

DEMA 661GAP-4 BLEND SAFE

INSTALLATION INSTRUCTIONS

The 661 Series lockable stainless steel dispensers offer safety and security when it's necessary for gallon bottles to be self-contained inside the dispenser. Units are lightweight and have a mounting flange outside the dispenser for easy installation.

1) **PARTS CHECKLIST:**

ITEM	DESCRIPTION	QTY.
A.	Blend Safe Assembly	1
B.	¼" ID X 21" Long Vinyl Supply Tubing & Foot Valve Assembly	4
C.	Ceramic Weight	4
D.	Hose Hanger Assembly (For 4 GPM Station Only)	1
E.	#10 Screws	6
F.	#10 Plastic Anchors	6
G.	Label Card	2
H.	Metering Tip Kit	1
I.	Cabinet Lock Keys	1

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 should not exceed 125 psi and water temperature must not exceed 150°F.

A. **MOUNTING AND WATER SUPPLY:**

Hold the unit in position to locate the mounting screw position at the top and bottom. Drill all of the holes into the drywall using a ¼" diameter bit for use with the included #10 screws and anchors. (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. Install the mounting screws at the top, leaving approximately 1/2" extension between the wall and screw head. Mount the Blend Safe by inserting the screw heads through the keyhole slots in the top and tightening the screws (See Figure 1). Now insert and tighten the bottom screw.

The water inlet is equipped with a female garden hose fitting (with strainer washer) for attaching a water supply hose. The unit is designed so water can be supplied to either side by interchanging the pipe plug and the 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.

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 Safe (See Figure 3).

C. **CHEMICAL INJECTION ADJUSTMENT:**

Warning: use care when handling hazardous chemicals.

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

<p>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</p>

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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

TABLE 2 - 4 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	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:

Slip a ceramic weight over a chemical supply tube. Install the chemical supply tubing by pushing the tubing over the barb of the proportioner. The proportioner is accessible through the case door (Refer to Figure 1). Push the tubing through the slots in the cover. Place the chemical container inside the case and insert the foot valve and ceramic weight end of the chemical supply tubing into the chemical container. Peel off gummed labels are provided for labeling chemicals.

E. 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.**

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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 a chemical water solution at the desired rate. 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 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 the 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 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 deliming solution. (Remove all parts attached to proportioner before soaking in deliming 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 outlet tube creating a natural siphon. Hang up outlet tube after use.

D. Valve Malfunction:

Check that the button moves freely in and 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 pinholes (bleed hole) in the diaphragm convolution are clear to allow the valve to close.

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

RETURNS:

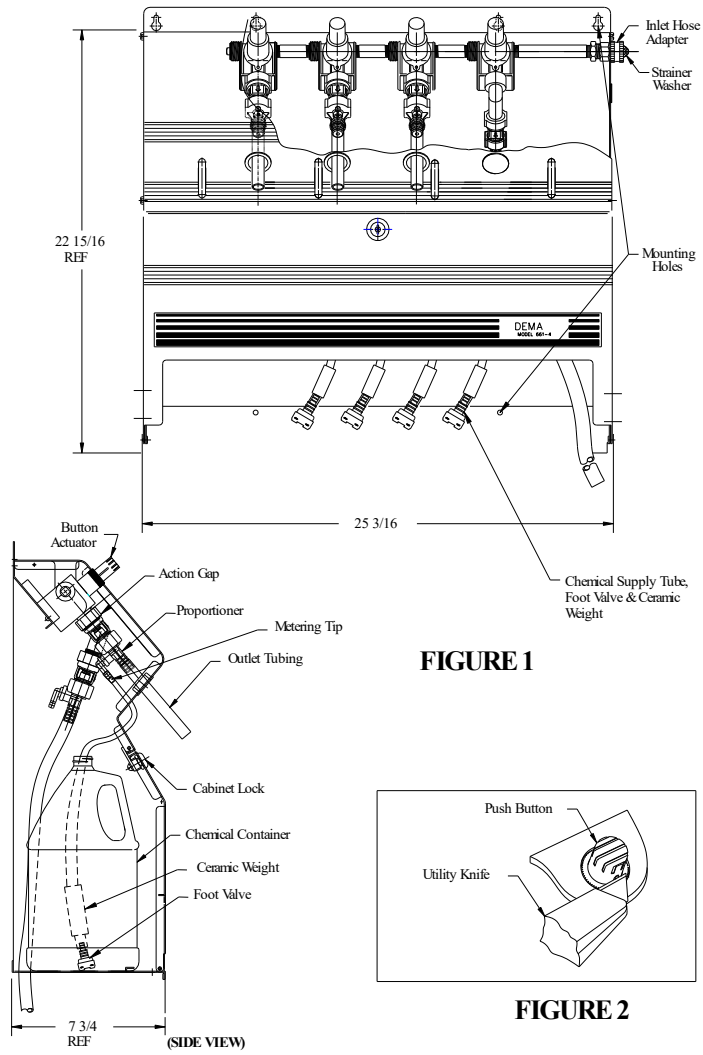
NO MERCHANDISE MAY BE RETURNED FOR CREDIT WITHOUT DEMA'S WRITTEN PERMISSION. RETURN MERCHANDISE AUTHORIZATION NUMBER REQUIRED IN ADVANCE OF RETURN.

WARRANTY:

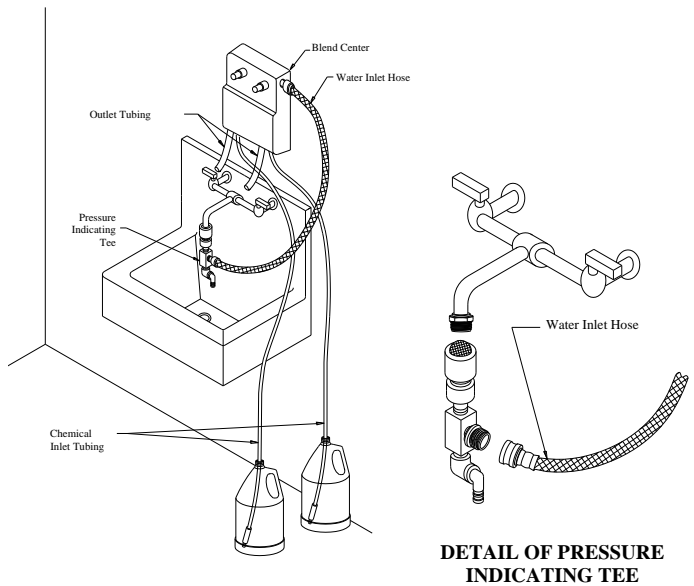
DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products which have a normal life shorter than one year, or failure and damage caused by chemicals, corrosion, improper 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.

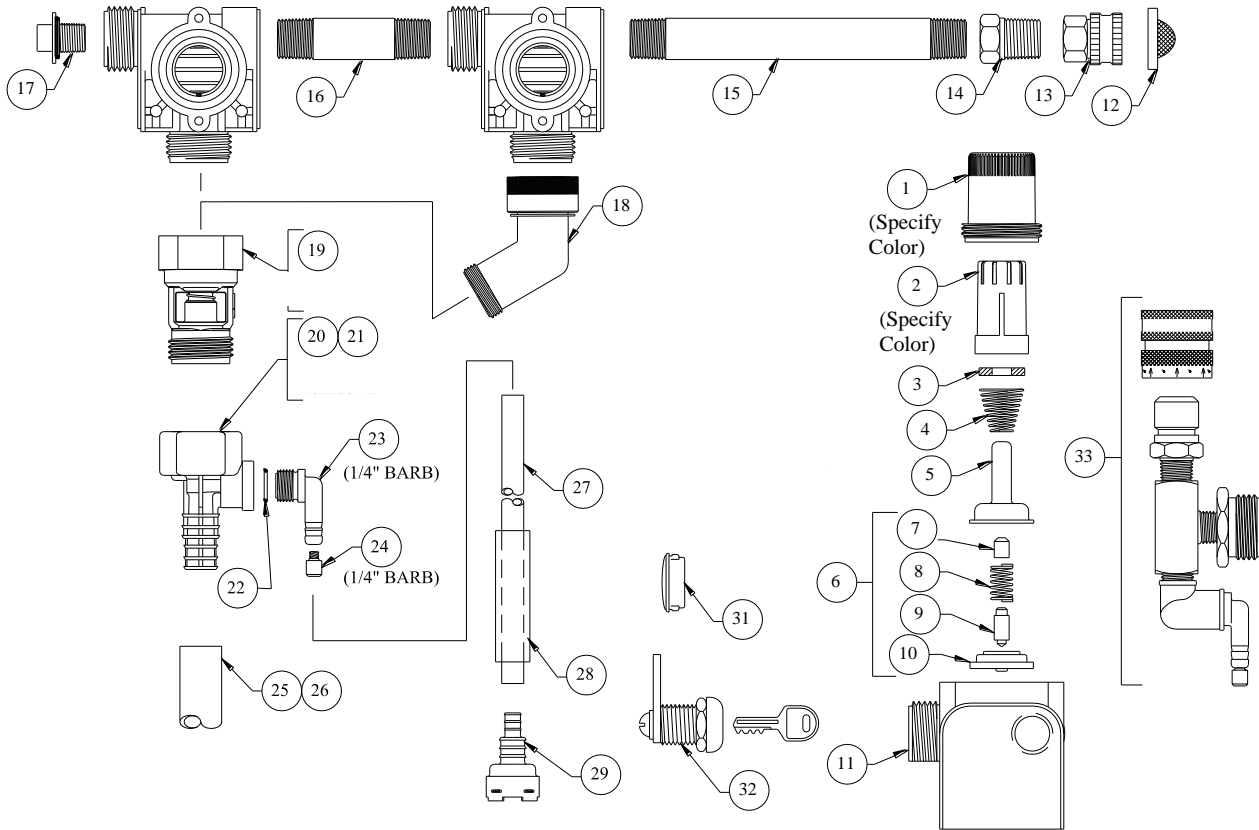
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PRESSURE INDICATING TEE INSTALLATION



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NO.	PART NO.	DESCRIPTION
1	66-139	Magnet Housing (Specify Color)
2	66-140	Push Button (Specify Color)
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	Kick-off Spring
9	63-38	Plunger
10	41-15-10	Diaphragm
11	63-39	Valve Body
12	100-38	Strainer Washer
13	93-19	Swivel Adapter
14	66-27	Bushing 3/8" FPT X 1/2" MPT
15	99-5-11	Pipe Nipple 3/8" NPT X 5 1/2" Lg.
16	99-5-3	Pipe Nipple 3/8" NPT X 2 1/2" Lg.
17	66-153	Pipe Plug & O-Ring Assy.
18	65-16	45° Male X Female GH Adapter (For 4 GPM Prop. Only)
19	16-30	Action Gap Assembly

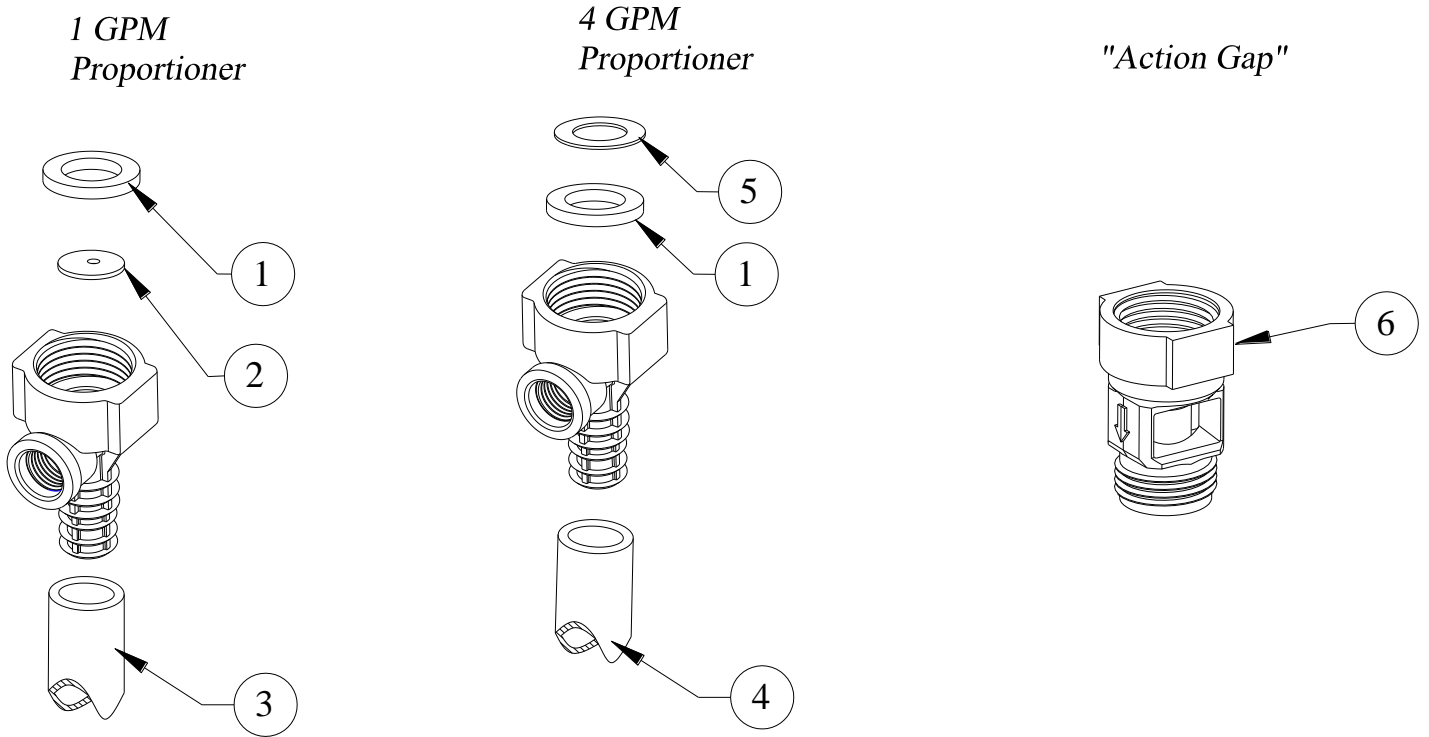
NO.	PART NO.	DESCRIPTION
20	61-22-3	4 GPM (1/4" Barb) Proportioner (Gray)
21	61-99-2	1 GPM (1/4" Barb) Proportioner (Green)
22	63-78	O-Ring
23	63-79	Inlet Barb (1/4" Barb)
24	100-15K	Metering Tip Kit (14 Sizes)
25	89-30-5	1/2" ID X 6' Lg. Hose Hanger Assy. (4 GPM Only)
26	16-3-6	1/2" ID X 6" Lg. Vinyl Outlet Tube (1 GPM Only)
27	66-28	1/4" ID X 21" Lg. Vinyl Supply Tube
28	61-107-2	Ceramic Weight
29*	61-16E	Foot Valve
31	61-71	Snap Bushing
32	66-21	Cabinet Lock

- Foot Valve also available with silicone (100-16S) or Viton 100-16V rubber seals. Please specify material when ordering.

ACCESSORIES		
NO.	PART NO.	DESCRIPTION
33	68-6-QD2	Pressure Indicating Tee

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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