

HydroMinder Model 511GB

Package Contains:

1. Proportioner with U-clamp for mounting
2. Float with chain
3. Suction tube with foot valve -- 2.75m.
4. Discharge tube -- 60cm
5. Metering tip kit (14 tips)
6. Production information sheet

Installation:

1. Mount the unit in a level position on the side of a reservoir. The U-clamp may be repositioned or removed as necessary.
2. Install a minimum 13mm ID water hose between the inlet threads and the water spigot. Minimum water pressure required to operate the proportioner is 1.8 Bar (flowing).
3. Attach the end of the discharge tube with the clamp and flooding ring to the discharge barb on the eductor.
4. Insert the foot valve end of the suction tube into the concentrate container. (The level of the concentrate must be below the level of the eductor, or the proportioner will continue to siphon concentrate after it is turned "off".)
5. Select a metering tip (see next two sections) and screw it into the suction stub on the eductor body.
6. Slide the open end of the suction tube over the suction stub.
7. Adjust the bead chain length to position the float at the desired level of solution. To prevent foaming, be certain that the solution level will always be above the point of discharge. Be sure float mechanism is not hampered by water turbulence caused by discharging solution. It may be necessary to baffle the float from the discharge in order for the unit to work correctly.

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	Drill Size	Approx Ratio @ 2.85 Bar water-thin viscosity
No tip		4:1
Gray	30	5:1
Black	40	6:1
Beige	50	8:1
Red	55	17:1
White	57	23:1
Blue	60	25:1
Tan	65	36:1
Green	70	48:1
Orange	72	64:1
Brown	74	75:1
Yellow	76	90:1
Purple	80	120:1
Pink	87	240:1

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 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.

Operation:

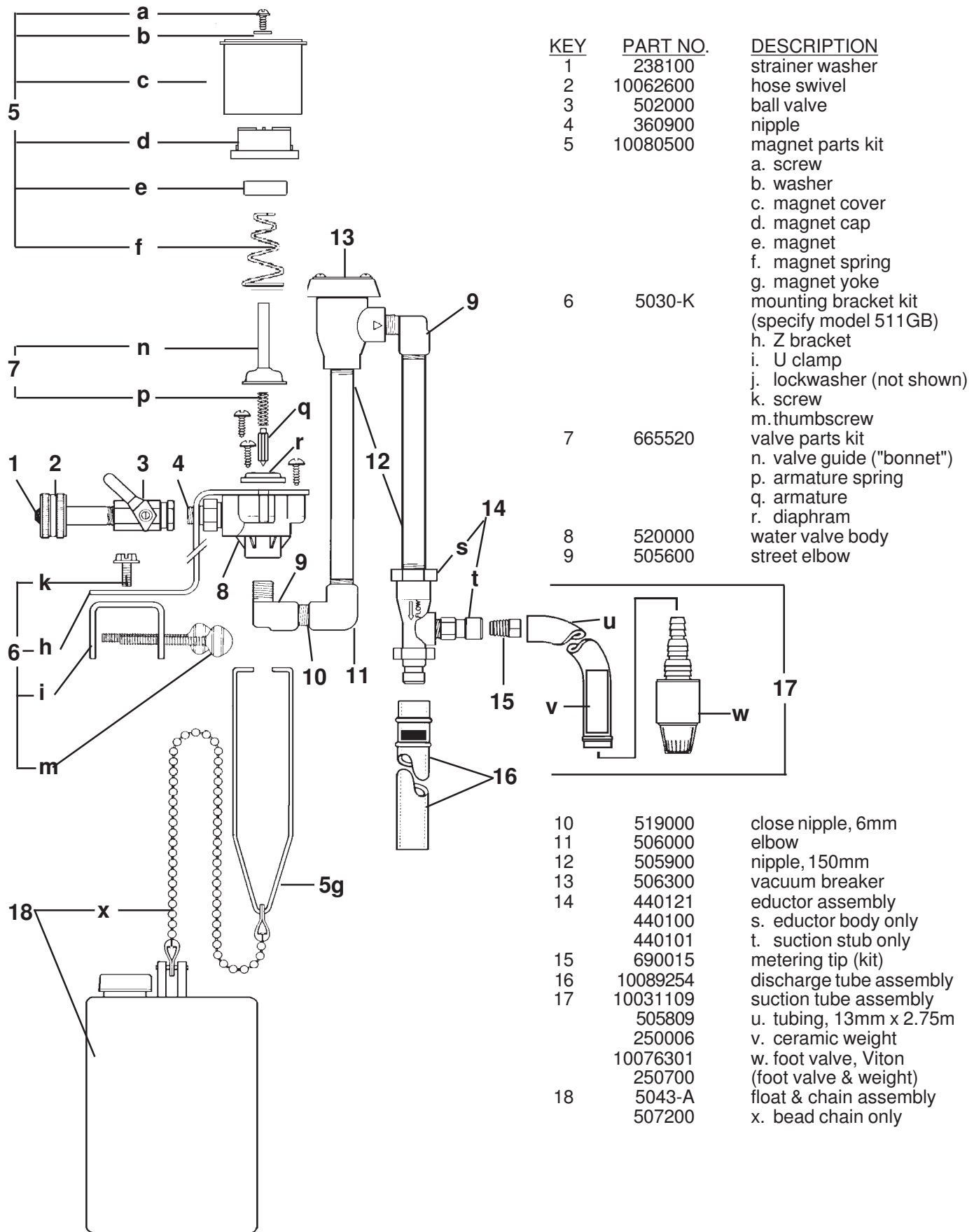
Open the water supply ball valve. When the solution in the reservoir reaches the level set by the float, the valve will close. This will stop the water flow and siphoning of concentrate. When withdrawal of solution from the reservoir causes the level to drop more than 25-38mm, the valve will open, and the reservoir will be refilled to the previous, pre-set level. This cycle will be repeated automatically until the supply of concentrate is depleted. The ball valve should be **fully closed** when changing metering tips or concentrate container, when reservoir is drained, or when the unit is not in use.

Troubleshooting:

Problem	Probable Cause	Remedy
1. No discharge	a. No water b. Defective magnetic valve assembly c. Excessive water pressure	a. Open water inlet b. Replace assembly c. Install regulator if pressure exceeds 6 Bar
2. No concentrate draw	a. Clogged foot valve b. Metering tip or eductor clogged c. Low water pressure d. Discharge tube or flooding ring not in place	a. Clean or replace foot valve b. Clean* or replace c. Minimum 1.8 Bar flowing required d. Check position: Replace discharge tube if flooding ring is missing.
3. Failure of unit to turn off	a. Valve parts dirty or defective b. Magnet spring too short c. Clogged valve orifice	a. Clean or replace b. Replace c. Clean or replace
4. Backflow into concentrate	a. Diluted solution being siphoned into container b. Water being siphoned into container	a. Replace or repair foot valve b. Replace eductor

* In hard water areas, **scale** may form at the discharge of the eductor. This scale may be removed by soaking the eductor in a descaling solution or by running the descaling solution through the system. If descaling solution is educted through the system, flush the unit by educting water only before returning the system to regular use.

HydroMinder Model 511GB Parts Diagram/List



KEY	PART NO.	DESCRIPTION
1	238100	strainer washer
2	10062600	hose swivel
3	502000	ball valve
4	360900	nipple
5	10080500	magnet parts kit
a.		screw
b.		washer
c.		magnet cover
d.		magnet cap
e.		magnet
f.		magnet spring
6	5030-K	magnet yoke mounting bracket kit (specify model 511GB)
h.		Z bracket
i.		U clamp
j.		lockwasher (not shown)
k.		screw
7	665520	valve parts kit
n.		valve guide ("bonnet")
p.		armature spring
q.		armature
r.		diaphragm
8	520000	water valve body
9	505600	street elbow
10	519000	close nipple, 6mm
11	506000	elbow
12	505900	nipple, 150mm
13	506300	vacuum breaker
14	440121	eductor assembly
s.	440100	eductor body only
t.	440101	suction stub only
15	690015	metering tip (kit)
16	10089254	discharge tube assembly
17	10031109	suction tube assembly
u.	505809	tubing, 13mm x 2.75m
v.	250006	ceramic weight
w.	10076301	foot valve, Viton
	250700	(foot valve & weight)
18	5043-A	float & chain assembly
x.	507200	bead chain only



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