

DEMA 633AG-1 & 633AG-4 BLEND CENTER



INSTALLATION INSTRUCTIONS

1. PARTS:

- | | |
|--|---|
| A. Blend Center assembly | B. 1 pc. 1/4" I.D. or 3/8" I.D. x 8 ft. long supply tubing, foot valve & ceramic weight |
| C. 1 pc. 9/16" I.D. x 6 ft. long vinyl outlet tubing | D. 2 pcs. #8 pan head 1-1/2" long mounting screws & anchors |
| E. 1 pc. label card | F. Metering tip kit |

2. INSTALLATION:

Note: Pressure indicating tee is to be install 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.

This product is designed only to be used as described in this instruction sheet. Adhere to all warnings and cautions identified in this document.	
	<p>WARNING: Installations must conform to all local and national plumbing codes and use approved backflow prevention and pressure relief devices where required.</p> <p>ALWAYS DISCONNECT DISPENSER FROM WATER SOURCE WHEN DISPENSER IS NOT IN USE.</p>
	<p>Always read SDS for all chemicals used and follow personal protective guidelines.</p>

A. Mounting & Water Supply:

Remove the two cover retainer screws and the cover from the blend center assembly. Any number of blend centers can be coupled together by first removing the pipe plugs in all but the last unit, then connecting the male hose thread of one unit to the female inlet hose adapter of the next unit. Mount the unit(s) in position on the wall and locate the position for the mounting screws. Only two screws are necessary to mount up to four units coupled together. Mount the units(s) to the wall and replace the covers and screws. 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 10 times with a wrench. **DO NOT OVER TIGHTEN.**

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 3). Water supply should not exceed 125 psi and water temperature must not exceed 160°F.

C. Chemical Supply:

Place the chemical containers in a convenient location not more than 6 feet below the blend center (greater lifts will reduce injection capacities). Insert the ends with the foot valves of the 8 foot 1/4" I.D. or 3/8" I.D. vinyl tubing into the chemical containers. Cut the vinyl tubing to any convenient length that will allow them to extend from the bottom of the chemical container to the proportioner inlet barbs. (See Figure 1) Gummed labels are provided for labeling chemicals.

D. Outlet:

Cut the 9/16" I.D. outlet tubing to the desired length and attach it to the proportioner outlets. Longer lengths may be used up to 10 feet. The 7" long, 3/16" tubing must be left on the 633-164AG model to insure priming.

E. 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 for each barb using the tables.

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TABLE 1 - 164BAG (1 GPM FLOW RATE PROPORTIONER - 1/4" BARB AND 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	1.25	102-1	0.90	142-1	0.60	213-1
Orange	1.70	75-1	1.20	107-1	0.80	160-1
Turquoise	2.15	60-1	1.55	83-1	1.10	116-1
Pink	3.00	43-1	2.00	64-1	1.50	85-1
Light Blue*	3.90	33-1	2.75	47-1	1.80	71-1
Brown	4.55	28-1	3.00	43-1	2.00	64-1
Red	5.80	22-1	3.60	36-1	2.30	56-1
White	7.00	18-1	4.45	29-1	2.70	47-1
Green	7.90	16-1	5.00	26-1	3.00	43-1
Blue	9.80	13-1	5.75	22-1	3.30	39-1
Yellow	14.80	9-1	7.35	17-1	3.55	36-1
Black	20.15	6-1	8.50	15-1	3.70	35-1
Purple	27.80	5-1	9.80	13-1	3.80	34-1
Gray	31.60	4-1	10.50	12-1	3.90	33-1
No Tip	35.70	3.6-1	11.80	11-1	4.50	28-1

*Metering tip color was formerly clear. Note: All induction rates are base on a water pressure of 40 psi. Leaner dilutions can be achieved by ordering DEMA ultra lean tip kit 100-15KU.

TABLE 2 - 164AG (1 GPM FLOW RATE PROPORTIONER - 3/8" BARB AND TUBING)

Metering Tip Color	Injection Rates For Viscosities Shown					
	1 cps		75 cps		200 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Clear	1.40	91-1	1.00	128-1	0.85	151-1
Purple	2.15	60-1	1.75	73-1	1.40	91-1
Yellow	4.00	32-1	3.25	39-1	2.80	46-1
Green	6.70	19-1	5.40	24-1	4.50	28-1
Pink	8.70	15-1	7.00	18-1	5.60	23-1
Turquoise	14.15	9-1	11.15	11-1	8.15	16-1
Black	17.25	7-1	13.50	9-1	10.00	13-1
Gray	22.60	6-1	16.75	8-1	11.60	11-1
Red	25.15	5-1	19.50	7-1	13.50	10-1
Blue	27.50	4.7-1	21.65	6-1	14.25	9-1
Brown	31.00	4-1	24.25	5-1	15.60	8-1
White	33.50	3.8-1	26.25	4.9-1	16.70	7.7-1
Orange	35.40	3.6-1	28.00	4.6-1	17.40	7.4-1
Lt. Blue*	36.50	3.5-1	29.00	4.4-1	18.20	7-1
Tan*	37.80	3.4-1	29.90	4.3-1	18.65	6.9-1
No Tip	38.30	3.3-1	30.90	4.1-1	21.30	6-1

Note: All induction rates are base on a water pressure of 40 psi. *These tips are not included in standard tip kit

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E 3 - 163BAG (4 GPM FLOW RATE PROPORTIONER - 1/4" BARB AND 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	0.30	427-1	0.20	640-1	0.15	853-1
Orange	0.40	320-1	0.30	427-1	0.25	512-1
Turquoise	0.60	213-1	0.40	320-1	0.30	427-1
Pink	0.80	160-1	0.50	256-1	0.40	320-1
Light Blue*	1.00	128-1	0.70	183-1	0.45	284-1
Brown	1.20	107-1	0.80	160-1	0.50	256-1
Red	1.50	85-1	0.90	142-1	0.60	213-1
White	1.85	69-1	1.10	116-1	0.70	183-1
Green	2.00	64-1	1.25	102-1	0.80	160-1
Blue	2.50	51-1	1.50	85-1	0.82	156-1
Yellow	4.00	32-1	1.85	69-1	0.90	142-1
Black	5.50	23-1	2.00	64-1	0.94	136-1
Purple	8.80	15-1	2.40	53-1	0.96	133-1
Gray	11.65	11-1	2.50	51-1	1.00	128-1
No Tip	16.20	8-1	3.00	43-1	1.20	107-1

***Metering tip color was formerly clear. Note: All induction rates are base on a water pressure of 40 psi. Leaner dilutions can be achieved by ordering DEMA ultra lean tip kit 100-15KU.**

TABLE 4 - 163AG (4 GPM FLOW RATE PROPORTIONER - 3/8" BARB AND TUBING)

Metering Tip Color	Injection Rates For Viscosities Shown					
	1 cps		75 cps		200 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Clear	0.90	142-1	0.30	427-1	0.20	640-1
Purple	1.10	116-1	0.50	256-1	0.40	320-1
Yellow	1.80	71-1	1.00	128-1	0.70	183-1
Green	2.50	51-1	1.50	85-1	1.20	107-1
Pink	3.00	43-1	2.00	64-1	1.50	85-1
Turquoise	4.50	28-1	3.15	41-1	2.30	56-1
Black	4.80	27-1	3.75	34-1	2.80	46-1
Gray	6.70	19-1	4.80	27-1	3.35	38-1
Red	8.15	16-1	5.80	22-1	3.80	34-1
Blue	9.20	14-1	6.60	19-1	4.20	30-1
Brown	11.10	12-1	7.75	17-1	4.70	27-1
White	13.20	10-1	9.15	14-1	5.00	26-1
Orange	15.00	9-1	10.10	13-1	5.30	24-1
Lt. Blue*	16.70	8-1	11.10	12-1	5.50	23-1
Tan*	18.50	7-1	11.80	11-1	5.80	22-1
No Tip	19.40	6.6-1	13.00	10-1	6.20	21-1

Note: All induction rates are base on a water pressure of 40 psi. *These tips are not included in standard tip kit.

3. OPERATION:

The blend center 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, 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 counter clockwise direction will release it, allowing the valve to shut off.

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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 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.

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 up & down 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 holes) 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.

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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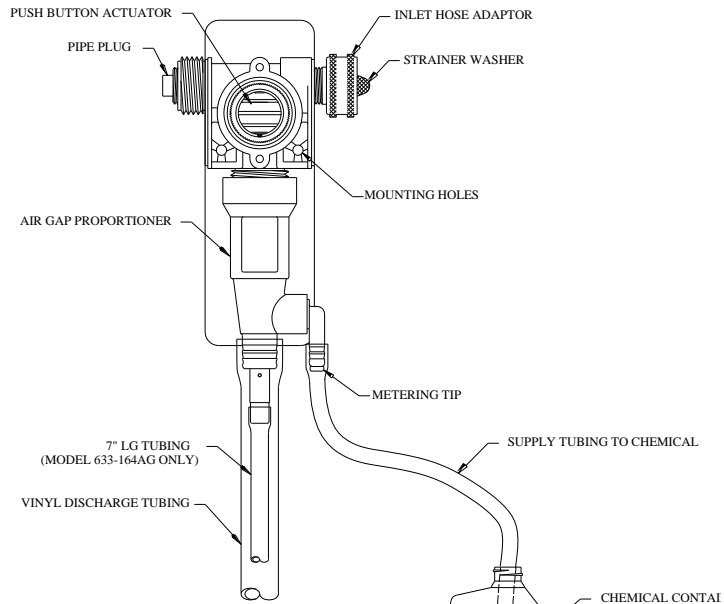


FIGURE 1

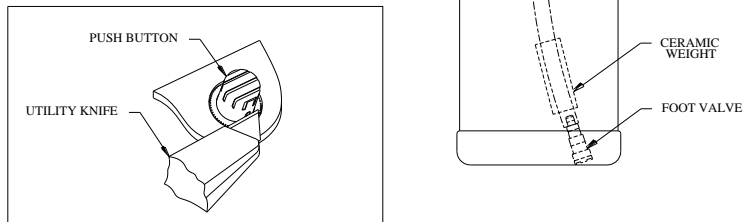


FIGURE 2

PRESSURE INDICATING TEE INSTALLATION

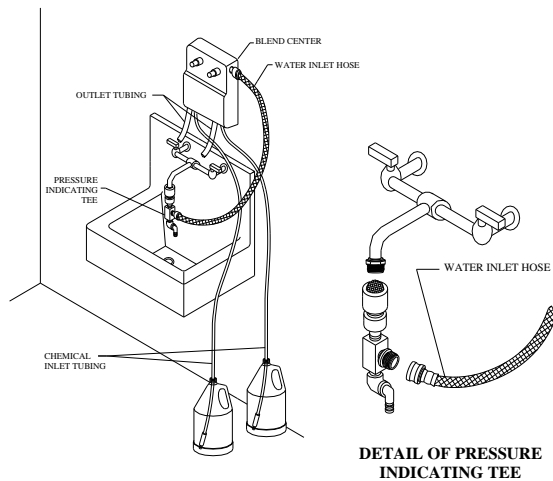
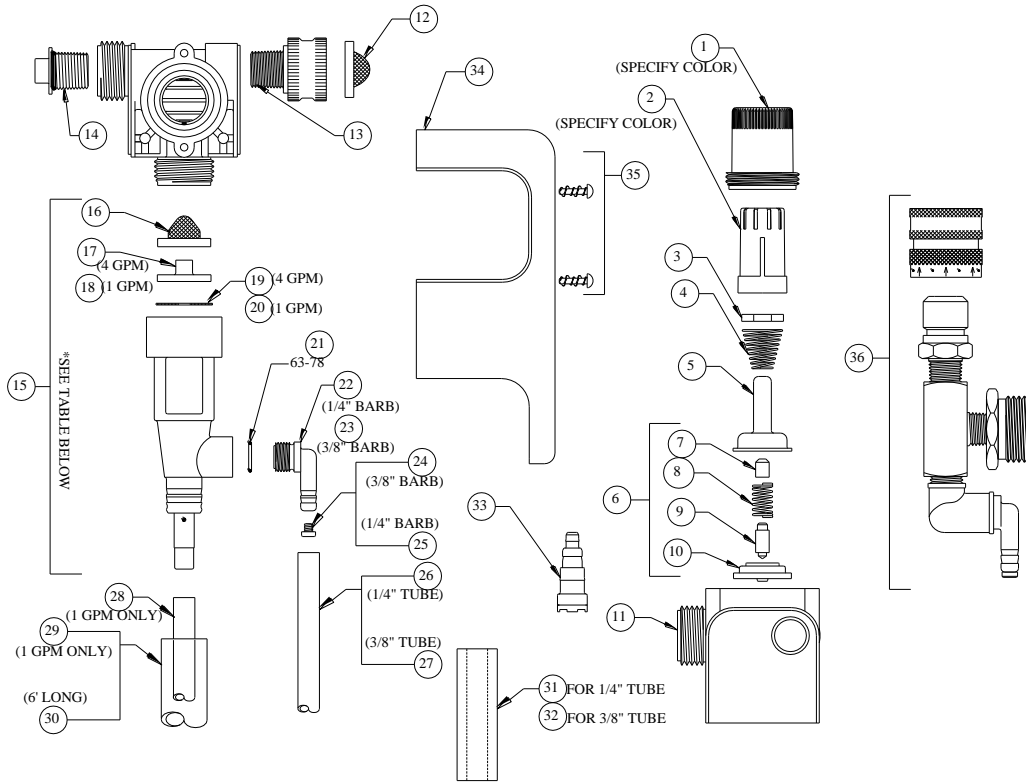


FIGURE 3

DEMA 633AG-1 & 633AG-4 BLEND CENTER INSTALLATION INSTRUCTIONS



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	93-44	Pipe To Garden Hose Adapter
14	66-153	Pipe Plug & O-Ring Assy.
15	61-22-3AG	4 GPM(3/8" Barb) Proportioner
	61-22-3BAG	4 GPM(1/4" Barb) Proportioner
	61-32AG	1 GPM(3/8" Barb) Proportioner
	61-32BAG	1 GPM(1/4" Barb) Proportioner
16	100-59	Strainer Washer
17	63-73	Nozzle (4 GPM)
18	63-74-2	Nozzle (1 GPM)
19	63-76	Screen (4 GPM)
20	63-77	Screen (1 GPM)
21	63-78	O-Ring
22	63-79	Inlet Barb (1/4" Barb)
23	63-80	Inlet Barb (3/8" Barb)

NO.	PART NO.	DESCRIPTION
24	61-9	Metering Tip
25	100-15	Metering Tip
26	100-12	Vinyl Tube (7/32" ID X 8 ft. Lg.)
27	100-12L	Vinyl Tube (3/8" ID X 8 ft. Lg.)
28	63-82	Vinyl Tube (3/16" ID X 7" Lg.)
29	63-88	Vinyl Tube (9/16" ID X 4" Lg.) (1 GPM Only)
30	63-83	Vinyl Tube (3/16" ID X 6 Ft. Lg.)
31	61-107-2	Ceramic Weight (For 3/8" OD Tubing)
32	61-107	Ceramic Weight (For 1/2" OD Tubing)
33	100-11P	Foot Valve
34	63-45	Cover
35	63-46	Screw

ACCESSORIES		
NO.	PART NO.	DESCRIPTION
36	68-6-QD2	Pressure Indicating Tee
37	61-25-2	Fresh Water Outlet Kit
38	100-15K	Metering Tip Kit (14 Sizes)
39	61-9K	Metering Tip Kit (15 Sizes)
40*	L307	Chemical labels
41*	L366	Unit front Label

*Items 40 and 41 are not shown