DOSATRON®

WATER POWERED DOSING TECHNOLOGY

Metal Working Reference Guide

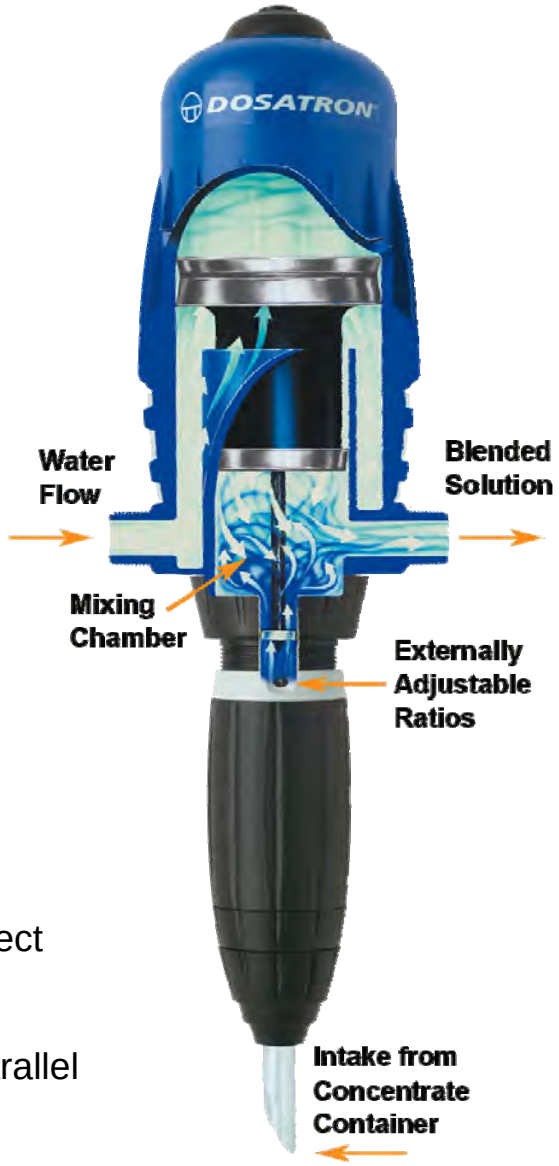
DOSATRON SALES & SERVICE • NORTH & CENTRAL AMERICA
2090 Sunnydale Blvd • Clearwater, Florida 33765 • USA
Telephone: 727-443-5404 • Fax: 727-447-0591 • Service: 800-523-8499
www.dosatronusa.com

DOSATRON®

WATER POWERED DOSING TECHNOLOGY

Operating Principle

- Non-electric, water powered
- Units operate on positive displacement principle
- Concentrate is directly proportional to the volume of water
- Homogenous mixing occurs inside the unit
- Force of water pushes the blended solution downstream



Dosatron Dispensers

- **Easy to adjust**
  external adjustment of ratios
- **Highest efficiency**
  fluctuation in pressure & flow do not affect operation
- **Flexible**
  units may be manifolded in series or parallel
- **Versatile**
  units are compatible with computer–controlled systems

DOSATRON®

WATER POWERED DOSING TECHNOLOGY

Unit Selection

D07RE

D14

D14MZ520

D45RE3

D8R150

METAL PROCESSING UNITS	COOLANT	DIE LUBE	PARTS WASHING	FINISHING/ DEBURRING
D07RE5				●
D07RE125				●
D14MZ5	●	●	●	●
D14MZ10	●	●	●	●
D14MZ520	●	●		
D45RE3*		●	●	
D45RE8*	●	●		
D8R150	●	●		
*Use PVDF-H with Chlorinated or Acidic products				

Specifications

Model	Max. Flow	Min. Flow	Injection Percents	Injection Ratios	Pressure Range	Connections
D07RE5	3 GPM	0.02 GPM	0.8 to 5.5%	1:128 to 1:18	4.3 to 85 PSI	3/4” NPT
D07RE125	3 GPM	0.02	0.15 to 1.25%	1:667 to 1:80	4.3 to 85 PSI	3/4” NPT
D14MZ520	8.8 GPM	0.05 GPM	5 to 20%	1:20 to 1:5	7 to 57 PSI	3/4” NPT
D14MZ2	14 GPM	0.05 GPM	0.2 to 2%	1:500 to 1:50	4.3 to 85 PSI	3/4” NPT
D14MZ5	14 GPM	0.05 GPM	0.5 to 5%	1:200 to 1:20	4.3 to 85 PSI	3/4” NPT
D14MZ10	14 GPM	0.05 GPM	1 to 10%	1:100 to 1:10	7 to 85 PSI	3/4” NPT
D45RE3	20 GPM	0.4 GPM	0.5 to 3%	1:200 to 1:33	7 to 70 PSI	1” NPT
D45RE8	20 GPM	0.4 GPM	3 to 8%	1:33 to 1:12	7 to 70 PSI	1” NPT
D8R150	40 GPM	2.2 GPM	1 to 5%	1:100 to 1:20	2 to 110 PSI	1 1/2” NPT

DOSATRON®

WATER POWERED DOSING TECHNOLOGY

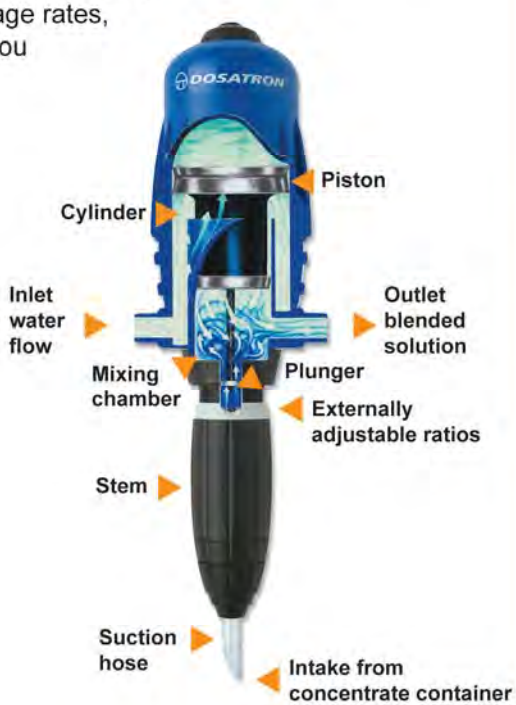
Metal Working

Chemical Dispensers

Dosatron chemical dispensers are water-powered so no electricity is necessary. They compensate for flow and pressure changes providing consistent, repeatable results. Dosatrons are simple to use and easy to adjust allowing for flexible dosage rates, and they are easy to maintain saving you time and effort.

Our injectors are great for:

- Coolants
- Vibratory Compounds
- Die Lubes
- Detergents / Cleaners
- Rust Inhibitors



D14MZ10
14 GPM

To learn more about Dosatron call

800-523-8499

or visit

www.dosatronusa.com

UNIT SPECIFICATIONS

D14 Chemical Dispensers				
MODEL	D14MZ2	D14MZ5	D14MZ10	D14MZ520
DILUTION RANGE	1:500 to 1:50	1:200 to 1:20	1:100 to 1:10	1:20 to 1:5
MAX. FLOW	14 GPM	14 GPM	14 GPM	9 GPM
MIN. FLOW	0.05 GPM	0.05 GPM	0.05 GPM	0.05 GPM
INJECTION PERCENTS	0.2% to 2%	0.5% to 5%	1% to 10%	5 to 20%
PRESSURE RANGE	4.3 to 85 PSI	4.3 to 85 PSI	7 to 85 PSI	7 to 57 PSI
CONNECTIONS	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
RECOMMENDED ACCESSORY KIT	IPK34 - 14 GPM	IPK34 - 14 GPM	IPK34 - 14 GPM	IPK34 - 7 GPM

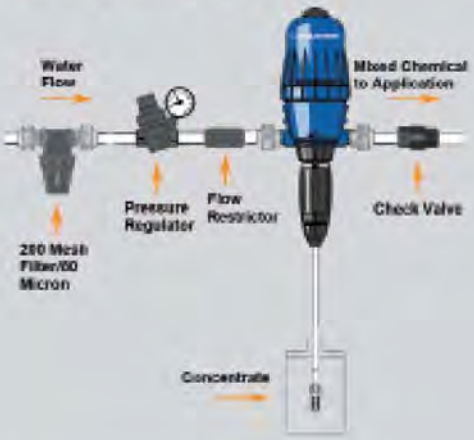
D45, D8R, and D07 Chemical Dispensers					
MODEL	D45RE3	D45RE8	D8R150	D07RE5	D07RE125
MAX. FLOW	20 GPM	20 GPM	40 GPM	3 GPM	3 GPM
MIN. FLOW	0.4 GPM	0.4 GPM	2.2 GPM	0.02 GPM	0.02 GPM
INJECTION PERCENTS	0.5% to 3%	3% to 8%	1% to 5%	0.8 to 5.5%	0.15 to 1.25%
INJECTION RATIO	1:200 to 1:33	1:33 to 1:12	1:100 to 1:20	1:128 to 1:18	1:667 to 1:80
PRESSURE RANGE	7 to 70 PSI	7 to 70 PSI	2 to 110 PSI	4.3 to 85 PSI	4.3 to 85 PSI
CONNECTIONS	1" NPT	1" NPT	1 1/2" NPT	3/4" NPT	3/4" NPT
RECOMMENDED ACCESSORY KIT	IPK100 - 20 GPM	IPK100 - 20 GPM	N/A	IPK34 - 3 GPM	IPK34 - 3 GPM

All units include: mounting bracket, suction tube, strainer and weight.
Please review the basic installation drawing for recommended accessories.
MAXIMUM TEMPERATURE: 104 °F

PRE-PLUMBED SYSTEMS

Call 800-523-8499 to order your pre-plumbed panels and locking cabinets.

Basic Installation



Customer Service

At Dosatron, we stand behind our units. Our world-class customer service team is always ready to assist you with service and support, for as long as you own your Dosatron.

Not sure what unit fits your needs? Give us a call for unit recommendations.

Want an easy preventive maintenance reminder? Sign up at www.dosatronusa.com/pm for Dosatron's Preventive Maintenance Program.

Ready to order? Call **800-523-8499** for a distributor near you.

DOSATRON®
2090 Sunnydale Blvd.
Clearwater, FL 33765 USA
727-443-5404
(Fax) 727-447-0591

800-523-8499
www.dosatronusa.com

Genuine DOSATRON Parts

2011-07 PF 2007-56-MP001

DOSATRON®

WATER POWERED DOSING TECHNOLOGY

Dosatron Coolant System Cabinet

Customized according to your dosing needs.

Contact us for a quote today.

DOSATRON® WATER POWERED DOSING TECHNOLOGY

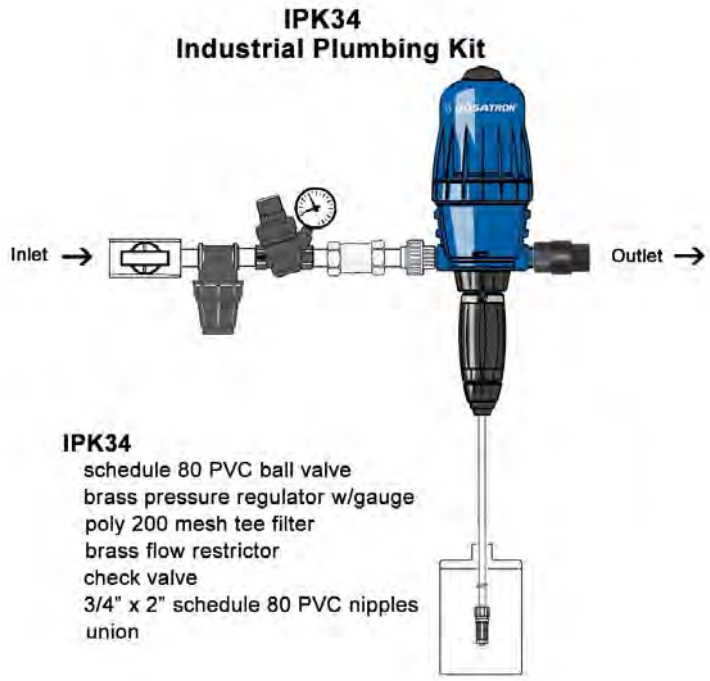
Installation Requirements

1. Dosatron factory warranty **requires** the use of an 80 micron/200 mesh water filter on the inlet side of the unit.
2. In **all** applications Dosatron highly recommends an Industrial Plumbing Kit (IPK).
3. Operate unit within the maximum flow specified on the unit label and specification sheets.
4. Operate unit within the 104° F of water supply temperature maximum*.
5. Operate unit within the maximum water supply pressure specified on the unit label and specification sheet.
6. D07RE - 3 GPM injectors are required to use a Flow Restrictor (Part #: FR34).

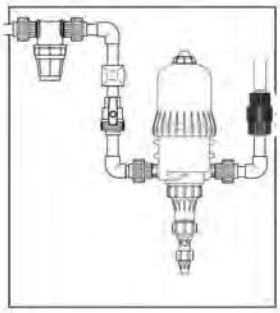
*Dosatron high temperature models are available. Call 800-523-8499 for details.

Types of Installations

Standard Installation with Plumbing Kit



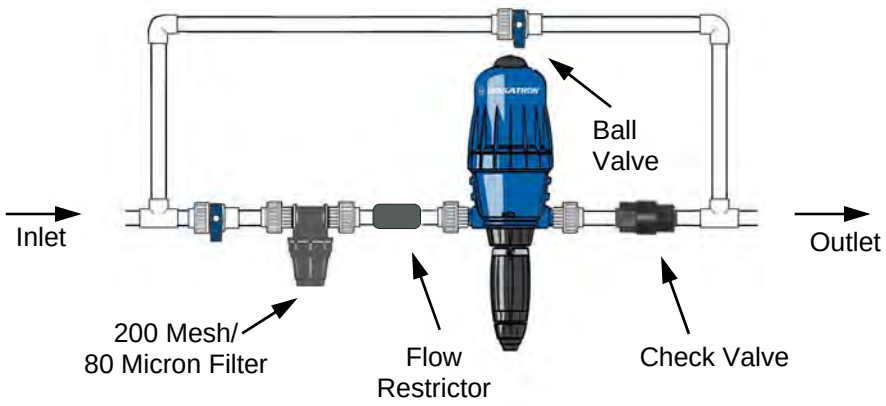
Modular-Mountable
Ready-to-Install Panels
and Cabinets are available



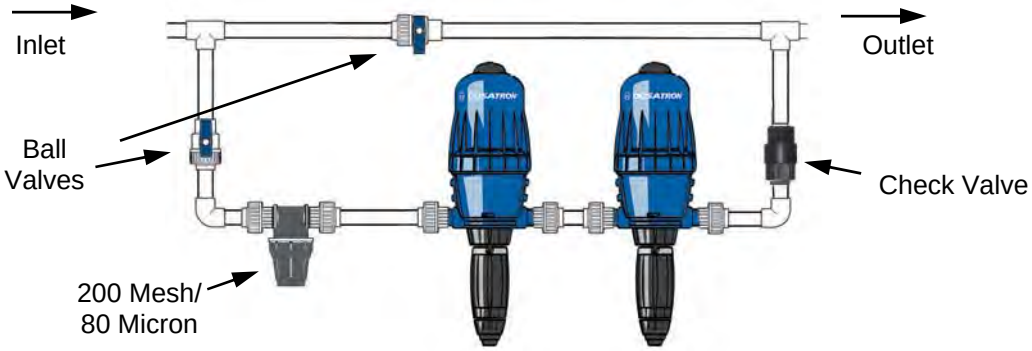
KIT	KIT NUMBER
3 GPM	IPK34 - 3 GPM
7 GPM	IPK34 - 7 GPM
10 GPM	IPK34 - 10 GPM
14 GPM	IPK34 - 14 GPM
20 GPM	IPK100 - 20 GPM

Types of Installations (cont.)

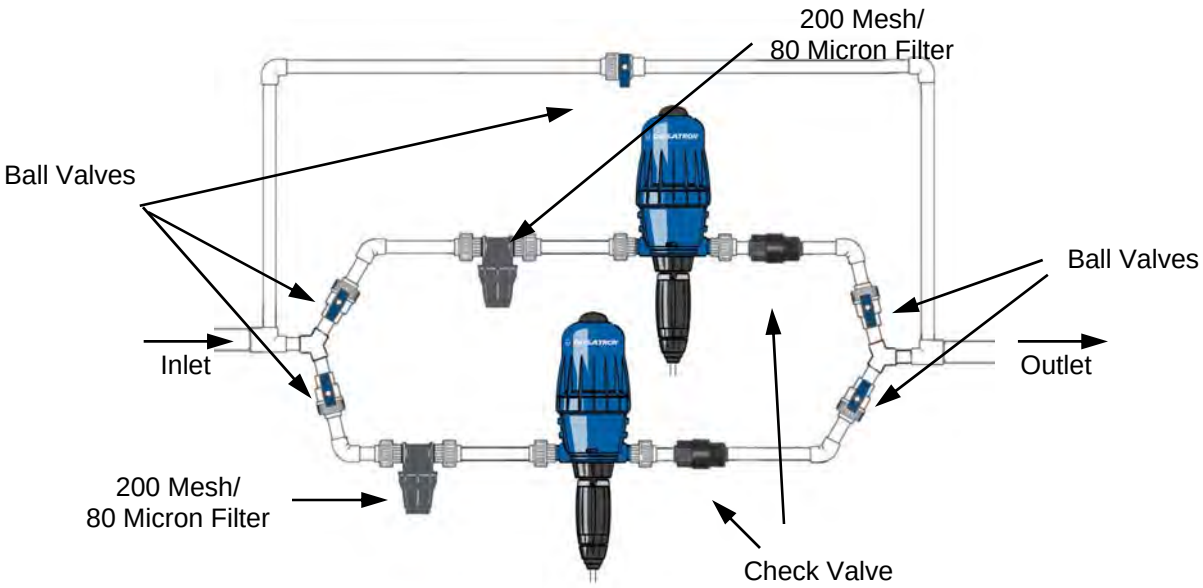
Bypass Installation



Series Bypass Installation
Dose 2 Different Chemicals



Parallel Bypass Installation
Double Water Flow Capability

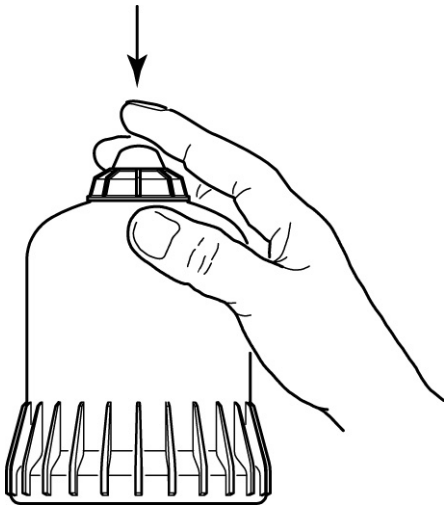


DOSATRON® WATER POWERED DOSING TECHNOLOGY

Initial Start Up

Every Dosatron is factory water tested prior to shipping. To avoid exceeding the maximum acceptable flow while a unit is filling with water on its initial startup please follow this procedure:

1. Ensure water supply to the unit is shut off.
2. Energize (open) the water control solenoid that will be used to control flow to the unit.
3. **SLOWLY** open the water supply valve to the unit allowing water to **slowly** fill the Dosatron.
4. While filling, the chemical suction line should begin drawing chemical. (Dosatron proportioners are self priming up to 13' vertically.) To decrease the time needed to fully prime the chemical suction line, set the injection rate to maximum (see instructions for setting the injection rate). Once the unit is fully charged with water leave the water supply valve fully open allowing the solenoid to control flow to the unit when needed.
5. Many Dosatron units are supplied with an air bleed button at the top of the unit. When first put into service, air may be trapped in the top of the unit. Although air will eventually work its way out through the system, you can quickly bleed air from the unit by holding down that button until a clear stream of water (no air) is seen coming from around the button. At that time release the button and the unit is ready for normal service.



DOSATRON® WATER POWERED DOSING TECHNOLOGY

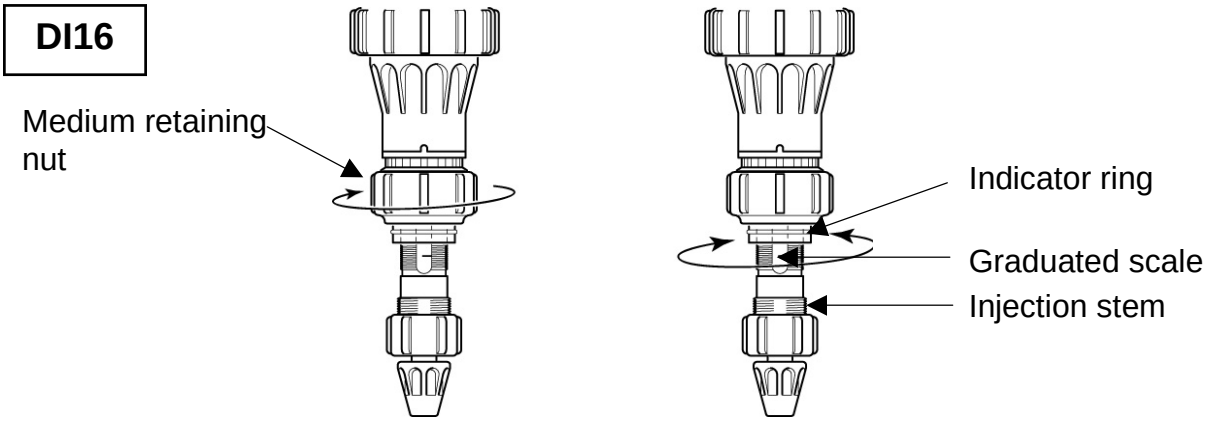
Setting the Injection Rate

DI16 - PROCEDURE FOR SETTING THE INJECTION RATE

To set the desired injection rate, follow the steps below:

- Turn the water supply off and allow pressure to drop.
- Unscrew the medium retaining nut 2 full turns.
- Screw in or unscrew the injection stem until the desired mark on the graduated scale is aligned with the line inside the clear indicator ring.
- Hand tighten medium retaining nut.

DI16

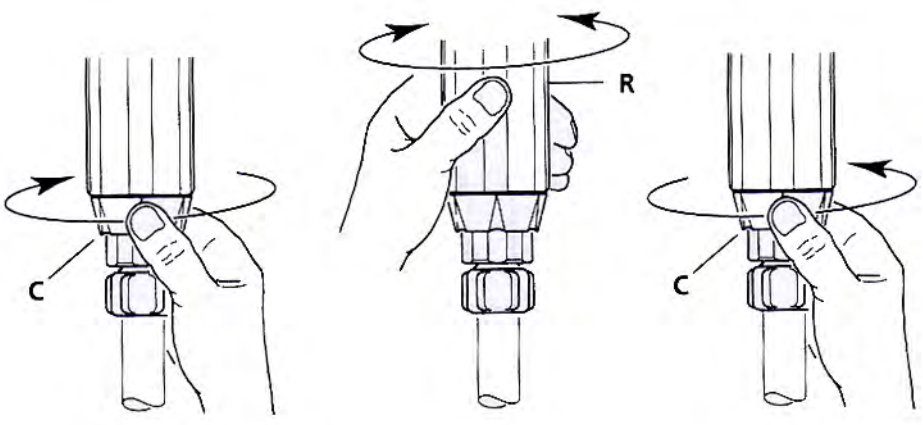


D45RE15 - PROCEDURE FOR SETTING THE INJECTION RATE

To set the desired injection rate, follow the steps below :

- Turn the water supply off and allow pressure to drop.
- Unscrew the lock ring 2 turns
- Screw in or unscrew the adjusting sleeve and align the desired dosing rate on the graduated scale with the top of the sleeve.
- Hand tighten the lock ring.

D45

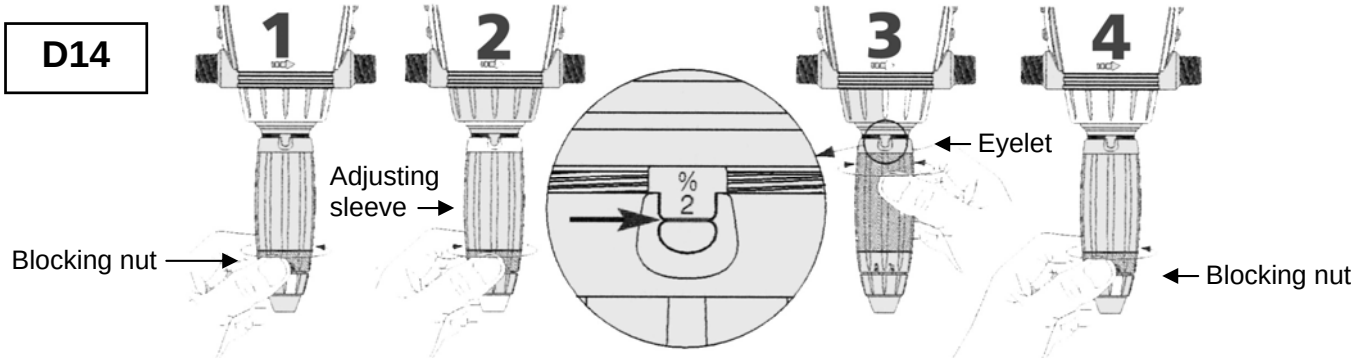


Setting the Injection Rate (cont.)

D14 - PROCEDURE FOR SETTING THE INJECTION RATE
IMPORTANT: USE NO TOOLS!

To set the desired injection rate, follow the steps below :

- Turn the water supply off and allow pressure to drop.
- (1) Slightly loosen the blocking nut.
- (2) Screw or unscrew the adjusting sleeve until desired ratio on the scale is shown through the (3) eyelet.
- (4) Hand tighten the blocking nut.



DOSATRON® WATER POWERED DOSING TECHNOLOGY

Know Your Flow

Once you have your Dosatron installed and operating, you can easily determine the volume of water flowing through your unit by using the "Click Chart" provided.

1. While the unit is running listen for the "clicks" as the piston travels its stroke. (If room noise prevents hearing the clicks, place your hand on the top of the unit and you should be able to feel the clicks as the piston changes stroke.)
2. Count the number of clicks over a fifteen (15) second time frame.
3. Refer to the click chart group that reflects the maximum flow for your specific unit.
4. In the "clicks" column locate the number closest the number of clicks you counted, follow that line across to see a very close approximation of the flow passing through the unit.
5. *** If the number of clicks you've counted exceeds the maximum shown on the chart, see troubleshooting.**

Click Charts

3 GPM
Clicks Per 15 Seconds

Clicks	GPM
4 1/2	1/2
8	1
12 1/2	1 1/2
16	2
20 1/2	2 1/2
24	3

7 GPM
Clicks Per 15 Seconds

Clicks	GPM
4 1/2	1
9	2
15	3 1/2
22	5
31	7

11 GPM
Clicks Per 15 Seconds

Clicks	GPM
3 1/2	1
11	2
20	5 1/2
25 1/2	7
33	9
36	11

14 GPM
Clicks Per 15 Seconds

Clicks	GPM
2	0.5
3.5	1
10.5	3
21	6
35	10
49	14

20 GPM
Clicks Per 15 Seconds

Clicks	GPM
2 1/2	1
7 1/2	3
12 1/2	5
25	10
37 1/2	15
45	20

40 GPM
Clicks Per 15 Seconds

Clicks	GPM
1 1/2	2
4 1/2	5
9	10
18	20
27	30
36	40

DOSATRON® WATER POWERED DOSING TECHNOLOGY

Injector Troubleshooting

Symptom	Cause	Solution
Piston		
Piston is not clicking	The unit is installed in the wrong direction	The arrow on the unit should point in the same direction as the water flow. Water supply and demand valves should be open.
	Piston locked up/not clicking or bypass in OFF position	Reset piston (see instructions) or flip bypass to ON position, if dispenser has manual bypass.
	Excessive water flow	1. Reduce the flow rate and restart the unit slowly. 2. Check O-rings around the piston valves to see if they are missing or dislodged. 3. Reset the piston (see instructions), and close unit.
	Water hammer	Reset piston (see instructions) and install water hammer arrestor in the appropriate location.
	In-line water filter or inside screen is clogged	Clean the in line water filter and inside screen.
	Worn or scratched/scored piston flanges, piston shells, bell housing or body	Do piston "fit" test (see instructions). Replace piston flanges, body and/or bell housing as necessary. Make sure your installation has a 200 mesh filter before the Dosatron. Flush unit often by injecting clear water if wear is due ti chemical.
	Presence of air inside the bell housing *(for DI, D14 and D8Rseries models)*	Bleed out the air by pushing the air bleed button until constant flow of water comes out from around the button. *(DI and D14)* Put bypass switch to "B" position until water comes out *(D8R)*
	Broken actuator spring (*for D25 and D8R series models)*	Replace both actuator springs (D25) or actuator assembly (D8R). Call for instructions.
	Broken toggle spring *(for D8R models)*	Replace toggle spring. Call for instructions.
Dosing		
Water flowing back into solution container	Check valve dirty, worn, assembled incorrectly or missing	Clean or replace check valve parts (in particular the seal and cone) and reassemble check valve correctly. Be sure the check valve seal is in proper position.
No suction of solution or under-injection	Piston locked up/not clicking or bypass in OFF position	Reset piston (see instructions), or flip bypass to ON position, if dispenser has manual bypass.
	Air leak in the suction tube	Check suction tube connection. Inspect suction tube for pin holes or cracks. Check tightness of connection nuts. Cut ½" of top of the hose and reattach it correctly.

Dosatron International, Inc. ● 2090 Sunnydale Blvd., ● Clearwater, Florida 33765
Service: 800-523-8499 ● Tel.: 727-443-5404 ● Fax: 727-447-0591
www.dosatronusa.com

DOSATRON® WATER POWERED DOSING TECHNOLOGY

Injector Troubleshooting

Symptom	Cause	Solution
Dosing		
No suction of solution or under-injection (cont.)	Suction tube or strainer clogged	Clean suction tube and strainer or replace hose assembly. Raise strainer 2" off the bottom of stock tank solution.
	Check valve worn, improperly assembled, dirty or damaged	Clean or replace check valve parts (in particular the seal and cone) or assembly. Be sure the check valve seal is in proper position.
	Plunger seal is damaged, swollen or missing	Clean or replace plunger seal. If plunger seal is missing, check incoming water pressure; refer to unit manual for specifications.
	Worn piston shell or flanges, housing or body	Do piston "fit" test (see instructions). If necessary, replace piston flanges, body and housing. Make sure your installation has a 200 mesh filter before the Dosatron.
	Suction of air	Check suction tube connection. Inspect suction tube for pin holes or cracks. Check tightness of connection nuts. Cut ½" off top of the hose and reattach it correctly.
	Excessive water flow	Listen to the unit clicking, count the individual clicks, make sure unit does not exceed maximum number of clicks in 15 seconds (see click chart for your model). If excessive flow, reduce the flow rate and restart the unit slowly.
	Worn plunger seal	Replace plunger seal.
	Worn or cracked injection stem (inside and outside)	Replace injection stem.
	Check valve worn, improperly assembled, dirty, or damaged	Clean or replace check valve parts (in particular the seal and cone) or assembly.
Leaks		
Leaks in the vicinity of the black nut *(for DI, D14, and D8R series)* or near the metal collar *(for D25 series)* under the body	Sleeve o-ring *(D14, D25)* or diffuser seal *(DI, D8R)* is damaged or positioned incorrectly	Position correctly or replace the sleeve o-ring or diffuser seal. Check tightness of the nut.
	Body may be cracked	Check and replaced the body if necessary.
	Diffuser is installed incorrectly *(DI and D8R)*	Position correctly or replace the diffuser if damaged. Align notch in the diffuser with tooth molded in body.
Leaks between the body and the bell housing or lid *(DI, D14 and D8R series)*	Bell housing seal or lid O-ring is damaged, positioned incorrectly or missing	Position correctly, clean the seal seat, or replace the housing seal.
Leaks between adjusting nut and locking ring	Dosing stem O-ring is damaged, improperly positioned, or missing	Clean and replace dosing stem O-ring.

Dosatron International, Inc. ● 2090 Sunnydale Blvd., ● Clearwater, Florida 33765
Service: 800-523-8499 ● Tel.: 727-443-5404 ● Fax: 727-447-0591
www.dosatronusa.com

DOSATRON®

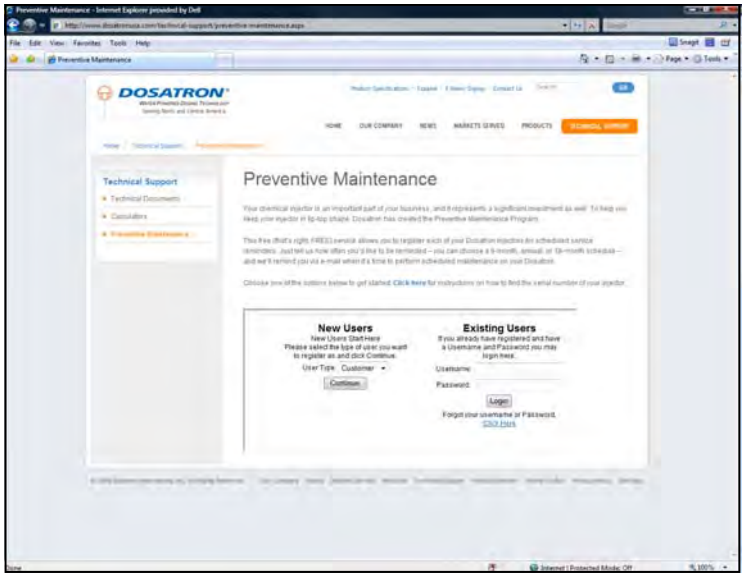
WATER POWERED DOSING TECHNOLOGY

Quick and Easy Maintenance

Order your seal kit today. Call 800-523-8499.

Unit Model	Injection Seal Kit
D07RE5	PJDI095
D07RE125	PJDI097 or PJDI106 (depending on serial #)
D14MZ520	PJDI135
DI16	PJDI075
DI150	PJD060
DI210	PJDI076
DI110	PJDI103
D14MZ5	PJDI120
D14MZ10	PJDI122
D45RE3	PJ084
D45RE8	PJ098
D8R150 New Style	8PJ057

Preventive Maintenance Program



Benefits:

- Ability to choose your maintenance schedule (6, 12, or 18 months)
- Automatic reminder by e-mail for scheduling your routine maintenance
- Ability to track your units
- Can add, remove or update units

Customers get timely information to protect their equipment investment

Simple to use, highly effective planning that saves time and money

Targeted data is provided if you need it and when you need it

Representations and warranties applicable to your Dosatron are limited as set forth in the documentation delivered at the time of your purchase. The results achieved with your Dosatron depend upon a professional determination of the specifications of the chemicals or other products to be applied. In some cases it may require an accurate analysis of the water source. Finally, results are dependent upon proper installation, usage, and maintenance of your Dosatron. Please consult a reputable dealer or Dosatron International for assistance and details.

DOSATRON®

WATER POWERED DOSING TECHNOLOGY

2090 Sunnydale Blvd. ● Clearwater FL 33765 USA
727-443-5404 ● (Fax) 727-447-0591

800-523-8499
www.dosatronusa.com

2012-01 PF 2007-59-MP002