

DEMA® MODEL 294DC FOAMER & 294DC-DS DROP STATION FOAMER

INSTALLATION INSTRUCTION

NOTE: 294DC-DS is intended for use with another mixing device and to be used as a foaming drop station.



1. PARTS

- A. Foamer Assembly
- B. Plastic chemical supply tubing w/ foot valve and ceramic weight
- C. Metering tip kit
- D. Outlet hose 25' long (optional accessory)
- E. Shut-off valve (optional accessory)

2. MOUNTING

Hold the unit in position on the wall and locate the positions for the mounting screws. Drill holes in wall approximately 1" deep and insert mounting anchors. Install top 2 mounting screws, leaving approximately 1/8" extension between the wall and screw head. Mount the Foamer unit by inserting the screw heads through the keyhole slots in the cover and tighten the screws. Screw the bottom 2 screws into the wall to secure.
Note: Attach proper air supply fittings before mounting unit to wall. See caution warning in Section 3 for air inlet.

3. INSTALLATION

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>
	Always read SDS for all chemicals used and follow personal protective guidelines.

- A. Water inlet is 3/4" garden hose swivel.
- B. Air inlet is 1/4" NPT. **CAUTION: When tightening air supply fittings into the ball valve, be sure to secure the ball valve with a wrench or other similar tool. Avoid rotating ball valve when tightening air supply fittings.**
- C. Foam outlet is 3/4" garden hose. Attach shut-off valve to the end of the hose. See Table 1 for hose limitations.
- D. Detergent can be drawn directly from any chemical container, which may be set on the floor. The unit should be mounted no more than 6' above the chemical container; greater lifts reduce injection capacity.

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4. CHEMICAL ADJUSTMENT

Caution: Use care when handling hazardous chemicals.

Chemical dilution rates are set with a tip screwed into the inlet barb on the metering block. Select the proper tip using Table 3 as a guide. Cut the inlet tubing to a convenient length so that it reaches from the bottom of the chemical container to the chemical inlet. Slip the ceramic weight over the tubing and insert the end with the foot valve into the chemical. Attach the other end of the tubing to the barb of the chemical inlet.

5. OPERATION

Open the shutoff valve at the end of the hose. Turn on air supply and set at 40 psi. Turn on water supply. See Table 2 for water flow and airflow.

TABLE 1

HOSE SIZE AND LENGTH	MIN. PRESSURES		MAX. PRESSURE	
	Water	Air	Water	Air
25' of 3/4" ID	40 psi	40 psi	125 psi	125 psi
50' of 3/4" ID	50 psi	40 psi		
25' of 1/2" ID	60 psi	40 psi		

TABLE 2

	Pressure (PSI)			
	40	50	60	80
WATER FLOW (GPM)	1.4	1.6	1.7	2.1
AIRFLOW (SCFM)	3.5	4.2	4.8	6.1

Maximum Temperature – 150°F (65.5°C)

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TABLE 3

Metering Tip Color	Induction Rates for Viscosities Shown							
	1 cps		75 cps		200 cps		500 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Clear	0.84	152-1	0.65	197-1	0.45	284-1	0.30	427-1
Purple	1.35	95-1	1.10	116-1	0.90	142-1	0.60	213-1
Yellow	2.40	53-1	2.00	64-1	1.50	85-1	1.10	116-1
Green	4.20	30-1	3.40	38-1	2.65	48-1	2.10	61-1
Pink	5.25	24-1	4.50	28-1	3.45	37-1	2.60	49-1
Turquoise	9.40	14-1	7.25	18-1	5.45	23-1	3.70	35-1
Black	11.75	11-1	8.80	15-1	6.35	20-1	4.20	30-1
Gray	14.50	9-1	10.80	12-1	7.75	17-1	4.75	27-1
Red	18.00	7-1	13.20	10-1	8.30	15-1	5.00	26-1
Blue	20.60	6-1	14.70	9-1	8.65	14.8-1	5.20	25-1
Brown	24.10	5-1	16.15	8-1	9.30	14-1	5.50	23-1
White	27.50	4.7-1	17.80	7-1	9.70	13-1	5.70	22-1
Orange	30.00	4.3-1	18.50	6.9-1	10.10	12.7-1	5.85	21.9-1
Lt. Blue*	32.00	4-1	18.90	6.8-1	10.20	12.5-1	6.00	21-1
Tan*	32.50	3.9-1	19.25	6.6-1	10.40	12.3-1	6.25	20.5-1
None	34.25	3.7-1	20.45	6-1	10.60	12-1	6.50	20-1

All induction rates are based on 40 psi water pressure and 40 psi air pressure.

*These tips are not standard tip pack.

6. SERVICING

Caution: When servicing, be sure that replacement parts have been install according to drawing. Be certain that check valve parts are in place.

Problem

See situation:

Unit will not draw or stops drawing chemical

1, 2, 3, 5, 6, 10, 11, 12, 13, 15, 16

Poor foam quality

1, 2, 3, 5, 6, 10, 11, 12, 13, 15, 16

Foam surges

1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 15, 16

Foam output is too wet

1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 16

Foam output is too dry

2

Water is flowing into chemical container

12

Foam does not clean adequately

4, 8, 11, 14

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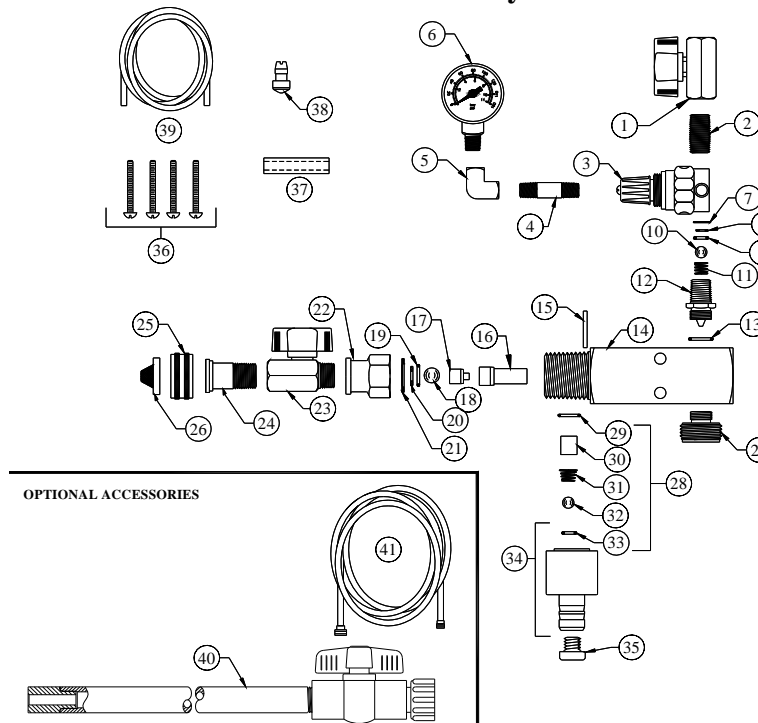
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POSSIBLE SITUATIONS

SITUATION	CAUSE	SOLUTION
1	Chemical tube not immersed in chemical or chemical depleted.	Immerse tube in chemical or replace.
2	Air pressure is too high for water.	Adjust air regulator down.
3	Water pressure is too low.	At least 30 psi is required. Increase if possible, or decrease air pressure.
4	Chemical to water ratio is too low.	Change metering tip to one that is larger.
5	Foam hose is kinked.	Straighten hose.
6	Foam hose is too long or wrong size.	See table 1.
7	Air supply is inadequate.	Increase air pressure by regulating up.
8	Detergent is wrong.	Use a more effective detergent, and be sure that product is recommended for foaming.
9	Using oil on the airline may deteriorate the quality of the foam.	Use only clean, dry air.
10	Holes or cuts are in chemical inlet tube.	Replace the tube.
11	Strainer and/or metering tip is blocked.	Remove, clean or replace.
12	Solution check valve is not working.	Remove, clean or replace.
13	Air regulator is not working.	Remove, clean or replace.
14	Soil has hardened on surface.	Reapplication may be necessary. Be sure to rinse foam off before it dries.
15	Rust or build-up is clogging the foamer aspirator.	Disconnect water from unit and visually inspect. Remove blockage.
16	Water scale or chemical build-up may have formed in the water jets.	Place the chemical tube in descaling acid and completely open the shut-off valve. Let unit run until the chemical tube is fill with acid, then close the shut-off valve and water supply. Elevate the chemical tubing and outlet hose until acid has had enough time to descale. Repeat if necessary. For severe cases, disassemble unit and soak foamer body in descaling acid.

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INSTALLATION INSTRUCTION 294DC Assembly



NO.	PART NO.	DESCRIPTION
1	16-11	Ball Valve (1/4" NPT)
2	25-137-9U	Close Nipple (1/4" NPT)
3	93-1	Pressure Regulator
4	93-103-1	Pipe Nipple (1/8" NPT)
5	93-102-1	Elbow (1/8" NPT)
6	93-15-1	Pressure Gauge
7	29-18-2	5/16" Internal Snap Ring
8	29-17-3	Stainless Steel Washer
9	90-35V	Air Check Valve O-Ring
10	26-49P	Ball 3/16" Teflon
11	93-6-2	Air Check Valve Spring
12	29-14	Air Nozzle Adapter
13	30-5V-14	O-Ring
14	29-6-1	Foamer Body
15	29-15	Pin
16	29-11	Diffuser
17	29-16	Water Nozzle
18	29-5P	Ball - 11/16" Dia.
19	29-7	O-Ring
20	29-17-2	Stainless Steel Washer
21	28-18-4	7/16" Snap Ring
22	93-105-1	Reducing Coupling (1/2" NPT x 3/8" NPT)

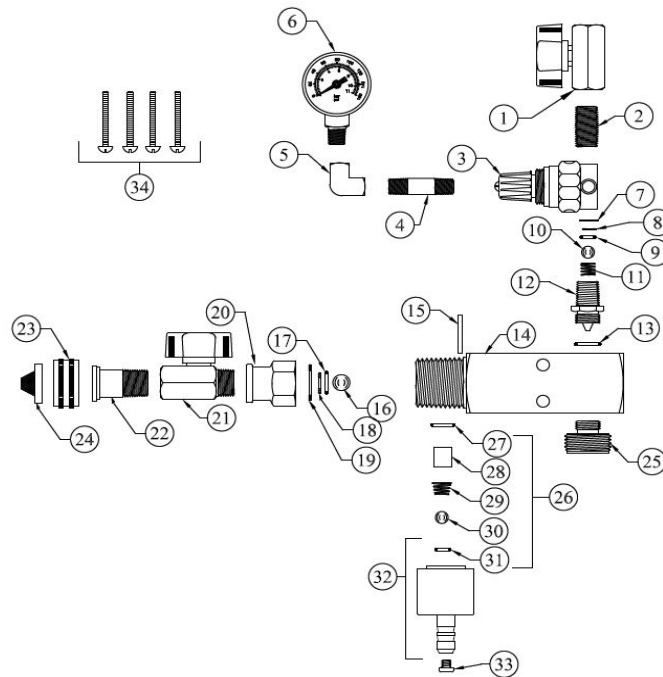
NO.	PART NO.	DESCRIPTION
23	65-2	Ball Valve (3/8" NPT)
24	93-104-1	Swivel Adapter Stem
25	65-10	Coupling
26	100-38	Strainer Washer
27	29-8	Outlet
28	29-12	Check Valve Repair Kit
29	25-29V	Metering Knob O-Ring
30	23-34-3	Check Valve Core
31	23-9-2	Check Valve Spring
32	23-10	Teflon Ball - 9/32" Dia.
33	23-11V	Check Valve O-Ring
34	23-32T	Metering Knob
35	61-9 61-9K	Metering Tip (Specify Color or Metering Tip Kit)
36	29-10	Hi-Lo Screw (4 Reqd.)
37	61-107	Ceramic Weight
38	24-11L	Foot Strainer
39	100-12L	1/2"OD Vinyl Tubing x 8'Lg.

OPTIONAL ACCESSORIES		
NO.	PART NO.	DESCRIPTION
40	93-18	Spray Wand
41	93-14	3/4"ID x 25'Lg. Outlet Hose

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294DC-DS Assembly



NO.	PART NO.	DESCRIPTION
1	16-11	Ball Valve (1/4" NPT)
2	25-137-9U	Close Nipple (1/4" NPT)
3	93-1	Pressure Regulator
4	93-103-1	Pipe Nipple (1/8" NPT)
5	93-102-1	Elbow (1/8" NPT)
6	93-15-1	Pressure Gauge
7	29-18-2	5/16" Internal Snap Ring
8	29-17-3	Stainless Steel Washer
9	90-35V	Air Check Valve O-Ring
10	26-49P	Ball 3/16" Teflon
11	93-6-2	Air Check Valve Spring
12	29-14	Air Nozzle Adapter
13	30-5V-14	O-Ring
14	29-6-1	Foamer Body
15	29-15	Pin
16	29-5P	Ball – 11/16" Dia.
17	29-7	O-Ring
18	29-17-2	Stainless Steel Washer
19	28-18-4	7/16" Snap Ring
20	93-105-1	Reducing Coupling (1/2" NPT x 3/8" NPT)

NO.	PART NO.	DESCRIPTION
21	65-2	Ball Valve (3/8" NPT)
22	93-104-1	Swivel Adapter Stem
23	65-10	Coupling
24	100-38	Strainer Washer
25	29-8	Outlet
26	29-12	Check Valve Repair Kit
27	25-29	Metering Knob O-Ring
28	23-34-7	Check Valve Core
29	24-23	Check Valve Spring
30	23-10	Teflon Ball
31	24-25	Check Valve O-Ring
32	24-32T	Metering Knob
33	100-15-18	Metering Tip
34	29-10	Hi-Lo Screw (4 Reqd.)

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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.