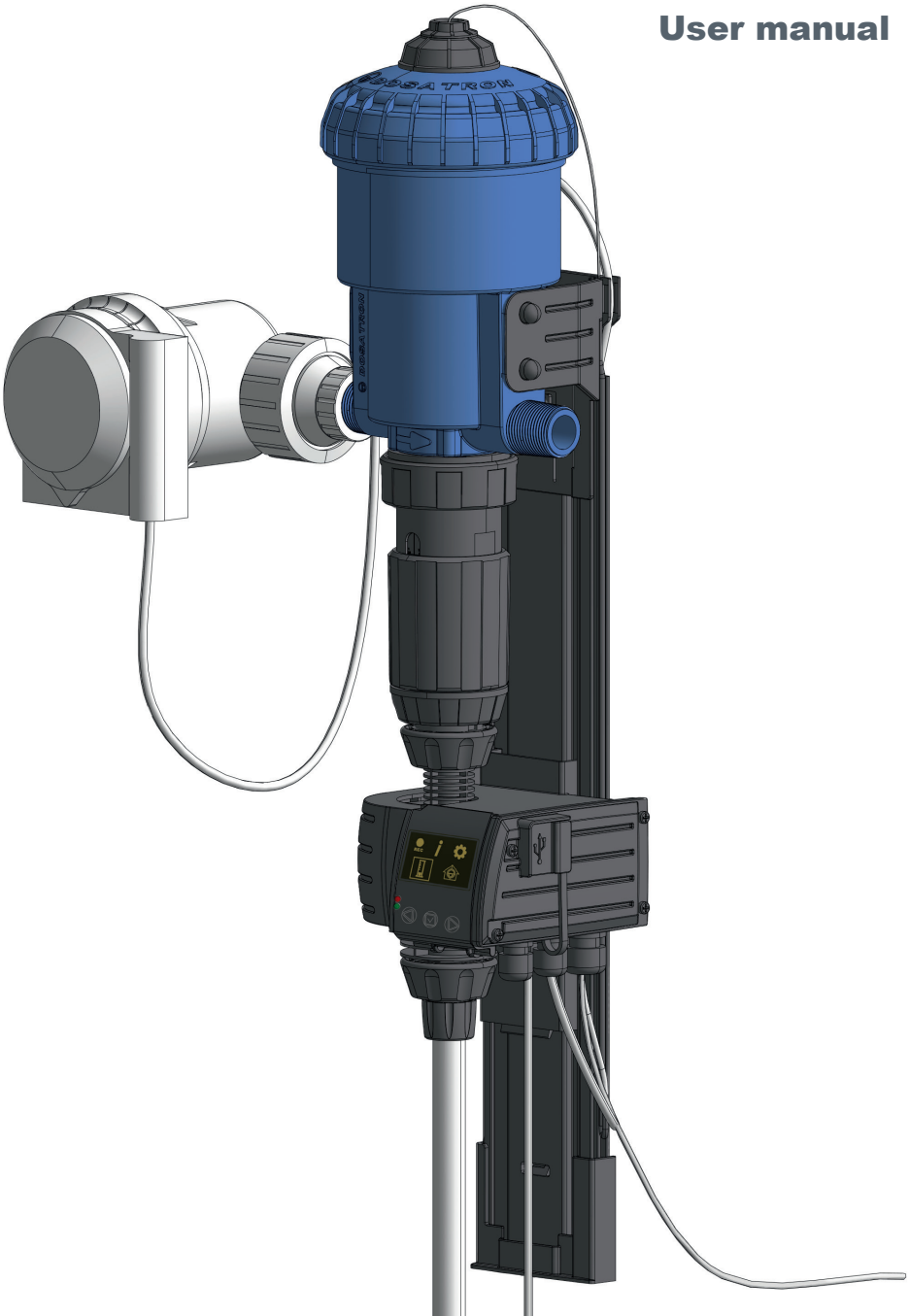
DOSATRON®

Because life is powered by water®

User manual



SD25AL5 - ANIMAL HEALTH LINE

DOSATRON®

Because life is powered by water®

CUSTOMER SERVICE
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Congratulations on your choice.

This model was produced thanks to over 40 years of experience.

Our engineers have placed the Dosatron series well ahead of what the technical evolution of Dosatron hydrometric dosing pumps might have been.

This Dosatron will, in time, reveal itself to be a most faithful ally.

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

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

N.B.

The complete reference and the serial number of your DOSATRON appear on the body of the pump. Please register this number in the section reserved below and quote it when contacting or requesting information from your vendor.

Ref. : SD .....

Serial no. : .....

Purchase date : .....

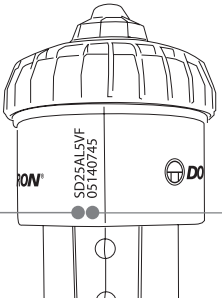
MARKING/IDENTIFICATION

CHARACTERISTICS

Our system has three main marking areas enabling the following to be identified in detail:

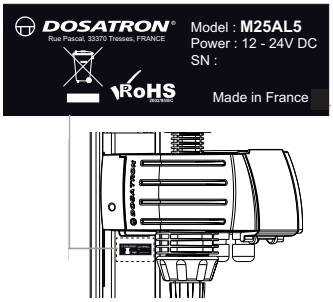
1. An engraving of 2 lines on the side of the pump body (see picture below) containing the exact reference of the device and the serial number.

2. A technical label on each side of the doser body giving the technical performance of the device.



REF **Serial no.**

3. A technical label on the monitoring part of the system, including the monitoring name and serial number.



CODIFICATION OF THE REFERENCE

E.g.	SD25	AL	5	VF	K	P
Dosatron Smart Dosing 2.5 m^3/h range						
Product line AL : Animal Health Line						
Max. dosing in %						
Type of dosing seals VF: Rather acid additives (pH 0 to 9) AF: Alkaline additives (pH 7 to 14)						
K : Kalrez plunger seal option for concentrated acid product						
P : PVDF pump body option						

TECHNICAL CHARACTERISTICS

CHARACTERISTICS OF THE SYSTEM

TECHNICAL DATA	METRIC UNIT	
	MIN	MAX
Dosage in %	1	5
Dosage as a ratio	1:100	1:20
Operating flowrate	10 L/H	2500 L/H
Operating pressure	0,3 Bar	6 Bar
Flowrate of injection of concentrated product	0,1 L/H	125 L/H
Maximum operating temperature		40°C
Average displacement of hydraulic motor (every 2 piston clicks)	0,43 L	
Inlet and outlet (NPT/BSP male gas)	Ø 20 x 27 mm (3/4″)	

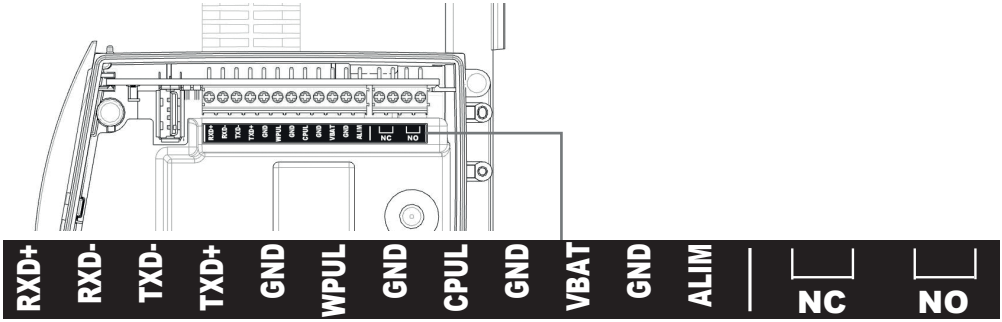
MONITORING MODULE ELECTRIC CHARACTERISTICS	
Device class	class A
Device group	group 1
Power supply voltage	12-24Vdc, 80mA
Maximum current consumption	Power 6W, i.e. 12V-500mA
Frequency [Hz]	See power supply
Monitoring module box protection class	IP65
Monitoring module box insulation class	Class III equipment
Power supply cable (sector adaptor)	Brand: Emerson or Artesyn embedded technology Model: DA12-120EU-M Characteristics: 220V A.C.50-60 Hz Cable length: 1.5 m
Protection	IP65
Batteries	This device contains a CR2032-type lithium battery (to safeguard the RTC) . When the general power supply is cut off, this device is also fitted with a 9V - 6LR61 backup battery (autonomy 6 hours).

DIMENSION AND WEIGHT OF THE PACKAGE	
Dimension of the packaging	53x35x18 cm
Weight of the package	4,52 kg

COMPOSITION OF THE PACKAGE

1 DOSATRON proportional hydraulic dosing device fitted with an flexible blade switch sensor/
1 wall-fitted dosing device support with monitoring subassembly/1 water meter/1 suction pipe/
1 strainer/1 “level detector” pipe/1 pipe guide/1 test tube for diagnosis/1 startup manual

CHARACTERISTICS OF THE TERMINAL BOARD INCOMING AND OUTGOING POINTS



NC / NO Outgoing Point TERMINALS:
Relay outgoing points which are activated simultaneously on selection of one of the alarms or events programmed on the Smart Dosing device device (ref. "Remote alarms activation")

⚠ **The circuits connected to the contacts of the relays must be Very Low Safety Voltage (VLSV). It is not possible to connect the type 230 V A.C. voltage to them.**

POWER SUPPLY/GND TERMINALS **(main power supply)**
Incoming point for the main power supply supplied by the Smart Dosing device sector adaptor. Only this Emerson (or Artesyn) brand adaptor, reference DA12-120EU-M, is approved to operate with Smart Dosing. The Smart Dosing device device is also designed to operate with an external, battery-type power supply with the following characteristics:
Power supply voltage: 12-24 V d.C. The battery must be fitted with an adequate protection circuit that can cut off a current of 8A in less than 120 seconds. For example, an inline fuse holder may be used fitted with a cartridge type fuse holder of type Mersen 3.15A type 5ST. Whether it be the main power supply supplied or external power supply of the battery type, the power supply is connected by cables to the terminals below

Terminal ALIM	Terminal GND
+ 12V + 24Vdc	0
Black cable	Black and white-lined cable

VBAT/GND TERMINALS **(9V backup battery)**
The Smart Dosing device device is fitted with a 9V alkaline backup battery. Thanks to the battery, it can operate during potential micro-cutouts in the main power supply. Depending on the frequency of this situation, this battery will need to be replaced; an alarm warns of the low level of the battery. (see user manual p.26). When replacing it, it is recommended that the same battery reference ANSMANN 9V D.C-50mAh model 6LR61 is used. It is connected to the terminals opposite

Terminal Vbat	Terminal GND
+9 Vdc	0
Red cable	Black cable

CPUL / GND TERMINALS
Entry point for the pre-installed flexible blade switch sensor on the Smart Dosing device.
The functionality is essential: it enables the motor cycles to be counted

The connection direction is the following

Terminal CPUL	Terminal GND
Red cable	Black cable

WPUL / GND TERMINALS
Entry point for connecting the pre-installed water counter to the Smart Dosing device

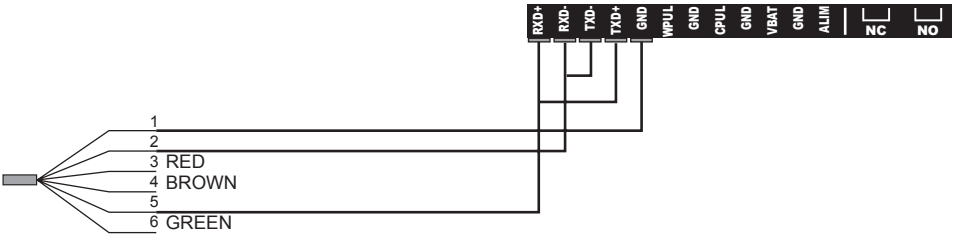
The connection direction is the following

Terminal WPUL	Terminal GND
White cable	Brown cable

GND / TXD+/TXD-/RXD+/RXD-/ TERMINALS
Outgoing point for an RS485 connection, cabling drawing below

GND	TXD+	TXD-	RXD+	RXD-
Mass	Transmission -	Transmission +	Reception +	Reception -

Half Duplex mode (connection)



⚠ For every connection via a cable it is strongly recommended that a Wurth Elektronik no.742 712 11 ferrite be fitted with a double loop. The connected circuit in RS485 must not exit the building in which the Smart Dosing device device is installed (the circuit is not considered TRT1)

****Group 1 definition**

Devices of group 1: group 1 combines all the devices that are not classed as being in the group 2 devices.
Devices of group 2: group 2 combines all the radioelectric frequency ISM (industrial, scientific and medical) devices in which radioelectric frequency energy in the 9 kHz to 400 GHz frequency range is produced and used intentionally or only used in the form of electromagnetic radiation, inductive and/or conductive coupling for the purposes of examination or analysis or for the treatment of matter.

***Class A definition**

The class A devices are the devices intended for use in all establishments other than residential premises and other than those connected directly to a low voltage electricity distribution network supplying residential buildings. The class A devices must comply with the class A limits.

Warning: *The class A devices are intended to be used in an industrial environment. In the user documentation an indication must be included drawing attention to the fact that there may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.*

USB socket

The USB outlet is accessible from the outside by opening the cover marked with the USB symbol. The female USB (type A) outlet works only with a USB stick for the transfer of data/ /firmware updating as described in the paragraph “USB mode”
Under no circumstances may this USB outlet supply power to another device.

RECOMMENDATIONS

- When the DOSATRON SMART DOSING SD25AL5 system is connected, either to the public water supply or to its own water point, it is imperative that back-flow protection and disconnection standards are complied with. DOSATRON recommends a disconnector using a back-flow preventor to avoid contamination of the water supply.

- When connecting the system to the water supply, ensure that the water flows in the direction of the arrows indicated on the water meter AND the hydraulic doser.

- All electrical connections must be done by qualified personnel in compliance with local regulations.

- Install the SD system in a by-pass with shutoff valves and non-return valves downstream of the system.

- Ensure that the connection to the system’s electrical supply is protected against water projections.

- In installations where a siphoning risk exists, it is recommended that an anti-siphon valve is fitted downstream of the system.

- Use a chemical container with a lid to limit fumes of aggressive or hazardous products in order to secure equipment located above and to protect personnel.

- Keep the DOSATRON SD25AL5 system away from significant heat sources and protect it from freezing in winter.

- Do not install the DOSATRON SD25AL5 system on the motor pump suction circuit (siphoning).

- To ensure the accuracy of dosing, the annual replacement of the seals in the dosing assembly remains the user’s sole responsibility. (Dosing seal preventive maintenance alarm)

- Adjustment of the system dosing is the exclusive responsibility of its user. The user must rigorously comply with the recommendations of the manufacturer of chemical/pharmaceutical products and dietary supplements.

Warning

During the installation, use and maintenance of the DOSATRON SD25AL5 system, comply with the safety instructions; use adequate tools, protective clothing and safety goggles when you are working on the equipment and install it with a view to ensuring hazard-free operation.

The installation, connections of the various subassemblies and maintenance of the SD25AL5 system must be carried out with the power off, the water supply circuit closed and the pressure released.

⚠ **N.B. All the electric connections and the cabling must comply with local construction standards.**

Follow the instructions in this manual and take safety measures appropriate to the nature of the liquid additives and the water temperature.

Be extremely cautious in the presence of dangerous substances (corrosive, toxic, dissolving, acids, caustic substances, inflammable substances or substances with a high risk of gaseous release, etc.).

- For the dosing of these substances, please consult your vendor before any use to confirm the compatibility with the doser. An increase in temperature increases the risk and aggressiveness of the substances listed above.

⚠ **The personnel in charge of the installation, use and maintenance of this equipment must have perfect knowledge of the content of this manual.**

- Ensure that the flowrate, water pressure and the electricity supply grid are compliant with the characteristics of the SD25AL5 system.

- The dosing must be adjusted without pressure. Close the water inlet and reduce the pressure to zero.

- The user alone shall be responsible for the correct choice of the system settings to obtain the desired dosing.

- An air intake, an impurity or a chemical attack of the seals may interrupt the correct operation of the dosing.

- Change the suction pipe or the level detection of the SD25AL5 system as soon as they appear deteriorated by the product dosed.

- At the end of use, remove pressure in the system.

- It is necessary to rinse the system by sucking clean water in the following cases:

1- at every change of product and after every use in the case of hazardous products (residues)

2- before every handling operation in order to prevent any contact with aggressive products.

- Any assembly on and any tightening of the doser subassemblies must be done manually, without tools.

Waters with impurities

- A meshed filter must be fitted upstream of the system (e.g.: 300 mesh - 60 microns) in order to improve the quality of the water while protecting your facility from the mineral or organic particles which encourage equipment wear (water meter/ pump/water supply points) and the development of biofilms. Should filtration not be sufficient to eliminate certain minerals, a pre-treatment will be necessary to protect any upstream installation (iron removal, softening, etc.)

Water hammer/excessive flowrate

- For operations subject to water hammer, it is necessary to install an anti-water hammer device (pressure/flowrate regulation system).

- For automated systems, it is preferable to use slow-opening and closing solenoid valves.

Location of the installation

- The DOSATRON and the product to be dosed must be accessible. Their installation must under no circumstances present a pollution or contamination risk.

- Try to position the water bypass pipework supplying the Smart Dosing device in such a way that the Smart Dosing device is sufficiently high enough to facilitate reading the screen and the menus (possibility of using flexible water connections of the stainless braid type).

- It is recommended that all the water pipework be stamped indicating that the water contains additives and the instruction: “WARNING! Not drinking water”.

- The device is intended to be installed inside a technical room or building.

Maintenance

- After use it is recommended that clean water be used for rinsing (~ 1 litre [0.264.US GALLONS].

- A diagnosis of the SD25AL5 system will enable certain potential problems to be verified on the motor or doser dosing assembly (automatic diagnostic program with test tube)

- Annual maintenance will optimise the life of your DOSATRON SMART DOSING device. Replace the dosing seals and the suction/level detection pipe every year.

Service

- This DOSATRON SMART DOSING device was tested before being packaged.

- Repair subassemblies and seal pouches are available.

- Do not hesitate to call your distributor or DOSATRON for any after-sales services.

SMART DOSING SD25AL5 SYSTEM

1 - DOSATRON proportional hydraulic doser fitted with a flexible blade switch sensor

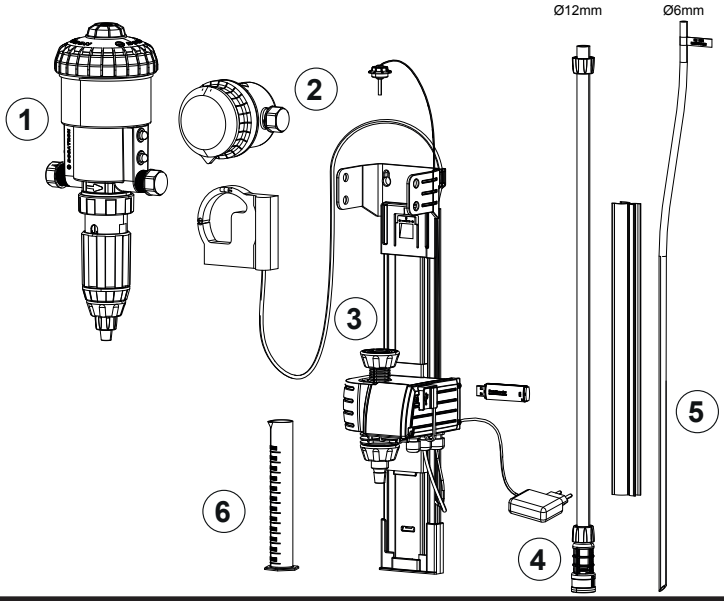
2 - Water meter with IZAR PULSE® pulse transmitter

3 - Doser wall support with monitoring subassembly

4 - Suction pipe and the strainer

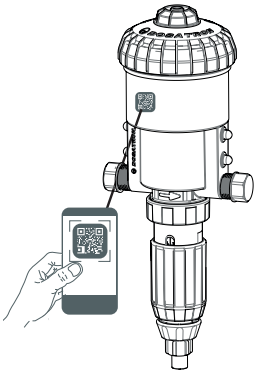
5 - “Level detection” pipe and pipe guide

6 - Test tube for diagnosis



INSTALLATION OF THE SMART DOSING DEVICE SD25AL5 SYSTEM

Scan the QR code of the doser in order to access the technical documents and mother liquid calculation solution application.



Download our application DOSATRON

App Store

Google play

WALL SUPPORT DOSER INSTALLATION - MONITORING

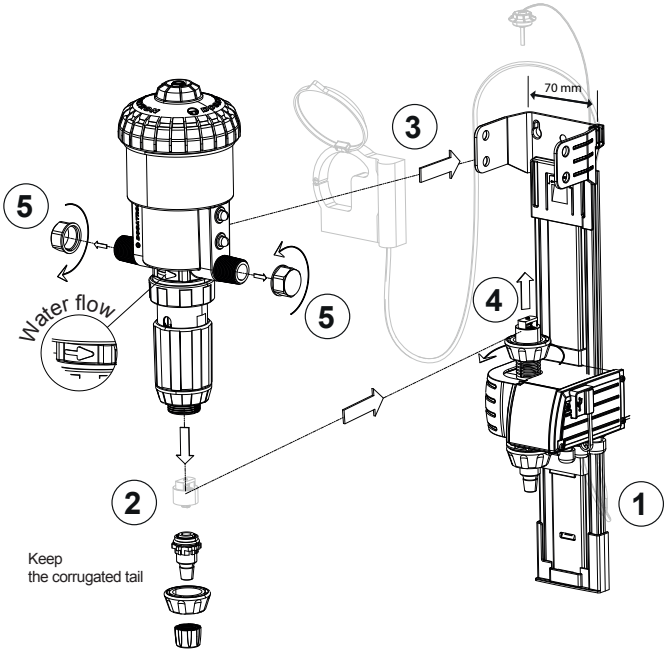
1 - Install the doser wall support with the monitoring subassembly.

2 - Remove the corrugated tail from the doser (store safely for maintenance purposes).

3 - Introduce and position the doser in the support by slightly spreading the arms of the support in order to latch the four lugs of the main body into the corresponding support holes.

4 - Connect the monitoring module in place of the corrugated tail.

5 - Remove the protective caps (doser inlet/outlet).

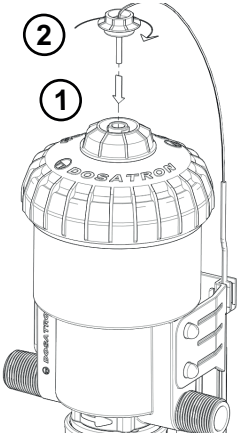


⚠ **Ensure that the water is flowing in the direction of the doser arrow.**

FLEXIBLE BLADE SWITCH MOTOR CYCLE SENSOR CONNECTION

1 - Insert the flexible blade switch sensor unit into the centre of the lid

2 - Lock with a quarter turn.



PULSE WATER METER CONNECTION

1 - Connect the water meter to the doser inlet.

⚠ Ensure that the water flows in the direction of the meter arrow.

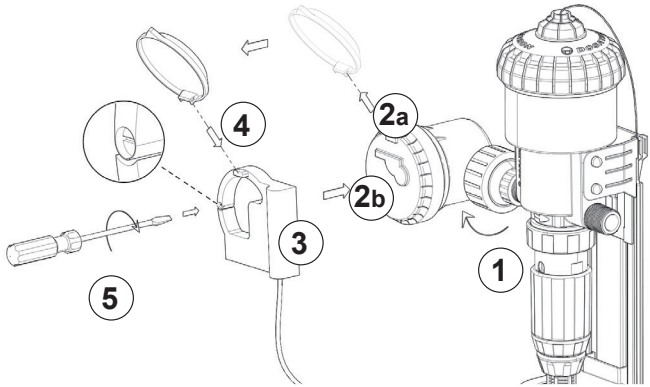
2a - Unclip the water meter lid.

2b - Position the tightening screw to the “0” position.

3 - Position the IZAR PULSE® pulse transmitter by aligning the lid hinges up to each other. Click into place by pressing the ring on the module, manually only.

4 - Place the water meter lid on the IZAR PULSE® pulse transmitter.

5 - Reposition the IZAR PULSE pulse transmitter tightening screw® to “1”.



SUCTION PIPE TO LEVEL DETECTION PIPE CONNECTION

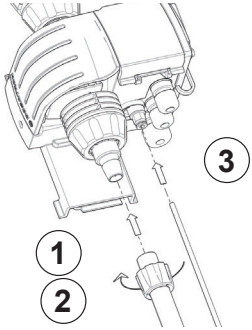
1 - Connect the suction pipe.

2 - Lock the tightening screw.

3 - Connect the level detection pipe to the monitoring module.

⚠ N.B. Never shorten the level detection pipe. **DO NOT SHORTEN**

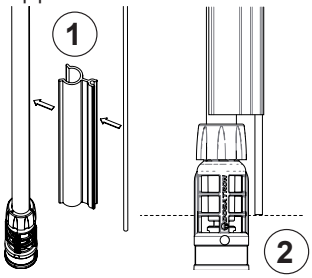
Adjust the length of the suction pipe (large diameter) on the basis of your treatments tank.



1 - Couple the two pipes using the pipe guide.

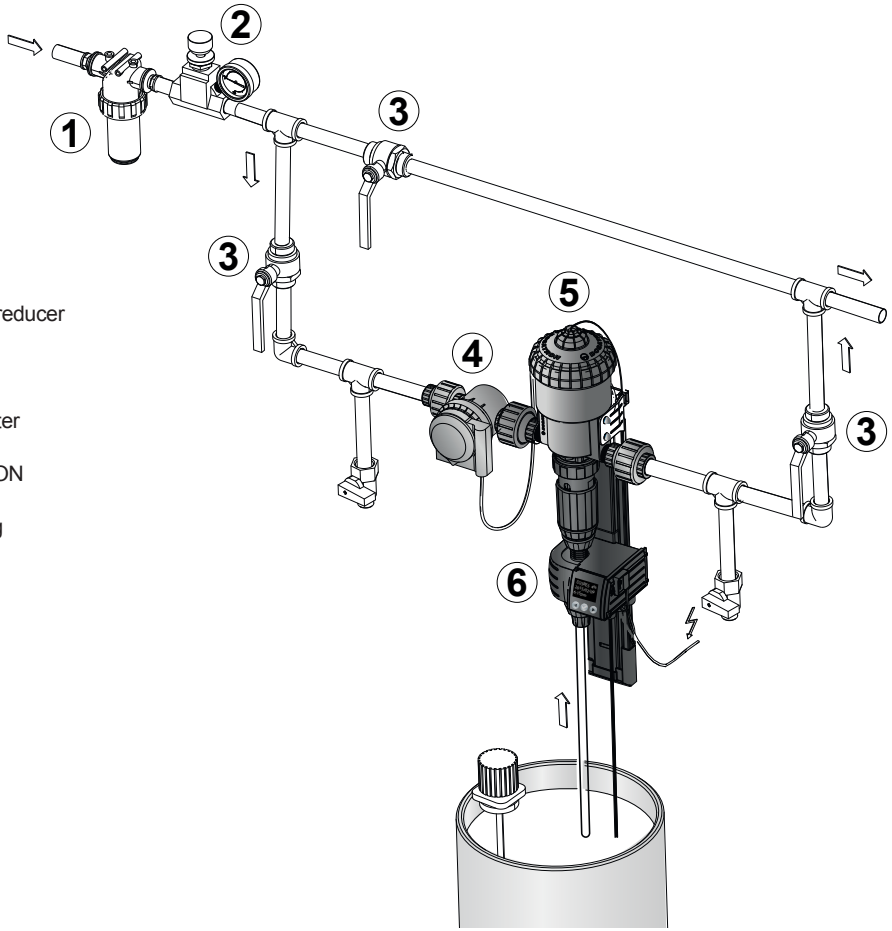
⚠ N.B. Never shorten the level detection pipe. **DO NOT SHORTEN**

2 - Adjust the height of the level detection pipe.



Raising type installation (overall view)

Livestock typical installation on the drinking water network, comply with the standards and regulations in force in the country.



1 - Filter

2 - Pressure reducer

3 - Valves

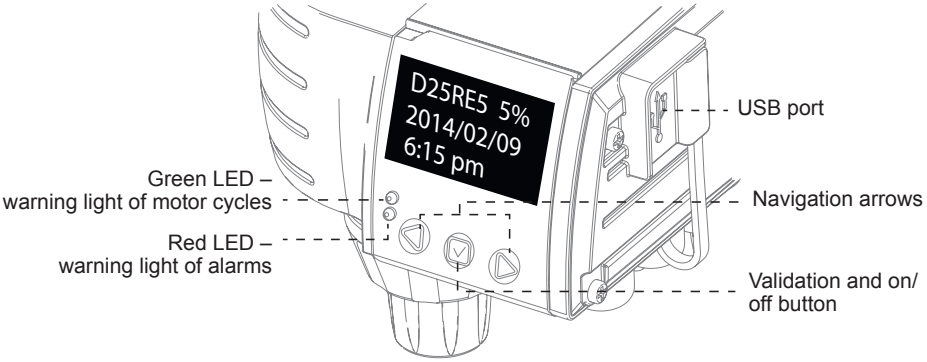
4 - Water meter

5 - DOSATRON

6 - Monitoring

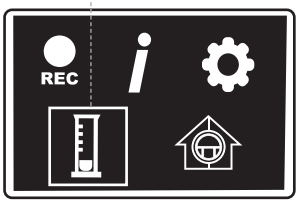
PRESENTATION OF THE MONITORING INTERFACE

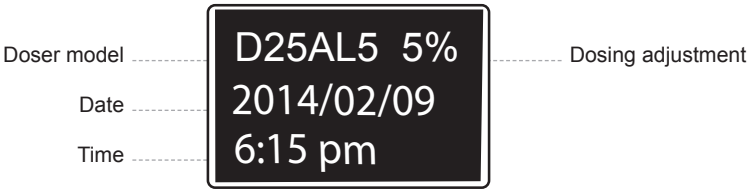
Man-machine interface (MMI)



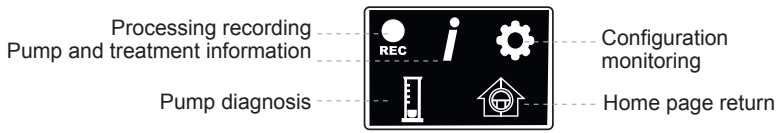
Upper level return

Active menu zone



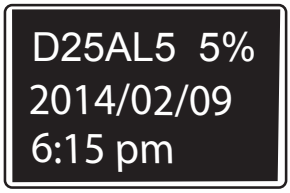


MENU NAVIGATION



● Press on ☑ to go to the main menu

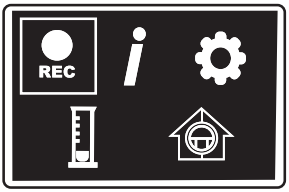
FIRST OPERATION OF THE CONFIGURATION MONITORING MODULE



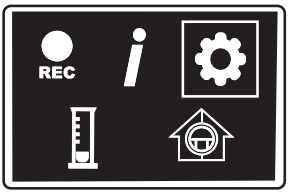
● After having energised the SD25AL5 system, press on the middle button to turn your module on. Navigation within the menu is done using the three-button interface:

◁ ▷ Navigation ☑ validation

● Press on ☑ to go to the main menu



● Press on ▷ until the configuration monitoring menu



● Press on ☑ to validate

Language configuration

● Press on ◁ ▷ to choose the “LANGUAGE” sub-menu

● Press on ☑ to validate

● Press on ◁ ▷ to choose the language then ☑ validate

Units configuration

- Press ◁ ▷ to select the “UNITS” sub-menu
- Press on ☑ to validate
- Press on ◁ ▷ to choose the “UNITS”
- Press on ☑ to validate

Date/Time configuration

- Press ◁ ▷ for date/time parameter
- Press on ☑ to validate

- Set the year with ◁ ▷
- Press on ☑ to validate
- Repeat the operation for the rest of the adjustment
- Press on ☑ to validate

Eco Mode configuration (Screen sleep time when operating on one battery only. Leave the value at zero by operating on mains power supply)

- Press ◁ ▷ to set eco mode
- Press on ☑ to validate
- Press on ◁ ▷ to set the screen sleep time
- Press on ☑ to validate

Low Level Alarm Configuration

(Useful when connecting the Smart Dosing device to the building telephone alarm system)

- Press ◁ ▷ to set the tank end alarm
- Press on ☑ to validate
- Press ◁ ▷ to set low level
- Press on ☑ to validate

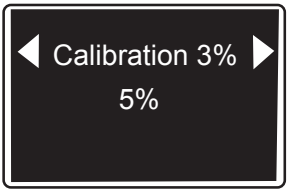
Remote Alarms Activation (Tank empty - Motor shutoff - Injection stop - Recirculation - On flow - Valve closed - Low level)

- Press ◁ ▷ to set dry contact activation to remote alarms (telephone terminal, others)
- Press on ☑ to validate

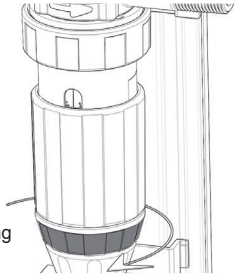
- Press ◁ ▷ to select and activate one or more remote alarms
- Press on ☑ to validate: the name of the underlined alarm will activate the dry contact
- A second press on ☑ deletes the activation of the dry contact (the underlining disappears)
- Press ◁ ▷ to select another alarm.

Pressing on an empty arrow brings the user back to the upper menu

Dosing indexation (Calibration % scale & Monitoring)



● Press on ☑ to validate



Blocking ring

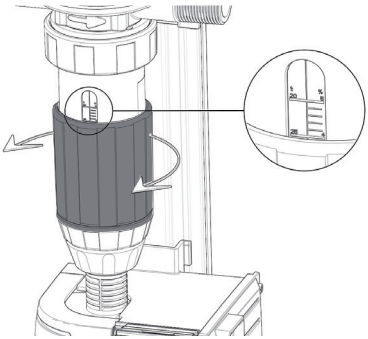
This operation enables the monitoring module to be indexed on the calibration scale engraved in % of the dosing subassembly.

⚠ Do not use tools

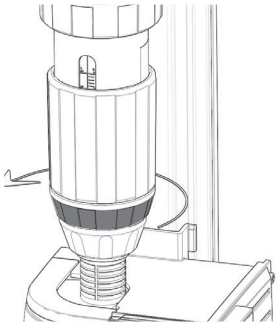
THE DOSING MUST BE ADJUSTED IN THE ABSENCE OF PRESSURE

● Close the water inlet and reduce the pressure to zero

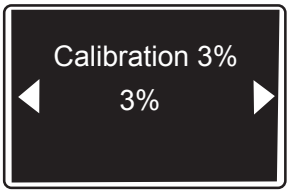
● Unscrew the blocking ring



● Screw or unscrew the adjustment bush to bring the top of the bush to the dosage 3 indicator

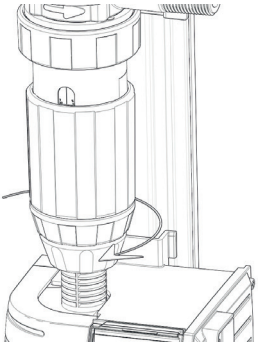


● Re-screw the blocking ring



● Press ◁ ▷ to initialise to the 3% dosing

● Press on ☑ to validate



● Adjust your doser to 3% on the calibration scale.

● Press on ☑ to validate the indexation of the dosing.

REMINDER Dosing principle:
E.g. : Adjustment to 1% => 1/100 = 1 volume of concentrated product for 100 volumes of water

E.g. : Adjustment to 2% => 2/100 = 2 volumes of concentrated product to 100 volumes of water Ratio => 1/50

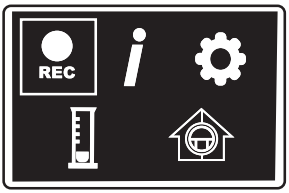
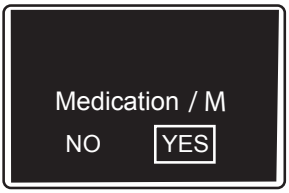
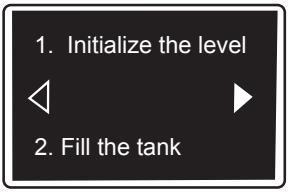
Software (firmware) version information

● Press ◁ ▷ to have the information: software version/serial no./Monitoring module model

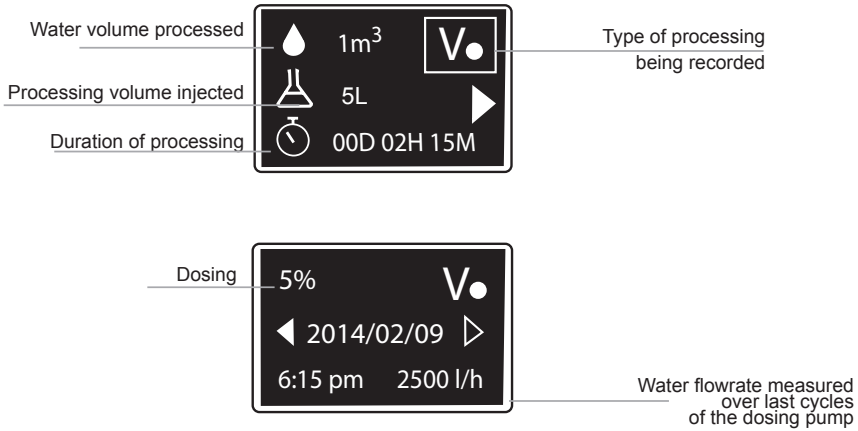
● Return to main menu – press on the empty arrow

PROCESSING OPERATION RECORDING
Function which enables the volumes of water processed, of treatment injected and the duration of processing to be recorded with the SD25AL5 dosing system

Before initiating recording of a processing operation:
- Estimate the volume of water consumed by the animals over the duration of processing
- Adjust the percentage of dosing on the calibration scale of the dosing assembly
- Rinse the doser and the tank to remove any residue
- Prepare the necessary volume of the mother liquid
- Open the valves of the Dosatron bypass and close the main circuit valve

	● Press on ☑ to validate
	Initiation and stopping of processing recording: Choice of processing: medication/M, vaccination/V, acidification/A, rinsing/R disinfection/D, other/X ● Press on ☑ to validate
	Validation screen to initiate the recording ● Press on ☑ to validate
	⚠ 1. Initialisation of the tank level: Raise the level sensor if it was immersed to remove any accumulated liquid inside the small level detection pipe. (Remove moisture by shaking the pipe before plunging it in the processing mother liquid) 2. Fill the tank with the previously calculated processing volume 3. Press on ▷ to validate

Processing operation recording table (REC function)



Arrow to return to the main menu without stopping processing

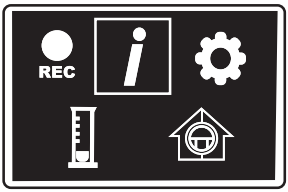
The REC recording mode of processing operations stops in the following cases:

- End of tank
- Manual stop by pressing the validation button
- Removal power supply to the system
- Insertion or removal of the USB stick

2 possibilities after stopping a processing operation:

	Stop the ongoing recording - Display the volumes & duration summary - Return to the main menu
	Reinitiate a new recording of the same type of processing (e.g. 5 recordings for 5 days of consecutive medication)

INFORMATION



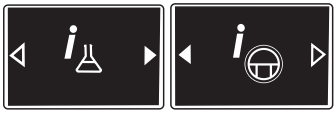
● With ◁ ▷ select using/“INFORMATION” menu

Press on ☑ to validate

“INFORMATION” contains two sub-menus:

Records of the last 15 processing operations recorded

Dosatron pump records (total meter of the water Volumes and treatments injected)



● Press on ☑ to select the sub-menu.

Empty arrows enable the user to return to the upper level if necessary

Under PROCESSING OPERATIONS RECORD menu

Numbering of the last 15 processing operations

Reminder of the type of processing operation

● It is possible to go back over the last 15 processing operations by browsing with ◁ ▷

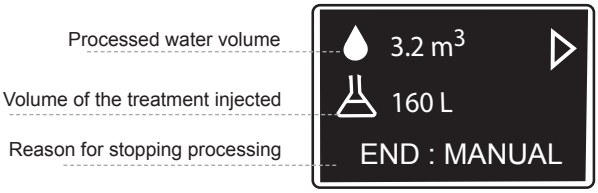
● Press on ☑ to obtain the information on the selected processing operation

Time-stamping of the start of processing

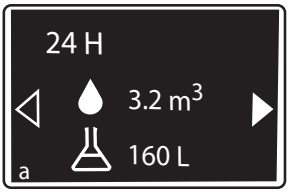
Time-stamping of the end of processing

Duration of the processing

● Press ▷ to access the rest of the information on the processing operation selected



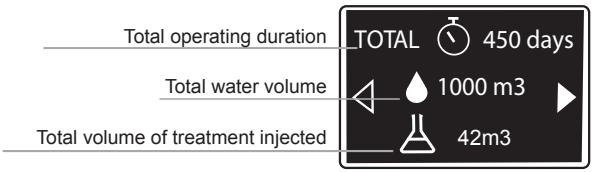
Under PUMP RECORD menu



This menu enables the user to visualise the volume of water having entered the doser and the volume of treatment injected over the last 24 hours

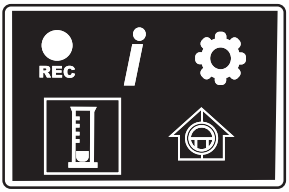
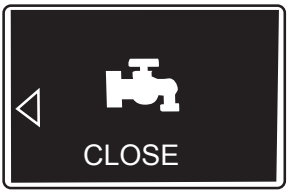
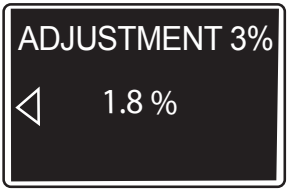
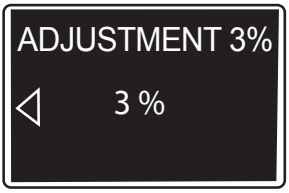
● Press ▷ to have the information on the installation date (implemented automatically)

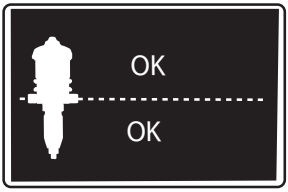
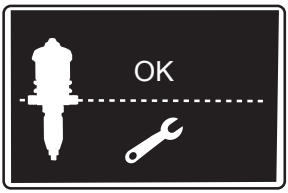
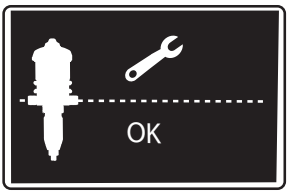
● Press ▷ to access the total meters and have the information on the operating time, the total volume of water having entered the pump (processed and unprocessed water) and the total volume of treatment injected since installation



● Press ▷ to return to the upper menu

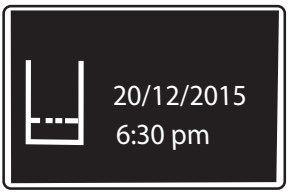
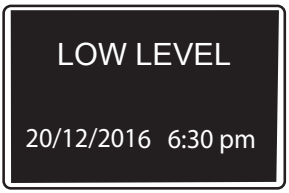
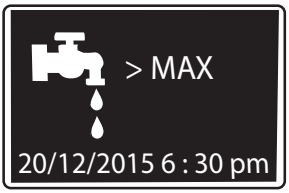
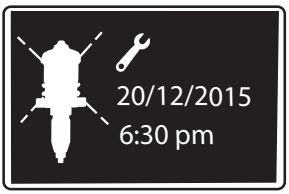
DIAGNOSIS

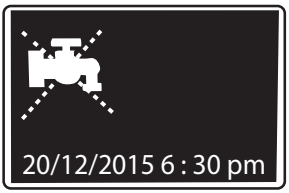
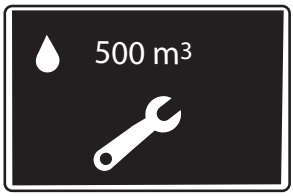
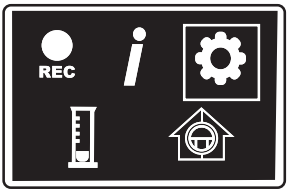
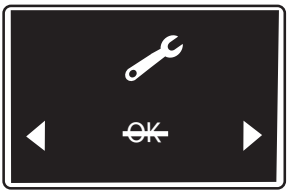
	Verification of the doser against the factory data using a graduated test tube and the water meter. In this sub-menu it is possible to exit each screen using the empty arrow ⚠ Check that the suction pipe is primed before starting each procedure “DIAGNOSIS”.
	● Close the valve upstream of the Dosatron to prepare for browsing in the diagnosis menu
	After 10 secs a new screen appears ● Set your doser manually to 3% The red LED lights up as long as the dosing value is not reached
	When the doser is set to 3%, the value of 3% stops blinking and the following screen appears
	● Position the suction pipe strainer with the level detector pipe in the test tube ● Fill the test tube to over 500 ml ● Ensure that the doser suction pipe is correctly filled before starting the automatic diagnosis. The blinking of the word FILL disappears and the following screen appears
	● Open the valve upstream of the doser to operate the motor and the drain valve downstream of the doser to generate a water flowrate necessary for the diagnosis

	The number of pump cycles is initialised at 17. The cycles are counted down automatically to 0 and the result relating to the motor and dosing assembly are displayed
The following screens may appear depending on the results	
	Case 1. Motor and dosing subassembly are compliant
	Case 2. Motor compliant and dosing subassembly maintenance to be carried out
	Case 3. Motor maintenance to be carried out (internal leaks) and dosing subassembly OK

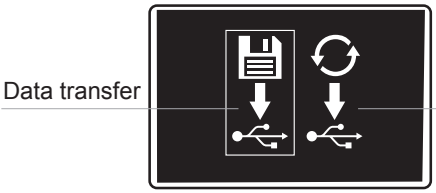
ALARMS
ACTIVE IN REC RECORDING MODE ONLY

The red LED will be activated for as long as the alarms are active. All the alarm screens become priority and thus temporarily mask the screen currently being used. Press on one of the three browsing keys to reactivate the use screen.

Empty tank alarm	
	The system indicates the end of the tank. This alarm ends the recording automatically. The date and time of the activation of the alarm are displayed
Low Level Alarm	
	Configurable alarm (in cm) with the aim of warning the user of the imminent end of the processing tank. Do not stop the ongoing recording
Recirculation alarm	
	Indicates an abnormal increase in the level of the processing tank (e.g. suction valve leak on the pump recirculating water in the tank or if the operator refills the tank during recording)
Excessive flow alarm	
	The doser has exceeded the maximum admissible flowrate at a given time. Do not stop the ongoing recording. If this frequently occurs the use of a higher flowrate doser is recommended
Motor Stop Alarm	
	The water circulates, the water meter detects the flowrate but the Dosatron pump motor is shut down (no signal detected by the flexible blade switch sensor located on the doser lid).

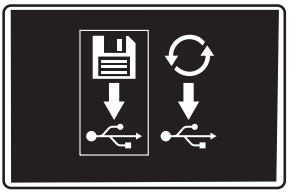
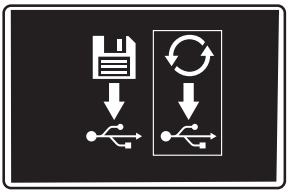
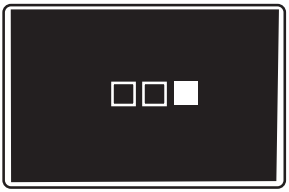
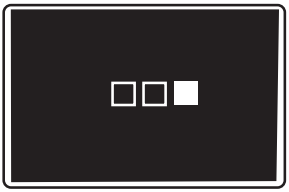
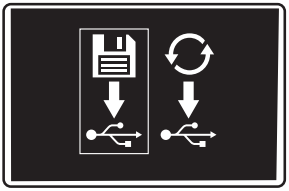
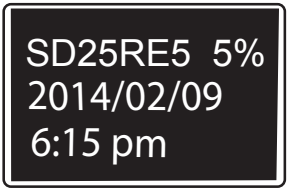
Valve alarm closed/Absence of water supply	
	This alarm appears if the REC recording function is active when the pump water meter and the flexible blade switch cycle counter sends no pulse for 30 minutes (value pre-defined in onboard software). E.g. DOSATRON bypass valve remained accidentally closed or break in water supply (network problem, filter blocked, etc.)
Battery alarm	
	Battery symbol appears, indicating that it needs to be replaced – See MAINTENANCE paragraph Press ▷ to validate
Preventive maintenance	
	● This alarm (given as an indication) concerns the replacement of the dosing assembly seals. Factors such as the type of products dosed, the quality of the water and, above all, the rinsing of the pump after use may prolong or reduce the lifetime of the seals. Pressing the validation button brings the user back to the current menu A tip: The diagnosis menu enables you to check the performance of the dosing assembly.
  	● Once the maintenance has been completed, go to the CONFIGURATION menu (screen with circled cog) ● Wait for the maintenance screen and activate it by pressing the validation button (screen with OK struck through appears) ● Pressing the validation button again removes the alarm and reinitialises the maintenance meter

Data transfer or updating of the onboard software using USB stick



- Insert the USB stick
- Press on ◁ ▷ to make the selection.

Procedure for each mode

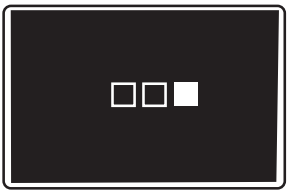
DATA transfer	Firmware update
1 	1 
● Press on ☑ to validate “DATA transfer”	● Press on ☑ to validate “firmware update”
2 	2 
Ongoing process screen.	Ongoing process screen.
3 	3 
End of process	Possibility to remove USB stick at this time.
	4 
	End of process. Return to Home screen.

DEFAULT PROCEDURE FOR RESTORING THE APPLICATION

- In the event of a problem in updating your firmware, follow the restoration procedure.
- Remove the power supply to the system.
- Energise the system by pressing both the central button and the left or right arrow simultaneously (5 secs) until the following message appears:

“Autorecovery…”

The default application file present in the memory then uploads into the system.

	Check that the following screen is displayed during the loading of the default application.
	After uploading the default firmware, check that a screen of the following type appears.

PREREQUISITES FOR INSTALLING THE SMARTLINK SOFTWARE (Operating software for PC or MAC for the dosing pump data and processing operations recorded by your Smart Dosing devices)

Prerequisites for using the Smartlink software:
- 2 Go of live RAM memory (4 Go recommended, especially for Windows Server 2008®)
- free space on hard drive – 1 Go
- 1 graphic board (1024 x 768 minimum)

It is recommended that the last pilots be installed for your graphic boards

⚠ **It is recommended that the latest version of the anti-virus software that you use be installed.**

Operating system

The Smartlink software is a Windows® 32 bits/ Mac OS application which works with the following operating systems:

- Windows 10® x86 y x64
- Windows 8.1® x86 y x64
- Windows 7® x86 y x64
- Windows XP® SP3 x86 (warning: this operating system is no longer maintained by Microsoft)
- Mac OS 10.X

It is recommended that of the latest Service Packs and critical updates for the version of Windows®/Mac OS that you use be installed.

Other software resources required

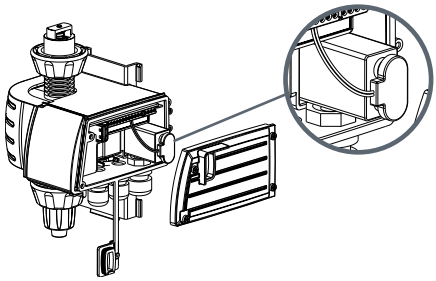
The following software resources (generally installed by default with the operating system) are necessary for the operation of the SmartLink software:

- Microsoft Internet Explorer 6 minimum
- Safari

Other prerequisites

- The physical machine hosting the SmartLink software must be connected to an uninterruptable power supply.
- An automatic backup compliant with your Quality Management system (frequency, preservation period) must be set up.

MAINTENANCE



Exchanging the 9V - 6LR61 backup battery

- Unscrew the four screws on the side
- Access the 9V - 6LR61 battery. Replace it
- Reassemble in the opposite direction

Recommendations for use

1 - When you use soluble products placed in solution it is recommended that the entire dosing assembly be periodically disassembled (see § Cleaning of the suction valve, § Changing the dosing seals).

Rinse the dosing assembly elements thoroughly in clean water and reassemble them having previously lubricated the seal identified with a silicone lubricant

2 - Before putting the DOSATRON back into service at the start of the usage period, remove the motor piston and immerse it in warm water (< 40° C) for several hours. This operation enables deposits having dried in the motor piston to be removed, see § Changing the motor piston.

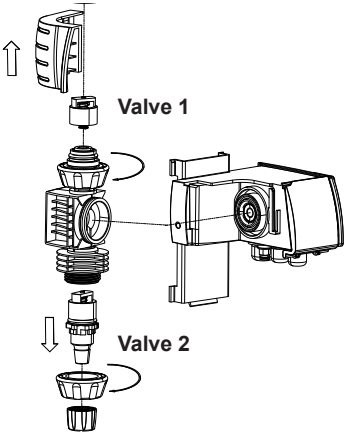
Warning: The monitoring box must not be disassembled by an unauthorised person. For any operation on the latter contact your distributor or DOSATRON.

Cleaning and reassembling of the two suction valves

ADVICE : Before assembling any dosing assembly it is recommended that the DOSATRON be put in operation by suction of clean water in order to rinse the injection system. This prevents any risk of contact with products that may be found in the dosing assembly.

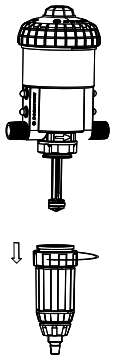
N.B. Wear protective goggles and gloves during any operation of this kind.

- Close the water inlet and reduce the pressure to zero.
- Unscrew the upper nut and disconnect the monitoring module from the dosing assembly by pulling downwards.
- Push the monitoring module lid upwards and remove the hydraulic body
- Check the state of the membrane in the monitoring module
- Disassemble the hydraulic body valves to clean them
- Pull downwards to remove the suction valve unit
- Rinse the various sections thoroughly using clean water and reassemble them
- Put the suction valve back into the doser body, push it to the stop.
- Check that the valve return spring is active.
- Reassemble in the opposite direction from the manual disassembly.



Draining the Dosatron

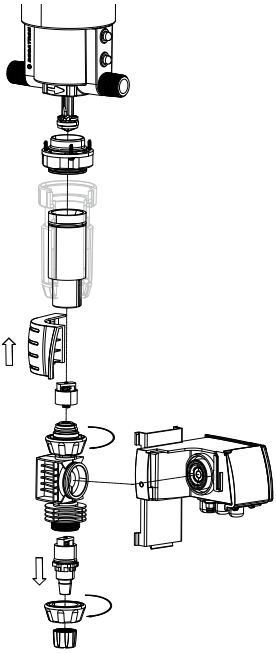
When protecting against freezing
- Close the water inlet.
- Remove the dosing assembly; see § Cleaning the suction valve, § Changing the dosing seals
- Remove the lid and the motor.
- Disconnect the connections at the water inlet and outlet.
- Empty the main body after having removed it from the wall support.
- Reassemble having previously cleaned the leaktightness seal.



Changing the dosing assembly seals (in the absence of pressure)

Frequency advised: Once a year.

⚠ **Do not use metal tools or utensils**



ADVICE: Before any dosing assembly is disassembled it is recommended that the DOSATRON be put into operation by suction of clean water in order to rinse the injection system. This prevents any risk of contact with products that may be located in the dosing assembly.
N.B. Wear protective goggles and gloves during any operation of this kind.

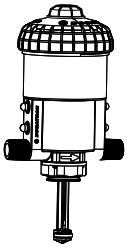
- Close the water inlet and reduce the pressure to zero.
- Unscrew the upper bolt and disconnect the monitoring module from the doser section by pulling downwards.
- Push the monitoring module lid upwards and remove the hydraulic body
- Check the state of the membrane in the monitoring module
- Disassemble the hydraulic body valves to change the suction seals and valves and the corrugated tail (see § CLEANING AND REASSEMBLING THE SUCTION VALVES)
- Unscrew the dosing assembly manually and using a long, cross-tip screwdriver
- Pull downwards to remove the dosing assembly
- Replace the seals

Method for removing a seal

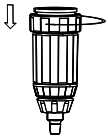
Pinch the part and the seal between the thumb and index finger; push it back towards the opposite side to deform it.

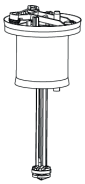
Accentuate the deformation to take hold of the section of the seal which overlaps, then remove the seal from its bearing.

Changing the motor piston (in the absence of pressure)



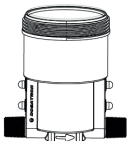
- Close the water inlet and reduce the pressure to zero.
- Unscrew the dosing assembly manually
- Pull downwards to remove the dosing assembly
- Remove the flexible blade switch sensor from the lid by a quarter turn
- Unscrew the lid manually and remove it.





Remove the motor piston unit by pulling upwards.

- Install the new motor piston and reassemble the doser in the opposite order of the disassembly.



- Manually reassemble the original lid taking care not to damage its seal.

- Insert the flexible blade switch sensor unit in the centre of the lid and lock it by a quarter turn.

POSSIBLE INCIDENTS

Your monitoring module does not turn on – check that the power supply plug of your device is connected and the condition of this cable.

Possible incidents		
SYMPTOM	**CAUSE**	**REMEDY**
Motor piston		
Your doser doesn't start (no motor click when the water circulates) or stops.	Motor piston blocked	Restart the motor piston by activating it manually.
	Excessive flowrate	1. Reduce the flowrate, put back into operation. 2. Check the presence of the motor valve seals.
	Motor piston broken	Send the DOSATRON back to your distributor.
Dosing		
Recirculation in the product tank	Suction valve or valve seal dirty, worn or absent.	To be cleaned or replaced.
No suction of product	The motor piston has stopped working.	See motor piston incidents.
	Air intake in suction pipe.	Check the suction pipe and the tightening of its attachment bolt on the dosing assembly
	Suction pipe obstructed or strainer blocked	Clean them or replace them.
	Suction valve seal worn, wrongly assembled or clogged.	Clean it or replace them.
	Plunger seal wrongly assembled, clogged or swollen.	Clean it or replace them.
	Doser body scratched.	Replace it.
Under-dosing	Air intake	1. Check the tightening of the bolts and the dosing assembly. 2. Check the condition of the suction pipe
	Suction valve seal worn or dirty.	Clean it or replace it.
	Excessive flowrate (cavitation)	Reduce the flowrate if possible or order a larger-capacity Dosatron
	Plunger seal worn	Replace it.
	Doser body scratched	Replace it.

Leaks		
Leaks close to the attachment ring under the pump body.	Injector sleeve seal damaged, wrongly positioned or absent.	Position it correctly or replace it.
Leaks between the adjustment bush and the blocking ring.	Doser body seal damaged, wrongly positioned or absent.	Position it correctly or replace it.
Leaks between the body and the lid.	Lid seal damaged, wrongly assembled or absent.	Position it correctly, clean seal seat bearing or replace it.
Monitoring Module		
Screen does not turn on	Electric power supply problem	Check the installation of your SMART DOSING system
Displays incoherent alarms		Check all the electric connections (flexible blade switch sensor/water meter pulse transmitter; the position of your “level detection” pipe; position of your monitoring module in the wall support rail)
Monitoring module regularly turns off	Electricity micro-cutouts	Check the condition of the 9V - 6LR61 backup battery.

GUARANTEE

DOSATRON INTERNATIONAL S.A.S. undertakes to replace any original part acknowledged to be defective over a 12-month period for the “doser” assembly of the SD25AL5 system and over a 24-month period for the “monitoring module” part of the system from the date of purchase by the initial purchaser. To obtain the replacement under guarantee the device or the separate part must be sent back with the initial proof of purchase to the manufacturer or to the approved distributor. It may be acknowledged defective after verification by the manufacturer’s or distributor’s technical services.
The device must be rinsed of any chemical product and sent to the manufacturer or to the distributor with postage paid, then it will be returned free of charge after repair if it is covered by the guarantee.
The purpose of operations carried out under the guarantee may not be to extend the lifetime. This guarantee applies only to manufacturing defects.
This guarantee does not cover the defects observed resulting from an abnormal installation of the device, from the use of inappropriate tools, from an installation or maintenance defect, from an environmental accident or by corrosion due to foreign bodies or liquids found inside or near to the device.

For the dosing of aggressive products, please consult your vendor before any use to confirm the compatibility with the doser. The guarantees do not include the seals (worn parts) or damage caused by water impurities, such as sand. A filter (e.g. 300 mesh - 60 microns depending on the quality of your water) must be installed at the front of the device to validate this guarantee. DOSATRON INTERNATIONAL S.A.S. declines any liability if the device is used under conditions non-compliant with the user manual instructions and tolerances.
There is no explicit or implicit guarantee relating to other products or accessories used with DOSATRON INTERNATIONAL S.A.S devices.
Do not hesitate to contact your distributor or Dosatron for any after-sales service.

NOTES

NOTES

This document does not constitute a contractual undertaking and is provided as an indication only.
The DOSATRON INTERNATIONAL company reserves the right to modify its devices at any time.

CE Conformity Statement
Document N° DOCE06050103
This Dosatron is in compliance with the European Directive 2006/42/CE. This declaration is only valid for countries of the European Community (CE).

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