iDD PROCESS & PACKAGING, INC.

OPERATION MANUAL

OXINE SYSTEM

5450 Tech Circle, Moorpark, CA 93021 Tel: (805) 529-9890 Fax: (805) 529-9282

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DISCLAIMER C

The customer assumes all responsibility for the SYSTEM once delivered. The SYSTEM is tried and tested equipment. As such IDD Processing & Packaging will not be held responsible for alterations and modifications carried out by the customer without the written approval of IDD Processing & Packaging.

CONFIDENTIALITY & COPYRIGHT D

WEAR SAFETY GOGGLES

Wear Safety Goggles approved for use by your Safety and Operational Procedures Committees when operating or observing this system.

WEAR CHEMICAL RESISTANT GLOVES & APRON

Wear Chemical Resistant Gloves and Apron approved for use by your Safety and Operational Procedures Committee.

WEAR BACK SUPPORT EQUIPMENT

Wear Back Support Equipment approved for use by your Safety and Operational Procedures Committees and use proper lifting technique approved for use by your Safety and Operational Procedures Committees.
A full keg weighs up to 165 lbs and must be lifted using proper equipment.

VENTILATION

Area should have adequate ventilation approved for use by your Safety and Operational Procedures Committees.
Respirators should be used during cleaning and operations where fumes are present.

PLANT LAYOUT J

SEE SECTION L FOR ADDITIONAL INFORMATION

Process & Packaging, Inc.

IDD Oxine System

Approximate Dimensions:
65"L x 20"W x 72"H

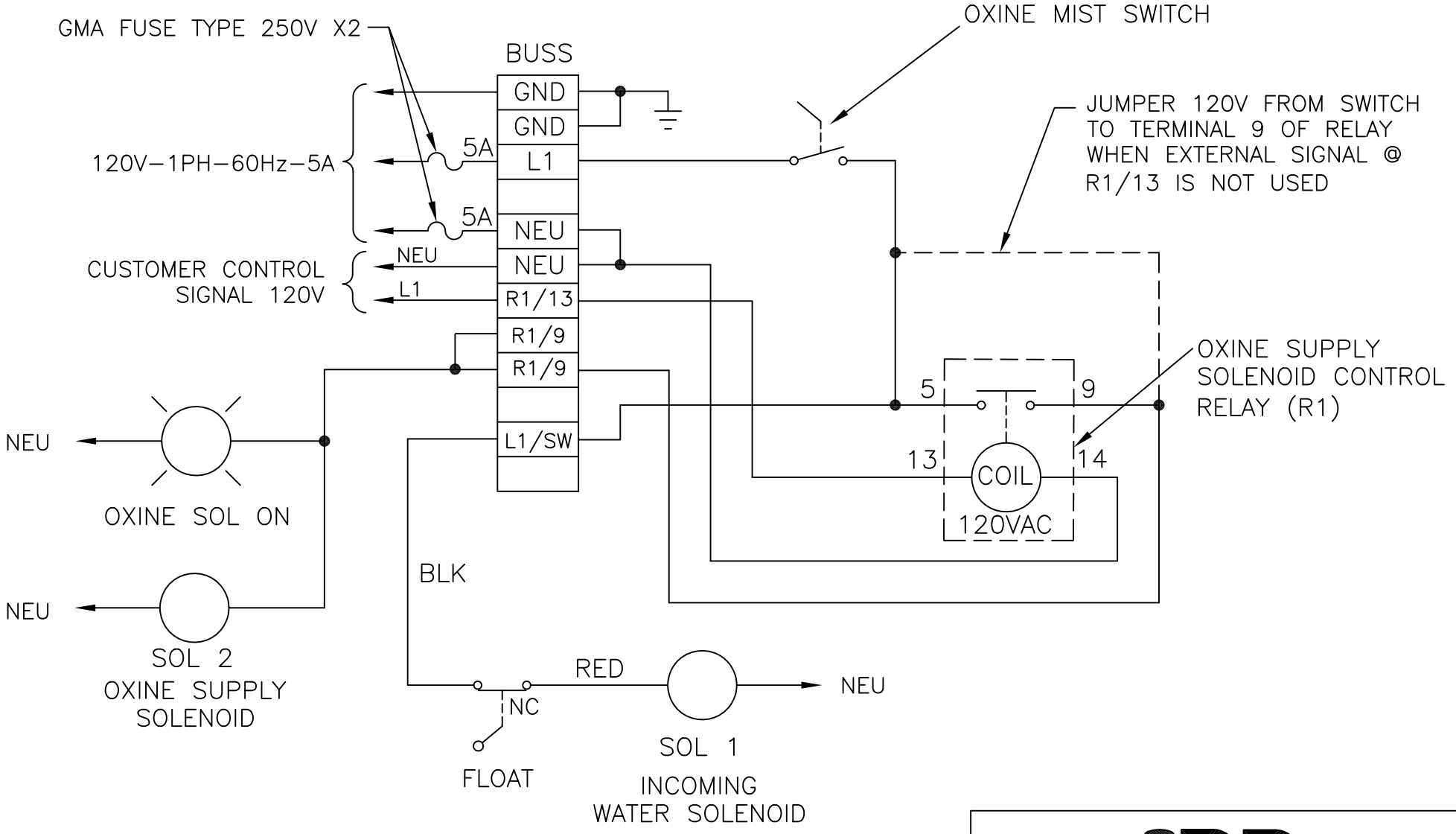
PLEASE NOTE:

Customer to supply local disconnect and ground fault device

Process & Packaging, Inc.

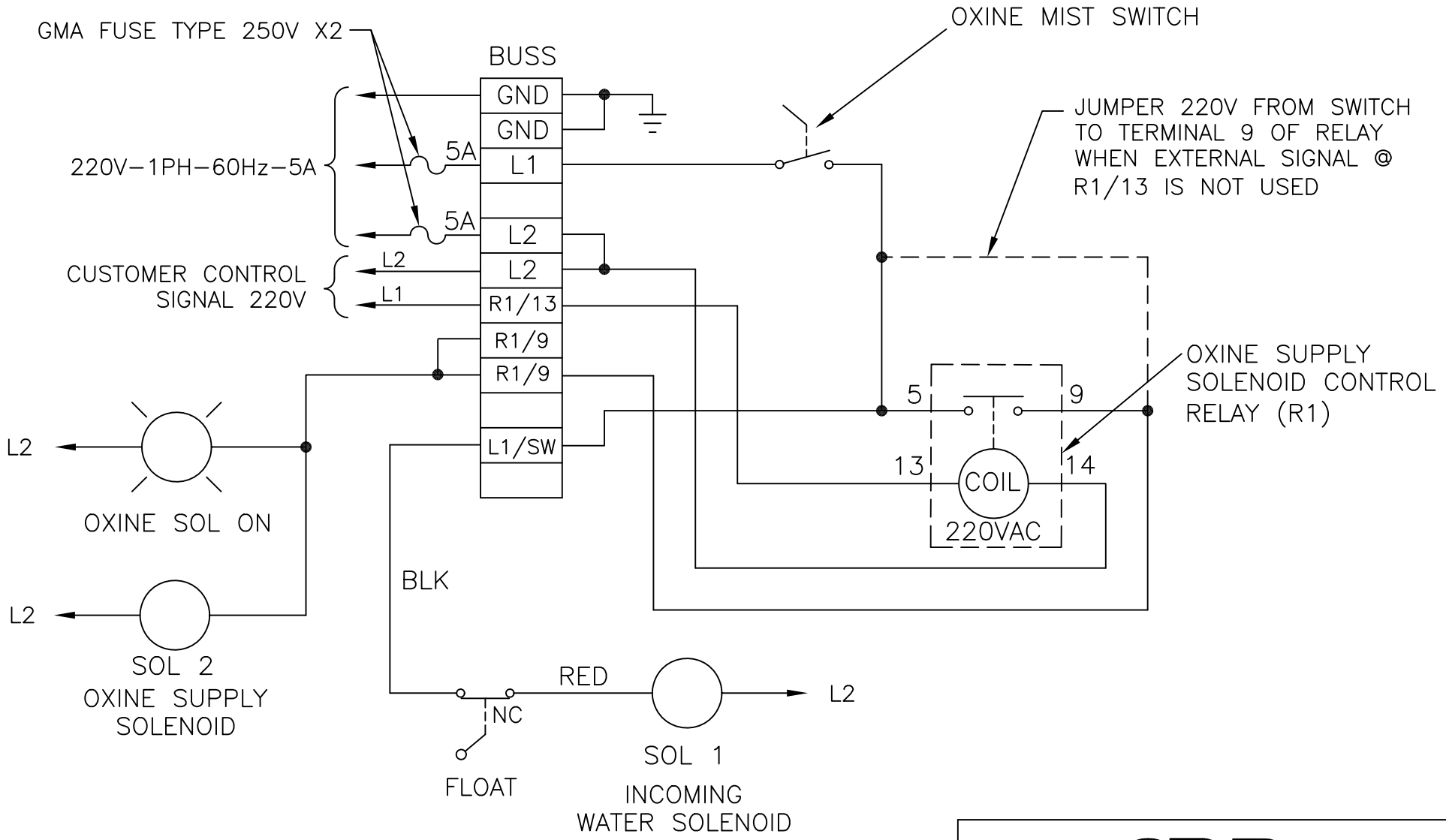
IMPORTANT
ELECTRICAL NOTE:

DURING INSTALLATION ALL ELECTRICAL CONNECTIONS TO BE SECURELY FASTENED BEFORE POWER IS TURNED ON.



Process & Packaging, Inc.

APPROVAL	DATE	TITLE	OXINE SYSTEM CONTROL 120VAC
DRAWN JWG	6/17/11		
CHECK OM	3/2/12	DWG. NO. ME L 03010	REV. A
ENG.		SIZE B / SCALE NONE	SHT 1 OF 1



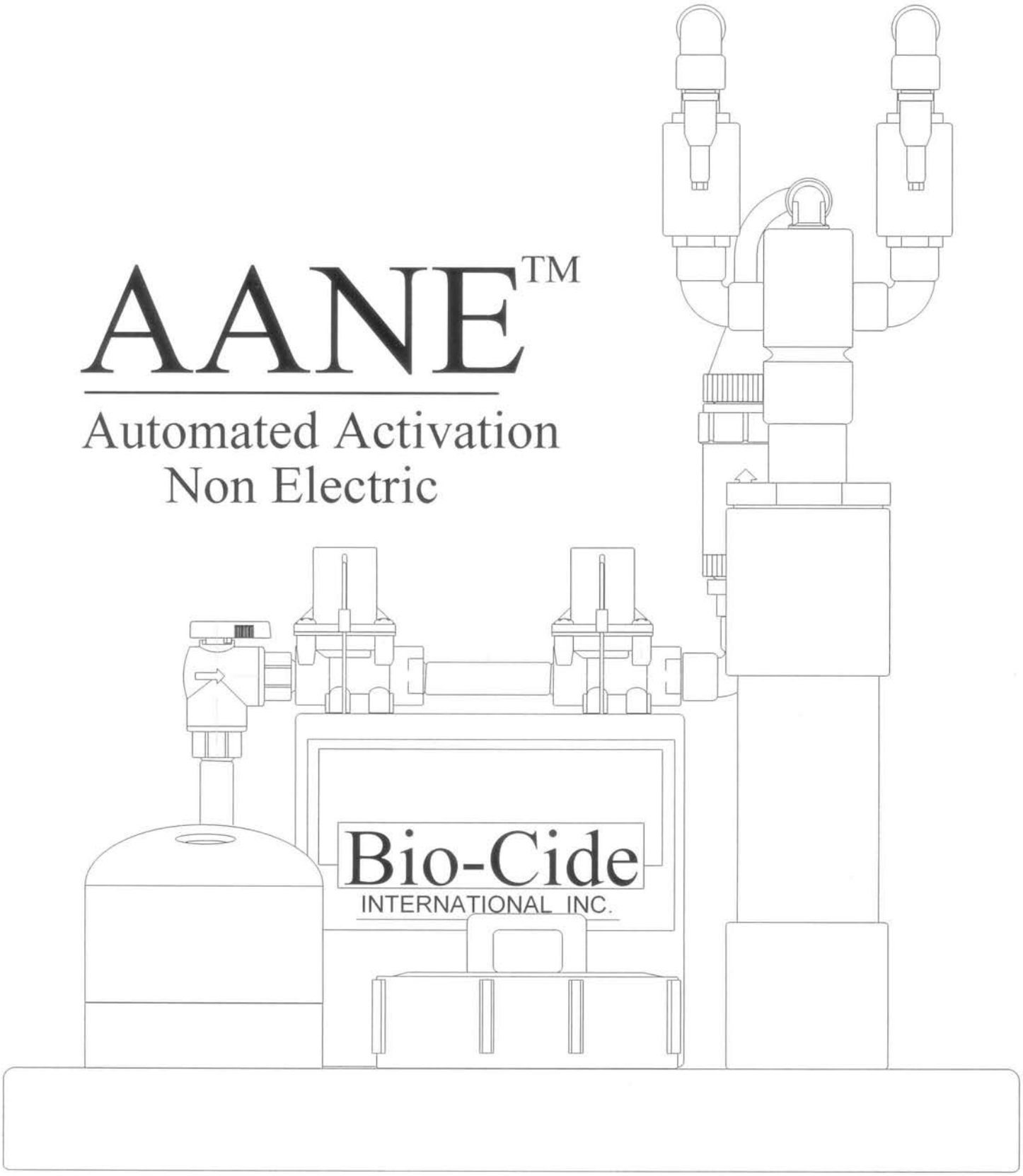
Process & Packaging, Inc.

APPROVAL	DATE	TITLE: OXINE SYSTEM CONTROL 220VAC		
DRAWN JWG	6/17/11			
CHECK OM	3/2/12	DWG. NO. ME L 03011		REV. A
ENG.		SIZE B	SCALE NONE	SHT 1 OF 1

SEE SUPPLEMENTAL
TECHNICAL DATA MANUAL
FOR ADDITIONAL INFORMATION
IF PROVIDED

AANE™

Automated Activation Non Electric



Instruction manual

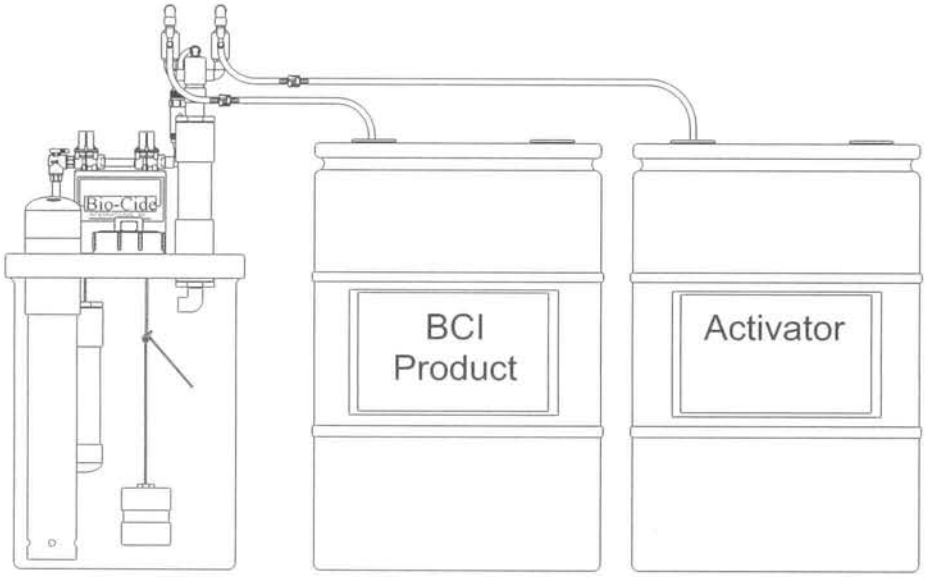
☑ Please read the entire instruction manual and all associated technical literature before beginning the setup and operation processes.

Your safety, and the safety of others, is very important. To help you make informed decisions about safety, we have provided setup, operating instructions and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

Contents

Introduction

Bio-Cide's chlorine dioxide based products require activation for many applications. The Automated Activation Non-Electric (AANE) system is a hands-free, simple, and convenient way to achieve this activation. Developed in response to customer needs for a non-electric activation system, the AANE is designed to automatically prepare an activated solution of Bio-Cide's chlorine dioxide based products at a desired concentration.

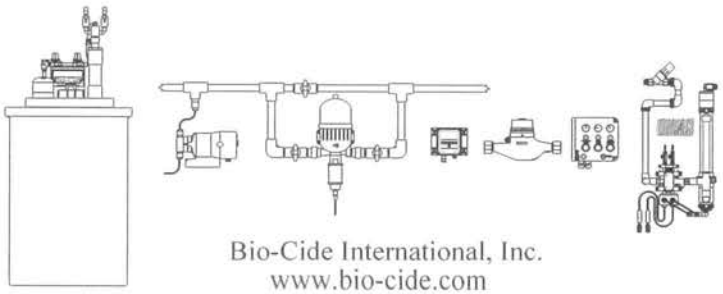


The AANE is a low cost system that eliminates measuring, manual mixing, and diluting, thereby, insuring consistent activation. Designed for users with continuous and/or large volume requirements for activated product, the system is reliable and has been proven in the field. The system increases efficiency by automatically refilling the solution reservoir with fresh active product as needed. A simple water supply connection is all that is needed.

Your distributor maintains additional technical information and can answer questions about the proper sizing and installation of the system. Contact your distributor for any additional information or assistance.

Bio-Cide International, Inc. and its distributors offer the following options for the AANE and other equipment systems.

- Larger tank conversion
- Automatic dilution devices
- Custom activation systems and equipment
- Water-actuated or electric metering pumps

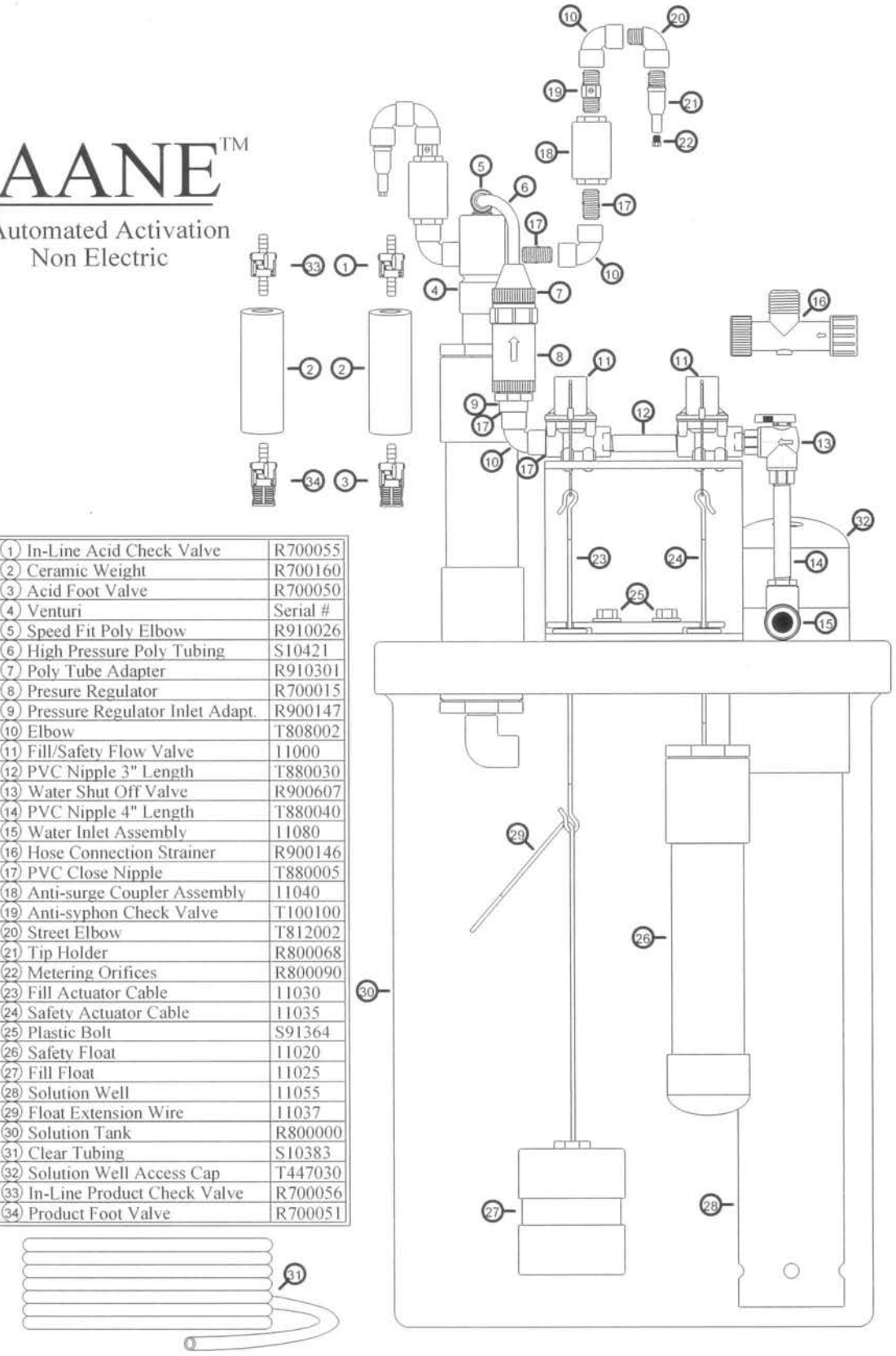


Bio-Cide International, Inc.
www.bio-cide.com
(800) 323-1398

Parts List / Parts Locator

AANE™

Automated Activation
Non Electric



1	In-Line Acid Check Valve	R700055
2	Ceramic Weight	R700160
3	Acid Foot Valve	R700050
4	Venturi	Serial #
5	Speed Fit Poly Elbow	R910026
6	High Pressure Poly Tubing	S10421
7	Poly Tube Adapter	R910301
8	Presure Regulator	R700015
9	Pressure Regulator Inlet Adapt.	R900147
10	Elbow	T808002
11	Fill/Safety Flow Valve	11000
12	PVC Nipple 3" Length	T880030
13	Water Shut Off Valve	R900607
14	PVC Nipple 4" Length	T880040
15	Water Inlet Assembly	11080
16	Hose Connection Strainer	R900146
17	PVC Close Nipple	T880005
18	Anti-surge Coupler Assembly	11040
19	Anti-syphon Check Valve	T100100
20	Street Elbow	T812002
21	Tip Holder	R800068
22	Metering Orifices	R800090
23	Fill Actuator Cable	11030
24	Safety Actuator Cable	11035
25	Plastic Bolt	S91364
26	Safety Float	11020
27	Fill Float	11025
28	Solution Well	11055
29	Float Extension Wire	11037
30	Solution Tank	R800000
31	Clear Tubing	S10383
32	Solution Well Access Cap	T447030
33	In-Line Product Check Valve	R700056
34	Product Foot Valve	R700051

Requirements

Water Supply

A back flow preventor is required in the water supply line. Consult your local plumbing authorities for the level of back flow protection required.

25 to 80 psi, 1.6 to 5.5 bar, a pressure booster pump is required if water pressure drops below 25 psi at any time during operation.

1.3 gpm, 4.5 liters per minute is the minimum water flow for proper activation.

33° to 100°F, 1° to 38°C is the operating range required. Do not attach to hot water lines or to the cold side of a cold water/steam mixer outlet (Cold water is preferred).

Location and Chemicals

Place the unit and supply drums out of direct sunlight and accessible for chemical replenishment.

Temperature must be maintained between 33° to 110°F, 1° to 43°C. Do not allow the unit to freeze.

⚠CAUTION

This unit has only been tested and approved for use with Bio-Cide's chlorine dioxide based products. Use of any other chemical products voids all warranties, and negates any responsibility Bio-Cide International may assume with regard to product support.

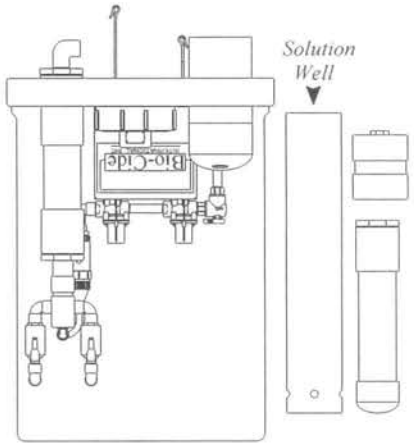
⚠CAUTION

Consult the appropriate Bio-Cide product MSDS for safety instructions and safety equipment requirements.

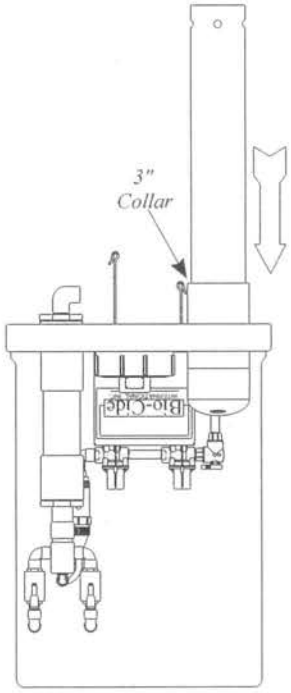
⚠CAUTION

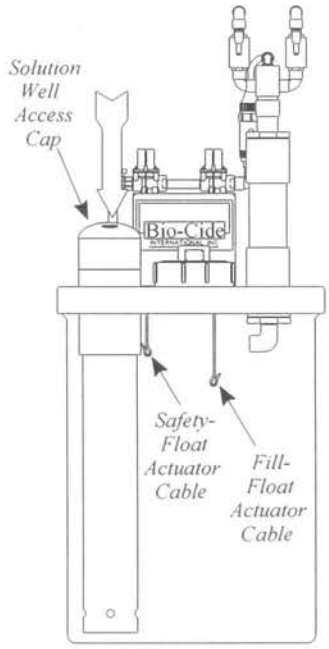
The activator is an acid product. Consult the product MSDS for safety instructions and safety equipment requirements.

Unpacking and Setup

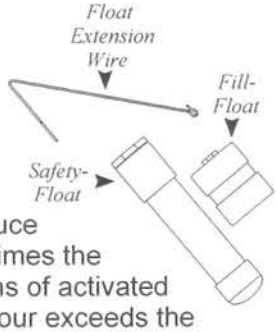


Remove all components of the unit from the box (the unit itself, two floats, and the solution well). The unit is shipped [inverted] with its solution tank and lid packed together. Before separating, remove packaging from the two floats and the solution well. Notice one end of the solution well has four small holes; this end must be in the bottom of the solution tank when the unit is set upright and in use. While inverted, being careful not to damage the lid, locate the 3" collar. Gently insert the solution well into the collar using light pressure. Final seating will be accomplished in the next step.



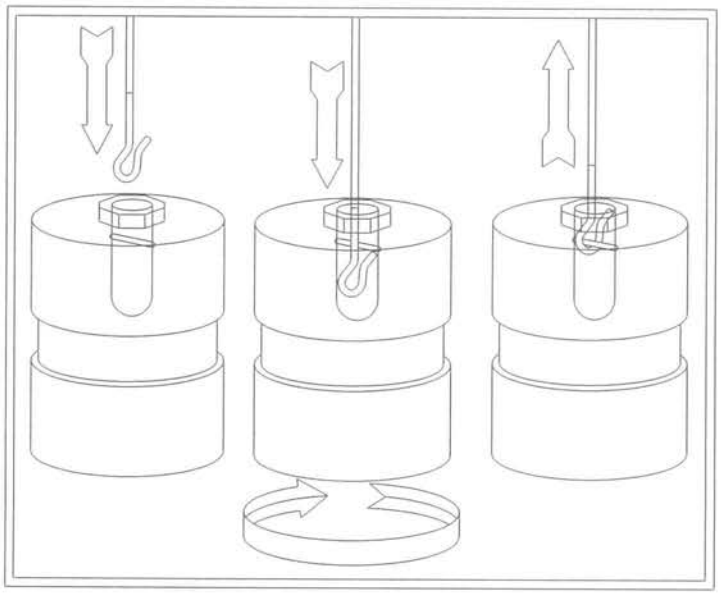


Carefully separate the lid from the solution tank. Then gently lift and turn the lid over and place onto the solution tank in its upright position. The solution well (inserted in previous step) will contact the bottom of the tank and prevent the lid from seating completely. To ensure proper seating, press down firmly on the solution well access cap until the lid is resting entirely on the solution tank.



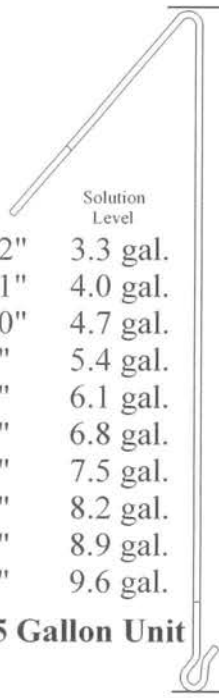
Attaching the floats is the next step. However, before this step can be accomplished an estimate of the activated solution the unit will need to produce per hour must be determined. This is a unique system that will produce 24 times the solution tank's maximum volume per day. The 15-gallon unit holds 11 gallons of activated solution and the 55-gallon unit holds 45 gallons. If the volume needed per hour exceeds the volume of the solution tank, do not use the float extension wire. Attach and hang the fill-float directly on the fill-float actuator cable. If the volume needed per hour is less than the capacity of the solution tank, use the float extension wire to adjust the fill-float to twice the volume needed (see chart on following page).

Each float can be attached by sliding the hook end of its cable into the well of the float, rotating the float until the cross bar of the float is perpendicular to the hook of the cable and then lifting the hook on to the cross bar. If it has been determined the extension wire is unnecessary, hang the fill-float directly on the fill-float actuator cable.



Float Extension Wire Adjustment

After estimating the solution need, use the chart below to determine the proper length of the extension wire needed. Measure from the bottom as indicated and bend the float extension wire at the proper length.

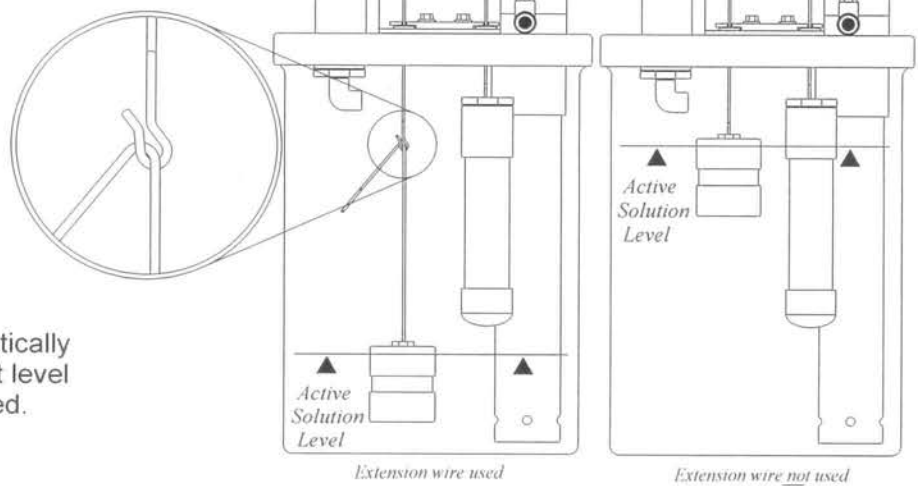


Solution Level	15 Gallon Unit	Solution Level	55 Gallon Unit
12"	3.3 gal.	17"	21.2 gal.
11"	4.0 gal.	16"	22.8 gal.
10"	4.7 gal.	15"	24.3 gal.
9"	5.4 gal.	14"	25.9 gal.
8"	6.1 gal.	13"	27.4 gal.
7"	6.8 gal.	12"	29.0 gal.
6"	7.5 gal.	11"	30.5 gal.
5"	8.2 gal.	10"	32.1 gal.
4"	8.9 gal.	9"	33.6 gal.
3"	9.6 gal.	8"	35.2 gal.
		7"	36.7 gal.
		6"	38.3 gal.
		5"	39.8 gal.
		4"	41.4 gal.
		3"	42.9 gal.

Measure from the bottom of the hook.

If the float extension wire is necessary, bend the extension wire at the desired length, attach the fill-float to the hook end, and attach the bent end to the fill-float actuator cable (see picture below). In either case hang the safety-float directly on the safety-float actuator cable. Observe the floats to make sure they are properly connected. Gently lift the fill-float actuator cable to assure the fill-float moves freely. When the cable is lifted the fill-valve should click off. Once the cable is released it should click back on. Follow the same procedure for proper connection of the safety-float.

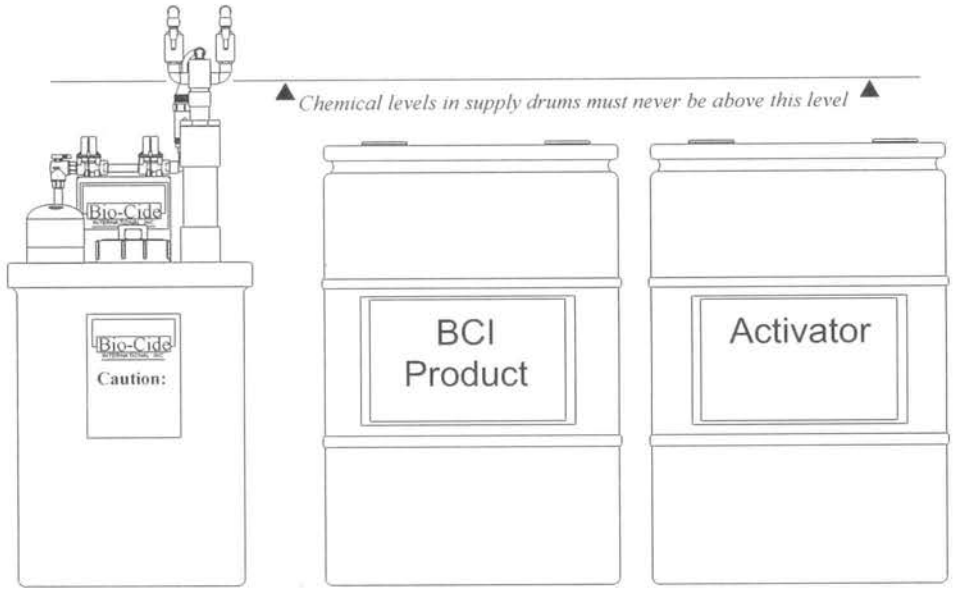
The unit should appear as one of the two pictured to the right. Which one depends on whether or not the extension-wire was used. Notice the difference in solution levels that must be reached before the fill-float will shut off the fill-valve and stop filling each unit.



NOTE

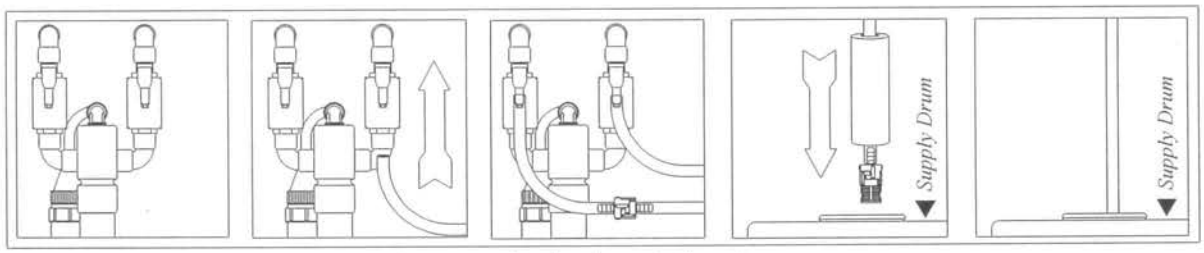
In either case, the unit will automatically refill the solution tank to the preset level with fresh active solution as needed.

Positioning of the unit is very important. Place the unit and supply drums out of direct sunlight and accessible for chemical replenishment. The lid should also be rotated on the solution tank for an appropriate, unobstructed view of the warning label. The chemical levels in the supply drums must never be higher than the venturi intake points. If the supply drums are elevated by a secondary containment system, the unit must be raised to an equal height or placed on a secondary containment system as well. This will prevent siphoning of chemicals into the solution tank.



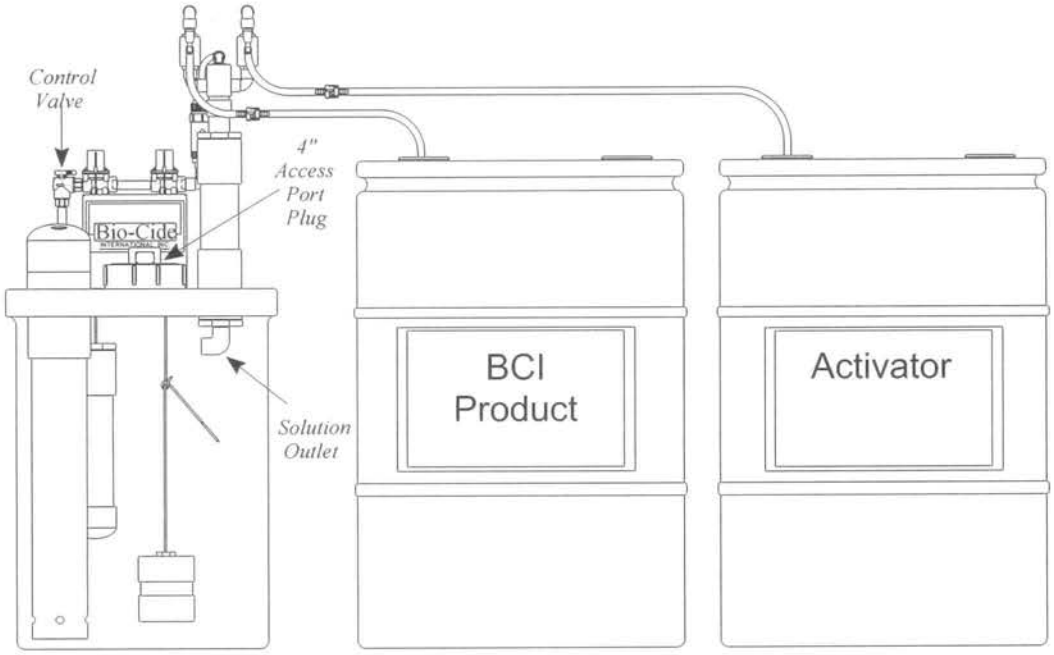
Connecting the unit to a water supply is accomplished by attaching the supplied strainer to the water inlet and attaching any potable water source with a male ¾" garden hose connection to the strainer. The unit must be installed in compliance with all local plumbing codes. Consult your local plumbing authorities for the level of back flow protection required on the water supply line. An approved back flow preventor must be installed upstream from the unit to prevent possible chemical contamination of the water supply. If the supplied strainer is not used, a suitable strainer with at least 140 mesh must be installed in the water supply line. Care must be taken during the installation process to keep pipe and thread sealing preparations to a minimum. Introduction of foreign materials into the unit can cause a malfunction of the valves and venturi.

The final step in setting up the unit is to attach each chemical intake tube to its respective intake point. Each intake point is marked at the top of the venturi intake assembly. Connect each intake tube by gently sliding its open end over the orifice and tip of each intake point. Make sure the ceramic weight is at the bottom end of each intake tube next to its foot valve and place the intake tubes into the bottom of their respective supply drums.



Connection of intake tubes to intake points

Starting and Testing the Unit



At this point, the unit should be properly assembled, positioned, connected to a water supply, and its intake tubes placed in their respective supply drums. Slowly turn the control valve to the "on" position. Water should begin to flow through the system and into the solution tank. Check the function of the fill-valve and the safety-valve by gently lifting each actuator cable one at a time. When each actuator cable is lifted, its valve should stop the water flow. After releasing the cable, water should again flow. Within seconds, the product intake tube will fill with product. The activator intake tube will take longer to fill, approximately 15-30 seconds. As the water flows, check the chemical intake tubes for suction. After verification of suction, the unit is now functioning properly and ready for sampling.

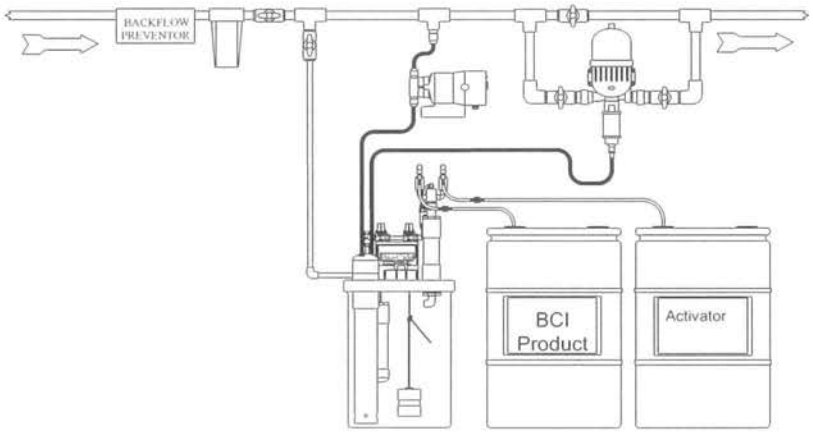
Wait one to two minutes after flow has been established through the unit and into the solution tank. Sample the solution with a plastic cup as it enters the solution tank. To do this, simply remove the 4" access port plug on the top of the lid. Slide the cup through the access port and under the solution outlet inside the solution tank. Collect approximately 6 ounces of sample and turn the control valve to the "off" position. Set the sample aside for approximately 5 minutes. Observe the sample. It should have a slight yellow color present. If the color is present, activation is occuring and the factory product parameters are adequate. Check the pH of the sample. The sample should have a pH range of 2.1 to 2.5 or as specified by application. After verification, slowly turn the control valve back to the "on" position and continue filling the solution tank. The system will continue to fill until water flow is stopped by the fill-valve at the preset level determined by the fill-float. During initial setup, after the unit has filled for the first time, wait one hour before using the activated solution.

The unit is equipped with a solution well designed for drawing active solution from the bottom of the solution tank. Simply drop metering equipment tube(s) through the predrilled holes in the solution well access cap. Additional holes or larger holes can be bored in the cap if needed. Consult metering equipment instruction manuals for installation requirements.

NOTE

Do not operate the unit without the solution well access cap in place.

Choosing Metering Equipment



There are several types of metering systems (electric, water driven, air diaphragm pumps, venturi, etc.). Since the concentrated solution from the unit can degrade certain materials over time, it is necessary to install a chemically compatible metering system for long lasting, and trouble-free operation. All wetted parts in the metering system must be chlorine dioxide, and acid resistant to avoid damage to these parts. In some metering system material specification charts it may be difficult to find specific reference to chlorine dioxide. A general rule is to look at its compatibility with chlorine, ozone, and hydrogen peroxide. Below are some materials that can be used for proper function of various metering systems with AANE.

Listed in descending order of preference (1 being best)

Wetted Rigid Construction Materials
1. Teflon®
2. Kynar® PVDF
3. CPVC
4. PVC
5. Polyethylene (high-density)
6. Polypropylene
7. Styrene and ABS

Wetted Elastomer Materials ("O" rings, seals and seats)
1. Teflon®
2. Viton®

Other Acceptable Materials of Construction
1. Titanium
2. Ceramic
3. Glass
4. Hastaloy C
5. Stainless Steel 316

Materials NOT to use in direct contact with concentrated activated solution.
1. Iron, carbon steel, and magnetic grade stainless steel
2. Aluminum, Brass and other soft metals
3. Nylon
4. Acetal or other formaldehyde base resins

Problems and Solutions

⚠CAUTION

This unit has only been tested and approved for use with Bio-Cide's chlorine dioxide based products. Use of any other chemical products voids all warranties, and negates any responsibility Bio-Cide International may assume with regard to product support.

⚠CAUTION

Consult the appropriate Bio-Cide product MSDS for safety instructions and safety equipment requirements.

⚠CAUTION

The activator is an acid product. Consult the product MSDS for safety instructions and safety equipment requirements.

Water will not flow through the system

With the control valve in the "on" position, lift up and then pull down on the two actuator cables attached to the fill and safety valves at the same time. Water should pass through the unit and into the solution tank. If this does not happen, follow the steps below until problem is resolved.

1. Check the water source for proper pressure and volume.
2. Make sure the control valve is in the "on" position. When the blue handle is pointed toward the safety valve and parallel to the support structure it is on.
3. Check to see if the solution tank is full. Normal operating tank volume is 1/2 to 2/3 full, less, if the float extension wire is installed.
4. Make sure the fill-float actuator cable and the safety-float actuator cable are connected to their respective valves. Each cable should be hooked around the bail wire of its valve.
5. Observe the floats to make sure they are properly connected. Check the function of the fill-valve and the safety-valve by gently lifting each actuator cable one at a time. When each actuator cable is lifted, the valve should stop the water flow. After releasing the cable, water should again flow.
6. Remove the screen from the strainer. Check for clogging and clean if necessary.

If the above steps do not facilitate water flow through the unit, one or both of the valves may need to be cleaned or replaced.

No suction in chemical intake tubes

As water flows through the unit, the chemical intake tubes should begin to fill. The product intake tube should fill within seconds. The activator intake tube will take longer to fill, approximately 15-30 seconds. Verify suction by lifting each intake tube one at a time from its supply drum, it should begin to suction in air, creating small air bubbles in the intake tube. If this does not happen, follow the steps below until the problem is resolved.

1. Check the product levels in the chemical supply drums.
2. Make sure the orifice tip at each intake point is not clogged or crystallized.
3. Make sure each foot valve, inline check valve, and intake tube is not clogged or damaged.
4. Check to see that water supply line meets psi and flow requirements.

If the above steps do not facilitate suction through the intake tubes, one or both sides of the venturi intake assembly may need to be repaired or replaced.

No yellow color present

If the directions for setting up the unit have been followed, but the product shows no sign of activation within 5 minutes, follow the steps below until the problem is resolved.

1. Verify suction in the product intake tube and the activator intake tube.

Read "No suction in chemical intake tubes" for help verifying suction and the steps to be taken for correcting.

2. Check the pH of the sample. Make sure the pH of the solution is within the range of 2.1 to 2.5 or as specified by application. To do this, simply remove the 4" access port plug on the top of the lid. Slide a plastic cup through the access port and under the solution outlet inside the solution tank. Collect approximately 6 ounces of sample and turn the control valve to the "off" position, then check the pH. Set the sample aside for about 5 minutes. Observe the sample. The solution should have a slight yellow color present.

If the color is present, activation is occuring and the factory product parameters are adequate. If the pH of the solution is out of range, read "Changing pH of activated solution" to correct.

Changing the pH of the activated solution

Before making any changes to the pH or concentration, check the QC sheets that accompany this manual for the factory preset pH and concentration levels of this unit. Note the color of the orifice to be changed. Make no more than one orifice size change up or down between adjustments (see color orifice chart in orifice pack).

The AANE is a venturi based system that draws chemicals through orifices to control pH and concentration (ppm). Therefore, when a change of orifice is made on one side of the venturi assembly, the other side is slightly affected as well. For example, if a change is made to a larger size orifice in the activator side of the venturi assembly, the pH will drop and the concentration will slightly drop as well. This occurs because the venturi assembly is now pulling more on the activator intake and compensating by pulling less on the product intake. In contrast, a change to a smaller orifice will cause the pH to go higher, and the concentration to increase.

If the solution pH is higher than 2.5, follow the steps below to lower the pH.

⚠CAUTION

Never operate without both product and activator orifices in place.

1. Turn control valve to the off position.
2. Carefully remove the activator intake hose from its intake point.
3. Unscrew the exposed orifice tip.
4. Replace the orifice with the next larger size according to the chart insert in the orifice pack, (more activator lowers the pH). Be careful not to over tighten.
5. Reinstall the activator intake hose.
6. Restart water flow, verify suction, and check the pH of the solution.

If the solution is higher than 2.5, repeat steps 1 through 5 until the desired pH is reached.

If the solution pH is lower than 2.1, follow the steps below to raise the pH.

⚠CAUTION

Never operate without both product and activator orifices in place.

1. Turn the water valve to the off position.
2. Carefully remove the activator intake hose from its intake point.
3. Unscrew the exposed orifice tip.
4. Replace the orifice with the next smaller size according to the chart insert in the orifice pack, (less activator raises the pH). Be careful not to over tighten.
5. Reinstall the activator intake hose.
6. Restart water flow, verify suction, and check the pH of the solution.

If the solution is lower than 2.1, repeat steps 1 through 5 until the desired pH is reached.

Maintenance

NOTE

Please read the entire instruction manual before performing any of the maintenance tasks listed below. Information on how to accomplish these tasks as well as important safety information can be found in previous sections within this manual.

Follow this chart to maintain performance and extend the life of the unit:

Maintenance Task Perform task as needed or at calender interval, whichever comes first.	Every Week	Every Month	Every 6 Mos.	Every Year
Make sure the unit stays clean and undamaged	✓			
Check for yellow color in the Solution Tank	✓			
Clean the Hose Connection Strainer (screen)		✓		
Replace the Product and Activator Intake Hoses			✓	
Replace the Product and Activator In-line Check Valves			✓	
Replace the Product and Activator Foot Valves			✓	
Replace the Product and Activator Orifices				✓

Your distributor maintains additional technical information and can answer questions about the proper maintenance and/or replacement parts for this unit.

Contact your distributor for any additional information or assistance not contained in this manual.

F-M014-082605

AANE QUALITY AND PERFORMANCE CHECK LIST

PHYSICAL CHECK LIST – WATER OFF

Each test must pass before proceeding.

- ☐ Check to see that the unit is configured to the specifications order sheet.
- ☐ Check to see that all plumbing is correct according to assembly drawing.
- ☐ Check for physical flaws. (Dents, scratches, cracks, improper holes)

WET CHECK LIST - HIGH PRESSURE

Attach the unit to a pressure system capable of 75 psi.

- ☐ Increase the pressure to 75 psi. Allow unit to pressurize for at least 15 minutes. Engage both float valves by lowering the bail of each. This action will allow water to flow through the unit. Allow water to flow through the unit for 1 minute and release the bail of each float valve. Check for leaks.

WET CHECK LIST- WORKING PRESSURE

- ☐ Place the Fill Float and Safety Float in a bucket of water to check buoyancy. The tops of both floats should float approximately 1" above surface of the water. Set Pressure system to 50psi. unless an otherwise specific pressure is listed on the order sheet. Connect floats to the unit and check for binding by raising and lowering each float in turn. Check for flow of water through the venturi when the floats are down and the float valves snap open. Check for no flow of water when the floats are up and the float valves snap shut. Both floats and valves should perform the same.

CHEMICAL INJECTION CHECK LIST

Chemicals listed here must match specifications listed on order sheet.

- ☐ BCI Precursor _____ Precursor Orifice Color: _____
- ☐ Activator _____ Activator Orifice Color: _____

LABORATORY CHECK LIST

- ☐ Water pressure during check _____ psi
- ☐ The pH of the solution from the venturi _____ pH
- ☐ The available ClO2 concentration of the solution _____ ppm w/w

Lab Tech. Signature_____ Date_____

Q. C. Signature_____ Date _____

Unit Serial Number_____

Bio-Cide International, Inc.
2845 Broce Drive
Norman, OK 73072

Toll Free:(800) 323-1398
Phone: (405) 329-5556
Fax: (405) 329-2681

www.Bio-Cide.com

OPERATOR'S MANUAL PD02P-XXX-XXX

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

RELEASED: 10-1-96
REVISED: 11-11-10
(REV. T)

1/4" DIAPHRAGM PUMP
1:1 RATIO (NON-METALLIC)

READ THIS MANUAL CAREFULLY BEFORE INSTALLING, OPERATING OR SERVICING THIS EQUIPMENT.

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

SERVICE KITS

Refer to Service Kit Chart to match the pump material with the service kits offered. The "X" represents a variable digit of the model number.

637276 air valve kit.

637313-XX for pump wet end repair (model digits 7 and 11).

637314-XX for pump rebuild (model digits 7 and 11).

PUMP DATA

Models..... see Model Description Chart for "-XXX"
Pump Type.. Non-Metallic Air Operated Double Diaphragm
Material..... see Model Description Chart
Weight..... PD02P-XPS-XXX ..... 4.08 lbs (1.85 kgs)
PD02P-XDS-XXX ..... 4.64 lbs (2.10 kgs)
PD02P-XKS-XXX ..... 4.90 lbs (2.22 kgs)
Maximum Air Inlet Pressure ..... 100 p.s.i.g. (6.9 bar)
Minimum Air Inlet Pressure..... 20 p.s.i.g. (1.4 bar)
Maximum Outlet Pressure ..... 100 p.s.i.g. (6.9 bar)
Maximum Flow Rate ..... 4.6 g.p.m. (17.4 l.p.m.)
Maximum Suction Lift..... 20 ft (water)
Maximum Output Per Cycle..... 0.014 gal. (53 cc's)
Maximum Particle Size ..... clean fluid only
Maximum Temperature Limits (diaphragm / ball / seat material)
E.P.R. / EPDM..... -60° to 280° F (-51° to 138° C)
Groundable Acetal..... 10° to 180° F (-12° to 82° C)
Kynar® PVDF..... 10° to 200° F (-12° to 93° C)
Nitrile ..... 10° to 180° F (-12° to 82° C)
Polypropylene..... 35° to 175° F (2° to 79° C)
Santoprene®..... -40° to 225° F (-40° to 107° C)
PTFE..... 40° to 225° F (4° to 107° C)
Groundable..... PD02P-XDS-DTX models only
Dimensional Data..... see page 8
Noise Level @ 70 p.s.i., 60 c.p.m..... 59.8 db(A)①

① The pump sound pressure levels published here have been updated to an Equivalent Continuous Sound Level (L_{Aeq}) to meet the intent of ANSI S1.13-1971, CAGI-PNEUROP S5.1 using four microphone locations.

NOTICE: All possible options are shown in the chart, however, certain combinations may not be recommended, consult a representative or the factory if you have questions concerning availability.

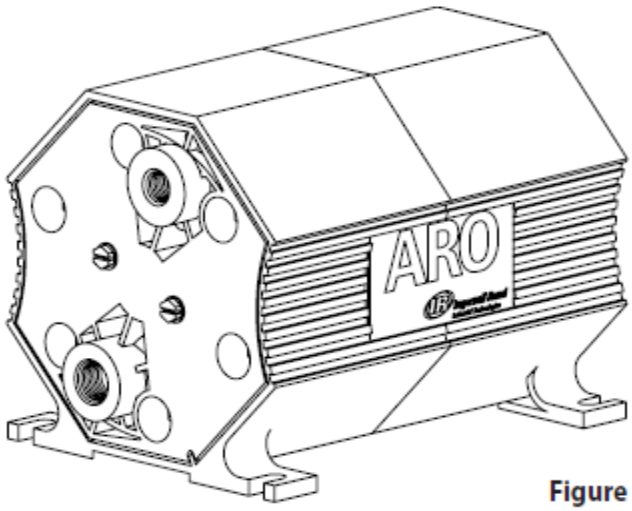


Figure 1

MODEL DESCRIPTION CHART

PD02 P - X X S - X T X

Center Body Material
P - Polypropylene

Inlet / Outlet
A - Single Inlet / Single Outlet
D - Single Inlet / Double Outlet
E - Double Inlet / Single Outlet
H - Double Inlet / Double Outlet

Wet End / Fluid Cap / Manifold Material
D - Groundable Acetal
K - Kynar PVDF
P - Polypropylene

Hardware Material
S - Stainless Steel

Check Valve Seat Material
D - Groundable Acetal
K - Kynar PVDF
P - Polypropylene

Check Material
T - PTFE

Diaphragm / "O" Ring Material
A - Santoprene / E.P.R.
G - Nitrile / Nitrile
T - PTFE / PTFE / Nitrile

Fluid Section Service Kit Selection

EXAMPLE: Model #PD02P-ADS-DTA
Fluid Section Service Kit # 637313-DA

PD02P - X X S - X T X
637313 - X X
Wet End Material
Diaphragm Material

OPERATING AND SAFETY PRECAUTIONS

READ, UNDERSTAND AND FOLLOW THIS INFORMATION TO AVOID INJURY AND PROPERTY DAMAGE.

⚠WARNING EXCESSIVE AIR PRESSURE. Can cause personal injury, pump damage or property damage.

- Do not exceed the maximum inlet air pressure as stated on the pump model plate.
- Be sure material hoses and other components are able to withstand fluid pressures developed by this pump. Check all hoses for damage or wear. Be certain dispensing device is clean and in proper working condition.

⚠WARNING STATIC SPARK. Can cause explosion resulting in severe injury or death. Ground pump and pumping system.

- PD02P-XDS-DTX Groundable Acetal pumps: Use the pump grounding screw provided. A screw terminal is provided on the manifold. Connect a 12 ga. (minimum) wire (66885-1 kit is available) to a good earth ground source.
- The pumping system and object being sprayed must be grounded when it is pumping, flushing, recirculating or spraying flammable materials such as paints, solvents, lacquers, etc. or used in a location where surrounding atmosphere is conducive to spontaneous combustion.
- Secure pump, connections and all contact points to avoid vibration and generation of contact or static spark.
- Consult local building codes and electrical codes for specific grounding requirements.
- After grounding, periodically verify continuity of electrical path to ground. Test with an ohmmeter from each component (e.g., hoses, pump, clamps, container, spray gun, etc.) to ground to insure continuity. Ohmmeter should show 0.1 ohms or less.
- Submerse the outlet hose end, dispensing valve or device in the material being dispensed if possible. (Avoid free streaming of material being dispensed.)
- Use hoses incorporating a static wire.
- Use proper ventilation.
- Keep inflammables away from heat, open flames and sparks.
- Keep containers closed when not in use.

⚠WARNING Pump exhaust may contain contaminants. Can cause severe injury. Pipe exhaust away from work area and personnel.

- In the event of a diaphragm rupture, material can be forced out of the air exhaust muffler.
- Pipe the exhaust to a safe remote location when pumping hazardous or inflammable materials.
- Use a grounded 1/4" minimum i.d. hose between the pump and the muffler.

⚠WARNING HAZARDOUS PRESSURE. Can result in serious injury or property damage. Do not service or clean pump, hoses or dispensing valve while the system is pressurized.

- Disconnect air supply line and relieve pressure from the system by opening dispensing valve or device and / or carefully and slowly loosening and removing outlet hose or piping from pump.

⚠WARNING HAZARDOUS MATERIALS. Can cause serious injury or property damage. Do not attempt to return a pump to the factory or service center that contains hazardous material. Safe handling practices must comply with local and national laws and safety code requirements.

- Obtain Material Safety Data Sheets on all materials from the supplier for proper handling instructions.

⚠ CAUTION Verify the chemical compatibility of the pump wetted parts and the substance being pumped, flushed or recirculated. Chemical compatibility may change with temperature and concentration of the chemical(s) within the substances being pumped, flushed or circulated. For specific fluid compatibility, consult the chemical manufacturer.

⚠ CAUTION Maximum temperatures are based on mechanical stress only. Certain chemicals will significantly reduce maximum safe operating temperature. Consult the chemical manufacturer for chemical compatibility and temperature limits. Refer to PUMP DATA on page 1 of this manual.

⚠ CAUTION Be certain all operators of this equipment have been trained for safe working practices, understand it's limitations, and wear safety goggles / equipment when required.

⚠ CAUTION Do not use the pump for the structural support of the piping system. Be certain the system components are properly supported to prevent stress on the pump parts.

- Suction and discharge connections should be flexible connections (such as hose), not rigid piped, and should be compatible with the substance being pumped.

⚠ CAUTION Prevent unnecessary damage to the pump. Do not allow pump to operate when out of material for long periods of time.

- Disconnect air line from pump when system sits idle for long periods of time.

⚠ CAUTION Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.

NOTICE Replacement warning labels are available upon request: "Static Spark and Diaphragm Rupture" pn \ 94080.

⚠WARNING	=	Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.
⚠ CAUTION	=	Hazards or unsafe practices which could result in minor personal injury, product or property damage.
NOTICE	=	Important installation, operation or maintenance information.

GENERAL DESCRIPTION

The ARO diaphragm pump offers high volume delivery even at low air pressures, easy self priming and the ability to pump various viscosity materials. The pump is designed to correspond to the needs of the user by offering a variety of wetted parts configurations to handle almost any application.

Air operated double diaphragm pumps utilize a pressure differential in the air chambers to alternately create suction and positive fluid pressure in the fluid chambers. Flat checks insure a positive flow of fluid.

Pump cycling will begin as air pressure is applied and it will continue to pump and keep up with the demand. It will build and maintain line pressure and will stop cycling once maximum line pressure is reached (dispensing device closed) and will resume pumping as needed.

Model PD02P-XDS-DTX: The Acetal material used in this pump contains stainless steel fibers. It's conductivity allows it to be connected to a suitable ground. A ground screw is provided for this.

AIR AND LUBE REQUIREMENTS

⚠WARNING EXCESSIVE AIR PRESSURE. Can cause pump damage, personal injury or property damage.

- A filter capable of filtering out particles larger than 50 microns should be used on the air supply. In most applications there is no lubrication required other than the "O" ring lubricant which is applied during assembly or repair.
- The pump can be rotated 360° to suit the application. It may be mounted upside down or on the wall with no effect on suction lift or operating efficiency. The filter and regulator need to be oriented in a normal vertical direction to function properly.
- Pipe plugs are included for the material inlets. They can be switched to accommodate piping requirements. However, the fluid inlet must always be in the port closest to the mounting base.
- When lubricated air is necessary, supply the air lubricator with a good grade of SAE 90 wt. non-detergent oil and set the lubricator to a rate not to exceed one drop per minute.

INSTALLATION

- **NOTICE: Re-torque fasteners prior to use. Refer to step #18 on page 6 for information.**
- Apply PTFE tape or pipe sealant to threads upon assembly to prevent leakage.
- Secure the diaphragm pump legs to a suitable surface to insure against damage by vibration.
- To avoid problems, install a particle fluid filter to screen out foreign matter 1/32" (0.79 mm) or larger in diameter.
- The pump is not recommended for submerged applications.
- When the diaphragm pump is used in a forced-feed (flooded inlet) situation, it is recommended that a "Check Valve" be installed at the air inlet.

OPERATING INSTRUCTIONS

- Always flush the pump with a solvent compatible with the material being pumped if the material being pumped is subject to "setting up" when not in use for a period of time.
- Disconnect the air supply from the pump if it is to be inactive for a few hours.
- The outlet material volume is governed not only by the air supply, but also by the material supply available at the inlet. The material supply tubing should not be too small or restrictive. Be sure not to use hose which might collapse.

MAINTENANCE

Refer to the part list on page 4 for service kit information, parts view on page 5 and Repair Procedures on page 6.

- Certain ARO "Smart Parts" are indicated which should be available for fast repair and reduction of down time.
- Service kits are available to service two separate diaphragm pump functions: 1. AIR SECTION, 2. FLUID SECTION. The Fluid Section is divided further to match typical active Material Options.
- Provide a clean work surface to protect sensitive internal moving parts from contamination from dirt and foreign matter during service disassembly and reassembly.
- Keep good records of service activity and include the pump in preventive maintenance program.

PARTS LIST / PD02P-XXX-XXX

637276 Air Valve Kit: Includes items 102, 111, 132, 134, 135, 137, 145, 146, 178, 179 and 94276 Lubriplate packet.
637313-XX Diaphragm Kit: Includes items 7, 13, 19, 22, 33, 41, 64, 144, 147, 161 and 94276 Lubriplate packet.
637314-XX Rebuild Kit: Includes items 7, 13, 19, 22, 33, 41, 64, 102, 111, 119, 137, 144, 146, 147, 161 and 94276 Lubriplate packet.

DIAPHRAGM OPTIONS PD02P-XXX-XXX

	"7"			"19"			"33" (0.103" x 0.693" o.d.)			"64" (0.157" x 3.424" o.d.)		
-XXX	Diaphragm	Qty	Mtl	Seal	Qty	Mtl	"O" Ring	Qty	Mtl	"O" Ring	Qty	Mtl
-XXA	93808	(2)	[Sp]	94434	(4)	[E]	94437	(2)	[E]	-----	---	---
-XXG	93808-G	(2)	[B]	94434-G	(4)	[B]	94438	(2)	[T]	-----	---	---
-XXT	93898	(2)	[T]	94435	(4)	[T]	94438	(2)	[T]	93947	(2)	[B]

COMMON PARTS

	PD02P-XXS-XTX		Polypropylene PD02P-XPS-PTX		Groundable Acetal PD02P-XDS-DTX		Kynar PVDF PD02P-XKS-KTX	
Item	Description (size)	Qty	Part No.	Mtl	Part No.	Mtl	Part No.	Mtl
□ 1	Rod (2-13/16" long)	(1)	93916	[C]	93916	[C]	93916	[C]
□ 5	Washer (1-3/4" o.d.)	(2)	94938	[Z]	94938	[Z]	94938	[Z]
□ 6	Diaphragm Screw (1/4" - 20)	(2)	93810-1	[P]	93810-2	[D1]	93810-3	[PK]
13	Back-Up Ring	(2)	95127	[T]	95127	[T]	95127	[T]
17	Manifold - Air Inlet	(1)	94246-1	[P]	94246-2	[GA]	94246-4	[PK]
18	Manifold	(1)	94247-1	[P]	94247-2	[GA]	94247-4	[PK]
22	Disc	(4)	94525	[T]	94525	[T]	94525	[T]
41	Spring Stop	(4)	93814-1	[P]	93814-2	[D1]	93814-3	[PK]
43	Screw (#10 - 32 x 1")	(4)	94436	[SS]	94436	[SS]	94436	[SS]
62	Nut (1/4" - 20)	(6)	93828	[SS]	93828	[SS]	93828	[SS]
63	Pipe Plug (1/4 - 18 N.P.T.)	(❍)	93832-1	[P]	93832-2	[D2]	93832-3	[PK]
□ 65	Fluid Cap	(❍)	94245-1	[P]	94245-2	[GA]	94245-4	[PK]
□ 66	Fluid Cap (with one blocked tube)	(❍)	94344-1	[P]	94344-2	[GA]	94344-3	[PK]
□ 68	Air Cap (with groove)	(1)	93804	[P]	93804	[P]	93804	[P]
□ 69	Air Cap (with tongue)	(1)	93805	[P]	93805	[P]	93805	[P]
74	Pipe Plug (3/8 - 18 N.P.T.)	(❍)	94478-1	[P]	94478-2	[D2]	94478-3	[PK]
131	Bolt (1/4" - 20 x 6-3/8")	(6)	94526	[SS]	94526	[SS]	94526	[SS]
205	Logo Plate	(2)	93919	[A]	93919	[A]	93919	[A]

AIR SECTION PARTS

Item	Description (size)	Qty	Part No.	Mtl
102	"O" Ring (1/16" x 7/8" o.d.)	(3)	Y325-18	[B]
103	Bushing	(1)	93917	[D2]
110	"U" Cup (1/8" x 13/16" o.d.)	(1)	Y186-54	[B]
□111	Spool Assembly (includes items 110, 138 & 180)	(1)	67163	[D2]
119	"O" Ring (0.106" x 0.587" o.d.)	(4)	15066	[B]
132	Gasket	(1)	96153	[Kr]
134	Screw (#4 - 20 x 0.295")	(3)	93942	[SS]
□135	Valve Block	(1)	93806	[R]
137	"O" Ring (1/16" x 1" o.d.)	(1)	Y325-20	[B]
138	"O" Ring (0.103" x 0.818" o.d.)	(1)	94760	[U]
144	"U" Cup (1/8" x 5/8" o.d.)	(2)	Y186-45	[B]
□145	Minor Valve Block	(1)	93807	[R]
146	"O" Ring (1/16" x 5/16" o.d.)	(2)	Y325-8	[B]
147	"O" Ring (1/16" x 7/16" o.d.)	(2)	Y325-11	[B]
161	"O" Ring (3/32" x 9/16" o.d.)	(2)	Y325-110	[B]
178	Trip Rod Assembly (includes item 119)	(2)	65145	[D2]
179	Sleeve Assembly (includes item 119)	(1)	65144	[D2]
180	"O" Ring (0.106" x 0.587" o.d.)	(1)	15066-U	[U]

MATERIAL CODE

[A] = Aluminum
[B] = Nitrile
[C] = Carbon Steel
[D1] = Acetal (orange)
[D2] = Acetal (white)
[E] = E.P.R. / EPDM
[GA] = Groundable Acetal (dark gray)
[Kr] = Kraton
[PK] = Pure Kynar
[P] = Polypropylene (light gray) High Density Polypropylene (green)
[R] = Ryton
[Sp] = Santoprene
[SS] = Stainless Steel
[T] = PTFE
[U] = Polyurethane
[Z] = Zinc

❍ Quantities will vary, depending on the inlet / outlet option selected (refer to chart on page 5).
□ "Smart Parts", keep these items on hand in addition to the service kits for fast repair and reduction of down time.

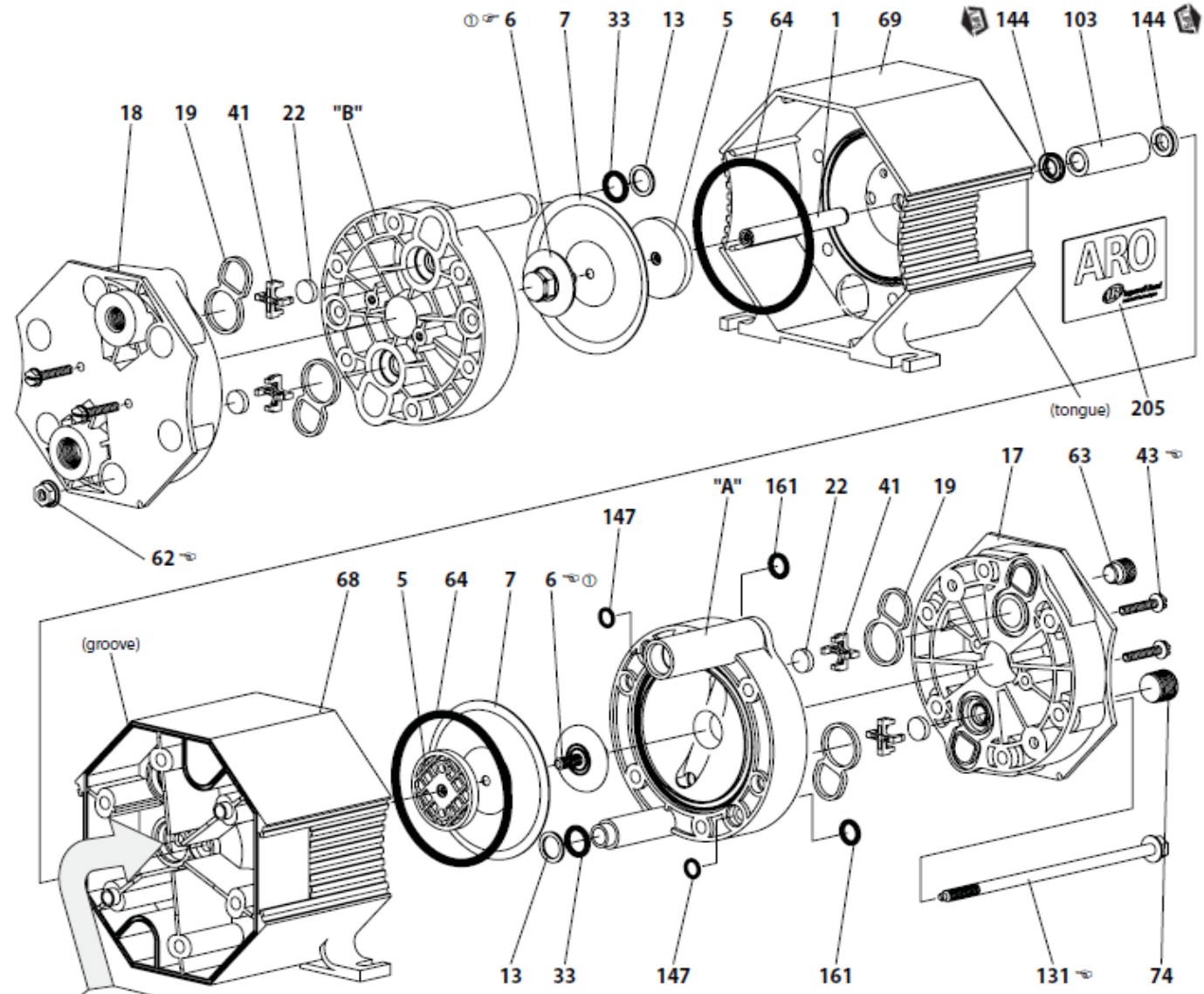


Figure 2

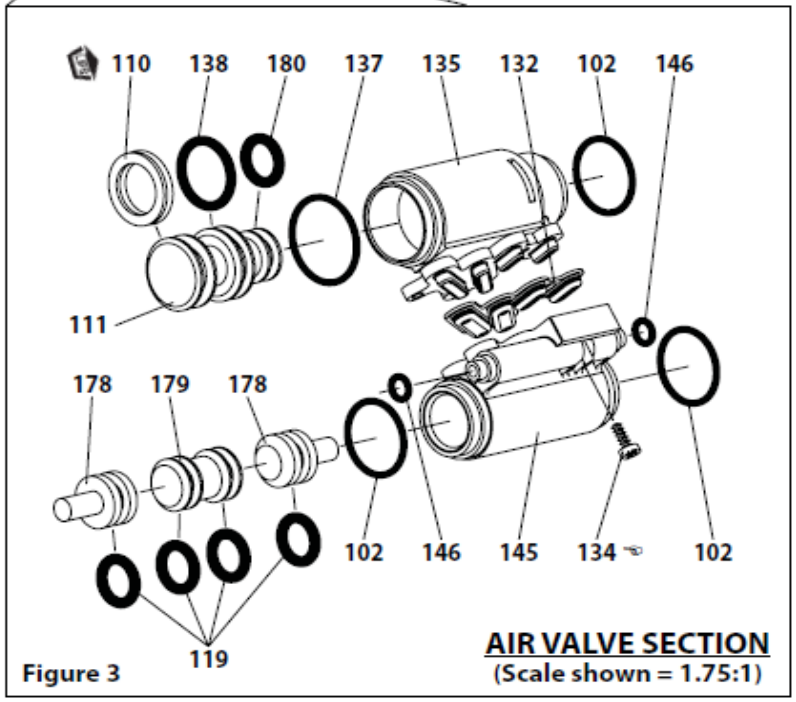


Figure 3

AIR VALVE SECTION
(Scale shown = 1.75:1)

Inlet / Outlet Options	Fluid Cap "A"	Fluid Cap "B"	Item 63 Qty	Item 74 Qty
SI / SO	65	65	(1)	(1)
SI / DO	66	65	---	(1)
DI / SO	65	66	(1)	---
DI / DO	66	66	---	---

TORQUE REQUIREMENTS

NOTE: DO NOT OVERTIGHTEN FASTENERS.

(6 / 5) Diaphragm screw / washer, 60 - 70 in. lbs (6.8 - 7.9 Nm).

(43) Screw, 20 - 25 in. lbs (2.3 - 2.8 Nm).

(62 / 131) Nut / bolt, 70 - 75 in. lbs (7.9 - 8.5 Nm).Tighten together alternately and evenly, then re-torque.

(134) Screw, 3.5 - 4.5 in. lbs (0.40 - 0.51 Nm).

LUBRICATION / SEALANTS

Apply Lubriplate FML-2 grease (94276) to all "O" rings, "U" cups and mating parts.

① Apply Loctite® 242® to threads.

PUMP DISASSEMBLY AND REASSEMBLY

GENERAL PUMP REPAIR NOTES:

- Tools needed to complete disassembly and repair:
  - 5/16" wrench or socket, 7/16" socket, 5/8" wrench or socket, 3/8" Allen wrench, spanner wrench, torque wrench (measuring inch pounds), "O" ring pick.
- Once the pump is disassembled, you have the opportunity to clean and inspect all parts for wear. Look for deep scratches on metallic surfaces and nicks or cuts in "O" rings. Replace old parts with new ones as necessary.
- Take precautions to prevent cutting "O" rings upon installation.
- Lubricate "O" rings and "U" cups with Lubriplate. A packet of this lubricant is included in each Service Kit.
- Do not over-tighten fasteners. Refer to torque specification block on page 5.
- Re-torque fasteners following restart.

Service Kits available. From your local distributor.
(Kits also include Lubriplate grease packet.)

- SERVICE KIT: 637314-XX contains parts for a complete pump rebuild.
- SERVICE KIT: 637276 contains parts to rebuild the air valve.
- SERVICE KIT: 637313-XX contains parts to rebuild the diaphragms and checks.

FLUID SECTION DISASSEMBLY

1. Place the pump on a flat workbench.
2. Using 7/16" sockets, remove six (62) nuts and (131) bolts.
3. Set the pump on end, with the "air inlet" end up.
4. Using a flat blade screwdriver, remove (17) air inlet manifold and ("A") fluid cap.
5. Remove (13) back-up ring and (33) "O" ring from ("A") fluid cap.
6. Remove two (147) "O" rings from ("A") fluid cap.
7. Remove (18) manifold and ("B") fluid cap.
8. Remove (13) back-up ring and (33) "O" ring from ("B") fluid cap.
9. Using 5/8" wrenches on (6) diaphragm screws, unthread and remove diaphragm assemblies.
   - NOTE: Air valve section can be repaired at this time, refer to "Air Valve Disassembly".
10. Using a 5/16" wrench or flat blade screwdriver, remove two (43) screws from (17) air inlet manifold.
11. Separate (17) air inlet manifold and ("A") fluid cap. NOTE: (41) spring stops and (22) discs may fall out. If not, remove at this time.
12. Remove (19) seals and (161) "O" rings.
13. Disassembly of the opposite end of the pump is the same as the "air inlet" end, except for the following: a.) the opposite end does not contain (161) "O" rings and b.) the top tube has the outside shoulder, the bottom tube has the inside shoulder.
14. Wrap (1) rod in a shop rag and secure in a soft-faced vise.
15. Using a 5/8" wrench, unthread (6) diaphragm screw from (1) rod.
16. Using a 5/8" wrench on (6) diaphragm screw and a spanner wrench on (5) washer, unthread and remove (6) diaphragm screw.

FLUID SECTION REASSEMBLY

NOTE: Lubricate all "O" rings, "U" cups seals and their mating parts with 94276 Lubriplate upon assembly.

1. Place the new (7) diaphragms on the (6) diaphragm screw, with the bowed side of the diaphragm oriented against (6) diaphragm screw.
2. Assemble (5) washer to (6) diaphragm screw and torque to 60 - 70 in. lbs (6.8 - 7.9 Nm), using a spanner wrench and a 5/8" wrench. NOTE: Be sure not to strip the plastic nut.
3. Assemble (1) rod to one of the diaphragm assemblies and tighten finger tight.
4. Models PD02P-XXS-XTT only: Assemble (64) "O" rings into grooves in (68 and 69) air caps.
5. Assemble diaphragm assemblies into air caps and torque to 60 - 70 in. lbs (6.8 - 7.9 Nm), using 5/8" wrenches.
6. Assemble two (147) "O" rings to the raised air passages, opposite each other, inside (68) air cap.
7. Set ("A") fluid cap on the workbench, with the "tube side" down.
8. Assemble two (161) "O" rings to counterbores in ("A") fluid cap.
9. Assemble (22) disc and (41) spring stop to the check seat nearest the top tube of ("A") fluid cap (top tube has the shoulder on the outside).
10. Assemble (41) spring stop and (22) disc (disc on top) to check seat nearest the bottom tube (shoulder on outside).
11. Lubricate seal grooves in (17) air inlet manifold and assemble (19) seals to grooves.
12. Assemble (17) air inlet manifold to ("A") fluid cap, aligning fluid inlet with lower tube (shoulder on outside).
13. Secure with two (43) screws. Torque to 20 - 25 in. lbs (2.3 - 2.8 Nm), using a 5/16" wrench.
14. Repeat steps 9 thru 13 for opposite end of pump. NOTE: The tubes are reversed on ("B") fluid cap (top tube has outside shoulder).
15. Assemble (33) "O" rings and (13) back-up rings to the outside shoulder of tubes of ("A" and "B") fluid caps.
16. Assemble (17) air inlet manifold and components into (68) air cap, being sure to align groove in manifold with rib in air cap.
17. Assemble (18) manifold and components into (69) air cap, being sure to align groove in manifold with rib in air cap.
18. Assemble six (131) bolts and (62) nuts to pump and torque to 70 - 75 in. lbs (7.9 - 8.5 Nm), using 7/16" sockets, hold the nut, torque the bolt only. NOTE: Allow the pump to sit for at least 15 minutes, then re-torque bolts to 70 - 75 in. lbs (7.9 - 8.5 Nm).

AIR VALVE SECTION DISASSEMBLY

1. Refer to "Fluid Section Disassembly", steps 1 thru 9.
2. Separate (68 and 69) air caps, releasing (103) bushing and logo plates.
3. Remove air valve assembly, (102, 137 and 146) "O" rings and (144) "U" cups from air caps.
4. Remove (111) spool assembly, (178) trip rods and (179) sleeve assembly from (145) valve block.
5. Remove "O" rings and "U" cup from (111) spool assembly.
6. Inspect (119) "O" rings on (178) trip rods and (179) sleeve assembly.
7. Remove three (134) screws, releasing (145) minor valve block and (132) gasket.

AIR VALVE SECTION REASSEMBLY

1. Assemble (132) gasket and (145) minor valve block to (135) valve block, securing with three (134) screws. NOTE: Torque to 3.5 - 4.5 in. lbs (0.40 - 0.51 Nm).
2. Assemble (119) "O" rings to (178) trip rods and (179) sleeve assembly.
3. Assemble (178) trip rods and (179) sleeve assembly into (145) valve block.
4. Assemble (138 and 180) "O" rings and (110) "U" cup to (111) spool assembly.
5. Assemble (111) spool assembly into (135) valve block, with small end of spool going into valve block first.
6. Assemble (102, 137 and 146) "O" rings to valve block.
7. Assemble (144) "U" cups to (68 and 69) air caps.
8. Place one (68 or 69) air cap on end, with legs down and seat valve block into air cap.
9. Assemble logo plates and (103) bushing into air cap.
10. Assemble other air cap to air cap, aligning logo plates, (178) trip rod and (103) bushing.
11. Refer to "Fluid Section Reassembly", steps 5 thru 18 to complete reassembly.

TROUBLE SHOOTING

Air Motor stalls.
- Check for blown diaphragm
- Check for damaged "O" rings on the spool.
- Check for damaged "O" rings on the trip rod.
- Check valve block gasket for leakage.

Air leaks from exhaust.
- Check for damaged "O" rings on the valve block, spool or trip rod.
- Check gasket between valve blocks for leakage.
- "U" cups on connecting rod bushing are damaged or installed backwards.

Fluid leaks from exhaust.
- Check for diaphragm damage.
- Check for diaphragm screws not adequately torqued.

Low flow or pump continues to cycle after shut-off.
- Check for trapped air if the pump is oriented where the inlet check is above the outlet check. Temporarily increase the flow or re-prime the pump.
- Check for damaged seats or foreign matter clogging the check assembly.

Air leaks from pump (other than exhaust).
- Check for bolts not evenly or adequately torqued.
- Check for "O" ring missing / damage between the fluid cap and the air cap on the air inlet side.

External fluid leaks from pump.
- Check for bolts not properly torqued.
- Check for damaged "O" rings on the fluid cap tubes.
- Check for damaged "O" rings on the valve check.
- Check for damaged diaphragm seal.

Pump operates but dispenses little or no fluid.
- Check for obstruction in fluid line.
- Check for foreign matter clogging check assemblies. Note: Install a fluid screen on the material inlet hose if the problem continues.
- Suction line too small.
- Check for air leakage at the air / fluid inlet pipe plugs. Use PTFE tape or pipe sealant upon assembly.

TYPICAL CROSS SECTION

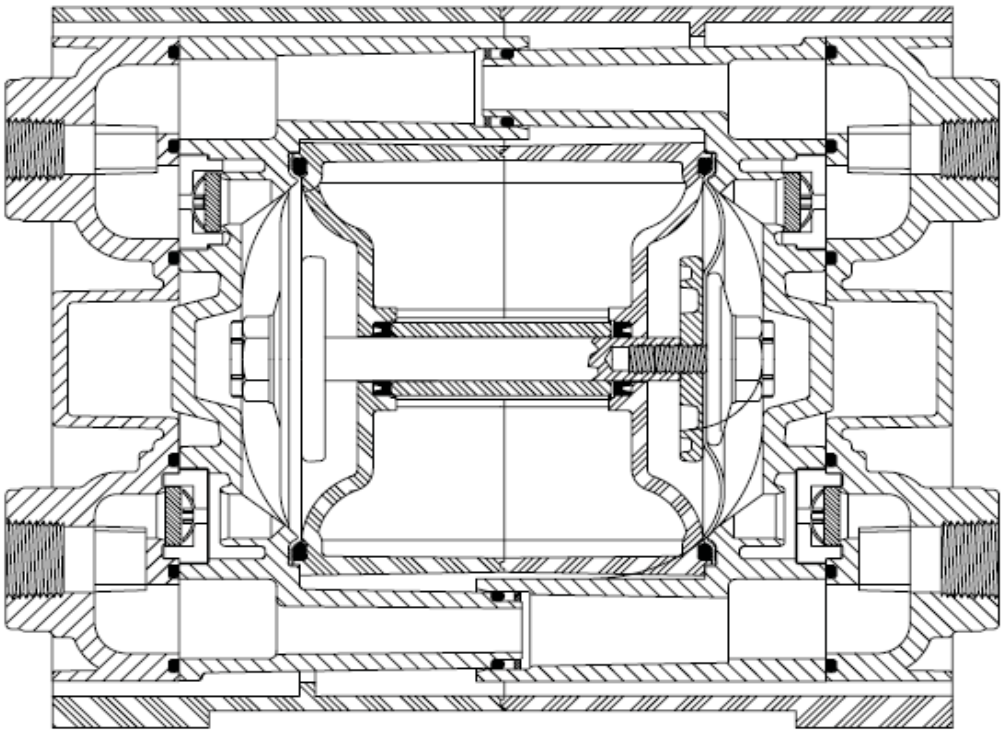
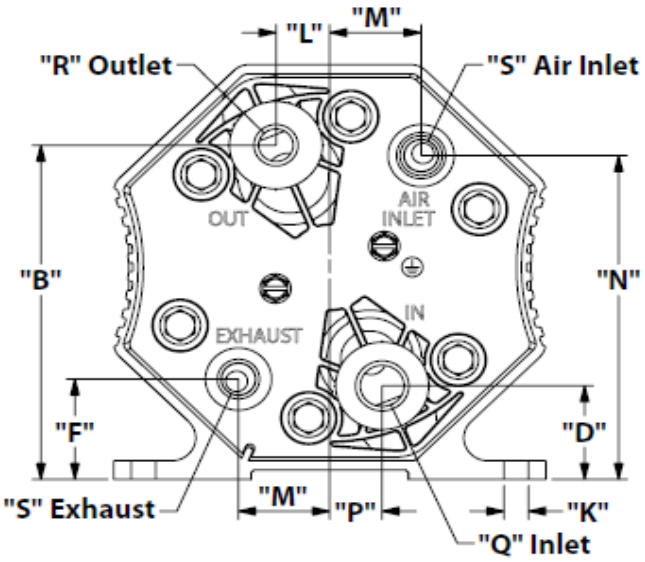
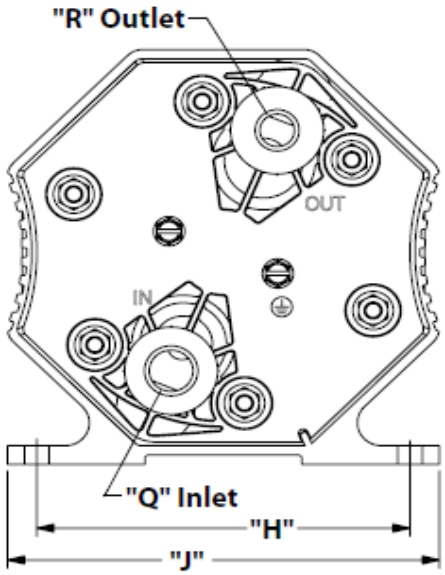


Figure 4

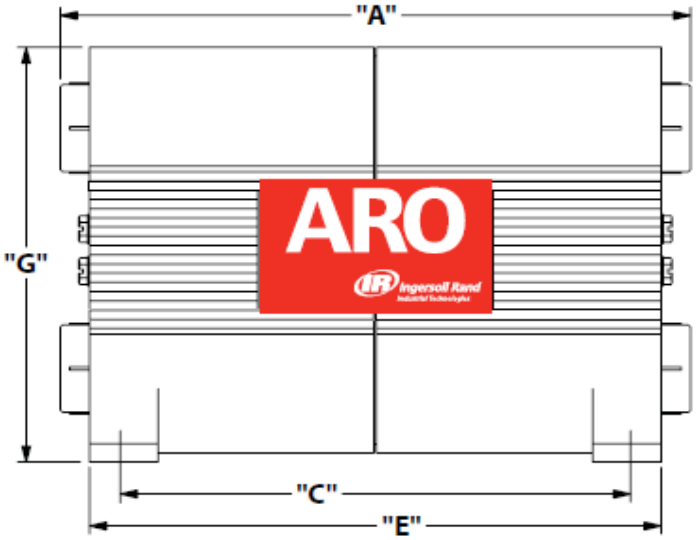
Dimensions shown are for reference only, they are displayed in inches and millimeters (mm).

END VIEWS





SIDE VIEW



DIMENSIONS

A - 8-1/32" (204.0 mm)	G - 5-5/8" (142.9 mm)	N - 4-25/64" (111.5 mm)
B - 4-17/32" (114.9 mm)	H - 4-3/4" (120.7 mm)	P - 21/32" (16.6 mm)
C - 6-1/2" (165.1 mm)	J - 5-1/2" (139.7 mm)	Q - 3/8 - 18 N.P.T.F. - 1
D - 1-5/16" (33.0 mm)	K - 5/16" (7.9 mm)	R - 1/4 - 18 N.P.T.F. - 1
E - 7-9/32" (184.9 mm)	L - 11/16" (17.3 mm)	S - 1/4 - 18 P.T.F.
F - 1-23/64" (34.5 mm)	M - 1-11/64" (29.5 mm)	

Figure 5

SALES & ENGINEERING DATA

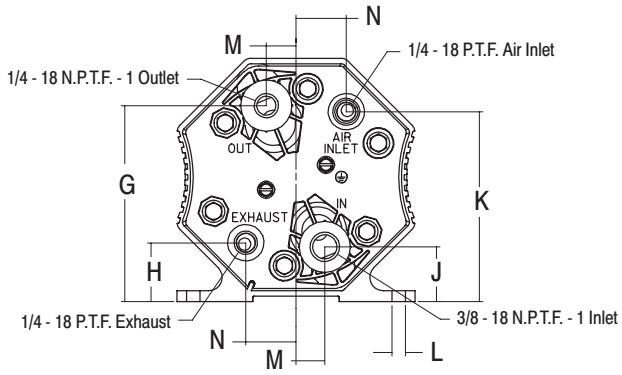
RATIO SERIES:	1:1
FLUID P.S.I. RANGE:	20 - 100

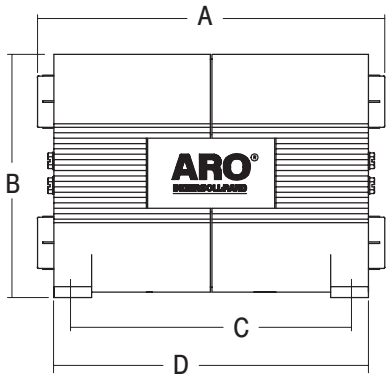
PD02P-XXS-XTX

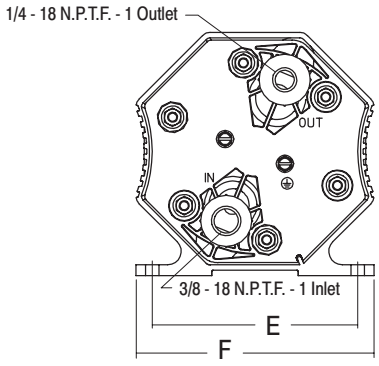
1/4" NON-METALLIC DIAPHRAGM PUMP

RELEASED: 1-31-97
REVISED: 5-17-02
S-874

DIMENSIONAL DATA







DIMENSIONS

A	8-1/16" (204 mm)	F	5-1/2" (140 mm)	K	4-7/16" (112 mm)
B	5-5/8" (143 mm)	G	4-9/16" (115 mm)	L	5/16" (8 mm)
C	6-1/2" (165 mm)	H	1-3/8" (35 mm)	M	11/16" (17 mm)
D	7-5/16" (185 mm)	J	1-5/16" (32 mm)	N	1-3/16" (30 mm)
E	4-3/4" (121 mm)				

NOTE: Dimensions are shown in inches and (mm), supplied for reference only and are typically rounded up to the nearest 1/16 inch.

SPECIFICATIONS

CONSTRUCTION

Model Series		PD02P-XXS-XTX
Pump Type		Non-Metallic, Air Operated, Double Diaphragm②
Ratio		1:1
Material Inlet (female)		3/8 - 18 N.P.T.F. - 1
Material Outlet (female)		1/4 - 18 N.P.T.F. - 1
Air Inlet (female)		1/4 - 18 P.T.F.
Air Exhaust (female)		1/4 - 18 P.T.F.
Weight	Polypropylene	4.08 lbs (1.85 kgs)
	Groundable Acetal	4.64 lbs (2.10 kgs)
	PVDF (Kynar)	4.9 lbs (2.22 kgs)
Air Valve Service Kit		637276
Fluid Section Service Kit		637313-XX
Pump Rebuild Service Kit		637314-XX

PD02P-X [X] S-XT [X]
637313 - [X][X]
Diaphragm Material
Wet End Material

EXAMPLE: Model PD02P-APS-PTA
Fluid Section Service Kit is 637313-PA
Pump Rebuild Service Kit is 637314-PA

PERFORMANCE

Air Inlet Pressure Range		20 - 100 p.s.i. (1.4 - 6.9 bar)
Fluid Pressure Range		20 - 100 p.s.i. (1.4 - 6.9 bar)
Maximum Flow Rate (flooded inlet)		4.6 g.p.m. (17.4 l.p.m.)
Maximum Particle Size		clean fluid only
Maximum Temperature Limits		
	Polypropylene	35° to 150° F (2° to 66° C)
	Groundable Acetal	10° to 180° F (-12° to 82° C)
	PVDF (Kynar)	10° to 200° F (-12° to 93° C)
Displacement / Cycle @ 100 p.s.i.		0.014 gal. (53 cc's)
Noise Level @ 70 p.s.i. - 60 c.p.m.		59.8 db(A)①

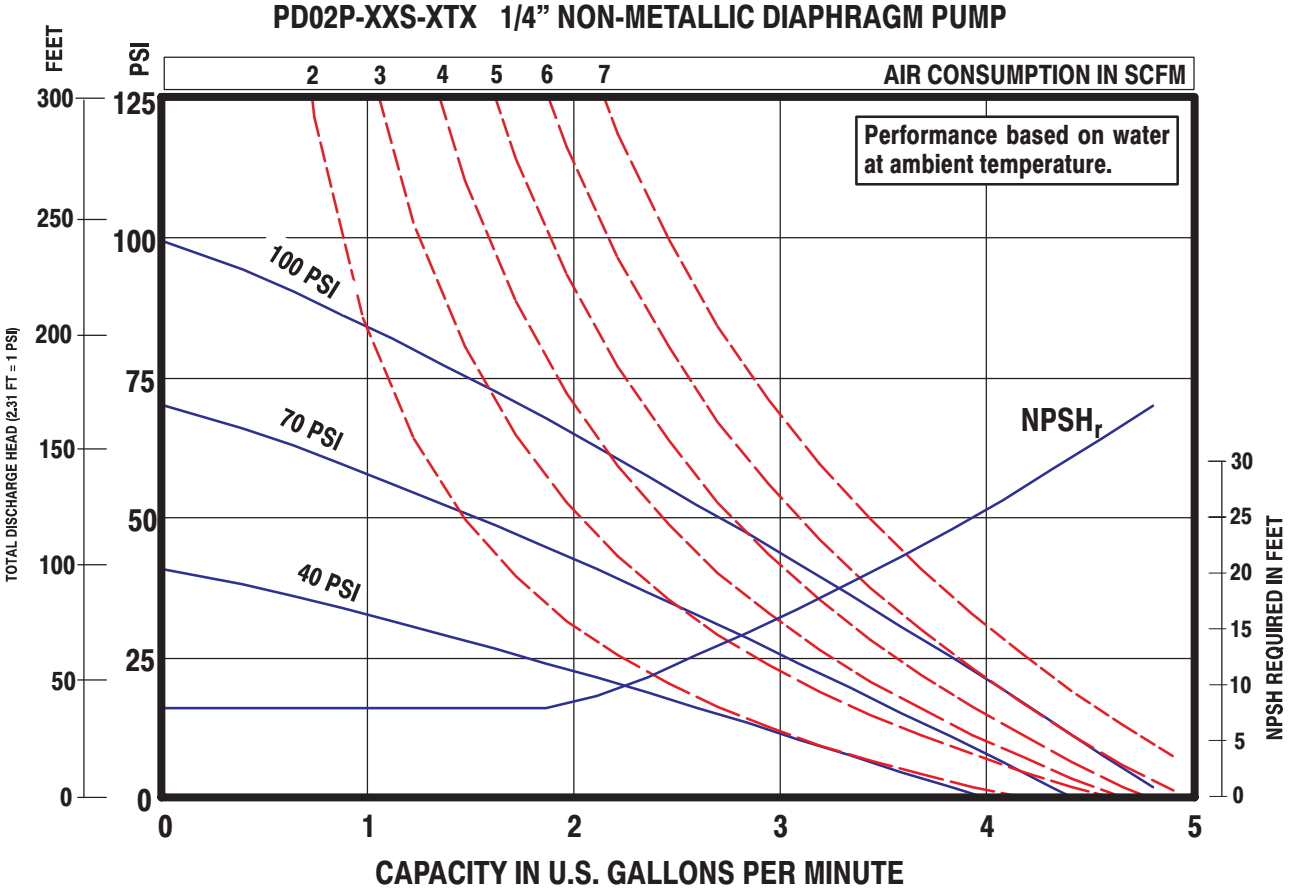
Notes:
① The pump sound pressure level has been updated to an Equivalent Continuous Sound Level (L_{Aeq}) to meet the intent of ANSI S1. 13-1971, CAGI-PNEUROP S5.1 using four microphone locations.
② PD02P-XDS-DTX models are constructed of a groundable acetal. The material's conductivity allows it to be connected to a suitable ground.

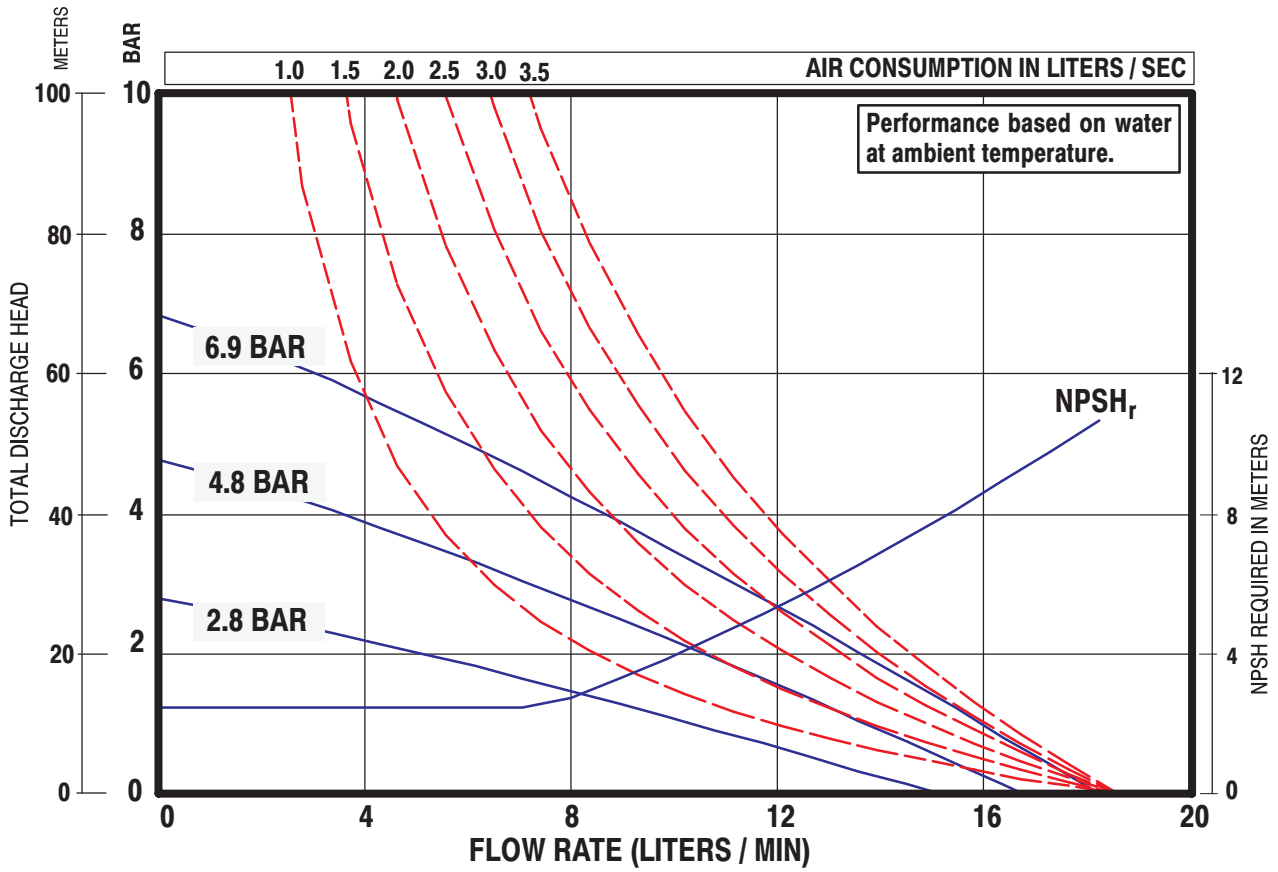
ACCESSORIES:
66073-1 Air Line Kit
66885-1 Grounding Kit

INGERSOLL-RAND COMPANY
P.O. BOX 151 • ONE ARO CENTER • BRYAN, OHIO 43506-0151
✆ (419) 636-4242 • FAX (419) 633-1674

PERFORMANCE CURVES

PD02P-XXS-XTX 1/4" NON-METALLIC DIAPHRAGM PUMP





DOSATRON®

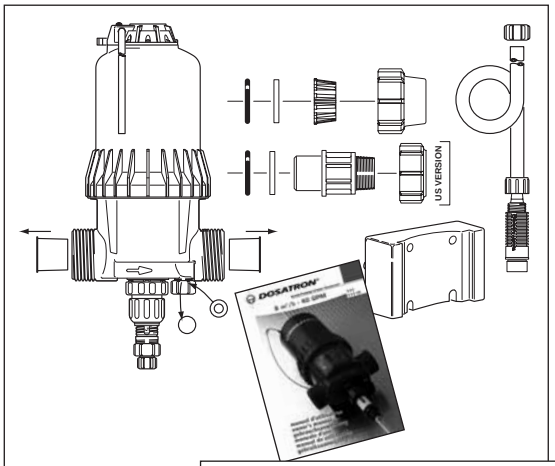
WATER POWERED DOSING TECHNOLOGY

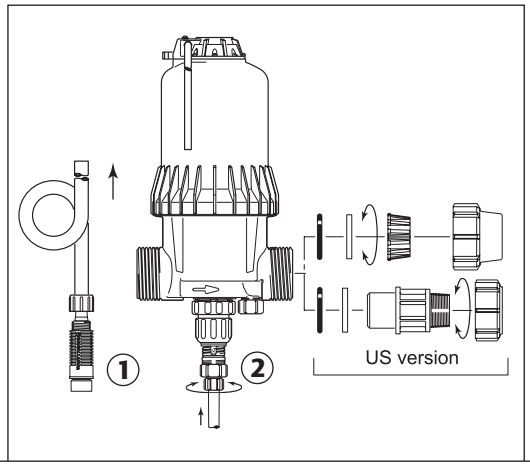
8 m³/h - 40 GPM

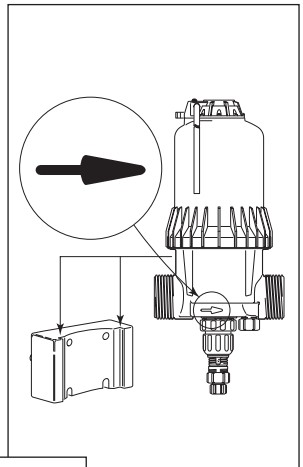
D 8 R
D 8 R 150

manuel d'utilisation
owner's manual
gebrauchsanweisung
manuale d'uso
manual de utilización
gebruiksaanwijzing

Quick start-up







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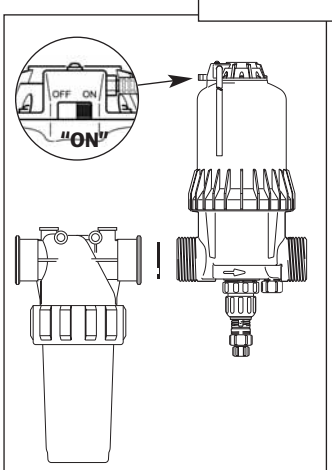
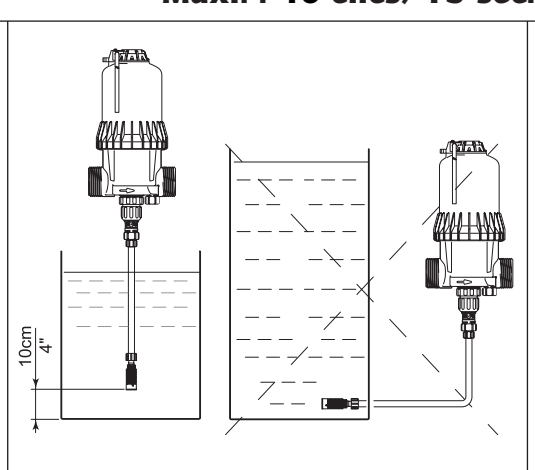
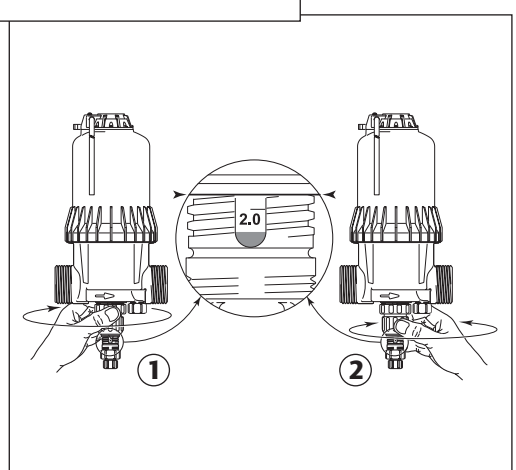






DOSATRON®

WATER POWERED DOSING TECHNOLOGY

SERVICE CLIENTÈLE
CUSTOMER SERVICE
KUNDENBETREUUNG
SERVIZIO CLIENTI
DEPARTAMENTO CLIENTELA
KLANTENSERVICE

WORLDWIDE - EUROPE :
DOSATRON INTERNATIONAL S.A.

Rue Pascal - B.P. 6 - 33370 TRESSES (BORDEAUX) - FRANCE
Tel. 33 (0)5 57 97 11 11
Fax. 33 (0)5 57 97 11 29 / 33 (0)5 57 97 10 85
e.mail : info@dosatron.com - http://www.dosatron.com

NORTH & CENTRAL AMERICA :
DOSATRON INTERNATIONAL INC.

2090 SUNNYDALE BLVD. CLEARWATER - FL 33765 - USA
Tel. 1-727-443-5404 - Fax 1-727-447-0591
Customer Service: 1-800-523-8499
e.mail : mail@dosatronusa.com - http://www.dosatronusa.com

Notes

Français

FR

Vous venez d'acquérir un Doseur Proportionnel DOSATRON.
Nous vous félicitons de votre choix. Ce modèle a été élaboré grâce à l'expérience de plus de 30 années.
Nos ingénieurs ont placé la série des DOSATRON largement en tête de ce que pouvait être l'évolution technique des Doseurs Proportionnels Sans Electricité.
Le choix des matériaux entrant dans leur fabrication fut des plus minutieux afin de résister aux attaques chimiques de tous ou du moins de la plus grande quantité des produits à doser sur le marché. Ce DOSATRON se révélera, au fil du temps, comme un allié des plus fidèles.
Quelques soins dispensés régulièrement sauront vous garantir un fonctionnement dans lequel le mot panne n'a plus sa place.

VEUILLEZ DONC LIRE CE MANUEL ATTENTIVEMENT AVANT DE METTRE L'APPAREIL EN SERVICE.

Important !
La référence complète et le numéro de série de votre DOSATRON figure **sur le corps de pompe**.
Vous êtes priés d'enregistrer ce numéro dans la partie réservée ci-dessous et de le rappeler lors de tout contact ou de besoin d'information avec votre vendeur.

Réf. : .....

N° Série : .....

Date d'achat : .....

....

CARACTERISTIQUES	D 8 R	D 8 R 150
Débit pratique de fonctionnement : **500 l/h mini - 8 m³ maxi [**2.2 Fl oz/min - 40 US GPM]		
Pression de fonctionnement :		
bar	**0.15 - 8**	**0.15 - 8**
PSI	2 - 110	2 - 110
Dosage réglable **extérieurement** :		
%	**0.2 - 2**	**1 - 5**
ratio	1:500 - 1:50	1:100 - 1:20
Débit d'injection du produit concentré :		
Mini l/h - Maxi l/h	**1 - 160**	**5 - 400**
US Fl. oz/min	0.56	2.8
US GPM/max	0.70	1.76
Température maximum de fonctionnement : **40 °C** [104 ° F]		
Raccordement (NPT/BSP gaz mâle) : **Ø 40x49 mm** [1" 1/2 M]		
Cylindrée du moteur hydraulique (tous les 2 clacs du piston) : environ **1.6 l** [0.4224 US Gallons]		

ATTENTION ! Le DOSATRON n'est pas préréglé, pour cela se reporter au paragraphe REGLAGE DU DOSAGE

ENCOMBREMENT		
Diamètre : **cm** ["]	**18.4** [7 1/4]	**18.4** [7 1/4]
Haut. totale : **cm** ["]	**59.1** [23 1/4]	**66.7** [26 1/4]
Larg. hors tout : **cm** ["]	**31** [12 1/4]	**31** [12 1/4]
Poids : ± **kg** [lbs]	**4** [8.8]	**4.5** [10]
Dimensions du colis : **cm** ["]	**60 x 36.5 x 24** [23 2/3 x 14 1/3 x 9 1/2]	**82 x 26 x 21** [32 1/4 x 10 1/4 x 8 1/4]
Poids du colis : ± **kg** [lbs]	**5.5** [12.15]	**7** [15.5]

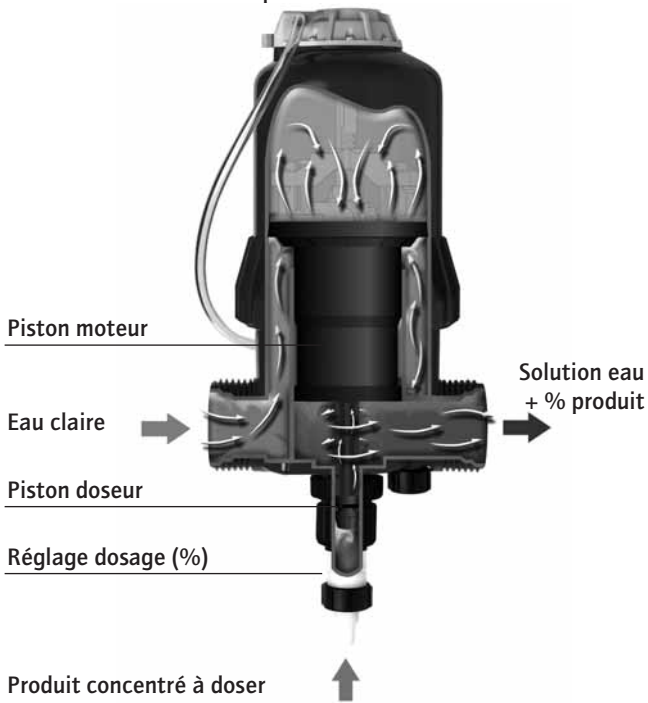
COMPOSITION DU COLIS : 1 DOSATRON / 1 support mural pour DOSATRON / 1 tuyau d'aspiration de produit concentré / 1 crépine / 1 manuel d'utilisation

Sommaire

FR

Précis, simple et fiable

Installé sur le réseau d'eau, le DOSATRON utilise la pression d'eau comme seule force motrice. Ainsi actionné, il aspire le produit concentré, le dose au pourcentage désiré, puis le mélange avec l'eau motrice. La solution réalisée est alors envoyée en aval. La dose de produit injecté est toujours proportionnelle au volume d'eau qui traverse le DOSATRON, quelles que soient les variations de débit ou de pression.



Installation

PRECAUTIONS

1 - GENERALITES

- Quand on connecte un DOSATRON, que ce soit au réseau d'eau public ou à son propre point d'eau, il est impératif de respecter les normes de protection et de disconnexion. DOSATRON recommande un disconnecteur afin d'éviter la contamination de l'alimentation d'eau.

- Dans le cas où l'installation serait plus haute que le DOSATRON lui-même, un risque de retour d'eau et de produit dans le DOSATRON est possible ; il est alors conseillé d'installer un clapet anti-retour en aval de l'appareil.
- Ne pas installer le DOSATRON au-dessus d'un bac d'acide ou de produit agressif, décaler le bidon et le protéger, à l'aide d'un couvercle, d'éventuelles émanations de produits.
- Tenir le DOSATRON éloigné des sources de chaleur importante et en hiver le mettre hors gel.
- Ne pas installer le DOSATRON sur le circuit d'aspiration de la pompe motrice (siphonnage).
- L'opérateur doit se tenir face au DOSATRON et porter des lunettes et des gants de protection lors de toute intervention.
- Pour assurer la précision du dosage, le remplacement annuel des joints de la partie dosage reste sous la seule responsabilité de l'utilisateur.
- Le réglage du dosage du Dosatron est sous la responsabilité exclusive de son utilisateur. Celui-ci est tenu de respecter rigoureusement les recommandations du fabricant des produits chimiques.
- S'assurer que le débit et la pression de l'eau de l'installation sont en conformité avec les caractéristiques du DOSATRON.
- L'utilisateur sera seul responsable du choix correct des réglages du DOSATRON pour l'obtention du dosage voulu.
- Une prise d'air, une impureté ou une attaque chimique du joint peut interrompre le bon fonctionnement du dosage. Il est recommandé de vérifier périodiquement que le produit concentré à doser est bien aspiré dans le DOSATRON.
- Changer le tuyau d'aspiration du DOSATRON dès que ce dernier semble détérioré par le concentré dosé.
- En fin d'utilisation, mettre le système hors pression (recommandé).

1 - GENERALITES (suite)

- Le rinçage (eau claire) du DOSATRON est impératif :
. à chaque changement de produit,
. avant chaque manipulation, afin d'éviter tout contact avec des produits agressifs.
- Pour le dosage de produits agressifs, merci de consulter votre vendeur avant toute utilisation pour confirmer la compatibilité avec le doseur.
- Tout montage ou tout serrage doit être fait sans outil et manuellement.

2 - EAUX CHARGEES

- Dans le cas d'eaux très chargées, installer **impérativement** en amont du DOSATRON un filtre à tamis (ex. : 300 mesh - 60 microns selon la qualité de votre eau). Si ce filtre n'est pas installé, des particules abrasives causeront l'usure prématurée du DOSATRON.

3 - COUPS DE BELIER / SURDEBIT

- Pour les exploitations sujettes aux coups de bélier, il est nécessaire d'installer un dispositif anti-bélier (système de régulation pression / débit).
- Pour les installations automatisées, utiliser de préférence des électrovannes à ouvertures et fermetures lentes.
- Dans le cas où un DOSATRON alimenterait plusieurs secteurs, actionner les électrovannes de façon simultanée (fermeture d'un secteur et ouverture d'un autre secteur en même temps).

4 - LOCALISATION DE L'INSTALLATION

- Le DOSATRON et le produit à doser doivent être accessibles. Leur installation ne doit en aucun cas présenter un risque de pollution ou de contamination.
- Il est recommandé d'équiper toutes les canalisations d'eau avec un marquage signalant que l'eau contient des additifs et porter la mention :
"ATTENTION ! Eau Non Potable".

5 - MAINTENANCE

- Après utilisation, il est recommandé de faire aspirer de l'eau claire (~ 1/4 litre [8 1/2 US Fl.oz]).
- Une maintenance annuelle optimisera la longévité de votre DOSATRON. Changer les joints de dosage au moins une fois par an, en fonction de son utilisation.

6 - SERVICE

- Ce DOSATRON a été testé avant son emballage.
- Des sous-ensembles de réparation et des pochettes de joints sont disponibles.
- Ne pas hésiter à appeler votre distributeur ou DOSATRON pour tout service après-vente.

L'INSTALLATION DOIT SE FAIRE SANS OUTIL

Le DOSATRON est livré avec :
- un support mural,
- un tuyau d'aspiration avec crépine.
- un tuyau (by-pass) Ø 6 x 9.

Le support permet la fixation murale du DOSATRON.
- Engager les queues d'aronde du DOSATRON **(Fig. 1-A)** dans le support mural **(Fig. 1-S)**.
- Enlever les écrous **(Fig. 1-E)** et les bagues crampées **(Fig. 1-C)** sur les orifices d'entrée et de sortie d'eau du DOSATRON.
- Enlever les bouchons de protection **(Fig. 1-B)** qui obturent les orifices de votre DOSATRON avant de le raccorder sur le réseau d'eau.
- Veiller au bon positionnement à l'entrée et à la sortie du système d'étanchéité. Placer d'abord le joint torique **(Fig. 1-J)** et ensuite la bague crampée **(Fig. 1-G)**.
- S'assurer que l'eau s'écoule dans le sens des flèches sur l'appareil.

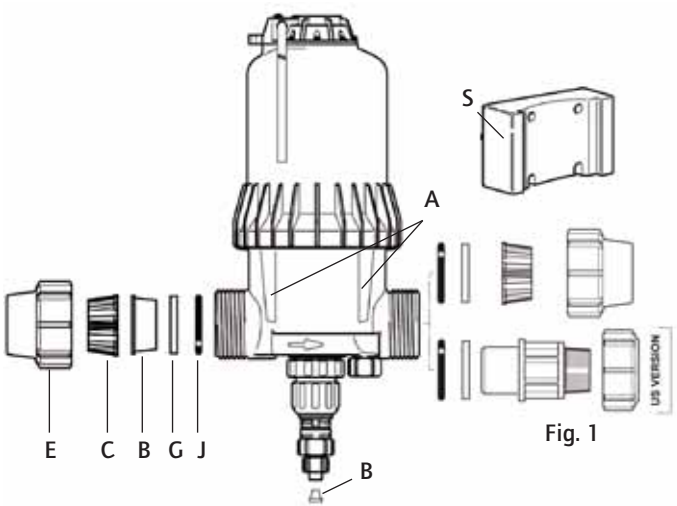


Fig. 1

Méthode à suivre pour raccordement avec tube polyéthylène et polypropylène :
- Placer sur le tube d'entrée et de sortie d'eau coupé proprement et chanfreiné, l'écrou **(Fig. 2-E)** et la bague crampée **(Fig. 2-C)**.
- Introduire le tube jusqu'en butée dans les orifices d'entrée et de sortie d'eau **(Fig. 2)**.
- Pousser jusqu'en butée la bague crampée **(Fig. 2-C)** sur l'entrée, puis l'autre sur la sortie d'eau.
- Serrer l'écrou **(Fig. 2-E)**.

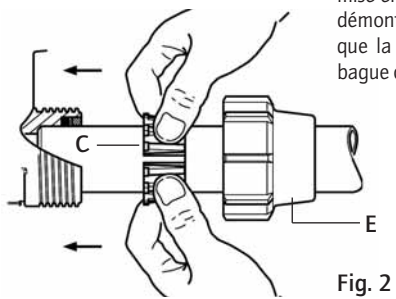


Fig. 2

Méthode à suivre pour raccordement avec tube PVC :
- Procéder comme pour le raccordement de tube polyéthylène ou polypropylène, mais avant de serrer, enduire de colle PVC la place qu'occupera la bague crampée.
- Avancer la bague crampée en position, en l'écartant avec les deux pouces placés dans la fente **(Fig. 2-C)** pour ne pas racler la colle, puis procéder au serrage de l'écrou.

NOTA : Attendre une heure avant la mise en pression du circuit. Pour tout démontage ultérieur, il faut savoir que la colle PVC n'adhère pas à la bague crampée qui est en polyacétal.

Le raccordement de l'appareil au réseau d'eau peut s'effectuer à l'aide de tuyaux souples de 40 mm de diamètre intérieur fixés à l'aide de colliers et raccords à écrous tournants Ø 40 x 49 mm [1"1/2]. S'assurer que l'eau s'écoule dans le sens des flèches sur l'appareil.

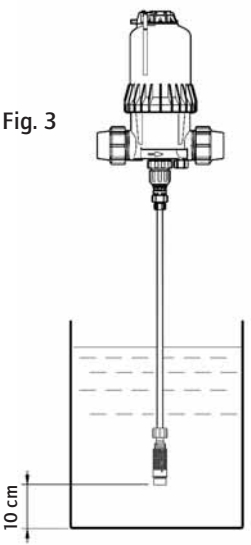
Le DOSATRON est livré avec un tuyau d'aspiration (à raccourcir suivant besoin) qui permet son utilisation avec un récipient de grande contenance. **Ce tuyau doit être muni obligatoirement de la crépine et du lest.**
Pour le raccordement de ce tuyau, voir le chapitre correspondant.

NOTA : La hauteur d'aspiration est de 4 mètres maximum [13 ft].

- Raccorder le tuyau muni de sa crépine et de son lest, le plonger dans la solution à doser.

ATTENTION ! Laisser la crépine à 10 cm [4"] environ du fond du bac de solution afin d'éviter d'aspirer les particules non solubles qui risquent d'endommager le corps doseur (Fig. 3).
- Ne pas poser la crépine sur le sol.

Fig. 3



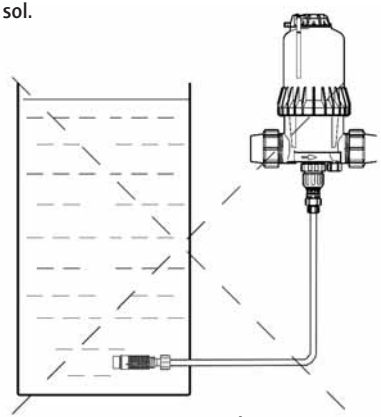


Fig. 4

▲ **CE QUE VOUS NE DEVEZ PAS FAIRE**

◀ **CE QUE VOUS DEVEZ FAIRE**

En aucun cas le niveau de la solution ne doit être au-dessus de l'entrée d'eau dans le DOSATRON, afin d'éviter tout siphonage .

CONSEIL D'INSTALLATION

Sur la canalisation d'eau, les montages peuvent être faits en ligne **(Fig. 5)**, en by-pass, conseillés **(Fig. 6)**. Si votre débit est supérieur aux limites du DOSATRON, voir **§ SURDEBIT**.

Le montage en by-pass permet l'alimentation en eau claire de l'installation sans faire fonctionner le DOSATRON et permet le démontage aisé de celui-ci.

Afin de préserver la longévité du DOSATRON, il est conseillé de monter un filtre (300 mesh -60 microns) en amont de celui-ci. Cette précaution est indispensable quand l'eau est chargée en impuretés ou particules, surtout si l'eau provient d'un forage. **Le filtre est conseillé et nécessaire pour que la garantie soit valable.**

Pour toute installation sur le réseau d'eau potable, respectez les normes et réglementations en vigueur dans le pays.

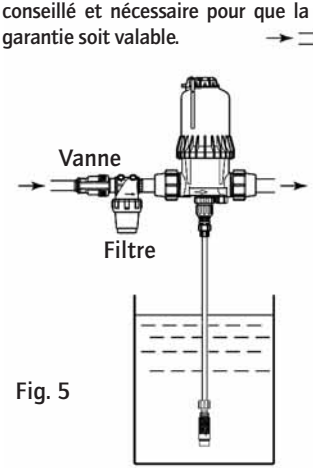


Fig. 5

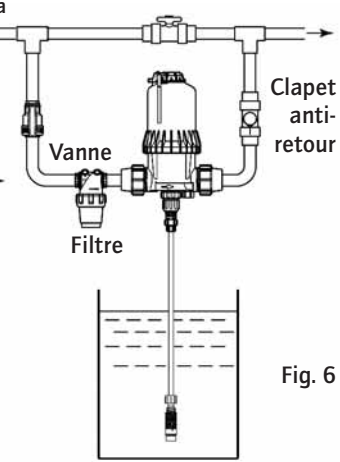


Fig. 6

Surdébit (à titre indicatif)
Si votre DOSATRON claque plus de **36 coups**, soit **18 cycles** en **15 secondes**, vous êtes en limite de capacité de débit supérieur. Pour aller au-delà, choisir un DOSATRON à capacité de débit d'eau supérieur.

Mise en service du DOSATRON

FR

PREMIERE MISE EN SERVICE

- Placer le levier by-pass **(Fig. 7-L)** sur la position **ON**.
- Ouvrir progressivement l'arrivée d'eau, le DOSATRON s'auto-amorce.
- Le laisser fonctionner jusqu'à ce que le produit à doser monte dans la partie dosage (visualisation à travers le tuyau transparent).
- Le DOSATRON émet un "clic clac" caractéristique de son fonctionnement.

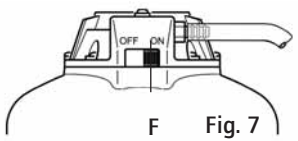


Fig. 7

NOTA : Le temps d'amorçage de la solution dosée est fonction du débit, du réglage du dosage et de la longueur du tuyau d'aspiration de produit. Pour accélérer l'amorçage, régler le dosage au maximum. Une fois l'amorçage réalisé, faire chuter la pression à zéro et régler le dosage à la valeur désirée **(voir § REGLAGE DU DOSAGE)**.

BY-PASS HYDRAULIQUE INCORPORÉ

Système de mise en route ou arrêt d'aspiration de produit :
Une pression de **0.8 bar minimum** d'eau de commande est nécessaire pour obtenir un bon fonctionnement du by-pass.
- By-pass sur **OFF (Fig. 8-L)**, le DOSATRON est arrêté et n'aspire pas le produit.
- By-pass sur **ON (Fig. 9-L)**, le DOSATRON fonctionne, il aspire, injecte et mélange le produit concentré dans l'eau au % choisi.

Fig. 8

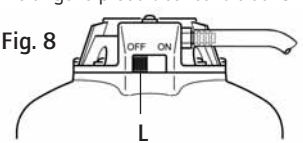
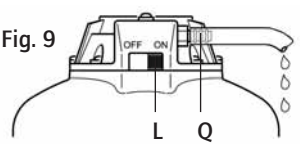


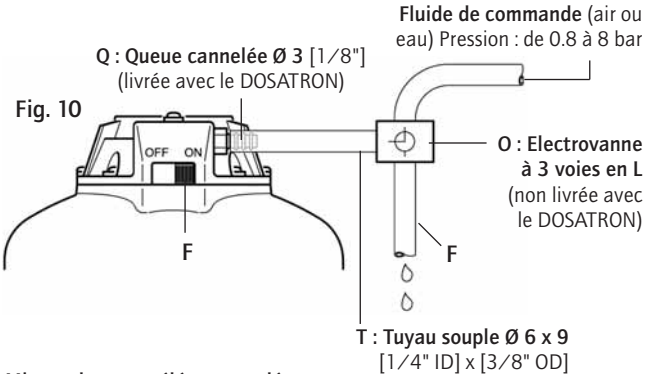
Fig. 9



ATTENTION ! Lorsque l'on passe de la position OFF à la position ON, il est normal qu'une petite quantité d'eau s'évacue par la queue cannelée Ø 3 [1/8"] (Fig. 9-Q).

BY-PASS COMMANDE HYDRAULIQUEMENT

Système de mise en route ou arrêt d'aspiration de produit :
Une pression de **0.8 bar minimum** d'eau de commande est nécessaire pour obtenir un bon fonctionnement du by-pass.
NOTA : En utilisation du by-pass télécommandé, le levier de commande manuelle **(Fig. 10-L)** doit être sur la position **ON**.

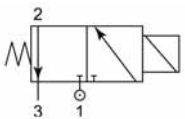


Mise en by-pass télécommandé :
- Ouverture de l'électrovanne.

NO (normalement ouvert) : **1 vers 2** > Utilisation : Arrivée eau de commande du by-pass Mise en by-pass (arrêt du DOSATRON)
3 > Echappement fermé

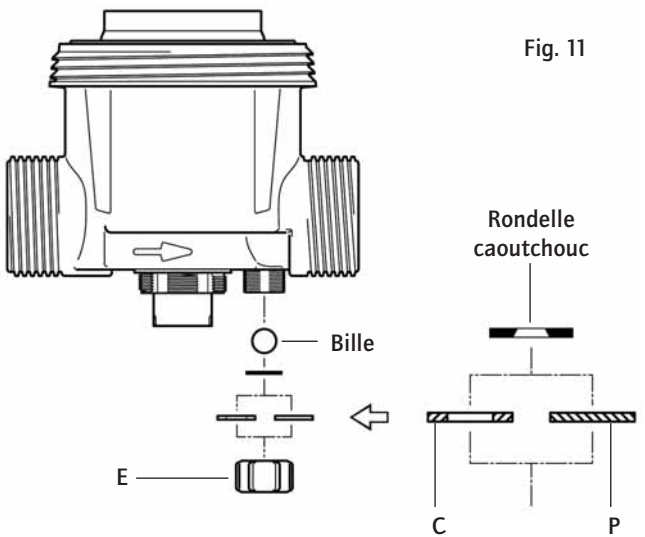
Mise en route du DOSATRON :
- Fermeture de l'électrovanne.

NF (normalement fermé) : **2 vers 3** > Echappement : Echappement eau de commande à l'extérieur
Mise en route du DOSATRON
1 > Pression en attente



BY-PASS COMMANDE HYDRAULIQUEMENT (suite)

Dispositif automatique anti-siphonnage du produit :
- Il rétablit automatiquement la pression atmosphérique dans l'installation en cas de dépression accidentelle* **(Fig. 11)**. Son utilisation relève de la réglementation sanitaire en vigueur dans le pays.
- Se conformer aux dispositions prévues.
- Pour le mettre en service, dévisser l'écrou **(Fig. 11-E)** enlever la rondelle métallique pleine **(Fig. 11-P)** et la remplacer par la rondelle creuse **(Fig. 11-C)** qui se trouve dans le colis.
- Revisser l'écrou **(Fig. 11-E)**.



*exemple : cas où la sortie doseur est plus basse que l'entrée.

Entretien

RECOMMANDATIONS

1 - Lorsque vous utilisez des produits solubles mis en solution, il est conseillé de démonter périodiquement la partie dosage complète **(§ CHANGEMENT DES JOINTS DE DOSAGE).**
Rincer abondamment les éléments de la partie dosage à l'eau claire, les remonter en ayant au préalable graissé avec une graisse au silicone le joint repéré **(Fig. 12).**

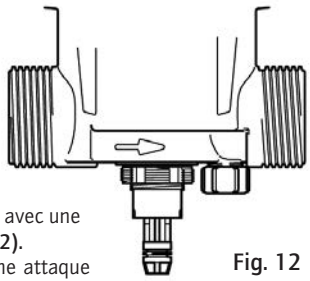
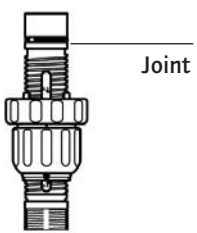


Fig. 12

2 - Une prise d'air, une impureté ou une attaque chimique du joint peut interrompre le bon fonctionnement du dosage. Il est recommandé de vérifier périodiquement que le produit concentré à doser est bien aspiré dans le DOSATRON.
3 - Avant la remise en service du DOSATRON en début de période d'utilisation, sortir le piston moteur et le tremper dans de l'eau **tiède** (< 40° C) pendant quelques heures. Cette opération permet d'éliminer les dépôts ayant séchés dans le piston moteur.



VIDANGE DU DOSATRON (dans le cadre d'une mise hors gel)

- Fermer l'arrivée d'eau et faire chuter la pression à zéro.
- Enlever la partie dosage.
- Enlever la cloche et le moteur, **§ NETTOYAGE DU FILTRE INCORPORE**.
- Débrancher les raccords à l'entrée et à la sortie d'eau.
- Vider le corps principal après l'avoir enlevé du support mural.
- Procéder au remontage en ayant au préalable nettoyé le joint d'étanchéité (**Fig. 14-N** page suivante).

NETTOYAGE DU FILTRE INCORPORE 500 microns - 32 mesh

Périodicité : Une fois par mois suivant utilisation.

Démontage du filtre

- Fermer l'arrivée d'eau et chuter la pression à zéro.

Avant d'accéder au filtre, suivre les procédures chronologiques de démontage décrites au § CHANGEMENT DU PISTON MOTEUR.

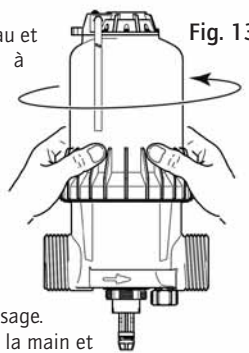


Fig. 13

- Enlever la partie dosage.
- Dévisser la cloche à la main et la retirer **(Fig. 13)**.
- Enlever le piston moteur **(Fig. 14-M)**.
- Sortir le filtre **(Fig. 14-F)**.
- Enlever le joint d'étanchéité **(Fig. 14-N)**.
- Nettoyer le filtre et le joint à l'eau claire.

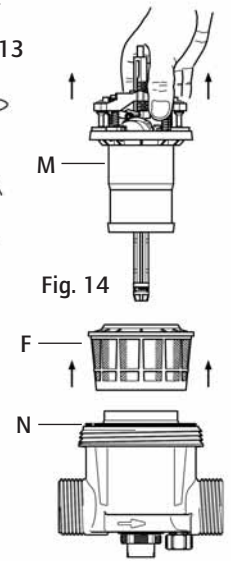


Fig. 14

Remontage du filtre

- Avant le remontage, s'assurer que les portées du filtre et celles du joint d'étanchéité **(Fig. 14-N)** sur le corps et sur la cloche sont propres. Remplacer le joint si nécessaire.
- Graisser le filetage du corps de pompe (graisse silicone).
- Opérations inverses du démontage.

Important : dans tous les cas, le serrage doit s'effectuer à la main.

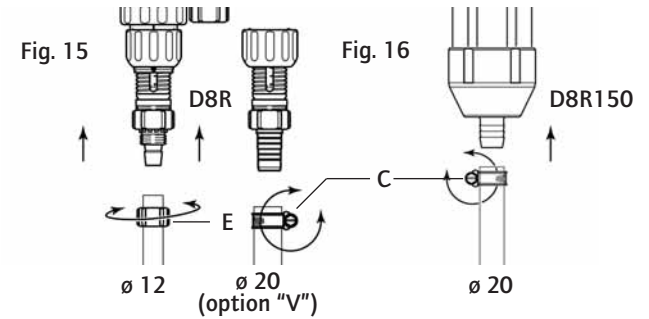
CONVERSIONS - Mesures internationales

Principe : Réglage à 1% ⇒ 1/100 = 1 volume de produit concentré pour 100 volumes d'eau.
Ex. : Réglage à 2 % ⇒ 2/100 = 2 volumes de produit concentré pour 100 volumes d'eau.
Rapport ⇒ 1/50.

RACCORDEMENT DU TUYAU D'ASPIRATION

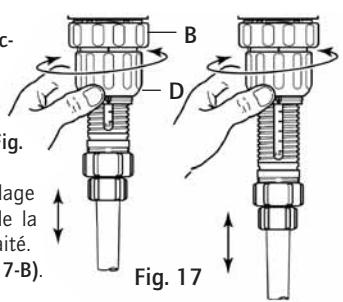
Dans le cas de raccordement sur un DOSATRON déjà utilisé, consulter **impérativement le § PRECAUTIONS.**

- Dévisser l'écrou **(Fig. 15-E)** du bas de la partie dosage et enfiler le tuyau d'aspiration dans l'écrou.
- Pousser **à fond** le tuyau sur l'embout cannelé et revisser l'écrou **à la main**.
- Pour le tuyau d'aspiration Ø 20 (D8RV et D8R150), dévisser à l'aide d'un tournevis, le collier **(Fig. 16-C)** monté sur le tuyau d'aspiration.
- Enfiler le tuyau **à fond** sur l'embout cannelé, revisser le collier.



REGLAGE DU DOSAGE (hors pression)

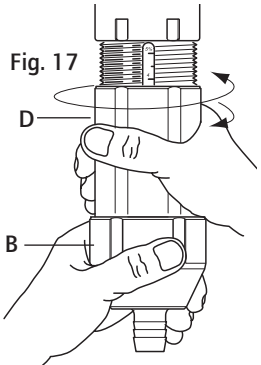
ATTENTION ! Ne pas utiliser d'outil.
Le réglage du dosage doit-être effectué hors pression, après fermeture arrivée d'eau.
Modèle D8R
- Desserrer la bague de blocage **(Fig. 17-B)**.
- Visser ou dévisser la douille de réglage **(Fig. 17-D)** pour amener le haut de la douille sur le repère du dosage souhaité.
- Resserrer la bague de blocage **(Fig. 17-B)**.



REGLAGE DU DOSAGE (suite)

Modèle D8R150
- Desserrer la bague de blocage **(Fig. 17-B)**.
- Visser ou dévisser la douille de réglage **(Fig. 17-D)** pour amener le haut de la douille sur le repère du dosage souhaité.
- Resserrer la bague de blocage **(Fig. 17-B)**.

RAPPEL : La quantité de produit injecté est proportionnelle à la quantité d'eau qui entre dans le DOSATRON. 1% ⇒ 1/100, rapport de 100 volumes d'eau + 1 volume de produit injecté.

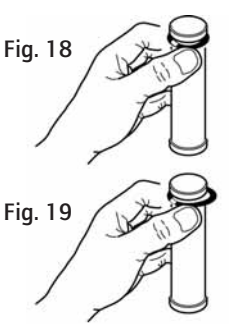


CHANGEMENT DES JOINTS DE LA PARTIE DOSAGE (hors pression)

Périodicité : au moins une fois par an.
ATTENTION ! Ne pas utiliser d'outil ou d'ustensile métallique.

CONSEIL : Avant tout démontage de la partie dosage, il est conseillé de faire fonctionner le DOSATRON en aspirant de l'eau claire afin de rincer le système d'injection. Ceci évite tout risque de contact avec des produits pouvant se trouver dans la partie dosage. Porter des lunettes et des gants de protection lors de toute intervention de cette nature !

METHODE POUR RETIRER UN JOINT
Fig. 18 : Entre le pouce et l'index, pincer la pièce et le joint ; le repousser vers le côté opposé pour le déformer.
Fig. 19 : Accentuer la déformation pour saisir la partie du joint qui dépasse, dégager ensuite ce dernier hors de sa gorge.
Nettoyer la portée de joint sans outil.
Le remontage se fait à la main.
Il est très important que le joint ne soit pas vrillé une fois en place car l'étanchéité ne serait pas assurée.



NETTOYAGE ET REMONTAGE DU CLAPET D'ASPIRATION

- Fermer l'arrivée d'eau et faire chuter la pression à zéro.

Modèle D8R

- Dévisser l'écrou **(Fig. 20/21-E)** et enlever le tuyau d'aspiration.
- Pour le tuyau d'aspiration Ø 20 (option V), dévisser à l'aide d'un tournevis, le collier **(Fig. 21-C)** monté sur le tuyau d'aspiration.
- Dévisser et enlever l'écrou noir **(Fig. 20/21-N)**.
- Tirer vers le bas pour dégager l'ensemble du clapet d'aspiration.
- Rincer abondamment à l'eau claire les différentes parties, les remonter dans l'ordre du schéma **(Fig.20/21-P)** et vérifier que le ressort de rappel est bien actif.
- Remonter dans le sens inverse du démontage **à la main**.

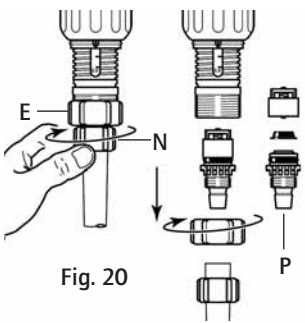


Fig. 20

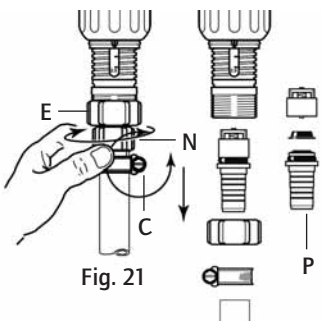


Fig. 21

Modèle D8R150

- Dévisser la bague de blocage **(Fig. 22-A)**.
- Tirer vers le bas pour dégager l'ensemble du clapet d'aspiration.
- Rincer abondamment à l'eau claire les différentes parties, les remonter dans l'ordre du schéma **(Fig.22-P)** et vérifier que le ressort de rappel est bien actif.
- Remonter dans le sens inverse du démontage **à la main**.

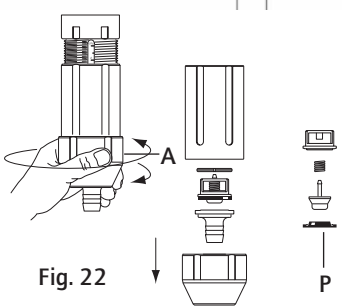


Fig. 22

CHANGEMENT DES JOINTS DE DOSAGE

- Fermer l'arrivée d'eau et faire chuter la pression à zéro.
- Démonter le tuyau d'aspiration de produit, dévisser la partie dosage comme décrit dans le chapitre précédent et tirer vers le bas pour la dégager.
- Changer le joint du corps doseur **(Fig. 23-O)** et celui du plongeur **(Fig. 23-P)**.
- Pour le D8R, dévisser l'écrou de maintien du clapet d'aspiration **(Fig. 23-E)** en prenant garde de ne pas perdre les éléments du clapet, puis changer le joint torique **(Fig. 23-T)** et le joint de clapet **(Fig. 23-C)**.
- Pour le D8R150, tout en maintenant l'écrou **(Fig. 23-S)**, dévisser la chemise doseur **(Fig. 23-U)** et tirer vers le bas.
- Remonter dans l'ordre inverse du démontage.

Nota : La réglette de dosage **(Fig. 23-L)** doit être positionnée face à vous.

- Visser la bague de retenue **(Fig. 23-R)** jusqu'au blocage.

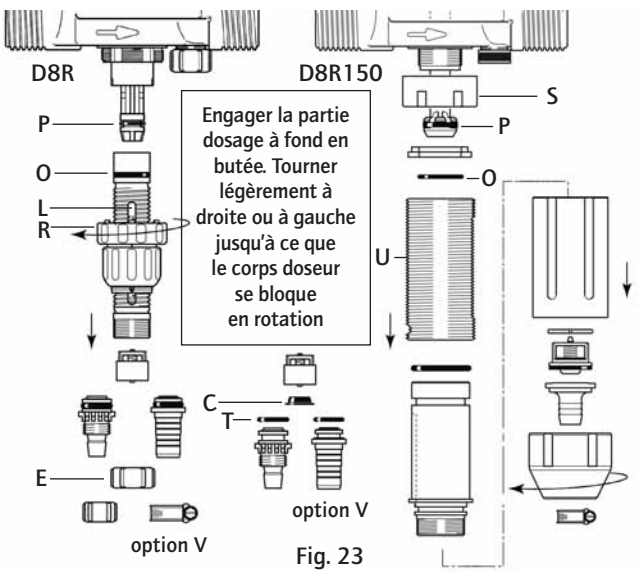


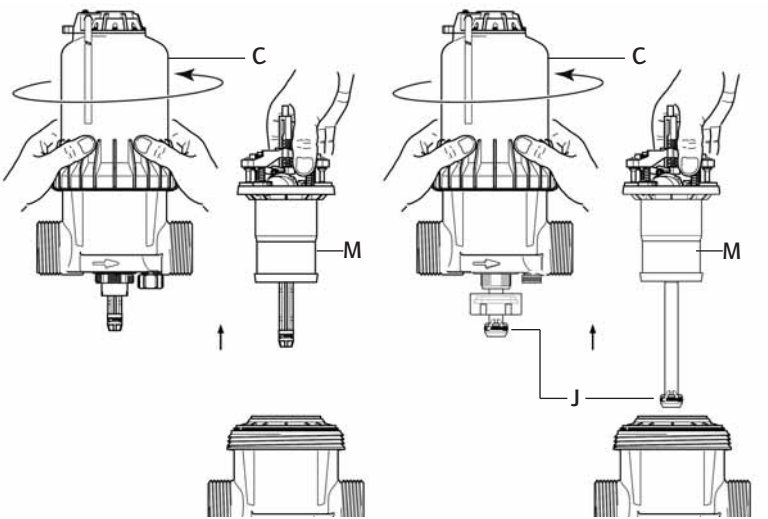
Fig. 23

CHANGEMENT DU PISTON MOTEUR (hors pression)

- Fermer l'arrivée d'eau et faire chuter la pression à zéro.
- Démonter la partie dosage comme indiqué au § précédent.
- Dévisser la cloche à la main **(Fig. 24-C)** et la retirer.
- Sortir l'ensemble piston moteur **(Fig. 24-M)** en tirant vers le haut, en prenant soin de guider le joint **(Fig. 24-J)**.
- Changer et remonter l'ensemble dans le sens inverse du démontage.
- Remonter la cloche en prenant garde de ne pas abîmer son joint et la visser à la main.
- Remonter la partie dosage.

Fig. 24

D8R **D8R150**



Désignation / référence

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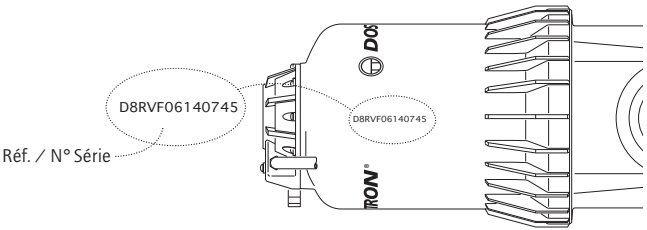


REF. / N° Série : .....

EXEMPLE	D8R	BP	V	AF	P	H	ii

- Type de DOSATRON
- BP : By-pass intégré
- V : Produits Visqueux (200-400 cSt)
- Joints Dosage :
  - AF = PH 7-14
  - VF = PH 1-7
- Couleur : - = Bleu
  - P = Blanc
  - R = Rouge
  - V = Vert
  - J = Jaune
  - O = Orange
- H = Hastelloy
- Autres extensions (à nous préciser)

Incidents possibles

SYMPTOME	CAUSE	REMEDE
Piston moteur		
Votre DOSATRON ne démarre pas ou s'arrête	Piston moteur bloqué	Relancer le piston moteur en l'actionnant manuellement
	Surdébit	1. Réduire le débit, remettre en route 2. Vérifier la présence des joints des soupapes du moteur
	By-pass ouvert ou à demi fermé	Placer le levier sur position "ON"
	Piston moteur cassé	Renvoyer le DOSATRON à votre distributeur.
	Filtre colmaté	Nettoyer le filtre : § p19
Dosage		
Refoulement dans le bac de produit	Clapet d'aspiration ou joint de clapet sale, usé ou absent	A nettoyer ou à remplacer
Pas d'aspiration de produit	Le piston moteur est arrêté	Voir § **Incidents Piston moteur**
	Prise d'air au niveau du tuyau d'aspiration	Vérifier le tuyau d'aspiration et le serrage de ses écrous
	Tuyau d'aspiration obstrué ou crépine colmatée	Les nettoyer ou les remplacer
	Joint du clapet d'aspiration usé, mal monté ou encrassé	Le nettoyer ou le remplacer
	Joint de plongeur mal monté, encrassé ou gonflé	Le nettoyer ou le remplacer

SYMPTOME	CAUSE	REMEDE
Dosage		
Pas d'aspiration de produit	Corps doseur rayé	Le remplacer
Sous dosage	Prise d'air	1. Vérifier le serrage des écrous de la partie dosage 2. Vérifier l'état du tuyau d'aspiration
	Joint du clapet d'aspiration usé ou sale	Le nettoyer ou le remplacer
	Surdébit (cavitation)	Réduire le débit
	Joint de plongeur usé	Le remplacer
	Corps doseur rayé	Le remplacer
Fuites		
Fuites à proximité de la bague de fixation sous le corps de pompe	Joint de chemise abîmé, mal positionné ou absent	Le positionner correctement ou le remplacer
Fuites entre la douille de réglage et la bague de blocage	Joint de corps doseur abîmé, mal positionné ou absent	Le positionner correctement ou le remplacer
Fuites entre le corps et la cloche	Joint de cloche abîmé, mal monté ou absent	Le positionner correctement, nettoyer la portée de siège du joint ou le remplacer.

DOSATRON INTERNATIONAL
DECLINE TOUTE RESPONSABILITE EN CAS D'UTILISATION
NON CONFORME A LA NOTICE D'EMPLOI.

Garantie

DOSATRON INTERNATIONAL S.A. s'engage à remplacer toute pièce reconnue défectueuse d'origine pendant une période de douze mois à compter de la date de l'achat par l'acheteur initial.

Pour obtenir le remplacement sous garantie, l'appareil ou la pièce détachée doit être renvoyé avec la preuve d'achat initial au fabricant ou au distributeur agréé.
Il pourra être reconnu défectueux après vérification des services techniques du fabricant ou du distributeur.

L'appareil doit être rincé de tout produit chimique et envoyé au fabricant ou au distributeur port payé, puis il sera retourné gratuitement après réparation si celle-ci est couverte par la garantie.

Les interventions réalisées au titre de la garantie ne pourront avoir pour objet d'en prolonger la durée.

Cette garantie ne s'applique qu'aux défauts de fabrication.

Cette garantie ne couvre pas les défauts constatés provenant d'une installation anormale de l'appareil, de la mise en œuvre d'outillages non appropriés, d'un défaut d'installation ou d'entretien, d'un accident d'environnement ou par la corrosion due à des corps étrangers ou des liquides trouvés à l'intérieur ou à proximité de l'appareil.

Pour le dosage de produits agressifs, merci de consulter votre vendeur avant toute utilisation pour confirmer la compatibilité avec le doseur.

Les garanties ne comprennent pas les joints (pièces d'usure) ni les dommages causés par les impuretés de l'eau, tel que le sable.

Un filtre (ex. : 300 mesh - 60 microns selon la qualité de votre eau) doit être installé devant l'appareil pour valider cette garantie.

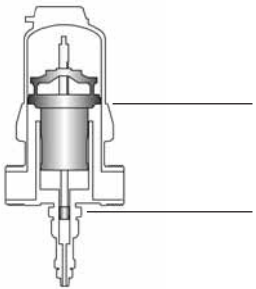
DOSATRON INTERNATIONAL S.A. décline toute responsabilité si l'appareil est utilisé dans des conditions non conformes aux prescriptions et tolérances du manuel d'utilisation.

Il n'y a pas de garantie explicite ou implicite relative à d'autres produits ou accessoires utilisés avec les appareils de DOSATRON INTERNATIONAL S.A.

Ne pas hésiter à appeler votre distributeur ou Dosatron pour tout service après-vente.

CONNAITRE VOTRE DEBIT

UNE METHODE SIMPLE
LE DOSATRON EST CONSTITUE :

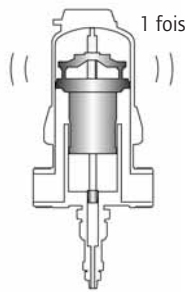


D'un moteur hydraulique volumétrique à piston entraînant :

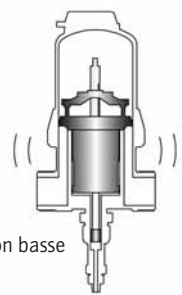
Un piston de dosage.

La cadence du moteur est proportionnelle au débit d'eau passant par l'appareil.

Dans son mouvement de va-et-vient, le piston moteur claque :



1 fois en position haute



1 fois en position basse

Comptez le nombre de clacs en **30** secondes x 100
= **Débit d'eau en litres/H.**

NOTA : Cette méthode de calcul ne saurait remplacer un débitmètre. Elle est donnée seulement à titre indicatif.

English

GB

You have just become the owner of one of the latest in the line of DOSATRON proportional dosing pumps and we congratulate you on your choice.
The development of this model is the result of over 30 years experience. Our engineers have placed the DOSATRON series at the forefront of technical development in the field of non-electric proportional dosing pumps.
The choice of materials used in manufacture was most meticulous in order to resist chemical attack from the great majority of injectable products on the market. This DOSATRON will, as time goes by, prove itself to be a most faithful ally.
A little care and attention, regularly spent, will guarantee you an operation in which the word breakdown has no place.

THEREFORE, PLEASE, READ THIS MANUAL CAREFULLY BEFORE PUTTING THE DOSATRON INTO OPERATION.

Important !
The complete model reference and the serial number of your DOSATRON is stamped **on the pump body.**
Please record this number in the space below and refer to it when you call your distributor for information, parts, and service.

Ref. # .....

Serial # .....

Purchase Date .....

....

SPECIFICATIONS

	D 8 R	D 8 R 150
Practical operating **flow range**: **500 l/h mini - 8 m³ maxi [**2.2 Fl oz/min - 40 US GPM]		
Operating **pressure**:		
bar	**0.15 - 8**	**0.15 - 8**
PSI	2 - 110	2 - 110
Externally adjustable injection rate:		
%	**0.2 - 2**	**1 - 5**
ratio	1:500 - 1:50	1:100 - 1:20
Concentrated additive injection:		
Mini l/h - Maxi l/h	**1 - 160**	**5 - 400**
US Fl. oz/min	0.56	2.8
US GPM/max	0.70	1.76
Maximum operating **temperature**: **40 °C** [104 ° F]		
Connections (NPT/BSP male): **Ø 40x49 mm** [1" 1/2 M]		
Hydraulic motor capacity (for every 2 clicks of the piston) : about **1.6 l** [0.4224 US Gallons]		

NOTE: The Dosatron is not preset, see chapter ADJUSTING THE INJECTING RATE

UNIT SIZE

Diameter: **cm** ["]	**18.4** [7 1/4]	**18.4** [7 1/4]
Total height: **cm** ["]	**59.1** [23 1/4]	**66.7** [26 1/4]
Width: **cm** ["]	**31** [12 1/4]	**31** [12 1/4]
Weight: ± **kg** [lbs]	**4** [8.8]	**4.5** [10]
Packaging size: **cm** ["]	**60 x 36.5 x 24** [23 2/3 x 14 1/3 x 9 1/2]	**82 x 26 x 21** [32 1/4 x 10 1/4 x 8 1/4]
Packaging weight: ± **kg** [lbs]	**5.5** [12.15]	**7** [15.5]

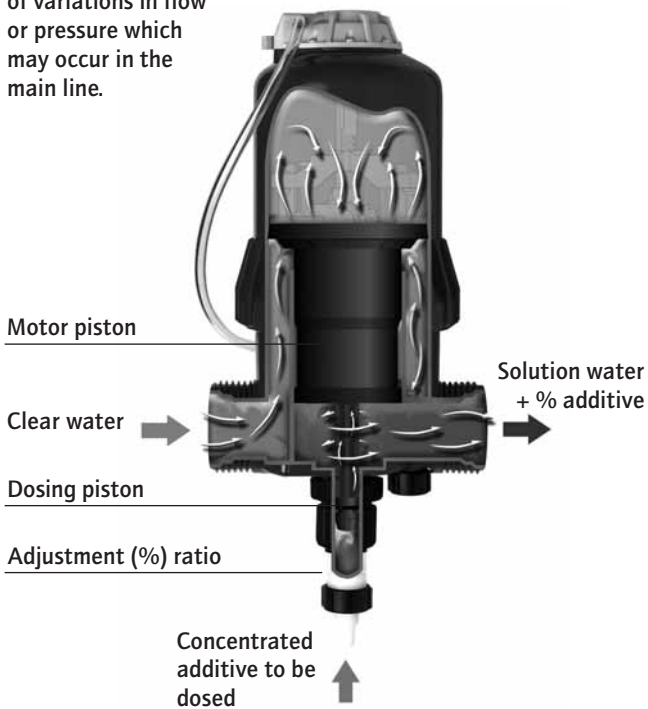
PACKAGE CONTENTS: 1 DOSATRON / 1 mounting bracket for DOSATRON / 1 suction tube of concentrated additive / 1 strainer / 1 owner's manual

Summary

GB

Precise, simple and reliable

Installed directly in the water supply line, the DOSATRON operates by using water pressure as the power source. The water activates the DOSATRON, which takes up the required percentage of concentrate. Inside the DOSATRON, the concentrate is mixed with the water. The water pressure forces the solution downstream. The dose of concentrate will be directly proportional to the volume of water entering the DOSATRON, regardless of variations in flow or pressure which may occur in the main line.



Installation

PRECAUTIONS

1 - GENERAL REMARKS

- When connecting a DOSATRON either to the public water supply or to its own water source, you must respect the regulations in force concerning protection of the source i.e. backflow prevention, etc.

- In a case where the downstream water installation is higher than the DOSATRON itself, there is a possible risk of water and concentrate flowing back through the DOSATRON. In this case, installing a check valve downstream is recommended.
- Do not install the DOSATRON just above an acid container, (risk of acid fumes attacking the DOSATRON) and protect it from possible contact with corrosive products.
- Protect the DOSATRON from freezing temperatures by draining it and store it away from sources of excessive heat.
- Do not install the DOSATRON on the suction side of the supply pump (risk of siphoning).
- During any intervention the operator must stay in front of the DOSATRON and wear protective eyewear and gloves.
- It is the responsibility of the owner/operator to replace the injection seals annually to ensure precise injection.
- The setting of the Dosatron's dosing rate is the sole responsibility of the user. The user has to respect the recommendations given by the manufacturer of the chemical product.
- It is the responsibility of the owner/operator to check that the flow and pressure of the installation do not exceed the DOSATRON characteristics.
- It is the responsibility of the owner/operator of the DOSATRON, to determine the correct amount of solution and injection ratio to obtain the desired result.
- An air inlet, an impurity or a chemical attack on a seal can interrupt the dosing function. It is recommended to periodically check that the solution is being correctly drawn up into the DOSATRON.
- Change the suction tube as soon as it seems damaged by the chemical.
- Relieve the pressure after use (advised).
- Rinsing of the DOSATRON is required :

. when changing chemicals,

. before handling the DOSATRON, to avoid any contact with the chemical.

PRECAUTIONS (cont...)

1 - GENERAL REMARKS (cont...)

- Before applying any aggressive chemicals, please consult your distributor to confirm compatibility with the dosing pump.

- All assembly should be done without tools, hand tighten only.

2 - WATER WITH HIGH PARTICLE CONTENT

- A (ex.: 300 mesh - 60 microns depending on your water quality) water filter must be installed upstream from the DOSATRON (see accessories), if a filter is not installed abrasive substances will cause the DOSATRON to deteriorate prematurely.

3 - WATER-HAMMER / EXCESSIVE FLOW

- For installations subject to water hammer a protection device such as a check valve or union ball check must be fitted (pressure/flow control system).
- For automatic installations, slow opening and closing solenoid valves are preferable.
- In an installation where a DOSATRON serves several sectors, the closing of one sector and the opening of another sector must be done at the same time (simultaneous operation of the solenoid valves).

4 - INSTALLATION LOCATION

- The location of the DOSATRON and concentrate container should be accessible, but should never present a risk of pollution or contamination.
- It is recommended to label all water lines with a warning about the injected solution i.e. Not For Human Consumption.

5 - MAINTENANCE

- Rinse the injection areas after using the DOSATRON. To do this, insert suction tube into a container of clean water and inject about 1/4 liter [8 1/2 US Fl.oz].
- Routine maintenance once a year will add to the life of your DOSATRON. Change the dosing seals at least once a year, depending on its use.

6 - SERVICE

- This DOSATRON was tested prior to packaging.
- Complete maintenance and seal kits are available.
- Call your DOSATRON distributor for service or parts.

ASSEMBLING THE DOSATRON

ASSEMBLY SHOULD BE CARRIED OUT WITHOUT THE USE OF TOOLS

The DOSATRON is delivered with :
- a mounting bracket,
- a suction tube with a strainer.
- 1 by-pass tube ø 6 x 9 [1/4" ID x 3/8" OD]

The bracket enables the DOSATRON to be fixed to a wall.
- Slide dovetails on the pump body **(Fig. 1-A)** into the support bracket **(Fig. 1-S)**.
- Remove the nuts **(Fig. 1-E)** and ferrules **(Fig. 1-C)** from the DOSATRON inlet and outlet.
- Remove the plastic caps **(Fig. 1-B)** which block the inlet and outlet of your DOSATRON before connecting to the water supply.
- Make sure the watertight seals at the inlet and outlet of the DOSATRON are correctly positioned : first position the <O> ring **(Fig. 1-J)** and then the spacing ring **(Fig. 1-G)**.
- Make certain that the water flows in the direction of the arrows on the pump body.

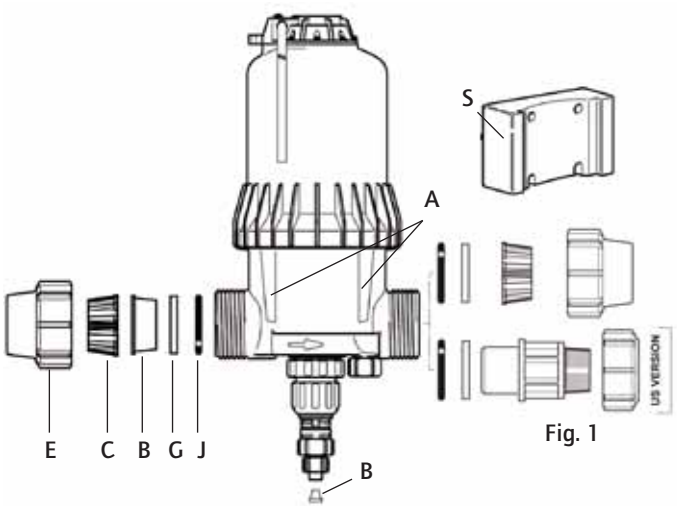


Fig. 1

For connecting to polyethylene or polypropylene pipe :
- Bevel the end of the pipe and slide on nut **(Fig. 2-E)** and then ferrule **(Fig. 2-C)**.
- Slide pipes into water inlet and outlet **(Fig. 2)** as far as they will go.
- Push one ferrule **(Fig. 2-C)** against the inlet and the other against the outlet.
- Tighten the nuts **(Fig. 2-E)**.

For connecting to PVC pipe :
- Proceed as for the polyethylene and polypropylene pipes but spread PVC adhesive on the pipe where the ferrules are to be mounted.
- Then place the ferrules over the pipe using both thumbs in the slot to widen the ferrule **(Fig. 2-C)** and avoid scraping off the adhesive, then tighten the nut.

NOTE : Wait for one hour before putting into operation.
The ferrule made of polyacetal will not adhere to the PVC glue and can therefore be dismantled easily at a later date.

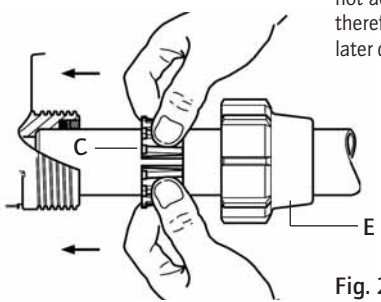


Fig. 2

The connection of the DOSATRON to the water network can be done with flexible hoses (internal diameter 40 mm) to be fixed by means of clamps and turning adapters ø 40 x 49 mm [1"1/2]. Make sure the water is flowing according to the direction arrow on the pump body.

The DOSATRON is delivered with a suction hose (cut it to the needed length) enabling its use with a large capacity concentrate container.
The hose must be fitted with its strainer and weights.
The instructions for fitting the hose are to be found in the specific chapter.

NOTE : The maximum suction height is 4 meters (13 vertical feet).

- Fit the hose, equipped with its strainer and its weight, and immerse it in the solution to be injected.

IMPORTANT ! - Do not put the suction tube strainer on the bottom of the stock solution container. The strainer must be suspended at least 10 cm [4"] above the bottom of the tank to avoid sucking up the insoluble particles that may damage the injection assembly (Fig. 3).
- Do not put the strainer on the ground.

Fig. 3

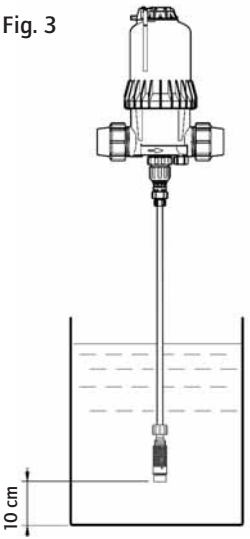
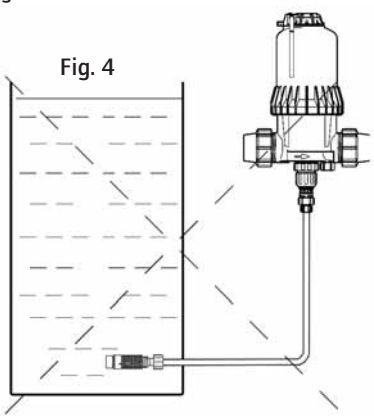


Fig. 4



WHAT YOU MUST NOT DO ▲

◀ WHAT YOU SHOULD DO

Under no circumstance should the solution level be above the water inlet of the DOSATRON (to avoid siphoning situations).

INSTALLATION HINTS

The DOSATRON can be connected to the main water line **directly (Fig. 5)** ; on a **by-pass (Fig. 6)**, recommended. If your flow rate is above the operating limits of the DOSATRON, see **§ EXCESSIVE FLOW**.

To prolong the working life of the DOSATRON it is advisable to install a filter (ex.: 300 mesh - 60 microns depending on your water quality) upstream.

This is imperative if the water contains impurities or particles, especially if the water comes from a well.

A filter is recommended and required for the warranty to be valid.

Installing the DOSATRON on a bypass enables clean water to be supplied without operating the DOSATRON and the DOSATRON to be easily dismantled.

When connecting an installation to the public water supply, you must respect the rules and regulations in force in the country.

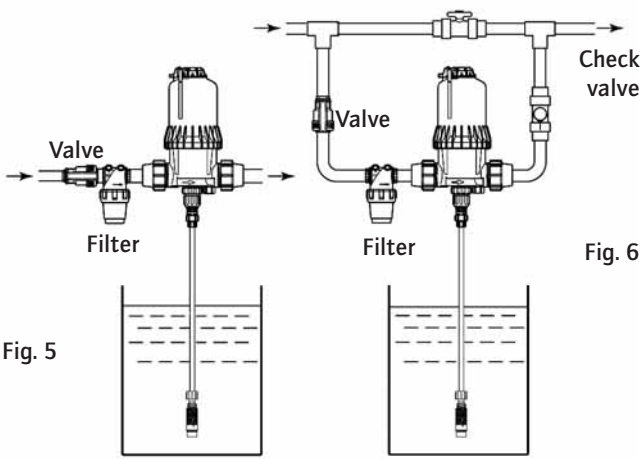


Fig. 5

Fig. 6

Excessive flow (as an indication)

If your DOSATRON clicks more than **36 times,** that is **18 cycles in 15 seconds**, you are close to the superior flow limit. If you need more flow, you must install a DOSATRON with a superior capacity of flow.

Putting the DOSATRON into order

GB

USING FOR THE FIRST TIME

- Place the by-pass lever in the **ON** position **(Fig.7-L).**
- Open the water inlet valve slowly, the DOSATRON is self-priming.
- Operate the DOSATRON until the product to be injected is drawn up into the injection stem (the product is visible through the plastic tube).
- The DOSATRON makes a characteristic "click-clack" noise when working.

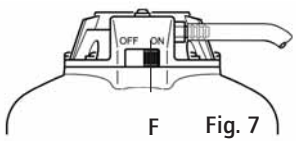


Fig. 7

NOTE : The time required to prime the suction hose depends on the water flow-rate, the ratio setting and the length of the suction hose. To bleed the air from the suction hose and accelerate the priming, set the injection rate at maximum. Once the DOSATRON is primed, adjust to the required injection rate **(see § ADJUSTING THE INJECTION RATE).**

INCORPORATED HYDRAULIC BY-PASS

A mechanism to select either the dosing function or the by-pass mode :

The operating medium must have a minimum pressure of **0.8 bar** [12 PSI] in order to operate the by-pass.

- By-pass in **OFF** position **(Fig. 8-L)** : the DOSATRON is not working and is not drawing up any concentrate.
- By-pass in **ON** position **(Fig. 9-L)** : the DOSATRON is sucking, injecting and mixing concentrate into water at the desired percentage.

Fig. 8

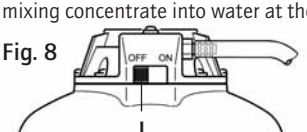
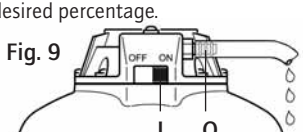


Fig. 9

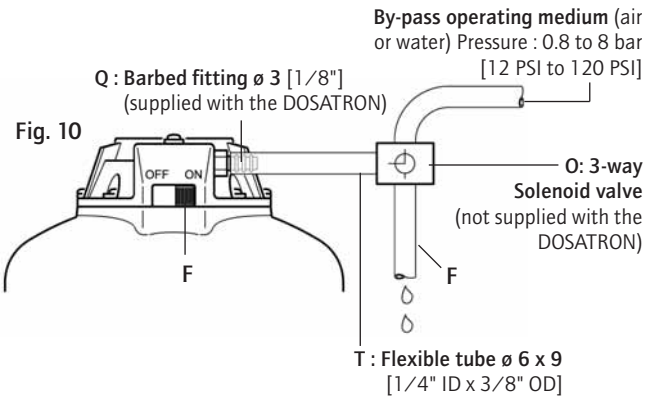


NOTE : When changing the lever (L) from the OFF to the ON position, it is normal that a small jet of water escapes from the barbed fitting ø 3 [1/8"] (Fig. 9-Q).

AUTOMATIC BY-PASS

A mechanism to select either the dosing function or the by-pass mode :
The operating medium must have a minimum pressure of **0.8 bar** [12 PSI] in order to operate the by-pass.
NOTE : When operating the By-pass through a remote control system, the operating lever **(Fig. 10-L)** must be on the **ON** position.

Fig. 10

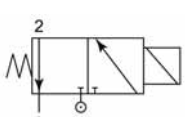


Operating the automatic by-pass :
- Opening of the solenoid valve.

Power supply open : **1 to 2** > Normal operating : Admission of the by-pass operating medium
By-pass function activated : Dosing function stopped
3 > Outlet closed

Operating of the DOSATRON :
- Closing of the solenoid valve.

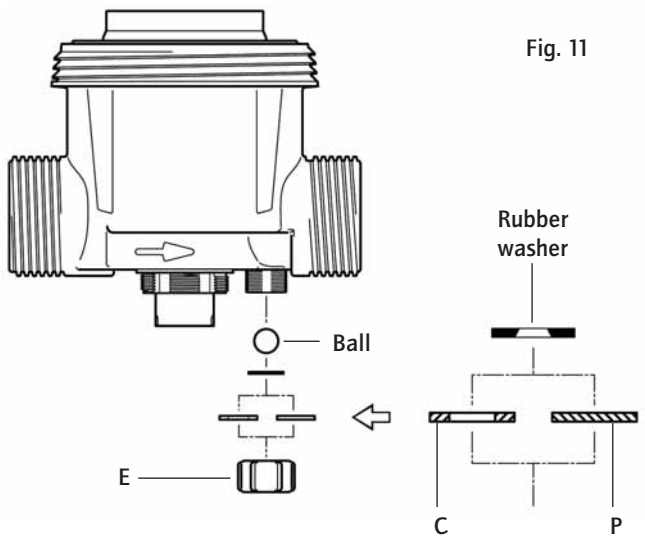
Power supply interrupted : **2 to 3** > Outlet open : Escaping of the by-pass operating medium
Activating of the dosing function
1 > Pressure at stand-by



AUTOMATIC BY-PASS (cont...)

Automatic anti-siphon valve :
- This automatically recreates normal atmospheric pressure in the DOSATRON in the event of an accidental vacuum in the line **(Fig. 11)***.
Its use depends on the regulations in force in your country.
- You must comply with the local water authority's requirements.
- To put into operation, unscrew the nut **(Fig. 11-E)**, remove the solid metal disc **(Fig. 11-P)** and replace it by the washer **(Fig. 11-C)** supplied with the DOSATRON.
- Screw the nut **(Fig. 11-E)**.

Fig. 11



*i.e. if the water outlet is lower than the inlet.

GB

Maintenance

RECOMMENDATIONS

1 - When using soluble products to be made up into solutions, we recommend the periodic dismantling of the entire dosing part **(see : § CHANGING SEALS IN THE INJECTION ASSEMBLY).**
Thoroughly rinsing all the elements of the dosing part with water and re-assembling them after having previously lubricated the seal **(Fig. 12)** with a silicone lubricant, in the case of difficulty in re-fitting.

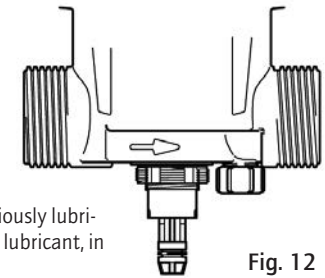
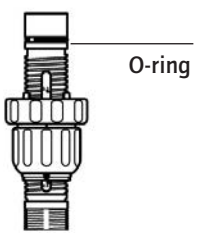


Fig. 12

2 - An air inlet, an impurity or a seal's failure can interrupt the dosing function ; periodically check out that the concentrate is correctly drawn up, thus incorporated into the water.
3 - Before putting the DOSATRON into operation after a non-use period, remove the motor piston and soak it into lukewarm water < 40° C [104° F] overnight. This helps to dissolve any deposits which may have dried onto the piston motor.



HOW TO DRAIN THE DOSATRON (in case of freezing temperature)

- Turn off the water supply and let the pressure drop to zero.
- Remove the injection assembly.
- Remove the bell and the motor piston, see **§ CLEANING THE WATER FILTER.**
- Disconnect the water inlet and outlet fittings.
- Remove the lower pump body from the mounting bracket and empty any remaining water.
- The DOSATRON can now be reassembled, having first cleaned the seal **(Fig.14-N next page)**.

CLEANING THE WATER FILTER 500 microns - 32 mesh

Frequency: once per month depending on use.

To remove the filter

- Close the valve upstream of the DOSATRON and allow the pressure to drop to zero.

Before removing the filter, please follow the dismantling instructions at § CHANGING THE MOTOR PISTON.

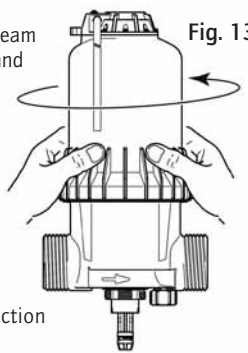


Fig. 13

- Remove the injection assembly.
- Unscrew the bell-housing by hand and remove it **(Fig. 13)**.
- Remove the motor piston **(Fig. 14-M)**.
- Remove the filter **(Fig. 14-F)**.
- Remove the seal **(Fig. 14-N)**.
- Clean the filter and the seal with clean water.

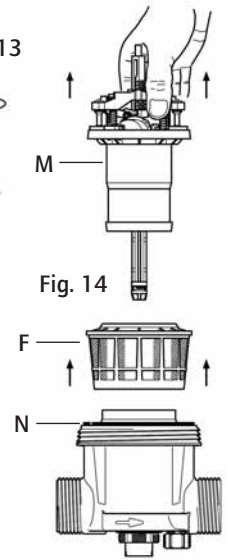


Fig. 14

To refit the filter

- Before re-assembly make sure that the seating area of the filter and seal **(Fig. 14-N)** in the lower pump body and the bell-housing are clean. If necessary the seal has to be replaced.
- Apply silicone grease to the thread on the body.
- Then proceed in reverse order to the above.

Important : in all cases tightening must be done by hand.

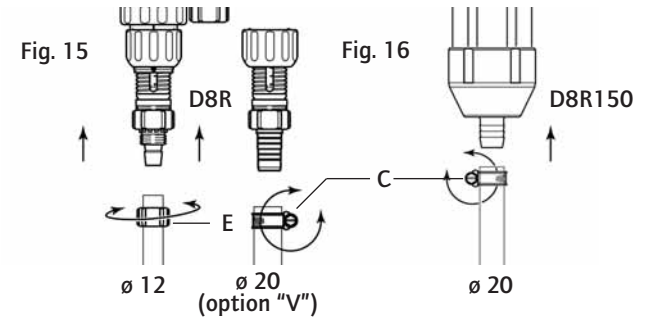
INTERNATIONAL CONVERSIONS

Principle : Setting at 1% ⇒ 1/100 = 1 part of concentrate for 100 parts of water.
Ex. : Setting at 2% ⇒ 2/100 = 2 parts of concentrate for 100 parts of water.
Ratio ⇒ 1/50.

FITTING THE SUCTION TUBE

If the DOSATRON has already been used, please **imperatively** refer to **§ PRECAUTIONS.**

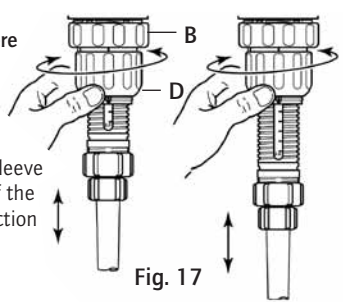
- Unscrew the nut **(Fig. 15-E)** at the bottom of the injection assembly and put it onto the tube.
- Push the tube onto the barbed fitting **as far as it will go** and screw up the nut **by hand**.
- For the suction tube Ø 20 (D8RV and D8R150), unscrew the nut **(Fig. 16-C)** at the bottom of the injection assembly and put it onto the tube.
- Slide the tube onto the barb **as far as it will go,** tighten the clamp.



ADJUSTING THE INJECTION RATE (with pressure off)

IMPORTANT ! Use no tools.
Adjustment must be made when there is no pressure in the DOSATRON.
Model D8R

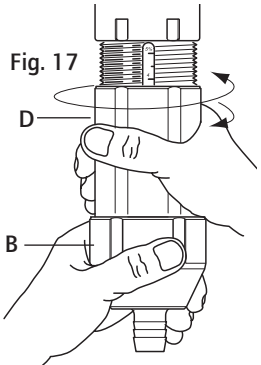
- Unscrew the blocking ring **(Fig. 17-B)**.
- Screw or unscrew the adjusting sleeve **(Fig. 17-D)** so as to bring the top of the sleeve into line with the desired injection rate.
- Tighten the blocking ring **(Fig. 17-B)**.



ADJUSTING THE INJECTION RATE (with pressure off) - cont...

Model D8R150

- Unscrew the blocking ring **(Fig. 17-B)**.
- Screw or unscrew the adjusting sleeve **(Fig. 17-D)** so as to bring the top of the sleeve into line with the desired injection rate.
- Tighten the blocking ring **(Fig. 17-B)**.



REMINDER: The quantity of injected product is proportional to the quantity of water entering the DOSATRON. 1% ⇒ 1/100, which means 100 volumes of water + 1 volume of injected products.

GB

CHANGING SEALS IN THE INJECTION ASSEMBLY (with pressure off)

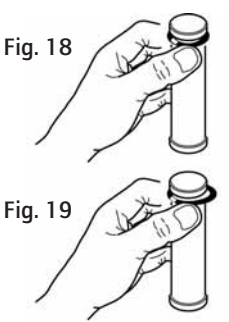
Frequency : Once per year.
IMPORTANT ! Use no tool or metallic utensils

ADVICE: Before dismantling any part of the injection assembly it is advisable to operate the DOSATRON, injecting clean water so as to rinse through the injection system. In this way, risks of contact with concentrated solutions in the injection assembly are minimized. During any such intervention, wear protective eyewear and gloves !

METHOD OF REMOVING SEAL

Fig. 18 : Between finger and thumb, pinch the component and the seal ; push towards one side to deform the seal.

Fig. 19 : Increase the deformation to grip the part of the seal thus exposed and pull it out of its groove. Clean the seal seating without any tools. Refitting is done by hand. It is very important that the seal is not twisted once in place as this would impair its efficiency.



CLEANING AND RE-ASSEMBLING THE SUCTION VALVE SEAL

- Turn off the water supply and allow the pressure to drop to zero.

Model D8R

- Unscrew the nut **(Fig. 20/21-E)** and pull downwards to remove the suction tube.
- For the suction tube Ø 20 (D8RV and D8R150), loose the clamp on the suction hose with a screwdriver **(Fig. 21-C)**.
- Unscrew and remove the black nut **(Fig. 20/21-N)**.
- Pull downwards to remove the suction valve assembly.
- Thoroughly rinse all single parts with water, reassemble according to the drawing **(Fig.20/21-P)** and check that the suction valve spring is in correct operating condition.
- Re-assemble in the reverse order to the above **by hand**.

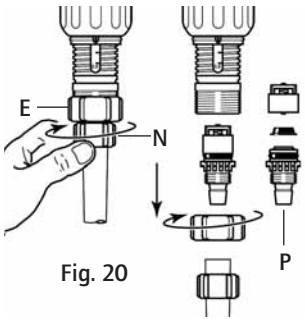


Fig. 20

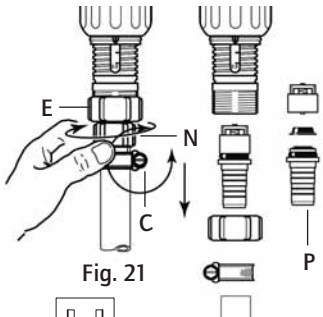


Fig. 21

Model D8R150

- Unscrew the blocking ring **(Fig. 22-A)**.
- Pull downwards to remove the suction valve assembly
- Thoroughly rinse all single parts with water, reassemble according to the drawing **(Fig.22-P)** and check that the suction valve spring is in correct operating condition.
- Re-assemble in the reverse order to the above **by hand**.

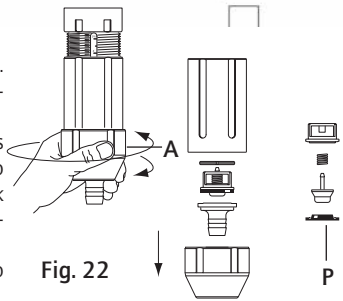


Fig. 22

GB

CHANGING THE INJECTION SEALS

- Turn off the water supply and allow the pressure to drop to zero.
- Take off the suction hose, unscrew the injection part as described in the previous chapter and pull downwards to remove it.
- Change the injection stem seal **(Fig. 23-O)** and the plunger seal **(Fig. 23-P)**.
- For the D8R, unscrew the suction valve maintaining nut **(Fig. 23-E)**, taking care not to loose the single parts of the suction valve, then change the o-ring **(Fig. 23-T)** and the valve seal **(Fig. 23-C)**.
- For the D8R150, while holding the nut **(Fig. 23-S)**, unscrew the sleeve **(Fig. 23-U)** and pull downwards.
- Re-assemble in the reverse order to the above.

Note : The graduated scale **(Fig. 23-L)** must be in front of you.

- Fasten the fixing ring **(Fig. 23-R)** firmly.

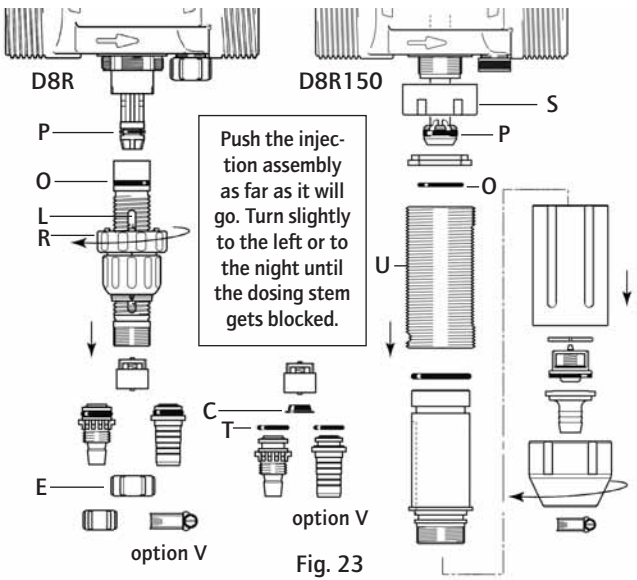


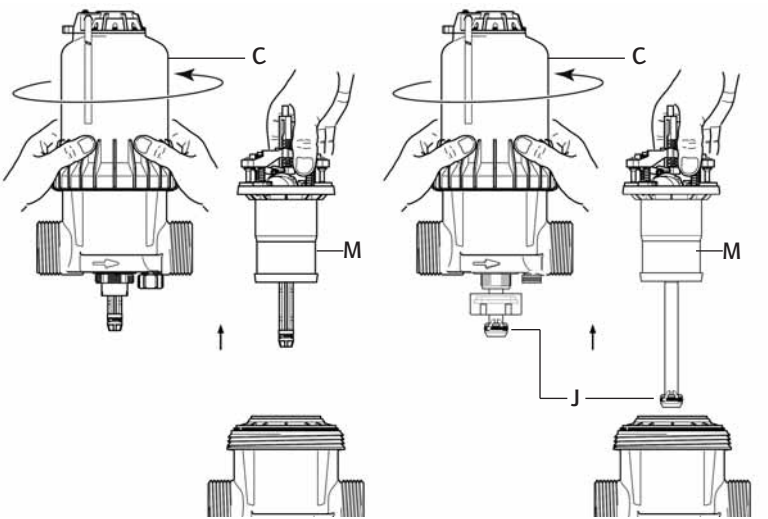
Fig. 23

CHANGING THE MOTOR PISTON (with pressure off)

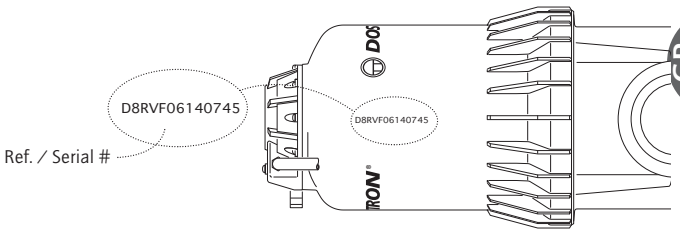
- Turn off the water supply and allow the pressure to drop to zero.
- Remove the injection assembly as previously described.
- Unscrew and remove bell-housing **by hand (Fig. 24-C)**.
- Remove the motor piston **(Fig. 24-M)** by pulling it up, paying particular attention to the seal **(Fig. 24-J)**.
- Change and reassemble in the reverse order to the above.
- Refit the bell-housing (take care not to damage its seal) and tighten **by hand.**
- Refit the injection part assembly.

Fig. 24

D8R D8R150



Reference Designation



REF. / Serial # : .....

EXAMPLE	D8R	BP	V	AF	P	H	ii

Type of DOSATRON

BP : integrated by-pass

V : Viscous Products (200-400 cSt)

Dosing seals :
AF = PH 7-14
VF = PH 1-7

Colour : - = Blue
P = White
R = Red
V = Green
J = Yellow
O = Orange

H = Hastelloy

Other extensions (consult us)

Troubleshooting

SYMPTOM	CAUSE	SOLUTION
Motor piston		
DOSATRON does not start or stops	Piston stalled	Reset piston, by hand
	Maximum flow exceeded	1. Reduce flow, restart unit 2. Unscrew the bell. Take off the piston and check piston valves seals to ensure correct position
	The by-pass is either on OFF position or half opened	Place the by-pass lever in the ON position
	Motor piston is damaged	Return unit to your service center for repair
	Filter clogged	Clean the filter : p45
Injection		
Water flowing back into concentrate container	Contaminated, worn, or missing check valve parts	Clean or replace them
No suction of concentrate	The piston motor has stopped	See **Motor piston** section
	Air leak (inlet) in the suction tube	Check the tightness between nut and suction hose
	Blocked suction tube or clogged strainer	Clean or replace it
	Missing or worn suction check valve seal	Clean or replace it
	Missing or worn plunger seal	Clean or replace it

SYMPTOM	CAUSE	SOLUTION
Injection		
No suction of concentrate	Worn injection stem	Replace it
Under injection	Suction of air	1. Check the tightness of the nuts in the injection area 2. Check suction tube
	Dirty or worn check valve seal	Clean or replace it
	Maximum flow exceeded (cavitation)	Reduce flow
	Worn plunger seal	Replace it
	Worn injection stem	Replace it
Leaks		
Leaks in the vicinity of the fixing ring under the pump body	Injection sleeve seal is damaged or positioned incorrectly	Replace it or refit it correctly
Leaks between the adjusting nut and the blocking ring	Injection stem seal damaged, positioned incorrectly or missing	Replace it or refit it correctly
Leaks between the body and bell	Pump body seal is damaged, positioned incorrectly or missing	Unscrew the bell, clean the seal seating, replace or change the seal. Position correctly the bell.

THE MANUFACTURER DECLINES ALL RESPONSIBILITY IF THE DOSATRON IS USED IN CONDITIONS THAT DO NOT CORRESPOND TO THE OPERATING INSTRUCTIONS AS INDICATED IN THIS MANUAL

Limited warranty

DOSATRON INTERNATIONAL S.A. will provide for replacement of all parts shown to be defective in material or workmanship during a period of twelve months from the date of purchase by the original purchaser. To obtain warranty replacement of a part, the DOSATRON must be returned with original proof of purchase receipt to the manufacturer or authorized distributor and thereafter recognized as defective after examination by the technical services of the manufacturer or distributor.

The DOSATRON must be flushed of any chemical and sent to the manufacturer or distributor prepaid, but will be returned free of charge once repairs are made if found to be covered by the warranty.

Any repairs made under warranty will not extend the initial warranty period. This warranty only covers circumstances where the part has failed due to defects caused by the manufacturing process.

This warranty is invalid if the defects are found to be due to the product's misuse, inappropriate use of tools, lack of maintenance or defective installation or environmental accidents or corrosion by foreign bodies and liquids found within or in proximity to the DOSATRON.

Before using any aggressive chemicals, please consult your distributor to confirm compatibility with the dosing pump. The seals and "o-rings" are not covered under warranty, nor is damage to the DOSATRON caused by water impurities such as sand.

A filter (ex.: 300 mesh - 60 microns depending on your water quality) must be used in front of the DOSATRON for the warranty to be valid.

DOSATRON INTERNATIONAL S.A. declines any responsibility if the DOSATRON is not used in compliance with the operating instructions and tolerances as indicated in this owner's manual.

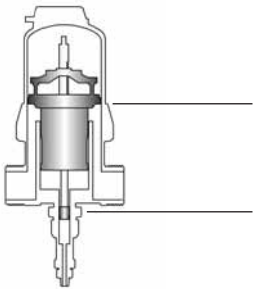
This warranty gives you specific legal rights and you may also have other rights which vary from state to state. But any implied warranty or merchantability or fitness for a particular purpose applicable to this product is limited in duration to the time period of this written warranty or any implied warranty.

The manufacturer or authorized distributor shall not be liable for incidental or consequential damage, such as any economic loss, resulting from breach of this written warranty or any implied warranty. There are no warranties, express or implied, which extend beyond those described above, relating in any way to products used in conjunction with DOSATRON INTERNATIONAL S.A. products.

Don't hesitate to call your distributor or Dosatron for any after sales service.

A SIMPLE METHOD

THE DOSATRON IS COMPOSED OF:



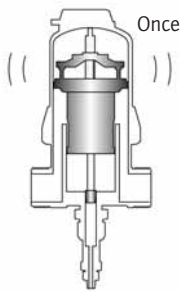
A driving volumetric hydraulic piston motor connected to

A plunger piston

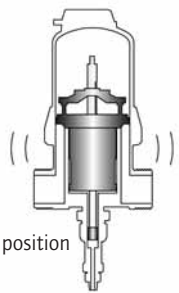
The speed of the motor is proportional to the flow of water passing through the system.

The greater the flow the faster it goes.

In its up and down movement, you can hear the piston motor "click" :



Once in the up position



Once in the down position

Count the number of clicks
in **30** seconds x 100 = **Flow of water in litres/hour**
[in **45** seconds ÷ 10 = **Flow of water in GPM**]

NOTE: This method of calculation cannot replace a flow meter.
It is given only as an approximate guide.

Deutsch

Dieses Dokument stellt keine vertragliche Verpflichtung dar und dient nur zur Information. DOSATRON INTERNATIONAL behält sich das Recht vor, jederzeit eine Änderung seiner Geräte vorzunehmen.

DE

Sie haben sich für eines der neuesten Modelle der DOSATRON Proportionaldosierer entschieden. Wir gratulieren Ihnen zu dieser Wahl. Dieser Apparat ist das Ergebnis einer langjährigen Erfahrung. Durch die Arbeit unserer Ingenieure gehört der Dosatron nunmehr zu den Spitzenprodukten im Bereich der Proportionaldosierung ohne Elektrizität. Die Wahl der für die Fabrikation notwendigen Materialien unterlag grösster Sorgfalt, damit eine Resistenz gegenüber allen bzw. den meisten auf dem Markt erhältlichen Chemikalien gesichert werden konnte. Dieser DOSATRON wird sich im Laufe der Zeit als treuester Verbündeter zeigen. Einige regelmässige Pflegemassnahmen werden Ihnen eine Betriebstüchtigkeit garantieren, wobei das Wort Panne fehl am Platze sein wird.

WIR BITTEN DAHER UM AUFMERKSAMES LESEN DIESER ANLEITUNG, BEVOR DAS GERÄT IN BETRIEB GENOMMEN WIRD.

Wichtig !
Die Seriennummer des Dosierers befindet sich auf **dem Pumpenkörper.** Wir bitten Sie, diese Nummer in den unten aufgeführten Teil einzutragen und sie bei jeglicher Kontaktaufnahme oder Informationsaustausch mit Ihrem Händler bereit zu haben.

Ref. : .....

Seriennr. : .....

Kaufdatum : .....

....

TECHNISCHE MERKMALE	D 8 R	D 8 R 150
Betriebswasserdurchsatz: **500 l/h mini - 8 m³ maxi [**2.2 Fl oz/min - 40 US GPM]		
Betriebswasserdruck:		
bar	**0.15 - 8**	**0.15 - 8**
PSI	2 - 110	2 - 110
Dosierung (aussen einstellbar):		
%	**0.2 - 2**	**1 - 5**
Verhältnis	1:500 - 1:50	1:100 - 1:20
Menge des eingespritzten Produkts:		
Mini l/h - Maxi l/h	**1 - 160**	**5 - 400**
US Fl. oz/min	0.56	2.8
US GPM/max	0.70	1.76
Maximale **Betriebstemperatur**: **40 °C** [104 ° F]		
Anschluß (NPT/BSP Aussengewinde) : **Ø 40x49 mm** [1" 1/2 M]		
Zylinderkapazität des hydraulischen Antriebs (bei jedem zweiten Kolbenschlag): ca. **1.6 l** [0.4224 US Gallons]		

ACHTUNG ! Der DOSATRON ist nicht voreingestellt, s. Paragraph EINSTELLUNG DER DOSIERUNG

ABMESSUNGEN		
Durchmesser: **cm** ["]	**18.4** [7 1/4]	**18.4** [7 1/4]
Gesamthöhe: **cm** ["]	**59.1** [23 1/4]	**66.7** [26 1/4]
Breite insgesamt: **cm** ["]	**31** [12 1/4]	**31** [12 1/4]
Gewicht: ± **kg** [lbs]	**4** [8.8]	**4.5** [10]
Paketmasse: **cm** ["]	**60 x 36.5 x 24** [23 2/3 x 14 1/3 x 9 1/2]	**82 x 26 x 21** [32 1/4 x 10 1/4 x 8 1/4]
Gewicht des Pakets: ± **kg** [lbs]	**5.5** [12.15]	**7** [15.5]

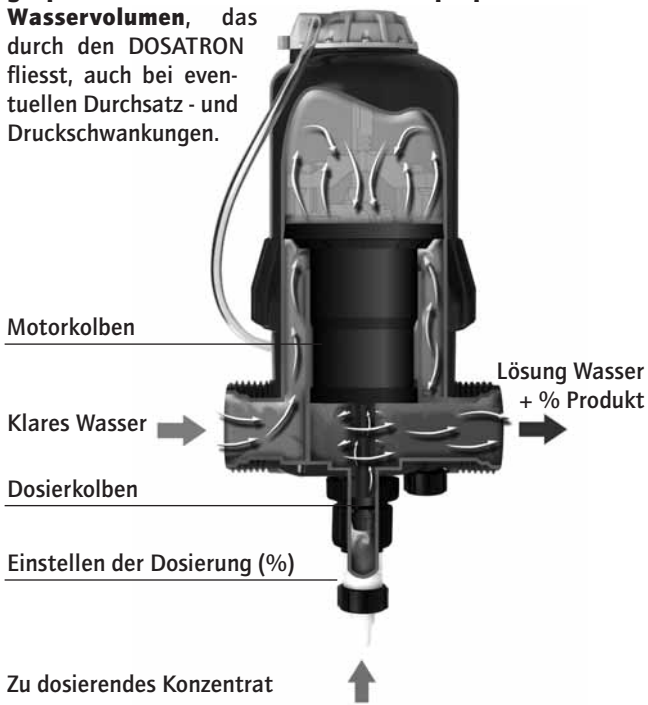
PAKETINHALT: 1 DOSATRON / 1 Wandhalterung / 1 durchsichtiger Saugschlauch / 1 Saugfilter / 1 Betriebs- und Wartungsanleitung

Inhaltsverzeichnis

DE

Präzise, einfach und zuverlässig

Der DOSATRON funktioniert ohne Strom und wird einfach an die Wasserleitung angeschlossen. Dabei wirkt der Wasserdruck als Antriebskraft. Auf diese Weise wird das Konzentrat angesaugt, der gewünschte Prozentsatz dosiert und in der Mischkammer mit dem Antriebswassser homogenisiert. Die so hergestellte Lösung wird dann in die Wasserleitung befördert. Die Menge des eingespritzten Produkts ist immer proportional zum Wasservolumen, das durch den DOSATRON fliesst, auch bei eventuellen Durchsatz - und Druckschwankungen.



Installation

VORSICHTSMASSNAHMEN

1 - ALLGEMEINES

- Wenn man eine Anlage sei es an die öffentliche, sei es an die eigene Wasserversorgung anschliesst, so müssen unbedingt die Normen zum Schutz und zur Trennung des Wasserzuflusses berücksichtigt werden. DOSATRON empfiehlt hierfür einen Systemtrenner.

- Wenn die Anlage höher gelegen ist als der DOSATRON, könnte eventuell Wasser in den DOSATRON zurücklaufen ; daher wird empfohlen, hinter dem Gerät ein Rückschlagventil einzubauen.
- Den DOSATRON nicht über einem Behälter mit Säure oder aggressiven Mitteln anbringen und ihn vor Dämpfen, die eventuell von diesen Mitteln aufsteigen, schützen.
- Den DOSATRON von Wärmequellen entfernt halten und im Winter vor Frost schützen.
- Den DOSATRON nicht an die Ansaugleitung der Arbeitspumpe anschließen (Siphoneffekt).
- Bei jeder Handhabung des DOSATRON Schutzbrille und-handschuhe tragen.
- Um die Dosierpräzision zu gewährleisten, muss der jährliche Austausch der Dichtungen des Dosierteils erfolgen. Dieser steht unter der alleinigen Verantwortung des Benutzers.
- Die Einstellung des Dosatron erfolgt unter alleiniger Verantwortung seines Benutzers. Letzterer ist dazu verpflichtet, die Anweisungen des Chemikalienherstellers strengstens zu befolgen.
- Stellen Sie sicher, dass der Wasserdurchsatz und - druck der Installation den Betriebswerten des DOSATRONS entspricht.
- Der Benutzer allein ist verantwortlich für die korrekte Wahl der Einstellungen des DOSATRONS, zum Erhalt der gewünschlen Dosierung.
- Lufteintritt, Unreinheiten oder ein zerrissener Ring können das richtige Dosieren unterbrechen. Es ist zu empfehlen, regelmässig zu überprüfen, ob das konzentrierte Produkt vom DOSATRON angesaugt wird.
- Wechseln Sie den Ansaugschlauch des DOSATRONS sobald dieser durch das Konzentrat beschädigt erscheint.
- Am Ende jeder Benutzung das System drucklos lassen (Empfehlung).

DE

VORSICHTSMASSNAHMEN (Fortsetzung)

1 - ALLGEMEINES (Forsetzung)
- Das Durchspülen des DOSATRONS ist unbedingt notwendig :
. bei jedem Produktwechsel,
. vor jeder Handhabung, um jeglichen Kontakt mit dem aggressiven Produkt zu vermeiden.
- Vor Inbetriebnahme mit aggressiven Produkten bitte Händler nach Verträglichkeit fragen.
- Jede Montage oder jegliches Festziehen darf nur von Hand und ohne Werkzeug erfolgen.

2 - VERUNREINIGTES WASSER
- Bei Wasser mit Verunreinigungen muß unbedingt vor der Dosierpumpe ein Filter eingebaut werden (z. B. : 300 mesh - 60 microns je nach Wasserqualität). Ohne Filter kann ein vorzeitiger Verschleiss des DOSATRON durch abrasive Partikel erfolgen.

3 - DRUCKSTÖSSE / ZU HOHER DURCHSATZ
- Bei Anlagen, die Druckstössen ausgesetzt sind, muss ein Gerät zur Verhinderung von Wasserschlag eingebaut werden (Reguliersystem Druck/Durchsatz).
- Bei automatisierten Anlagen wird die Verwendung eines langsam öffnenden und schliessenden Magnetventils empfohlen.
- In einer Anlage, in der der DOSATRON mehrere Sektoren versorgt, soll das Schliessen eines Sektors und das Öffnen eines anderen Sektors gleichzeitig erfolgen (simultane Aktivierung der Magnetventile).

4 - INSTALLATIONSORT
- Der DOSATRON und das Konzentrat müssen zugänglich sein. Ihre Installation darf auf keinen Fall ein Umweltverschmutzungs - oder Kontaminationsrisiko darstellen. - Es wird empfohlen, alle Wasserleitungen mit einer Markierung, dass das Wasser Zusatzmittel enthält, und mit folgendem Hinweis zu versehen :
"ACHTUNG ! Kein Trinkwasser".

5 - WARTUNG
- Nach dem Gebrauch alle Teile des DOSATRONS durch Ansaugen von klarem Wasser durchspülen (~ 1/4 Liter [8 1/2 US Fl.oz]).
- Eine jährliche Wartung optimisiert die Langlebigkeit Ihres DOSATRON. Das Auswechseln der Dosierdichtungen sollte mindestens einmal jährlich erfolgen, je nach Einsatzbedingungen.

6 - SERVICE
- Dieser DOSATRON wurde vor Versand getestet.
- Austauschteile und Dichtungsbeutel sind verfügbar.
- Rufen Sie Ihren Händler oder DOSATRON für jeglichen Wartungsservice an.

INSTALLATION DES DOSATRON

DIE MONTAGE MUSS OHNE WERKZEUGE ERFOLGEN
Der DOSATRON wird mit folgenden Teilen geliefert :
- eine Wandhalterung,
- ein Saugschlauch mit Saugfilter.
- 1 Schlauch (Bypass) ø 6 x 9 [1/4" ID x 3/8" OD]
Der Halter dient zur Befestigung an einer Wand.
- Die Zapfen des DOSATRON **(Abb. 1-A)** in die Wandhalterung einführen **(Abb. 1-S)**.
- Die Anschlüsse **(Abb. 1-E)** und die Klemmringe **(Abb. 1-C)** von den Wasserein-und-auslassöffnungen des DOSATRON entfernen.
- Die vorhandenen Schutzkappen **(Abb. 1-B)** abnehmen, bevor Sie das Gerät an die Wasserversorgung anschließen.
- Darauf achten, dass die Dichtungen am Einlass und Auslass korrekt sitzen. Zuerst den O-Ring **(Abb. 1-J)**, dann den Ring **(Abb. 1-G)** auflegen.
- Stellen Sie sicher, daß das Wasser in die Richtung fließt, in die die Pfeile auf dem Gerät zeigen.

DE

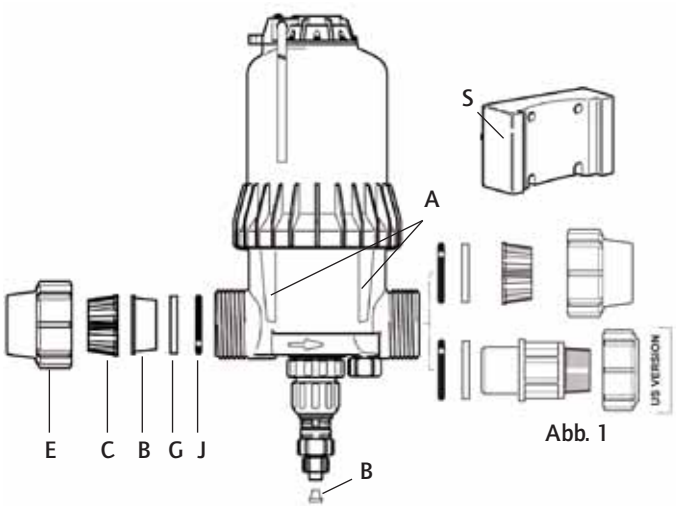


Abb. 1

Bei Anschluss mit Polyethylen - und Polypropylenrohr ist wie folgt zu verfahren:

- Die Anschlüsse **(Abb. 2-E)** und die Klemmringe **(Abb. 2-C)**, auf das sauber abgeschnittene und abgeschrägte Rohr stecken (Einlass und Auslass).
- Das Rohr bis zum Anschlag in die Wasserein - und auslassöffnungen einführen **(Abb. 2)**.
- Die Klemmringe beidseitig jeweils bis zum Anschlag schieben **(Abb. 2-C)**.
- Die Anschlüsse anziehen **(Abb. 2-E)**.

Bei Anschluss mit PVC-Rohr ist wie folgt zu verfahren:

- Verfahren Sie genauso wie beim Anschluß mit Polyethylen- oder Propylenrohr. Vor dem Anziehen jedoch die für den Klemmring vorgesehene Stelle mit PVC-Kleber bestreichen.
- Den Klemmring in seine korrekte Lage bringen. Dazu den Schlitz **(Abb. 2-C)** mit beiden Daumen aufziehen, damit der Kleber nicht abgeschabt wird. Anschliessend die Anschlüsse anziehen.
- Die Anschlüsse anziehen.

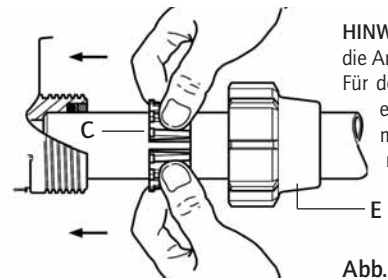


Abb. 2

HINWEIS: Eine Stunde warten, bevor die Anlage unter Druck gesetzt wird. Für den Fall, daß die Anlage später einmal demontiert wird, sollte man wissen, daß der PVC-Kleber nicht an dem Polyacetal-Klemmring haftet.

Das Gerät kann anhand eines Schlauches mit einem Innendurchmesser von 40 Millimetern und anhand von Rohrschellen und drehbaren Anschlußstutzen ø 40 x 49 mm [1"1/2] an die Wasserversorgung angeschlossen werden. Stellen Sie sicher, daß das Wasser in die Richtung, in die die Pfeile auf dem Gerät zeigen, fliesst.

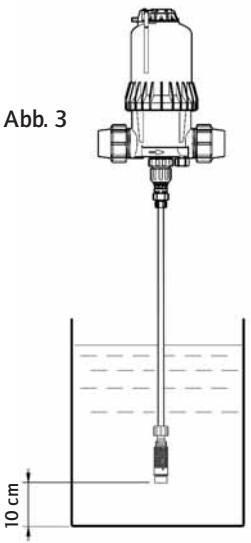
Der DOSATRON wird mit einem Ansaugschlauch geliefert (kann beliebig gekürzt werden) der eine Benutzung von Behältern mit grosser Kapazität ermöglicht. Dieser Schlauch muß unbedingt mit einem Saugfilter und einem Ballast versehen sein. Für den Anschluss dieses Schlauchs siehe das entsprechende Kapitel.

ANMERKUNG: Die maximale Ansaughöhe beträgt 4 m [13 ft].

- Schließen Sie den mit dem Saugfilter versehenen Schlauch an und tauchen Sie ihn in die zu dosierende Lösung ein.

ACHTUNG ! - Den Saugkopf ungefähr 10 cm [4"] vom Boden des Lösungsbehälters entfernt lassen, damit keine nichtlöslichen Teilchen, die den Dosierkörper beschädigen könnten, angesaugt werden (Abb. 3).
- Den Saugkopf nicht auf den Boden legen.

Abb. 3



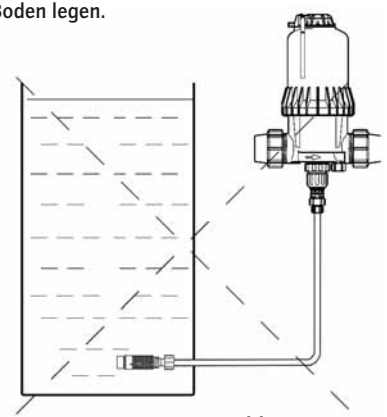


Abb. 4

▲ WIE SIE ES NICHT MACHEN SOLLEN

◀ WIE SIE ES MACHEN SOLLEN

In keinem Fall darf sich das Niveau der zu dosierenden Lösung höher als der Einlass des Dosatron befinden, um einen Siphon-Effekt zu vermeiden.

HINWEISE ZUR INSTALLATION

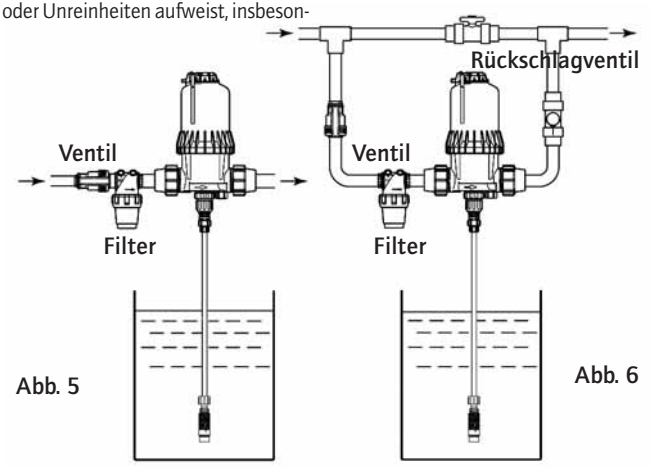
Die Installation kann je nach den Erfordernissen Ihrer Anlage direkt an die **Wasserleitung (Abb. 5)**, oder an eine **Bypass Leitung (Abb. 6)** erfolgen. Falls der Durchsatz die Grenzen des DOSATRON übersteigt, siehe **§ ZU HOHER DURCHSATZ.**

Um die Langlebigkeit des DOSATRONS zu gewähren, wird dazu geraten, einen Filter (z. B. : 300 mesh - 60 microns je nach Wasserqualität) vor diesem zu installieren.

Diese Massnahme ist unumgänglich, wenn das Wasser Schmutzpartikel oder Unreinheiten aufweist, insbesondere wenn das Wasser aus einem Brunnen oder einer Bohrung stammt. **Der Filter ist unbedingt notwendig, damit die Garantie gültig ist.**

Die Montage eines Bypasses erlaubt den Zufluss von klarem Wasser, ohne dass der DOSATRON funktioniert und dessen problemlosen Ausbau.

Bei Installation ans Trinkwassersystem beachten Sie bitte die Normen und Auflagen jedes Landes.

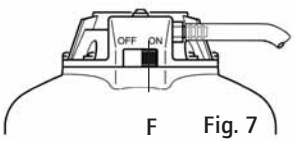


Zu hoher Durchsatz (Orientierungshilfe)

Wenn Ihr DOSATRON mehr als **36 Kolbenschläge**, d.h. **18 Zyklen in 15 Sekunden** macht, dann ist der DURCHSATZ ZU HOCH. Sie sollten einen DOSATRON mit höherer Wasserdurchsatzkapazität wählen.

Inbetriebnahme des DOSATRON

ERSTINBETRIEBNAHME



- Den Bypass-Schalter auf die Stellung **ON** bringen **(Abb. 7-L).**
- Die Wasserzufuhr nach und nach öffnen.
- Den Apparat solange funktionieren lassen, bis das Konzentrat die Dosierpartie erreicht hat (sichtbar am transparenten Ansaugschlauch).
- Beim Betrieb gibt der DOSATRON ein charakeristrisches Klicken von sich.

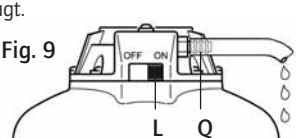
ANMERKUNG: Die Ansaugzeit für das Konzentrat hängt vom Durchsatz, der Einstellung der Dosierung und der Länge des Ansaugschlauches ab. Zur Beschleunigung des Ansaugvorgangs die maximale Dosierung einstellen. Bei Erreichen der Dosierpartie den gewünschten Wert einstellen **(siehe § EINSTELLEN DER DOSIERUNG)**.

EINGEBAUTER HYDRAULISCHER BYPASS

Ein - und Ausschalten der Produktansaugung:

Für den einwandfreien Betrieb des Bypasses muß das Antriebswasser einen Mindestdruck von **0.8 Bar** haben.

- Bypass auf **ON (Abb. 8-L)**, der DOSATRON funktioniert : Ansaugen, Einspritzen und Mischen von Konzentrat und Wasser zum gewünschten Prozentsatz.
- Bypass auf **OFF (Abb. 9-L)**, der DOSATRON funktioniert nicht : Der Motor steht still und es wird kein Konzentrat angesaugt.

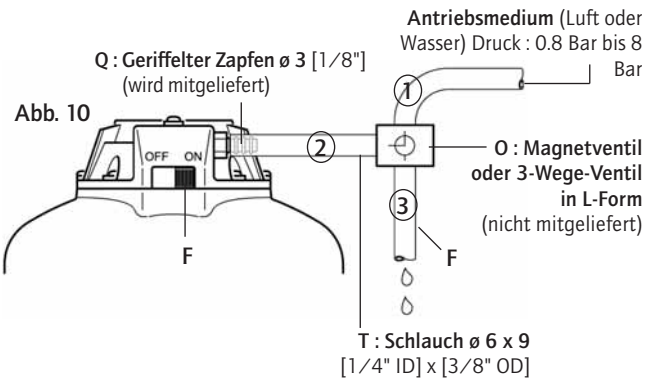


ACHTUNG ! Wenn der Schalter L von der Stellung OFF auf die Stellung ON gebracht wird, entweicht eine kleine Menge Wasser aus dem geriffelten Zapfen (Abb. 9-Q). Das ist ganz normal.

DE

FERNGESTEUERTER BYPASS

Ein - und Ausschalten der Produktansaugung:
Für den einwandfreien Betrieb des Bypass muß das Antriebswasser einen Mindestdruck von **0.8 bar** haben.
HINWEIS: Wird der ferngesteuerte Bypass benutzt, muß der Handbetrieb-Schalter **(Abb. 8-L)** auf **ON** stehen.

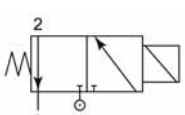


Funktion des ferngesteuerten Bypasses:
- Öffnen des Magnetventils.

Stromzufuhr: **1 nach 2** > normaler Gebrauch: Eindringen des Antriebsmediums des Bypasses. Bypass-Funktion = Abschalten der Dosierfunktion
3 > Wasserauslauf geschlossen

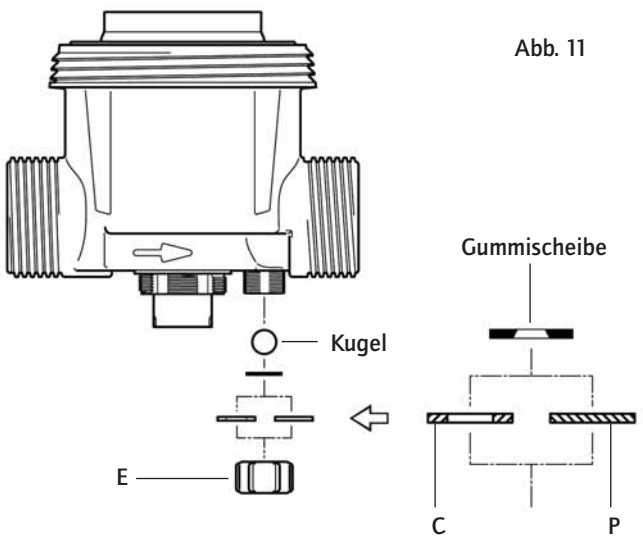
Funktion des DOSATRON:
- Schliessen des Magnetventils.

Keine Stromzufuhr: **2 nach 3** > Wasserauslauf geöffnet: Entweichen des Antriebswassers des Bypasses nach aussen
Anschalten des DOSATRON
1 > Keine Druckveränderung



FERNGESTEUERTER BYPASS (Fortsetzung)

Automatische Vorrichtung zur Vorbeugung der Hohlsaugwirkung:
- Im Falle einer eventuellen Drucksenkung* stellt sie automatisch den atmosphärischen Druck in der Anlage wieder her **(Abb. 11)**. Ihre Benutzung unterliegt den im jeweiligen Land gültigen Vorschriften für das Gesundheitswesen.
- Richten Sie sich nach den entsprechenden Bestimmungen.
- Zur Inbetriebnahme die Mutter **(Abb. 11-E)** abschrauben, die Metallscheibe entfernen **(Abb. 11-P)** und durch die im Paket enthaltene Scheibe mit Loch ersetzen **(Abb. 11-C)**.
- Die Mutter anziehen **(Abb. 11-E)**.



*Z.B. wenn der Wasserauslauf tiefer liegt als der Wassereinlass.

Wartung

WICHTIGE HINWEISE

1 - Wenn Sie lösliche Mittel zur Herstellung Ihrer Lösung verwenden, so wird empfohlen, das ganze Dosierteil regelmäßig abzubauen **(siehe § AUSWECHSELN DICHTUNGEN DES DOSIERTEILS)**, die Elemente mit reichlich klarem Wasser zu spülen und nach vorherigem Einfetten der Dichtung wieder zusammenzumontieren **(Abb. 12)**.

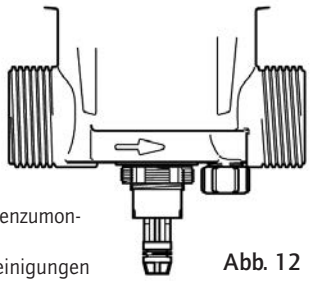
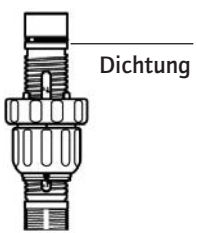


Abb. 12

2 - Das Eindringen von Luft und Verunreinigungen oder eine beschädigte Dichtung können eine Unterbrechung des Dosiervorgangs bewirken. Prüfen Sie regelmäßig nach, ob die Lösung richtig verbraucht wurde.

3 - Vor Inbetriebnahme des DOSATRON (nach längerer Nichtbenutzung) den Motorkolben einige Stunden lang in lauwarmes (< 40° C) Wasser legen. So werden trockene Ablagerungen im Motorkolben entfernt.



ENTLEEREN DES DOSATRON (Bei Ausbau wegen Frostgefahr)

- Wasserzufuhr schließen.
- Das Dosierteil abnehmen.
- Die Glocke und den Motor entnehmen, **siehe § REINIGUNG DES EINGEBAUTEN FILTERS**.
- Die Anschlußstutzen von Wassereinlaß und Wasserauslaß lösen.
- Den Pumpenkörper von der Wandhalterung nehmen und entleeren.
- Vor dem Zusammenbau die Dichtung **(Abb. 14-N)** reinigen.

REINIGUNG DES EINGEBAUTEN FILTERS 500 µ - Maschenweite 32

Wie oft : Einmal im Monat, je nach Gebrauch.

Ausbau des Filters

- Wassereinlass schliessen und Druck abfallen lassen.

Um den Filter zu erreichen, folgen Sie den Anleitungen für den Auseinanderbau wie auf den Seiten § AUSWECHSELN DES MOTORKOLBENS.

- Die Dosierpartie abbauen.
- Die Glocke von Hand losschrauben und abnehmen **(Abb. 13)**.
- Den Motorkolben herausnehmen **(Abb. 14-M)**.
- Den Filter herausnehmen **(Abb. 14-F)**.
- Die Dichtung lösen **(Abb. 14-N)**.
- Den Filter und die Dichtung mit klarem Wasser reinigen.

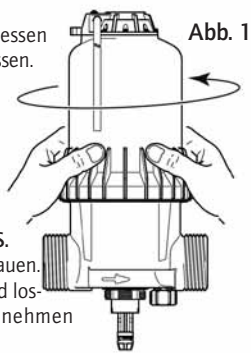


Abb. 13

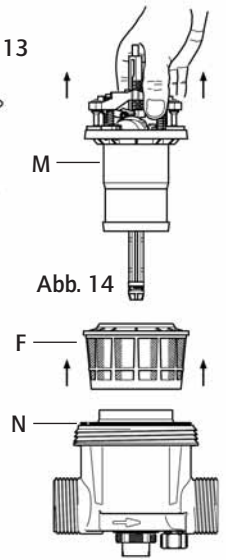


Abb. 14

Wiedereinbau des Filters

- Vor dem Wiedereinbau sicherstellen, dass die Auflageflächen des Filters und der Dichtung **(Abb. 14-N)** am Dosierkörper und an der Glocke sauber sind. Wenn nötig, die Dichtung auswechseln.

Das Gewinde des Pumpengehäuses schmieren (Silikonfett).

- In der umgekehrten Reihenfolge des Ausbaus vorgehen.

Wichtig: das Festschrauben muss unbedingt von Hand erfolgen

UMRECHNUNG % -VERHÄLTNIS

Prinzip : Einstellung 1% ⇒ 1/100 = 1 Volumen des konzentrierten Produkts plus 100 Wasservolumen.

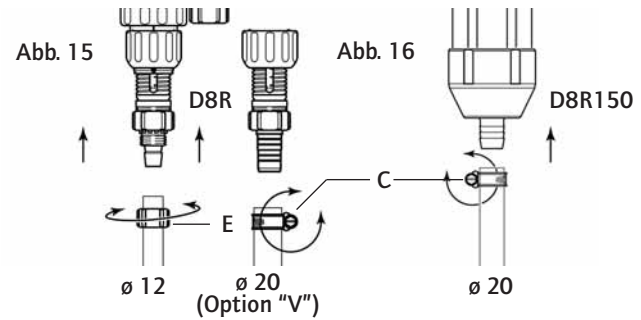
Beispiel : Einstellung 2% ⇒ 2/100 = 2 Volumen des konzentrierten Produkts plus 100 Wasservolumen.

Verhältnis ⇒ 1/50.

ANSCHLUSS DES SAUGSCHLAUCHES

Falls Sie den Anschluss mit einem DOSATRON vornehmen, der schon benutzt wurde, lesen Sie bitte **§ VORSICHTSMASSNAHMEN.**

- Zum Anschliessen des Ansaugschlauches die Mutter **(Abb. 15-E),** die sich unten am Dosierteil befindet, losschrauben und über den Saugschlauch stülpen.
- Den Schlauch über das gerillte Ansatzstück **ganz nach oben** drücken und die Mutter **von Hand** festziehen.
- Beim Ansaugschlauch Ø 20 (D8RV und D8R150) die auf dem Schlauch befindliche **(Fig. 16-C)** Klemme mit einem Schraubenzieher lösen.
- Stülpen Sie den Ansaugschlauch soweit es geht auf das geriffelte Ansatzstück, und ziehen Sie die Schelle wieder fest.

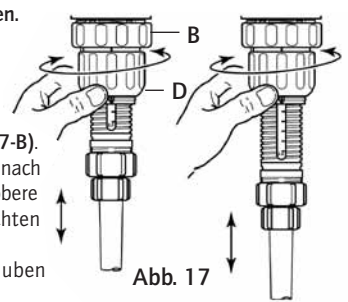


EINSTELLEN DER DOSIERUNG (druckfrei)

ACHTUNG ! Keine Werkzeuge benutzen. Die Einstellung der Dosierung darf nicht unter Druck erfolgen, d.h. erst nach Schliessen der Wasserzufuhr.

Modelle D8R

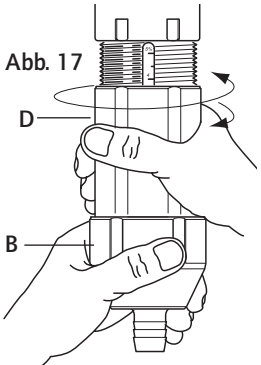
- Den Blockierring losschrauben **(Abb. 17-B)**.
- Die Einstellmutter nach oben oder nach unten schrauben **(Abb. 17-D)**, bis der obere Teil der Mutter auf der gewünschten Einstellmarkierung steht.
- Den Blockierring wieder festschrauben **(Abb. 17-B)**.



EINSTELLEN DER DOSIERUNG (Fortsetzung)

Modelle D8R150

- Den Blockierring losschrauben **(Fig. 17-B)**.
- Die Einstellmutter nach unten oder nach oben festschrauben **(Abb. 17-D)**, bis der obere Teil der Mutter auf der gewünschten Einstellmarkierung steht.
- Den Blockierring wieder festschrauben **(Abb. 17-B)**.



MERKE: Die Menge des eingespritzten Produkts ist proportional zur Wassermenge, die den Dosatron durchfliesst. 1% ⇒ 1/100, d.h. 100 Volumen Wasser + 1 Volumen Produkt.

DE

AUSWECHSELN DER DICHTUNGEN DES DOSIERTEILS (druckfrei)

Wie oft : Einmal pro Jahr.

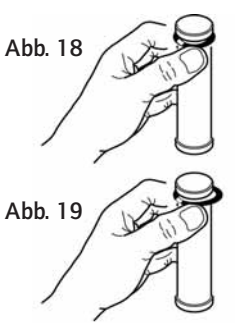
ACHTUNG ! Kein Werkzeug oder metallene Gegenstände benutzen

Es wird geraten, vor jeglichem Ausbau der Dosierpartie den DOSATRON zu betätigen und klares Wasser anzusaugen, um die Ansaugpartie durchzuspülen. Dies vermeidet jeglichen Kontakt mit noch in der Dosierpartie befindlichen Chemikalien. Bei jeglichem Eingriff dieser Art Schutzbrille und - handschuhe tragen.

METHODE ZUR ENTFERNUNG EINER DICHTUNG

Abb. 18: Die Dichtung und das Teil zwischen Daumen und Zeigefinger klemmen; die Dichtung auf die gegenüberliegende Seite drücken, um sie zu verformen.

Abb. 19: Die Verformung verstärken, um die Dichtung am herausragenden Teil zu erfassen und sie dann aus ihrer Fassung entnehmen.



Mit einem Tuch die Dichtung reinigen.
Der Zusammenbau erfolgt von Hand.
Es ist sehr wichtig, dass dabei die Dichtung nicht verdreht wird, da sonst keine Abdichtung mehr garantiert ist.

REINIGUNG UND WIEDEREINBAU DES ANSAUGVENTILS

- Wasserzufuhr schliessen und somit Dosierer druckfrei machen.

Modelle D8R

- Die Haltemutter losschrauben **(Abb. 20/21-E)** und Saugschlauch abnehmen.
- Beim Ansaugshlauch Ø 20 (Option V) die auf dem Schlauch befindliche **(Fig. 21-C)** Klemme mit einem Schraubenzieher lösen.
- Die Mutter **(Abb. 20/21-N)** losschrauben und abnehmen.
- Nach unten ziehen und das ganze Saugventil entnehmen.
- Die Einzelteile gut abspülen, sie nach Schema wieder zusammenbauen **(Fig.20/21-P)** und dabei prüfen, ob die Feder korrekt arbeitet.
- Der erneute Zusammenbau erfolgt **per Hand** in umgekehrter Reihenfolge des Auseinanderbaus.

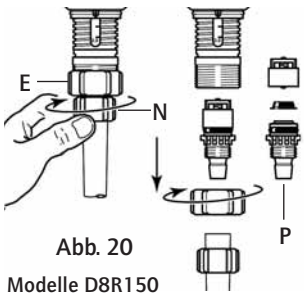


Abb. 20

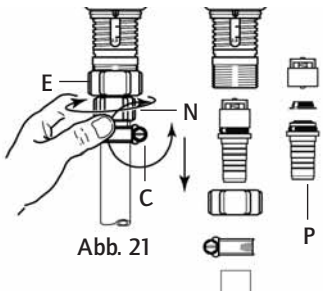


Abb. 21

Modelle D8R150

- Die kegelförmige Blockiermutter losschrauben **(Abb. 22-A)**.
- Nach unten ziehen und das ganze Saugventil entnehmen.
- Die Einzelteile gut abspülen, sie nach Schema wieder zusammenbauen **(Fig.22-P)** und dabei prüfen, ob die Feder korrekt arbeitet.
- Der erneute Zusammenbau erfolgt **per Hand** in umgekehrter Reihenfolge des Auseinanderbaus.

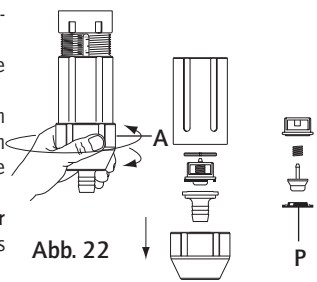
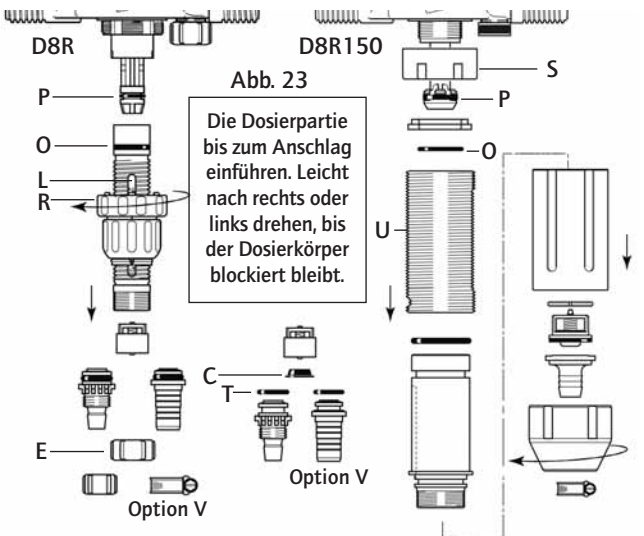


Abb. 22

DOSIERDICHTUNGEN

- Wasserzufuhr schliessen und somit Dosierer druckfrei machen.
- Ansaugschlauch abmontieren, Abschrauben der Dosierpartie wie im vorangegangenen Kapitel beschrieben, und sie durch Ziehen nach unten abnehmen.
- Austauschen der Dosierkörperdichtung **(Fig. 23-O)** und der Saugkolbendichtung **(Fig. 23-P)**.
- Beim Modell D8R den Haltering des Saugventils **(Fig. 23-E)** abschrauben. Dabei darauf achten, keine Einzelteile des Saugventils zu verlieren. Austauschen der O-Ring- Dichtung **(Fig. 23-T)** und der Saugventildichtung **(Fig. 23-C)**.
- Beim Modell D8R150 muss die Verschraubung **(Fig. 23-S)** festgehalten werden und gleichzeitig der Dosierkörper **(Fig. 23-U)** abgeschraubt und zur Abnahme nach unten gezogen werden.
- Der erneute Zusammenbau erfolgt in umgekehrter Reihenfolge des Auseinanderbaus.

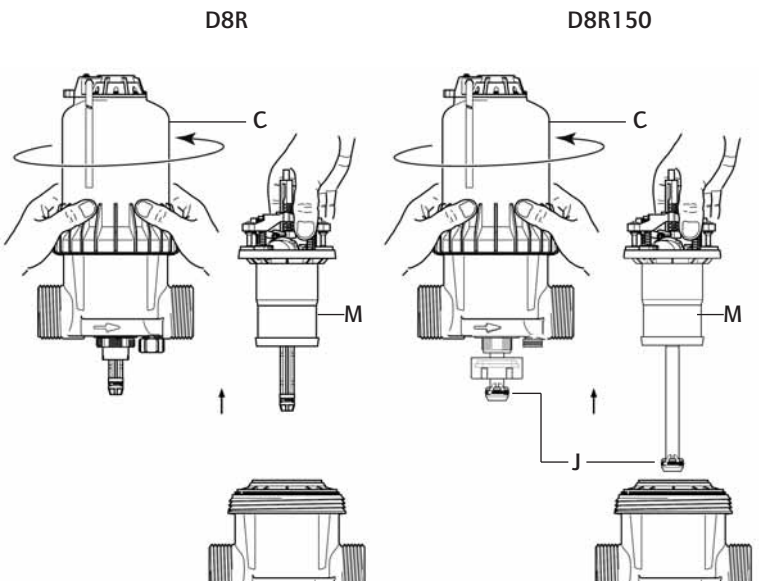
Anmerkung: Die Dosierskala **(Fig. 23-L)** muss so positioniert werden, dass sie sich vor Ihnen befindet. Den Haltering **(Fig. 23-R)** bis zum Anschlag festziehen.



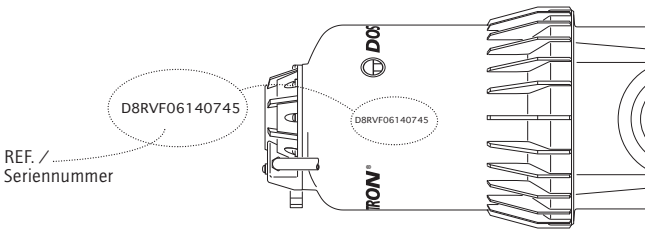
AUSWECHSELN DES MOTORKOLBENS (druckfrei)

- Wasserzufuhr schliessen und somit Dosierer druckfrei machen.
- Abbau der Dosierpartie wie im vorangegangenen Kapitel beschrieben.
- Die Glocke von Hand losschrauben **(Abb. 24-C)** und abnehmen.
- Den gesamten Motorkolben **(Abb. 24-M)** nach oben herausziehen, dabei besonders auf die Saugkolbendichtung **(Fig. 24-J)** achten.
- Auswechseln und erneuter Zusammenbau per Hand in umgekehrter Reihenfolge des Auseinanderbaus.
- Die Glocke wieder **per Hand** aufschrauben und dabei darauf achten, dass die Dichtung nicht beschädigt wird.
- Die Dosierpartie erneut anbringen.

Abb. 24



Die Artikelbezeichnung



DE

REF. / Seriennummer: .....

BEISPIEL	D8R	BP	V	AF	P	H	ii

DOSATRON Typ

BP: Integrierter Bypass

V: Option viskose Produkte (200-400 cSt)

Dosierdichtungen:
AF = PH 7-14
VF = PH 1-7

Farbe : - = Blau
P = Weiss
R = Rot
V = Grün
J = Gelb
O = Orange

H = Hastelloy

Andere Buchstaben (bitte angeben)

Mögliche Betriebsstörungen

STÖRUNGEN	URSACHEN	ABHILFE
Motorkolben		
Ihr DOSATRON startet nicht oder stoppt	Motorkolben blockiert	Den Kolben per Hand erneut in Gang bringen
	Zu hoher Durchsatz	1. Durchsatz drosseln, wieder starten 2. Überprüfen, ob die Dichtungen der Motorventile richtig sitzen
	Der Bypass ist entweder ganz oder halb geöffnet	Stellen Sie den Schalter auf ON
	Kolben defekt	DOSATRON an Händler zurücksenden
	Filter verstopft	Reinigen des Filters: s.71
Dosierung		
Rückfluss des Konzentrats in den Konzentrats - behälter	Saugventil oder Saugventildichtung verschmutzt, abgenutzt oder nicht vorhanden	Saugventil reinigen oder wechseln
Konzentrat wird nicht angesaugt	Der Motorkolben stoppt	Siehe **Motorkolben**
	Lufteintritt am Saugschlauch	Saugschlauch und Festsitzen der Muttern überprüfen
	Saugschlauch verstopft oder Saugfilter verklebt	Teile reinigen oder austauschen
	Saugventildichtung abgenutzt, falsch montiert oder verschmutzt	Dichtung reinigen oder austauschen
	Saugkolbendichtung falsch montiert, verschmutzt oder aufgequollen	Dichtung reinigen oder austauschen

STÖRUNGEN	URSACHEN	ABHILFE
Dosierung		
Konzentrat wird nicht angesaugt	Kratzer am Dosierkörper	Dosierkörper austauschen
Unterdosierung	Lufteintritt	1. Prüfen, ob Muttern des Dosierteils gut festgeschraubt sind 2. Zustand des Saugschlauchs überprüfen
	Dichtung des Saugventils abgenutzt oder verschmutzt	Reinigen oder Ersetzen der Dichtung
	Zu hoher Durchsatz	Durchsatz reduzieren
	Saugkolbendichtung abgenutzt	Dichtung ersetzen
	Kratzer am Dosierkörper	Dosierkörper ersetzen
Leckstellen		
Leckstellen an Mutter unterhalb des Pumpenkörpers	Dosierzylinderdichtung abgenutzt, schlecht montiert oder nicht vorhanden	Auswechseln oder korrektes Einsetzen der Dichtung
Leckstelle zwischen Einstellschraube und Blockierungsring	Dosierkörperdichtung verschlissen, schlecht montiert oder nicht vorhanden	Auswechseln oder korrektes Einsetzen der Dichtung
Leckstellen zwischen Pumpenkörper und Glocke	Dichtung beschädigt, schlecht montiert oder nicht vorhanden	Dichtung korrekt einsetzen Dichtungssitz reinigen oder Dichtung austauschen

DOSATRON INTERNATIONAL LEHNT JEGLICHE VERANTWORTUNG BEI NICHTBEACHTUNG DER GEBRAUCHSANWEISUNG DES GERÄTES AB.

Garantie

DOSATRON INTERNATIONAL S.A. verpflichtet sich, jegliches Teil zu ersetzen, dessen Fabrikationsfehler nachgewiesen werden kann, und dies für einen Zeitraum von 12 Monaten ab Einkaufsdatum (Ersteinkauf am Werk).

Um Garantieersatz zu erhalten, muss das Gerät oder das Teil mit dem ur-sprünglichen Einkaufsbeweis an den Hersteller oder Händler zurückge-schickt werden. Die Fehlerhaftigkeit wird erst nach Überprüfung durch die Technische Abteilung des Herstellers oder Händlers bestätigt.

Das Gerät muss von chemischen Produkten gereinigt sein und dem Hersteller oder Händler franko zugeschickt werden. Es wird nur dann kostenlos zurückgeschickt, wenn die Reparatur unter Garantie läuft.

Die unter Garantie vorgenommenen Eingriffe verlängern den Garantiezeitraum nicht weiter.

Diese Garantie gilt nur für Fabrikationsfehler.

Die Garantie gilt nicht für Defekte, die auf eine anormale Installation des Geräts zurückzuführen sind oder durch Verwendung von unangemessenenen Werkzeugen, Wartungs oder Installationsfehler, einen Unfall oder Korrosion durch Fremdkörper oder Flüssigkeiten im Innern des Geräts oder dessen Umfeld verursacht worden sind.

Vor Inbetriebnahme mit aggressiven Produkten bitte Händler nach Verträglichkeit fragen.

Die Garantie gilt weder für Dichtungen (Verschleissteile) noch für durch Unreinheiten im Wasser (wie z. B. Sand) verursachte Defekte.

Ein Filter (z. B. : 300 mesh - 60 microns oder weniger) muss vor dem Apparat installiert sein, um diese Garantie gelten zu machen.

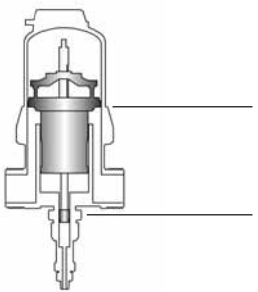
DOSATRON INTERNATIONAL S.A. haftet nicht für Geräte, sollten die Vorschriften und Funktionswerte der vorliegenden Gebrauchsanweisung beim Betrieb der Geräte nicht beachtet worden sein.

Eine explizite oder implizite Garantie gilt nicht in Bezug auf andere Produkte oder Zubehör, die zusammen mit dem DOSATRON benutzt werden.

Für Beratung und Kundendienst nehmen Sie bitte Kontakt mit Ihrem Vertriebspartner oder Dosatron auf.

BESTIMMUNG DES DURCHSATZES

EINE EINFACHE METHODE
DER DOSATRON BESTEHT AUS:



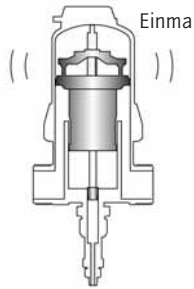
Einem hydraulischen Kolbenmotor, der

einen Dosierkolben antreibt

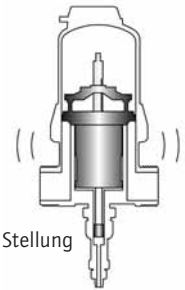
DE

Die Motorgeschwindigkeit ist abhängig vom Wasserdurchsatz im Gerät.

Bei der Hin-und Herbewegung des Kolbens ist ein klopfendes Geräusch hörbar.



Einmal in der oberen Stellung



Einmal in der unteren Stellung

Zählen Sie die Anzahl des Klopfgeräuschs in **30** Sekunden x 100
= **Wasserdurchsatz in Liter/Stunde**.

ANMERKUNG : Diese Berechnungsmethode ersetzt natürlich nicht den Durchsatzmesser. Sie ist nur als Hinweis gedacht.

Italiano

Questo documento non costituisce un documento contrattuale e viene fornito soltanto a titolo indicativo. La società DOSATRON INTERNATIONAL si riserva il diritto di modificare i propri apparecchi in qualsiasi momento.

Avete appena acquistato un modello della gamma dei Dosatori Proporzionali DOSATRON.
Ci congratuliamo con voi per la scelta effettuata. Questo modello è il risultato di più di 30 anni di esperienza.
I nostri ingegneri hanno piazzato la serie dei DOSATRON molto in testa di quello che poteva essere l'evoluzione tecnica dei Dosatori Proporzionali senza Elettricità.
La scelta dei materiali impiegati nella fabbricazione dei dosatori è stata molto minuziosa per resistere agli attacchi chimici di tutti o almeno della maggior parte dei prodotti da dosare presenti sul mercato.
Questo DOSATRON si rivelerà uno degli alleati più fedeli.
Poche cure costanti vi garantiranno un funzionamento durante il quale la parola guasto scomparirà.

IT

SI PREGA DI LEGGERE CON LA MASSIMA ATTENZIONE IL PRESENTE MANUALE PRIMA DI METTERE L'APPARECCHIO IN FUNZIONE

Importante !
Il numero di serie del vostro DOSATRON figura sul carter. Vi preghiamo di registrare questo numero nella parte riservata qui sotto e di menzionarlo ogni volta che avrete bisogno di contattare o di chiedere informazioni al vostro rivenditore.

Rif. : .....

N° Serie : .....

Data acquisto : .....

....

CARATTERISTICHE	D 8 R	D 8 R 150
Portata d'acqua di funzionamento : **500 l/h min. - 8 m³ mass** [2.2 Fl oz/min. - 40 US GPM]		
Pressione di funzionamento :		
bar	**0.15 - 8**	**0.15 - 8**
PSI	2 - 110	2 - 110
Dosaggio regolazione **esterna** o fissa :		
%	**0.2 - 2**	**1 - 5**
ratio	1:500 - 1:50	1:100 - 1:20
Portata della soluzione iniettata :		
Min. l/h - Mass. l/h	**1 - 160**	**5 - 400**
US Fl. oz/min.	0.56	2.8
US GPM/mass.	0.70	1.76
Temperatura massima di funzionamento : **40 °C** [104 ° F]		
Collegamento (NPT/BSP gas maschio) **Ø 40x49 mm** [1" 1/2 M]		
Cilindrata del motore idraulico (ogni 2 clac del pistone) : ± **1.6 l** [0.4224 US Gallons]		

ATTENZIONE ! Il Dosatron non è preregolato, per regolarlo vedi paragrafo REGOLAZIONE DEL DOSAGGIO.

INGOMBRO		
Diametro : **cm** ["]	**18.4** [7 1/4]	**18.4** [7 1/4]
Altezza totale **cm** ["]	**59.1** [23 1/4]	**66.7** [26 1/4]
Larghezza f. t. : **cm** ["]	**31** [12 1/4]	**31** [12 1/4]
Peso : ± **kg** [lbs]	**4** [8.8]	**4.5** [10]
Dimensioni della confezione :		
cm	**60 x 36.5 x 24**	**82 x 26 x 21**
["]	[23 2/3 x 14 1/3 x 9 1/2]	[32 1/4 x 10 1/4 x 8 1/4]
Peso della confezione :		
± **kg** [lbs]	**5.5** [12.15]	**7** [15.5]

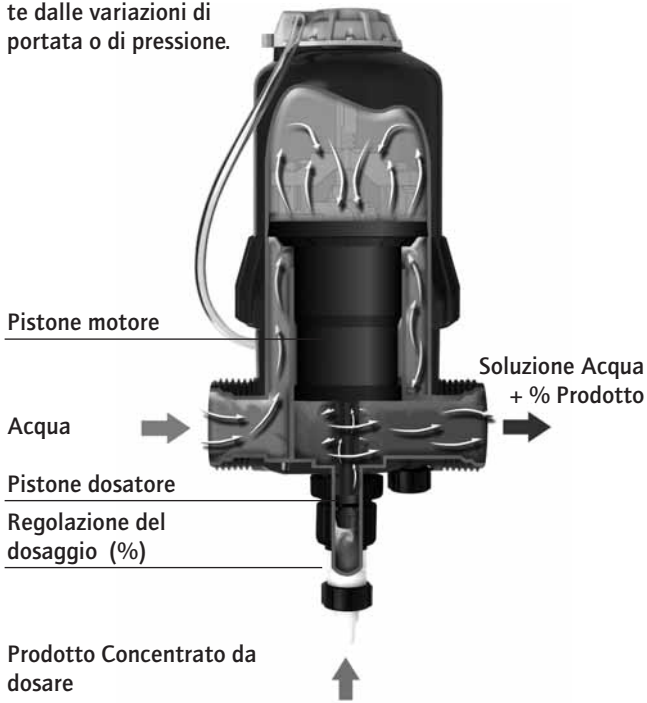
CONTENUTO DEL PACCO : 1 DOSATRON / 1 supporto murale per DOSATRON / 1 tubo aspirazione di soluzione / 1 succhieruola / 1 manuale d'uso

Sommario

IT

Preciso, semplice e affidabile

Installato nella rete d'acqua, il DOSATRON utilizza la pressione dell'acqua come unica forza motrice. Così azionato, aspira il prodotto concentrato, lo dosa alla percentuale desiderata, l'omogeneizza nella sua camera di miscelazione con l'acqua motrice. La soluzione realizzata è così inviata fuori del dosatore. La dose di prodotto iniettato è sempre proporzionale al volume di acqua che attraversa il DOSATRON, indipendentemente dalle variazioni di portata o di pressione.



Installazione

PRECAUZIONI

1 - INFORMAZIONI GENERALI

- Quando si collega un'installazione sia alla rete idraulica pubblica sia alla propria rete idraulica, è indispensabile rispettare le norme di protezione e di scollegamento. DOSATRON raccomanda un disconnettore per evitare la contaminazione dell'alimentazione d'acqua.

- Nel caso dove l'installazione sia più alta che il proprio DOSATRON, un rischio di ritorno d'acqua nel DOSATRON è possibile ; si consiglia allora di installare una valvola antiritorno prima dell'apparecchio.
- Non si deve installare il DOSATRON sopra un serbatoio di acido o di prodotto aggressivo e si deve proteggerlo da eventuali emanazioni di prodotti.

Mantenere il DOSATRON allontanato da fonti di caldo importante e metterlo al riparo del gelo.

- Non installare il DOSATRON nel circuito di aspirazione della pompa motrice (sifonaggio).
- L'operatore deve tenersi davanti al DOSATRON e portare occhiali e guanti di protezione durante ogni intervento.
- Per assicurare la precisione del dosaggio, il cambio annuale delle guarnizioni di dosaggio rimane sotto la sola responsabilità dell'utente finale.
- L'utente finale sarà il solo responsabile della scelta corretta delle regolazioni del DOSATRON per l'ottenimento del dosaggio voluto. L'utente deve rispettare rigorosamente le raccomandazioni del fabbricante di prodotti chimici.
- Assicurarsi che la pressione e la portata dell'acqua dell'impianto sono in conformità con le caratteristiche del DOSATRON.
- Una presa d'aria, un'impurità o l'attacco chimico di una guarnizione può interrompere il buon funzionamento del dosaggio. Si raccomanda di verificare periodicamente che il prodotto da dosare sia correttamente aspirato nel DOSATRON.
- Cambiare il tubo di aspirazione del DOSATRON non appena quest'ultimo dimostri un qualsiasi deterioramento dovuto al prodotto dosato.
- Dopo l'utilizzazione, mettere il sistema fuori pressione (raccomandato).

1 - INFORMAZIONI GENERALI (segue)

- Il risciacquo dei DOSATRON è imperativo :
- Ogni volta che si cambia di prodotto,
- Prima di ogni manipolazione, a fine di evitare qualsiasi contatto con prodotti aggressivi.
- Per il dosaggio di prodotti aggressivi, vi preghiamo di consultare il vostro rivenditore prima dell'utilizzazione per confermare la compatibilità con il dosatore.
- Il montaggio e il serraggio devono sempre essere effettuati senza utensili e manualmente.

2 - ACQUA CARICA

- Se l'acqua è molta carica, installare imperativamente un filtro a monte del DOSATRON (es. : 300 mesh 60 micron secondo la qualità dell'acqua). Particole abrasive possono danneggiare prematuramente il DOSATRON se non s'installa questo filtro.

3 - COLPI D'ARIETE / PORTATA IN ECCESSO

- Negli impianti soggetti ai colpi d'ariete, occorre installare un dispositivo antiariete (sistema di regolazione pressione/portata).
- Nelle installazioni automatizzate, utilizzare preferibilmente elettrovalvole con apertura e chiusura lente.
- Se un DOSATRON alimenta più siti, azionare le elettrovalvole simultaneamente (chiusura di un sito e apertura di un altro sito contemporaneamente).

4 - SISTEMAZIONE DELL'IMPIANTO

- Il DOSATRON e il prodotto da dosare devono essere accessibili. La loro installazione non deve in nessun caso presentare un rischio di polluzione o di contaminazione.
- Si raccomanda di attrezzare tutte le canalizzazioni d'acqua con una marcatura segnalando che l'acqua contiene additivi e scrivere la menzione : "ATTENZIONE ! Acqua Non Potabile".

5 - MANUTENZIONE

- Dopo utilizzo, si raccomanda di fare aspirare dell'acqua pulita (~ 1/4 litro [8 1/2 US Fl.oz]).
- Una manutenzione annuale aumenterà la durata del vostro DOSATRON. Cambiare le guarnizioni di dosaggio al meno una volta all'anno, secondo la sua utilizzazione.

6 - SERVIZIO

- Questo DOSATRON è stato testato prima dell'imballaggio.
- Sotto insiemi di riparazione e astucci di guarnizioni sono alla vostra disposizione.
- Non esitate a chiamare il vostro distributore DOSATRON per qualsiasi servizio dopo vendita.

IL MONTAGGIO DEVE ESSERE EFFETTUATO SENZA ATTREZZI

Il DOSATRON è fornito con :
- un supporto murale,
- un tubo di aspirazione con succhieruola.
- 1 tubo (by-pass) ø 6 x 9 [1/4" ID x 3/8" OD].

Il supporto serve al fissaggio murale del DOSATRON.
- Inserire il dosatore nel supporto spostando leggermente i bracci del supporto per incastrare i 4 naselli del corpo principale **(Fig. 1-A)** negli orifizi corrispondenti del supporto **(Fig. 1-S)**.
- Togliere i dadi **(Fig. 1-E)** e gli anelli dentellari **(Fig. 1-C)** sugli orifizi di entrata e di uscita d'acqua del DOSATRON.

Rimuovere i tappi di protezione **(Fig. 1-B)** che ostruiscono gli orifici del suo DOSATRON prima di collegarlo alla rete d'acqua.
- Assicurarsi del buon funzionamento all'entrata e all'uscita del sistema di ermeticità. Sistemare prima la guarnizione tubolare **(Fig. 1-J)** e poi l'anello **(Fig. 1-G)**.
- Assicurarsi che l'acqua scorra nel senso delle frecce riportate sull'apparecchio.

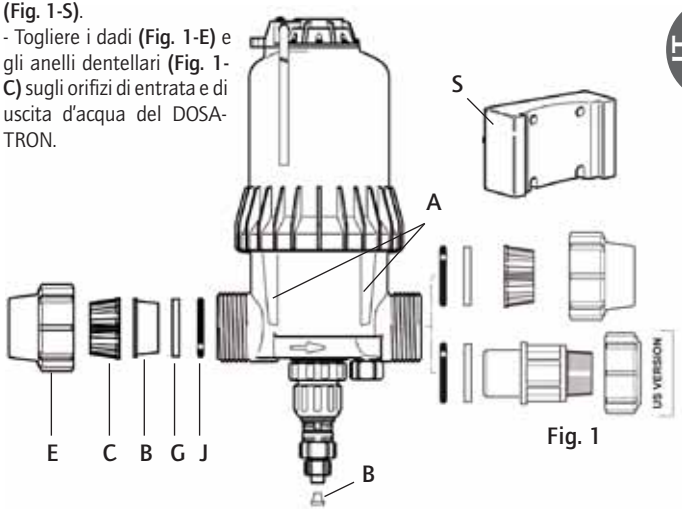


Fig. 1

IT

Metodo da seguire per il collegamento del tubo polietilene e polipropilene :
- Collocare nel tubo tagliato precisamente e smussato, il dado **(Fig. 2-E)** e l'anello dentellato **(Fig. 2-C)**.
- Introdurre il tubo negli orifizi di entrata e di uscita d'acqua **(Fig. 2)**.
- Spingere fino all'arresto l'anello dentellato **(Fig. 2-C)** sull'entrata, poi l'altro sull'uscita dell'acqua.
- Stringere il dado **(Fig. 2-E)**.

Metodo da seguire per il collegamento del tubo PVC :
- Procedere come per il collegamento del tubo polietilene o polipropilene ma prima di stringere, rivestire di colla PVC il posto che occuperà l'anello dentellato.
- Spingere in avanti l'anello dentellato in posizione, allargandolo con i pollici posti nella fessura **(Fig. 2-C)** per evitare di raschiare la colla. Dopo procedere al serraggio del dado.

NOTA : Aspettare 1 ora prima della messa in pressione del circuito. Per ogni smontaggio ulteriore, bisogna sapere che la colla PVC non aderisce all'anello dentellato in poliacetale.

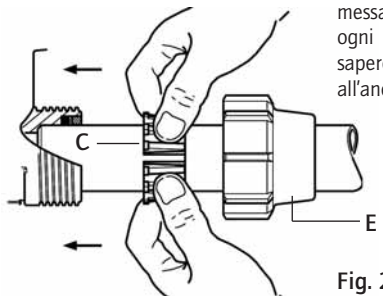


Fig. 2

Il collegamento dell'apparecchio alla rete d'acqua può essere effettuato con tubi flessibili di 40 millimetri di diametro interno, fissati con collari e raccordi girevoli di Ø 40 x 49 mm [3/4"]. Assicurarsi che l'acqua scorra nel senso delle frecce riportate sull'apparecchio.

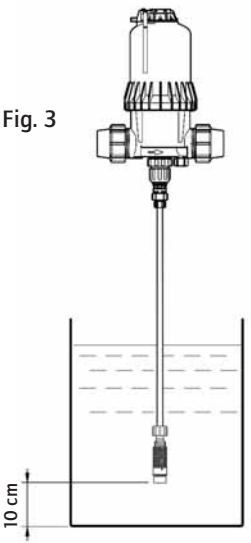
Il DOSATRON è venduto con un tubo di aspirazione (che può essere accorciato secondo i bisogni dell'installazione) che permette la sua utilizzazione con un serbatoio di grande contenenza. **Questo tubo deve essere dotato obbligatoriamente della succhieruola.** Per il collegamento di questo tubo, vedere il capitolo corrispondente.

NOTA : L'altezza di aspirazione è di 4 metri al massimo [13 ft].

Collegare il tubo munito della succhieruola ed immergerlo nella soluzione da dosare

ATTENZIONE ! - Lasciare la succhieruola a circa 10 cm dal fondo del serbatoio di soluzione per evitare di aspirare le particelle insolubili che possono danneggiare il corpo dosatore (Fig. 3).
- Non posare la succhieruola a terra.

Fig. 3



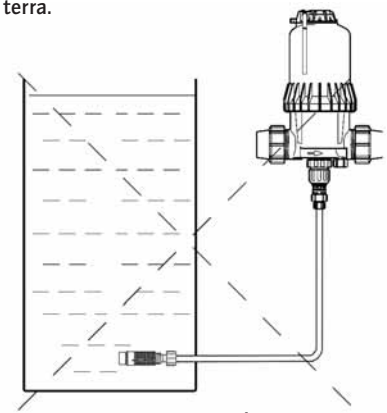


Fig. 4

▲ **QUELLO CHE NON SI DEVE FARE**

◀ **QUELLO CHE SI DEVE FARE**

Il livello della soluzione non deve essere mai al di sopra dell'entrata dell'acqua nel DOSATRON (al fine di evitare il sifonaggio).

IT

CONSIGLI PER L'INSTALLAZIONE

Nella canalizzazione dell'acqua, i montaggi possono essere fatti in diretta (**Fig. 5**), in by-pass consigliato (**Fig. 6**). Se la portata è superiore ai limiti del DOSATRON, vedere **§ PORTATA IN ECCESSO.**

Per preservare la durata del DOSATRON, si consiglia di mettere un filtro (300 mesh - 60 micron secondo la qualità dell'acqua) prima del dosatore. Questo è indispensabile quando l'acqua è piena di impurità e soprattutto quando l'acqua proviene da un pozzo o da una trivellazione.

Affinché la garanzia sia valida è necessario installare il filtro consigliato.

Il montaggio in by-pass permette di alimentare in acqua corrente senza fare funzionare il DOSATRON e permette il suo smontaggio.

Per qualsiasi installazione sulla rete idrica, rispettare le normi e regolamenti in vigore nel paese.

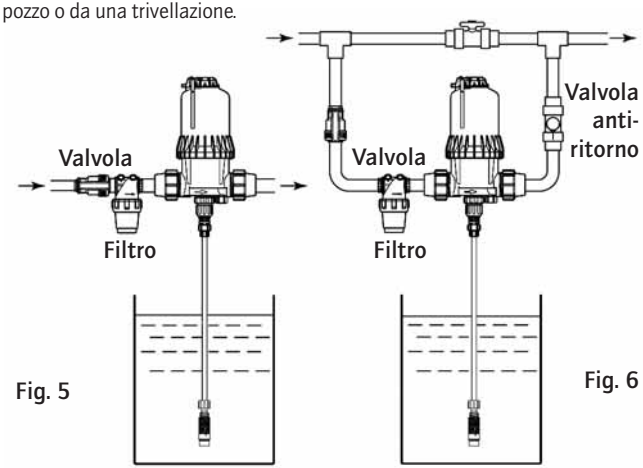


Fig. 5

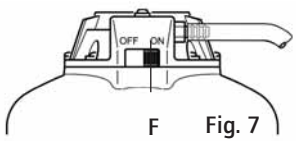
Fig. 6

PORTATA IN ECCESSO (a titolo indicativo)

Se il DOSATRON emette più di **36 clac**, cioè effettua **18 cicli** in **15 secondi**, si è in PORTATA IN ECCESSO ; dovete scegliere un DOSATRON con capacità di portata d'acqua superiore.

Messa in funzione del Dosatron

PRIMA MESSA IN FUNZIONE



F Fig. 7

- Mettere la leva by-pass **(Fig. 7-L)** nella posizione **ON**.
- Aprire progressivamente l'arrivo d'acqua, il DOSATRON autoadesca.
- Farlo funzionare finché il prodotto da dosare sia salito nel corpo dosatore (visualizzazione attraverso il tubo trasparente).
- Il dosatore emette un "clic-clac" caratteristico del suo funzionamento.

NOTA : Il tempo d'adescamento della soluzione dosata dipende dalla portata, dalla regolazione del dosaggio e dal tempo di riempimento del tubo di aspirazione di soluzione. Per accelerare l'adescamento, regolare il dosaggio al massimo. Dopo aver effettuato l'adescamento, fare calare la pressione e regolare al valore desiderato **(vedere § ALLEGATO)**.

BY-PASS IDRAULICO INCORPORATO

Sistema di messa in moto o di arresto dell'aspirazione della soluzione madre : Una pressione d'acqua di comando **0.8 bar minimo** é necessaria per ottenere un buon funzionamento del by-pass.

- By-pass in posizione **OFF (Fig. 8-L)**, il DOSATRON è fermato e non aspira più il prodotto.
- By-pass in posizione **ON (Fig. 9-L)**, il DOSATRON funziona, aspira, inietta e miscela il prodotto concentrato nell'acqua con la % desiderata.

Fig. 8

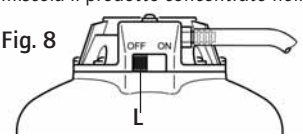
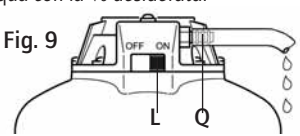


Fig. 9

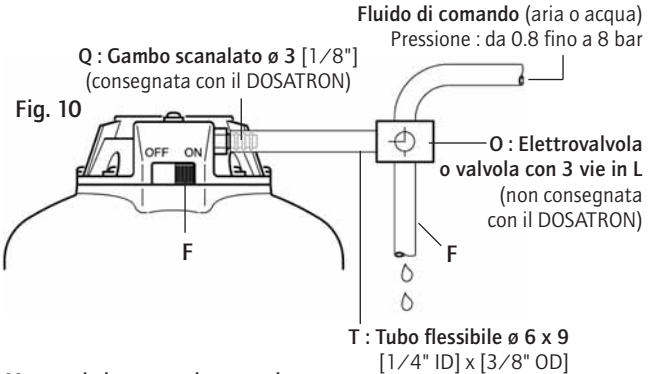


ATTENTIONE ! Nella posizione OFF, quando postiamo la leva nella posizione ON e normale che una piccola quantità di acqua sia evacuata dal gambo scanalato ø 3 [1/8"] (Fig. 9-Q).

IT

BY-PASS TELECOMANDATO

Sistema di messa in moto o di arresto dell'aspirazione della soluzione madre :
Una pressione d'acqua di comando **0.8 bar minimo** è necessaria per ottenere un buon funzionamento del by-pass.
NOTA : Con l'utilizzazione del by-pass telecomandato, la leva di comando manuale **(Fig. 10-L)** deve trovarsi sulla posizione **ON**.

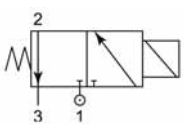


Mettere in by-pass telecomandato :
- Apertura dell' elettrovalvola.

Azionata aperta : **1 verso 2** > Utilizzazione : Entrata d'acqua di comando by-pass - Mettere in by-pass (arresto del DOSATRON)
3 > Scappamento chiuso

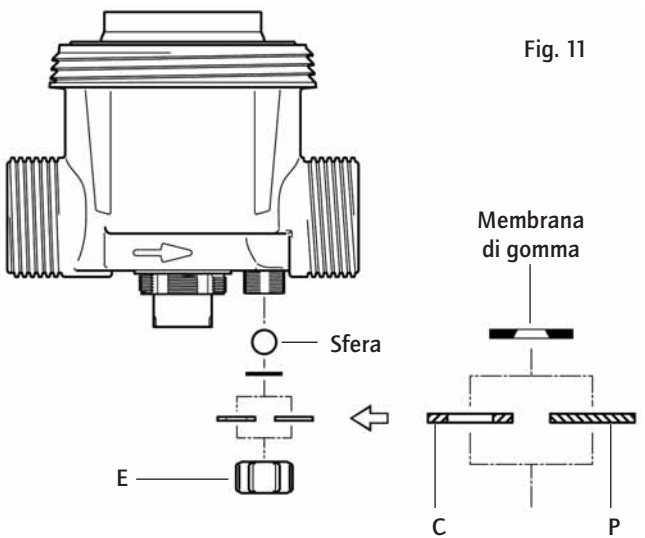
Messa in moto del DOSATRON :
- Chiusura dell' elettrovalvola.

Non azionata chiusa : **2 verso 3** > Scappamento : Scappamento dell'acqua di comando fuori
Messa in moto del DOSATRON
1 > Pressione in attesa



BY-PASS TELECOMANDATO (segue)

Dispositivo automatico antisifonnaggio di soluzione dosata :
- Ristabilisce automaticamente la pressione atmosferica nell'impianto in caso di depressione accidentale **(Fig. 11)**.
La sua utilizzazione dipende dalla normativa sanitaria vigente nel nostro paese.
- Conformarsi alle disposizioni previste.
- Per metterlo in servizio, svitare il dado **(Fig. 11-E)**, togliere la rondella metallica piena **(Fig. 11-P)** e sostituirla con la rondella cava **(Fig. 11-C)** che si trova nel pacco.
- Riavvitare il dado **(Fig. 11-E).**



*esempio : nel caso l'uscita del dosatore sia più bassa dell'entrata.

IT

Manutenzione

RACCOMANDAZIONI

1 - Quando si utilizzano prodotti solubili da mettere in soluzione, si consiglia di smontare periodicamente la parte completa di dosaggio **(§ SOSTITUZIONE DELLA GUARNIZIONE DI DOSAGGIO)**, di sciacquarla abbondantemente con acqua pulita, di rimontarla dopo aver lubrificato la guarnizione con silicone **(Fig. 12)**.

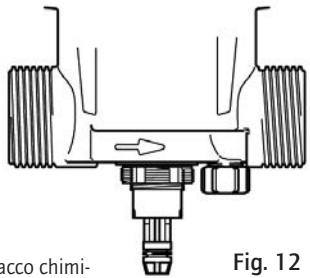
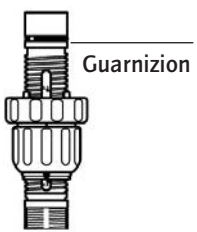


Fig. 12

2 – Una presa d'aria, un'impurità o l'attacco chimico di una guarnizione può interrompere il buon funzionamento del dosaggio. Si raccomanda di verificare periodicamente che il prodotto sia correttamente aspirato nel DOSATRON.



3 - Prima di rimettere il DOSATRON in moto, all'inizio della stagione, rimuovere il pistone motore ed immergerlo in acqua tiepida (< 40° C) per qualche ora. Tale operazione permette di eliminare i depositi secchi sul pistone motore.

SCARICO DEL DOSATRON (precauzioni contro il gelo)

- Chiudere l'arrivo dell'acqua e fare calare la pressione a zero.
- Rimuovere la parte dosaggio.
- Rimuovere la campana e il motore, **§ PULIZIA DEL FILTRA INCORPORATO**.
- Staccare i raccordi all'entrata e all'uscita dell'acqua.
- Svuotare il corpo principale dopo averlo rimosso dal supporto murale e svuotarlo.
- Procedere al rimontaggio dopo aver pulito la guarnizione di tenuta stagna **(Fig. 14-N pagina seguente)**.

PULIZIA DEL FILTRO INCORPORATO 500 microns - 32 mesh

Periodicità : Una volta al mese secondo l'uso.

Smontaggio del filtro

- Chiudere l'arrivo d'acqua e fare calare la pressione.

Prima di accedere al filtro, seguire le istruzioni cronologiche di smontaggio descritte al § SOSTITUZIONE DELLE PISTONE MOTORE.

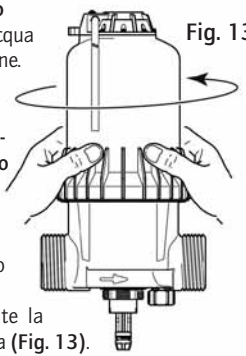


Fig. 13

- Rimuovere il corpo dosatore.
- Svitare manualmente la campana e rimuoverla **(Fig. 13)**.
- Rimuovere il pistone motore **(Fig. 14-M)**.
- Rimuovere il filtro **(Fig. 14-F)**.
- Rimuovere la guarnizione di tenuta stagna **(Fig. 14-N)**.
- Pulire il filtro e la guarnizione con acqua pulita.

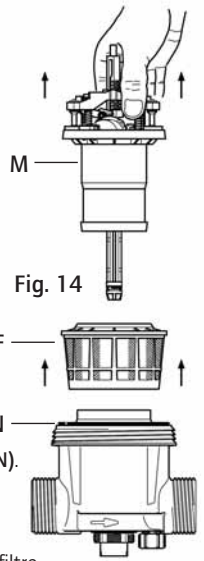


Fig. 14

Rimontaggio del filto

- Prima del rimontaggio, assicurarsi che le portate del filtro e della guarnizione di tenuta stagna **(Fig. 14-N)** sul corpo e sulla campana siano pulite. Cambiare la guarnizione se occorre.
- Lubrificare la filettura del corpo della pompa (grasso silicone).
- Operazioni inverse dello smontaggio.

Importante : in ogni caso il serraggio deve essere fatto a mano.

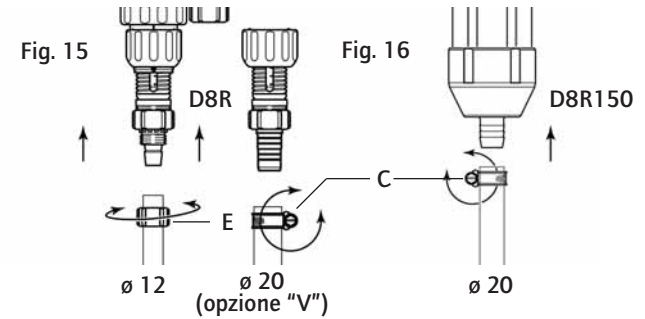
CONVERSIONI - Misure internazionali

Principio : Regolazione all' 1% ⇒ 1/100 = 1 volume di prodotto concentrato per 100 volumi d'acqua.
Es. : Regolazione al 2 % ⇒ 2/100 = 2 volumi di prodotto concentrato per 100 volumi d'acqua.
Rapporto ⇒ 1/50.

RACCORDO DEL TUBO DI ASPIRAZIONE

Nel caso di raccordo a un DOSATRON già utilizzato, consultare **imperativamente il § PRECAUZIONI.**

- Svitare il dado **(Fig. 15-E)** situato in basso, nella parte dosaggio, ed infilare il tubo di aspirazione nel dado.
- Spingere a fondo il tubo sull'estremità scanalata e riavvitare il dado **a mano**.
- Per il tubo di aspirazione Ø 20 (D8RV et D8R150), svitare con un cacciavite, il collare **(Fig. 16-C)** montato nel tubo di aspirazione.
- Infilare il tubo **a fondo** nell'estremità scanalata, avvitare di nuovo il collare.

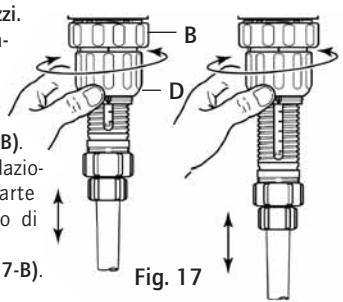


REGOLAZIONE DEL DOSAGGIO (fuori pressione)

ATTENZIONE ! Non utilizzare attrezzi. La regolazione deve essere effettuata fuori pressione, dopo avere chiuso l'arrivo d'acqua.

Modello D8R

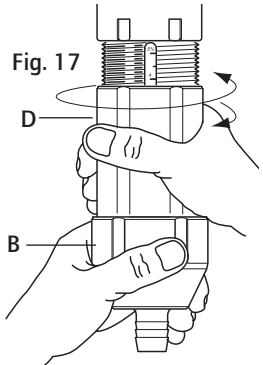
- Allentare il dado di ritenuta **(Fig. 17-B)**.
- Avvitare o svitare la boccola di regolazione **(Fig. 17-D)** per portare la parte superiore della boccola sul numero di dosaggio desiderato.
- Ristringere il dado di ritenuta **(Fig. 17-B)**.



REGOLAZIONE DEL DOSAGGIO (segue)

Modello D8R150

- Allentare il dado di ritenuta **(Fig. 17-B)**.
- Avvitare o svitare la boccola di regolazione **(Fig. 17-D)** per portare la parte superiore della boccola sul numero di dosaggio desiderato.
- Ristringere il dado di ritenuta **(Fig. 17-B)**.



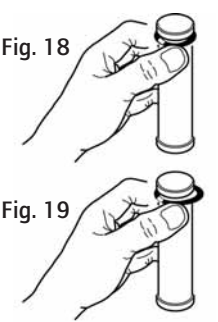
RICORDIAMO che la quantità del prodotto iniettato è proporzionale alla quantità d'acqua che entra nel DOSATRON.
1 % => 1/100, rapporto di 100 volumi d'acqua + 1 volume di prodotto iniettato.

SOSTITUZIONE DELLE GUARNIZIONI DELLA PARTE DOSAGGIO (fuori pressione)

Periodicità : al meno una volta all'anno.
ATTENZIONE ! Non si deve utilizzare attrezzi o utensili metallici.

CONSIGLIO : Prima di qualsiasi smontaggio della parte dosaggio, si consiglia di fare funzionare il DOSATRON aspirando dell'acqua pulita, per sciacquare il sistema d'iniezione. In tal modo si evita qualunque contatto con i prodotti eventualmente presenti nella parte dosaggio. Portare occhiali e guanti di protezione durante ogni intervento di questo tipo !

METODO PER TOGLIERE UNA GUARNIZIONE
Fig. 18 : Tra il pollice e l'indice, stringere il pezzo e la guarnizione; rispingerlo verso il lato opposto per deformarlo.
Fig. 19 : Aumentare la deformazione per prendere il pezzo della guarnizione che sporge, toglierlo della sua scanalatura. Pulire la portata della guarnizione senza attrezzi.
Il rimontaggio si fà a mano.
È molto importante che la guarnizione, una volta a posto, non stia attorcigliata, altrimenti l'ermeticità non sarebbe rispettata.



IT

PULIZIA E RIMONTAGGIO DELLA VALVOLA DI ASPIRAZIONE

- Chiudere l'arrivo d'acqua e fare calare la pressione a zero.

Modello D8R

- Svitare il dado **(Fig. 20/21-E)** e rimuovere il tubo d'aspirazione.
- Per il tubo di aspirazione Ø 20 (opzione V), svitare con un cacciavite, il collare **(Fig. 21-C)** montato nel tubo di aspirazione.
- Svitare e togliere il dado nero **(Fig. 20/21-N)**.
- Tirare verso il basso per rimuovere l'insieme della valvola di aspirazione.
- Risciacquare abbondantemente con acqua le diverse parti, rimontarle nell'ordine dello schema **(Fig. 20/21-P)** e verificare che la molla sia bene attiva.
- Rimontare nel senso inverso allo smontaggio **a mano**.

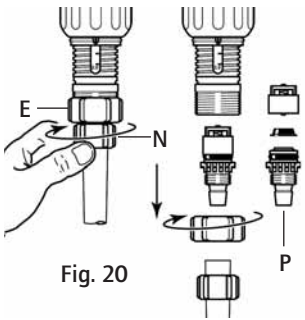


Fig. 20

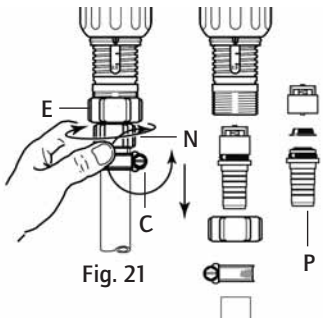


Fig. 21

Modello D8R150

- Allentare il dado di ritenuta **(Fig. 22-A)**.
- Svitare e rimuovere il dado di serraggio della valvola di aspirazione.
- Risciacquare abbondantemente con acqua le diverse parti, rimontarle nell'ordine dello schema **(Fig. 22-P)** e verificare che la molla sia bene attiva.
- Rimontare nel senso inverso allo smontaggio **a mano**.

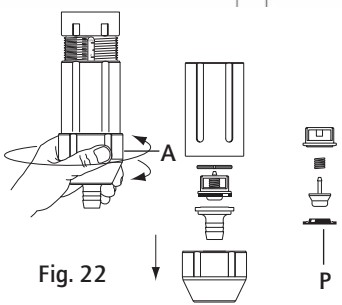


Fig. 22

SOSTITUZIONE DELLE GUARNIZIONI DELLA PARTE DOSAGGIO

- Chiudere l'arrivo d'acqua e fare calare la pressione a zero.
- Smontare il tubo di aspirazione di prodotto, svitare la parte dosaggio come descritto nel capitolo precedente e tirare verso il basso per liberarla.
- Cambiare la guarnizione del corpo dosatore **(Fig.23-O)** e quella del tuffante **(Fig. 23-P)**.
- Per il D8R, svitare il dado di contegno della valvola di aspirazione **(Fig.23-E)** stando attento a non perdere gli elementi della valvola, poi cambiare la guarnizione torica **(Fig. 23-T)** e la guarnizione della valvola **(Fig. 23-C)**.
- Per il D8R150, tenendo il dado **(Fig. 23-S)**, svitare la camicia dosatore **(Fig. 23-U)** e tirare verso il basso.
- Rimontare nel senso inverso allo smontaggio **a mano**.

Nota : La scala di dosaggio **(Fig. 23-L)** deve essere posizionata di fronte a voi.

- Avvitare l'anello di ritenuta **(Fig. 23-R)** fino al bloccaggio.

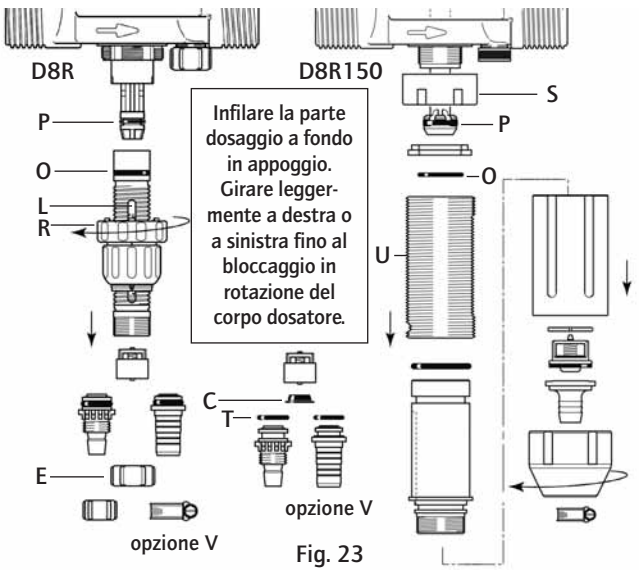


Fig. 23

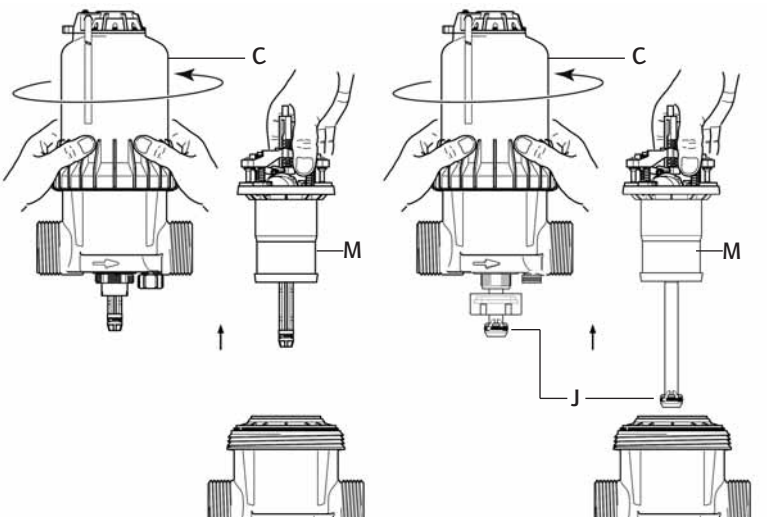
IT

SOSTITUZIONE DEL PISTONE MOTORE (fuori pressione)

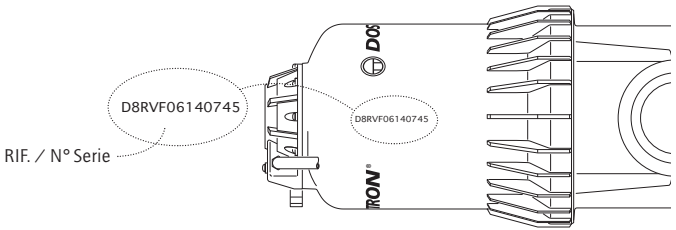
- Chiudere l'arrivo d'acqua e fare calare la pressione a zero.
- Smontare la parte dosaggio come indicato al § precedente.
- Svitare la campana a mano **(Fig. 24-C)** e rimuoverla.
- Uscire il pistone motore **(Fig. 24-M)** tirando verso l'alto, prendendosi cura di guidare la guarnizione **(Fig. 24-J)**.
- Cambiare e rimontare nel senso inverso allo smontaggio.
- Cambiare le guarnizioni della valvola e del gambo scanalato.
- Rimontare il sottogruppo dosaggio.

Fig. 24

D8R **D8R150**



Designazione/riferimento



RIF. / N° Serie : .....

ESEMPIO	D8R	BP	V	AF	P	H	ii

Tipo di DOSATRON

BP : By-pass integrato

V : Prodotti Viscosi (200-400 cSt)

Guarnizioni Dosaggio :
AF = PH 7-14
VF = PH 1-7

Colore : - = Blu
P = Bianco
R = Rosso
V = Verde
J = Giallo
O = Arancio

H = Hastelloy

Altre opzioni (da precisarci)

IT

Guasti possibili

GUASTI	CAUSE	SOLUZIONI
Pistone motore		
Il vostro DOSATRON non si mette in funzionamento o si ferma	Pistone motore bloccato	Rilanciare il pistone motore azionandolo manualmente
	Portata in eccesso	1. Ridurre la portata, rimettere in funzionamento 2. Verificare la presenza delle guarnizioni delle valvole del motore
	Il by-pass è chiuso o mezzo aperto	Mettere la leva in posizione **ON**
	Pistone motore rotto	Inviare il DOSATRON al vostro distributore
	Filtro ostruito	Pulire il filtro : § p97
Dosaggio		
Erogazione nella vasca di prodotto	Valvola di aspirazione sporca, guasta o mancante.	Pulire o cambiare.
Il prodotto non viene aspirato	Il pistone motore è fermo.	Vedi **Pistone motore**.
	Presa d'aria al livello del tubo di aspirazione.	Verificare il tubo di aspirazione e il serraggio dei suoi dadi.
	Tubo di aspirazione ostruito o succhieruola sporca.	Pulire o cambiare.
	Guarnizione della valvola di aspirazione guasta, installata male o sporca.	Pulire o cambiare.
	Guarnizione di tuffante guasta, installata male o sporca.	Pulire o cambiare.

GUASTI	CAUSE	SOLUZIONI
Dosaggio		
Il prodotto non viene aspirato	Screpolatura nel corpo dosatore	Cambiare
Sotto dosaggio	Presa d'aria	1. Verificare il serraggio dei dadi della parte dosaggio 2. Verificare lo stato del tubo di aspirazione
	Guarnizione della valvola di aspirazione guasta o sporca	Pulire o cambiare
	Eccesso di portata	Ridurre la portata
	Guarnizione di tuffante guasta	Cambiare
	Screpolatura nel corpo dosatore	Cambiare
Fughe d'acqua		
Fughe a prossimità dell'anello metallico di fissaggio sotto il corpo di pompa	Guarnizione della camicia guasta, installata male o assente	Installare correttamente o cambiare
Fughe tra la ghiera di regolazione e l'anello di bloccaggio	Guarnizione del corpo dosatore guasta, installata male o assente	Installare correttamente o cambiare
Fughe tra il corpo e la campana	Guarnizione di campana guasta, installata male o assente	Installare correttamente, pulire la sede della guarnizione o sostituire

DOSATRON INTERNATIONAL
DECLINA OGNI RESPONSABILITÀ IN CASO DI UTILIZZAZIONE NON CONFORME AL MANUALE D'USO

Garanzia

DOSATRON INTERNATIONAL S.A. si impegna a sostituire tutto particolare riconosciuto difettoso di origine durante un periodo di dodici mesi a partire dalla data di acquisto del compratore iniziale.

Per ottenere la sostituzione sotto garanzia, l'apparecchio o la parte di ricambio deve esse rinviata con la prova di acquisto iniziale al fabbricante o al distributore autorizzato.
Il detto materiale potrà essere dichiarato difettoso dopo verifica dei servizi tecnici del fabbricante o del distributore.

L'apparecchio deve essere sciacquato per pulirlo di tutto prodotto chimico e inviato al fabbricante o al distributore con porto assegnato, sarà poi rinviato gratuitamente dopo riparazione se coperto dalla garanzia.

Gli interventi realizzati sotto garanzia non potranno aumentare il tempo della garanzia stessa.

Questa garanzia si applica unicamente ai difetti di fabbricazione.

Questa garanzia non copre i difetti constatati provenienti da un'installazione anormale dell'apparecchio, della messa in opera di attrezzature non appropriate, da un difetto di installazione o di manutenzione, di un incidente ambientale o dalla corrosione dovuta a corpi stranieri o a liquidi trovati all'interno o a prossimità dell'apparecchio.

Per il dosaggio di prodotti aggressivi, Vi preghiamo di consultare il Vs rivenditore prima dell'utilizzazione per confermare la compatibilità con il dosatore.

La garanzia non comprende le guarnizioni (parti che si usano) ne i danni causati dalle impurità dell'acqua, come la sabbia.

Un filtro (300 mesh - 60 micron o inferiore) deve essere installato prima dell'apparecchio per convalidare questa garanzia.

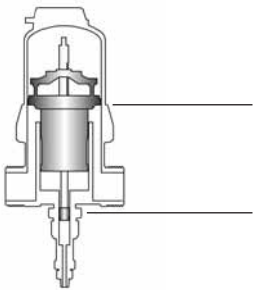
DOSATRON INTERNATIONAL S.A. declina tutta responsabilità se l'apparecchio viene utilizzato sotto condizioni che non sono conformi alle prescrizioni et tolleranza del manuale d'uso.

Non esiste garanzia implicita o esplicita relativa ad altri prodotti o accessori utilizzati con gli apparecchi della DOSATRON INTERNATIONAL S.A.

Non esitare a chiamare il Vostro distributore o la Dosatron per qualsiasi assistenza dopo vendita.

PER CONOSCERE LA VOSTRA PORTATA

UN METODO SEMPLICE
È COSTITUITO DA :

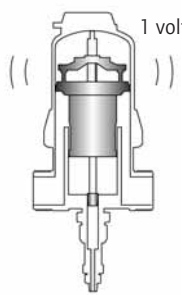


Un motore idraulico volumetrico con pistone che aziona :

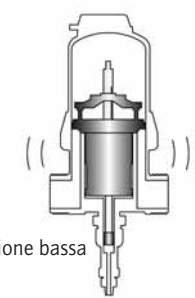
Un pistone di dosaggio.

La cadenza del motore è proporzionale alla portata d'acqua che passa attraverso l'apparecchio.

Nel suo movimento di va e vieni, il pistone motore emette i clac :



1 volta in posizione alta



1 volta in posizione bassa

Contare il numero di clac in **30** secondi x 100
= **Portata d'acqua in litri/ora.**

NOTA : Questo metodo di calcolo non può sostituire un misuratore di portata. È dato esclusivamente a titolo indicativo.

Español

Este documento no constituye un compromiso contractual y se suministra solamente a título orientativo. La sociedad DOSATRON INTERNATIONAL se reserva el derecho de modificar sus aparatos en cualquier momento.

Vd. acaba de adquirir un Dosificador Proporcional DOSATRON INTERNATIONAL.
Le felicitamos por su elección. Este modelo ha sido elaborado gracias a la experiencia de más de 25 años.
Nuestros ingenieros han situado la serie de los DOSATRON en primera línea de lo que podía ser la evolución técnica de los Dosificadores Proporcionales Sin Electricidad.
La elección de los materiales que forman parte de la fabricación fue de lo más minuciosa a fin de resistir a los ataques químicos de todos o, por lo menos, de la mayoría de los productos a dosificar existentes en el mercado. Este DOSATRON se revelará, con el tiempo, un aliado de los más fieles. Una limpieza regular garantizará un funcionamiento en el cual la palabra avería ya no tendrá cabida.

SÍRVASE LEER ATENTAMENTE ESTE MANUAL
ANTES DE PONER EN SERVICIO EL APARATO

ES

¡ Importante !
El número de serie de su DOSATRON aparece **en el cuerpo de bomba**.
Le rogamos apunte éste número en la parte destinada a ello más abajo y lo mencione cuando se ponga en contacto con su vendedor para cualquier información.

Ref. : .....

N° Serie : .....

Fecha de compra : .....

....

CARACTERÍSTICAS	D 8 R	D 8 R 150
Caudal nominal de agua de funcionamiento : **500 l/h mín. - 8 m³ máx. [**2.2 Fl oz/min - 40 US GPM]		
Presión de funcionamiento :		
bar	**0.15 - 8**	**0.15 - 8**
PSI	2 - 110	2 - 110
Dosificación ajustable **exteriormente** o fija :		
%	**0.2 - 2**	**1 - 5**
ratio	1:500 - 1:50	1:100 - 1:20
Caudal de inyección del producto concentrado :		
Mín. l/h - Máx. l/h	**1 - 160**	**5 - 400**
US Fl. oz/mín	0.56	2.8
US GPM/máx	0.70	1.76
Temperatura máxima de funcionamiento : **40 °C** [104 ° F]		
Conexión (NPT/BSP gas macho) : **Ø 40x49 mm** [1" 1/2 M]		
Cilindrada del motor hidráulico (cada dos pistonadas del pistón) : aprox. **1.6 l** [0.4224 US Gallons]		

¡ CUIDADO ! El DOSATRON no está regulado de antemano, para ello referirse al § AJUSTE DE LA DOSIFICACIÓN

DIMENSIONES		
Diámetro : **cm** ["]	**18.4** [7 1/4]	**18.4** [7 1/4]
Altura total : **cm** ["]	**59.1** [23 1/4]	**66.7** [26 1/4]
Anchura total : **cm** ["]	**31** [12 1/4]	**31** [12 1/4]
Peso : ± **kg** [lbs]	**4** [8.8]	**4.5** [10]
Dimensiones del embalaje :		
cm	**60 x 36.5 x 24**	**82 x 26 x 21**
["]	[23 2/3 x 14 1/3 x 9 1/2]	[32 1/4 x 10 1/4 x 8 1/4]
Peso del paquete :		
± **kg** [lbs]	**5.5** [12.15]	**7** [15.5]

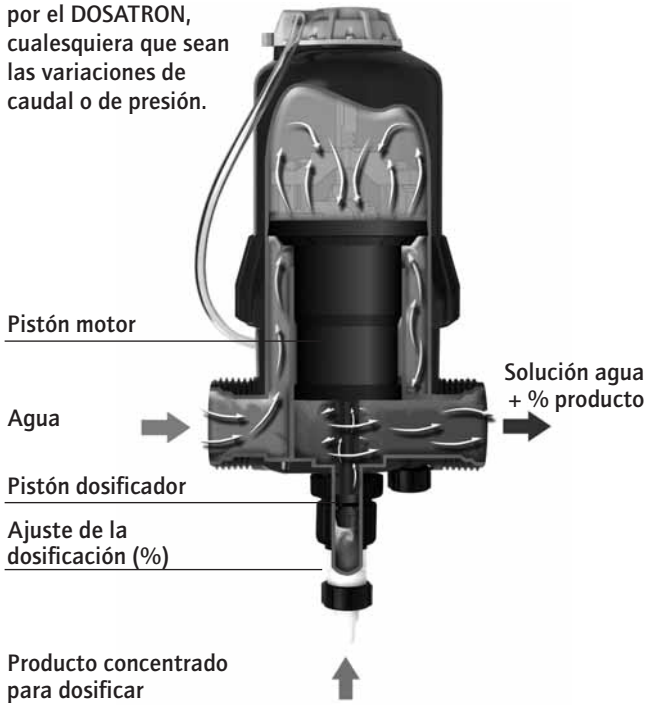
COMPOSICIÓN DEL PAQUETE : 1 DOSATRON / 1 soporte mural para DOSATRON / 1 tubo de aspiración para la solución / 1 filtro de aspiración / 1 manual de utilización

Índice

ES

Preciso, sencillo y fiable

Instalado en una red de agua, el DOSATRON funciona sin electricidad : utiliza la presión del agua como fuerza motriz. Así accionado, aspira el producto concentrado en un recipiente, lo dosifica al porcentaje deseado, lo homogeneiza en la cámara mezcladora con el agua motriz. La solución realizada está entonces enviada a la salida del aparato. La dosis de producto inyectada es siempre proporcional al volumen de agua que pasa por el DOSATRON, cualesquiera que sean las variaciones de caudal o de presión.



Instalación

RECOMENDACIONES

1 - INFORMACIONES GENERALES

- Cuando se conecta una instalación, bien a la red pública de agua o a su propio punto de agua, es imperativo cumplir la normativa de protección y desconexión.

DOSATRON recomienda un desconectador para evitar la contaminación de la red de agua.

- En caso de que la instalación esté más alta que el propio DOSATRON, existe el riesgo de retorno de agua al DOSATRON ; por lo tanto, se recomienda instalar una válvula antirretorno aguas abajo del aparato.
- No instalar el DOSATRON sobre un recipiente de ácido o de un producto agresivo, y protegerlo contra posibles emanaciones de producto.
- El DOSATRON ha de estar protegido contra el hielo y debe estar situado lejos de fuentes de calor importantes.
- No instalar el DOSATRON en el circuito de aspiración de la bomba de impulsión (efecto sifón).
- El operador debe ponerse frente al DOSATRON, llevar gafas y guantes de protección para cualquier intervención.
- Para asegurar la precisión de la dosificación, el cambio anual de las juntas de la parte dosificación permanece bajo la responsabilidad del utilizador.
- El utilizador será el único responsable de la selección de las regulaciones del DOSATRON para obtener la dosificación deseada.

El utilizador debe respetar rigurosamente las recomendaciones del fabricante de producto.

- Asegurarse de que el caudal y la presión de agua de la instalación son conformes con las características del DOSATRON.
- Una toma de aire, una impureza o una rotura de junta puede interrumpir el buen funcionamiento de la dosificación. Se recomienda verificar periódicamente que el producto concentrado por dosificar va siendo aspirado en el DOSATRON.
- Cambiar el tubo de aspiración del DOSATRON en cuanto parezca deteriorado por el concentrado dosificado.
- Al final del uso, poner el sistema fuera de presión (recomendado).

ES

1 - INFORMACIONES GENERALES (continuación)

- El enjuague del DOSATRON es imprescindible :
. después de cada cambio de producto.
. antes de cada manipulación, para evitar el contacto con productos agresivos.
- Para la dosificación de productos agresivos, le rogamos consulte el distribuidor oficial DOSATRON antes de cualquier utilización para confirmar la compatibilidad del producto con el dosificador.
- No se debe utilizar herramientas para montar y apretar.

2 - AGUAS CARGADAS

- En caso de aguas cargadas muy duras, coloque **imperativamente** un filtro con tamiz antes del DOSATRON (300 mesh – 60 micras según la calidad de su agua). Si no se instala este filtro, partículas abrasivas causarán el desgaste prematuro del DOSATRON.

3 - GOLPES DE ARIETE / CAUDAL EXCESIVO

- En instalaciones sometidas a golpes de ariete, es necesario instalar un dispositivo antigolpes de ariete (sistema de regulación presión/caudal).
- En las instalaciones automatizadas, utilice preferentemente electroválvulas de apertura y cierre lentos.
- En caso de que un DOSATRON alimente varios sectores, accionar las electroválvulas simultáneamente (cierre de un sector y abertura de un otro sector al mismo tiempo).

4 - LUGAR DE LA INSTALACION

- El DOSATRON y el concentrado que hay que dosificar deben ser fácil de acceso. Su instalación no debe presentar ningún riesgo de polución o de contaminación.
- Se recomienda marcar todas las tuberías de agua señalando que el agua contiene aditivos, mencionar :
" ¡ CUIDADO ! Agua No Potable".

5 - MANTENIMIENTO

- Después de utilizarlo, se recomienda aspirar agua (~ 1/4 litro [8 1/2 US Fl.oz]).
- Un mantenimiento anual le permitirá alargar la vida de su DOSATRON. Cambiar al menos cada año las juntas de inyección y el tubo de aspiración.

6 - SERVICIO

- Este DOSATRON se sometió à pruebas antes de embalarle.
- Subconjuntos de reparación y bolsas de juntas son disponibles.
- Para cualquier servicio posventa, llame su distribuidor o DOSATRON.

EL MONTAJE DEBE HACERSE SIN HERRAMIENTAS

El DOSATRON se entrega con :
- un soporte mural,
- un tubo de aspiración con filtro.
- 1 tubo (by-pass) ø 6 x 9 [1/4" ID x 3/8" OD]

El soporte permite la fijación mural del DOSATRON.
- Colocar las colas de milano del DOSATRON **(Fig. 1-A)** en el soporte mural **(Fig. 1-S)**.
- Retirar las tuercas **(Fig. 1-E)** y los anillos de fijación **(Fig. 1-C)** situados en los orificios de entrada y de salida del agua del DOSATRON.
- Retirar los tapones de protección del DOSATRON **(Fig. 1-B)** que obstruyen los orificios de su DOSATRON antes de conectarlo a la red de agua.
- Controle la posición correcta en la entrada y salida del sistema de estanqueidad. Coloque primero la junta tórica **(Fig. 1-J)** y luego el anillo de fijación **(Fig. 1-G)**.
- Asegúrese de que el agua fluya en el sentido de las flechas por el aparato.

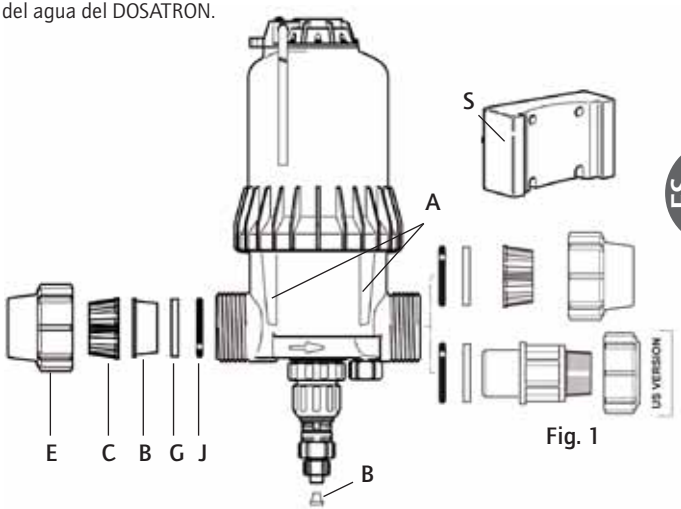


Fig. 1

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Técnica de empalme para tubos de polietileno y polipropileno :
- Colocar la tuerca **(Fig. 2-E)** y el anillo de fijación **(Fig. 2-C)**, en el tubo cortado y achaflanado.
- Introducir el tubo en los orificios de entrada y de salida del agua **(Fig. 2)**.
- Empujar hasta el tope el anillo **(Fig. 2-C)** hacia la entrada, y el otro anillo hacia la salida de agua.
- Apretar la tuerca **(Fig. 2-E)**.

Técnica de empalme para tubos de PVC :
- Proceder como para el empalme de tubos de polietileno y polipropileno, pero antes de apretar, untar con cola de PVC el sitio del anillo de fijación.
- Posicionar el anillo de fijación separandolo con los dos pulgares puesto en la ranura **(Fig. 2-C)** pour ne pas racler la colle, despues, apretar la tuerca.

NOTA : Esparar 1 hora antes de poner a presión el circuito. Para cualquier desmontaje ulterior, es necesario saber que la cola PVC nunca adhiere al anillo de fijación de poliacetal.

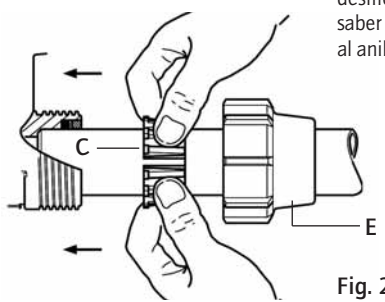


Fig. 2

La conexión del aparato a la red de agua puede realizarse mediante tubos flexibles de 40 mm de diámetro interior fijados con anillos y racores giratorios de ø 40 x 49 mm [1"1/2]. Asegúrese de que el agua fluya en el sentido de las flechas por el aparato.

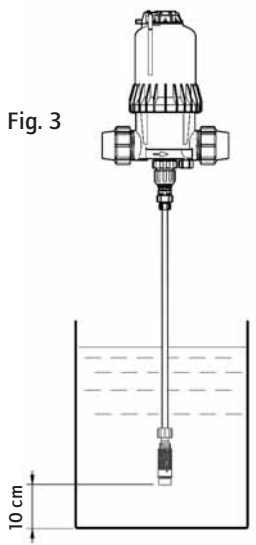
El DOSATRON se entrega con un tubo de aspiración que permite su uso con un recipiente de gran capacidad.
Este tubo debe estar provisto obligatoriamente del filtro de aspiración.
Para la conexión de este tubo, véase el anexo correspondiente.

NOTA : La altura de aspiración es de 4 metros (máx) [13 ft].

- Conectar el tubo provisto de su filtro de aspiración y sumergirlo en la solución a dosificar.

¡ ATENCIÓN ! Dejar el filtro de aspiración a 10 cm del fondo del recipiente de solución para evitar aspirar las partículas no solubles que puedan dañar el cuerpo dosificador (Fig. 3).
- No colocar el filtro de aspiración en el suelo.

Fig. 3



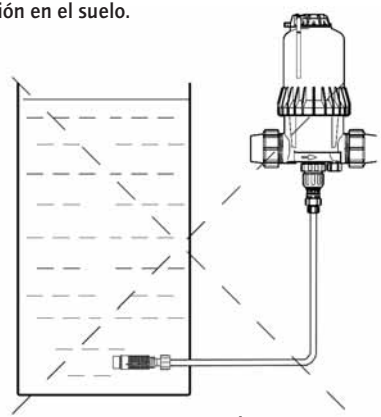


Fig. 4

▲ **LO QUE NO DEBE HACER**

◀ **LO QUE DEBE HACER**

El nivel de la solución nunca debe estar encima de la entrada de agua en el DOSATRON (a fin de evitar el efecto sifón).

ES

RECOMENDACIONES DE INSTALACIÓN

En la tubería del agua, los montajes pueden hacerse **en directo** (**Fig. 5**), en **by-pass,** recomendado (**Fig. 6**. Si el caudal es superior a los límites del DOSATRON, **véase § CAUDAL EXCESIVO**.

Para preservar la longevidad de su DOSATRON, se aconseja instalar un filtro (300 mesh - 60 microns) antes de éste.
Esta precaución es imprescindible cuando el agua está cargada de impurezas o partículas, sobre todo si el agua proviene de un pozo o de una perforación.
El filtro es aconsejado y necesario para que corra la garantía.

El montaje en by-pass permite el paso del agua clara sin que funcione el DOSATRON y el desmontaje de este.

Para cualquier instalación en la red de agua potable, respete las normas y reglamentaciones vigentes del país.

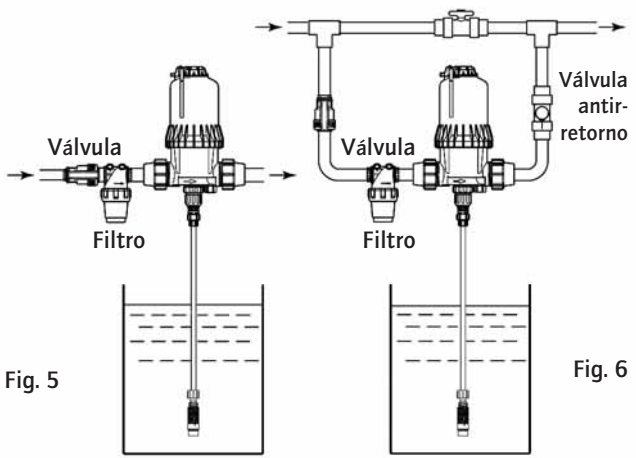


Fig. 5

Fig. 6

CAUDAL EXCESIVO (a título indicativo)
Si el DOSATRON realiza más de **36 pistónadas**, o sea **18 ciclos** en **15 segundos**, se encontrará en una situación de CAUDAL EXCESIVO ; entonces tendrá que escoger un DOSATRON de mayor capacidad de caudal de agua.

Puesta en servicio del DOSATRON

PRIMERA PUESTA EN SERVICIO

- Poner la palanca **(Fig. 7-L)** en la posición **ON**.
- Dejarlo funcionar hasta que el producto suba en la parte dosificación (ver en el tubo transparente).
- El DOSATRON emite un "clic clac" característico de su funcionamiento.

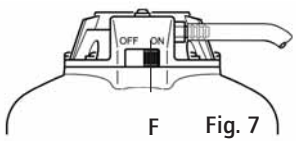


Fig. 7

NOTA : El tiempo de cebado de la solución dosificada es función del caudal y del tiempo de llenado del tubo de aspiración de solución. Para acelerar el arranque, ajustar la dosificación al máximo. Una vez realizado el arranque, ajustar al valor deseado, **(véase § AJUSTE DE LA DOSIFICACIÓN)**.

BY-PASS HIDRAULICO INCORPORADO

Sistema de puesta en marcha o interrupción de la aspiración de la solución:
Para tener un buen funcionamiento del by-pass se necesita una presión de agua de mando de **0.8 bar mínimo**.
- By-pass sobre **OFF (Fig. 8-L)**, el DOSATRON está parado y no aspira producto.
- By-pass sobre **ON (Fig. 9-L)**, el DOSATRON funciona, aspira, inyecta y mezcla el producto concentrado en el agua en el porcentaje elegido.

Fig. 8

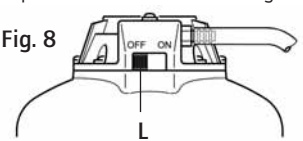
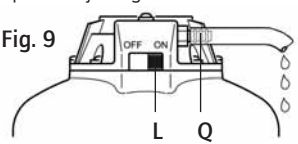


Fig. 9



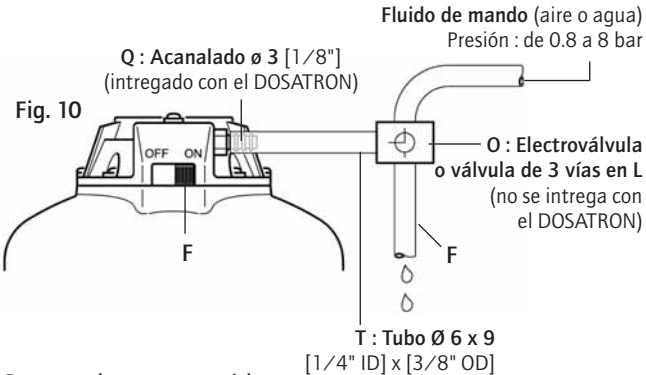
CUIDADO ! Es normal que salga un poco de agua por el mango acanalado ø 3 [1/8"] (Fig. 9-Q) cuando se pasa de la posición OFF a la posición ON.

ES

BY-PASS AUTOMATICO

Sistema de puesta en marcha o interrupción de la aspiración de la solución:
Para tener un buen funcionamiento del by-pass se necesita una presión de agua de mando de **0.8 bar minimum**.
NOTA : Cuando se utiliza el by-pass automático, la palanca de mando **(Fig. 8-L)** tiene que estar en la posición ON.

Fig. 10

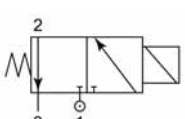


Puesta en by-pass automático :
- Abrir la electroválvula.

Accionada abierta : **1 hacia 2** > Utilización : Entrada del agua de mando del by-pass - Puesta en by-pass (parada del DOSATRON)
3 > Escape cerrado

Puesta en marcha del DOSATRON :
- Cerrar la electroválvula.

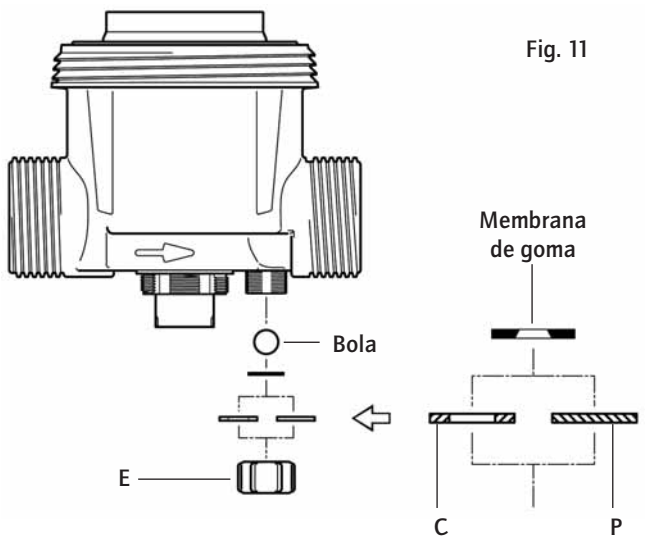
No accionada cerrada : **2 hacia 3** > Escape : Evacuación del agua de mando al exterior - Puesta en marcha del DOSATRON
1 > Presión en espera



BY-PASS AUTOMATICO (continuación)

Dispositivo de auto-aspiración de la solución dosificada :
- Restablece automaticamente la presión atmoférica en la instalación en caso de depresión accidental* **(Fig. 11)**. Su utilización depende de la reglamentación sanitaria vigente en nuestro país.
- Ajustese a las disposiciones previstas.
- Para ponerlo en servicio, desatornille la tuerca **(Fig. 11-E)** quite la arandela metálica llena **(Fig. 11-P)** y sustituirla con la arandela hueca **(Fig. 11-C)** que se encuentra en el paquete.
- Cerrar la tuerca **(Fig. 11-E)**.

Fig. 11



*ejemplo : caso en el cual la salida del dosificador es más baja que el entrada

ES

Mantenimiento

RECOMMANDATIONS

1 - Cuando utiliza productos solubles disolvidos, se recomienda desmontar periódicamente la parte dosificación completa, **(véase : § CAMBIO DE LAS JUNTAS DE LA PARTE DOSIFICACIÓN).** Aclararla con agua abundante y volver a montarla después de haber engrasado la junta con una grasa de silicona **(Fig. 12)**.

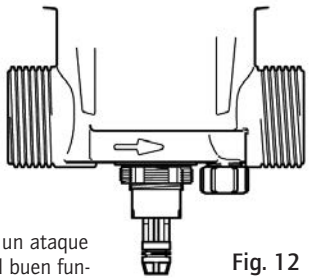
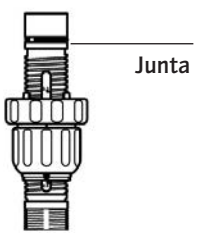


Fig. 12

2- una entrada de aire, una impureza o un ataque químico de la junta puede interrumpir el buen funcionamiento de la dosificación. Se recomienda verificar periódicamente que el producto concentrado a dosificar esté siendo bien aspirado por el Dosatron.



Junta

3 - Antes de volver a poner el DOSATRON en servicio a principios de temporada, extraer el pistón motor y sumergirlo en agua templada (< 40° C) durante unas horas. Esta operación permite eliminar los sedimentos que se hayan secado en el pistón motor.

VACIADO DEL DOSATRON (en caso de una puesta fuera de hielo)

- Cerrar la llegada de agua y caer la presión a cero.
- Retirar la parte dosificación.
- Retirar la campana y el motor, **§ LIMPIEZA DEL FILTRO INCORPORADO**.
- Desconectar los racores de la entrada y salida de agua.
- Retirar el cuerpo principal del soporte mural y vaciarlo.
- Proceder al remontaje después de haber limpiado previamente la junta de estanqueidad (**Fig. 14-N pág. siguiente**).

LIMPIEZA DEL FILTRO INCORPORADO 500 micras - mesh 32

Periodicidad : Una vez al mes según el uso.

Desmontaje del filtro

- Cerrar la llegada de agua y dejar caer la presión.

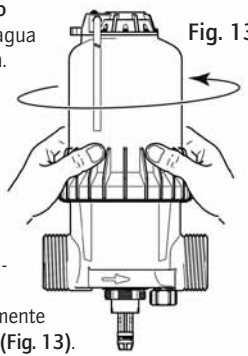


Fig. 13

Antes de sacar el filtro, seguir los métodos cronológicos de desmontaje mencionados en § CAMBIO DEL PISTON MOTOR.

- Retirar la parte dosificación.
- Desenroscar manualmente la campana y retirarla **(Fig. 13)**.
- Retirar el pistón motor **(Fig. 14-M)**.
- Extraer el filtro **(Fig. 14-F)**.
- Retirar la junta de estanqueidad **(Fig. 14-N)**.
- Limpiar el filtro y la junta con agua limpia.

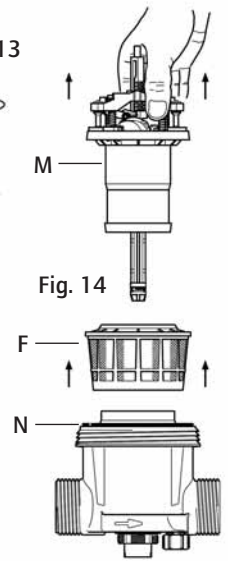


Fig. 14

Montaje del filtro

- Antes de volver a montar el filtro, asegurarse de que los asientos de éste y los de la junta de estanqueidad **(Fig. 14-N)** en el cuerpo y la campana estén limpios. Cambiar la junta si necesario.
- Engrasar el fileteado del cuerpo de bomba (grasa silicona).
- Operaciones inversas al desmontaje.

Importante : el apriete debe hacerse siempre manualmente.

ES

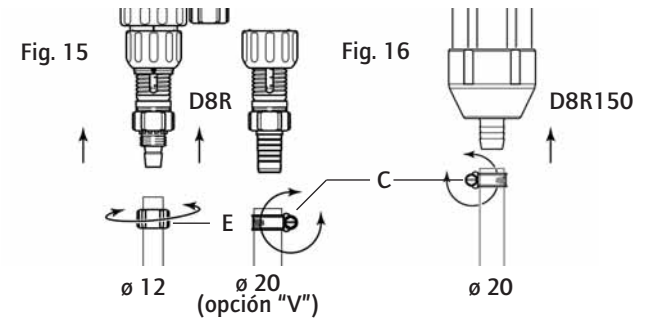
CONVERSIONES - Medidas internacionales

Principio : Ajuste al 1% ⇒ 1/100 = 1 volumen de producto concentrado para 100 volúmenes de agua.
Ej. : Ajuste al 2 % ⇒ 2/100 = 2 volúmenes de producto concentrado para 100 volúmenes de agua.
Relación ⇒ 1/50.

CONEXIÓN DEL TUBO DE ASPIRACIÓN

En caso de una conexión a un DOSATRON ya utilizado, consultar **imperativamente el § PRECAUCIONES.**

- Desenroscar la tuerca **(Fig. 15-E)** colocada debajo de la parte dosificación e introducir el tubo de aspiración en la tuerca.
- Empujar **a fondo** el tubo en la tubuladura acanalada y enroscar la tuerca **manualmente**.
- Para el tubo de aspiración Ø 20 (D8RV et D8R150), quitar el collarín que mantiene el tubo de aspiración **(Fig. 16-C)** con un destornillador.
- Meter **a fondo** el tubo de aspiración en la contera acanalada, y volver a poner el collarín.

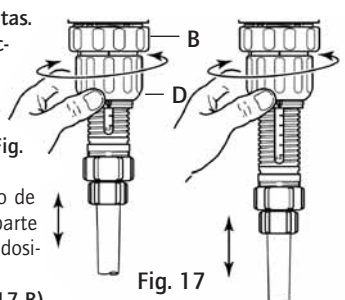


AJUSTE DE LA DOSIFICACIÓN (sin presión)

¡ ATENCIÓN ! No utilizar herramientas. El ajuste de la dosificación ha de efectuarse sin presión, después de haberse cerrado la llegada de agua.

Modelo D8R

- Desenroscar el anillo de bloqueo **(Fig. 17-B)**.
- Enroscar o desenroscar el casquillo de ajuste **(Fig. 17-D)** para situar la parte superior del casquillo en la marca de dosificación deseada.
- Enroscar el anillo de bloqueo **(Fig. 17-B)**.

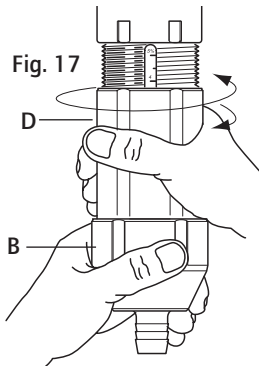


AJUSTE DE LA DOSIFICACIÓN (continuación)

Modelo D8R150

- Desenroscar el anillo de bloqueo **(Fig. 17-B)**.
- Enroscar o desenroscar el casquillo de ajuste **(Fig. 17-D)** para situar la parte superior del casquillo en la marca de dosificación deseada.
- Enroscar el anillo de bloqueo **(Fig. 17-B)**.

Nota : La cantidad de producto inyectado es proporcional a la cantidad de agua que entra en el Dosatron. 1% => 1/100, relación de 100 volúmenes de agua + 1 volumen de producto inyectado.



CAMBIO DE LAS JUNTAS DE LA PARTE DOSIFICACIÓN (sin presión)

Periodicidad : Una vez al año.

¡ CUIDADO ! No usar herramientas o utensilios metálicos

CONSEJO : Antes de cualquier desmontaje de la parte dosificación se aconseja hacer funcionar el DOSATRON aspirando agua clara para aclarar el sistema de inyección. Esto evita cualqier riesgo de contacto con los productos que pueden estar en la parte dosificación. Llevar gafas y guantes de protección para cualquier intervención de esta naturaleza !

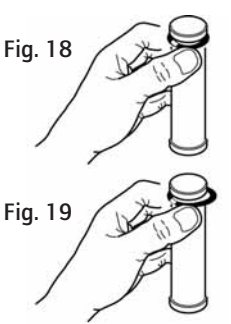
Fig. 18 : Apretar la pieza y la junta con el pulgar y el índice : empujar hacia el lado opuesto para desformarlo.

Fig. 19 : Acentuar la deformación para agarrar la parte sobresaliente de la junta, y retirar ésta última fuera de su ranura.

Limpiar el asiento de la junta sin herramientas.

El remontaje se hace a mano.

Es muy importante que la junta no se quede torcida porqué una vez puesta ya no habrá estanqueidad.



ES

LIMPIEZA Y REMONTAJE DE LA VÁLVULA DE ASPIRACIÓN

- Cerrar la llegada de agua y dejar caer la presión.

Modelo D8R

- Desenroscar la tuerca **(Fig. 20/21-E)** y retirar el tubo de aspiración.
- Para el tubo de aspiración diam 20 (opción V), destornillar con un destornillador el collar **(Fig. 21-C)** montado en el tubo de aspiración.
- Destornillar y retirar la tuerca negra. **(Fig. 20/21-N)**.
- Tirar hacia abajo para sacar todo el conjunto tubo de aspiración.
- Enjuagar abundantemente con agua limpia las diferentes partes, montar de nuevo siguiendo el orden del esquema **(Fig. 20/21-P)** y verificar que el muelle de retorno esté activo.
- Volver a montar en el orden inverso al desmontaje **manualmente.**

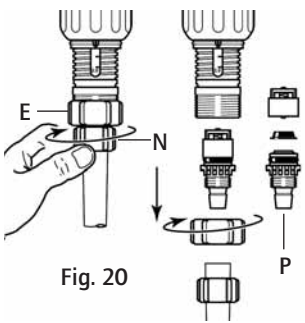


Fig. 20

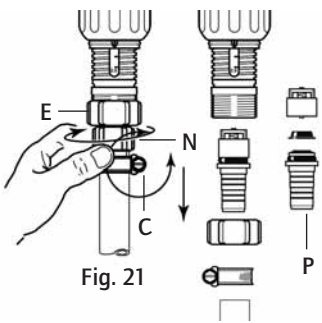


Fig. 21

Modelo D8R150

- Desenroscar el anillo de bloqueo **(Fig. 22-A)**.
- Tirar hacia abajo para sacar todo el conjunto tubo de aspiración.
- Enjuagar abundantemente con agua limpia las diferentes partes, montar de nuevo siguiendo el orden del esquema **(Fig. 22-P)** y verificar que el muelle de retorno esté activo.
- Volver a montar en el orden inverso al desmontaje **manualmente.**

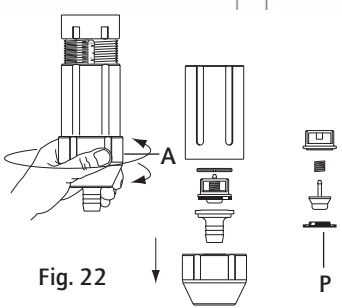


Fig. 22

CAMBIO DE LAS JUNTAS DE LA PARTE DOSIFICACIÓN

- Cerrar la llegada de agua y dejar caer la presión.
- Desmontar el tubo de aspiración del producto, destornillar la parte dosificación como descrito en el capitulo precedente y tirar hacia abajo para retirarla.
- Cambiar la junta del cuerpo dosificador **(Fig. 23-O)** y la junta del émbolo buzo **(Fig. 23-P)**.
- Para el D8R, destornillar la tuerca de mantenimiento de la válvula de aspiración **(Fig. 23-E)** tomando cuidado para no perder los elementos de la válvula , y luego cambiar la junta tórica **(Fig. 23-T)** y la junta de la válvula **(Fig. 23-C)**.
- Para el D8R150, manteniendo la tuerca **(Fig. 23-S)**, destornillar la camisa **(Fig. 23-U)** y tirar hacia abajo.
- Volver a montar en el orden inverso al desmontaje.

Nota : La regleta de dosificación **(Fig. 23-L)** debe estar colocada ante usted.

- Atornillar el anillo de retención **(Fig. 23-R)** hasta el bloqueo.

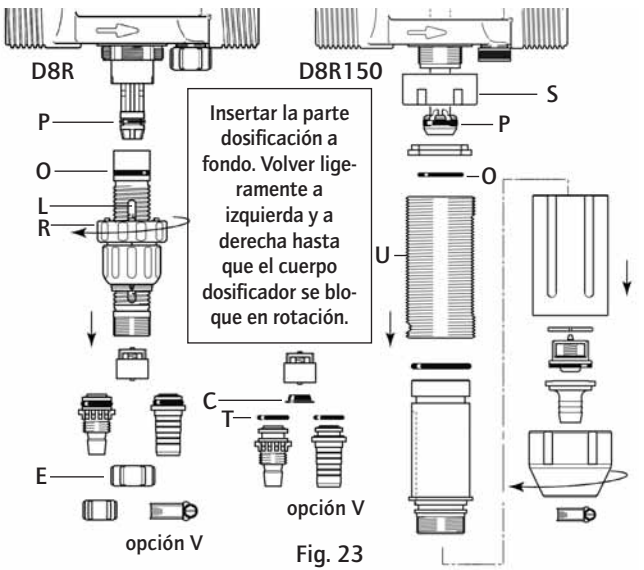


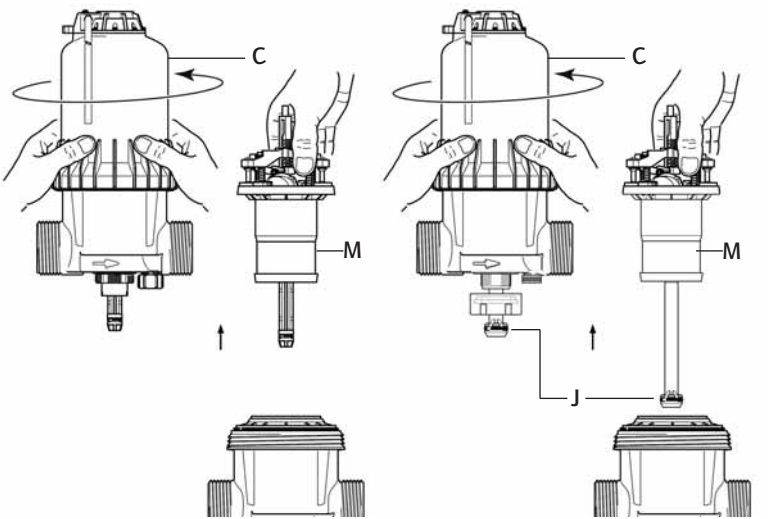
Fig. 23

CAMBIO DEL PISTON MOTOR (sin presión)

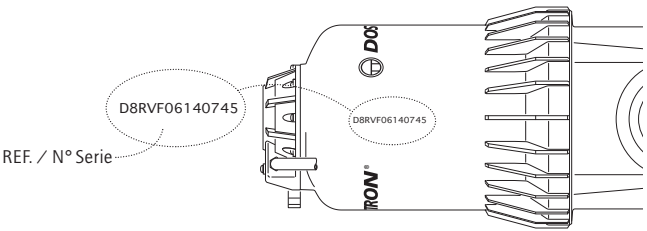
- Cerrar la llegada de agua y dejar caer la presión.
- Desmontar la parte dosificación como indicado en el parágrafo precedente.
- Desenroscar la campana manualmente **(Fig. 24-C)** y retirarla.
- Sacar el émbolo-buzo **(Fig. 24-M)** tirando hacia arriba, tomando cuidado para guiar la junta **(Fig. 24-J)**.
- Volver a montar el conjunto en el orden inverso al desmontaje.
- Volver a montar la campana procurando no estropear su junta y enroscarla **manualmente.**
- Volver a montar el subconjunto dosificación.

Fig. 24

D8R **D8R150**



Denominación/Referencia



REF. / N° Serie : .....

EJEMPLO	D8R	BP	V	AF	P	H	ii

Tipo de DOSATRON
BP : By-pass integrado
V : Productos Viscosos (200-400 cSt)
Juntas dosificación :
AF = PH 7-14
VF = PH 1-7
Color : - = Azul
P = Blanco
R = Rojo
V = Verde
J = Amarillo
O = Naranja
H = Hastelloy
Otras extensiónes (especificar)

ES

Posibles Incidencias

SINTOMAS	CAUSA	SUBSANAR
Pistón motor		
Su DOSATRON no arranca o se para	Pistón bloqueado	Reactivar el pistón accionando manualmente
	Caudal excesivo	1. Reducir el caudal, volver a ponerlo en marcha 2. Controlar el montaje de las juntas de las válvulas del motor
	El by-pass está, o cerrado, o medio abierto	Poner la palanca en posición ON
	Pistón motor roto.	Devolver el DOSATRON a su distribuidor.
	Filtro atascado	Limpiar el filtro : § p19
Dosificación		
Retorno en el recipiente de concentrado	Válvula de aspiración o junta de la válvula sucia, desgastada o ausente	Limpiar o cambiar
No aspira el concentrado	El pistón hidráulico está parado	Véase **Pistón motor**
	Toma de aire en el tubo de aspiración	Controlar el tubo de aspiración y el apriete de sus tuercas
	Tubo de aspiración obstruido o filtro atascado	Limpiar o cambiar
	Junta de la válvula de aspiración desgastada, mal montada o sucia	Limpiar o cambiar
	Junta del émbolo buzo mal montada o sucia	Limpiar o cambiar

SINTOMAS	CAUSA	SUBSANAR
Dosificación		
No aspira el concentrado	Grietas en el cuerpo mal montada o sucia	Cambiar
Subdosificación	Toma de aire	1. Controlar el apriete de las tuercas de la parte dosificación 2. Verificar el estado del tubo de aspiración
	Junta de válvula de aspiración desgastada o sucia	Limpiar o cambiar
	Caudal excesivo	Reducir el caudal
	Junta del émbolo buzo desgastada	Cambiar
	Cuerpo dosificador rayado	Cambiar
Fugas		
Fugas a proximidad del anillo metálico de fijación bajo del cuerpo de bomba	Junta de la camisa estropeada, mal montada o ausente	Ponerla correctamente o cambiar
Fugas entre el anillo de regulación y el anillo de bloqueo	Junta del cuerpo dosificador estropeada, mal montada o ausente	Ponerla correctamente o cambiar
Fugas entre el cuerpo y la campana	Junta de la campana estropeada, mal montada o ausente	Ponerla correctamente, limpiar el asiento de la junta o cambiar

DOSATRON INTERNATIONAL
RECHAZA CUALQUIER RESPONSABILIDAD EN CASO DE UTILIZACIÓN NO CONFORME CON LAS INSTRUCCIONES TÉCNICAS

ES

Garantía

DOSATRON INTERNATIONAL S.A se compromete a sustituir todo material identificado como defectuoso de origen durante un periodo de doce meses a partir de la fecha de compra del cliente inicial.

Para obtener la sustitución bajo garantía, el equipo o repuesto deber ser enviado con el comprobante de compra inicial al fabricante o al distribuidor oficial para que sea reconocido como defectuoso después control por el departamento técnico del fabricante o distribuidor.

El equipo debe ser enjuagado para eliminar cualquier producto químico y enviado limpio al fabricante o distribuidor ; el cliente se hará cargo del transporte. El equipo será devuelto gratuitamente si la reparación se encuentra bajo garantía.

Las reparaciones realizadas bajo garantía no podrán prolongar el tiempo de la misma.

Esta garantía solo se aplica a los defectos de fabricación.

Esta garantía no cubre los efectos derivados de una mala utilización del equipo, del uso de herramientas inapropiadas, de un defecto de instalación o de mantenimiento, de desastres naturales, o debido a la corrosión causada por cuerpos extraños o líquidos encontrados en el interior o cerca del equipo.

Para la dosificación de productos agresivos, le rogamos consulte el distribuidor oficial DOSATRON antes de cualquier utilización para confirmar la compatibilidad del producto con el dosificador.

Las garantías no comprenden las juntas (repuestos de desgaste) ni los daños causados por las impurezas del agua, como la arena.

Para dar validez a esta garantía, es imprescindible instalar un filtro (300 mesh - 60 micras o inferior) antes del equipo.

DOSATRON INTERNATIONAL SA rehusa toda responsabilidad si el equipo es utilizado en condiciones no conformes a las prescripciones del manual de utilización.

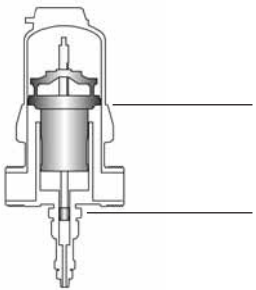
No existe garantía, implícita o explícita, relativa a otros productos o accesorios utilizados con los equipos de DOSATRON INTERNATIONAL S.A.

No dude en entrar en contacto con nuestro distribuidor o con Dosatron para cualquier servicio post-venta.

CONOCER SU CAUDAL

UN MÉTODO SENCILLO

EL DOSATRON SE COMPONE :

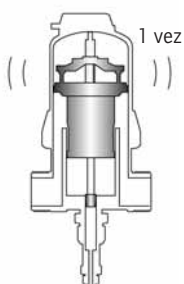


De un motor hydráulico volumétrico de pistón de accionamiento :

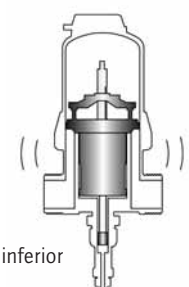
De un pistón dosificador.

La cadencia del motor es proporcional al caudal de agua que pasa por el aparato.

En su movimiento de vaivén, el pistón motor produce las pistónadas siguientes :



1 vez en la posición superior



1 vez en la posición inferior

Cuente la cantidad de pistónadas del pistón en **30** segundos x 10 =
Caudal de agua en litros/H.

NOTA : Este método de cálculo no reemplaza un caudalímetro.
Sólo se proporciona a título orientativo.

ES

Nederlands

Proficiat met de aanschaf van uw DOSATRON. U heeft een goede keuze gemaakt. De ontwikkeling van dit model is het resultaat van meer dan 30 jaar ervaring. Onze technici hebben de DOSATRON koploper gemaakt op het gebied van door water aangedreven proportionele doseerpompen.
Wij zijn zeer nauwkeurig te werk gegaan bij de keuze van toe te passen materialen teneinde de inwerking van de meeste te doseren chemicaliën te kunnen weerstaan Deze DOSATRON zal zich in de loop der tijd als een zeer waardevol hulpmiddel bewijzen.
Regelmatig onderhoud en wat aandacht geeft u de garantie dat de DOSATRON jarenlang probleemloos zal werken.

LEES DAAROM AANDACHTIG DEZE GEBRUIKSAANWIJZING, ALVORENS DE DOSEERPOMP AAN TE SLUITEN.

Belangrijk !
Het serienummer en complete model van uw DOSATRON zijn in het **pomphuis** gegraveerd. Schrijf het nummer hieronder op, u heeft het nodig wanneer u uw dealer belt voor informatie, onderdelen of service.

Type: .....

Serienummer: .....

Aankoopdatum: .....

....

NL

SPECIFICATIE	D 8 R	D 8 R 150
Doorstroming: **500 l/h min. - 8 m³ max. [**2.2 Fl oz/min - 40 US GPM]		
Inlaatdruk bij werking:		
bar	**0.15 - 8**	**0.15 - 8**
PSI	2 - 110	2 - 110
Dosering vast of instelbaar:		
%	**0.2 - 2**	**1 - 5**
mengverhouding	1:500 - 1:50	1:100 - 1:20
Injectie capaciteit:		
Min. l/h - Max. l/h	**1 - 160**	**5 - 400**
US Fl. oz/min	0.56	2.8
US GPM/max	0.70	1.76
Maximale temperatuur: 40 °C [104 ° F]		
Aansluitingen (NPT/BSP): **Ø 40x49 mm** [1" 1/2 M]		
Capaciteit motor (elk 2 slagen van de zuigermotor): ongeveer **1.6 l** [0.4224 US Gallons]		

LET OP: de Dosatron is niet vooraf ingesteld, zie hoofdstuk INSTELLING VAN DE DOSERING

AFMETINGEN POMP		
Diameter: **cm** ["]	**18.4** [7 1/4]	**18.4** [7 1/4]
Totale hoogte: **cm** ["]	**59.1** [23 1/4]	**66.7** [26 1/4]
Breedte: **cm** ["]	**31** [12 1/4]	**31** [12 1/4]
Gewicht: ± **kg** [lbs]	**4** [8.8]	**4.5** [10]
Afmeting verpakking:		
cm	**60 x 36.5 x 24**	**82 x 26 x 21**
["]	[23 2/3 x 14 1/3 x 9 1/2]	[32 1/4 x 10 1/4 x 8 1/4]
Gewicht verpakking:		
± **kg** [lbs]	**5.5** [12.15]	**7** [15.5]

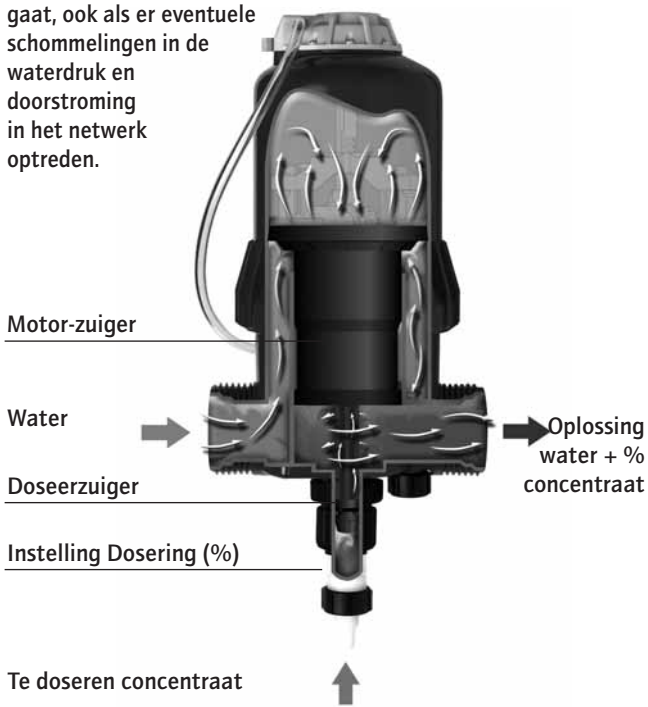
VERPAKKING BEVAT: 1 DOSATRON / 1 bevestigingssteun / 1 zuigslang / 1 aanzuigfilter /1 gebruiksaanwijzing

Inhoud

NL

Exact, eenvoudig, betrouwbaar

De Dosatron, aangesloten in het waternet, gebruikt de waterdruk als enige aandrijfkracht voor de motorzuiger. Deze drijft een doseerzuiger aan, die het concentraat opzuigt in het ingestelde percentage en het vervolgens mengt met het aandrijvende water. De aldus verkregen oplossing wordt vervolgens via de leidingen verdeeld. De geïnjecteerde hoeveelheid concentraat is ten alle tijde proportioneel aan de hoeveelheid water die door de Dosatron gaat, ook als er eventuele schommelingen in de waterdruk en doorstroming in het netwerk optreden.



Installatie

VOORZORGSMAATREGELEN

1. ALGEMENE OPMERKINGEN

Wanneer een DOSATRON aangesloten wordt op het openbare waterleidingnet of op een eigen watervoorziening dient men de geldende voorschriften in acht te nemen betreffende het beschermen van de bron, zoals het voorkomen van terugstromen etc.

- In het geval dat de installatie hoger opgesteld staat dan de doseerpomp zelf, bestaat de mogelijkheid dat water terugstroomt door de pomp. Daarom is het in deze situatie aan te bevelen een terugslagklep achter de uitlaat van de doseerpomp te monteren.
- Installeer de pomp niet direct boven een vat met een zuur of andere agressieve middelen (i.v.m opstijgende zure dampen) en bescherm het tegen mogelijk contact met corrosieve producten.
- Bescherm de DOSATRON tegen bevriezen door de pomp leeg te laten lopen en stel de pomp niet in extreme hitte op.
- De DOSATRON niet aan de aanzuigleiding van de water/aanvoerpomp aansluiten (gevaar voor hevelwerking)
- De gebruiker moet tijdens werkzaamheden vóór de pomp blijven en een veiligheidsbril en handschoenen dragen.
- De eigenaar of gebruiker van de pomp draagt de verantwoording om jaarlijks de injectiepakkingen/afdichtringen te vervangen om een exacte dosering te waarborgen.
- De eigenaar of gebruiker van de pomp draagt de verantwoording om te controleren of de doorstroming en druk van de installatie aan de specificaties van de DOSATRON voldoen.
- De eigenaar of gebruiker van de pomp draagt de verantwoording om vast te stellen of de juiste hoeveelheid injectievloeistof wordt opgezogen om het gewenste resultaat te bereiken.
- Lucht, een verontreiniging of chemische aantasting van een afdichtring/pakking kan het doseren beïnvloeden. Het wordt aanbevolen om regelmatig te controleren of er injectievloeistof wordt aangezogen.
- Vervang de aanzuigslang zodra deze aangetast lijkt door de injectievloeistof.
- laat de DOSATRON na gebruik niet onder druk staan
- spoelen van de DOSATRON is gewenst:
. bij het wijzigen van de injectievloeistof
. vóór onderhoud aan de DOSATRON, teneinde contact met de injectievloeistof te vermijden

NL

AANBEVELINGEN (vervolg)

1 - ALGEMENE OPMERKINGEN (vervolg)

- Raadpleeg voor het aanzuigen van agressieve chemicaliën uw leverancier, om vast te stellen of de doseerpomp hiertegen bestand is.
- Het in en uit elkaar nemen van de pomp mag niet met gereedschap gebeuren, gebruik alleen handkracht.

2 - VERONTREINIGD WATER

- Installeer een filter met een maaswijdte van 60 micron - 300 mesh (afhankelijk van de waterkwaliteit) vóór de DOSATRON (zie accessoires). Wanneer geen filter wordt geïnstalleerd kunnen verontreinigingen er de oorzaak van zijn dat de DOSATRON voortijdig slijt.

3 - WATERSLAG/BUITENSPORIGE DOORSTROMING

- Installaties welke onderhevig zijn aan waterslag dienen voorzien te worden van een beveiliging, zoals een terugslagklep en/of waterslagdemper.
- Bij geautomatiseerde installaties worden langzaam openende en sluitende magneetventielen aanbevolen.
- In geautomatiseerde installaties waarin de DOSATRON diverse sectoren bedient, dienen de magneetventielen gelijktijdig in en uit geschakeld te worden.

4 - PLAATSING EN INSTALLATIE

- De plaatsing van de DOSATRON en de container met injectievloeistof moet vrij toegankelijk zijn, maar zodanig dat vluchtige chemicaliën de injectievloeistof niet kunnen bederven en geen risico tot vervuiling meebrengen.
- Het wordt aanbevolen om alle leidingen te voorzien van de waarschuwing: "niet voor menselijke consumptie".

5 - ONDERHOUD

- Spoel de DOSATRON na gebruik door. Hang de aanzuigslang in een emmer met schoon lauw water en zuig ongeveer een (1/4 liter op [8 1/2 US Fl.oz]).
- Regelmatig onderhoud, minimaal eens per jaar, zal de levensduur van uw DOSATRON verlengen. Vervang de doseerpakkingen/afdichtringen en de aanzuigslang minstens één maal per jaar om u van een juiste dosering te verzekeren.

6 - SERVICE

- Elke DOSATRON wordt voor het inpakken in de fabriek getest.
- Complete onderhoud- en pakkingsets zijn verkrijgbaar.
- Bel uw leverancier of Dosatron voor service of onderdelen.

MONTAGE VAN DE DOSEERPOMP

HET MONTAGE MAG NOOIT ONDER DRUK PLAATSVINDEN

De DOSATRON wordt geleverd met:
- Een bevestigingssteun,
- Een aanzuigslang met filter.
- een slang (By-Pass) ø 6 x 9 .

Met de bevestigingssteun kan de DOSATRON aan de muur bevestigd worden.
- Breng de zwaluwstaarten van de Dosatron **(Fig. 1-A)** in de muursteun **(Fig. 1-S)**.
- Verwijder de moeren **(Fig. 1-E)** en de klemringen **(Fig. 1-C)** op de gaten voor ingang en uitgang van water van de DOSATRON.

Verwijder de plastik doppen aan de in – en uitlaat van de DOSATRON **(fig. 1-B).**
- Zorg voor de goede positionering aan de ingang en aan de uitgang van het waterdichtheidssysteem. Plaats eerst de O-ring **(Fig. 1-J)** en daarna de klemring **(Fig. 1-G)**.
- Zorg ervoor dat het water in de richting van de pijl op de DOSATRON stroomt !

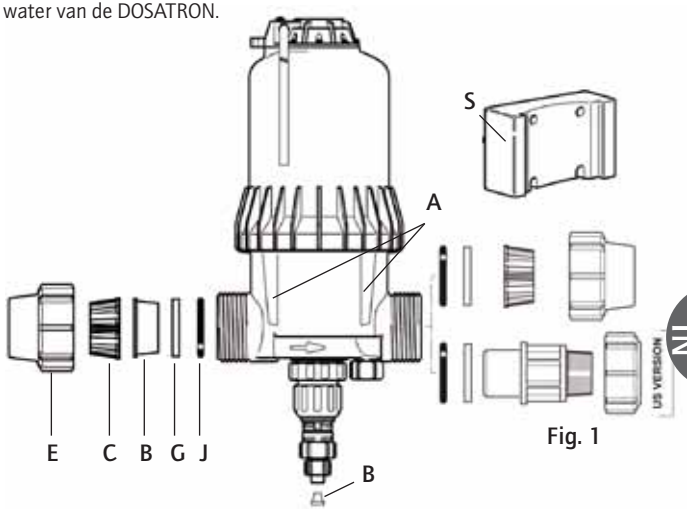


Fig. 1

NL

De te volgen methode voor aansluiting met buis in polyethyleen of polypropyleen :
- Plaats de moer **(Fig. 2-E)** en de klemring **(Fig. 2-C)** op de buis voor ingang en uitgang van water, juist afgesneden en afgekant.
- Steek de buis tot tegen de aanslag in de gaten voor ingang en uitgang van water **(Fig. 2).**
- Duw de klemring **(Fig. 2-C)** tot tegen de aanslag op de ingang, en daarna de andere op de wateruitgang.
- De moer vastdraaien **(Fig. 2-E)**.

De te volgen methode voor aansluiting met een buis in PVC :
- Ga te werk zoals voor de aansluiting met een buis in polyethyleen of polypropyleen, maar vooraleer vast te draaien, smeer de plaats die de klemring zal bekleden met PVC-lijm.
- De klemring naar voren in positie brengen, door hem uiteen te schuiven met de twee duimen in de gleuf geplaatst **(Fig. 2-C)** om de lijm niet af te schrapen, en daarna de moer vastdraaien.

NOTA : een uur wachten vooraleer het circuit onder druk te zetten. Voor elke latere demontage, moet men weten dat de PVC-lijm niet kleeft aan de klemring, die in polyacetal is.

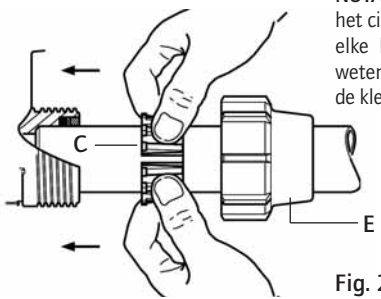


Fig. 2

De aansluiting van het toestel op het waternet kan gebeuren met behulp van de soepele slangen van 40 mm binnendiameter bevestigd met beugels en draaiende verbindingsstukken met moeren Ø 40 x 49 mm (1"1/2). Zorg ervoor dat het water loopt in de richting van de pijlen op het toestel.

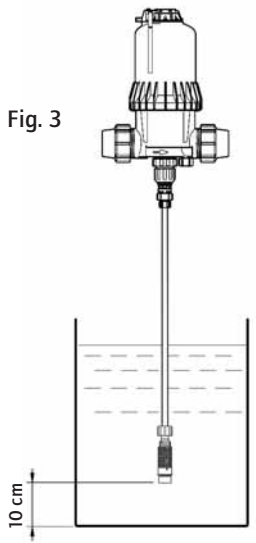
De DOSATRON wordt met een aanzuigslang van 1,2m geleverd, waardoor hij in combinatie met een groot voorraadvat gebruikt kan worden (indien gewenst op lengte afsnijden). Het bijgeleverde filter en contragewicht moet aan de zuigslang bevestigd worden.

LET OP: De maximum aanzuighoogte is 4 meter [13 ft].

- Het filter met zuigslang aansluiten en in de injectievloeistof hangen.

BELANGRIJK – Het filter moet minimaal 10cm boven de bodem van het vooraadvat hangen om te voorkomen dat onopgeloste deeltjes in de pomp gezogen worden en deze beschadigen (Fig. 3).
- De zuigfilter niet op de bodem zetten.

Fig. 3



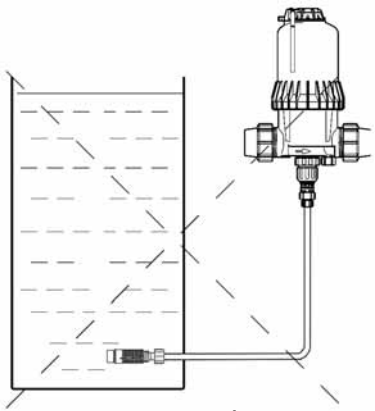


Fig. 4

▲ **ZO MOET HET NIET**

◀ **ZO MOET HET**

Het niveau van de injectievloeistof mag om hevelwerking te voorkomen nooit boven de inlaat van de DOSATRON uitkomen.

NL

AANWIJZINGEN VOOR DE INSTALLATIE

De DOSATRON kan direct **(fig. 5)** of via een **bypass (fig. 6)** in de waterleiding geïnstalleerd worden.

Om de levensduur van de DOSATRON te verlengen wordt geadviseerd een filter van (300 mesh = 60 micron afhankelijk van de waterkwaliteit) voor de DOSATRON te installeren. Dit is noodzakelijk wanneer het water verontreinigingen bevat of vaste deeltjes, speciaal bij water uit een eigen bron.

Een filter wordt aanbevolen en is nodig om voor garantie in aanmerking te komen.

De installatie van een DOSATRON in een bypass geeft de mogelijkheid om over schoon water te beschikken terwijl de DOSATRON in onderhoud is of gerepareerd wordt.

Voor elke installatie geldt dat deze moet voldoen aan de eisen van het plaatselijke waterleidingbedrijf.

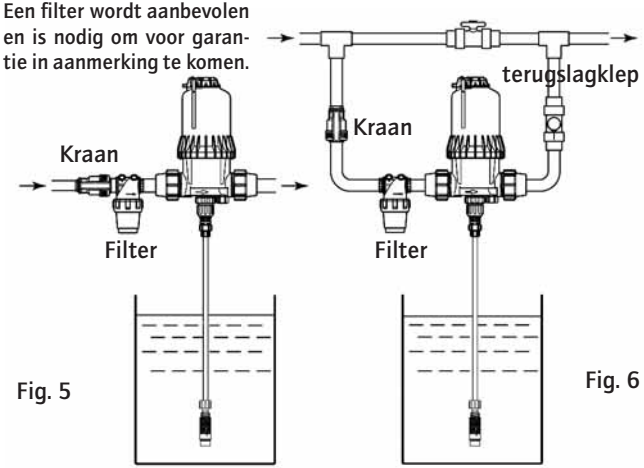


Fig. 5 Fig. 6

Te hoge doorstroming (indicatie)

Wanneer uw DOSATRON meer dan **40 keer**, d.w.z. **20 cyclussen** per **15 seconden tikt**, ligt de doorstroming dicht bij de maximum grens. Wanneer u meer doorstroming heeft, moet u een DOSATRON met een grotere capaciteit installeren.

Het in bedrijf stellen van de DOSATRON

IN GEBRUIK NEMEN (voor de eerste keer)

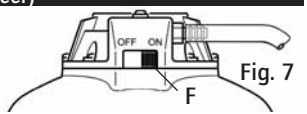


Fig. 7

- De hendel van de By-Pass **(Fig. 7-L)** op positie **ON** zetten.
- Open nu de wateraanvoer helemaal, de DOSATRON is zelfaanzuigend.
- Laat de DOSATRON werken totdat de injectievloei-stof in de doseerbuis opgezogen is (de injectievloeistof is door de heldere zuigslang te zien).
- De DOSATRON maakt een karakteristiek klikkend geluid wanneer hij in bedrijf is.

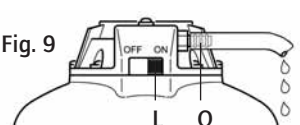
NOTA: De tijd welke nodig is om de zuigslang te vullen is afhankelijk van de doorstroming, de ingestelde dosering en de lengte van de zuigslang. Om de lucht zo snel mogelijk uit de zuigslang te krijgen en het aanzuigen te versnellen moet de dosering op maximum gezet worden. Zodra de vloeistof aangezogen is kan de dosering op de gewenste stand ingesteld worden **(zie § INSTELLEN VAN DE DOSERING).**

INGEBOUWDE HYDRAULISCHE BY-PASS

Systeem om aanzuiging van product in gang te zetten of stop te zetten:
Een druk van **minimaal 0.8 bar** van aandrijfwater is noodzakelijk om een goede werking van de By-Pass te verkrijgen.
- By-pass op **OFF (Fig. 8-L)**, de DOSATRON staat uit en de injectievloeistof wordt niet opgezogen.
- By-pass op **ON (Fig. 9-L)**, de DOSATRON is in bedrijf en de injectievloeistof wordt opgezogen.

Fig. 8

Fig. 9



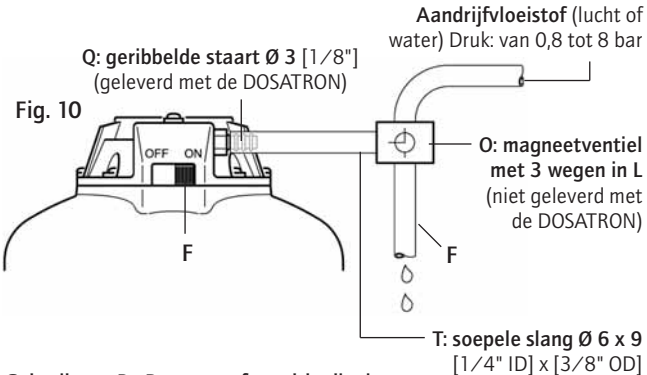
OPGEPAST! Wanneer men van de stand OFF overgaat naar de stand ON, is het normaal dat een kleine hoeveelheid water ontsnapt langs de geribbelde staart Ø 3 [1/8"] (Fig. 9-Q).

NL

HYDRAULISCH BESTUURDE BY-PASS

Systeem om aanzuiging van product in gang te zetten of stop te zetten:
Een druk van **minimaal 0.8 bar** van aandrijfwater is noodzakelijk om een goede werking van de By-Pass te verkrijgen.
NOTA : Bij gebruik van de By-Pass met afstandsbediening, moet de manuele bedieningshendel **(Fig. 10-L)** zich in de stand **ON** bevinden.

Fig. 10

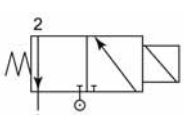


Gebruik van By-Pass met afstandsbediening:
- Opening van het magneetventiel.

NO (Normaal Open) : **1 naar 2** > Gebruik: Aankomst aandrijfwater van de By-Pass. Gebruik van de By-Pass (stopzetting van de DOSATRON)
3 > Gesloten uitlaat

In werking zetten van de DOSATRON:
- Sluiting van het magneetventiel.

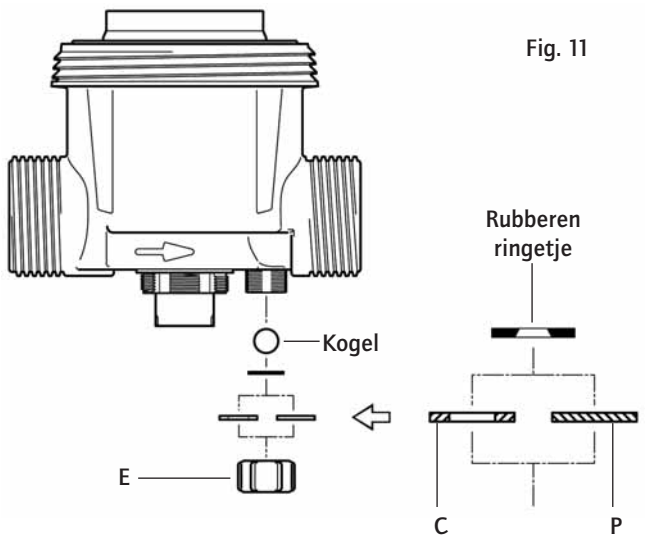
NF (Normaal Gesloten) : **2 naar 3** > Uitlaat - uitlaat aandrijfwater naar buiten. In werking zetten van de Dosatron
1 > druk in afwachting



HYDRAULISCH BESTUURDE BY-PASS (vervolg)

Automatische uitrusting anti-overheveling van het product:
- Het herstelt automatisch de atmosferische druk in de installatie in geval van accidentele depressie* **(Fig. 11)**. Zijn gebruik is onderhevig aan de sanitaire reglementering die in het land van kracht is.
- De voorziene bepalingen naleven.
- Om het in werking te zetten, de moer losdraaien **(Fig. 11-E)**, het volle metalen ringetje verwijderen **(Fig. 11-P)** en die vervangen door het holle ringetje **(Fig. 11-C)** die in het pak zit.
- De moer opnieuw vastdraaien **(Fig. 11-E)**.

Fig. 11



*voorbeeld: geval waarbij de uitgang van het doseerapparaat lager is dan de ingang.

NL

Onderhoud

AANBEVELINGEN

1 - Bij gebruik van producten zoals poeders die opgelost moeten worden, is het aan te bevelen het gehele doseerelement periodiek uit elkaar te nemen **(zie § VERWISSELEN VAN DE AFDICHTRINGEN IN HET INJECTIEDEEL).**
Spoel al de onderdelen uit het doseerelement grondig met water schoon en zet de delen weer in elkaar. Smeer indien nodig de afdichting **(fig. 12)** met siliconen smeermiddel wanneer de zuigbuis zich moeilijk laat monteren.

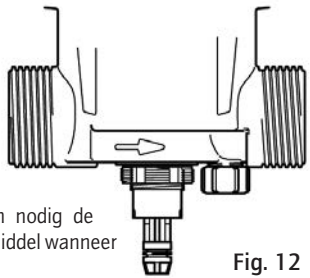
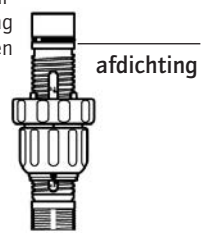


Fig. 12

2 - Een luchtaanvoer, een onzuiverheid of een chemische aanval van de dichting kunnen de goede werking van de dosering onderbreken. Het is aan te bevelen regelmatig te controleren of het te doseren geconcentreerde product wel goed aangezogen wordt de Dosatron.
3 - Wanneer men de DOSATRON een tijd niet gebruikt heeft, is het aan te raden de zuigermotor een paar uur in lauw warm water <40°C te laten weken. Dit helpt om opgedroogd vuil en uitgekristalliseerd concentraat los te weken.



DE DOSATRON LEGEN (Bij vorstgevaar)

- Sluit de kraan aan de inlaatzijde en laat de druk wegvallen.
- Verwijder het doseerelement.
- Verwijder het schroefdeksel en de zuigermotor, **§ REINIGEN VAN HET INGEBOUWDE FILTER**.
- Maak de koppelingen aan aan- en afvoer los.
- Haal het pomphuis uit de steun, en verwijder het laatste water.
- De DOSATRON kan nu weer in elkaar gezet worden, (eerst dekselpakking schoonmaken **fig.14-N**).

REINIGEN VAN HET INGEBOUWDE FILTER 500 microns - 32 mesh

Ter indicatie : één keer per maand afhankelijk van de toepassing.

Demontage van het filter
- Sluit de kraan aan de inlaatzijde en laat de druk wegvallen.

Om vrij toegang tot het filter te verkrijgen, eerst doseerelement demonteren, zie § VERVANGEN VAN DE MOTOR.

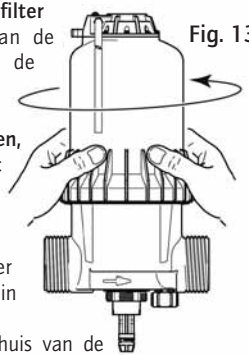


Fig. 13

- Verwijder de zuiger van de afdichtingen in het doseerelement.
- Schroef het bovenhuis van de doseerpomp met de hand los **(Fig. 13)**.
- Verwijder de zuiger van de motor **(Fig. 14-M)**.
- Verwijder het filter **(Fig. 14-F)**.
- Verwijder de pakking **(Fig. 14-N)**.
- Reinig het filter en de pakking met schoon water.

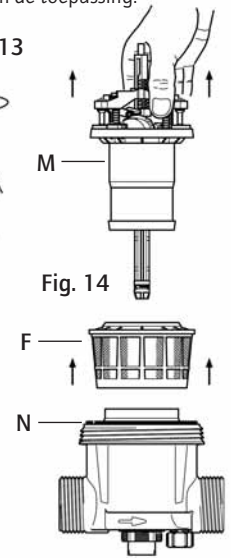


Fig. 14

Montage van het filter
- Vóór de montage, erop letten dat het filter, de pakking en de raakvlakken met het onder- en bovenhuis **(Fig. 14-N)** schoon zijn. Pakking vervangen indien nodig.
- De schroefdraad van het pomphuis invetten (siliconenvet).
- Ga verder in omgekeerde volgorde te werk.

Belangrijk: in alle gevallen moet het aandraaien met de hand gebeuren.

NL

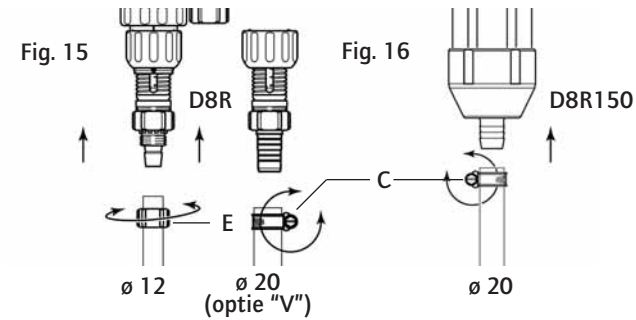
INTERNATIONALE HERLEIDINGEN

Uitgangspunt: instelling op 1% ⇒ 1/100 = 1 deel injectievloeistof in 100 delen water.
bv.: instelling op 2% ⇒ 2/100 = 2 delen concentraat in 100 delen water
Verhouding ⇒ 1/50

HET BEVESTIGEN VAN DE ZUIGSLANG

Wanneer de DOSATRON al eens gebruikt is lees dan eerst op **§ VOORZORGSMAATREGELEN.**

- Draai de slangwartelmoer **(Fig. 15-E)** onder aan de zuigbuis los en schuif hem over de zuigslang.
- Duw de zuigslang zo ver mogelijk over de slangpilaar, en draai de wartelmoer met de **hand aan**.
- Voor de aanzuigslang Ø 20 (D8RV et D8R150), met een schroevendraaier de ring **(Fig. 16-C)** losdraaien.
- Duw de zuigslang zo ver mogelijk over de slangpilaar, en de ring met de schroevendraaier weer vastdraaien.

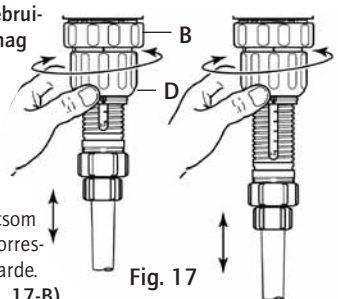


INSTELLEN VAN DE DOSERING (pomp niet onder druk)

BELANGRIJK ! geen gereedschap gebruiken. Het instellen van de dosering mag nooit onder druk plaatsvinden. Sluit de kraan aan de inlaatzijde en laat de drukwegvallen.

Model D8R

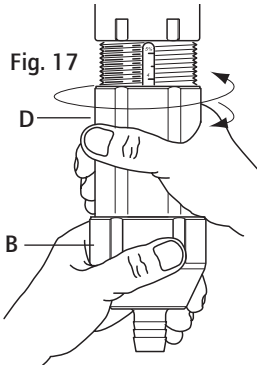
- Draai de conische moer/ blokkeerring los **(Fig. 17-B)**.
- Draai de doseermoer links- of rechtsom **(Fig. 17-D)** totdat de bovenzijde correspondeert met de gewenste doseerwaarde.
- Draai de blokkeerring weer vast **(Fig. 17-B)**.



INSTELLEN VAN DE DOSERING (vervolg)

Model D8R150

- Draai de conische moer/blokkeerring los **(Fig. 17-B)**.
- Draai de doseermoer links- of rechtsom **(Fig. 17-D)** totdat de bovenzijde correspondeert met de gewenste doseerwaarde.
- Draai de blokkeerring weer vast **(Fig. 17-B)**.



HERINNERING: De hoeveelheid opgenomen product is evenredig met de hoeveelheid water die in de Dosatron komt. 1% ⇒ 1/100, verhouding van 100 volumes water + 1 volume van het ingespoten product.

VERVANGEN VAN DE AFDICHTINGEN IN HET DOSEERELEMENT (pomp niet onder druk)

Frequentie: minstens éénmaal per jaar.

BELANGRIJK ! Draag tijdens deze werkzaamheden altijd beschermende kleding, veiligheidsbril en handschoenen. Gebruik geen gereedschap!

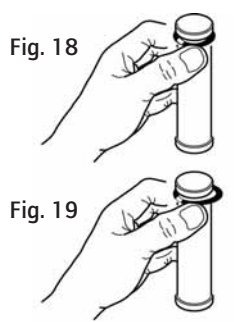
ADVIES: Alvorens het doseerelement uit elkaar te nemen, verdient het aanbeveling om de DOSATRON schoon water op te laten zuigen en zodoende het doseerelement door te spoelen. Daardoor wordt het risico van contact met injectievloeistoffen verkleind !

METHODE VOOR HET VERWIJDEREN VAN DE AFDICHTRING

Fig. 18 : knijp met vinger en duim in de afdichtring, en duw deze naar een kant.

Fig. 19 : verhoog de vervorming van de ring nog meer totdat deze uit-steekt en uit zijn zitting getrokken kan worden.

Maak de zitting van de ring schoon (geen gereedschap gebruiken). Terugplaatsen wordt met de hand gedaan. Het is zeer belangrijk dat de afdichtingring niet gedraaid in de zitting komt te liggen, omdat hij anders niet goed afdicht.



NL

REINIGING EN MONTAGE VAN DE TERUGSLAGKLEP

- Draai de watertoevoer uit en laat de druk naar nul zakken.

Model D8R

- Draai de witte moer **(Fig. 20/21-E)** los en verwijder de zuigslang.
- Voor de aanzuigslang Ø 20 (D8RV et D8R150), met een schroevendraaier de ring **(Fig. 21-C)** losdraaien.
- De zwarte moer **(Fig.20/21-N)** losdraaien en verwijderen.
- Trek het zuigventiel naar beneden uit de zuigbuis.
- De verschillende delen met proper water overvloedig spoelen, ze opnieuw monteren in de volgorde van het schema **(Fig. 20/21-P)** en controleren of de terugstelveer wel degelijk actief is.
-Plaats de verschillende onderdelen in omgekeerde volgorde **met de hand terug**.

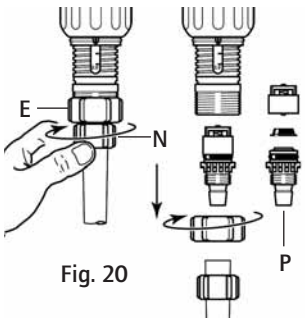


Fig. 20

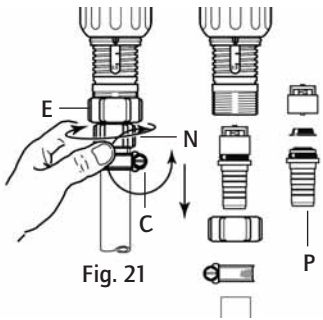


Fig. 21

Model D8R150

- Draai de conische moer/ blokkeerring los **(Fig. 22-A)**.
- Trek het zuigventiel naar beneden uit de zuigbuis.
- De verschillende delen met proper water overvloedig spoelen, ze opnieuw monteren in de volgorde van het schema **(Fig. 22-P)** en controleren of de terugstelveer wel degelijk actief is.
-Plaats de verschillende onderdelen in omgekeerde volgorde **met de hand terug**.

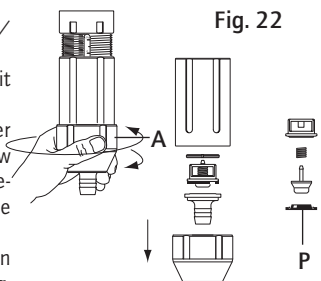


Fig. 22

VERVANGEN VAN DE TERUGSLAGKLEPPAKKING

- Draai de watertoevoer uit en laat de druk naar nul zakken.
- De aanzuigslang van het product demonteren, het deel dosering losdraaien zoals beschreven in vorige paragraaf en naar beneden trekken om het te verwijderen.
- De pakking van de zuigbuis **(Fig. 23-O)** en die van de doseerzuiger **(Fig.23-P)** veranderen.
- Voor de D8R, de moer van de aanzuigklep **(Fig. 23-E)** losdraaien, en zorg ervoor de elementen van de klep niet te verliezen, daarna de O-ring vervangen **(Fig. 23-T)** en de pakking van de klep **(Fig. 23-C).**
- Voor de D8R150, terwijl u de moer **(Fig. 23-S)** op zijn plaats houdt, draai het omhulsel van het doseerapparaat los **(Fig. 23-U)** en naar beneden trekken.
-Plaats de verschillende onderdelen in omgekeerde volgorde **met de hand terug**.
Nota: de doseerschaal **(Fig. 23-L)** moet tegenover u in positie gebracht worden.
- De vasthoudmoer **(Fig. 23-R)** draaien tot blokkering.

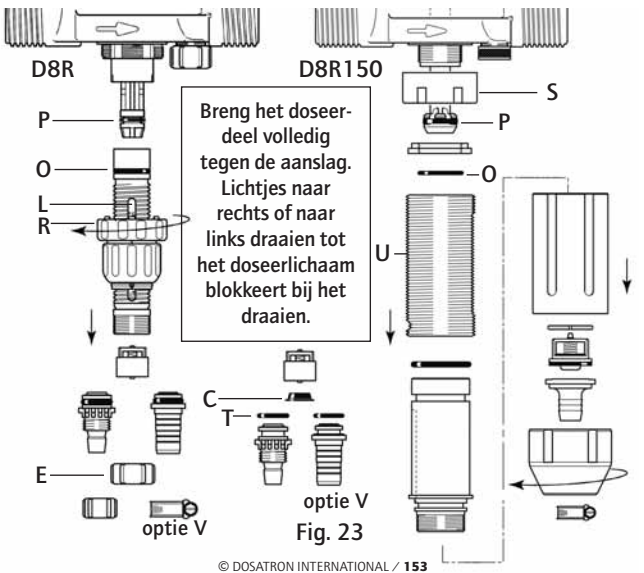


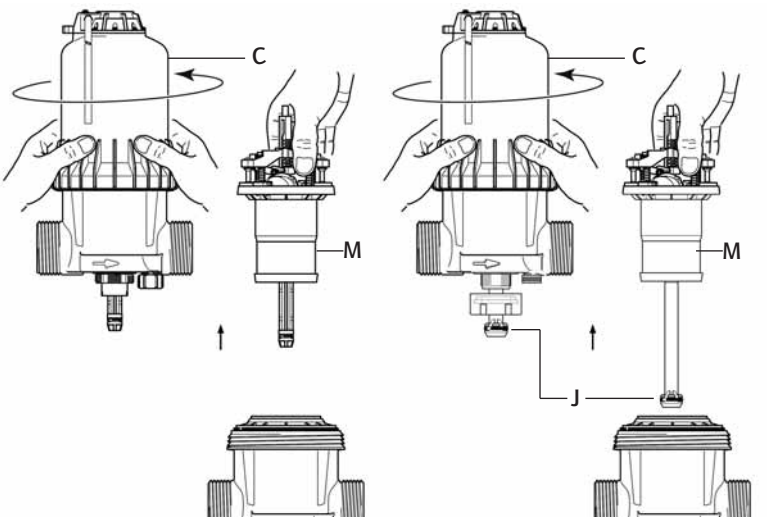
Fig. 23

VERVANGEN VAN DE MOTOR (pomp niet onder druk)

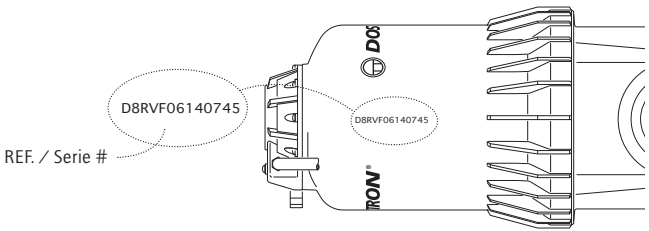
- Draai de watertoevoer uit en laat de druk naar nul zakken.
- Het doseergedeelte demonteren zoals uitgelegd in vorige paragraaf.
- Draai het bovenhuis met de hand los **(Fig. 24-C)**.
- Trek de motorzuiger naar boven uit het huis **(Fig. 24-M)**, en zorg er daarbij voor om de pakking te leiden **(Fig. 24-J)**.
- Verwissel de motorzuiger en zet alles in omgekeerde volgorde weer in elkaar.
- Draai het bovenhuis weer **met de hand** vast (let op dat de afdichtring niet beschadigd wordt).
- Doseerelement weer op zijn plaats brengen en vastdraaien.

Fig. 24

D8R **D8R150**



Typenummering



REF. /Serie # : .....

VOORBEELD	D8R	BP	V	AF	P	H	ii

- Type DOSATRON
- BP : geïntegreerde bypass
- V : viskeuze producten (200-400 cSt)
- Pakkingen/afdichtringen :
  AF = PH 7-14
  VF = PH 1-7
- Kleur: - = blauw
  P = wit
  R = rood
  V = groen
  J = geel
  O = Oranje
- H = Hastelloy
- Andere letters (raadpleeg ons)

NL

Storingen

PROBLEEM	OORZAAK	OPLOSSING
Zuigermotor		
DOSATRON start niet of stopt	Zuigermotor loopt niet	Reset de zuiger met de hand
	Maximum doorstroming overschreden	1. verlaag de doorstroming, herstart de pomp 2. Draai het bovenhuis los, verwijder de zuiger en controleer of de zuigerklepringen nog op hun plaats zitten
	De by-pass staat op OFF, ofwel halfopen	De by-pass op ON zetten
	Zuigermotor beschadigd	Stuur de pomp naar uw servicecentrum terug
	Filter verstopt	Filter reinigen: **§ p149**
Dosering		
Water stroomt terug in de concentraat tank	Vervuilde, versleten ontbrekende delen of van de terugslagklep	Reinigen of vervangen
Er wordt geen concentraat opgezogen	De zuigermotor is gestopt	Zie bij **zuigermotor**
	Lekke aanzuigslang	Vervang aanzuigslang
	Verstopte zuigslang of aanzuigfilter	Reinigen of vervangen
	Ontbreken of versleten terugslagkleppakking	Reinigen of vervangen
	Ontbreken of versleten aanzuigpakking	Vervangen
	Versleten zuigbuis	Vervangen

PROBLEEM	OORZAAK	OPLOSSING
Dosering		
Te lage dosering	Er wordt lucht aangezogen	1. controleer of de moeren van het doseerelement aangedraaid zijn 2. controleer de aanzuigslang reinigen of vervangen
	Vervuilde of versleten terugslagkleppakking	Verlaag de doorstroming
	Overschrijding van de maximale doorstroming (cavitatie)	Verlaag de doorstroming
	Versleten aanzuigpakking	Vervangen
	Versleten zuigbuis	Vervangen
Lekken		
Lekkage bij de aansluiting doseerbuis pomphuis	Doseerhulsring beschadigd of onjuist geplaatst	Juist plaatsen of vervangen
Lekkage tussen de doseermoer en de blokkeerring	Zuigbuisring beschadigd onjuist geplaatst of onbreekt	Vervangen
Lekkage tussen het boven- en onderhuis	Pakking tussen boven- en onderhuis is beschadigd, onjuist geplaatst of onbreekt	Schroef het bovenhuis los, reinig de pakkingzitting, nieuwe pakking of oude zorgvuldig terugleggen

DE FABRIKANT
WIJST ELKE VERANTWOORDELIJKHEID AF WANNEER
DE DOSATRON NIET VOLGENS DE AANWIJZINGEN
UIT DEZE HANDLEIDING
GEBRUIKT WORDT

Beperkte Garantie

DOSATRON INTERNATIONAL S.A. zal gedurende een periode van twaalf maanden na de datum van aankoop door de oorspronkelijke koper voorzien in de vervanging van alle onderdelen die qua materiaal of uitvoering gebreken vertonen. Teneinde uit hoofde van deze garantie aanspraak te kunnen maken op vervanging van een onderdeel, moet de DOSATRON aan de fabrikant of erkende distributeur worden geretourneerd met het originele bewijs van aankoop en vervolgens als defect worden aangemerkt na onderzoek door de technische dienst van de fabrikant of de distributeur. De DOSATRON moet worden ontdaan van alle chemicaliën en vervolgens, na betaling van de verzendkosten, aan de fabrikant of distributeur worden gezonden. Zodra de reparatie is uitgevoerd, zal de DOSATRON kosteloos worden geretourneerd indien deze blijkt te worden gedekt door deze garantie. Reparaties die worden uitgevoerd uit hoofde van deze garantie, brengen geen verlenging van de oorspronkelijke garantieperiode met zich mee.

Alvorens agressieve chemicaliën te gebruiken, verzoeken wij u uw distributeur te raadplegen om te bevestigen dat de doseringspomp bestand is tegen deze stoffen.

Deze garantie dekt slechts omstandigheden waarbij het onderdeel defect is geraakt vanwege gebreken veroorzaakt door het productieproces. Deze garantie geldt niet indien de gebreken blijken te zijn veroorzaakt door verkeerd gebruik van het product, onjuist gebruik van gereedschappen, gebrekkig onderhoud, ondeugdelijke installatie, milieuongevallen of corrosie door vreemde lichamen en vloeistoffen die worden gevonden in of in de nabijheid van de DOSATRON. Noch de pakkingen en "O"-ringen, noch schade aan de DOSATRON die is veroorzaakt door waterverontreinigingen zoals zand worden gedekt door deze garantie. De garantie geldt slechts indien een filter (300 mesh - 60 micron afhankelijk van uw waterkwaliteit) wordt gebruikt vóór de DOSATRON. DOSATRON INTERNATIONAL S.A. wijst iedere aansprakelijkheid af indien de DOSATRON niet wordt gebruikt conform de bedieningsvoorschriften en –toleranties, zoals hierin aangegeven.

Deze garantie geeft u specifieke juridische rechten en u kunt tevens andere rechten hebben die van land tot land ver-schillen. Echter, iedere stilzwijgende garantie of verhandelbaarheid of geschiktheid voor een bepaald doel van toepassing op dit product, is qua duur beperkt tot de periode aangegeven in deze schriftelijke garantie of enige stilzwijgende garantie.

Er geldt geen garantie, uitdrukkelijk of stilzwijgend, voor producten die worden gebruikt in samenhang met producten van DOSATRON INTERNATIONAL S.A.

De fabrikant of erkende distributeur is niet aansprakelijk voor bijkomende of gevolgschade, zoals eventuele economische schade die het gevolg is van inbreuk op deze schriftelijke garantie of een eventuele stilzwijgende garantie.

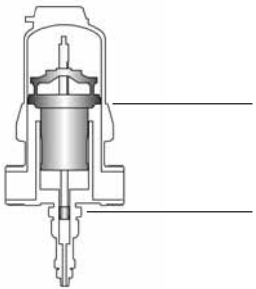
Er zijn geen uitgebreidere garanties, uitdrukkelijk of stilzwijgend, dan de hierboven beschreven garanties.

Aarzel niet om met uw dealer of Dosatron contact op te nemen voor service na verkoop.

WAT IS DE DOORSTROMING ?

EEN EENVOUDIGE METHODE

DE DOSATRON BESTAAT UIT:

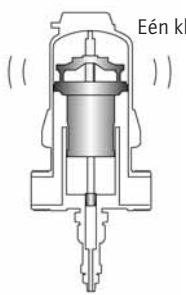


Een wateraangedreven zuigermotor doe gekoppeld is aan

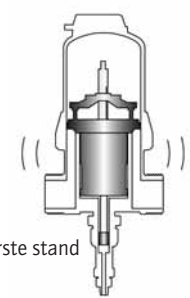
De doseerzuiger

Het toerental van de zuigermotor is evenredig met de doorstroming in het apparaat. Hoe hoger de doorstroming hoe sneller de pomp loopt.

De op- en neergaande beweging van de zuigermotor geeft een klikkend geluid:



Eén klik in de bovenste stand

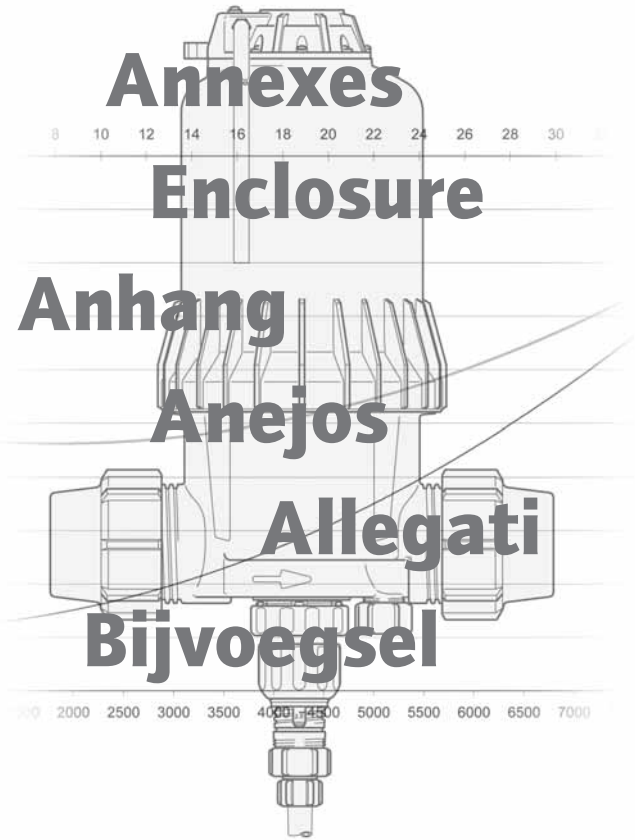


Eén klik in de onderste stand

Tel het aantal klikken in **30** seconden x 10 = **Doorstroming in liters water/uur.**

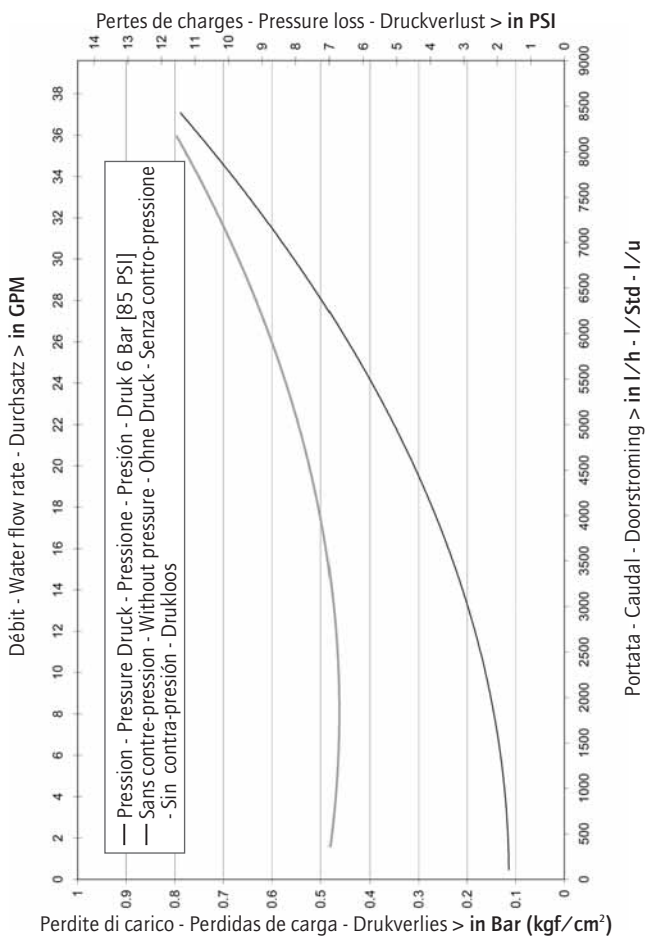
NOTA: Deze methode is niet zo nauwkeurig dat ze een doorstroommeter kan vervangen. Het geeft de doorstroming slechts bij benadering weer.

NL

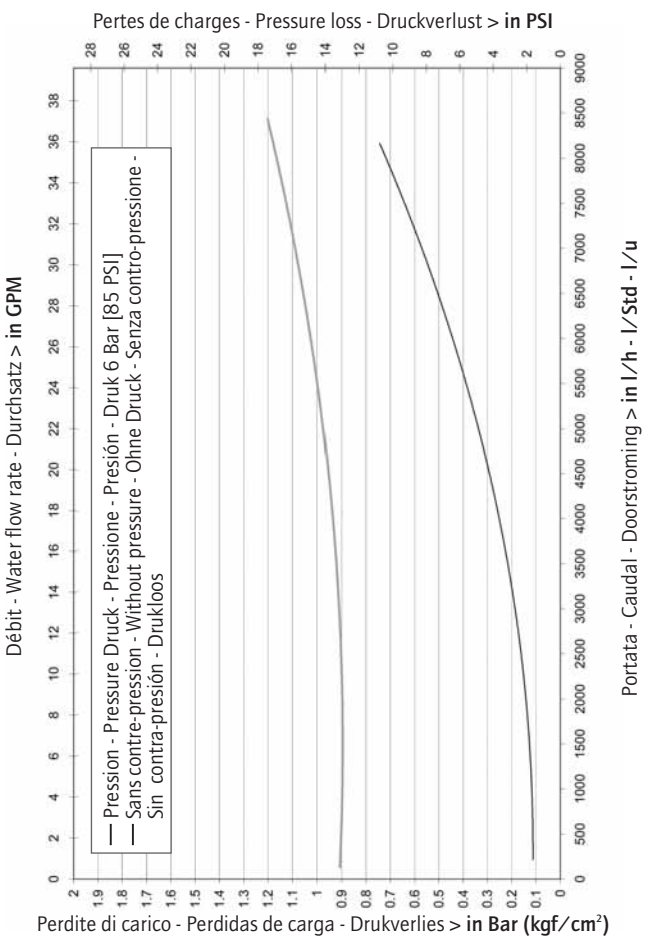


Annexes
Enclosure
Anhang
Anejos
Allegati
Bijvoegsel

D 8 R

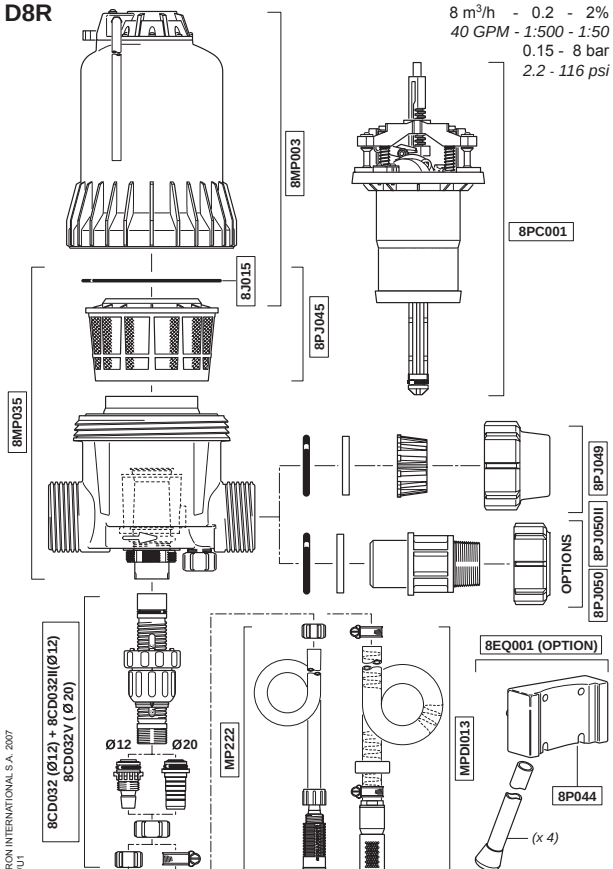

Pertes de charges - Pressure loss - Druckverlust > in PSI
Débit - Water flow rate - Durchsatz > in GPM
Portata - Caudal - Doorstroming > in l/h - l/Std - l/u
Perdite di carico - Perdidas de carga - Drukverlies > in Bar (kgf/cm²)
— Pression - Pressure Druck - Pressione - Presión - Druk 6 Bar [85 PSI]
— Sans contre-pression - Without pressure - Ohne Druck - Senza contro-pressione - Sin contra-presión - Drukloos

D 8 R 150


Pertes de charges - Pressure loss - Druckverlust > in PSI
Débit - Water flow rate - Durchsatz > in GPM
Portata - Caudal - Doorstroming > in l/h - l/Std - l/u
Perdite di carico - Perdidas de carga - Drukverlies > in Bar (kgf/cm²)
— Pression - Pressure Druck - Pressione - Presión - Druk 6 Bar [85 PSI]
— Sans contre-pression - Without pressure - Ohne Druck - Senza contro-pressione - Sin contra-presión - Drukloos

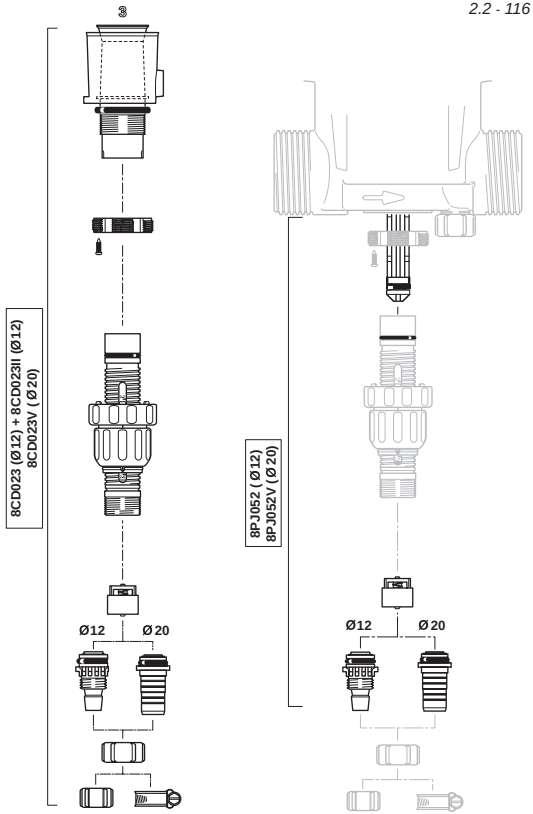
D8R

8 m³/h - 0.2 - 2%
40 GPM - 1:500 - 1:50
0.15 - 8 bar
2.2 - 116 psi



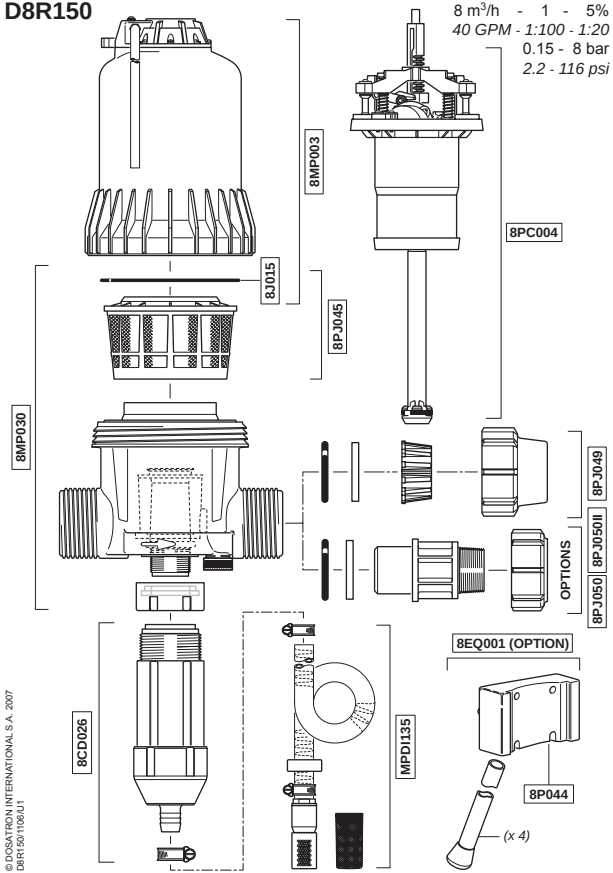
D8R

8 m³/h - 0.2 - 2%
40 GPM - 1:500 - 1:50
0.15 - 8 bar
2.2 - 116 psi



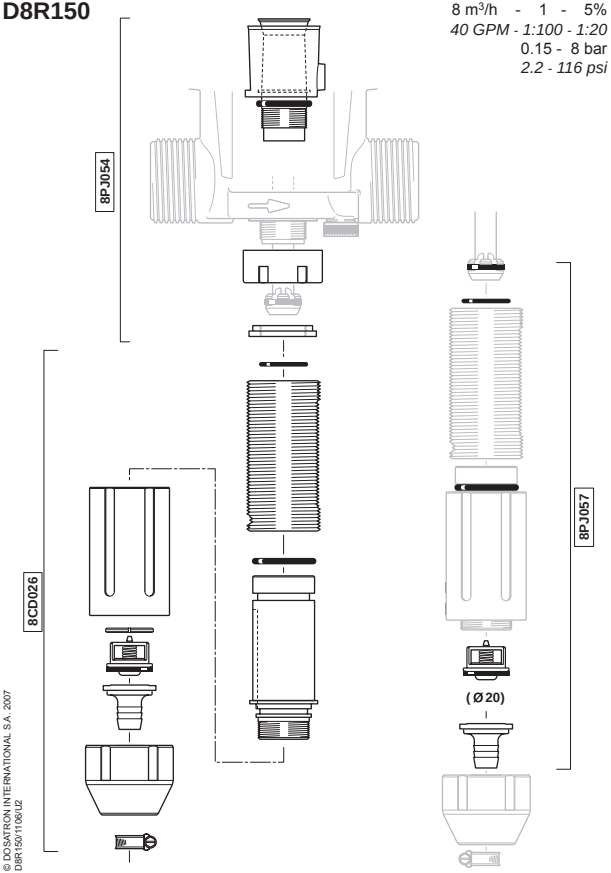
D8R150

8 m³/h - 1 - 5%
40 GPM - 1:100 - 1:20
0.15 - 8 bar
2.2 - 116 psi



D8R150

8 m³/h - 1 - 5%
40 GPM - 1:100 - 1:20
0.15 - 8 bar
2.2 - 116 psi



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Document N° DOCE05050108
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DOSATRON®

WATER POWERED DOSING TECHNOLOGY

CE

ISO 9001 : 2000
Quality System Certified

FABRIQUÉ PAR
MANUFACTURED BY
HERGESTELLT VON
FABBRICATO DA
FABRICADO POR
GEPRODUCEERD DOOR

NT / 8 /03/07

DOSATRON INTERNATIONAL S.A.

Rue Pascal - B.P. 6 - 33370 TRESSES (BORDEAUX) - FRANCE
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Process & Packaging, Inc.

ADJUSTABLE SINGLE STAGE INJECTORS

MODEL TF0402S

1. **PARTS**
   - A. Injector
   - B. Ceramic Weight.
   - C. Plastic tubing 8' long with foot strainer.

2. **INSTALLATION**

The injector may be installed in any position in the water line with the arrow in the direction of flow. Drop end of plastic tubing with strainer into fluid product container. Cut tubing to convenient length, and slip open end over injector fitting.

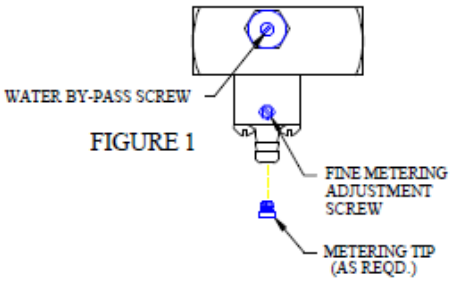

FIGURE 1

3. **OPERATION**

Warning: Use care when handling hazardous chemicals.

See Fig. 1 for location of water bypass screw and fine metering adjustment screw. Turn on water supply valve. The injector may draw momentarily as the system is filling but normally will stop as the system builds up to full pressure. To actuate injector, turn the bypass screw clockwise until product begins to be drawn from the container. After the fluid reaches the injector, the feed rate may be adjusted to the desired rate by turning the bypass screw. The maximum injection rates are shown in Table 2. For low injection rates, it is advisable to set the bypass screw for more injection than required; then turn the fine metering screw clockwise to reduce injection to the desired rate. Table 1 shows the operation range of the injector. If the injector will not draw with the bypass screw full in, then the water flow is below the range of the injector. If the injector draws with the screw full out but pressure loss is excessive, then flow is above the range of the injector.

Operating Range - Gallons Per Minute

Water Pressure (psi)	TF0402S
10	2.00 - 6.40
20	2.30 - 7.50
40	2.90 - 9.50
60	3.40 - 11.00
100	4.20 - 14.00
200	5.70 - 19.00
400	7.90 - 26.00
500	8.90 - 29.00
* 700	11.00 - 35.00
* 1000	13.00 - 41.00
* 1500	16.00 - 50.00
* 2000	18.00 - 58.00
* 3000	20.00 - 70.00

Maximum Injection (Oz/Min)	
Fluid Viscosity (cps)	TF0402S
1	40
75	8
200	4

Recommended water pressure is 60 psi.

Note 1: Fully open (counter clockwise) water by-pass screw then turn clockwise 2.5 turns.

Note 2: Set Oxine fine metering screw (1 turn from fully closed for a starting point) to dose 20 oz/min (50 PPM+) of 4000 PPM activated Oxine (see Activatiun instructions in "Oxine" section of manual)

* SPECIFY – S Stainless Steel Knob for pressure exceeding 700 PSI.

IDD Process & Packaging, Inc.
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HAYWARD INDUSTRIAL PRODUCTS, INC.
1/4", 3/8" and 1/2" NVA SERIES NEEDLE VALVES
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

PLEASE READ THE FOLLOWING INFORMATION PRIOR TO INSTALLING AND USING HAYWARD NVA SERIES NEEDLE VALVES. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY, OR EVEN DEATH.

1. Hayward Industrial Products, Inc. (Hayward) guarantees its products against defective material and workmanship only. Hayward assumes no responsibility for property damage or personal injury resulting from improper installation, misapplication, or abuse of any product.
2. Hayward assumes no responsibility for property damage or personal injury resulting from chemical incompatibility between its products and the process fluids to which they are exposed. Determining whether a particular PVC, CPVC, or PP product is suitable for an application is the responsibility of the user. Chemical compatibility charts provided in Hayward literature are based on ambient temperatures of 70°F and are for reference only.
3. Hayward products are designed for use with non-compressible liquids.

> **WARNING**
> **Hayward PVC and CPVC products should NEVER be used or tested with compressible fluids such as compressed air or nitrogen. Use of PVC and CPVC products in compressible fluid applications may result in product damage, property damage, personal injury, or even death.**

4. The maximum recommended fluid velocity through any Hayward product is eight feet per second (8 ft/s). Higher fluid velocity can result in damage due to the water hammer effect.
5. Piping systems must be designed and supported to prevent excess mechanical loading on Hayward products due to system misalignment, weight, shock, vibration, and the effects of thermal expansion and contraction.
6. The effect of temperature on plastic piping systems must be considered when the systems are initially designed. The pressure rating of plastic systems must be reduced with increasing temperature. Maximum operating pressure is dependent upon material selection as well as operating temperature. Before installing any Hayward product, consult Hayward product literature for pressure vs. temperature curves to determine any operating pressure or temperature limitations.
7. PVC and CPVC plastic products become brittle below 40°F. Use caution in their installation and operation below this temperature.

> **WARNING**
> **Hayward PVC and CPVC products should not be used in services with operating temperature below 34°F.**

8. Due to differential thermal expansion rates between metal and plastic, transmittal of pipe vibration and pipe loading forces, **DIRECT INSTALLATION OF PLASTIC VALVES INTO METAL PIPING SYSTEMS IS NOT RECOMMENDED**. Wherever installation of plastic valves into metal piping systems is necessary, it is recommended that at least 10 pipe diameters in length of plastic pipe be installed upstream and downstream of the plastic valve to compensate for the factors mentioned above.
9. Published operating torque requirements are based on testing of new valves using clean water at 70°F. Valve torque is affected by many factors including fluid chemistry, viscosity, flow rate, and temperature. These should be considered when sizing electric or pneumatic actuators.
10. Systems should always be depressurized and drained prior to installing or maintaining any Hayward product.

THREADED CONNECTIONS:

a) Wrap male threads of pipe end with Teflon® tape. Proper application of Teflon® tape will provide a sufficient seal for PVC, CPVC and PP threaded joints.

> **WARNING**
> **Do not use "pipe dope", liquid sealant, or thread sealant on any PVC, CPVC, or Polypropylene, threaded connections. Pipe dope and thread sealants may react with the PVC, CPVC, or Polypropylene, weakening the material and potentially resulting in failure of the joint, product damage, property damage, personal injury, or even death.**

b) Thread the pipe end into the threaded ends of the valve until "hand tight". Using a strap wrench only (never use a pipe wrench), tighten the pipe into the end of the valve only to the point required to form a seal between the valve end and pipe thread; 1/2 turn past hand tight is typically sufficient to form a seal. **(Caution: Tightening beyond this point may introduce excessive stress that could cause failure of the valve end or the threaded end of the pipe.)**

INSTALLATION CONSIDERATIONS:

a) Hayward NVA Series Needle Valves are designed to regulate, or meter, flow as well as to provide drop-tight shutoff.
b) Hayward NVA Series Needle Valves are uni-directional. The direction of flow is critical to the proper and successful performance of the valve. **A FLOW ARROW ON THE BODY DESIGNATES THE PROPER INSTALLATION DIRECTION.** Installation of the valve in the flow direction indicated by the flow arrow on the valve body allows the flow to be accurately regulated as well as to achieve complete shutoff.

> **WARNING**
> **Installation of the valve with the flow arrow on the body opposite to the direction of system flow may result in malfunction of the valve, potentially resulting in failure of the product, product damage, property damage, personal injury, or even death.**

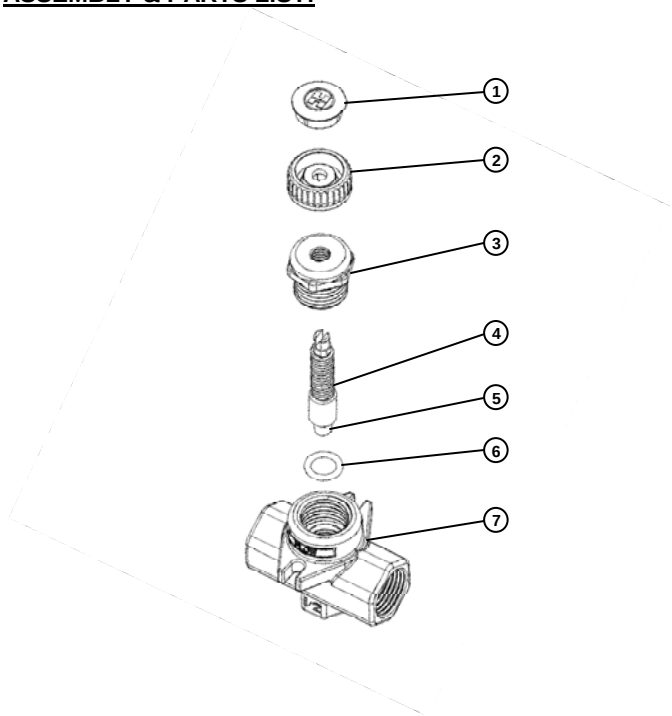
OPERATION:

a) Operation of the Hayward NVA Series Needle Valve is achieved by clockwise rotation of the thumbwheel to decrease flow, or fully close the valve, and counterclockwise rotation of the thumbwheel to increase flow, or fully open the valve.
b) The Hayward NVA Series Needle Valve can be used to meter flow. The stem will retain its set point once it is positioned to achieve a particular flow rate through the valve.

MAINTENANCE:

a) The Hayward NVA Series Needle Valve is not intended to be repaired. Valves that are damaged during installation or operation should be replaced with a new valve.

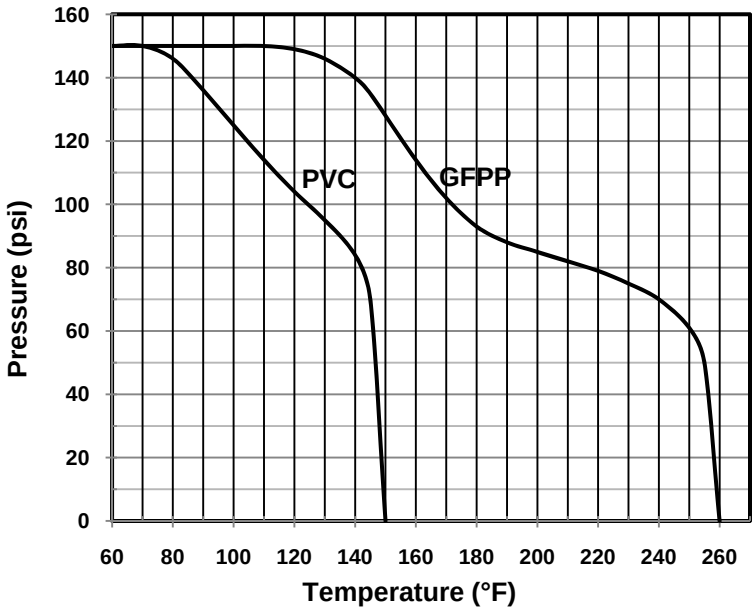
ASSEMBLY & PARTS LIST:



ITEM	DESCRIPTION
1	BEZEL
2	THUMBWHEEL
3	BONNET
4	STEM
5	SEAT
6	O-RING
7	BODY

PRESSURE & TEMPERATURE RATINGS:

- Pressure rating of PVC and GFPP products at 70°F: 150 psi
- Minimum service temperature of PVC and GFPP products: 34°F
- Maximum service temperature of PVC products: 140°F
- Maximum service temperature of GFPP products: 240°F



CHEMICAL COMPATIBILITY CHARTS:

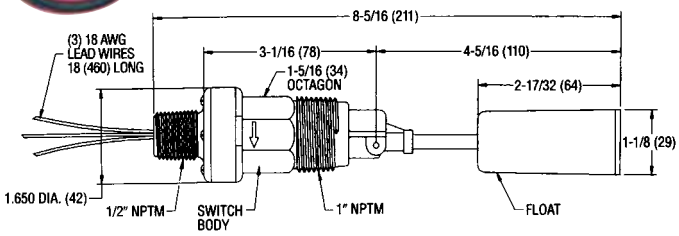
- Consult the Hayward Industrial Product Guide or www.haywardflowcontrol.com for complete chemical compatibility charts for all materials of construction of the valve.

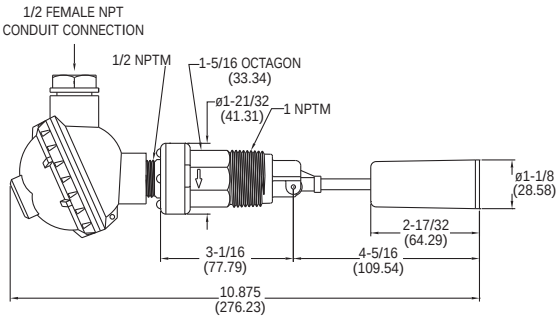
Model L8 FLOTECT® Liquid Level Switch

Specifications – Installation and Operating Instructions

Model L8

Model L8-WP





Model L8 Flotect® Liquid Level Switch features a leak proof body and float constructed from tough, durable polyphenylene sulfide (PPS) which has excellent chemical resistance. Because the liquid level snap switch is magnetically actuated, there is no direct mechanical linkage to leak or fail, assuring longer life and decreased maintenance costs. This inexpensive unit is ideal for liquid level alarm, indication or control. Installation is quick and easy — simply install in a horizontal position with the index arrow pointing down.

The L8 Flotect® Liquid Level Control is UL recognized as an industrial motor controller per UL standard 508, suitable for mounting in a protected environment. This lightweight switch can be used in numerous chemical process, industrial systems and similar applications where process conditions are compatible with polyphenylene sulfide, ceramic 8 and 316 stainless steel. This liquid level switch provides accurate setpoint control of liquids with specific gravities as low as 0.6. This compact and reliable control is designed to handle temperatures up to 212°F (100°C) and pressures to 150 psig (10 bar).

MODEL
L8 Level Switch

OPTIONS
-MV, Gold Plated Contacts, for dry circuits. Rated 1A @ 125 VAC; 1A resistive, 0.5A inductive @ 30 VDC. Example L8-MV

-INC, Inconel® Option. Inconel® alloy replaces standard 316 SS wetted parts. Wetted parts are Inconel® alloy, ceramic 8, and Polyphenylene Sulfide. Example: L8-INC

-WP, Weatherproof Enclosure. Optional housing is phenylpolioxide and provides weatherproof protection for electrical wiring. Example: L8-WP

SPECIFICATIONS
Service: Compatible liquids.
Wetted Materials:
Float and Body: Polyphenylene Sulfide (PPS).
Pin and Spring: 316 SS or Inconel® alloy.
Magnet: Ceramic 8.
Temperature Limit: 212°F (100°C).
Pressure Limit: 150 psig (10.34 bar).
Enclosure Rating: General purpose. WP option is weatherproof.
Switch Type: SPDT snap switch. MV option is a SPDT gold contact snap switch.
Electrical Rating: 5A @ 125/250 VAC, 5A resistive, 3A inductive @ 30 VDC. MV option: 1A @ 125 VAC, 1A resistive, 0.5A inductive @ 30 VDC.
Electrical Connections: 18 AWG, 18″ (460 mm) long.
Conduit Connection: 1/2″ male NPT.
Process Connection: 1″ male NPT.
Mounting Orientation: Horizontal with index arrow pointing down.
Weight: 5 oz (0.142 kg).
Agency Approvals: CE, UL 508 for US and Canada.
Specific Gravity: 0.6 minimum.

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www.dwyer-inst.com
e-mail: info@dwyer-inst.com

INSTALLATION

1. The Model L8 Level Switch is designed for use in clean, compatible process media free from scale, debris and other foreign material which could collect on the float and impede its movement. Build up from such materials will prevent proper operation. See wetted materials list in the specifications to assure compatibility with process liquids.

2. Unpack switch and remove any packing material from the switch and float. Due to variations in fittings and amount of thread engagement, float must be checked for proper operation during installation.

3. Use pipe thread sealant tape or pipe thread sealant to seal the 1″ NPT mounting connection. Avoid excess sealant which could interfere with float movement. Do not exceed 50 ft/lb (40n/m) torque on the switch housing. Damage can result.

4. Install switch in a horizontal position with index arrow pointing down.

5. Wire in accordance with local electrical codes. Lead wire color codes are as follows. Black - Common, Red - Normally Closed, Blue - Normally Open. Normal is the contact condition when liquid level is below the actuation point. Closed contacts open and open contacts close when liquid level lifts the float to the actuation point.

6. Switch electrical components must be protected from moisture at all times. If necessary, install a lightweight, waterproof junction box over the 1/2″ NPT threaded stem. Do not place mechanical loading on the switch housing. Permanent damage can occur. Use flexible Romex sheathing or equivalent.

MAINTENANCE

The Model L8 Liquid Level Switch is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.

Inconel® is a registered trademark of Huntington Alloys Corporation.

Printed in U.S.A. 2/10

FR# 82-440881-00 Rev. 3

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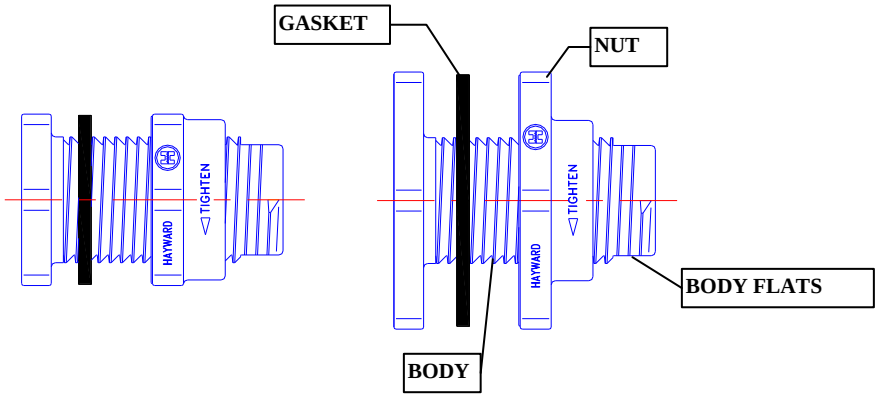
HAYWARD INDUSTRIAL PRODUCTS

INSTALLATION DATA FOR
SAFE-T-LOC™ BULKHEAD FITTINGS



PLEASE READ THE FOLLOWING INFORMATION PRIOR TO INSTALLING AND USING HAYWARD VALVES, STRAINERS, FILTERS, AND OTHER ASSOCIATED PRODUCTS. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN SERIOUS INJURY.

1. Hayward guarantees its products against defective material and workmanship only. Hayward assumes no responsibility for damage or injuries resulting from improper installation, misapplication, or abuse of any product.
2. Hayward assumes no responsibility for damage or injury resulting from chemical incompatibility between its products and the process fluids to which they are subjected. Compatibility charts provided in Hayward literature are based on ambient temperatures of 70 ºF and are for reference only. Customer should always test to determine application suitability.
3. Consult Hayward literature to determine operating pressure and temperature limitations before installing any Hayward product. Note that the maximum recommended fluid velocity through any Hayward product is eight feet per second. Higher flow rates can result in possible damage due to the water hammer effect. Also note that maximum operating pressure is dependent upon material selection as well as operating temperature.
4. Hayward products are designed primarily for use with non-compressible liquids. They should NEVER be used or tested with compressible fluids such as compressed air or nitrogen.
5. Systems should always be depressurized and drained prior to installing or maintaining Hayward products.
6. Temperature effect on piping systems should always be considered when the systems are initially designed. Piping systems must be designed and supported to prevent excess mechanical loading on Hayward equipment due to system misalignment, weight, shock, vibration, and the effects of thermal expansion and contraction.
7. Because PVC and CPVC plastic products become brittle below 40 ºF, Hayward recommends caution in their installation and use below this temperature.
8. Published operating torque requirements are based upon testing of new valves using clean water at 70 ºF. Valve torque is affected by many factors including fluid chemistry, viscosity, flow rate, and temperature. These should be considered when sizing electric or pneumatic actuators.
9. Due to differential thermal expansion rates between metal and plastic, transmittal of pipe vibration, and pipe loading forces DIRECT INSTALLATION OF METAL PIPE INTO PLASTIC CONNECTIONS IS NOT RECOMMENDED. Wherever installation of plastic valves into metal piping systems is necessary, it is recommended that at least 10 pipe diameter in length of plastic pipe be installed upstream and downstream of the plastic valve to compensate for the factors mentioned above.

INSTALLATION INSTRUCTIONS:

The following table, in inches, are recommended values. "SF"= Standard Flange "LF"= Large Flange

Bulkhead size	**Min Rigid** Tank Radius	**Min Flexible** Tank Radius	**Max** Wall	**Min / Max** Hole Size	
1/2"	7.25 SF / 12.00 LF	6.50 SF / 11.00 LF	2.08	1.38	1.41
3/4"	10.00 SF / 13.50 LF	9.25 SF / 12.75 LF	2.08	1.63	1.66
1"	11.75 SF / 20.50 LF	10.70 SF / 18.50 LF	2.08	1.87	1.91
1-1/4"	16.25	12.19	2.00	2.63	2.67
1-1/2"	16.25	12.19	2.00	2.63	2.67
2"	25.75	19.38	2.00	3.25	3.28
3"	30.00	25.25	2.12	4.50	4.54
4"	60.00	55.00	2.45	5.75	5.78
6"	114.00	97.00	3.25	8.00	8.06

THE SYSTEM AND TANK SHOULD BE DEPRESSURIZED AND DRAINED BEFORE ATTEMPTING TO INSTALL A BULKHEAD FITTING. VENTING AND PROPER PERSONAL PROTECTION EQUIPMENT SHOULD BE USED WHEN ENTERING TANKS.

THE BULKHEAD FITTING SHOULD BE INSTALLED WITH THE BODY AND THE GASKET ON THE INSIDE OF THE TANK. TIGHTEN THE NUT WHILE HOLDING THE BODY. THE NUT CAN BE TIGHTENED FROM THE OUTSIDE OF THE TANK BY HOLDING THE FLATS ON THE BODY END WHILE TURNING THE NUT.

THREADED CONNECTION:
Threaded end connections are manufactured to ASTM specifications D2464-88. F437-88 and ANSI B2.1. Wrap threads of pipe with Teflon tape of 3 to 3-1/2 mil thickness. The tape should be wrapped in a clockwise direction starting at the first or second full thread. Overlap each wrap by, 1/2 the width of the tape. The wrap should be applied with sufficient tension to allow the threads of a single wrapped area to show through without cutting the tape. The wrap should continue for the full effective length of the thread. Pipe sizes 2" and greater will not benefit with more than a second wrap, due to the greater thread depth. To provide a leak proof joint, the pipe should be threaded into the bulkhead fitting "hand tight". Using a strap wrench only. (Never use a stillson type wrench) tighten the joint an additional 1/2 to 1-1/2 turns past hand tight. Tightening beyond this point may induce excessive stress that could cause failure.

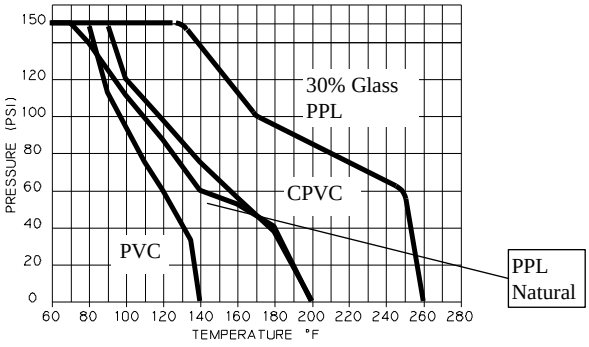
SOCKET CONNECTION:
Socket connections are manufactured to ASTM D2467-94. Solvent cementing of socket connections to pipe should be performed per ASTM specifications D2855-87. Cut pipe square. Chamfer and deburr pipe. Surfaces must be cleaned and free of dirt, moisture, oil and other foreign material. Apply primer to inside socket surface. Use a scrubbing motion. Repeat applications may be necessary to soften the surface of the socket. Next, liberally apply primer to the male end of the pipe to the length of the socket depth. Again apply to the socket, without delay apply cement to the pipe while the surface is still wet with primer. Next apply cement lightly, but uniformly to the inside of the socket. Apply a second coat of cement to the pipe, and assemble the pipe into the socket, rotating the pipe 1/4 turn in one direction as it is slipped to full depth of the socket. The pipe should be held in position for approx. 30 seconds to allow the connection to "set". After assembly wipe off excess cement. Full set time is a minimum of 30 minutes at 60 to 100 F. Full cure time should be based on the chart below.

JOINT CURE SCHEDULE:
The cure schedules are suggested as guides. They are based on laboratory test data, and should not be taken to be the recommendations of all cement manufacturers. Individual manufacturer's recommendations for their particular cement should be followed.

	Test Pressures for Pipe Sizes ½" to 1-1/4"		Test Pressures for Pipe Sizes 1-1/2" to 3"		Test Pressures for Pipe Sizes 4" & 5"		Test Pressures for Pipe Sizes 6" to 8"	
Temperature Range During Cure Period(B) °F(°C)	Up to 180 PSI (1240 kPa)	Above 180 to 370 PSI (1240 to 2550 kPa)	Up to 180 PSI (1240 kPa)	Above 180 to 315 PSI (1240 to 2172 kPa)	Up to 180 PSI (1240 kPa)	Above 180 to 315 PSI (1240 to 2172 kPa)	Up to 180 PSI (1240 kPa)	Above 180 to 315 PSI (1240 to 2172 kPa)
60 to 100 (15 to 40)	1 hour	6 hours	2 hours	12 hours	6 hours	18 hours	8 hours	1 day
40 to 60 (5 to 15)	2 hours	12 hours	4 hours	1 day	12 hours	36 hours	16 hours	4 days
20 to 40 (-7 to 5)	6 hours	36 hours	12 hours	3 days	36 hours (A)	4 days (A)	3 days (A)	9 days (A)
10 to 20 (-15 to 7)	8 hours	2 days	16 hours	4 days	3 days (A)	8 days (A)	4 days (A)	12 days (A)
Colder than 10 (-15)	Extreme care should be exercised on all joints made where pipe, fittings or cement is below 10°F.							

A: It is important to note that at temperatures colder than 20°F on sizes that exceed 3 in., test results indicate that many variables exist in the actual cure rate of the joint. The data expressed in these categories represent only estimated averages. In some cases, cure will be achieved in less time, but isolated test results indicate that even longer periods of cure may be required.
B: These cure schedules are based on laboratory test data obtained on Net Fit Joints (NET FIT=in a dry fit the pipe bottoms snugly in the fitting socket without meeting interference).

NON SHOCK OPERATING PRESSURES



CAUTION:

When installing the bulkhead fitting in a large diameter tank, care should be used to assure the initial thread engagement to the mating part outside the tank, is minimized. This will allow final position of the bulkhead fitting to be adjusted after the tank is filled.

After the tank is filled, if a slight leak develops around the fitting, it may be necessary to slightly loosen the nut and rotate the entire bulkhead body clockwise, while holding the mating part stationary. This will draw the bulkhead fitting body toward the inside tank wall. **RETIGHTEN** the bulkhead fitting nut, while holding the flats on the body.

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Manual Oxine Dilution & Use

Useful figures to have available if you are diluting Oxine manually without a titration kit. These figures are applicable with Oxine that has been activated within 48 hours of dilution with a food grade acid at 2.5 to 3 pH .

For keg sanitizing and use with the Super King, Mini King or Squire series machines:

It is recommended that you start by using approximately 100 ppm of activated Oxine for keg sanitizing until you can determine through your own QC procedures whether you need to increase or decrease the amount based upon microbial results obtained. Experience indicates that normal usage will be in the range of 20 to 100 ppm.

1. Take a one gallon container with a screw lid and drill a hole in the cap to suit the dosing unit siphon tube.

2. Take 0.6 liter (20 ounces) of Oxine, add food grade acid to lower the pH to approximately 2.5 to 3.0 pH to activate the Oxine and stir. This will give you approximately 20,000 ppm of activated Oxine. CAUTION – Do so in a well ventilated area and do NOT breathe the fumes given off during activation. See the MSDS in this section for more details.

3. When activated (after 5 to 10 minutes) add 3 liters (101 ounces) of water to the activated Oxine (5:1 ratio). This will give you approximately 4,000 ppm of activated Oxine. Stir and replace cap with siphon tube into Oxine.

4. Using the chart supplied with the Oxine doser venturi kit select the colored venturi that will then give you a 40:1 reduction ratio. This will give you approximately 100 ppm of activated Oxine being supplied as your rinse and sanitizing water to the keg for pre and post rinse.

5. This can be verified with the Oxine test kit or Oxystix attainable from IDD Process & Packaging, Inc.

Other ratios of Oxine for general sanitizing purposes

One unit of manually activated Oxine at 20,000ppm and you:

Add 1 unit of water, the concentration reduces to 10000ppm – Ratio of water to Oxine 1:1.

Add a further 2 units of water, the concentration reduces to 5000ppm – Ratio of water to Oxine 3:1.

Add a further 4 units of water, the concentration reduces to 2500ppm – Ratio of water to Oxine7:1.

Add a further 8 units of water, of the concentration reduces to 1250ppm – Ratio of water to Oxine 15:1.

Add a further 16 units of water, the concentration reduces to 625ppm – Ratio of water to Oxine 31:1.

Add a further 32 units of water, the concentration reduces to 312.5ppm – Ratio of water to Oxine 63:1.

Add a further 64 units of water, the concentration reduces to 156.5ppm – Ratio of water to Oxine 127:1.

Add a further 128 units of water, the concentration reduces to 78ppm – Ratio of water to Oxine 255:1.

Add a further 256 units of water, the concentration reduces to 39ppm – Ratio of water to Oxine 511:1.

Add a further 512 units of water, the concentration reduces to 19.5ppm – Ratio of water to Oxine 1023:1.

Add a further 1024 units of water, the concentration reduces to 9.5ppm – Ratio of water to Oxine 2047:1.

Add a further 2048 units of water, the concentration reduces to 5ppm – Ratio of water to Oxine 4095:1.

Add a further 4096 units of water, the concentration reduces to 2.5ppm – Ratio of water to Oxine 8191:1.

Add a further 8192 units of water, the concentration reduces to 1.25ppm – Ratio of water to Oxine 16382:1.

OXINE & PUROGENE SANITIZER

The following information is offered as suggested uses of Oxine and Purogene and is not intended to be definitive or accurate for all applications. IDD Process & Packaging, Inc. do not accept any liability for the use or application of Oxine or Purogene.

OXINE AND PUROGENE...THE SANITIZERS FOR ALL REASONS. For years it has been known that chlorine dioxide gas is a powerful anti-microbial agent. However, this gas is toxic and unstable in an aqueous solution. Modern technology has overcome these problems with Oxine and Purogene. Today, stabilized chlorine dioxide (ClO2) is available in a concentrated stable form with very low toxicity. As a powerful oxidant, stabilized ClO2 is virtually unaffected by organic load and hard water. These technical advances have resulted in the FDA, EPA and USDA approving stabilized ClO2 as an acceptable sterilant for numerous applications within the brewery, dairy and food processing plants. Properties which make stabilized ClO2 most attractive to the brewer, maltster and other beverage plant operators are:

LOW ODOR - Unlike typical sanitizers such a hypochlorites, quaternary ammonium, or even peroxy-acetic acid, stabilized ClO2 has an almost undetectable odor while surpassing the bacteriocidal efficacy of these other compounds. Hypochlorites can form chlorophenols (a medicinal flavor compound) when combined with organic material in beer: Quaternary ammonia compounds have well known negative effects on flavor; the end product of the reduction of peroxy-acetic acid is acetic acid, with its typically "vinegar-like" character. Even small amounts remaining in a tank and having the opportunity of coming in contact with beer, can have a deleterious effect on beer flavor.

LOW CORROSIVITY - Stabilized ClO2 is not harmful to vessels or piping systems when used at the recommended dosages. Typically, brewers like the effectiveness of hypochlorites but a major drawback is hypochlorites role in causing stress corrosion fatigue in stainless steel, particularly at weld joints. Stabilized ClO2 while actually being 4 to 7 times more effective as a sanitizer than hypochlorite, does not enhance or contribute to “stress corrosion fatigue” in the metal. Stabilized ClO2 is only slightly more corrosive than tap water at and much of this is due to the acid used in the activation of the product. When it is used as a final rinse in vessels, or piping systems, it is perfectly safe to leave a 10 ppm solution un-rinsed in a tank, pipe network or piece of process equipment, (i.e. bottle fillers, keg racking machines, sheet or pressure leaf filters, etc.).

EASE OF HANDLING - While idophors, peroxy-acetic acid and hypochlorites are popular sanitizers for tanks, fillers and other equipment, they have some handling drawbacks. Iodophors are really only effective at low pH, thus they are typically carried as a concentrate in a solution of phosphoric or nitric acid. This makes them hazardous to handle. Iodophors also have a tendency to stain equipment (and people). Pereoxy-

acetic acid is actually quite volatile at moderately elevated temperatures (120_F/50_C) and can cause spontaneous explosions. It is also corrosive in its concentrated form. Hypochlorites as chlorine gas have a short-term exposure limit slightly higher than that of stabilized ClO2 (1.0 ppm versus 0.3 ppm respectively). However, since stabilized ClO2 is 4 to 7 times more effective than hypochlorites at normal use levels, it is less hazardous.

NO ENVIRONMENTAL IMPACT - Stabilized ClO2 does not form the highly carcinogenic trihalomethanes as do hypochlorites in the presence of organic materials. Oxine is environmentally and user friendly and has been accepted by the EPA has having no environmental impact upon disposal. It is not corrosive nor is it volatile in its concentrated (2%) form.

EFFICACY - Stabilized ClO2 does not act by chlorination but by oxidation and has proven effective against all common brewery, winery and beverage plant micro-organisms. It is an effective bacteriostat at use rates as low as 5 to 20 ppm against such common pests as Lactobacillus and Pediococcus sp. and at 50 ppm against Wild Yeasts and Mold strains.

As with all gaseous products such as stabilized ClO2, Oxine can be monitored by using a standard gas monitoring system such as those supplied by LAB SAFETY SUPPLIES COMPANY. Toll free telephone number 800-356-0722. It is necessary to take extra care with good ventilation during the "activation" process of Oxine. If it is considered necessary to monitor gas levels at this time for your safety records, we recommend that the chlorine "low range" (0.05 to 16ppm) tube be used to monitor gas levels. These tubes readily detect and measure all types of inorganic chlorine.

MALTHOUSE:
Stabilized ClO2 is an effective wash down sanitizer for walls and floors, germination areas and steep tanks. At 100 to 500 ppm it will kill and bleach out mold and mildew common to these high-humidity areas. Stabilized ClO2 is successfully used in barley steep waters to inhibit microbial growth of all types. Typically at 10 to 50 ppm depending on the microbial load, one can assure a safe re-cyling of the steep water into subsequent batches. Stabilized ClO2's strong oxidizing capability actually reduces B.O.D. loads for disposal.

BREWHOUSE:
Safe for all vessels and piping systems, whether copper or stainless steel, stabilized ClO2 can ensure a microbially free environment in coppers/kettles, mash filters or lauter tuns, swirl tanks, settlers and wort cooling systems when used at 50 to 100 ppm. The related piping systems for wort transfer to fermentation areas can be sanitized at 100 ppm. A 50 ppm solution is also safe to leave in the pipelines during periods of non-use, to keep them sanitized.

OXINE & PUROGENE SANITIZER

FERMENTATION/STORAGE AREAS:

A 50 ppm solution is adequate to sanitize tank walls and related piping systems. Since low levels of contact with finished product do not effect final beer flavor, one can safely use stabilized ClO2 in a final rinse and be able to obtain some residual bacteriostatic value. It is recommended that boots, gloves, yeast-handling tools and the like be sanitized at 100 ppm. Stabilized ClO2 at 100 ppm is ideal for foot baths at or near tank entry areas.

FILTRATION:

Stabilized ClO2 is particularly useful for stabilizing and sanitizing filter systems. It can be used to shock sanitize activated carbon and sand/gravel filters in the water treatment facility. Typically, a 50 to 100 ppm solution is run slowly through these type filters. Stabilized ClO2 will not be absorbed significantly by the active carbon. Once the bed is sanitized it is then possible to dose Oxine into the water stream prior to the filter bed at a concentration of 1 to 5 ppm in order to prevent future contamination.

Plate-and-frame filters can be sanitized with a 10 to 50 ppm solution without the typical water flush/rinse required by acid-sanitizers and the like. A standing solution of up to 10 ppm can be left in a filter during periods of non-use with no harm to the filter frame or the sheets.

It is recommended that this procedure be carried out after any normal beer filter use to inhibit the growth of yeasts and bacteria, since residual beer on the sheets makes for an ideal growth media. A solution of the same strength sprayed over the outer exposed edges of the filter sheets will prevent mold growth when standing.

PACKAGING:

Stabilized ClO2 provides a safe sanitization and soaking solution for keg washer rackers, bottle and can fillers. Sanitize at 50 ppm and soak or stand filler bowls in cold water at 10 ppm.

Aseptic keg, bottle and can rinsing immediately prior to filling with beer is enhanced when 20 to 50 ppm of stabilized ClO2 is used as a final cold rinse.

The use of stabilized ClO2 as an aseptic "fog" spray around aseptic bottle and can fillers is highly effective as a sanitizer and microbial preventative at 10 to 20 ppm.

The non-corrosive nature of stabilized ClO2 makes it an ideal growth inhibitor in tunnel pasteurizers. Stabilized ClO2 is most effective in the moderate temperature zones (warm-up and cool-down fresh water zones) of the pasteurizer. A 20 to 30 ppm solution is normally adequate and quite safe to the equipment.

OXINE & PUROGENE SANITIZER

TANK-TRUCK WASHING:

As in the typical use for tank washing and sanitizing, stabilized ClO2 can be used for the sanitization and cleanup of bulk tankers and their related piping and hoses. Wash down tank internals, pumps and hoses at 100 ppm, externals at 250 to 500 ppm. This will prevent transfer of micro-organisms to or from the connecting systems.

MOLD AND MILDEW CLEANUP AND CONTROL:

Clean off walls and floors as well as air handling units and machinery using a 200 to 500 ppm solution of stabilized ClO2. This effectively kills mold and mildew spores while still retaining some bleaching ability to remove tough black stains. This is good procedure prior to painting, or prior to the application of a mold and slime growth inhibitor such as Alltech's Mold-Zap.

PROCESS WATER TREATMENT:

The FDA has approved stabilized ClO2 for process water sanitization at between 100 to 200 ppm available ClO2. Potable water treatment is approved for human consumption at 4 ppm available ClO2.

ACTIVE CARBON BED (ACB):

Infected ACB's can be back flushed and soaked in a 100 ppm solution of ClO2 for 15 to 60 minutes, after which time a forward flush-out of 15 to 30 minutes with the process water can take place. It is then advisable to inject 1 to 3 ppm of activated ClO2 into the process water stream thereafter prior to the ACB to prevent future infections.

GLASS WASHING/RINSING:

Even at the final stage of the brewer's trade, where bars and pubs have a need for an effective and safe drinking-glass sanitizer, stabilized ClO2 can fill the need. Since stabilized ClO2 can be safely consumed at 4 ppm, it makes an ideal glass rinse. Unlike typical quaternary ammonium rinses, it will not have any deleterious effect on beer flavor, nor on beer foam quality. Use at 20 to 50 ppm in final rinse water.

WASHING OF YEAST SLURRY WITH STABILIZED ClO2 (OXINE):

Stabilized ClO2 (Oxine) will effectively kill unwanted bacteria in yeast at 20 to 40 ppm, while leaving the culture yeast unharmed. Because of stabilized ClO2's unique action, it does not have the drawbacks of phosphoric acid. It does not form chlorophenols (which contribute to a much feared medicinal character in beers) in the presence of organic materials.

METHOD:

Normally, an initial washing at 20 to 40 ppm (20 ppm for homogenous yeast, 40 ppm for "clumpy" or highly flocculant strains) is effective against most Lactobacilli and Pediococci species. This "wash" is done by adding stabilized ClO2 directly to yeast slurry on a volume/ppm basis. It does not need to be activated as the pH of the yeast slurry is low enough to convert to ClO2.

OXINE & PUROGENE SANITIZER

Stabilized ClO2 is supplied at a concentration of 20,000 ppm or 2% Chlorine Dioxide when activated. Therefore, on a volume basis, one could essentially make up with one gallon of stabilized ClO2 concentrate, one thousand gallons of solution at 20 ppm. By this method, we can also assume with one gallon of concentrate to make up one thousand gallons of yeast slurry at 20 ppm. It is impractical to measure the concentration of ClO2 in the presence of yeast, so the dilution must be made based on the strength of the concentrate (20,000 ppm).

Yeast slurry should be thin enough to allow for homogeneous mixing, usually 20 to 40% solids. The killing action of stabilized ClO2 is very fast compared to the traditional phosphoric acid wash. Only 15 to 30 minutes need be allowed for effective bactericidal effect of stabilized ClO2, with no resultant stress on yeast cells.

DOSING RATE:
NORMAL WASH: For regular washing of homogenous recycled brewers yeast, a 20 to 40 ppm wash for a minimum 30 minutes to 5 hours prior to pitching. Mix 1 to 2 ml of stabilized ClO2 concentrate with each liter of yeast slurry. Agitate thoroughly during the process.

ACTIVATION OF CONCENTRATE:
Since the ClO2 is in a stabilized form in concentrate, it must be "activated" before using. To activate Oxine add acid to lower the pH in a well ventilated area to below 5 pH. Activation can be verified by a corresponding color change of the concentrate from clear to yellow/green. Any number of acids will activate the stabilized ClO2, however, food grade Citric or Phosphoric acid is recommended for this application.

Normally it requires up to 200 grams of Citric Acid to activate one gallon of stabilized ClO2 concentrate (up to 50 grams per liter of stabilized ClO2 concentrate).

Following are the details for replacement chemicals for your Oxine Test Kits.

10% Potassium Iodide - 100 g diluted to 1,000 ml with distilled water.

0.2N Hydrochloric Acid - Add 16.6 ml Concentrated HCL (39%) to 800 ml water. Bring to 1,000 ml with water.

0.00564N PAO (Phenylarsine Oxide).

Oxine is available from IDD in 1, 5, 30, 55 gallon and tote containers. Test kits and replacement materials can also be purchased from IDD.

STORAGE:

Concentrated ClO2 can be stored in a dry area away from acids for up to 3 years under standard conditions.

Activated ClO2 has a half-life of approximately 48 hours under standard conditions.

Activated ClO2 can be added to cold water at 4,000 ppm. Under such conditions a half-life of up to 2 weeks is possible under standard conditions.

AUTOMATIC ACTIVATION SYSTEMS:

A series of low cost, hands free, automated activation systems are available to provide a continuous volume of activated ClO2 into a storage reservoir as needed. These systems eliminate the need for manual mixing, measuring and dispensing.

Bio-Cide
INTERNATIONAL, INC.

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Oxine®

CHEMICAL FAMILY
Mixture of Oxychlorine Compounds

MANUFACTURER
Bio-Cide International, Inc., 2845 Broce Drive, Norman, OK 73072 U.S.A. (800.323.1398)

EPA REGISTRATION NUMBER:
9804-1

EFFECTIVE DATE:
June 2004

SUPERSEDES:
April 2002

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	C.A.S. No.	% by Wt.
Sodium Chlorite	7758-19-2	3.35%

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Clear liquid with very faint chlorinous odor
May cause skin reaction. May cause eye irritation.

POTENTIAL HEALTH EFFECTS

INHALATION: Prolonged inhalation of fog or mist may be irritating to nose and throat.

SKIN: Based on rabbit studies, product is listed as "practically not an irritant". Prolonged exposure may produce localized irritation, contact dermatitis, mild erythema and edema.

EYE: Based on rabbit studies, product has been given an EPA Category III rating as a mild irritant. Exposure can produce slight irritation of conjunctiva, cornea and eyelid.

INGESTION: Ingestion may produce gastric discomfort, nausea, vomiting and diarrhea. Intake of large quantities may produce methemoglobinemia.

SYSTEMS OF OVER EXPOSURE

Skin and eye irritation. Exposures to chlorine dioxide from activation can produce coughing.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Skin disorders, such as dermal allergies and dermatitis. Exposure to chlorine dioxide produced by activation can aggravate pulmonary disorders, such as emphysema.

CHRONIC EXPOSURE EFFECTS

May cause localized irritation to areas exposed to product.

SECTION 4: FIRST AID MEASURES

The following procedures are recommended as emergency first aid only. They are not intended to replace or supplant the treatment advice of a physician or other authorized health care specialist.

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center of doctor. Do not give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN

Chlorine dioxide vapors are emitted when this product contacts acids or chlorine. If these vapors are inhaled, monitor patient closely for delayed development of pulmonary edema which may occur up to 48-72 hours post inhalation.

SECTION 5: FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Autoignition temperature	*Not Applicable*
Flash Point	*Not Applicable*
Flammable Limits – LEL	*Not Applicable*
Flammable Limits – UEL	*Not Applicable*

EXTINGUISHING MEDIA

Water unless contraindicated by other materials involved in the fire.

FIRE-FIGHTING EQUIPMENT

Standard protective gear with self-contained breathing apparatus.

SPECIAL FIRE-FIGHTING PROCEDURES

Do not allow product to evaporate to dryness. If chlorine dioxide gas is produced, vent to atmosphere. Open or vent any large containers.

UNUSUAL FIRE OR EXPLOSIVE HAZARDS

The sodium chlorite in dried Oxine® is a strong oxidizer, which supports combustion. Chlorine dioxide, which may evolve from Oxine® solutions, is explosive in the gaseous phase at concentrations greater than 10% by volume. Do not allow chlorine dioxide gas to accumulate within a confined space.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL NOTIFICATION

All spills and leaks involving more than 10 gallons should be reported to the nearest regional EPA office or designated state emergency response office with 24 hours. Spills from ocean vessels or which may contaminate U.S. costal waterways should be reported to the nearest Coast Guard office within 24 hours.

SPILL OR LEAK PROCEDURE

Small spills, involving less than 10 gallons, may be flushed to a designated and permitted sewer system with the amount of water that is about 10 times the amount of the spill.

Large spills, involving more than 10 gallons, should be contained and neutralized using any one of the three neutralizers: i) sodium sulfite, ii) sodium bisulfite, or iii) sodium thiosulfate. The neutralization reaction can be extremely exothermic, and therefore, care should be taken to add the neutralizer in small increments. Sodium sulfite is the most preferred (least exothermic) neutralizer that can be used in the ratio of 1 lb per gallon of spilled material. Sodium thiosulfate can be used in the ratio of 2 lbs of anhydrous salt or 3 lbs of pentahydrate salt per estimated gallon of the spilled material. The neutralized solution can then be flushed to a designated and permitted sewer system with double the amount of water. The product that is not neutralized may be disposed of as chemical waste in the manner indicated below. The vicinity of the spill should be thoroughly flushed with water after clean-up. At no time should the spilled material be allowed to dry to a crystalline salt. Do not discharge this product to storm drains or to any surface or groundwater source unless specifically allowed under a valid NPDES permit.

If the neutralizer is not available, volumes larger than 10 gallons should be carefully transferred into a container and taken to an authorized chemical disposal site (Class I or landfill) in accordance with all federal, state, and local regulations. Consult with selected facility regarding the need for prior neutralization of waste.

SECTION 7: HANDLING AND STORAGE

HANDLING

Use product only as directed by the label. Avoid contact with skin and eyes; avoid breathing any vapors or fumes resulting from product activation. Wash thoroughly after handling. Thoroughly rinse all protective gear and handling equipment, such as transfer pumps and lines, with water prior to reuse or storage. Keep away from children, animals, and unauthorized personnel.

PRODUCT STORAGE

Store in a cool, dry, well-ventilated location away from acids, chlorine and chlorine compounds, hypochlorites (bleach), organic solvents, sulfur and sulfite compounds, phosphorus, combustible/flammable materials, and direct sunlight. Keep containers tightly closed when not in use and open carefully to prevent spillage. Storage on wooden floors and pallets is not recommended. Do not contaminate water, food or feed by storage or disposal.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

VENTILATION

Open air or good room ventilation is normally adequate for safe use of this product. Avoid breathing any vapors or fumes resulting from acid activation.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye/Face Protection

Good manufacturing practice recommends use of chemical safety goggles for all applications involving chemical handling.

Skin Protection

Good manufacturing practice recommends that, at a minimum, rubber, neoprene, or other chemically impervious gloves be worn for all applications involving chemical handling.

Respiratory Protection

In accordance with OSHA regulations (29 CFR 1910.134 and 29 CFR 1910.1000), fogging or spraying applications may require worker respiratory protection, such as: (1) NIOSH/MSHA approved air-purifying respirators, or (2) NIOSH/MSHA approved canister/cartridge facial respirators rated for chlorine/acid vapors or specified for chlorine dioxide.

General

Product should be stored and applied in close proximity to a safety shower, chemical eyewash station or other fresh water source.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade	Clear liquid with very faint chlorinous odor
General Physical Form	Liquid
Volatile Organic Compounds	*<0.1% by weight*
Flash Point	*Not applicable*
Evaporation Rate	*Comparable to water*
Solubility in Water	*Complete*
Boiling Point	*213°F (100.5°C)*
Vapor Density	*0.02 kg/m^3*
Vapor Pressure	*23.7 mm Hg (25°C)*
Specific Gravity	*1.03 g/ml (20°C)*
pH	8.0 – 8.5
Melting point:	*Not determined.*

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable

Materials and Conditions to Avoid:

Avoid storing product under conditions in which it could evaporate to crystalline salt. Avoid accidental contact of concentrate with acids, chlorine compounds, hypochlorites (bleach), sulfur and sulfite compounds, phosphorous, organic solvents and combustible/flammable material

Hazardous Reaction and Decomposition Products:

Exposure to acids or chlorine compounds can produce uncontrolled generation of chlorine dioxide gas.

Hazardous Polymerization:

Hazardous polymerization will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

ANIMAL TOXICOLOGY

Inhalation LC_{50}:	>5.61 mg/l
Dermal LD_{50}:	>2,020 mg/kg (rabbit)
Oral LD_{50}:	4,360 mg/kg (rat)

CARCINOGENICITY

Active ingredients are not listed by ROTECS, OSHA, IARC, NTP or EPA. No evidence to date implicating product as a carcinogen or tumor promoter.

MUTAGENICITY

Though product active ingredient is a chemical oxidant, no evidence to date for mutagenicity from whole animal or in vitro studies.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY

No known effects to date.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

This product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional office of the EPA.

SECTION 13: DISPOSAL CONSIDERATIONS

CONTAINER DISPOSAL

Triple rinse. Then offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill; or by incineration; or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

DISPOSAL PROCEDURE

Small quantities, less than 10 gallons, may be flushed to an authorized and permitted sewer with copious amounts of water. Larger volumes should be taken to an authorized chemical disposal site (Class I or landfill) in accordance with all federal, state and local regulations. Consult with selected facility regarding the need for prior neutralization of waste.

SECTION 14: TRANSPORT INFORMATION

Not DOT Regulated

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA

All product ingredients are in inventory

SARA TITLE 312/313

Neither the product nor its constituent ingredients are listed under SARA reporting requirements. Chlorine dioxide produced from activation is listed under SARA 313.

RCRA

Not considered a hazardous waste either categorically or by chemical listing.

FIFRA

Oxine® is an EPA registered sanitizer (EPA No. 9804-1)

FEDERAL OSHA REGULATIONS

Neither product nor constituent ingredients is classified as an acute or chronic health hazard by OSHA. Chlorine dioxide produced by activation is regulated with an air exposure limit of 0.1 ppm TL V and 0.3 ppm STEL.

STATE LAWS

CALIFORNIA: Not regulated under the provisions of Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

NEW JERSEY: Sodium Chlorite is listed under New Jersey's Chemical Inventory Notification Requirement (NJAC 7:1Z). Estimated release notification, however, is not required.

NOTE: Regulatory requirements are subject to change and may vary from one location to another. It is the user's responsibility to ensure compliance with all applicable federal, state and local regulations pertaining to the purchase, transport, storage, use and disposal of this product.

CHEMICAL INVENTORIES

This material contains one or more substances listed on the TSCA Inventory. Commercial use of this material is regulated by the EPA.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200

SECTION 16: OTHER INFORMATON

NFPA Hazard Classification

Health: 1 **Flammability:** 0 **Reactivity: 1** **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard rating primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

NOTICE: Manufacturer believes the information contained herein is accurate; however we make no guarantees with respect to such accuracy and assume no liability in connection with the use of the information contained herein by any party. Any party using this product should review all such laws, rules or regulations prior to use.

Product may bleach clothing and fabric materials, such as draperies and carpets.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED FOR A PARTICULAR PURPOSE OR OTHERWISE

RECOMMENDED SPARES PARTS S

Process & Packaging, Inc.

5450 Tech Circle, Moorpark, CA 93021
Tel: 805-529-9890, Fax: 805-529-9282
Toll Free: 800-621-4144
Email: idd2jeff@aol.com,
Web Site: www.iddeas.com

OXINE SYSTEM
RECOMMENDED SPARE PARTS

Qty	Part Number	Description	Category
1	CV1402	THR'D T.END 1.5 S 5/8	CONV FEET/WHEEL
1	CV1403	LEVEL MOUNT 2 1/2"	CONV FEET/WHEEL
1	EL0400	2 POSITION SWITCH	ELEC SWITCH
1	EL0434	FLOAT LEVEL SWITCH	ELEC SWITCH
1	EL0438	N/O CONTACT BLOCK	ELEC SWITCH
1	EL0624	115-220vFUSE HLDR,GMA	ELEC FUSE/HLDR
5	EL0627	GMA 5 AMP FUSE	ELEC FUSE/HLDR
1	EL0800	120V WHITE LAMP	ELEC LAMP LIGHT
1	EL0801	220V WHITE LAMP	ELEC LAMP LIGHT
1	EL1901	SPDT MINI BASE	ELEC RELAY
1	EL1915	SPDT 120V MINI RELAY	ELEC RELAY
1	EL1918	SPDT 240V MINI RELAY	ELEC RELAY
1	PU0274	FOGGING PUMP	PUMP LIQUOR
1	TF0402S	STAINLESS ST. INJECTOR	TANK DOSERS
1	TF0412	DOSATRON 40GPM 1.5NPT	TANK DOSERS
1	TF0438	DEMA BALL V/V SQUIRE	TANK DOSERS
1	VA1507B	SOL VALV 1/2" 120/240	VALV AUTO

Anyone who wants to improve process reliability and machine availability must start at the very beginning - and first analyze the compressed air supply in detail.

Particles, water and oil are the natural enemies of perfectly prepared compressed air. They have an adverse effect on the components and cost additional energy.

Process & Packaging, Inc.

IDD Oxine System

Approximate Dimensions

65"L x 20"W x 57"H

WWW.IDDEAS.COM 5450 Tech Circle, Moorpark, CA 93021
Tel: (805) 529-9890 Fax: (805) 529-9282

Process & Packaging, Inc.

IDD Oxine System

Approximate Dimensions:
65"L x 20"W x 72"H

PROCESS & PACKAGING, INC.

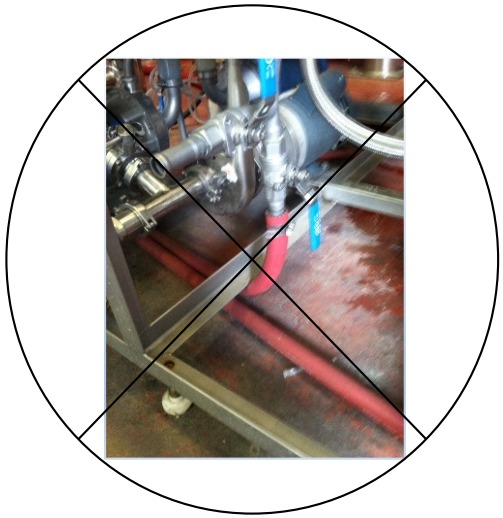
APPROVAL	DATE	TITLE: OXINE SYSTEM SERVICES
DRAWN OM	3/2/12	
CHECK		DWG. NO. 35402-2 REV.
ENG.		SIZE B SCALE NONE SHT. 2 OF 2

OXINE SYSTEM

OXINE SYSTEM WITH DOSMATIC DOSER – SERVICE REQUIREMENTS					
NOTATION	SERVICE	PRESSURE	CONSUMPTION	FLOW RATE	TERMINATION
1	WATER IN	40–60 PSIG	–	45 GPM	1–1/2" PVC PIPE
2	WATER OUT (OPT)	–	–	45 GPM	1–1/2" PVC PIPE
3	MIST OUTLET	40 PSIG	–	–	1/2" NPT (F)
4	AIR CONTROL	80 PSIG	5 SCFM	5 SCFM	1/4" NPT (F)
5	POWER CONTROL	120/240–1–60	–	5 AMP	ELECTRICAL PLUG

Process & Packaging, Inc.

SUGGESTED METHOD OF PROCESS & PACKAGING PLANT DRAINAGE FOR NON WET AREA LOCATIONS



PURPOSE: TO PREVENT BACK PRESSURE IN THE SYSTEM DRAIN LINES.

The Compressor Professor sez... Dryers

"Water is the No. 1 contaminant in your compressed air system. You should *DO* something about it."

An Air Dryer will remove moisture from compressed air to a certain degree of dryness and this is referred to as **pressure dew point.** Different types of dryers can achieve different dew points and, for the most part, the drier the air needs to be, the more expensive it is to dry

• **Refrigerated Dryers** condense the moisture out of the air and drain it away as liquid. They are limited to about 35° F because the water would freeze if it got any colder.

• **Desiccant Dryers** adsorb the moisture in the compressed air and remove it while still suspended as vapor. They are typically applied at about -40° F, but can get to -100 and below.

• **Membrane Dryers** use permeability to separate the moisture from the air and can also achieve low dew points.

The selection is made on personal preference, the dryness required, and cost, which should include operating and electrical or utility costs.

SMC Corporation of America

Product Information

RoHS Compliant

Membrane Air Dryer - Series IDG

Remove Moisture and Protect Your Machine

- *New energy saving model, reduce purge flow up to 31%*
- *As low as -76° F (atm) dew point*
- *Compact size compared to previous model*
- *High performance, reduced time to reach dew point*
- *Built in silencer to reduce purge noise*
- *Environmentally friendly: non fluorocarbon, no electricity required*

Do You Have These Problems?

- *Valve and actuator failure*
- *Rust or corrosion*
- *Water droplets on air blow*
- *Clogged auto drain or valve*
- *Solidification of powder*
- *Over plugged air passages due to freezing*

You Need an Air Dryer!

SMC Corporation of America
10100 SMC Blvd.
Noblesville, IN 46060
www.smcusa.com

(800) SMC.SMC1
(800 - 762 - 7621)

SMC Pneumatics (Canada) Ltd.
www.smcpneumatics.ca

e-mail: sales@smcusa.com
For International inquires:
www.smcworld.com

APPENDIX Z