

DEMA BLEND SAFE

MODEL: 662-637GAP AND 662-637GAP-10H (ONE HAND FILL)

INSTALLATION INSTRUCTIONS

The Blend Safe II (Dial-A-Blend) is a modular, locking dispensing system that allows user to dispense chemicals safely, control dispenser inventory. It, also, has the flexibility to meet changing requirements at different accounts in the field.

1. **PARTS CHECKLIST:**

- | | |
|-------------------------|--|
| A. Blend Safe Assembly | B. ¼"ID x 8' Long Vinyl Supply Tubing and Foot Valve |
| C. Ceramic Weight | D. ½" ID x 6" Long Vinyl Outlet Tubing |
| E. Hose Hanger Assembly | F. Drip Tray |
| G. Screw and Anchor Kit | H. Label Card |
| | I. Metering Tip Kit |
| | J. Cabinet Lock Keys |

*Quantity varies depending on the model of the Blend Safe.

2. **INSTALLATION: (Refer to Figure 1): 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 pressure should not exceed 125 psi and water temperature must not exceed 150°F.**

- A. MOUNTING AND WATER SUPPLY:** Use mounting template enclosed to locate the mounting screw positions. 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 long screws with a phillips screwdriver into the anchors so the screw heads are sticking out of the wall approximately ½". Mount the Blend Safe by inserting the screw heads through the keyhole slots in the base and tightening 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 water inlet assembly. **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 thickness of the tape may cause the plastic to crack. Use a non-welding liquid sealant instead.**
- B. PRESSURE INDICATING TEE INSTALLATION:** Screw female quick disconnect to faucet and attach pressure indicating tee to female quick disconnect. Attach female end of reinforced hose to male threads of tee, then attach the male end to the female garden hose fitting at the water inlet of the Blend Center (See Figure 4).
- C. CHEMICAL INJECTION ADJUSTMENT: WARNING: USE CARE WHEN HANDLING HAZARDOUS CHEMICALS.** Chemical feed rates are controlled by metering tips screwed into the selector valve barbs. Select a tip for each barb using Table 1 or 2 as a guide.

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 - 1 GPM FLOW RATE 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

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TABLE 2 - 4 GPM FLOW RATE PROPORTIONER, 1/4" LD. 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: *Metering tip color was formerly clear. All induction rates are based on a water pressure of 40 psi. Leaner dilutions can be achieved by ordering DEMA ultra lean tip kit 100-15KU or capillary tip 44-61P.

- D. CHEMICAL SUPPLY:** Remove Blend Safe cover. Slip a ceramic weight over a chemical supply tube. Install the tubing by pushing tubing over a barb on the selector valve. Place the chemical container inside the case. Run the tubing through the holes in the back of the Blend Safe and insert the end of the tubing with the foot valve into the chemical container (See Figure 1). Repeat for each chemical supply tube. Gum labels are provided for labeling the dial with the corresponding chemical.
- E. DRIP TRAY (1 GPM ONLY):** The Drip Tray is installed by inserting the tabs in the back of the tray into the slots in the door of the case. Push tray down into place. Two-sided tape or Velcro (not included) may be used to secure drip tray to door.
- F. OUTLET TUBING (OPTIONAL 4 GPM ONLY):** Attach one end of the 1/2" ID tubing to the proportioner outlet barb and run the other end through the hole located at the bottom of the case. Attach tubing hanger to end of tubing, to hang up when not in use. **NOTE: Do not force outlet tubing onto the larger barbs on the proportioner.**

3. OPERATION:

The Blend Safe is now ready for use. Depressing a push button or lifting a bottle lever (select models only) will allow water to flow through the proportioner and mix a chemical water solution at the desired ratio. The buttons are spring loaded to prevent accidental overflow if unattended, but may be converted to locking buttons by cutting off the tab at the notch (See Figure 2). Pushing the button and turning it a 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 while filling large containers. Turning the button in a counterclockwise direction will release it, allowing the valve to shut off. **NOTE: Models with bottle lever do not allow push button to lock on.**

4. SERVICING: Caution: Turn off water supply before servicing.

A. Proportioner fails to draw chemical: Insufficient water supply pressure. 20 PSI is the minimum allowable pressure.

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 deliming solution. (Remove all parts attached to proportioner before soaking in deliming solution.) **Note: Use care when handling hazardous chemicals.**

Valve Malfunction: Check that the button moves freely in & out, bottle lever moves up and down freely (select models only) 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 pinholes (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.**

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RETURNS: NO MERCHANDISE MAY BE RETURNED FOR CREDIT WITHOUT DEMA'S WRITTEN PERMISSION. RETURN MERCHANDISE AUTHORIZATION NUMBER REQUIRED IN ADVANCE OF RETURN.

WARRANTY: DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products which have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, improper voltage supply, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "O"-rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty will be void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. DEMA assumes no liability for damages. Return merchandise authorization number, to return units for repair or replacement, must be granted in advance of return.

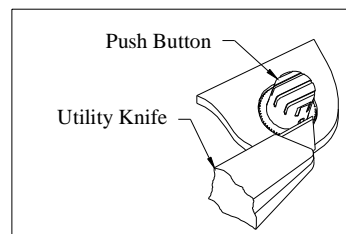
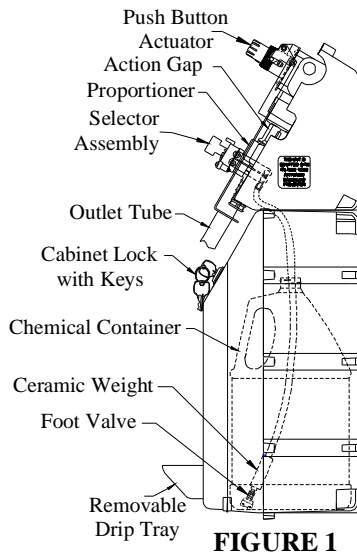
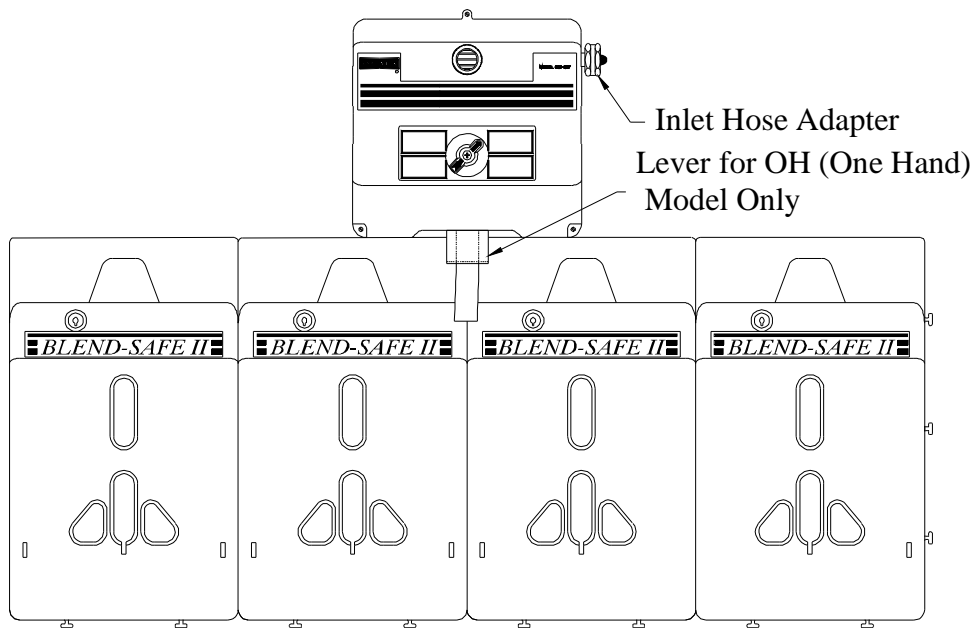


FIGURE 2

DEMA BLEND SAFE

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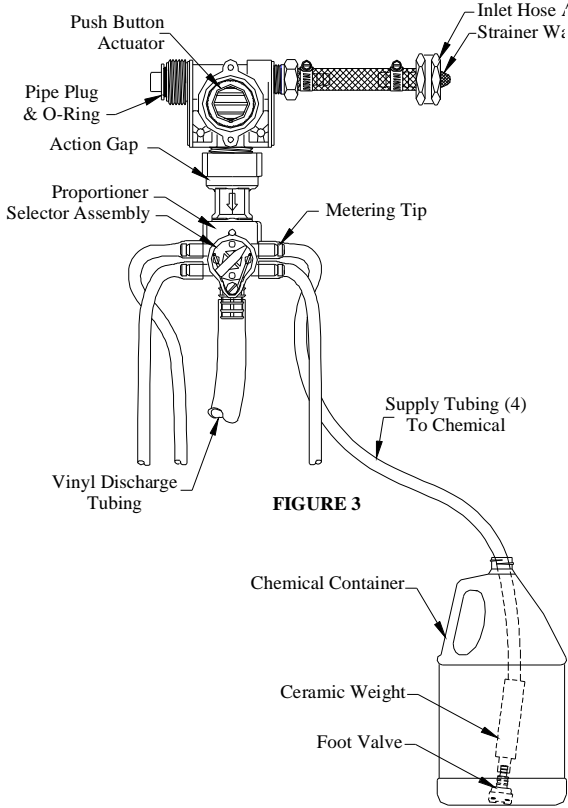
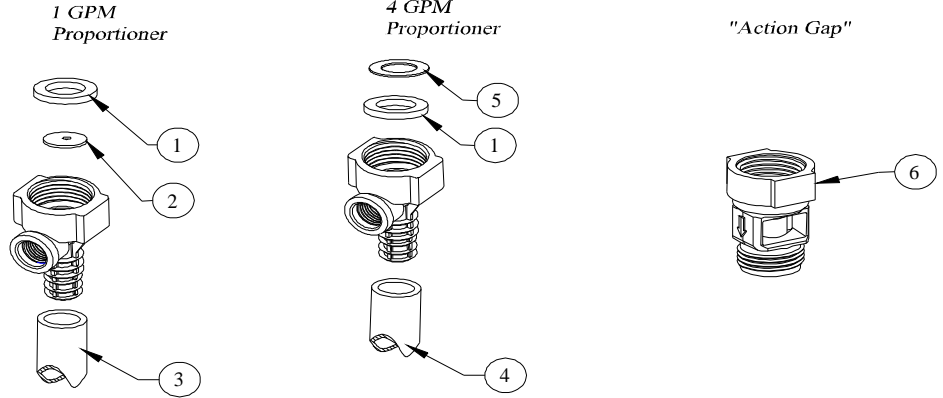


FIGURE 3

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	89-30-5	1/2" I.D. x 6' Lg. Hose Hanger Assy. (4 GPM Only)
5	63-89-1	Rubber Washer (1/32" Thick)
6	16-30	Action Gap Assembly

PRESSURE INDICATING TEE INSTALLATION

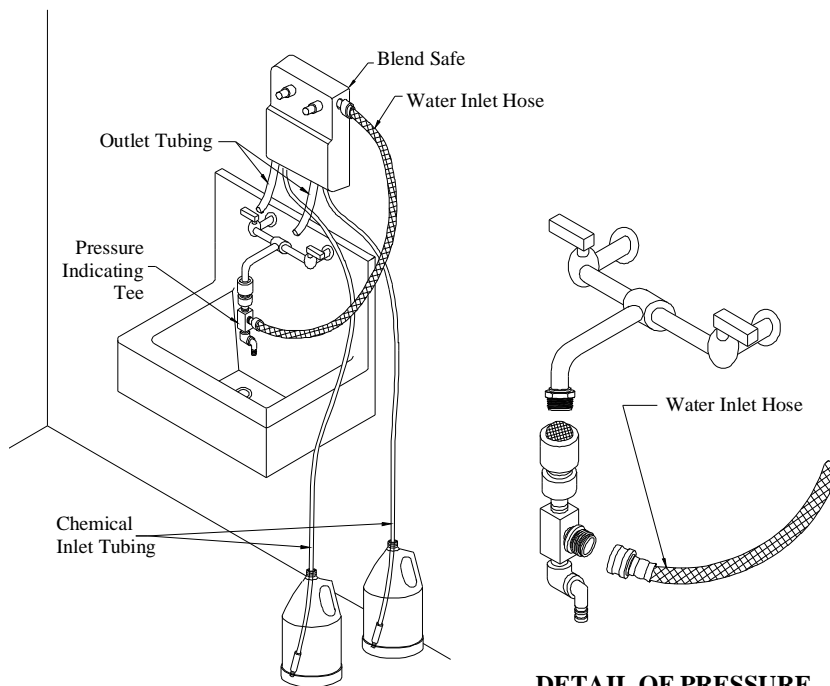


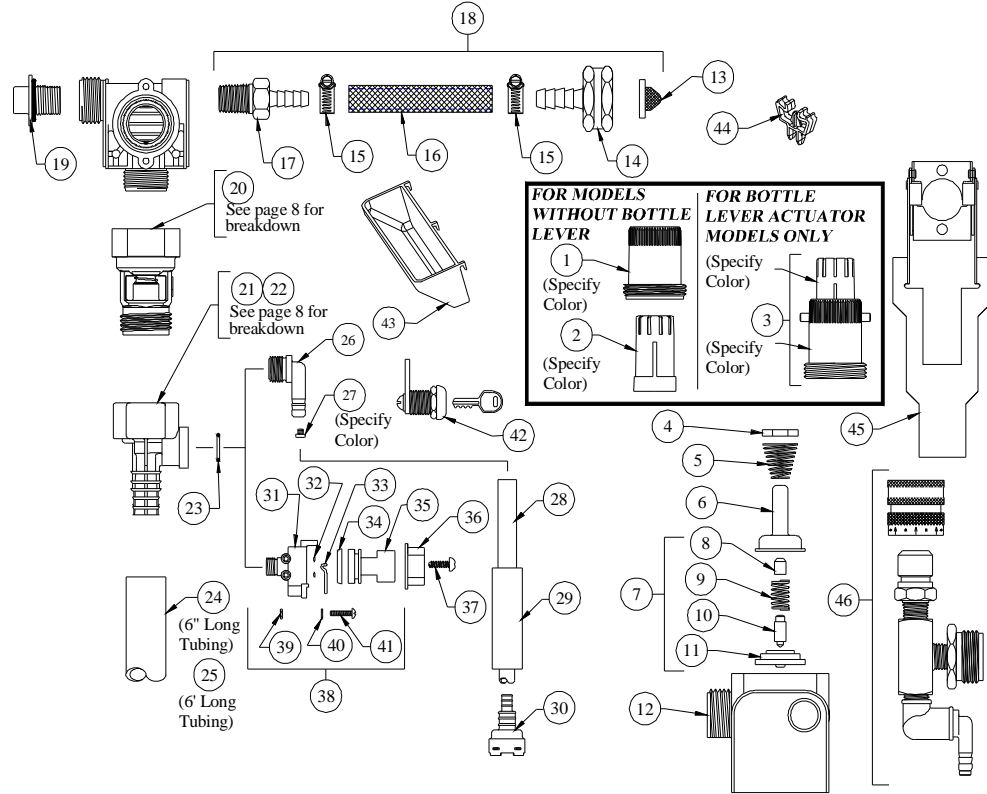
FIGURE 4

DETAIL OF PRESSURE INDICATING TEE

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NO.	PART NO.	DESCRIPTION
1	66-139	Magnet Housing (Specify Color)
2	66-140	Push Button (Specify Color)
3	66-333-OH	Push Button Kit
4	63-35	Magnet
5	63-36	Spring
6	41-7-25	Enclosing Tube
7	63-87	Valve Repair Kit
8	63-37	Spacer
9	41-1-8	Kick-off Spring
10	63-38	Plunger
11	41-15-10	Diaphragm
12	63-39	Valve Body
13	100-38	Strainer Washer
14	66-142	Garden Hose /Adapter Barb
15	76-2-3	Hose Clamp
16	66-98-4	3/8" Braided Tube
17	66-119	Hose Barb
18	66-156	Water Inlet Assembly
19	66-153	Pipe Plug & O-Ring Assy.
20	16-30	Action Gap Assembly
21	61-22GAP-2	4 GPM Proportioner (Gray)
22	61-99GAP-2	1 GPM Proportioner (Green)
23	63-78	O-Ring
24	16-3-6	1/2" ID X 6" Lg. Vinyl Outlet Tube(1 GPM only)
25	89-30-5	1/2" ID X 6' Lg. Hose Hanger Assy. (4 GPM only)

NO.	PART NO.	DESCRIPTION
26	63-79	Inlet Barb (1/4" Barb)
27	100-15K	Metering Tip Kit (14 Sizes)
28	100-12-16	1/4 ID X 28' Lg. Vinyl Supply Tubing
29	61-107-2	Ceramic Weight
30*	100-16E	Foot Valve
31	63-98	Selector Valve Body
32	25-77	O-Ring (Silicone)
33	63-100	Retainer Spring
34	63-51	"U" Cup
35	63-101-2	Knob
36	63-111-2	Selector Knob
37	58-60	Screw
38	63-96-3	Selector Valve Assembly
39	66-13	Nut
40	63-104	Washer
41	63-103	Screw
42	66-21	Cabinet Lock
43	66-64	Drip Tray
44	67-4-1	Box Clip
ACCESSORIES		
NO.	PART NO.	DESCRIPTION
45	63-159	Bottle Lever
46	68-6-QD2	Pressure Indicating Tee

*Foot Valve also available with silicone (100-16S-1) or Viton (100-16V-1) rubber seals.

Please specify material when ordering.