KleenRite

HydroMinder Model 5111
with dual pick-up E-gap

Package Contains:
1. Proportioner with U-clamp for mounting.
2. Float with chain.
3. Inlet tubes 1/4" x 7' with weights and footvalves.
4. Discharge tube 2 ft.
5. Metering tip kits.
6. Instruction sheet.

THANK YOU FOR YOUR INTEREST IN OUR PRODUCTS

Hydro Systems manufactures quality chemical proportioners. Please use this equipment carefully and observe all warnings and cautions.

********** **NOTE** **********

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 containers.
ALWAYS	dispense cleaners and chemicals in accordance with manufacturer's instructions. Exercise **CAUTION** when maintaining your equipment.
KEEP	equipment clean for proper operation.
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).

Through proper care and maintenance, this equipment will serve your toughest cleaning jobs.

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 ½" ID water hose between the inlet threads and the water spigot. Minimum water pressure required to properly operate the proportioner is 25 PSI (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 push 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 properly.

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 Color	Drill Size	Approx. Ratio @ 40 PSI, water-thin viscosity	Tip Color	Drill Size	Approx. Ratio @ 40 PSI, water-thin viscosity
No tip		3:1	Green	70	48:1
Gray	30	3.5:1	Orange	72	64:1
Black	40	4:1	Brown	74	72:1
Beige	50	8:1	Yellow	76	100:1
Red	55	16:1	Aqua	77	128:1
White	57	24:1	Purple	80	200:1
Blue	60	28:1	Pink	87	400:1
Tan	65	32:1			

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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:

Dilution (X) = Amount of Mixed Solution — Amount of Concentrate Drawn
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.

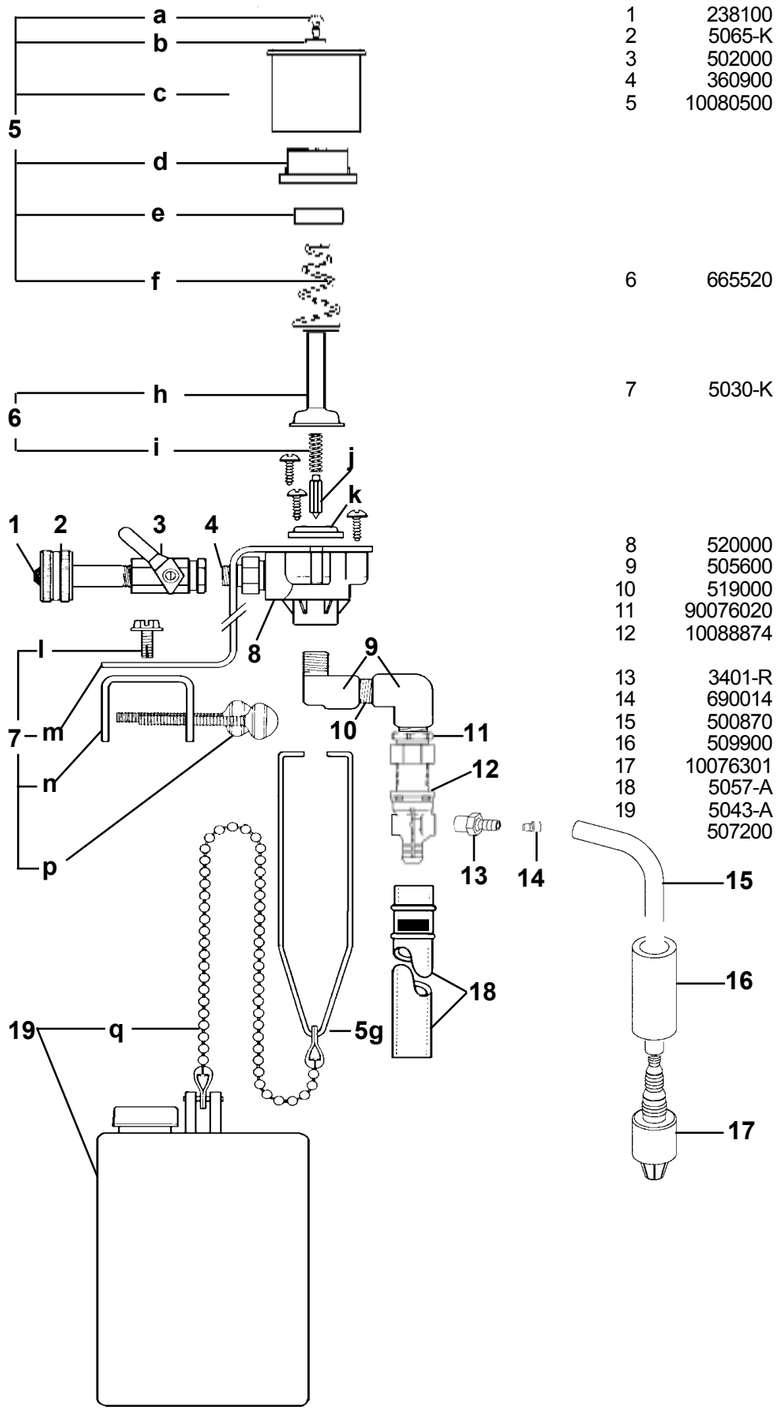
Operation:
Open the water supply ball valve. When the solution in the reservoir reaches the level set by the float, the valve will close. This will stop the water flow and siphoning of concentrate. When withdrawal of solution from the reservoir causes the level to drop more than 1-1/2 inches, the valve 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	a. Open water inlet
	b. Defective magnetic valve assembly	b. Replace assembly
	c. Excessive water pressure	c. Install regulator if pressure exceeds 85 PSI
2. No concentrate draw	a. Clogged foot valve	a. Clean or replace foot valve
	b. Metering tip or eductor clogged	b. Clean* or replace
	c. Low water pressure	c. Minimum 25 PSI flowing required
	d. Discharge tube or flooding ring not in place	d. Check position: Replace discharge tube if flooding ring is missing.
3. Failure of unit to turn off	a. Valve parts dirty or defective	a. Clean or replace
	b. Magnet spring too short	b. Replace
	c. Clogged valve orifice	c. Clean or replace
4. Backflow into concentrate	a. Diluted solution being siphoned into container	a. Replace or repair foot valve
	b. Water being siphoned into container	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 5111 Parts Diagram/List



KEY	PART NO.	DESCRIPTION
1	238100	strainer washer
2	5065-K	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
		g. magnet yoke
6	665520	valve parts kit
		h. valve guide ("bonnet")
		i. armature spring
		j. armature
		k. diaphram
7	5030-K	mounting bracket kit (specify model 511)
		l. screw
		m. Z bracket
		n. U clamp
		o. lockwasher (not shown)
		p. thumbscrew
8	520000	water valve body
9	505600	street elbow
10	519000	close nipple, 1/4"
11	90076020	adapter, eductor
12	10088874	3.5 gpm e-gap dual pick-up assembly
13	3401-R	hosebarb assembly
14	690014	metering tip (kit)
15	500870	tubing, 1/4" x 7'
16	509900	weight
17	10076301	Foot valve, Viton
18	5057-A	discharge tube assembly
19	5043-A	float & chain assembly
	507200	q. bead chain only