

DEMA MODELS P203CTC.PI.1, .2, .3

INSTALLATION INSTRUCTIONS

I. PARTS:

- A. 1 pc. Cyclone Portable Injector
- B. 1 pc. Foot Strainer & 1/4" I.D. Tubing.
- C. 1 pc. Ceramic Weight.
- D. 1 pc. Instruction Sheet
- D. 2 pc. 3' hose w/ female x female GHT fittings on both ends (.1 ONLY)
- D. 2 pc. 3' hose w/ female x female and female x male GHT fitting (.2 ONLY)

II. INSTALLATION:

A. Water Supply.

The water inlet and outlet is 3/4" GHT.

WARNING: Water supply should not exceed 125 psi and water temperature must not exceed 150°F.

B. Possible Outlet Connections.

The outlet can be pipe or hose. To connect a discharge hose to the outlet a garden hose fitting will be needed. Spray guns, spray nozzles or foaming wands may be used on the hose outlet, note that this Injector is designed to operate with a total spray nozzle flow rating of no less than 4 GPM total at 40 PSI. When a spray gun or nozzle is used, hose lengths must not exceed those shown in Table 1. Hoses, spray guns and foam wands are available through Dema. See the parts list on page 4, under Optional Accessories for various styles.

TABLE 1

Hose I.D.	3/8"	1/2"	5/8"
Max. Length	15 ft.	50 ft.	100 ft.

C. Installation of Metering Tips and Chemical Inlet Tubing.

Metering tips should be installed at the metering knob body, installed on the injector. To easily install the threaded metering tip, take the supplied 1/4" vinyl tubing; place the metering tip with threads facing out into the top of the tube. Push the metering tip up to the metering knob barb opening and rotate against it clockwise. When the metering tip stops rotating freely, it should be installed properly. Push the tubing firmly against the metering tip and over the metering knob barb.

D. Chemical Supply.

WARNING: USE CARE WHEN HANDLING HAZARDOUS CHEMICALS.

Place the chemical container in a convenient location not more than six feet below the Injector. (Greater lifts will reduce injection capabilities). The top of the container should not be above the injector. Cut the vinyl tube to any convenient length that will allow the tubing to reach the bottom of the container. Drop the tubing end with the strainer and ceramic weight into the chemical container.

III. FEED RATE ADJUSTMENT:

The chemical feed rate is controlled by a metering tip screwed into the metering barb on the side of the unit. The feed rates can be changed by using a different size metering tip which is available through Dema (See parts list on page 3). To select a proper size metering tip for the desired dilution ratio refer to Table 3.

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TABLE 3
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METERING TIP SELECTION CHART
INJECTION RATES USING METERING TIPS (100-15)

Metering Tip Color	Injection Rate for Viscosities Shown					
	1 cps		75 cps		200 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Tan	0.40	320-1	0.25	512-1	0.20	640-1
Orange	0.50	256-1	0.35	366-1	0.25	512-1
Turquoise	0.75	171-1	0.45	284-1	0.35	366-1
Pink	0.95	135-1	0.65	197-1	0.45	284-1
Light Blue	1.30	98-1	0.80	160-1	0.55	233-1
Brown	1.50	85-1	0.90	142-1	0.60	213-1
Red	1.90	67-1	1.00	128-1	0.70	183-1
White	2.25	57-1	1.30	98-1	0.80	160-1
Green	2.64	49-1	1.50	85-1	0.90	142-1
Blue	3.20	40-1	1.75	73-1	1.00	128-1
Yellow	4.85	26-1	2.25	57-1	1.10	116-1
Black	6.50	20-1	2.40	53-1	1.15	111-1
Purple	9.20	14-1	2.70	47-1	1.20	107-1
Gray	10.40	12-1	2.85	45-1	1.25	102-1
No Tip	12.80	10-1	3.50	37-1	1.55	83-1

All injection rates are based on 40 PSI inlet water pressure and a water flow rate of 2.5 GPM.

IV. SERVICING:

CAUTION: TURN OFF WATER SUPPLY BEFORE SERVICING.

A. If unit fails to draw chemical.

1. Is the hose too long? (See Table 1)
2. Is the gun or nozzle(s) sized properly? (Refer to Section II B). Remove gun and/or nozzle(s) and turn on water. If the injector inducts chemical, the gun and nozzle(s) are improperly sized.
3. Is the metering tip blocked? Remove tip and clear blockage.
5. Is the hose kinked or otherwise obstructed?
6. Is the spray gun or foam wand fully open?

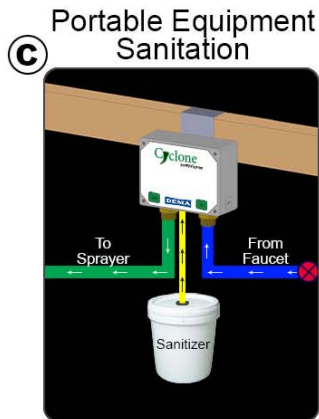
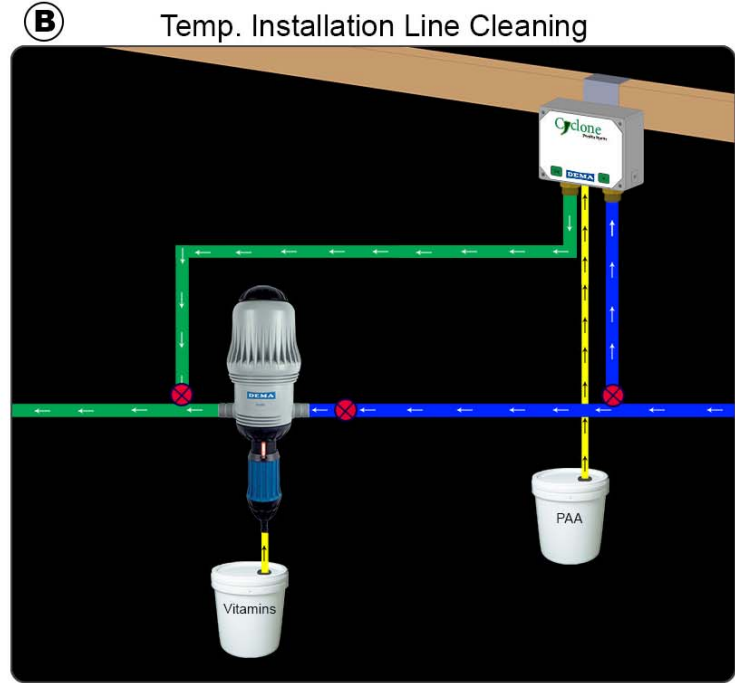
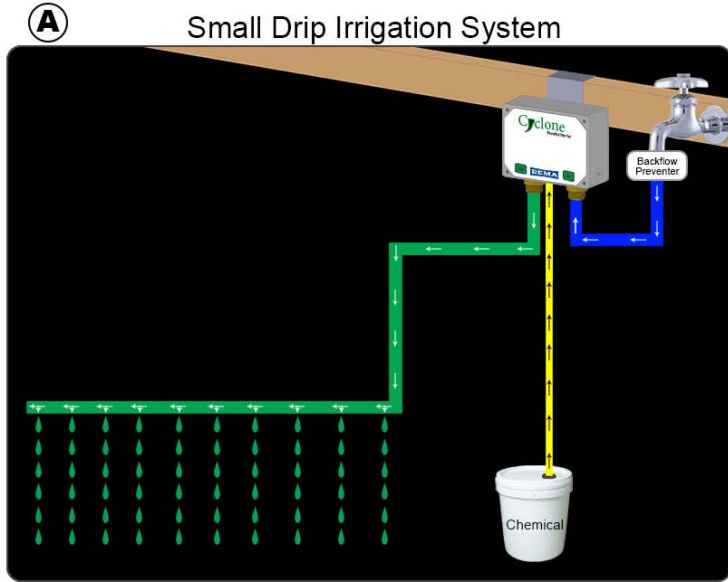
B. If unit stops drawing chemical.

1. Is the foot strainer clogged? Lift from drum and clean.
2. Are the spray nozzle(s) partially clogged? Remove and clean.
3. Is the metering tip blocked? Remove and clean.
5. Is the injector check valve clogged? Remove square, plastic metering knobs to inspect check valve ball, spring and O-ring.

CAUTION: WHEN SERVICING UNIT BE SURE THAT REPLACEMENT PARTS HAVE BEEN INSTALLED ACCORDING TO DRAWING. BE CERTAIN CHECK VALVE PARTS ARE IN PLACE.

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V. SUGGESTED USES:



(A) 100% of water to drip irrigation goes through Cyclone Injector.

(B) Line cleaning chemicals are injected at higher concentrations than vitamins, therefore a standard injector cant be used. Also, Cyclone can be moved to where it is needed.

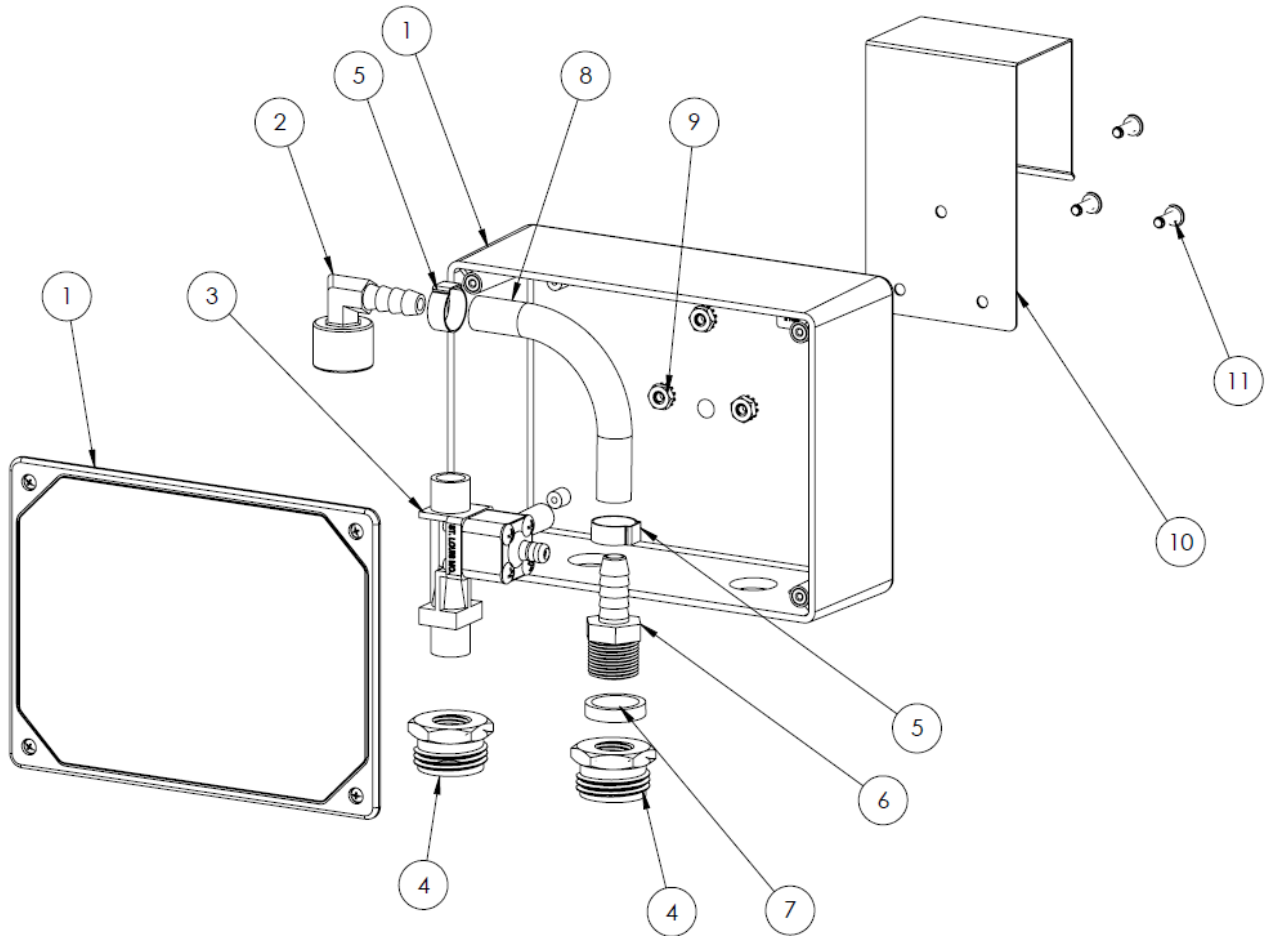
(C) Portable vehicle and equipment sanitizing

⊗ - Throttle Valve symbol

Metering tip is hidden in enclosure to prevent tampering

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VI. PARTS DIAGRAM AND LIST:



Item No.	Part No.	Description
1	20-4	Enclosure w/ lid
2	68-43-1	Brass elbow, 3/8 FNPT x 3/8 Barb
3	P203CTC	Injector complete with chemical barb
4	65-31-4U	Garden hose adapter
5	76-2-15	Worm gear hose clamp
6	N/A	3/8 NPT x 3/8 plastic barb
7	20-5	Spacer washer
8	66-98-12	3/8 I.D. Nylabraid hose
9	36-32-1	Hex locking nut, #8-32
10	20-2	Bracket
11	N/A	#8-32 x 7/16 S.S. Phillips head screw
12	100-16E-1	Tubing and foot valve assembly
13	61-107-2	Ceramic weight
14	100-15K	Metering tip kit
15	44-3-3FC2	3ft Garden hose assembly, Female x Female
16	44-3-3	3ft Garden hose assembly, Female x Male

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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.