

**Troubleshooting Guide:**

Problem	Cause	Solution
1. No discharge	a. No water b. Excessive water pressure  c. Eductor clogged	a. Open water supply b. Install regulator if pressure exceeds 85 PSI c. Clean* or replace
2. No concentrate draw	a. Clogged check valve b. Metering tip clogged  c. Eductor clogged d. Clogged water inlet e. Clogged foot strainer f. Low water pressure and/or volume g. Concentrate container empty h. Check valve not screwed into eductor firmly	a. Clean or replace b. Rinse in hot water or replace: <b>DO NOT REAM CLEAN!</b> c. Clean or replace d. Clean screen e. Clean or replace f. Minimum 25 PSI and 4 GPM flow required to operate unit g. Replace with full container h. Tighten, but <b>DO NOT OVER TIGHTEN!</b>
3. Excess concentrate draw	a. Metering tip not in place (Or wrong metering tip)	a. Press correct tip firmly into barb
4. Water flow won't shut off	a. Ball valve defective	a. Replace
5. Leaks at plastic and copper junctions	a. Compression nut loose	a. Tighten nut 1/2 turn
6. Low or no water flow	a. Inlet screen clogged b. Supply source inadequate  c. Scaled eductor or fittings	a. Clean or replace b. 4 GPM flow necessary to unit. Move unit or replumb incoming line. c. Clean* or replace
7. Backflow into concentrate	a. Eductor check valve inoperable	a. Clean or replace check valve

\* In hard water areas, scale (mineral deposits) may form at the discharge of the eductor. This scale may be removed by soaking the eductor in a descaling (deliming) solution or by running the descalant through the system. When removing an eductor for soaking, firmly grasp the eductor and unthread the adapters located above and below the eductor. Replace in the same manner.



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**10069291 Rev. B**  
**92009-0400**



## SPEED CLEAN UNIT

### Multifunction Proportioning and Dispensing System

High volume washing, foaming and/or sanitizing proportioner with two product eductors.

#### THANK YOU FOR YOUR INTEREST IN OUR PRODUCTS

Fuller Brush Commercial products manufactures quality proportioning and dispensing equipment. Please use this equipment carefully and observe all warnings and cautions.

\*\*\*\*\* **NOTE** \*\*\*\*\*

<b>WEAR</b>	protective clothing and eyewear when dispensing chemicals or other materials.
<b>ALWAYS</b>	observe safety and handling instructions of the chemical manufacturers.
<b>ALWAYS</b>	direct discharge away from you or other persons or into approved containers.
<b>ALWAYS</b>	dispense cleaners and chemicals in accordance with manufacturer's instructions. Exercise <b>CAUTION</b> when maintaining your equipment.
<b>CLEAN</b>	equipment after each use in accordance with instruction sheet.
<b>WEAR</b>	protective clothing and eyewear when working in the vicinity of all chemicals, filling or emptying equipment or changing metering tips.
<b>ALWAYS</b>	re-assemble equipment according to instruction procedures. Be sure all components are firmly screwed or latched into position.
<b>ATTACH</b>	only to tap water outlets (85 PSI maximum).

#### Package includes:

- complete unit mounted on stainless steel back plate with formed ABS plastic cover
- (2) 7-foot vinyl product suction tubes with foot strainers
- (2) metering tip kits
- (4) screws and (4) wall anchors for wall mounting (use 9/32" drill)
- parts list and product structure diagram

#### Instructions for Operation:

1. Attach unit to wall using hardware provided.
2. Select metering tips (see section on metering tip selection) and press tips firmly into hose barbs provided at the side of the eductors. Install product suction tubes on hose barbs. The strainer end of the suction tubes can be dropped directly into the concentrate containers.
3. Connect water inlet hose with 3/4" male garden thread to female swivel at top left side of unit. Tighten to avoid leaking.
4. Connect discharge hose to male 3/4" discharge provided at bottom of unit.
5. Turn on water supply to unit. Minimum 25 PSI water pressure and 4 GPM flow are required to operate the unit. Hose of 1/2" ID is recommended if the hose length will be 50 feet or less. Use 3/4" ID hose if the total length of the hose will exceed 50 feet.
6. Turn on product valve to begin proportioning and dispensing. Shut off the valve and turn on rinse (bottom) lever for full volume rinse.

NOTE: By removing the four cover-attaching screws (two top and two bottom), the cover can be removed by sliding it to the RIGHT (handles in the horizontal, or OFF position). Reassembly is the reverse of this process: Align the handles with holes in the cover and slide the cover on from right to left. Replace the screws.

#### Metering Tip Selection:

The final concentration of the dispensed solution is related to the size of the metering tip orifice, the viscosity of the liquid being siphoned, water pressure, water flow rate, and other factors in the application. A chart is provided on the next page which can be used as a guideline for selecting a metering tip when proportioning water-thin concentrates. Test the actually achieved dilution using the Measurement of Concentration procedure discussed on the next page. If product viscosity is greater than that of water, choose a tip with a larger orifice than that which would deliver the desired water-to-product ratio for a water-thin product. Test the actually achieved ratio using the Measurement of Concentration procedure on the next page. Continue to choose and test tips until the desired dilution is achieved. Two clear, undrilled tips are supplied to permit drilling orifice sizes not listed if necessary.

**APPROXIMATE DILUTIONS  
AT 40 PSI FOR WATER-THIN PRODUCTS (1.0 CP)**

Tip Color	Orifice Size	Std. Drill Number)	Ratio
No Tip	.187	(3/16)	10:1
Gray	.128	(30)	10:1
Black	.098	(40)	10:1
Beige	.070	(50)	12:1
Red	.052	(55)	16:1
White	.043	(57)	24:1
Blue	.040	(60)	28:1
Tan	.035	(65)	32:1
Green	.028	(70)	48:1
Orange	.025	(72)	64:1
Brown	.023	(74)	80:1
Yellow	.020	(76)	96:1
Aqua	.018	(77)	128:1
Purple	.014	(79)	256:1
Pink	.010	(87)	384:1
Lt. Purple	.009	(89)	512:1

**CONVERSION CHART:  
Ratio Equivalents to  
Standard Measures**

Oz./Gal.	Ratio	%
128	1:1	50.0
64	2:1	33.3
32	4:1	20.0
21	6:1	14.3
16	8:1	11.1
14	9:1	10.0
8	16:1	5.9
6	24:1	4.0
4	32:1	3.0
3	48:1	2.0
2	64:1	1.5
1	128:1	0.8
1/2	256:1	0.4
1/4	512:1	0.2

**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.

**PARTS LIST (Refer to diagram)**

Key #	Part Number	Description	Key #	Part Number	Description
1	238100	Strainer washer	16	500870	Suction tube, 1/4" x 7'
2	317801	Swivel connector	17	509900	Weight
3	371300	Reducer bushing	18	609600	Foot strainer
4	604400	2 -1/2" bushing	19	604300	Discharge elbow
5	133000	Branch tee	20	133200	Cross
6	470100	Nipple	21	605400	Hose hanger
7	347900	Tee	22	861801	3/8" Tubing, nylon
8	223500	Clamp	23	138000	Compression fitting, 45°
9	10075925	Pipe plug		138100	Brass insert, 3/8" tube
10	133100	Ball valve (complete)			(inside compressions fitting)
	133101	Ball valve handle	24	133500	Stainless steel base
	133102	Ball valve nut	25a	506502	Swivel nut
	133105	Handle sleeve	b	276800	Swivel stem
11	328900	Hose connector adapter		270700	Hose washer (not visible)
12	276700	Swivel connector	<b>NOT SHOWN:</b>		
	270700	Hose washer		133600	Cover, ABS plastic
13	440800	3.5 GPM eductor, GH out			
14	10069270	Check valve, Viton*			
15	10027209	Metering tip (kit)			

\* EPDM check valve available: Order 10069271

**Speed Clean Parts Diagram**

