



DOSATRON®

Because life is powered by water®

User manual



D3 - INDUSTRY LINE

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Introduction

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You have just acquired a DOSATRON water-powered dosing pump. Congratulations on your choice. This model was produced using over 50 years of experience.

Our engineers have developed the DOSATRON series to become one of the most technically advanced water-powered dosing pumps in the world.

Over time, this DOSATRON will prove itself to be a most faithful ally.

A few regular maintenance operations will guarantee operation in which the word “breakdown” will no longer be heard.

**IT IS THEREFORE IMPORTANT TO READ THIS MANUAL
CAREFULLY BEFORE USING THE DEVICE.**

Important!

You will find your DOSATRON's part number and serial number on the pump body.

Please record these numbers in the space provided below for easy referral when contacting or requesting information from your vendor.

Part No.

Serial No.

Date of purchase

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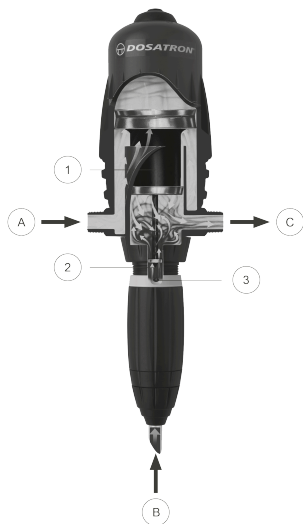
EC Declaration of Conformity

This DOSATRON range complies with the European Directive 2006/42/EC.
This declaration is only valid in countries where this directive applies.

DOSATRON Technology

Unique technology that incorporates all dosing functions.

Installed on the water supply line, the DOSATRON uses water pressure as the only power source. When activated, it draws in the concentrate, doses it to the desired percentage, and mixes it with the motive water. The resulting solution is then propelled downstream. The dose of injected concentrate is always proportional to the volume of water flowing through the DOSATRON, regardless of variations in flow or pressure in the water supply line.



Item	Description
A	Clear water
B	Concentrated additive to be dosed
C	Solution water + % additive
1	Motor piston
2	Dosing piston
3	Dosing adjustment(%) ratio

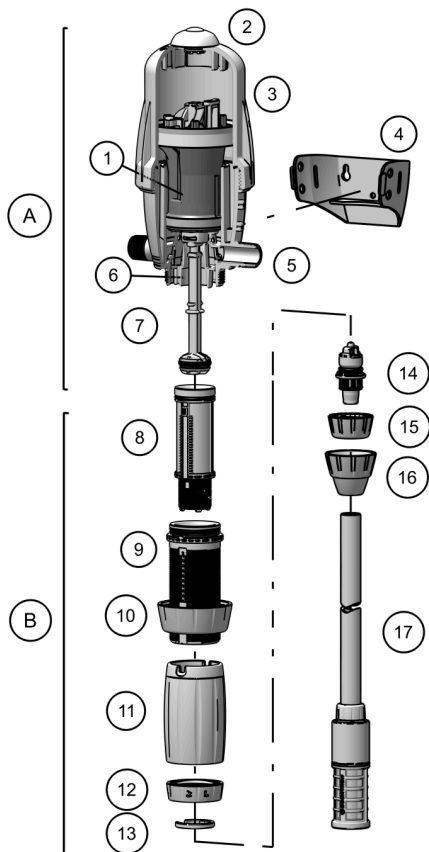


fig 1

Item	Description
A	MOTOR SECTION
B	INJECTION ASSEMBLY
1	Motor piston
2	Bleed valve
3	Top cover
4	Mounting bracket
5	Pump body
6	Mixing ring
7	Dosing piston
8	Dosing pump body
9	Injector sleeve
10	Nut
11	Adjustment sleeve
12	Dosing locking ring
13	Retaining ring
14	Suction valve
15	Suction valve nut
16	Hose nut
17	(Ø16) Suction hose + strainer + ballast weight

Marking/Identification Specifications

MARKING

Your dosing pump has 3 main marking zones, allowing it to be identified in detail :

- A 2-line engraving on the side of the top cover with the exact part number of the device on the first line and the serial number on the second line.

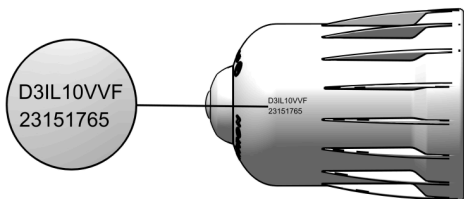


fig 2

- A technical data label on each side of the pump body with the exact part number, serial number and technical performance of the device:
 - Q = Operating flow
 - P = Operating pressure
 - T = Operating temperature
 - D = Dosing rate
 - I = Injection rate
- The technical data label also includes a QR code that can be scanned with your smartphone to download the DOSATRON application. This gives you access to a wide range of resources and information about your dosing pump.



fig 3

CODIFICATION OF THE PART NUMBER

REF. Serial No.								
Example	D3	IL	10	IE	BP	V	VF	K
Dosatron Range								
Additive line IL: Industry Line								
Dosing								
IE: External injection option								
BP: Manual By-pass option								
V: Optional viscous kit								
Dosing Seal type VF: Acidic fluid AF: Alkaline fluid HT/AF: Strong alkaline fluid								
K: Plunger seal option for highly acidic concentrates								

SPECIFICATIONS & DIMENSIONS

Version	D3IL3000	D3IL2	D3IL5
Operating flow range: 10l/h min. 3m3/h max. [0,4-14US gpm]			
Max. operating temperature:40°C [104°F]			
Operating pressure:			
bar	0,3-6	0,3-6	0,3-6
psi	4.3-85	4.3-85	4.3-85
Externally adjustable dosing rate:			
%	0,03 - 0,3	0,2 - 2	0,5 - 5
Ratio	1:3000 - 1:333	1:500 - 1:50	1:200 - 1:20
Concentrated product injection rate:			
Min. l/h - Max. l/h	0,003-9	0,02-60	0,05-150
US Fl. oz/min - MIN	0,0017	0.011	0,028
US Fl. oz/min - MAX	0.04	0.28	0.7
Connection (NPT/BSP male gas fittings): Ø20 x 27mm [3/4"]			
Hydraulic motor capacity (every two clicks of the piston): approx. 0,53L [0,14US Gallons]			

⚠ ATTENTION! The DOSATRON is not pre-set, please refer to the paragraph on [Adjusting the dosing \(without pressure\), page 33](#)

DIMENSIONS

Diameter: cm ["]	11,2 [4 7/16]	11,2 [4 7/16]	11,2 [4 7/16]
Total height: cm ["]	53 [21]	48,5 [19 3/32]	53,8 [21 3/16]
Overall width: cm ["]	16 [6 5/16]	16 [6 5/16]	16 [6 5/16]
Weight: ± kg [lbs]	1,6 [3.5]	1,7 [3.7]	1,7 [3.7]

SPECIFICATIONS

Version	D3IL10	D3IL25
Operating flow range:10l/h min.3m3/h max. [0,4-14US gpm]		
Max. operating temperature:40°C [104°F]		
Operating pressure:		
bars	0,5-6	0,5-4
psi	7-85	7-57
Externally adjustable dosing rate:		
%	1 - 10	5 - 25
Ratio	1:100 - 1:10	1:20 - 1:4
Concentrated product injection rate:		
Min. l/h - Max. l/h	0,1-300	0,5-500
US Fl. oz/min - MIN	0.056	0.2818
US Fl. oz/min - MAX	1.4	2.2
Connection (NPT/BSP male gas fittings): Ø20 x 27mm [3/4"]		
Hydraulic motor capacity (every two clicks of the piston): approx.0,53L [0,14US Gallons]		

⚠ ATTENTION! The DOSATRON is not pre-set, please refer to the paragraph on [Adjusting the dosing \(without pressure\)](#), page 33

DIMENSIONS

Diameter:cm["]	11,2[4 7/16]	11,2[4 7/16]
Total height:cm["]	53,8[21 3/16]	66[26 1/8]
Overall width:cm["]	16[6 5/16]	16[6 5/16]
Weight: ±kg[lbs]	2[4.4]	4[8.8]

PACKAGING

PACKAGE COMPOSITION:

1 DOSATRON/1 mounting bracket for DOSATRON/1 suction hose for concentrate/1 strainer/ 1 quick start guide

PACKAGING DIMENSIONS:

55,2 x 16,5 x 14,5 cm [21 7/8" x 6 5/8" x 5 3/4"]

PACKAGE WEIGHT:

Approx. 5 kg [~ 11 US lbs]

Installation

PRECAUTIONS

1. General points

⚠ WARNING: During the installation, operation and maintenance of the DOSOTRON water-powered dosing pump, the following safety instructions must be observed: use suitable tools, protective clothing and safety goggles when working on the equipment and install it in such a way as to ensure risk-free operation.

⚠ WARNING: Follow the instructions in this manual and take safety measures appropriate to the nature of the liquid additives and the water temperature. Be extremely careful in the presence of hazardous substances (corrosives, toxic substances, solvents, acids, caustics, flammable substances, etc.). For dosing these substances, please consult your distributor before use to confirm compatibility with the dosing pump.

⚠ ATTENTION! The personnel in charge of installing, operating and maintaining this equipment must be fully acquainted with the contents of this manual.

- When connecting a DOSATRON either to the public water supply line or to its own water source, it is essential to adhere to the standards concerning protection and disconnection. DOSATRON recommends a shut off valve to prevent contamination of the water supply, where applicable.
- When connecting the DOSATRON to the water supply line, ensure that the water flows in the direction of the arrows shown on your device.
- If the system is located at a higher level than the DOSATRON itself, there is a possible risk of water and concentrate flowing back into the DOSATRON. We therefore recommend installing a non-return valve downstream of the device.
- Fitting an anti-siphoning valve downstream of the dosing pump is recommended in installations where there is a risk of siphoning.
- Do not install the DOSATRON above a tank containing aggressive additives. Move the can away and protect it from possible product fumes with a cover.
- Keep the DOSATRON away from significant heat sources and away from frost in the winter.
- In winter, or whenever the DOSATRON is exposed to temperatures close to or below 0°C, it must be protected from the cold and frost.

- Do not install the DOSATRON on the water pump suction circuit (risk of siphoning).
- The user is responsible for replacing the injection seals once a year to ensure accurate dosing.
- The adjustment of the Dosatron's dosing is the sole responsibility of the user. The user must strictly adhere to the recommendations of the chemical manufacturer.
- Ensure that the water flow and pressure of the installation are compliant with the DOSATRON specifications.
- The dosing should be adjusted with no pressure in the system. Turn off the water supply and allow the pressure to drop to zero.
- The user shall be solely responsible for correctly adjusting the DOSATRON to achieve the desired dosing rate.
- Problems with airtightness, impurities or chemical aggression of the seal can disrupt the dosing operation. We therefore recommend that you periodically check that the concentrate to be dosed is being correctly drawn into the DOSOTRON.
- Change the DOSATRON suction hose as soon as it appears to be damaged by the concentrate being dosed.
- Release the pressure in the system after use (recommended).
- The DOSOTRON must be rinsed:
 - whenever the concentrate is changed
 - before handling the DOSATRON, to avoid any contact with aggressive concentrates.
- All assembly and tightening operations must be done by hand and without the use of tools (except for those with recommended tightening torques).

2. Water with a high particle content

If the water has a high abrasive particle content which could cause premature wear of the Dosatron, it is essential to install an upstream filter (e.g 60 microns - 250 mesh or finer).

3. Water hammer / Overflow

- For installations subject to water hammer, a water hammer protection device must be fitted (pressure/flow control system).
- For automated installations, it is preferable to use slow opening and slow closing solenoid valves.
- If a DOSATRON is used to supply several sectors, activate the solenoid valves simultaneously (close one sector and open another sector at the same time).

4. Installation location

- The DOSATRON and the dosing additive must be accessible at all times. Their installation must under no circumstances present a pollution or contamination risk.
- It is recommended that all water pipes are marked showing that the water contains additives and with the wording: "CAUTION! Non-potable water" This wording will not be needed for drinking water applications.

5. Maintenance

- After use, we recommend flushing with clear water.
- Annual maintenance will extend the service life of your DOSATRON. Replace the dosing seals and the additive suction hose at least once a year.

6. Service

- This DOSATRON was tested prior to packaging.
- Replacement sub-assemblies and packs of seals are available upon request.
- Do not hesitate to call your distributor or DOSATRON for any after-sales services.

INSTALLING THE DOSATRON

⚠ ATTENTION! THE INSTALLATION SHOULD BE CARRIED OUT WITHOUT TOOLS

Remove the protective caps which block the openings in your DOSATRON, before connecting it to the water supply line.

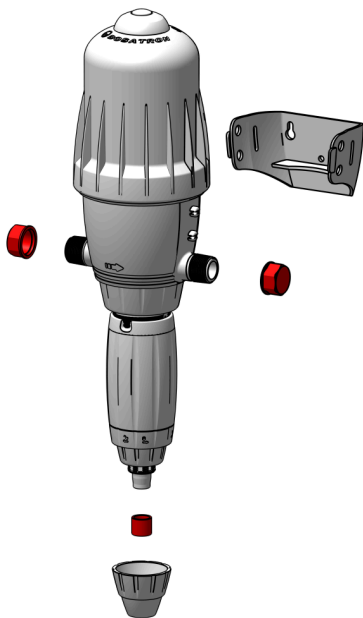


fig 4

Make sure you follow the direction of fluid flow as shown by the arrow on the pump body (see the bubble in the figure above).

The DOSATRON is delivered with:

- a mounting bracket,
- a suction hose with a strainer.

The mounting bracket enables the DOSATRON to be mounted on a wall.

Insert the DOSATRON into the mounting bracket, spreading the arms slightly so that the 4 lugs on the main body engage in the corresponding holes in the mounting bracket.

Scan the QR code below with your smartphone. It will allow you to download the DOSATRON application, register your device and access a wide range of resources and information about your dosing pump.



RECOMMENDATIONS



fig 5

Torque 20 N.m
i.e. 2 kg.m
(remember: 1 N.m = 0.1 DaN.m)

The device can be connected to the water supply line by means of 20 mm interior diameter flexible pipes (drinking water certified, where applicable) fixed with swivel fittings Ø 20 x 27 mm [3/4"]. Make sure that the water flows in the same direction as the arrows (water flow direction) on the device.

Whenever possible, install the DOSATRON high enough to be able to read and adjust the dosing on the graduated scale in % or ratio.

CHANGING THE DOSING SCALE

The DOSATRON dosing rate can be adjusted according to two scales: percentages and ratios. These scales are positioned on either side of the injection assembly.

Depending on the liquid circulation direction in the hydraulic installation, and on the direction in which the dosing pump is mounted on its bracket, it may be necessary to change the orientation of this scale.

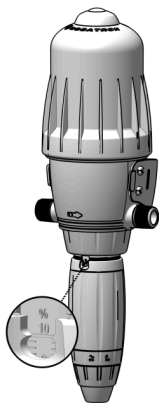


fig 6



fig 7

— Unscrew the fixing nut on the injection assembly by hand to release it, then pull it downwards and rotate it half a turn to see the correct dosing adjustment scale.

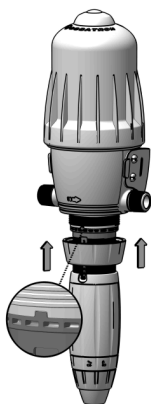


fig 8

— Ensure that the centring pins are aligned with the groove in the pump body. If necessary, to see the pins better, unscrew the dosing adjustment sleeve to the middle of its travel.

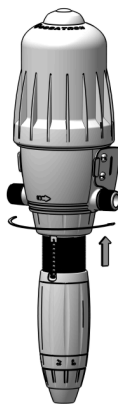


fig 9

— Manually retighten the fixing nut on the injection assembly.

CONNECTING THE SUCTION HOSE

The DOSATRON is supplied with a suction hose (to be adjusted as required) which allows it to be used with a large capacity container. This hose must be fitted with the strainer and ballast.

NOTA: Maximum suction height: 4 m [13 ft]

D3IL3000



fig 10

- Unscrew the nut at the bottom of the injection assembly. Then thread the suction hose through the nut (item 2) and the nozzle (item 1).



fig 11



fig 12

- Push the hose into the barbed fitting as far as it will go and screw the nut by hand.
- Assemble the strainer on the other end of the hose using the same method
- Immerse the strainer into the solution to be dosed



fig 13

- Unscrew the nut at the bottom of the injection assembly and thread the suction hose through the nut.



fig 14

Push the hose into the barbed fitting as far as it will go and screw the nut by hand.

- Assemble the strainer on the other end of the hose using the same method

- Immerse the strainer into the solution to be dosed



fig 15

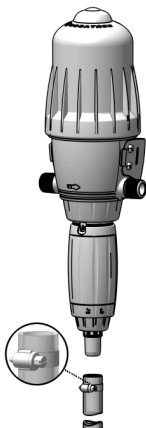


fig 16

- Pass the suction hose through the clamp.

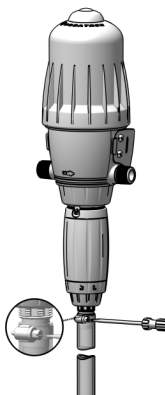


fig 17

- Push the hose all the way onto the suction valve fitting, position the clamp over the middle of the fitting and tighten it.

- Assemble the strainer on the other end of the hose using the same method

- Immerse the strainer into the solution to be dosed



fig 18

INSTALLATION TIPS

The DOSATRON must be assembled as shown below.

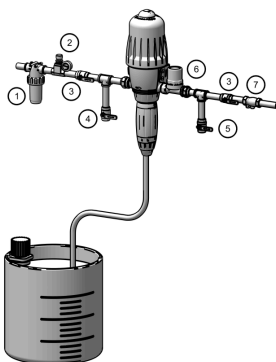


fig 19

Item	Description
1	Filter
2	Pressure Reducer
3	Isolation valve
4	Clear water / stock solution valve
5	Fast priming / flushing / Dosatron test / sampling valve
6	Water hammer protection device
7	Non-return valve

To prolong the service life of the DOSATRON, we recommend fitting an upstream filter (e.g 60 microns - 250 mesh, depending on your water quality). This precaution is essential if the water contains impurities or particles, especially when using water from a well or surface water

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

⚠ WARNING: For any installation connected to the drinking water supply line, please respect the standards and regulations in force in your country.

⚠ ATTENTION! OVERFLOW (for information purposes): If your DOSOTRON clicks more than 46 times in 15 seconds, (i.e. 23 cycles) you have reached the upper limit of its flow capacity. If you want to increase the flow rate, please choose a DOSATRON with a higher water flow capacity.

⚠ ATTENTION! Leave the strainer approx. 10 cm [4"] from the bottom of the solution tank to avoid drawing in unsolvable particles that may damage the dosing pump body. The strainer must not rest on the bottom of the tank.

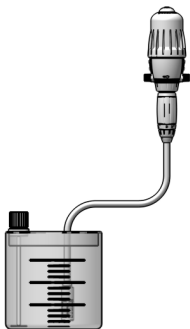


fig 20

WHAT YOU SHOULD DO

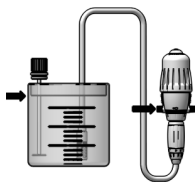


fig 21

WHAT YOU SHOULDN'T DO

Under no circumstances should the solution level be above the water inlet on the DOSATRON (to prevent any siphoning).

CONNECTING THE EXTERNAL INJECTION (IE) KIT

Some DOSATRON models come with an external injection connection port.

⚠ ATTENTION! No tools should be used.

D3IL25

Remove the protective caps from the connection ports on both your DOSATRON and your external injection kit.

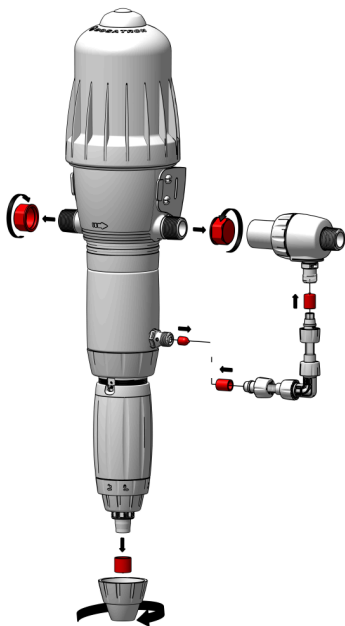
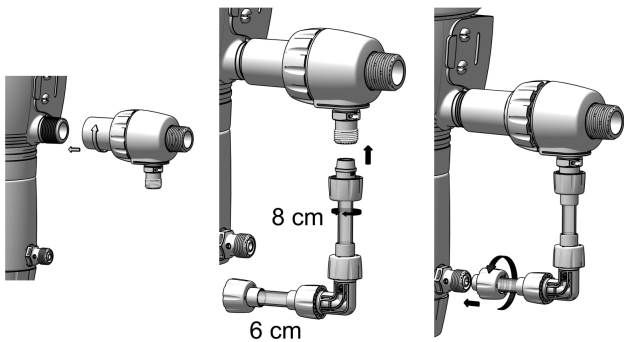
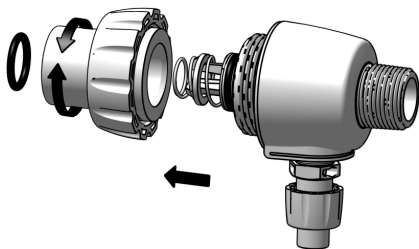


fig 22

Install the external injection components as shown in the diagram below



Starting up the DOSATRON

USING FOR THE FIRST TIME

- Partially open the water inlet.
- Gradually open the DOSATRON By-Pass valves while closing the main valve
- Press the bleed button on the top cap.
- When a constant flow of water is seen coming from around the bleed button (no “spitting” of air), release the button.
- Slowly open the fast priming valve located downstream of the DOSATRON.
- Let the DOSATRON run until the additive to be dosed rises in the injection assembly (you will be able to see it through the transparent tube), then close the fast priming valve.
- The DOSATRON makes a characteristic “click-clack” noise when operating.

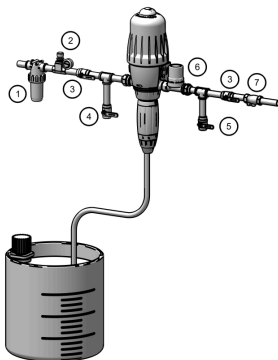


fig 23

NOTA: The time required to prime the dosed solution depends on the flow rate, the dosing setting and the length of the additive suction hose. To accelerate the priming, set the dosing level to maximum. Once the DOSATRON is primed, drop the pressure to zero and adjust to the required dosing value (please refer to the paragraph on [Adjusting the dosing \(without pressure\)](#), page 33).

USE

The device is designed to operate with fluids whose temperature must not exceed 40°C [104 °F] (motive fluid, additive, motive fluid/additive mixture). If the installation is subject to operating at temperatures lower than 5 °C [41 ° F], ensure that the installation is protected from frost (please refer to the [Precautions, page 17](#) section).

The dosing pumps are designed for use at pressures of up to 6 bar [85 psi]. The installation must be protected against any risk of overpressure.

The installation must also be dimensioned to avoid hydraulic oscillation (water hammer).

If necessary, a water hammer protection device should be fitted.

ADJUSTING THE DOSING RATE (WITHOUT PRESSURE)

⚠ ATTENTION! No tools should be used.

The dosing adjustment must be carried out with no pressure in the system

- Turn off the water supply and allow the pressure to drop to zero.
- Unscrew the dosing locking nut.
- Turn the dosing adjustment sleeve clockwise or anticlockwise so that the 2 dots above the viewing hole are aligned with the desired dosing marker.
- Retighten the dosing locking nut.



fig 24

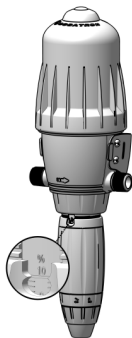


fig 25



fig 26

DOSING PRINCIPLE

Principle: Adjustment at 1% - $1/100 = 1$ volume of concentrate to 100 volumes of water.

BY-PASS OPTION

The upper part of the DOSATRON can be equipped with a by-pass function (optional):

- When the by-pass is set to ON, the DOSATRON runs and the additive is drawn up.
- When the by-pass is set to OFF, the DOSATRON stops and does not draw up the additive.

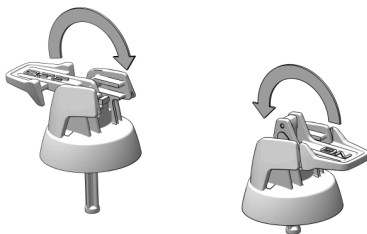


fig 27

Maintenance

⚠ WARNING: Before performing any work on the DOSATRON, you must read to the [Precautions section, page 17](#).

RECOMMENDATIONS

1. We recommend periodically dismantling the entire injection assembly (refer to: [Cleaning and refitting the suction valve, page 57](#), [Replacing the injection seals, page 44](#)). Thoroughly rinse all elements of the injection assembly with clear water and reassemble them, having previously greased the seal (shown below) with a silicone-based lubricant.
2. Before restarting the DOSATRON at the start of the period of use, remove the motor piston and soak it in lukewarm water ($<40^{\circ}\text{C}$) for a few hours. This will remove any deposits that may have dried in the motor piston.

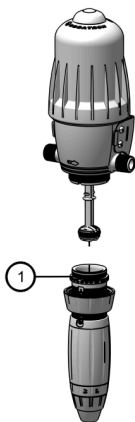


fig 28

DRAINING THE DOSATRON

In order to perform thorough maintenance on the DOSATRON, or to protect it from frost, it may be necessary to drain it.

- Turn off the water supply and allow the pressure to drop to zero.
- Remove the injection assembly ([see Removing/refitting the injection assembly, page 41](#)).
- Unscrew the top cover and take out the motor.
- Disconnect the water inlet and outlet connections.
- Empty the main body after removing it from the mounting bracket.
- Refit, once you have cleaned the motor cover seal

D3IL3000 / D3IL2 / D3IL5 / D3IL10



fig 29



fig 30

D3IL25

For this model, after dismantling the injection assembly ([§ Dismantling/Refitting the injection assembly, page 41](#)), the dosing piston assembly must first be unscrewed before the motor can be removed. Take care not to lose the retaining washer on the threaded part of the dosing piston.



fig 31



fig 32



fig 33

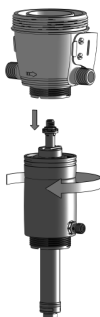


fig 34

REMOVING THE SUCTION HOSE

⚠ WARNING: Before performing any work on the DOSATRON, you must read to the [Precautions section, page 17](#).

NOTA: Before dismantling, and to avoid any contact with the injected additives, turn on the DOSATRON and allow it to draw in clear water in order to rinse the injection assembly.

D3IL3000

- Unscrew the nut at the bottom of the injection assembly
- Remove the hose and its nozzle from the suction valve fitting by pulling it downwards.
- Reassemble in the reverse order. If necessary, please refer to [Connecting the suction hose, page 24](#).



fig 35

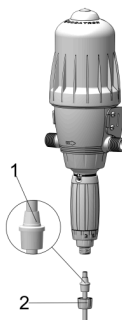


fig 36

D3IL2 / D3IL5 / D3IL10 / D3IL25

- Unscrew the nut at the bottom of the injection assembly
- Remove the hose from the suction valve fitting by pulling it downwards.
- Reassemble in the reverse order. If necessary, please refer to [Connecting the suction hose, page 24](#).



fig 37



fig 38

D3IL10V / D3IL25V

- Unscrew the hose clamp.
- Remove the hose from the suction valve fitting by pulling it downwards.
- Reassemble in the reverse order. If necessary, please refer to [Connecting the suction hose, page 24](#).

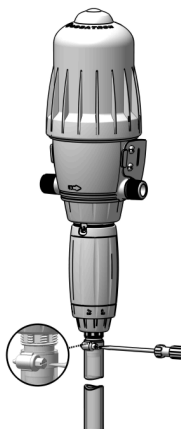


fig 39



fig 40

REMOVING/REFITTING THE INJECTION ASSEMBLY

⚠ WARNING: Before performing any work on the DOSATRON, you must read to the [Precautions section, page 17](#).

NOTA: Before dismantling, and to avoid any contact with the injected additives, turn on the DOSATRON and allow it to draw in clear water in order to rinse the injection assembly.

D3IL3000 / D3IL2 / D3IL5 / D3IL10

- Turn off the water supply and allow the pressure to drop to zero.
- Remove the suction hose (see [Dismantling the suction hose, page 38](#)).
- Completely unscrew the fixing nut on the injection assembly
- Pull downwards to remove the injection assembly.
- Before refitting, position the injection assembly depending on the desired scale (percentage or ratio).
- Insert the injector sleeve into the pump body ensuring that the centring pins on the sleeve are aligned with the groove in the pump body. If necessary, to obtain a clearer view of the pins, unscrew the dosing adjustment sleeve to the middle of its travel.
- Manually retighten the fixing nut on the injection assembly



fig 41



fig 42



fig 43

D3IL25

- Turn off the water supply and allow the pressure to drop to zero.
- Remove the suction hose (see [§ Dismantling the suction hose, page 38](#)).
- Completely unscrew the fixing nut on the injection assembly.
- Pull downwards to remove the injection assembly.
- Remove the external injection module.
- Remove the top cover.
- Hold the motor and unscrew the plunger piston.
- Remove the extension of the injection assembly.
- Take care to recover the friction washer and retaining washer before screwing the extension of the injection assembly back on to the mechanical stop. The external injection port must be in the same plane as the port on the pump body.
- Hold the motor and screw the plunger piston back to the mechanical stop (as you approach the stop, you should feel the notches in the friction washer)
- Refit the top cover.
- Refit the external injection module.
- Before refitting the injection assembly, position it depending on the desired scale (percentage or ratio).
- Insert the injector sleeve into the pump body ensuring that the centring pins on the sleeve are aligned with the groove in the pump body. If necessary, to see the pins better, unscrew the dosing adjustment sleeve as far as the middle of its travel.
- Manually retighten the fixing nut on the injection assembly.



fig 44

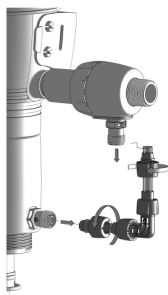


fig 45

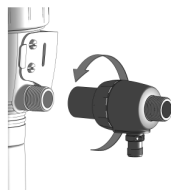


fig 46

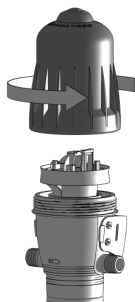


fig 47



fig 48

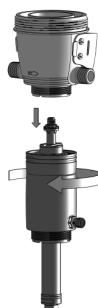


fig 49

REPLACING THE INJECTION SEALS

Frequency: at least once a year.

Contact DOSATRON, or a dealer to select the appropriate seal kit for your dosing pump.

Dismantle the injection assembly in accordance with the instructions in the [Removing/Refitting the injection assembly section, page 41](#).

⚠ ATTENTION! Do not use metal tools or utensils.

D3IL3000

Replace the suction valve:

- Unscrew the suction valve locking nut.
- Release the suction valve by pulling it through the middle of the injection assembly (the suction valve is made up of 2 parts: hose connector + valve)

Replace the dosing pump body O-rings:

- Completely unscrew the dosing locking nut
- Release the snap ring by spreading the lugs.
- Remove the dosing body by pushing it through the sleeve
- Unscrew the upper part of the dosing pump body
- Remove the seal from the lower part of the dosing body and replace it.
- Screw the upper part of the dosing body back on by hand.
- Using your thumb and forefinger, pinch the component and the seal; push towards the other side to distort the seal.
- Continue until you can grip the protruding part of the seal, then pull it out of the groove and replace it.
- Refit the dosing pump body into the injector sleeve using the centring pins.
- Refit the snap ring, ensuring that it is correctly positioned in its groove.
- Retighten the dosing locking nut completely.
- Finish by refitting the suction valve (make sure it is fitted in the right direction) and its locking nut.

Replace the dosing piston:

- Using a 6 mm open-ended spanner, rotate the plunger piston a quarter turn and disengage it from the motor.
- Insert the new plunger piston with its seal into the housing provided on the motor and lock it in place with a quarter turn using the 6 mm spanner.

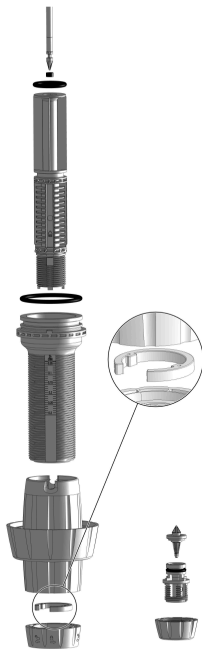


fig 50



fig 51



fig 52

D3IL2 / D3IL5 / D3IL10

Replace the suction valve:

- Unscrew the suction valve locking nut.
- Release the suction valve by pulling it through the middle of the injection assembly

Replace the dosing pump body O-ring:

- Completely unscrew the dosing locking nut
- Release the snap ring by spreading the lugs.
- Remove the dosing body by pushing it through the sleeve
- Using your thumb and forefinger, pinch the component and the seal; push towards the other side to distort the seal.
- Continue until you can grip the protruding part of the seal, then pull it out of the groove.
- Refit the dosing pump body into the injector sleeve using the centring pins.
- Refit the snap ring, ensuring that it is correctly positioned in its groove.
- Retighten the dosing locking nut completely.
- Finish by refitting the suction valve and its locking nut.

Replace the injector sleeve O-ring:

- Follow the method explained above.

Replace the dosing piston seal:

- Replace the dosing pump body O-ring following the method described above.
- Clean the seal seating without any tools.
- Reassemble by hand. It is extremely important that the seal is not twisted once it is in place, as this would compromise the seal.

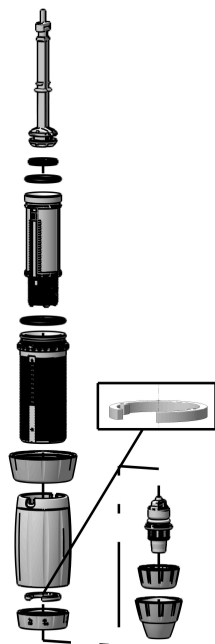


fig 53



fig 54



fig 55

D3IL25

Replace the suction valve:

- Unscrew the suction valve locking nut.
- Release the suction valve by pulling it through the middle of the injection assembly

Replace the dosing pump body O-ring:

- Completely unscrew the dosing locking nut
- Release the snap ring by spreading the lugs.
- Remove the dosing body by pushing it through the sleeve
- Using your thumb and forefinger, pinch the component and the seal; push towards the other side to distort the seal.
- Continue until you can grip the protruding part of the seal, then pull it out of the groove.
- Refit the dosing pump body into the injector sleeve using the centring pins.
- Refit the snap ring, ensuring that it is correctly positioned in its groove.
- Retighten the dosing locking nut completely.
- Finish by refitting the suction valve and its locking nut.

Replace the injector sleeve O-ring:

- Follow the method explained above.

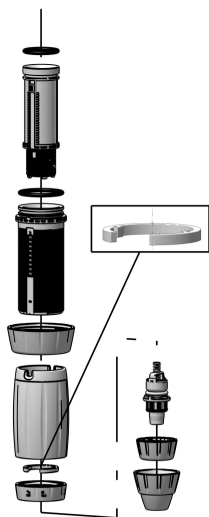


fig 56



fig 57



fig 58

Replacing the dosing extension seals:

- Unscrew the sleeve.
- Unscrew the seal nut on the plunger rod.
- Remove the scraper ring and the plunger rod seal and replace them. Take care to fit these two components in the correct order.
- Replacing the O-ring of the dosing extension.
- Unscrew the external injection hose fitting and replace the O-ring.

Replace the seals on the dosing piston assembly:

- Remove the retaining washer and friction washer from the middle of the dosing piston.
- Remove the dosing piston assembly from the extension of the injection assembly.
- Remove the 2 circlips and separate the suction valve seat and the plunger rod from the plunger piston.
- Replace the flat seal, Quad-ring seal and plunger piston bleed lip.
- Replace the suction valve seal.
- Replace the suction valve seat seal.
- Reassemble the dosing piston assembly, taking care to secure the valve seat and the plunger rod to the plunger piston using the 2 circlips.

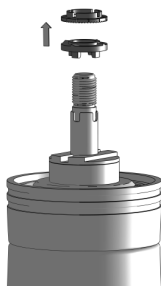


fig 59



fig 60



fig 61



fig 62



fig 63

REMOVING/REFITTING THE DOSING PISTON

⚠ WARNING: Before performing any work on the DOSATRON, you must read to the [Precautions section, page 17](#).

NOTA: Before dismantling, and to avoid any contact with the injected additives, turn on the DOSATRON and allow it to draw in clear water in order to rinse the injection assembly.

- Turn off the water supply and allow the pressure to drop to zero.
- Dismantle the injection assembly in accordance with the instructions in the [Removing/Refitting the injection assembly section, page 41](#).

D3IL3000

- Using a 6 mm open-ended spanner, rotate the plunger piston a quarter turn and disengage it from the motor.
- Insert the new plunger piston with its seal into the housing provided on the motor and lock it in place with a quarter turn using the 6 mm spanner.

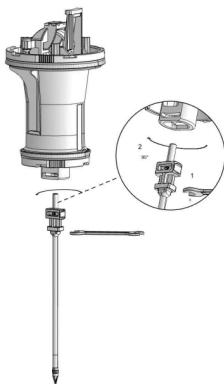


fig 64

D3IL2 / D3IL5 / D3IL10

- Turn the dosing piston through a quarter turn anticlockwise to unlock it and release it from the piston motor.
- Reassemble in the reverse order.

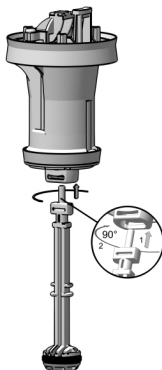


fig 65

D3IL25

- Dismantle the dosing piston assembly in accordance with the instructions in the [§ Changing the injection assembly seals section, page 44](#).
- Reassemble in the reverse order.



fig 66

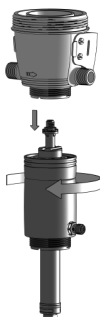


fig 67

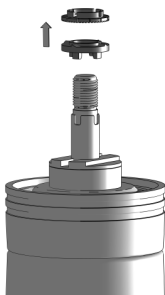


fig 68



fig 69

REPLACING THE EXTERNAL INJECTION SEALS

⚠ WARNING: Before performing any work on the DOSATRON, you must read to the [Precautions section, page 17](#).

NOTA: Before dismantling, and to avoid any contact with the injected additives, turn on the DOSATRON and allow it to draw in clear water in order to rinse the injection assembly.

Replace the injection T-piece seals.

- Unscrew the central nut on the external injection T-piece.
- Replace the 2 O-rings on the valve seat.
- Refit the valve components.
- Remove the O-ring from the connection sleeve on the pump body and replace it.
- Unscrew the external injection hose fitting and replace the O-ring.

Replacing the external injection hoses:

- Unscrew the 4 nuts holding the 2 external injection hoses.
- Slide the nuts towards the middle of the hoses.
- Remove the hoses from the connections and elbow.
- Remove the 4 nozzles from the 2 hoses and loosen the nuts.
- Refit the assembly with the new components, following the instructions in [§ Connecting the external injection \(IE\), page 29](#)

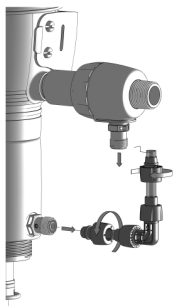


fig 70



fig 71

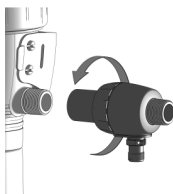


fig 72

CLEANING AND REFITTING THE SUCTION VALVE

⚠ WARNING: Before performing any work on the DOSATRON, you must read to the [Precautions section, page 17](#).

NOTA: Before dismantling, and to avoid any contact with the injected additives, turn on the DOSATRON and allow it to draw in clear water in order to rinse the injection assembly.

- Turn off the water supply and allow the pressure to drop to zero.
- Remove the suction hose (see [Dismantling the suction hose, page 38](#)).
- Unscrew the suction valve locking nut.
- Release the suction valve by pulling it through the middle of the injection assembly
- Thoroughly rinse the various parts of the valve using clear water.
- Reassemble the parts following the order and positions shown in the diagram.

D3IL3000

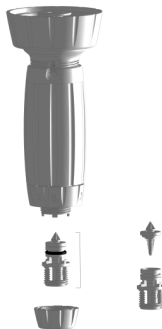


fig 73

D3IL2/D3IL5/D3IL10/D3IL25



fig 74

REPLACING THE MOTOR PISTON (WITHOUT PRESSURE)

⚠ WARNING: Before performing any work on the DOSATRON, you must read to the [Precautions section, page 17](#).

NOTA: Before dismantling, and to avoid any contact with the injected additives, turn on the DOSATRON and allow it to draw in clear water in order to rinse the injection assembly.

D3IL3000 / D3IL2 / D3IL5

- Turn off the water supply and allow the pressure to drop to zero.
- Unscrew the cover by hand and remove it.
- Remove the motor piston assembly by pulling upwards.
- The rod and plunger piston will follow the motor piston upwards.
- Change and refit the assembly in the reverse order to dismantling.
- Refit the cover, taking care not to damage the seal, and screw it on by hand.



fig 75

D3IL10

- Turn off the water supply and allow the pressure to drop to zero.
- Dismantle the injection assembly in accordance with the instructions in the [§ Removing/Refitting the injection assembly section, page 41](#).
- Dismantle the dosing piston in accordance with the instructions in the [§ Removing/Refitting the dosing piston section, page 52](#).
- Unscrew the cover by hand and remove it.
- Remove the motor piston assembly by pulling upwards.
- Change and refit the assembly in the reverse order to dismantling, ensuring that the mixing ring is correctly positioned.
- Refit the cover, taking care not to damage the seal, and screw it on by hand.



fig 76

D3IL25

- Turn off the water supply and allow the pressure to drop to zero.
- Dismantle the injection assembly in accordance with the instructions in the [§ Removing/Refitting the injection assembly, page 41](#).
- Dismantle the dosing piston in accordance with the instructions in the [§ Removing/Refitting the Dosing piston section, page 52](#).
- Unscrew the cover by hand and remove it.
- Remove the motor piston assembly by pulling upwards.
- Change and refit the assembly in the reverse order to dismantling.
- Refit the cover, taking care not to damage the seal, and screw it on by hand.



fig 77

Troubleshooting

SYMPTOM	CAUSE	SOLUTION
Motor piston		
Your DOSATRON does not start, or it stops working.	Motor piston has seized.	Restart the motor piston by hand.
	Presence of air in the DOSATRON.	Bleed the air out of the system.
	Overflow.	1.Reduce flow rate and restart. 2.Check that the motor valve seals are fitted.
	Motor piston is broken.	Return the DOSOTRON to your distributor.
Dosing		
Backflow into the product tank.	Dirty, worn or missing suction valve or valve seal.	Clean or replace.
Additive is not drawn into the system.	The motor piston has stopped working.	See Troubleshooting Motor piston .
	Air tightness problem in the suction hose.	Check the suction hose and that its nuts are properly tightened.
	Suction hose obstructed or strainer blocked.	Clean or replace them.
	Suction valve seal worn, incorrectly fitted or dirty.	Clean or replace it.
	Plunger seal incorrectly fitted, dirty or swollen.	Clean or replace it.
	Dosing pump body scratched.	Replace it.

SYMPTOM	CAUSE	SOLUTION
Dosing		
Under dosing	Air tightness problem.	1.Check the that the injection assembly nuts are correctly tightened 2.Check the condition of the suction hose.
	Suction valve seal worn or dirty.	Clean or replace it.
	Overflow (cavitation)	Reduce the flow.
	Worn plunger seal	replace it
	Scratched dosing pump body	Replace it.
Leaks		
Leaks near the fixing nut under the pump body.	Damaged, incorrectly positioned or missing dosing body seal.	Correctly position or replace it.
Leaks between the adjustment sleeve and the dosing locking nut.	Dosing pump body seal damaged, incorrectly positioned or missing.	Correctly position or replace it.
Leaks between the body and top cover.	Top cover seal damaged, incorrectly fitted or missing	Position it correctly, clean the seal face or replace it.

Warranty

DOSATRON INTERNATIONAL S.A.S. agrees to replace any part recognised as defective when new for a period of twelve months from the date of purchase by the initial purchaser.

To obtain the replacement under the warranty, the device or spare part must be returned with proof of initial purchase to the manufacturer or authorized distributor.

It may be recognised as defective after examination by the technical services of the manufacturer or distributor.

The device must be rinsed to remove any trace of chemicals and sent postage paid to the manufacturer or to the distributor. It will then be returned free of charge after repair if it is covered by the warranty.

Services rendered under the warranty cannot extend the duration thereof.

This warranty only applies to manufacturing defects.

This warranty does not cover any defects resulting from abnormal installation, the use of unauthorized tools, incorrect installation, improper maintenance, environmental accidents, or corrosion caused by foreign objects or liquids found in or near the device.

When dosing aggressive products, please consult your vendor before use to confirm compatibility with the dosing pump.

This warranty does not cover seals (wearing parts) or any damage caused by water-borne impurities such as sand.

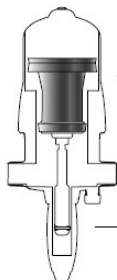
A filter (e.g 60 microns - 250 mesh, depending on your water quality) must be installed upstream of the device for this warranty to be valid.

DOSATRON INTERNATIONAL S.A.S. declines all responsibility if the device is used in conditions that do not comply with the requirements and tolerances specified in the user manual.

There is no express or implied warranty with respect to other products or accessories used in conjunction with DOSATRON INTERNATIONAL S.A.S. devices.

KNOW YOUR FLOW

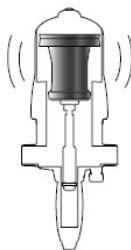
A SIMPLE METHOD
THE DOSATRON IS COMPOSED OF:



— A volumetric piston hydraulic motor driving:

— a dosing piston

As it moves back and forth, the motor piston clicks:



Once in the up position



Once in the down position

2 clicks = 1 motor cycle
= 1 displacement

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

Calculating the water flow rate in litres/hour =

$$\frac{\text{Number of clicks in 15 seconds}}{2} \times 4 \times 60 \times 0,53$$

Calculation for 1 minute Motor displacement in litres

2 clicks = 1 cycle Calculation for 1 hour

Calculating the water flow rate in gallons/minute =

$$\frac{\text{Number of clicks in 15 seconds}}{2} \times 4 \times 0,53 \times 3,8$$

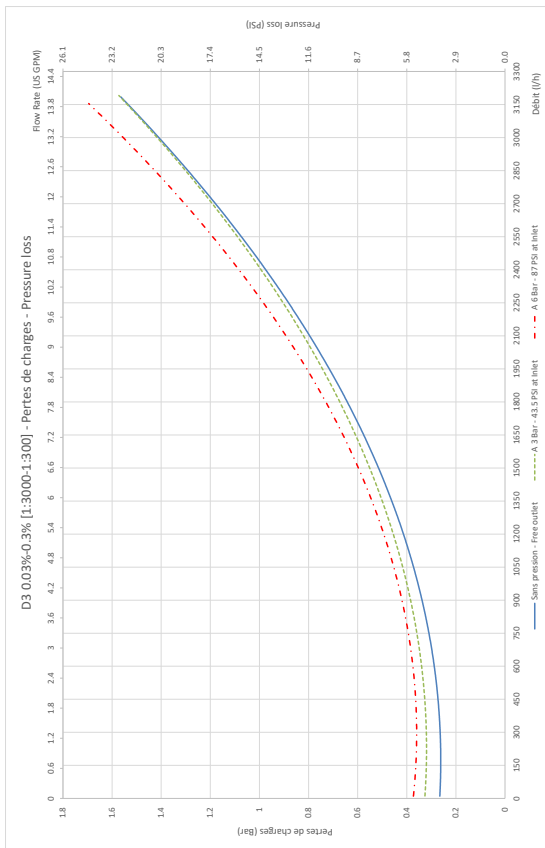
Calculation for 1 minute Conversion litres to gallons

2 clicks = 1 cycle Motor displacement in litres

Appendices

GRAPHS

1. Pressure losses - D3 - 3000



2. Pressure losses - D3 - 2%

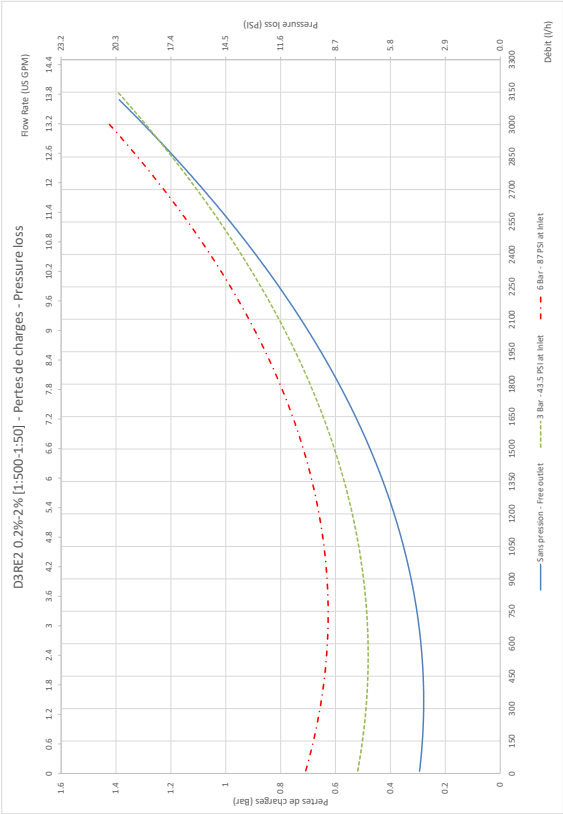


fig 79

3. Pressure losses - D3 - 5%

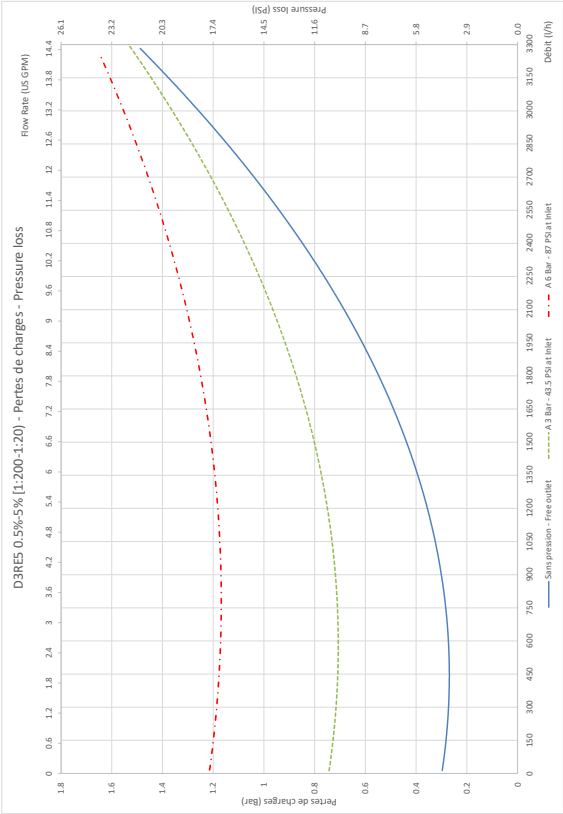


fig 80

4. Pressure losses - D3 - 10%

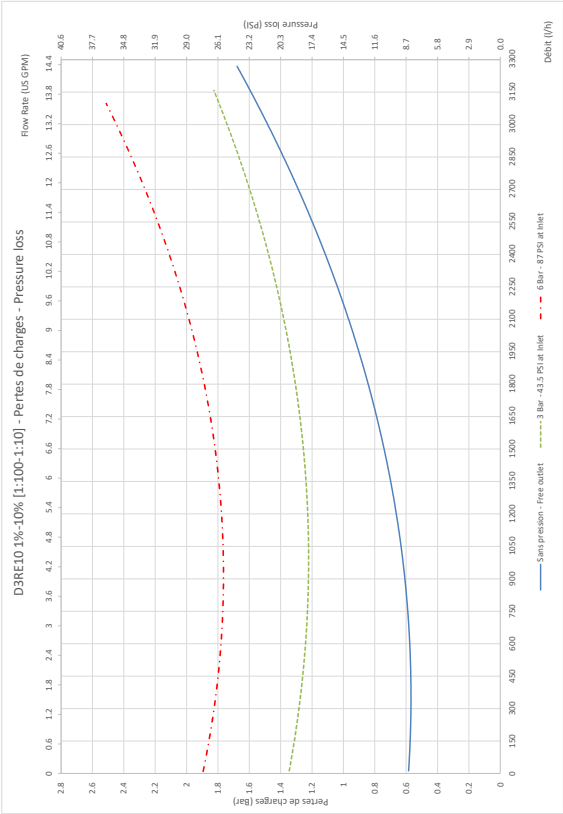


fig 81

5. Pressure losses - D3 - 25%

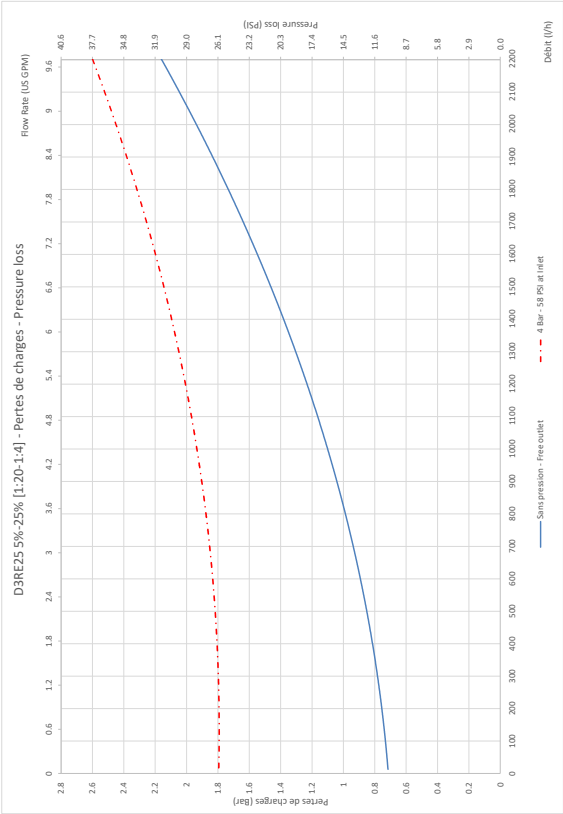


fig 82

6. Viscosity - D3 - 3000

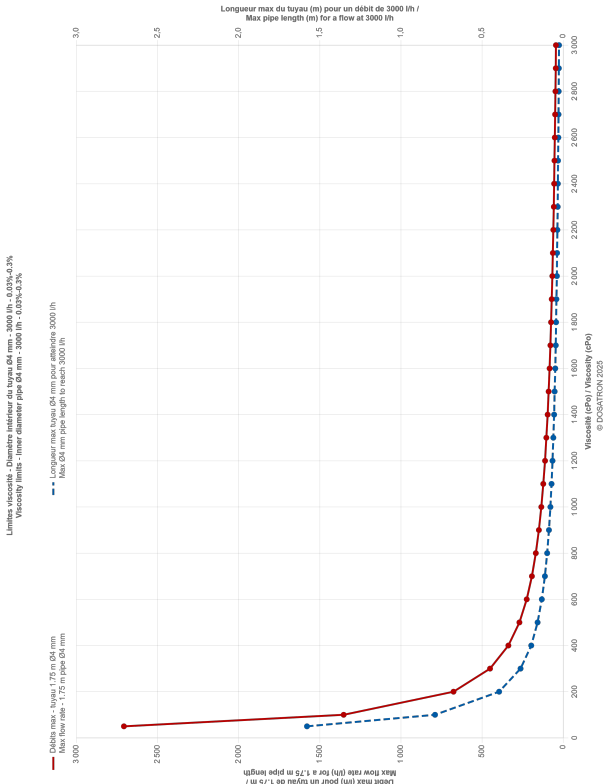


fig 83

7. Viscosity - D3 - 2%

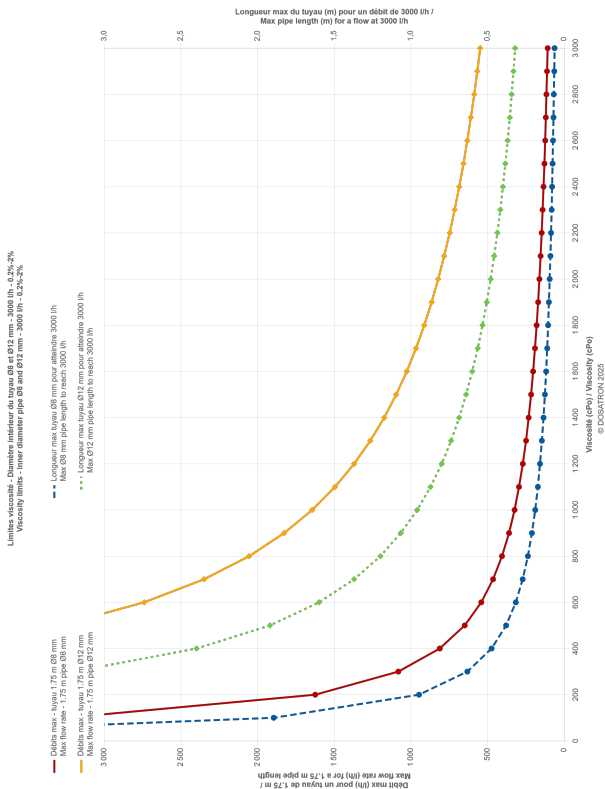


fig 84

8. Viscosity - D3 - 5%

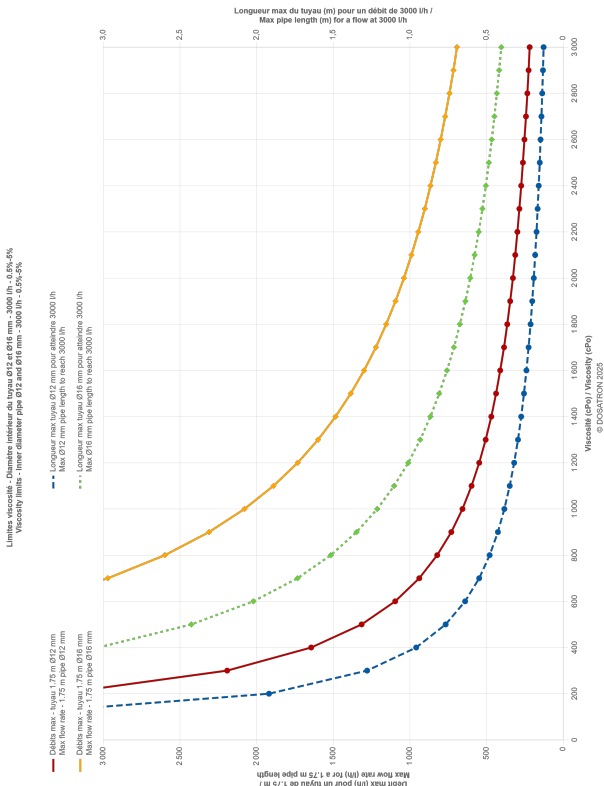


fig 85

9. Viscosity - D3 - 10%

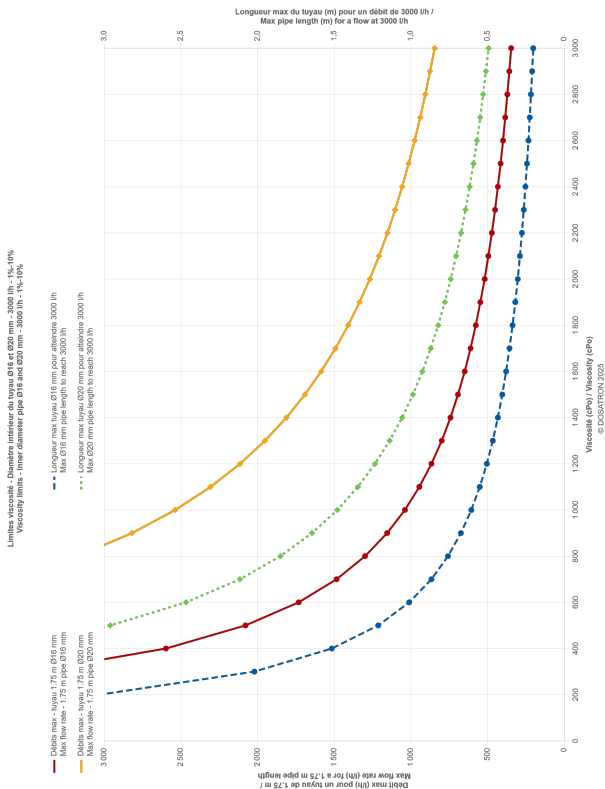


fig 86

10. Viscosity - D3 - 25%

Limites viscosité - Diamètre intérieur du tuyau Ø20 et Ø16 mm - 3000 l/h - 5%-25%
Viscosity limits - Inner diameter pipe Ø20 and Ø16 mm - 3000 l/h - 5%-25%

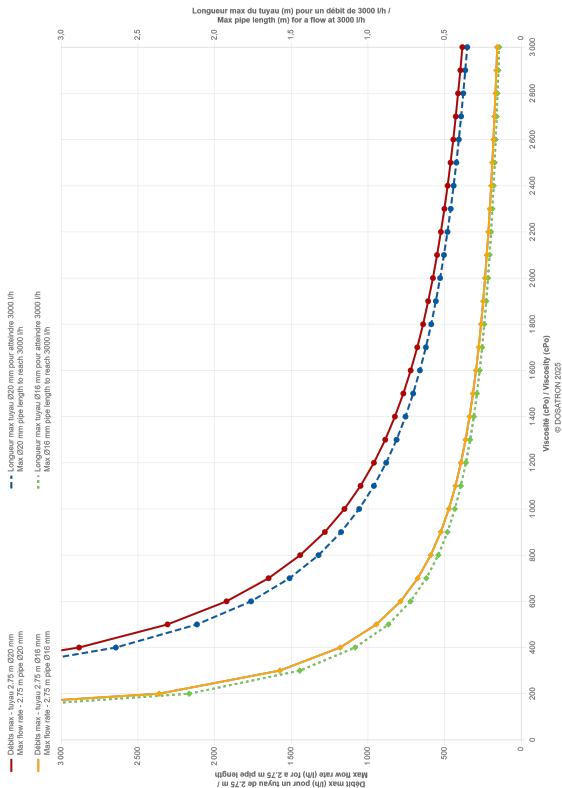


fig 87



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NTD3IL-01-26