the bottom), through the bung adapter, then over the suction stub.
2. Slide the end of the discharge tube over the educator discharge outlet
3. Remove the bung from an upright drum.
4. Insert the foot valve end of the suction tube into the drum.
5. Swivel the drum adapter several times in the bung opening until the bracket is secure.
6. Install minimum 3/8" ID water hose between the inlet swivel and water supply spigot. (Minimum 25 PSI flowing water pressure is required to operate the unit.)
7. Turn on water supply. To begin dispensing solution, place discharge tube into container and then open ball valve at inlet to unit. Turn ball valve off to stop solution flow.

METERING TIP SELECTION:

The final concentration of the dispensed liquid is related to the size of the metering tip opening (orifice), inlet water pressure, temperature, and the viscosity of the liquid being siphoned. For water-thin products, use the chart below as a guideline. The figures listed below are only approximate. Test the actual dilution you are achieving using the *Measurement of Concentration* procedure on the next page for best results. If the product viscosity is noticeably greater than water, consult the procedure for *Measurement of Concentration* on the next page to determine your desired water-to-product ratio. Two undrilled, clear tips are provided for drilling sizes not listed.

Tip Color:	Orifice Size Standard Drill	Approximate Dilution Ratio at 40 PSI, water-thin viscosity (1.0 cp)	Approximate %
No tip	0.187	1:1	100.0%
Grey	0.128 / 30	1.3:1	76.9%
Black	0.098 / 40	2:1	50.0%
Beige	0.070 / 50	3.5:1	28.6%
Red	0.052 / 55	6:1	16.7%
White	0.043 / 57	9:1	11.1%
Blue	0.040 / 60	10:1	10.0%
Tan	0.035 / 65	13:1	7.7%
Green	0.028 / 70	18:1	5.6%
Orange	0.025 / 72	25:1	4.0%
Brown	0.023 / 74	30:1	3.3%
Yellow	0.020 / 76	37:1	2.7%
Purple	0.014 / 79	55:1	1.8%
Pink	0.010 / 87	110:1	0.9%

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MEASUREMENT OF CONCENTRATION:

The dispensed water-to-product ratio can be determined by operating the primed dispenser for a minute or so and noting 1) the amount of dispensed water-to-product mixture and 2) the amount of concentrate used in preparation of the dispensed solution. The water-to-product ratio can then be calculated as follows where X = parts of water:

$$\text{Dilution (X:1)} = \frac{\text{Amount of mixed solution} - \text{Amount of concentrate used}}{\text{Amount of concentrate used}}$$

Using the above formula gives the dilution ratio as X parts water to 1 part concentrate (X:1). If this test does not yield the desired ratio choose a different tip and repeat.

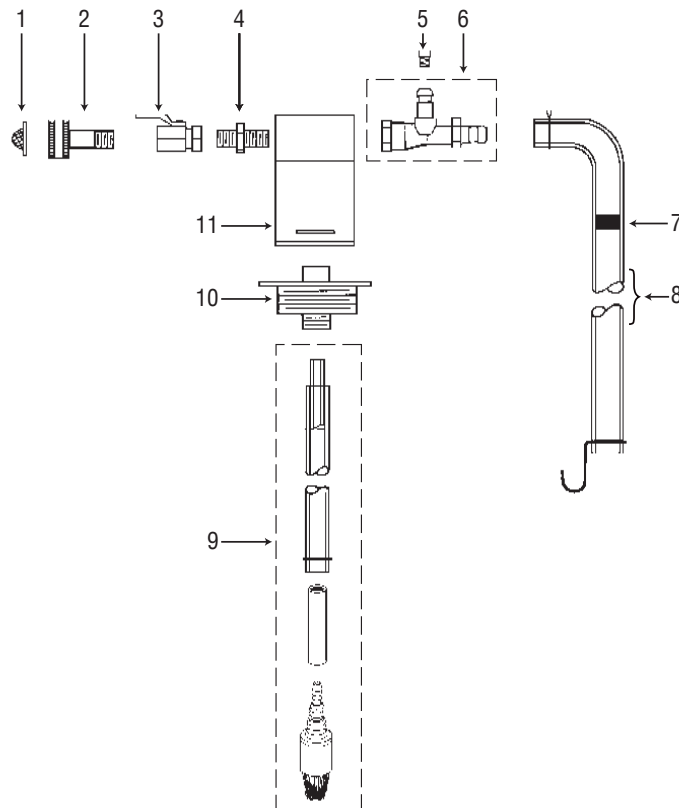
TROUBLESHOOTING:

PROBLEM:	CAUSE:	REMEDY:
1. Unit doesn't draw concentrate	a. Clogged foot valve strainer b. Metering tip orifice obstructed c. Water pressure too low d. Mineral deposits in eductor e. Flooding ring not in place	a. Clean or replace b. Rinse orifice or replace with new tip c. Replumb line or use different source d. Descale* or replace eductor e. Replace discharge tube
2. Water gets into concentrate container	a. Heavy mineral deposits in eductor b. Faulty or missing foot valve	a. Descale* or replace eductor b. Repair or replace foot valve
3. Unit continuously draws concentrate	a. End of discharge tube lower than eductor	a. Always hang discharge tube from unit using hook provided on end.

* Mineral deposits, known as scales, may form at the discharge of the eductor, particularly in hard water areas. To remove scales, soak eductor in a descaling or deliming solution. Alternately, the descaling solution can be siphoned into the eductor by operating the unit with the foot valve in the descaling solution. After operating the unit in this manner for a minute, put the foot valve in clear water and operate for another minute to flush the unit. Return the foot valve to the concentrate for normal use.

PARTS INFORMATION:

KEY:	DESCRIPTION:
1	Strainer washer
2	Hose swivel
3	Ball valve
4	Nipple
5	Metering tip (from kit)
6	Eductor assembly
7	Flooding ring
8	Discharge tube assembly
9	Suction tube assembly
10	Bung adaptor assembly
11	Mounting bracket



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Revised 04/10