

Operating manual



Flocculant dosing pump

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1 General safety instructions

This operating manual contains basic instructions that must be complied with for installation, commissioning, operation, and maintenance. Consequently this operating manual must always be read by the fitter as well as the responsible owner prior to installation and commissioning, and must be accessible to every user of the device. In addition, all other safety instructions in this document must be strictly complied with. Read and comply with all instructions. To reduce the danger of injury, do not allow children to use this product.

Dangers due to failure to comply with the safety instructions

Failure to comply with the safety instructions can result in hazards for personnel as well as for the environment and the device.

Failure to comply with the safety instructions can result in loss of all claims for damage compensation.



DANGER!

Compliance with the protection rating

After tasks on the Flockmatic Vario, if the housing or individual cable glands are not properly closed, so that a reliable seal is ensured, moisture can penetrate into the device.

Possible consequences: Damage or destruction of the Flockmatic Vario, malfunctions.

- After all tasks performed on the device, ensure a safe seal..



DANGER!

Inadequate qualification of personnel

Dangers due to inadequate qualification of personnel!

Possible consequence: Death or severe injury, significant damage to material assets.

- The system owner must ensure compliance with the required qualifications.
- All activities must only be carried out by personnel who are qualified to perform such activities.
- Access to the system must be prevented for inadequately qualified personnel..



IMPORTANT NOTE!

Compliance with the applicable accident prevention regulations and the other statutory regulations and the generally acknowledged safety regulations must be ensured by the system owner!



IMPORTANT NOTE!

Only liquid flocculants from the company BAYROL may be dosed with the Flockmatic Vario. The use of flocculants or other products from other manufacturers results in loss of all damage compensation claims!

2 Overview






The Flockmatic Vario is a high quality peristaltic pump for dosing of liquid flocculants in the circulation circuit of a swimming pool.

The swimming pool must be equipped with an adequately dimensioned sand filter system.








3 Operation

The Flockmatic Vario is operated via the two-row display with 2 x 16 characters and the membrane pushbuttons.

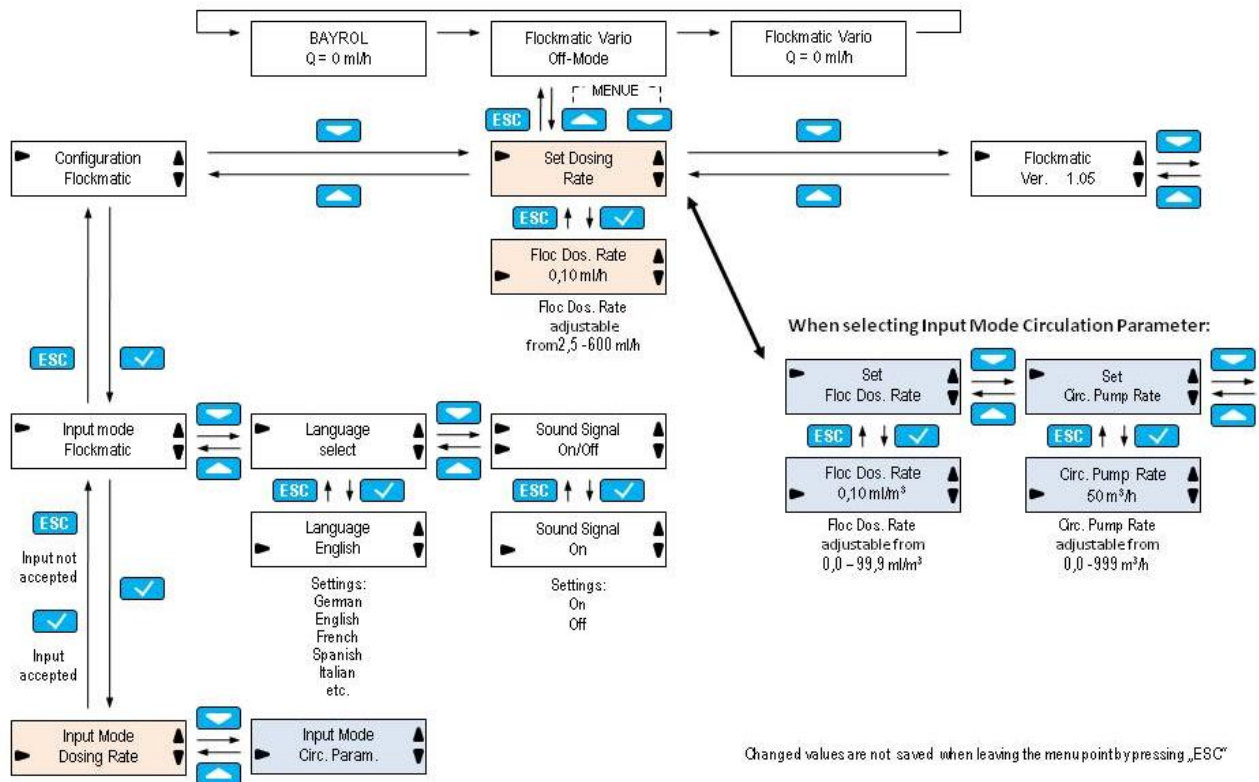
3.1 Button functions

Button	Function
	Switches from the basic view to the menu structure.
	<ul style="list-style-type: none"> - Switches from the menu structure back to basic view. - Switches from one menu item to the next higher menu item. - When exiting an input menu the selected settings are not applied.
	<ul style="list-style-type: none"> - Opens the input menu of a menu item. - Confirms the changed settings in an input menu.
 and 	<ul style="list-style-type: none"> - Navigates between the individual menu items. - Changes the setting values in the input menu.

3.2 Operating states

Status	Description
Off	<p>The display is switched off, the pump does not display, the filling level of the canister for flocculent is not evaluated, and no input can be made. The green LED  flashes at intervals of approx. 2 sec.</p> <p>Activate the  button for approximately 1 second to switch on the device; the device is in operating status Off.</p>
On	<p>The green LED  flashes briefly at intervals of approx. 2 sec, the display is switched on and inputs can be made.</p> <p>Briefly activate the  button to switch the device to automatic mode.</p>
Dosing	<p>The green LED  is illuminated continuously. The display is switched on and inputs can be made.</p> <p>If the filling level of the canister for flocculent is low, an alarm will be triggered.</p> <p>Fast vacuum function: With this function the air can be quickly removed from the suction and pressure hose. For this, the dosing pump is switched on manually with the  button for approximately one minute with full capacity. Subsequent pushing of the  button switches off the pump as needed before one minute elapses.</p>

3.3 Menu structure



3.4 Menu items

Basic view:

In the basic view the momentary delivery capacity is displayed, and in operating status Off, the current mode is displayed.

Flockmatic configuration:

Input mode - delivery capacity

There are 2 possibilities for entering the delivery capacity:

- Input mode dosing capacity**
If this input mode is selected the delivery capacity is entered directly in ml/h (from 2.5 - 600 ml/h)
- Input mode - circulation parameters**
If this input mode is selected the delivery capacity is calculated based on the two parameters "dosing quantity" and "circulation" that must be input. The necessary dosing quantity of flocculent per m³ of circulation capacity depends on the concentration of the flocculent used. The circulation capacity is set in accordance with the circulation pump used.

Available languages

The device can be configured for multiple languages.

Acoustic signal

The acoustic signal that is triggered when the filling level of the canister for flocculent is low, can be activated or deactivated. The visual alarm signal will always be output regardless of this setting.

Output of the alarm via the PoolManager®/Analyt (only devices with colour display):

If an alarm should not be output via the Flockmatic Vario, but rather should be output via one of the devices cited, then the BNC connector of the suction lance is connected directly to the control device. In this case the input on the Flockmatic Vario must be bypassed with a BNC terminating connector.

In this case the Flockmatic Vario must be connected via the module in the PoolManager®/Analyt that is provided for this purpose.

See the PoolManager®/Analyt manual for more information on connection and configuration.

4 Installation and maintenance

4.1 Safety instructions for installation and maintenance tasks



DANGER!

Danger due to electric shock

The Flockmatic Vario is energised as soon as voltage is applied on the mains input. Contact with energised parts can result in electric shock.

Possible consequence: Serious or fatal health impairment, damage to material assets

- Installation and maintenance tasks on the device must always be executed in de-energised status.
- When performing tasks safeguard the device from being switched on!
- Only connect cables in de-energised status.
- A safety device that is independent of the pump should always be present.
- The valid country-specific safety regulations must be complied with.
- Directly after completing the tasks, all safety devices and protective devices must be reattached, i.e. must be rendered functional.
- Failure to comply with the safety instructions can result in defects of the device and life-threatening danger, with the consequence of loss of warranty.

4.2 Mounting

- Level, vertical surface.
- The free area surrounding the device must be large enough to ensure that trouble-free operation and maintenance are possible. The cover must always be removable.
- Pump housing vertical, hose connections downwards.
- The display of the regulator should be approximately at eye level.
- Below the device, at least 20 cm of free space is required for installation of the hoses.
- There must be no parts that are sensitive to moisture below the device.
- A wet room earth contact electrical outlet with continuous current at a maximum distance of 1.5 m.
- All hoses and cables must be laid out in such a manner that they are kink-free and free of abrasion.
- No hose line should be longer than 5 m
- The hoses must not be routed directly over heat-conducting pipes or systems.
- Direct sunlight, thermal radiation, the effects of frost and moisture must be avoided.
- Ensure adequate aeration.
- Ensure that measures are in place in the event of a leak in the pump or the dosing hoses (e.g. defined discharge, collecting container).
- The base plate can be used as a drilling template by holding it at the intended location and marking the location of the bores on the wall..

4.3 Electrical connection

The Flockmatic Vario has been designed and built in accordance with the applicable guidelines. Prior to leaving the plant the product was carefully tested and it left the plant in faultless condition.

Safe operation is only possible if all instructions contained in this manual and the generally applicable guidelines are complied with.

The supply voltage for the device must not exceed 240 V/50 Hz. The permitted operating temperature is 5 to 45°C, the permitted humidity is 0-90%.

As is customary for all electrical connections, ensure that all plug connections are protected against water.



IMPORTANT NOTE

Ensure that the Flockmatic Vario is only supplied with power when the circulation pump is running!

4.4 Replacing the device fuse

If the device is subjected to an unusual operating state, this can cause a fuse to trip; in this case the fuse must be replaced.



IMPORTANT NOTE

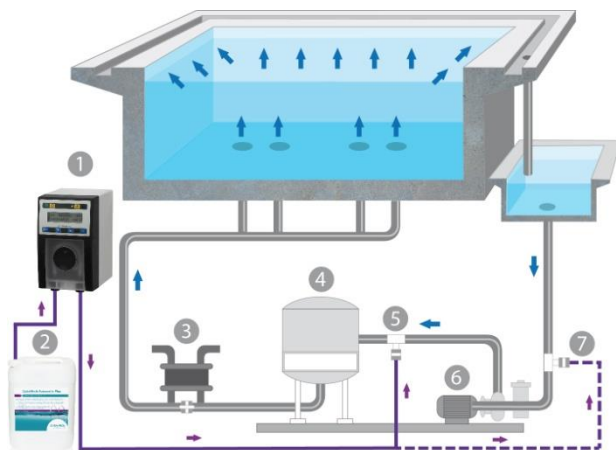
Always identify what caused the fuse to trip. Always ensure that the cause is completely eliminated before placing the Flockmatic Vario is service again.

Replacing a fuse:

- Disconnect the Flockmatic Vario from the power supply.
- Remove the pressure and suction hose.
- Take the cover off of the rotor.
- Pull off the blue housing frame from the front.
- Open the housing by unscrewing the 4 Phillips head screws.
- Pull off the upper part of the housing from the front.
- Turn the cover of the black fuse holder a quarter turn to the left and pull the fuse up and out.
- Insert a new (1 A/250 V MT) fuse.
- Assembly is executed in the reverse sequence.

4.5 Installation in the circulation system

Install the Flockmatic Vario in the circulation system as follows.



- 1 Flockmatic Vario
- 2 Quickflock fluid
- 3 Heat exchanger
- 4 Filter
- 5 Injection after the circulation pump
- 6 Filter pump
- 7 Injection before circulation pump

(recommended if counter pressure is higher than 0.8 bar)
Connect the suction hose (connection to the canister) on the left connection of the pump, connect the pressure hose (connection to the injection nozzle) on the right connection of the pump.



IMPORTANT NOTE

For all hose and mounting connections, ensure that these connections do not leak.
Liability is excluded if there are leaks!

4.6 Maintenance

Some parts of the Flockmatic Vario are subject to wear due to chemical and mechanical stress. Thus regular inspection is required for safe, long-term operation. Regular preventive maintenance of the system protects against unscheduled interruptions of operation.

4.6.1 14-day maintenance

- Visual inspection of all dosing lines and the dosing hose for leaks, replace if necessary

4.6.2 Yearly maintenance

- Visual inspection of all dosing lines, replace if necessary
- Replacement of the hose of the dosing pump

4.6.3 Cleaning

Clean the surfaces of the device with a soft lint-free cloth as needed. To do this only use a little water, if necessary



IMPORTANT NOTE

Do not use aggressive cleaners

4.6.4 Hose replacement Flockmatic Vario



NOTE

Never grease the hose!



NOTE

Only use original spare pump hoses!



DANGER!

Danger due to chemicals

When pulling off the pump hose, corrosive product residues can escape.

Possible consequence: Serious health impairment (acid burns) and damage to material assets

- Always empty the pump hose and supply lines first.
- If necessary wear protective goggles and protective gloves and protect the surroundings against escaping product residues with a cloth.



DANGER!

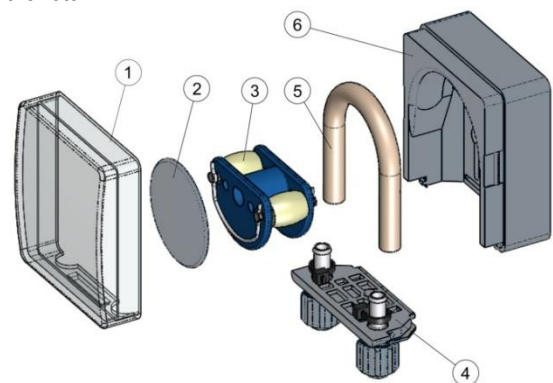
Danger due to rotating parts

The rotor of the dosing pump can start-up abruptly.

Possible consequence: Danger of crushing for fingers!

Ensure that the dosing pump remains disconnected from the operating voltage while replacing the hose (unplug the mains plug)!

The hose of the dosing pump is replaced without dismantling the rotor.



- Remove the emptied suction and pressure hoses from the hose holder. To do this open the blue clamping screws.
- Take the transparent cover 1 off of the pump.
- Take off the blue cover 2 of the rotor.
- Turn rotor 3 in such a manner that the flat side points to the left and is vertical.
- Pull the hose holder 4 out of its holder and lift it on the left side.
- Now turn the rotor 3 clockwise and follow with the hose lifted until it is completely free.
- Proceed in the reverse sequence for mounting.

The hose only, or the hose together with the hose holder can be replaced.

We recommend replacing the hose together with the hose holder. (Replacement hose set)

Art.-no.	Description
127402	Replacement hose Flockmatic / Vario S
127403	Replacement hose set Flockmatic / Vario S



NOTE

If only the hose is replaced, you must strictly ensure the following when mounting the hose

- Firm seat of the hose on the nozzles.
- The hose must not be fitted on twisted under any circumstances.
- You must ensure that the hose connectors are firmly seated..

4.7 Winter care

For brief interruption of use (e.g. several days) no special measures are required.

For longer interruptions of operation that extend over several weeks, as in the case of winter care the following tasks must be executed:

- Remove the suction lance from the canister and rinse it with water.
- Seal the delivery container, store it in a cool and dry location and protect against UV radiation.
- Rinse the hose pump with water.
- Take the dosing hose out of the pump.
- Flush all hoses with water and empty them completely.

After the winter season, all components must be examined to determine that they are functional. All dismantled parts must be remounted at their intended position. Check the settings of the Flockmatic Vario.

4.8 Decommissioning





If the device will be disposed of after its service life, it must be flushed out and the water drained. The device has been manufactured in accordance with the provisions of the ROHS Directive and the Waste Electrical and Electronic Equipment Directive. It does not belong in domestic waste.

Take the device to a suitable and appropriate collection point.

5 Technical data

Parameter	Value
Supply voltage	230VAC
Power consumption	max. 20VA
Ambient temperature	min.5 - max. 45°C
Delivery capacity	2,5 – 600ml/h
Counterpressure	max. 3 bar
Protection class - housing	P65
Dimensions (without mounting plate):	approx. 93 x 150 x 130 mm (WxHxD)

6 Spare parts

Art.-No.	Picture	Description
127 450		Flockmatic Vario
172 130		Suction fitting, rigid PR
127403		Replacement hose set Flockmatic / Vario S
127402		Pump hose Flockmatic / Vario S
100 509		PE dosing hose 6x4X1 (10 m)
171 207		Injection nozzle, 0.5 bar