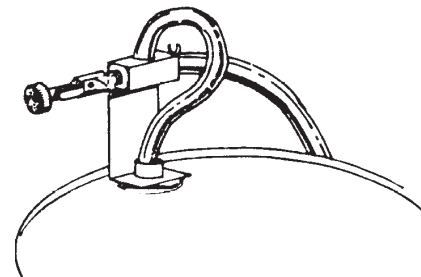


HYDROMASTER MODEL 208



Package Contains:

1. Drum proportioner.
2. Suction tube (1.2 m) with foot valve.
3. Discharge tube (1.2 m).
4. Metering tip kit.
5. Product information sheet.

Installation and Operation:

1. Select a metering tip (see next section), and insert it into the suction stub. Slide the open end of the suction tube over the stub.
2. Remove the bung from an upright drum.
3. Insert the foot valve end of the suction tube into the drum.
4. Swivel the drum adaptor several turns in the bung opening until the bracket is secure.
5. Install minimum 13 mm ID water hose between the inlet swivel and water supply spigot. (Minimum 1.76 Bar/25 PSI flowing water pressure is required to operate the unit.)
6. Turn on water supply. To begin dispensing solution, open ball valve at inlet to unit.

Metering Tip Selection:

The final concentration of the dispensed liquid is related to both the size of the metering tip opening (orifice) 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 below as a guideline. Because such factors as inlet water pressure and temperature can affect dilution ratios, the figures listed below are only approximate. Test the actual dilution you are achieving using the Measurement of Concentration procedure for best results. Two undrilled, clear tips are supplied for drilling sizes not listed.

Tip Colour	Orifice Size (mm)	Approximate Dilution Ratio at 2.67 Bar (40 PSI), water-thin viscosity (1.0 cp)	Approximate Per Cent
No tip	.187	1:1	50.0
Grey	.128	1.3:1	43.4
Black	.098	2:1	33.3
Beige	.070	3.5:1	22.2
Red	.052	6:1	14.3
White	.043	9:1	10.0
Blue	.040	10:1	9.1
Tan	.035	13:1	7.1
Green	.028	18:1	5.3
Orange	.025	25:1	3.9
Brown	.023	30:1	3.2
Yellow	.020	37:1	2.6
Purple	.014	55:1	1.8
Pink	.010	110:1	0.9

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 water/product mixture, and the amount of concentrate used in preparation of the solution dispensed. The water-to-product ratio is then calculated as follows:

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

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.

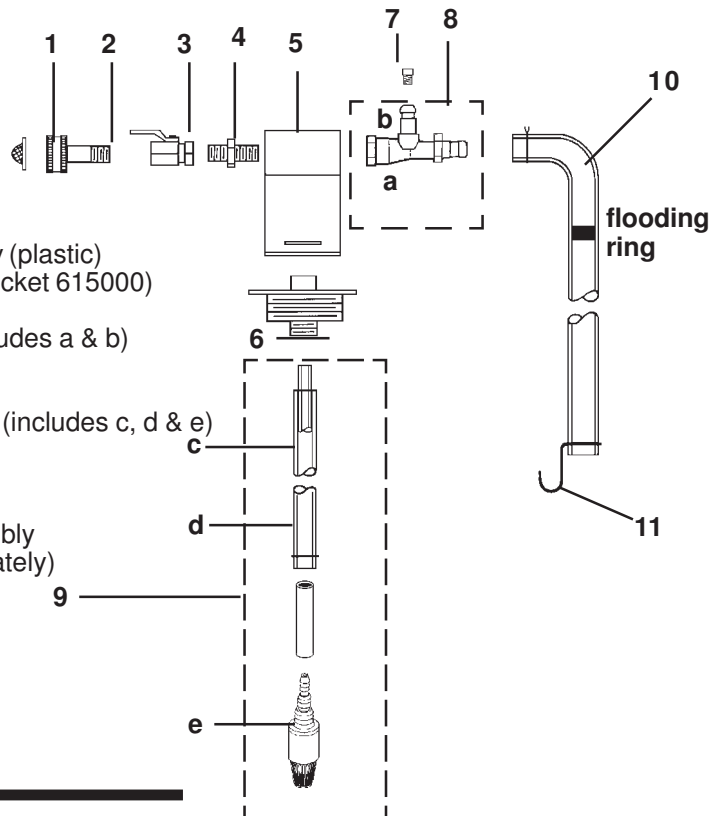
Troubleshooting:

Problem	Cause	Remedy
1. Unit does not 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. Minimum 1.67 Bar (25 PSI) required. 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 scale, may form at the discharge of the eductor, particularly in hard water areas. To remove scale, soak the 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 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	PART NO.	DESCRIPTION
1	238100	Strainer/washer
2	10062600	Hose swivel
	506501	Swivel stem
3	502000	Ball valve
4	234300	Nipple
5	615000	Mounting bracket
6	10090910	Bung adaptor assembly (plastic) (includes mounting bracket 615000)
7	690015	Metering tip (kit)
8	440321	Eductor assembly (includes a & b)
a	440300	Eductor only
b	440301	Suction stub
9	10074800	Suction tube assembly (includes c, d & e)
c	505804	13 mm ID tubing
d	250006	Ceramic weight
e	10076301	Foot valve, Viton*
10	10074815	Discharge tube assembly
11	615400	Hose Hook (sold separately)



* EPDM foot valve available: Order 10076302



Hydro Systems Europe Ltd

Unit 3 The Sterling Centre, Eastern Road, Bracknell RG12 2PW England
 Tel.: 44 (0)1344 48 88 80
 Fax: 44 (0)1344 48 88 79
 www.hydrosystemeurope.com