

LavoWare Pro Series










INSTRUCTION MANUAL

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Safety


-  Make sure that the pressure at the rinse aid injection point is not higher than 40PSI.
-  Check that the suction hoses are inserted in the correct product.
-  Use a multimeter to check all the electrical connections on the LavoWare Pro. Applying the incorrect voltage could permanently damage the equipment. Lavo's Warranty does not cover mistakes with electrical connections. Do not connect to power supplies subject to widely fluctuating voltages and/or peaks of current. When making electrical connections, refer to the wiring diagram in this manual.
-  Check the voltage on the main power supply and make sure that it is between 80 and 265 VAC.
-  **CAUTION:** LavoWare Pro provides a high voltage at the transformer connection. Always turn off the power supply before doing any maintenance work on the equipment.
-  **CAUTION:** During installation and when making electrical connections, disconnect the power supply to the dishwasher.
-  Failure to follow the information provided in this manual could harm people or property, and compromise the way the equipment operates or damage it.

Check the contents of your package:

QTY	Check	Description
1		LavoWare Pro
2 or 3		Foot valves
1		Detergent injector
1		Rinse Injector
1		Sanitizer injector (3 Product)
1		Conductivity probe with wiring
1		Mounting Hardware: 2 screws, anchors, bracket
1		Conductivity probe installation kit (Optional)
3		Phoenix Connectors

Introduction

The LavoWare Pro is a versatile dosing system for all of your ware washing needs. The intuitive design allows for dispensing up to 3 chemicals, whether they are all liquid, or a single solid detergent with two liquids. The LCD display enables easy setup and installation. The LavoWare Pro can be used with single rack or conveyor dishwashers.

 **Please read this manual carefully, paying particular attention to the warnings and cautions related to the installation procedures. Always apply the necessary safety procedures, including the use of adequate personal protective equipment for your face, eyes, hands and clothing.**

 **Before proceeding with installation, read this manual and select the relevant operating mode:**


1. Review the package contents, technical specifications, and the operating principles.
2. Connect the plumbing, mechanical and the electrical connections.
3. Program the dispenser according to your application demands.

Technical Specifications

Power-supply requirements	100-240 VAC (24 VAC: using additional optional module) 50/60 Hz
Signal Voltage:	24-240 VAC or 160-240 VAC
Consumption	20W
Fuse	1.6A
Detergent Pump Flow	0.25 to 2.4 GPH
Rinse Pump Flow	.5GPH @ 40PSI
Sanitizer Pump Flow	.5GPH @ 40PSI
Conductive Probe Range	0 mS to 10 mS
Inductive Probe Range	1 mS to 50 mS
Case Rating	IP 65

Installation

Attach the equipment to a wall near the dishwashing machine (using the wall anchors supplied in the pack). It is best to keep the appliance at a height that is within 5 ft. of the chemical container. Make sure to follow all applicable legal regulations related to electrical and plumbing connections to make sure that the system is compliant. Refer to the wiring diagrams for the dishwashing machine when making electrical connections. Make sure all power is disconnected prior to starting the installation.

 **CAUTION:** Do not install the equipment near steam outlets as this could cause a short circuit, resulting in permanent damage to the equipment.

Installing the LavoWare Pro near the steam vents of the dishwasher may cause the LavoWare Pro circuit board to overheat, which could cause damage or result in operating problems.

MOUNTING THE DISPENSER

- Find a suitable position for installing the LavoWare Pro
- Use the brackets and material supplied for installation.
- Using the bracket as a drilling template, mark out the position of the holes.
- Use a drill to make the holes in the wall.
- Put the wall anchors in the holes.
- Fix the brackets in position (flat side against the wall with the holes at the bottom), using the screws provided.
- Insert the bracket you have just fixed to the wall in its housing in the back of the LavoWare Pro. (Fig. 1).
- To open the LavoWare Pro, unscrew the upper screws on the front cover by ¼ turn, and hold the cover until it is fully open.

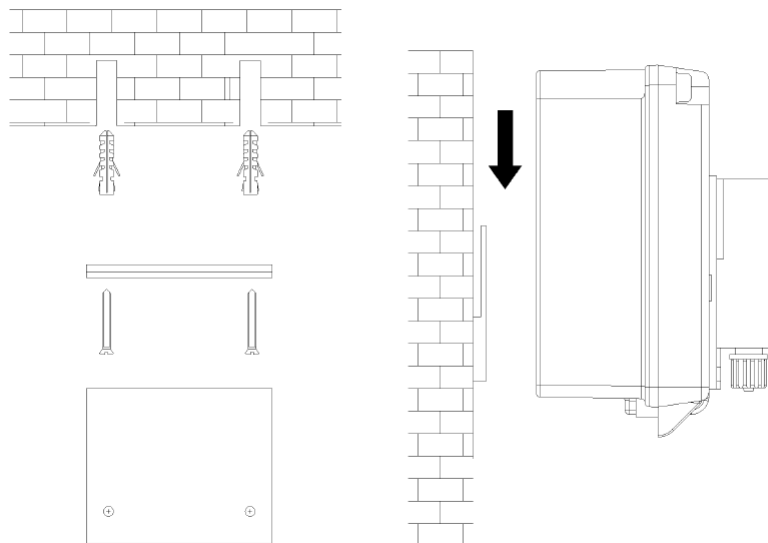
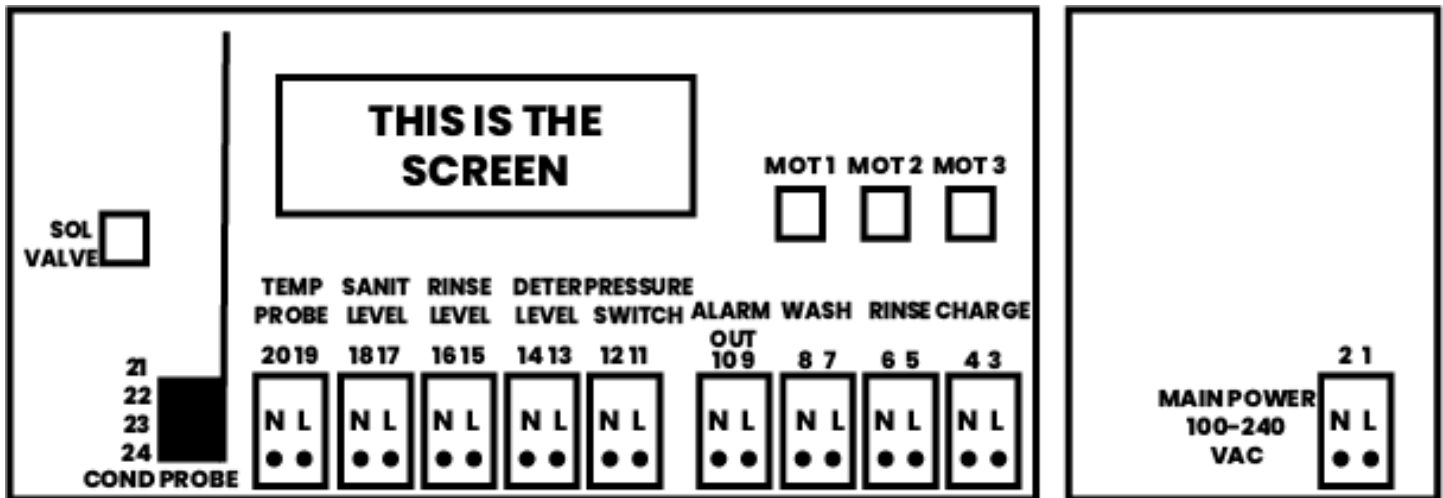


Fig. 1

CB Diagram



Power and Signal Connections:

Connection	Voltage	Connection
Main Power	VAC (24 or 115-230)	Connect NUETRAL (N) to #2 and LINE (L) to #1
Detergent Signal	VAC (24 or 115-230)	Locate WASH on CB. Connect NUETRAL to # 8 and LINE to #9.
Rinse Signal	VAC (24 or 115-230)	Locate RINSE on CB. Connect NUETRAL to #6 and LINE to #5.

Conductive & Inductive Probe Connections:

Connection	Voltage	Connection
Conductive Probe (standard)	0-5 VDC	Connection Port 19: Brown Wire Connection Port 20: White Wire Connection Port 21: Green Wire Connection Port 22: Yellow Wire
Inductive Probe	0-5 VDC	Same as above if using LAVO Inductive Probe

Low level connections: (intended for lances with a switch)

Connection	Voltage	Connection
Detergent Lance	Dry Contact	Locate DETER LEVEL. Connect NUETRAL (N) to #14 and LINE (L) to
Rinse Level	Dry Contact	Locate RINSE LEVEL. Connect NUETRAL (N) to #16 and LINE (L) to
Sani Level	Dry Contact	Locate DETER LEVEL. Connect NUETRAL (N) to #18 and LINE (L) to

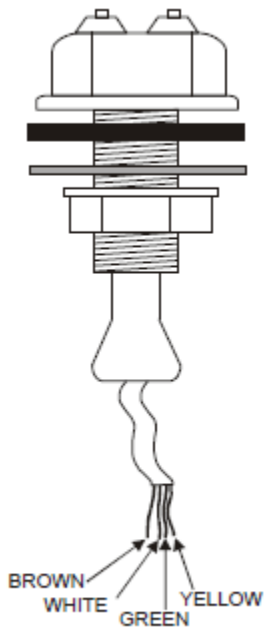
CAUTION: LavoWare Pro provide high voltage at the transformer connection. Always switch off the power supply before doing any maintenance work on the appliance.

Use a multimeter to check all the electrical connections on the LavoWare Pro. Applying the incorrect voltage could permanently damage the dispenser and such damage is not covered by the warranty. Do not connect to power supplies subject to widely fluctuating voltages and/or peak currents. When making any electrical connections, refer to the wiring diagram in this manual.

All wiring must be carried out in compliance with local regulations for electrical connections.

Probe Installation

Conductive Probe Installation:



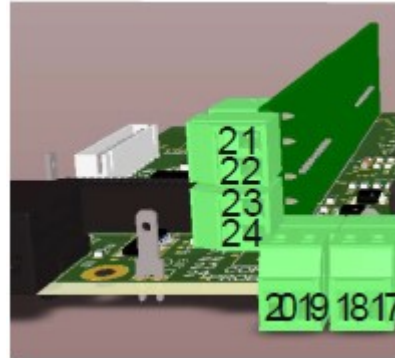
Connect the wires for the probe to the terminals **19, 20, 21 and 22, with the coloring as follows:**

Terminal 19—Brown

Terminal 20—White

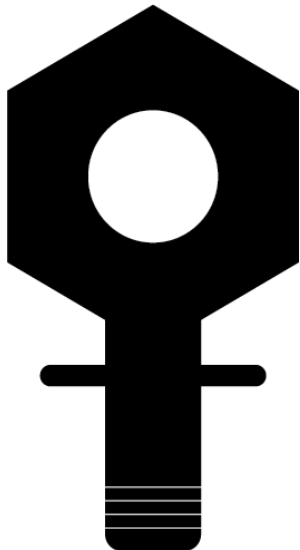
Terminal 21—Green

Terminal 22—Yellow



For optimal results, use 20AWG wire. Do not lay the wire near high voltage cables.

Inductive Probe Installation:



Connect the wires for the probe to the terminals **19, 20, 21, 23, and 24 with the coloring as follows:**

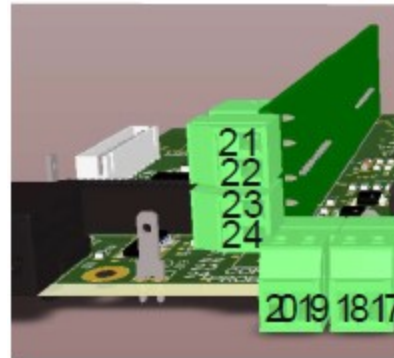
Terminal 19—Blue

Terminal 20—Brown

Terminal 21—Red

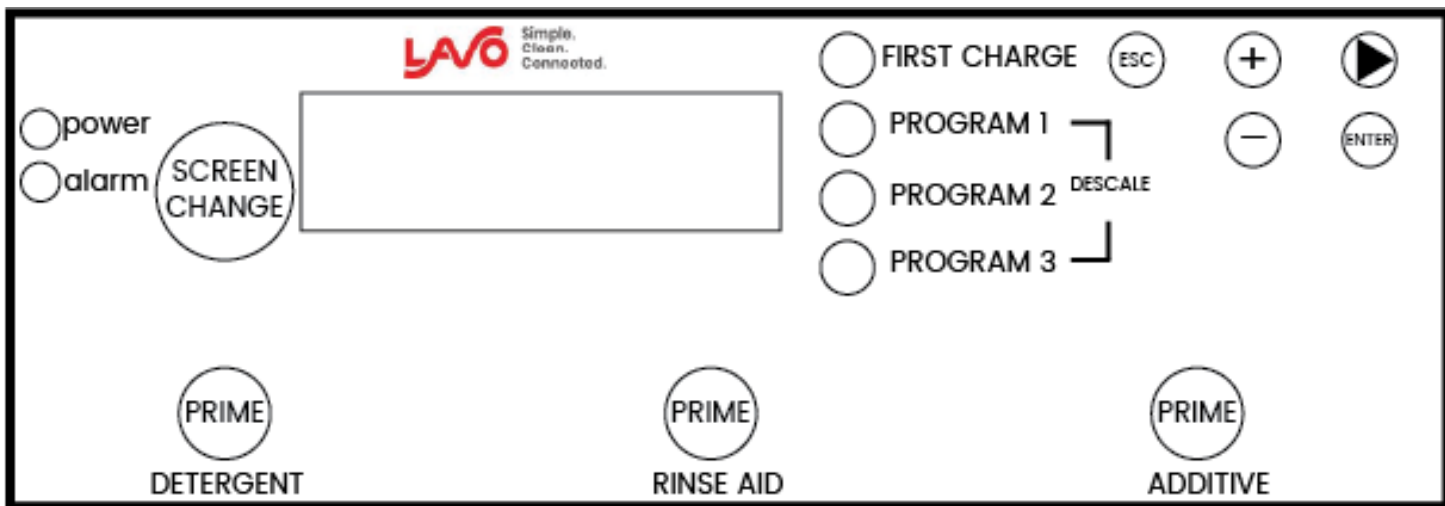
Terminal 23—White

Terminal 24—Grey & Black



The PT100 Inductive Probe, once connected, will automatically detect the tank temperature and begin to compensate for temperature loss.

Button Functions



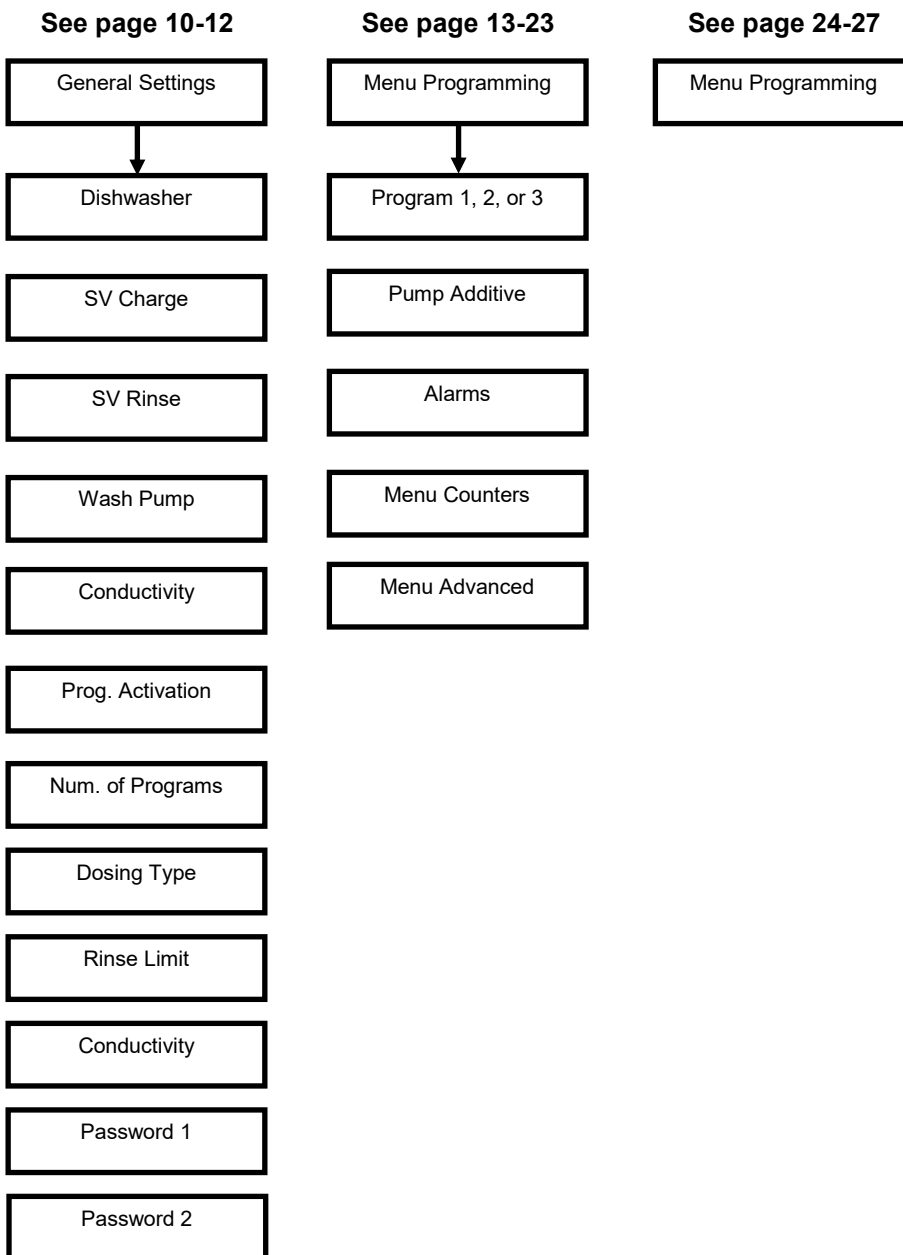
Key	Function
First charge	The first charge key will dose for the amount programmed. You cannot stop the dosage if you press this key.
Detergent pump priming	Priming is pre-programmed for 60 second. Press the button once to start priming. Press the button again to stop priming.
Rinse aid pump priming	Priming is pre-programmed for 60 second. Press the button once to start priming. Press the button again to stop priming.
Sanitizer pump priming	Priming is pre-programmed for 60 second. Press the button once to start priming. Press the button again to stop priming.
Screen Change	Use this key to select the display when the pump is in use.
ESC key	When programming, press this key 1 to go back a menu, and 2 times to exit.
UP key (+)	Use this key to toggle between menus, options, and text characters during programming.
DOWN key (-)	Use this key to toggle between menus, options, and text characters during programming.
ENTER key	This key is used to confirm the modifications to the settings just modified or to proceed
Program 1	This key is used to select the Program 1 during manual activation mode
Program 2	This key is used to select the Program 2 during manual activation mode. You can use this program to set a DESCALE operation.
Program 3	This key is used to select the Program 3 during manual activation mode

Menu Tree

PROGRAMMING MENU TREE

When you log in to the dispenser, you will see the 3 top level options below. ***The menus with content underneath them (general settings, and menu programming) have menus and sub-menus that may require adjustments to meet the requirements of your installation.***

Menu Statistics does not have any programmable features, so the tree was excluded from this page.



Programming: General Settings

PROGRAMMING BEGINS HERE

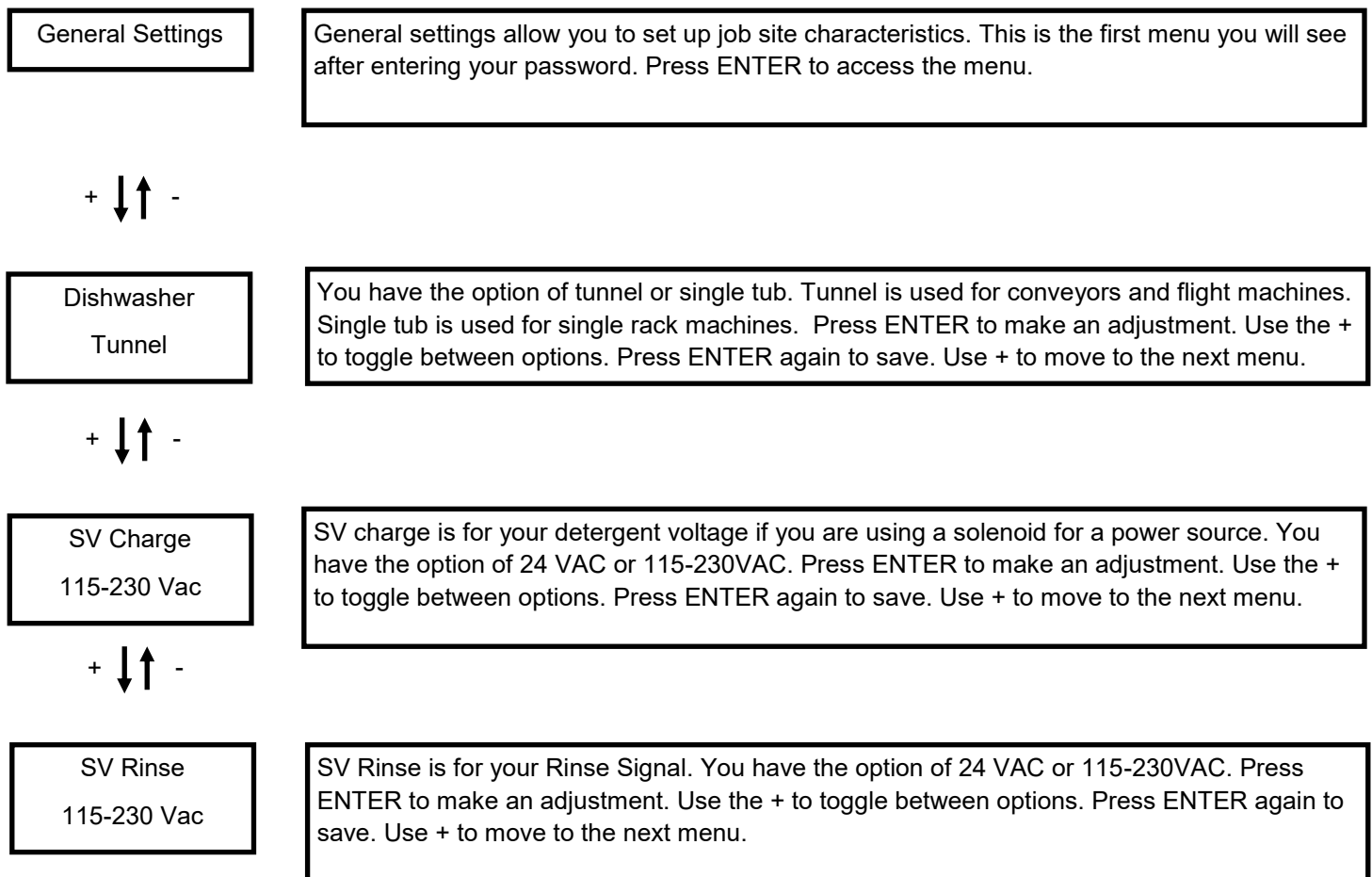
Accessing the dispenser, and toggling menus and options:

- To begin programming, hold the ENTER button for 5 seconds.
- The password screen will appear. Factory default is 0 0 0 0. Press ENTER.
- General Settings will be the first menu you see.
- Use the + sign to see the additional menus.
- Once inside of a menu press ENTER to adjust a setting. Use + and — buttons to toggle between the options. When you have completed the adjustment, press ENTER to save.
- Once Continue using + and — to advance through the menus.

*****The menus below flow using the + button.**

MENU 1: General Settings.

The purpose of General Settings is to set up the job site characteristics. When programming a new dispenser, it's important to beginning in this menu.



Programming: General Settings

+ ↓↑ -

Wash Pump
115-230 Vac

Wash Pump is the voltage for your detergent signal. You have the option of 24 VAC or 115-230VAC. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Conductivity
Yes

You have the option of YES or NO. Yes means you are going to use a probe. No means you are going to run probeless. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Prog. Activation
Manual

You have the option of automatic or manual. Leave this option as manual. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Num. of Programs
1, 2, or 3

You have the option of 3 programs. You will see the option for 2 if you have a 2 pump system and 3 if you have a 3 pump system. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Dosing type
Normal

The default is normal. Leave this option as Normal. Use + to move to the next menu.

+ ↓↑ -

Rinse limit
Continue

You have the option of continue or a fixed set of time. Continue will run for the duration of the rinse signal. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Conductivity
Band 80-20%

Conductivity is for probe mode. 80% and 20% represent the percentage the dispenser will dose before it begins pulse feeding. **For example**, if the set point is 100, the pump will dispense until it reaches 80 and will pulse feed for the remaining 20. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Programming: General Settings

+ ↓↑ -

Password 1

0 0 0 0

You have the option to adjust the default password to access the system. Press ENTER to make an adjustment. Use the + and — to toggle numbers. Use the RIGHT ARROW button to move to the right. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Password 2

0 0 0 0

Used for secondary access for displaying the statistics or setting the values for the “Counters” alarms. Press ENTER to make an adjustment. Use the + and — to toggle numbers. Use the RIGHT ARROW button to move to the right. Press ENTER again to save. Use + to move to the next menu.

Press the ESC button one time. You will see General Settings.

Use the + button to move to Menu Programming.

Once you see Menu Programming, press ENTER.

MENU PROGRAMMING BEGINS ON THE NEXT PAGE

Menu Programming—Program 1/2

After you have programmed General Settings, you can set up the pumps to do what you need.

Menu Programming will have up to 3 program options, depending on if you selected multiple programs in the General Settings.

The following is for Probe Mobe.

Program 1

This is the first option you will see in the Menu Programming Tree. Press ENTER to begin programming your DETERGENT and RINSE pump. The following is programming in PROBE MODE.

+ ↓↑ -

Filter Charge
20 Sec

Filter charge is the minimum amount of time a signal need to be present to be recognized by the LavoWare Pro. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Det First Charge
20 Sec

Det first charge is only necessary if you need to manually dose the first charge. You can use this if you do not have a detergent signal to connect. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

SetPoint
Press ENTER

SetPoint is used when your tank is titrated at the level that is necessary to operate. Press ENTER to make to save the current tank titration. Use + to move to the next menu.

+ ↓↑ -

Filter Charge
20 Sec

SetPoint Reg. is to manually adjust the titration setpoint. If you have not titrated the dish washer, you can come back and manually enter the value here. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Menu Programming– Program 1/2

Rinse Rinse Aid
Speed

+ ↓ ↑ -

Rinse Speed
50%

OR

ON	Speed	Rin
0.2	50%	<-

OR

Rinse Time
20 Sec

Rinse can be dosed using one of three options.

Speed: The pump will run for the duration of the rinse signal. You can adjust the speed of the motor next if you select this.

On/Off: The pump will come ON for the time selected and turn off. For example, on for .2 seconds and off for .8 seconds. This happens for the duration of the signal.

Time: The pump will come on for a specific number of seconds. You can adjust the seconds next if you select this.

Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

If you selected Rinse Speed, this option will appear. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

If you selected Rinse ON/OFF, this option will appear. You can use this if you do not have a detergent signal to connect. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

If you selected Rinse Time, this option will appear. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

Program 1 programming is complete.

If you have multiple programs, repeat these steps.

Press the ESC button once.

You will see Menu Programming, press Enter.

Menu Programming—Program 1/2

After you have programmed General Settings, you can set up the pumps to do what you need.

Menu Programming will have up to 3 program options, depending on if you selected multiple programs in the General Settings.

The following is for Probeless Mobe.

Program 1

This is the first option you will see in the Menu Programming Tree. Press ENTER to begin programming your DETERGENT and RINSE pump. The following is programming in PROBE MODE.

+ ↓↑ -

Filter Charge
20 Sec

Filter charge is the minimum amount of time a signal need to be present to be recognized by the LavoWare Pro. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Det First Charge
20 Sec

Det first charge is for the initial fill. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Reset Det
Press ENTER

Reset Det is the recharge for the detergent. The recharge allows for 3 methods of dosing detergent back into the washer.

Speed: The pump will run for the duration of the rinse signal. You can adjust the speed of the motor next if you select this.

On/Off: The pump will come ON for the time selected and turn off. For example, on for .2 seconds and off for .8 seconds. This happens for the duration of the signal.

Time: The pump will come on for a specific number of seconds. You can adjust the seconds next if you select this.

Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Menu Programming– Program 1/2

Reset Speed
50%

If you selected Reset Speed, this option will appear. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

OR

ON	Speed	Rin
0.2	50%	<-

If you selected Reset ON/OFF, this option will appear. You can use this if you do not have a detergent signal to connect. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

OR

Reset Time
20 Sec

If you selected Reset Time, this option will appear. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

+ ↓↑ -

Rinse Rinse Aid
Speed

Rinse can be dosed using one of three options.

Speed: The pump will run for the duration of the rinse signal. You can adjust the speed of the motor next if you select this.

On/Off: The pump will come ON for the time selected and turn off. For example, on for .2 seconds and off for .8 seconds. This happens for the duration of the signal.

Time: The pump will come on for a specific number of seconds. You can adjust the seconds next if you select this.

Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Menu Programming– Program 1/2

Rinse Speed
50%

If you selected Rinse Speed, this option will appear. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

OR

ON	Speed	Rin
0.2	50%	<-

If you selected Rinse ON/OFF, this option will appear. You can use this if you do not have a detergent signal to connect. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

OR

Rinse Time
20 Sec

If you selected Rinse Time, this option will appear. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

Program 1 programming is complete.

If you have multiple programs, repeat these steps.

Press the ESC button once.

You will see Menu Programming, press Enter.

Menu Programming– 3rd Pump

From Menu Programming, Press ENTER.

Program 1 will show up.

Use the + button to scroll to Pump Additive

Press ENTER

Additive Type
Sanitizer

The 3rd pump can be used for sanitizer or descaler. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Sani pump mode
Rinse

Decide if the Sanitizer will run with Rinse or Detergent. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Sani speed
50%

Choose the speed of the sanitizer pump. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

OR

Desc. Pump
Speed

If you selected for the 3rd pump to dose a descaler product, this menu option will appear.

Speed: The pump will run for the duration of the rinse signal. You can adjust the speed of the motor next if you select this.

Time: The pump will come on for a specific number of seconds. You can adjust the seconds next if you select this.

Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

+ ↓↑ -

Sani speed
50%

If you selected for the sanitizer pump to run off of speed this option will appear. Likewise, if you selected for the sanitizer pump to run off time, you will see the option to adjust the time setting. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

Menu Programming– Alarms

From Menu Programming, Press ENTER.

Program 1 will show up.

Use the + button to scroll to Alarms

Press ENTER

Buzzer
Active

The default setting for the buzzer is active. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Input levels
N.O.

If you are using lances that have a switch, you can adjust whether the switch is normally open or normally closed using this setting. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

Input levels
Not active

If you are using lances with a switch, this setting should be active. Otherwise, leave it inactive.. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

+ ↓ -

OFA
999 Sec

OFA is an emergency setting for the dispenser while in probe mode. This setting allows you to adjust the amount of time this setting will be active. It will need to be reset to adjust the alarm if the alarm becomes active. Otherwise, leave it inactive.. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

+ ↓↑ -

OFA2
Block

OFA2 has the option of BLOCK or Emergency. Block will prevent emergency mode from entering secondary settings. Emergency allows you to program a second set of dosages in case of probe failures. Otherwise, leave it inactive.. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

Menu Programming– OFA2

If you adjusted OFA2 to Emergency

The following menu options should be adjusted.

Use the + button to scroll to Alarms

Press ENTER

SOS OFA2 Charge
20 Sec

The OFA2 charge will be the initial charge in emergency mode. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

SOS OFA2 Rinse
50%

SOS OFA2 Rinse is the setting for the Rinse Speed of the Rinse Motor. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

+ ↓↑ -

SOS OFA2 Reset
50%

OFA2 Reset is the Detergent Recharge setting in emergency mode. The pump will run for the same duration of your OFA2 Charge at a reduced speed. You adjust the speed with this menu option. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save.

Menu Programming– Counters

From Menu Programming, Press ENTER.

Program 1 will show up.

Use the + button to scroll to Counters

Press ENTER

The counters menu allows you to measure the amount of product remaining in volume. You set the initial volume of each product. When the product has gone through the entire amount programmed, an alarm will sound and the pump will stop. You have to replace the product and reset the counter for the pump to work again.

NOT ACTIVE is the default setting. If you do not wish to use this feature, do not change the default setting.

Det Counter
Not Active

+ ↓↑ -

The default setting for the Detergent Counter is Not Active. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Rinse Counter
Not active

+ ↓↑ -

The default setting for the Rinse Counter is Not Active. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Addit. Counter
Not active

+ ↓↑ -

The default setting for the Additive Counter is Not Active. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Alarm duration
99 min

This setting is for the duration of the Alarm when one of the product alarms sound. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Menu Programming– Advanced

From Menu Programming, Press ENTER.

Program 1 will show up.

Use the + button to scroll to Advanced

Press ENTER

The advanced menu allows you to name the dispenser and products, set daylight savings, adjust the rack time, and calibrate the probe.

System

OK

+ ↓↑ -

The default setting for the dispenser is System OK. You can input different text to have displayed on the front screen while the dispenser is not in programming mode. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Daylight Saving

Not active

+ ↓↑ -

If you live in a location with bi-annual daylight savings adjustments, you can edit this setting to active or inactive. Active is when you want to extend the clock by 1 hour. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Customer ID

Insert ID Code

+ ↓↑ -

If you want to display the customer name on the front screen, you can edit this setting. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Product 1

DET

+ ↓↑ -

This setting allows you to name Product 1—the default is DET. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Product 2

RINSE

This setting allows you to name Product 1—the default is Rinse. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Menu Programming– Advanced

Product 3
ADDITIVE

+ ↓↑ -

This setting allows you to name Product 3—the default is Additive. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Racks Time
15 sec

+ ↓↑ -

Racks Time is the total time it takes for 1 rack to pass through the machine. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

Calibration
Probe

To calibrate your probe, you can do it from this menu. Press ENTER to make an adjustment. Use the + to toggle between options. Press ENTER again to save. Use + to move to the next menu.

From here the sub-menu will loop back to the first option.

Menu: Statistics

MENU	DEFINITION
First Charges Prog1 0 + ↓↑ -	If in timed mode, this allows you to see the number of first charges dosed for Program 1.
First Charges Prog2 0 + ↓↑ -	If in timed mode, this allows you to see the number of first charges dosed for Program 2.
First Charges Prog3 0 + ↓↑ -	If in timed mode, this allows you to see the number of first charges dosed for Program 3.
First Charges Prog3-B 0 + ↓↑ -	If in timed mode, this allows you to see the number of first charges dosed for Program 3-B.
First Charges Total 0 + ↓↑ -	If in timed mode, this allows you to see the number of first charges dosed for all of your programs.
Wash/Rinse Prog1 0 + ↓↑ -	If in probe mode, this allows you to see the number of first charges dosed for Program 1.
Wash/Rinse Prog2 0 + ↓↑ -	If in probe mode, this allows you to see the number of first charges dosed for Program 2.
Wash/Rinse Prog3 0 + ↓↑ -	If in probe mode, this allows you to see the number of first charges dosed for Program 3.
Wash/Rinse Prog3-B 0	If in probe mode, this allows you to see the number of first charges dosed for Program 3-B.

Menu: Statistics

MENU	DEFINITION
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Wash/Rinse</div> <div>Totals 0</div> </div> </div>	<div>If in probe mode, this allows you to see the number of first charges dosed for all of your programs.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Drums Washed</div> <div>Prog1 0</div> </div> </div>	<div>This allows you to see the total number of loads run in program 1.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Drums Washed</div> <div>Prog2 0</div> </div> </div>	<div>This allows you to see the total number of loads run in program 2.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Drums Washed</div> <div>Prog3 0</div> </div> </div>	<div>This allows you to see the total number of loads run in program 3.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Drums Washed</div> <div>Prog3-B 0</div> </div> </div>	<div>This allows you to see the total number of loads run in program 3-B.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Drums Washed</div> <div>Totals 0</div> </div> </div>	<div>This allows you to see the total number of loads run for all of your programs.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Det Activation</div> <div>P1 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the detergent pump for program 1.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Det Activation</div> <div>P2 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the detergent pump for program 2.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Det Activation</div> <div>P3 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the detergent pump for program 3.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Det Activation</div> <div>P3-B 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the detergent pump for program 3-B.</div>

Menu: Statistics

MENU	DEFINITION
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Det Activation</div> <div>Total 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the detergent pump for all of your programs.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Rinse Activation</div> <div>P1 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the rinse pump for program 1.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Rinse Activation</div> <div>P2 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the rinse pump for program 2.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Rinse Activation</div> <div>P3 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the rinse pump for program 3.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Rinse Activation</div> <div>P3-B 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the rinse pump for program 3-B.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Rinse Activation</div> <div>Total 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the additive pump for all of your programs.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Add. Activation</div> <div>P1 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the additive pump for program 1.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Add. Activation</div> <div>P2 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the additive pump for program 2.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Add. Activation</div> <div>P3 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the additive pump for program 3.</div>
<div> <div> <div>+</div> <div>↓↑</div> <div>-</div> </div> <div> <div>Add. Activation</div> <div>P3-B 0h 0m 0s</div> </div> </div>	<div>If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the additive pump for program 3-B.</div>

Menu: Statistics

MENU

+ ↓↑ -

Add. Activation
Total 0h 0m 0s

DEFINITION

If in tunnel mode, this is the sum of number of time in hours, minutes, and seconds, the signal has been activated for the additive pump for all of your programs.

+ ↓↑ -

System Life
0d 0h 0m

This is the total amount of time the system has been powered on. It is equivalent to the life of the electronics.

+ ↓↑ -

Average Cond.
0.0 ms

In probe mode, this is the average conductivity of the dish machine while in use.

+ ↓↑ -

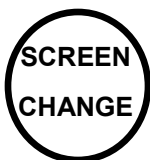
Reset Stat.
Press ENTER

To reset the statistics of the dispenser, Press Enter. You will be asked to confirm your decision, Press Enter again to proceed.

FRONT SCREEN DISPLAY

DISPLAY MODE

Press the **SCREEN CHANGE** button on the left side of the screen to change what is shown on the front screen while the dispenser is not in programming mode. This is the screen the end user will see most often.



System
SYSTEM OK

This text can be changed in menu advanced. It is default text to show the system is ok. When the system alarms, the screen will show the alarm.

Language
ENGLISH

To change the default language of the dispenser, Press ENTER. Use the + button to toggle between options. Press ENTER again to save.

Prog1 Normal
 Manual

Program 1, 2 and 3 will allow you to adjust the mode of operation. The user can pick 1, 2 or 3 if they all have programming.

Det Rinse Add
OFF OFF OFF

Detergent, Rinse and Additive will show On or Off depending on whether or not there is a signal being received.

SP=99SkU 99.9MS
CD=86SkU 91.9MS

SP is the Set Point and the tolerance set in the programming.
CD is the current conductivity reading of the tank.

Temperature
25° C 77° F

Temperature shows the current temperature in the tank. You need to calibrate the temperature for a correct reading.

Counters Det / Rinse / Add

Counters will allow you see the total time the detergent has been activated, and the total amount of rinse aid that has been dispensed in liters.

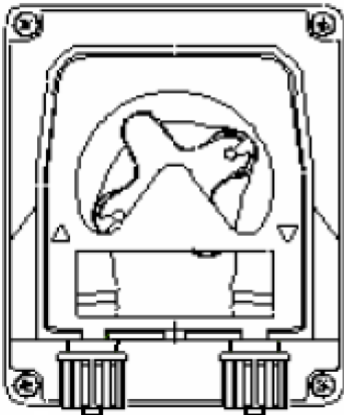
Date Time

In the programming, you can set the current date and time.

Maintenance

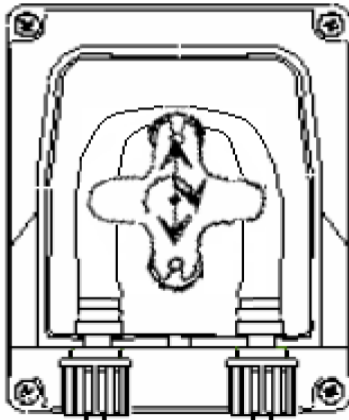
REPLACING THE SQUEEZE TUBE ON THE PERI. PUMP

1



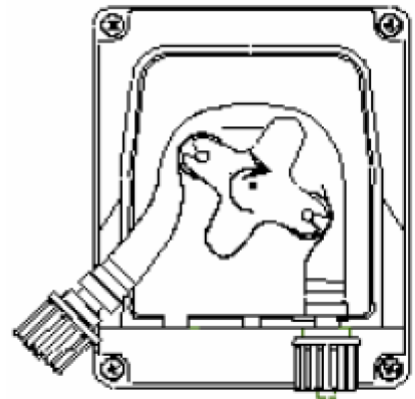
Remove the four screws.
Release the cover by lifting
the left connector

2



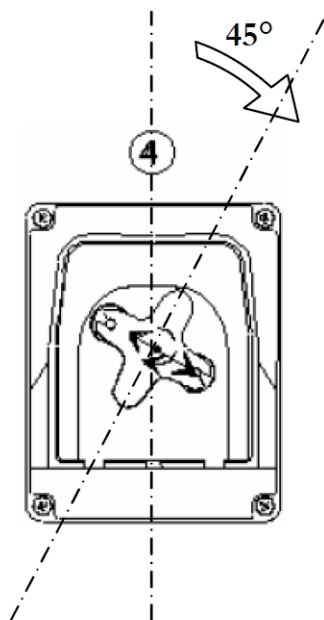
Position the roller vertically,
turning it in a clockwise di-
rection.

3



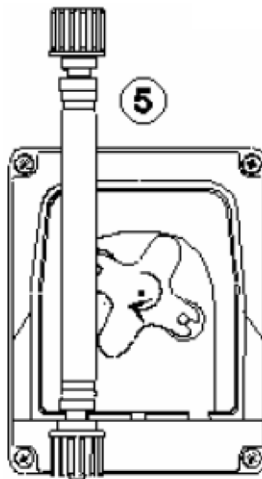
Pull the squeeze tube out in
a clockwise motion.

4



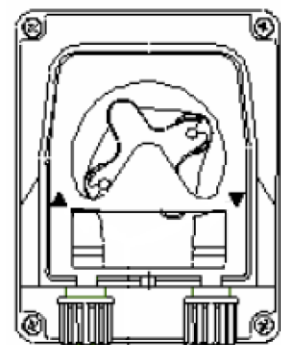
Position the roller at 45°
turning it clockwise.

5



Insert the left connector into
the housing and pass the
hose under the roller, guide
to the right connector.

6



Reposition the cover on the
pump. Replace screws.

Troubleshooting

Problem	Solution
THE POWER SUPPLY LED (power) DOES NOT SWITCH ON	<ol style="list-style-type: none"> 1. Check the fuses. 2. Make sure that the voltage at the circuit power supply terminals is correct. For details on the data plate and the connections diagram, refer to this manual.
ONE OR MORE PUMPS ARE NOT RUNNING	<ol style="list-style-type: none"> 1. Check the terminals on the circuit board for the pump motor for any loose screws or disconnected wires. 2. Check that the voltage on the signal terminals is correct. For details on the data plate, refer to this manual.
EXCESS DETERGENT	<ol style="list-style-type: none"> 1. Check the voltage on the power supply to the system. 2. Check that the concentration set point was set correctly. 3. Make sure that there is no residue or debris on the conductivity or inductive probe that would compromise the correct reading of the concentration in the tank. 4. Check that the dosing time for the detergent pump has not been set at excessively high values.
TOO LITTLE DETERGENT	<ol style="list-style-type: none"> 1. Check the voltage on the power supply to the system. 2. Check that the concentration set point was set correctly. 3. Check the efficiency of the conductivity or inductive probe. 4. Check that the dosing time for the detergent pump has not been set at excessively low values.
EXCESS RINSE AID OR SANITIZER	<ol style="list-style-type: none"> 1. Check for possible chemical product leaks on the delivery line.
TOO LITTLE RINSE AID OR SANITIZER	<ol style="list-style-type: none"> 1. Check that the dosing time or speed for the pump has not been set at excessively high values. 2. Check for possible chemical product leaks on the delivery line.
THE PUMP RUNS TOO SLOWLY	<ol style="list-style-type: none"> 1. Check that the roller block has not seized. 2. Check lubrication of the flexible hose.
PRIMING PUMP LEAKING	<ol style="list-style-type: none"> 1. Check the suction line for holes. 2. Check that the pump's peristaltic hoses are not cracked or punctured.

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