

HydroMinder Model 532

Package Contains:

1. Proportioner with U-clamp for mounting
2. Float with chain
3. Suction tubes with foot valves -- 9 ft. each
4. Discharge tubes -- 2 ft. each
5. Metering tip kit -- 14 tips
6. Product information 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.
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).

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

Installation:

1. Select a metering tip for each eductor (see next page) and insert them into the suction stubs on the eductor bodies.
2. Attach the ends of the discharge tubes with the clamps and flooding rings to the discharge barbs on the eductors.
3. Mount the unit in a level position on the side of the reservoir. The U-clamp may be repositioned or removed as necessary.
4. Insert the foot valve ends of the suction tubes into the concentrate containers. (The concentrate containers must be below the level of the HydroMinder, or the unit will continue to siphon concentrate after the water flow stops.)
5. Slide the open ends of the suction tubes over the suction stubs and metering tips.
6. Adjust the float chain length to position the float at the highest desired level of solution. To prevent foaming, be certain that the solution level will always be above the point of discharge (open ends of the discharge tubes). 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.
7. Install a minimum 1/2" water hose between the inlet swivel and water supply. (Minimum 25 PSI pressure is required at the inlet to properly operate the HydroMinder.) Be sure ball valve is in "off" position. Turn on water supply.

Operation:

Open the water supply and shut-off valve. Water will flow through the HydroMinder, causing a suction in the eductor which draws concentrate into the water flow. When the solution in the reservoir reaches the level set by the float, the valve will close and stop the water flow. 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 level. This cycle will be repeated automatically. The shut-off valve should be **fully closed** when changing metering tips or concentrate containers, when reservoir is drained or when the unit is not in use.

Metering Tip Selection:

Final dilution of concentrate is related to many factors, including the size of the metering tip opening and the viscosity of the liquid being siphoned. For water-thin products, consult the chart on the next page as a guide-line. Use the Measurement of Concentration procedure on the next page to test the actual dilution achieved in your application. Two undrilled, clear tips are supplied for drilling sizes not listed. If greater dilution of your concentrate is required, an additional HydroMinder may be installed on an adjoining reservoir for two-step dilution.

Tip Color	Drill Size	Approximate Dilution Ratio at 40 PSI, Water-thin Viscosity (1.0 CP)
No tip	---	3:1
Grey	30	4:1
Black	40	5:1
Beige	50	7:1
Red	55	12:1
White	57	17:1
Blue	60	18:1
Tan	65	24:1
Green	70	35:1
Orange	72	46:1
Brown	74	52:1
Yellow	76	62:1
Purple	80	75:1
Pink	87	195:1

Measurement of Concentration and Guide to Tip Selection

You can determine the dispensed water-to-product ratio for any metering tip size and product viscosity by operating 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:

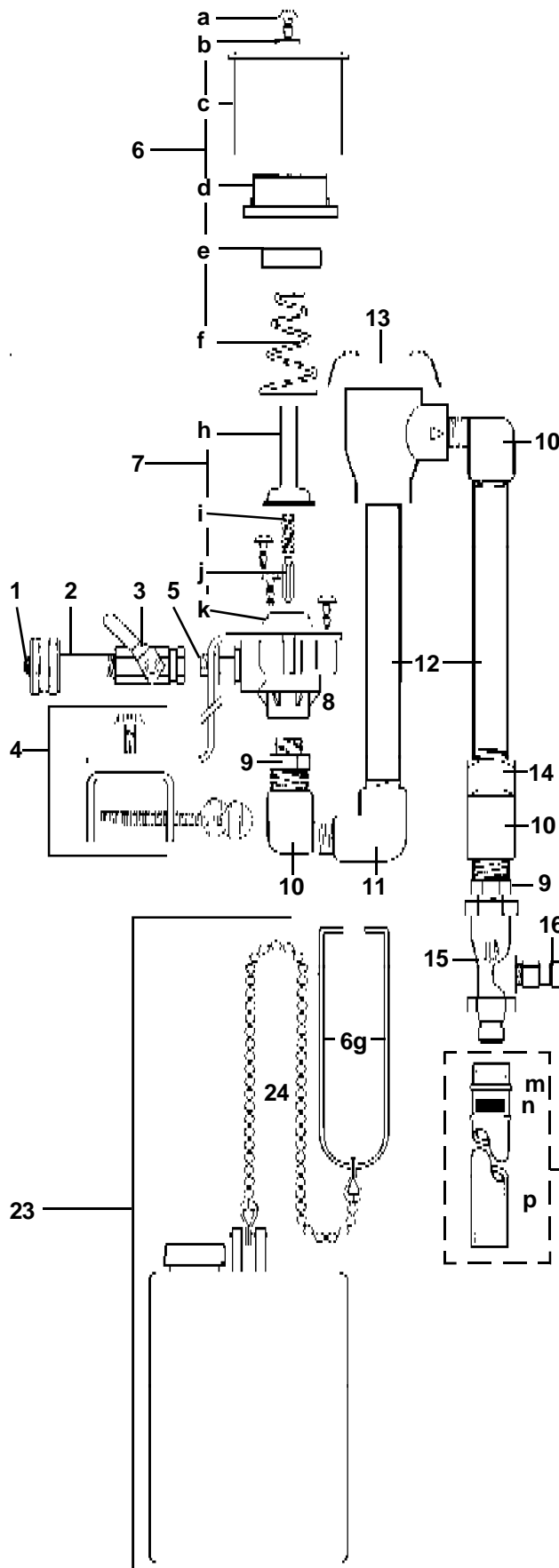
$$\text{Dilution (X)} = \frac{\text{Amount of Mixed Solution} - \text{Amount of Concentrate Drawn}}{\text{Amount of Concentrate Drawn}}$$

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.

Trouble-Shooting Chart:

Problem	Cause	Remedy
1. No discharge	a. No water b. Defective magnetic valve assembly c. Excessive water pressure	a. Open water inlet valve b. Replace assembly c. Install regulator if pressure exceeds 85 PSI
2. No concentrate draw	a. Clogged foot valve strainer b. Metering tip clogged or eductor scaled c. Low water pressure d. Discharge tube or flooding ring not in place e. Loose hose barb	a. Clean or replace b. Clean or replace* c. Minimum 25 PSI, flowing, required d. Replace tube. Order new tube if flooding ring is missing e. Tighten hose barb on eductor
3. Failure of unit to turn off	a. Valve parts dirty or defective b. Magnet spring too short or weak c. Clogged valve orifice	a. Clean or replace* b. Replace magnet spring (magnet parts kit) c. Clean or replace
4. Backflow into concentrate	a. Dirty or defective foot valve b. Weak eductor directs water into concentrate	a. Clean or replace foot valve b. Replace eductor
* In hard water areas, scale may form at the discharge of the eductor or in valve parts. This scale may be removed by soaking the eductor in a descaling or deliming solution. Or, the delimer may be drawn through the unit for a few minutes, then the unit flushed with clear water before returning to service. Be sure deliming solution is not dispensed into the solution holding tank.		

Parts Diagram/List



Key	PartNo.	Description
1	238100	strainer washer
2	276700	hose swivel connector
3	607600	ball valve
4	5030-K	mounting bracket kit (specify model 532); includes bracket, clamp, screws, etc.
5	637900	hex nipple
6	5051-K	magnet parts kit: <ul style="list-style-type: none"> a. screw b. washer c. magnet cover d. magnet cap e. magnet assembly f. spring g. yoke
7	10080500	valve parts kit: <ul style="list-style-type: none"> h. valve guide assembly i. spring j. armature k. diaphragm
8	520000	water valve body
9	419500	reducing hex nipple
10	233100	street elbow
11	506900	1/2" elbow
12	507000	nipple, 1/2" MPT x 6"
13	507100	vacuum breaker, 1/2" FPT
14	345700	tee, 1/2" FPT
15	440121	4 GPM eductor assembly (includes #16 stub)
16	440101	suction stub only
17	690015	metering tip (kit)
18	5057-A	discharge tube assembly <ul style="list-style-type: none"> m. hose clamp n. flooding ring p. tube
19	5058-9A	suction tube/foot valve assembly (includes 19-21)
20	505809	suction tube only
21	10076301	foot valve, Viton
22	250006	ceramic weight (inside tube)
23	5043-A	float & chain assembly (includes #23)
24	507200	bead chain only

