

**BLEND CENTER
MODEL: 681GAP-4
INSTALLATION INSTRUCTIONS**

by Wilhelmsen

1. PARTS CHECKLIST:

A. Blend Center Assembly
C. Ceramic Weight
E. Screw and Anchor Kit

B. Vinyl Supply Tubing and Foot Valve
D. Vinyl Outlet Tubing
F. Manifold

G. Metering Tip Kit

- 2. INSTALLATION: Note: All installations must conform to local plumbing codes and use approved backflow preventers. Pressure indicating tee is to be installed with existing faucets according to local plumbing codes in the state of Wisconsin and any other state that requires the use of a pressure indicating tee. WARNING: Water supply should not exceed 125 psi / 8 BAR and water temperature must not exceed 150°F / 65°C**

MOUNTING AND WATER SUPPLY:

Locate mounting holes on a permanent surface. Drill all of the holes into the drywall using a 1/4" diameter bit for use with the included #10 screw and anchor set. (If mounting the Blend Safe to wood and you do not plan to use the included anchors, drill 1/8" diameter holes.) Insert the anchors into drilled holes and hammer them into the wall until they are flush with face of wall. Assemble all of the #10 screws with a Phillips screwdriver into the anchors so the screw heads are sticking out of the wall approximately 1/2". Mount the Blend Safe by inserting the screw heads through the keyhole slots in the base and tighten the screws. The water inlet is equipped with a female garden hose fitting (with strainer washer) for attaching a water supply hose. The water inlet may be removed to permit direct connection to a 3/8" NPT pipe. The unit is designed so water can be supplied to either side by interchanging the pipe plug with the pipe and female hose fitting. **Note: Apply pipe dope, hand tighten, and then turn 1-1/2 times with a wrench. DO NOT OVER TIGHTEN.** WARNING: Do not use Teflon® tape to seal internal plastic threads as the extra thickness of the tape may cause the plastic to crack. Use a non-welding liquid sealant instead.

Chemical Supply: (Refer to Fig. 1) Place the chemical containers in a convenient location not more than 6 feet below the Blend Center.

Slip a ceramic weight over the chemical supply tube. Insert the end with the foot valve and ceramic weight of the chemical supply tubing into the chemical container. Cut the chemical supply tubing to any convenient length that will allow it to extend from the bottom of the chemical container to the proportioner inlet barb. Insert other end of chemical supply tubing onto the barb connector tee. Gummed labels are provided for product labeling.

Outlet: Cut the 1/2" I.D. outlet tubing to the desired lengths and attach them to the proportioner outlets **Note: Do not force outlet tubing onto the larger barbs on the proportioner.**

Chemical injection adjustment: WARNING: USE CARE WHEN HANDLING HAZARDOUS CHEMICALS.

Chemical feed rates are controlled by metering tips screwed into the proportioner barbs. Select a tip using Table 1 or 2.

1 cps (centipoise) is equal to the viscosity of water
75 cps is approximately equal to the viscosity of 10 weight motor oil
200 cps is approximately equal to the viscosity of most dishwashing detergents

TABLE 1 - BOTTLE FILL PROPORTIONER, 1/4" I.D. TUBING

Metering Tip Color	Injection Rates For Viscosities Shown					
	1 cps		75 cps		200 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Tan	1.03	125-1	0.76	168-1	0.38	333-1
Orange	1.24	103-1	0.98	130-1	0.53	241-1
Turquoise	1.43	89-1	1.07	119-1	0.61	211-1
Pink	2.47	52-1	1.58	81-1	0.92	139-1
Light Blue*	3.05	42-1	2.1	61-1	1.06	121-1
Brown	3.48	37-1	2.31	55-1	1.15	111-1
Red	4.38	29-1	2.83	45-1	1.23	104-1
White	5.33	24-1	3.1	42-1	1.37	93-1
Green	6.38	20-1	3.63	35-1	1.4	91-1
Blue	6.77	19-1	3.78	34-1	1.45	88-1
Yellow	9.90	13-1	5.1	25-1	1.48	86-1
Black	15.00	9-1	6.54	20-1	1.53	84-1
Purple	24.94	5-1	7.28	18-1	1.57	82-1
Gray	35.94	4-1	8.5	15-1	1.64	78-1
No Tip	73.21	2-1	9.35	14-1	1.87	69-1

**BLEND CENTER
MODEL: 681GAP-4**

UNITOR™

INSTALLATION INSTRUCTIONS

by Wilhelmsen

* All induction rates are base on a water pressure of 40 psi/2.7BAR.

TABLE 2 - BUCKET FILL PROPORTIONER, 1/4" I.D. TUBING

Metering Tip Color	Injection Rates For Viscosities Shown					
	1 cps		75 cps		200 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Tan	0.33	387-1	0.26	500-1	0.12	1090-1
Orange	0.42	307-1	0.32	430-1	0.17	735-1
Turquoise	0.51	251-1	0.34	382-1	0.19	676-1
Pink	0.78	165-1	0.56	230-1	0.3	422-1
Light Blue*	0.87	147-1	0.67	192-1	0.33	391-1
Brown	0.99	129-1	0.74	174-1	0.37	345-1
Red	1.37	93-1	0.91	141-1	0.44	289-1
White	1.52	84-1	1.04	123-1	0.48	264-1
Green	1.72	74-1	1.22	105-1	0.52	244-1
Blue	2.13	60-1	1.27	101-1	0.54	239-1
Yellow	3.05	42-1	1.71	75-1	0.56	229-1
Black	4.50	28-1	1.96	65-1	0.57	224-1
Purple	7.75	17-1	2.4	53-1	0.59	217-1
Gray	9.86	13-1	2.54	50-1	0.63	204-1
No Tip	19.63	7-1	3.16	40-1	0.67	190-1

NOTE: Leaner dilutions can be achieved by ordering ultra lean tip kit 100-15KU

3. OPERATION:

The Blend Safe is now ready for use. Depressing a push button opens the valve, allowing water to flow through the chemical proportioner that mixes chemical at the desired rate. The buttons are spring loaded to prevent accidental overflow if unattended it may be converted to a locking button by cutting off the tab at the notch (See Figure 2). Pushing the button and tubing it 1/4 turn clockwise at the end of its travel allows the valve to lock on. This makes it unnecessary for the attendant to hold the button in while filling large containers. Turning the button in a counterclockwise direction will release it, allowing the valve to shut off.

4. SERVICING: CAUTION: TURN OFF WATER SUPPLY BEFORE SERVICING.

A. Proportioner fails to draw chemical:

1. Pinch outlet tube to create back pressure, which will cause unit to prime. The foot valve will keep the inlet tube primed thereafter.
2. Insufficient water supply pressure. 20 PSI/ 1.3BAR is the minimum allowable.

B. Proportioner stops drawing chemical:

1. Inspect foot valve for dried chemical or dirt. Soak in hot water to clean.
2. Proportioner metering tip clogged with dried chemical. Remove tip and try injecting in hot water. If there is no suction, remove proportioner and soak in hot water to clear interior passages.
3. Inspect proportioner to ensure that there are no mineral deposit build-ups on the nozzle. If so, soak proportioner body in de-liming solution. (Remove all parts attached to proportioner before soaking in de-liming solution.) **Note: Use care when handling hazardous chemicals.**

C. Proportioner continues to draw chemical after water valve closes: Chemical supply is higher than bottom of discharge tube creating a natural siphon. Lower the supply vessel or hang up outlet tube after use.

D. Valve Malfunction: Check that the button moves freely in & out and that a "click" can be heard when the button is pushed and released, indicating that the magnet is activating the plunger properly. Remove cover. To inspect internal parts, unscrew magnet housing and carefully pull off the enclosing tube so as not to drop the plunger, kick-off spring, and spacer. Check for dirt or damage impeding plunger and kick-off spring movement. Inspect the diaphragm, making sure the two small pin holes (bleed hole) in the diaphragm convolution are clear to allow the valve to close.

CAUTION: When servicing unit, be sure that replacement parts have been installed according to drawing.

**BLEND CENTER
MODEL: 681GAP-4
INSTALLATION INSTRUCTIONS**

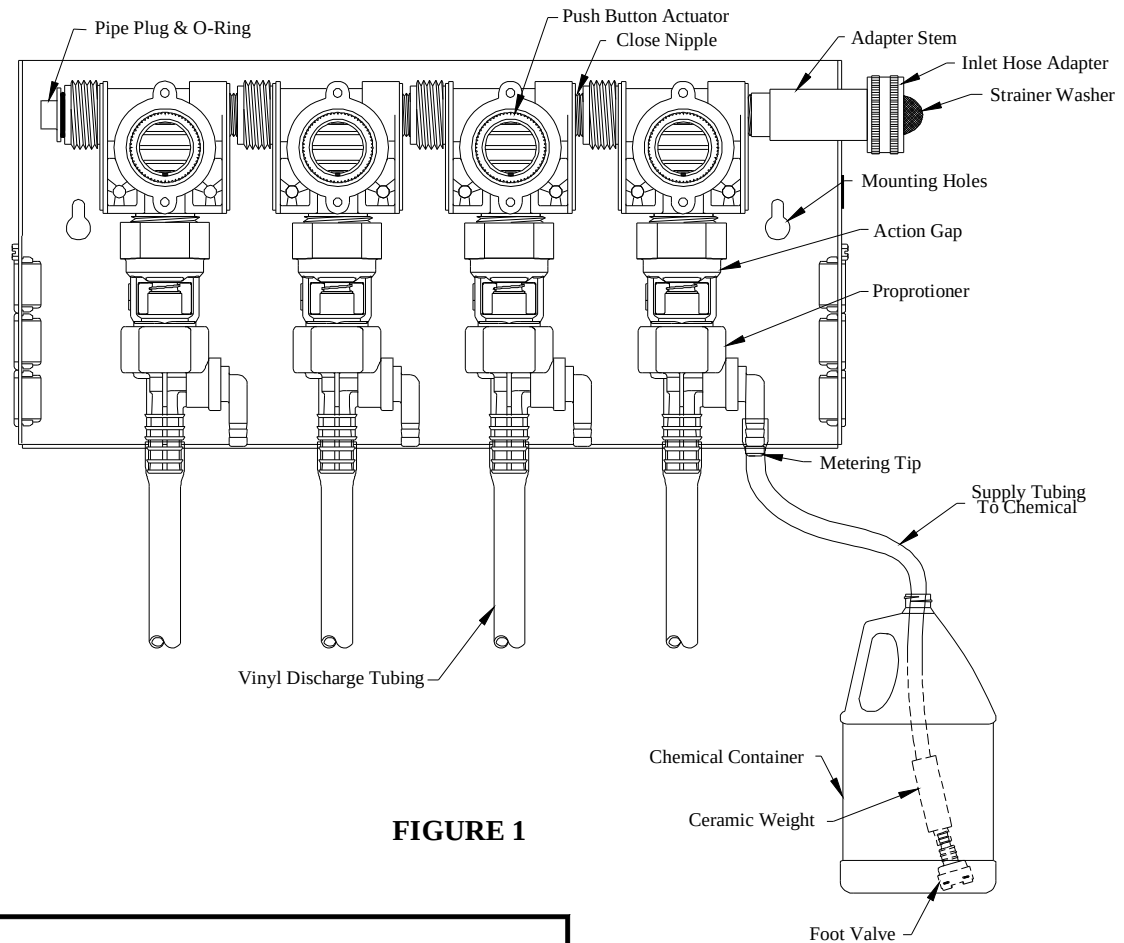


FIGURE 1

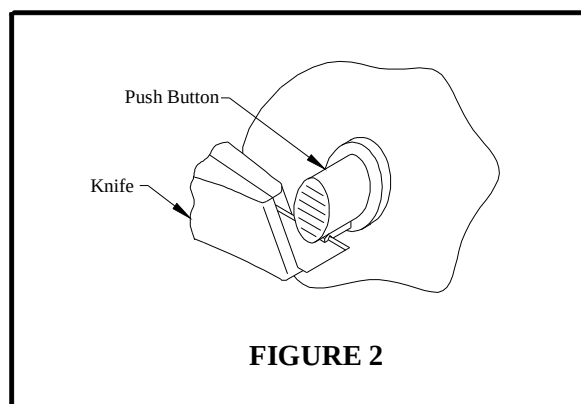


FIGURE 2

**BLEND CENTER
MODEL: 681GAP-4
INSTALLATION INSTRUCTIONS**

PRESSURE INDICATING TEE INSTALLATION

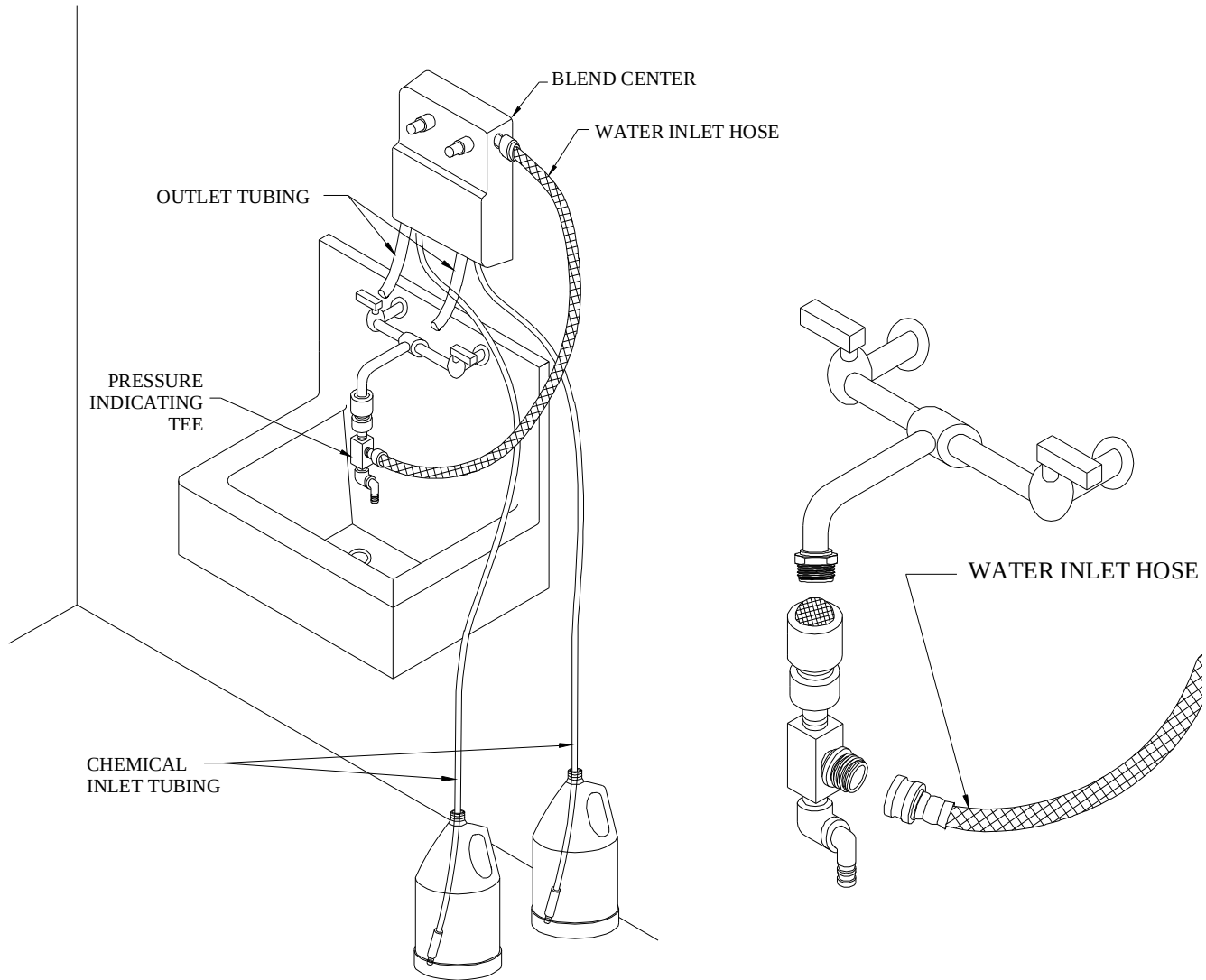
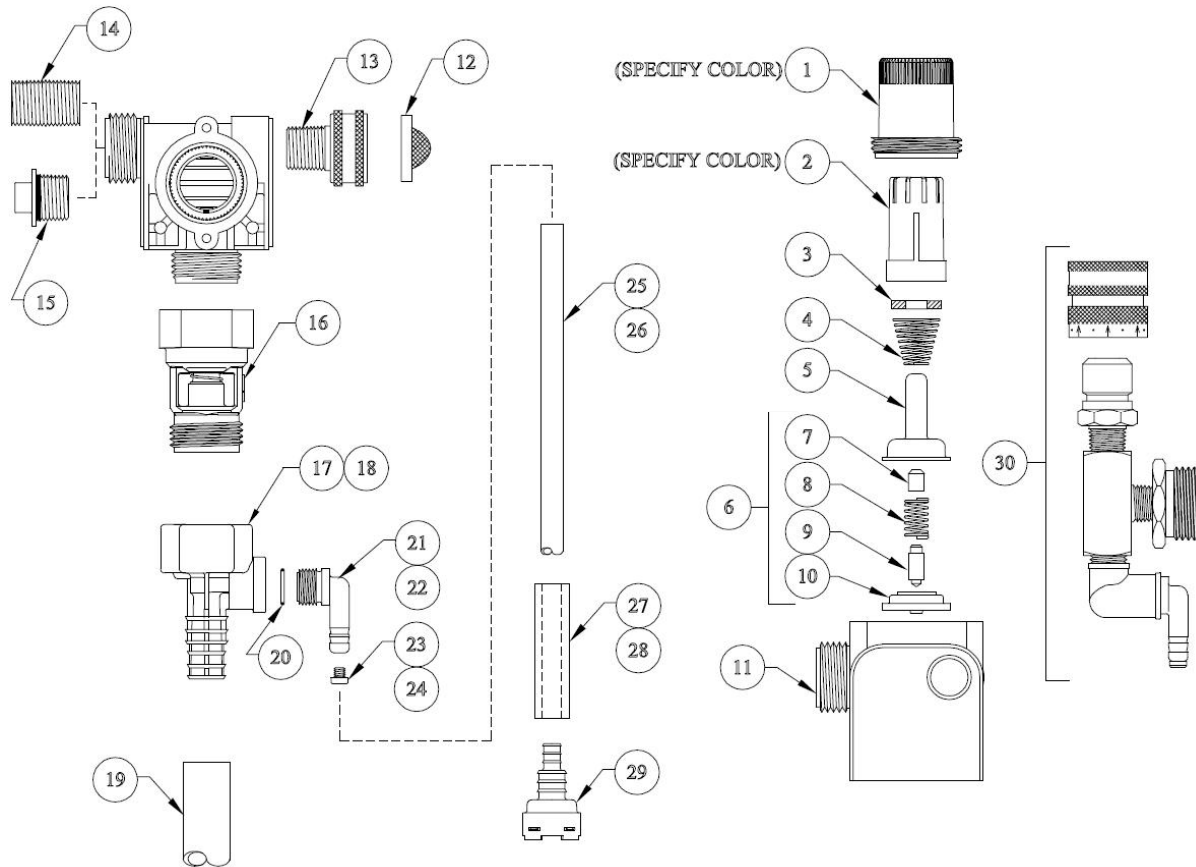


FIGURE 3

**BLEND CENTER
MODEL: 681GAP-4
INSTALLATION INSTRUCTIONS**

UNITOR™

by Wilhelmsen

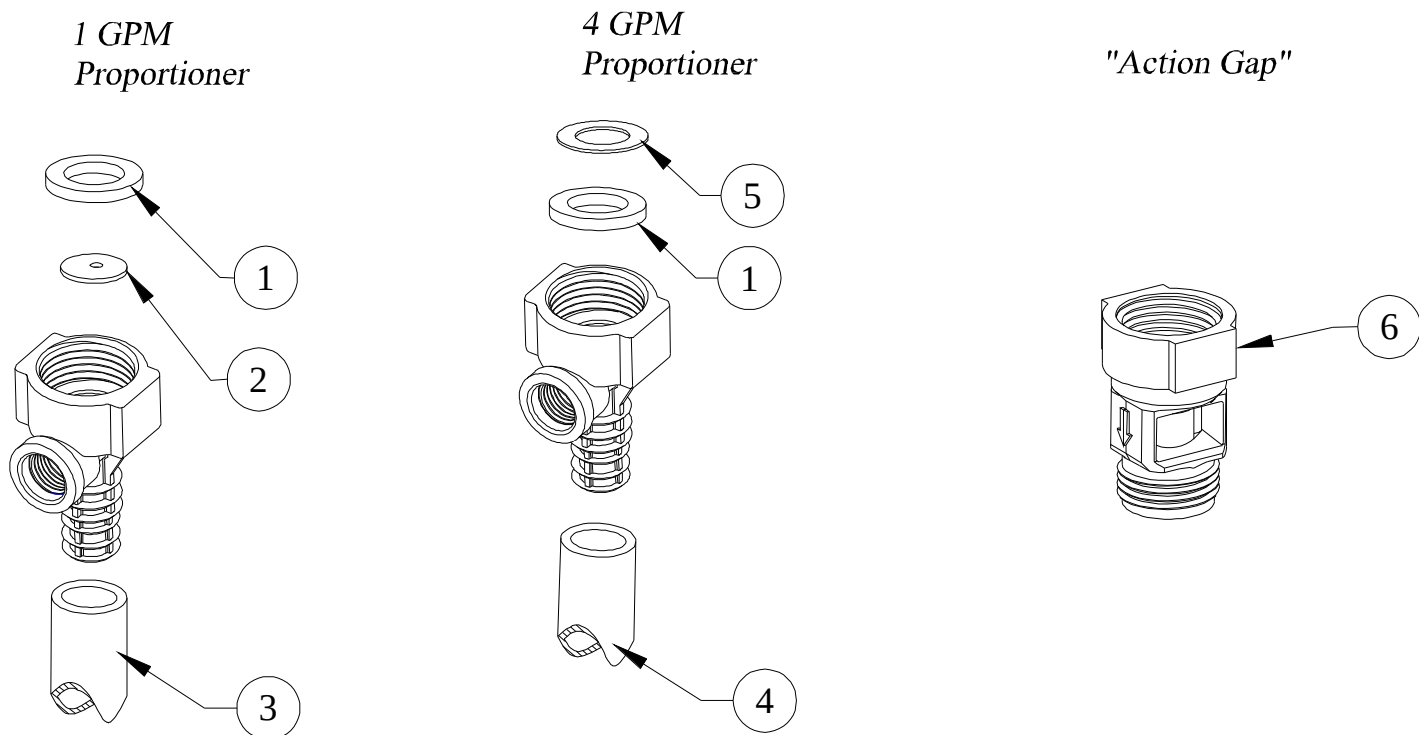


NO.	PART NO.	DESCRIPTION
1	66-139	MAGNET HOUSING
2	66-140	PUSH BUTTON
3	63-35	MAGNET
4	63-36	SPRING
5	41-7-25	ENCLOSING TUBE
6	63-87	VALVE REPAIR KIT
7	63-37	SPACER
8	41-1-8	KICKOFF SPRING
9	63-38	PLUNGER
10	41-15-10	DIAPHRAGM, EP
11	63-39	VALVE BODY
12	100-38	STRAINER WASHER
13	93-44	PIPE TO GARDEN HOSE ADAPTOR
14	66-31	CLOSE NIPPLE
15	66-153	PIPE PLUG ASSY
16	16-30	ACTION GAP ASSY
17	61-22GAP-2	4 GPM PROPORTIONER (WHITE)
18	61-99GAP-2	1 GPM PROPORTIONER (GREEN)

NO.	PART NO	DESCRIPTION
19	61-21	½" ID X 6' LONG VINYL OUTLET TUBE (4 GPM)
20	16-3-6	1/3" ID X 6' LONG VINYL OUTLET TUBE (1 GPM)
21	63-78	O-RING EP
22	63-79	INLET BARB (1/4")
23	63-80	INLET BARB (3/8")
24	100-15K	METERING TIP KIT (1/4" BARB)
25	61-9K	METERING TIP KIT (3/8" BARB)
26	100-12	¼" ID X 8' LONG VINYL SUPPLY TUBING
27	61-107-2	CERAMIC WEIGHT FOR ¼" TUBING
28	61-107	CERAMIC WEIGHT FOR 3/8" TUBING
29	100-16E-1	FOOT VALVE
30	68-6-QD2	PRESSURE INDICATING TEE
31	61-25-2	FRESH WATER OUTLET KIT

**BLEND CENTER
MODEL: 681GAP-4
INSTALLATION INSTRUCTIONS**

PROPORTIONER AND ACTION GAP BREAKDOWN



NO.	PART NO.	DESCRIPTION
1	150-6	Rubber Washer
2	61-36	Flow Disk
3	16-3-6	1/2" I.D. x 6" Lg. Vinyl Outlet Tube (1 GPM Only)
4	61-21	1/2" I.D. x 6' Lg. Vinyl Outlet Tube (4 GPM Only)
5	63-89-1	Rubber Washer (1/32" Thick)
6	16-30	Action Gap Assembly