PURELAB Option-Q 7/15 - US
Operator Manual
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TABLE OF CONTENTS

1. INTRODUCTION.........................................................1
   1.1 Product Range ...............................................1
   1.2 Use of this Manual........................................1
   1.3 Customer Support ........................................1

2. HEALTH AND SAFETY NOTES.................................2
   2.1 Electricity.......................................................2
   2.2 Pressure..........................................................2
   2.3 Ultra-Violet Light............................................2
   2.4 Sanitization Chemicals.....................................3
   2.5 Control of Substances Hazardous to Health (COSH)........3

3. PRODUCT AND PROCESS DESCRIPTION..................4
   3.1 Product Description..........................................4
   3.2 Process Description.........................................5
   3.3 Technical Specifications....................................7

4. CONTROLS..................................................................11

5. INSTALLATION INSTRUCTIONS............................12
   5.1 Unpacking the PURELAB Option-Q........................12
   5.2 Positioning the PURELAB Option-Q......................12
   5.3 Connecting up the PURELAB Option-Q..................14
   5.4 Initial Controller Set-Up...................................17
   5.5 Initial Start Up................................................20

6. OPERATION................................................................21
   6.1 Intermittent Mode..............................................21
   6.2 Alarm Conditions...............................................22

7. MAINTENANCE.........................................................24
   7.1 Replacing the LC140 Pre-treatment Cartridge........25
   7.2 Replacing the LC163 Ion-exchange Cartridge Pack......26
   7.3 Replacing the Ultraviolet Lamp (LC118)...............27
   7.4 Cleaning the Re-Circulation Strainer....................29
   7.5 Replacement of LC143 Reverse Osmosis Cartridge(s)....29

8. SANITIZATION PROCEDURE.................................30
   8.1 Liquid sanitization............................................30
   8.2 Tablet sanitization...........................................34

9. TROUBLE SHOOTING..............................................39

10. CONSUMABLES AND ACCESSORIES......................40

11. KEY TO CONTROL PANEL......................................41
11.1 Icons ................................................................. 41
11.2 Alarm Conditions .................................................... 41
11.3 Replacement Timers .................................................. 41
11.4 Low Level, Quality and Standby Alarms ......................... 42

12. WARRANTY/CONDITIONS OF SALE ....................... 43

13. USEFUL CONTACT DETAILS ................................... 45
1. INTRODUCTION

1.1 Product Range
This Operator Manual has been prepared for the PURELAB Option-Q product models.

- PURELAB Option-Q7-US
- PURELAB Option-Q7 BP-US (with boost pump)
- PURELAB Option-Q15-US
- PURELAB Option-Q15 BP-US (with boost pump)

1.2 Use of this Manual
This manual contains full details on installation, commissioning and operation of the PURELAB Option-Q unit. If this unit is used contrary to the instructions in this handbook, then the safety of the user may be compromised.

1.3 Customer Support
Service support and consumable items are available from your local supplier or distributor. Refer to customer service contact details shown at the end of this publication.
2. HEALTH AND SAFETY NOTES

**PURELAB Option-Q** products have been designed to be safe, however, it is important that personnel working on these units understand any potential dangers. All safety information detailed in this handbook is highlighted as WARNING and CAUTION instructions. These are used as follows:

**WARNING!**  
WARNINGS ARE GIVEN WHERE FAILING TO OBSERVE THE INSTRUCTION COULD RESULT IN INJURY OR DEATH TO PERSONS.

**CAUTION!**  
Cautions are given where failure to observe the instruction could result in damage to the equipment, associated equipment and processes.

### 2.1 Electricity

It is essential that the electrical supply to the **PURELAB Option-Q** is isolated before any items are changed or maintenance work performed.

The ON/OFF switch is located at the left-hand side of the unit. The mains power lead is located just behind the ON/OFF switch.

**WARNING!**  
THIS APPLIANCE MUST BE EARTHED.

### 2.2 Pressure

The main water supply pressure should be isolated and residual pressure released prior to removal of any cartridges or carrying out work on the unit.

Switching off the electrical supply will isolate the source of pressure, but pressure trapped within the unit should be released by opening the dispense tap until water flow stops.

### 2.3 Ultra-Violet Light

The **PURELAB Option-Q** unit is fitted with a ultra-violet lamp. The UV lamp is enclosed in a stainless steel chamber ensuring the operator will not be exposed to UV light.

**WARNING!**  
UNDER NO CIRCUMSTANCES SHOULD THE LAMP BE CONNECTED AND ACTIVATED WHEN OUTSIDE THE HOUSING.
2.4 Sanitization Chemicals

During the sanitization cycle EfferSan™ Multi-purpose Disinfecting Tablets or Minncare Cold Sterilant is used and relevant safety guidance is included in this handbook. Please refer to the manufacturer for material safety data sheets.

EfferSan™ and Minncare Cold Sterilant are EPA registered as a sterilant, high level disinfectant, and sanitizer.

EfferSan™ and Spent Minncare Cold Sterilant are acidic and require normal neutralization as specified by your local state and local regulations.

1% of Minncare Cold Sterilant has a pH of 3.5.

2.5 Control of Substances Hazardous to Health (COSHH)

Material safety data sheets covering the various replaceable cartridges are available upon request. Contact your local supplier or distributor.
3. PRODUCT AND PROCESS DESCRIPTION

3.1 Product Description

This handbook covers the operator instructions for the PURELAB Option-Q unit.

The PURELAB Option-Q water purification unit has been specifically designed to provide a supply of highly purified water.

Typically the PURELAB Option-Q is operated with a Docking Vessel DV25 (Cat. No. LA621) which provides a reservoir of 25 liters of highly purified water. The PURELAB Option-Q can also be operated with alternative reservoirs providing the level control interface is compatible. (See Section 10 - Consumables and Accessories).

The PURELAB Option-Q can be bench or wall mounted with an optional wall mounting kit available. A range of accessories are available to complement the unit. (See Section 10 - Consumables and Accessories, for detail).
3.2 Process Description

The **PURELAB Option-Q** process links four purification technologies, Reverse Osmosis, adsorption, ion-exchange and photo oxidation and also incorporates a re-circulation pump and an optional RO feed water boost pump. A sub-micron point of use filter is also available as an option.

The unit is designed to operate from a good quality potable water supply, and produces either 7 or 15 liters per hour of purified water which is further purified and circulated through a treated water reservoir. The ultrapure water can be dispensed at 1 liter/minute.

A graphics screen displays the system status and provides control by means of three function buttons.

The water is processed and treated by the **PURELAB Option-Q** unit as follows:

- Potable water enters through a strainer and inlet solenoid valve at either regulated mains water pressure, or is pumped by means of a feed water pump (optional), and passes through the pre-treatment cartridge. The pre-treatment cartridge has been designed to protect the reverse osmosis cartridges from particulate/colloidal matter and excessive free chlorine, which may be present in the incoming feedwater.

- The pre-treated water then passes the sanitization port and through one or two reverse osmosis cartridges, set up in series, which split the flow into permeate and concentrate streams. The permeate water is further purified whilst the waste concentrate stream is passed to drain.

- The permeate water passes through a water quality sensor which measures the conductivity of the water.

- The permeate water is drawn into the main re-circulation stream by the re-circulation pump together with water from the reservoir and passes through the re-circulation purification loop.

- This water is pumped directly through the UV chamber where it is exposed to intense multi wavelength UV radiation to provide continuous bacterial control and photo oxidation of organic molecules.

- The partially purified water then passes through the ion-exchange cartridge which removes dissolved ionic impurities from the permeate water.

- Finally, the water is passed through a:
  - Water quality sensor, which measures the resistivity of the water.
  - Temperature sensor which provides accurate temperature measurement.
  - The deionised water is either dispensed through a dispense tap, or returns to the reservoir. An optional point of use 0.2μm bacterial filter can be fitted to the dispense tap for added protection.
  - During periods of non-use the unit will automatically operate in intermittent re-circulation mode to maintain water purity with maximum efficiency.
Process Flow - PURELAB Option-Q
### 3.3 Technical Specifications

The Technical Specifications for the **PURELAB Option-Q** are as follows:

<table>
<thead>
<tr>
<th>Feedwater</th>
<th><strong>PURELAB Option-Q 7</strong></th>
<th><strong>PURELAB Option-Q 15</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source Quality</strong></td>
<td>Potable mains water supply</td>
<td>Potable mains water supply</td>
</tr>
<tr>
<td><strong>Fouling Index-maximum</strong></td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Conductivity</strong></td>
<td>1400μS/cm</td>
<td>1400μS/cm</td>
</tr>
<tr>
<td><strong>Total Chlorine</strong></td>
<td>0.5ppm</td>
<td>0.5ppm</td>
</tr>
<tr>
<td><strong>Heavy Metals - maximum</strong></td>
<td>0.05ppm</td>
<td>0.05ppm</td>
</tr>
<tr>
<td><strong>Silica - maximum</strong></td>
<td>30ppm</td>
<td>30ppm</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>1 - 35°C</td>
<td>1 - 35°C</td>
</tr>
<tr>
<td><strong>Flowrate (Maximum requirement)</strong></td>
<td>78l/hr</td>
<td>85l/hr</td>
</tr>
<tr>
<td><strong>Drain Requirements (gravity fall with air gap). Maximum during Service</strong></td>
<td>70l/hr</td>
<td>70l/hr</td>
</tr>
</tbody>
</table>

| Feedwater Pressure | | |
|---------------------|---------------------|
| **Maximum - without internal boost pump** | 6.0 bar (90 psi) | 6.0 bar (90 psi) |
| **Minimum - without internal boost pump** | 4.0 bar (60 psi) | 4.0 bar (60 psi) |
| **Maximum - with internal boost pump** | 2.0 bar (30 psi) | 2.0 bar (30 psi) |
| **Minimum - with internal boost pump** | Flooded Suction | Flooded Suction |

| Dimensions | | |
|------------|---------------------|
| **Height** | 460mm (18.1") | 460mm (18.1") |
| **Width** | 550mm (21.7") | 550mm (21.7") |
| **Depth** | 270mm (10.6") | 270mm (10.6") |
| **Weight** | | |
| With internal boost pump | 20kg (44lb) | 21kg (46lb) |
| Without internal boost pump | 18kg (40lb) | 19kg (42lb) |

| Connections | | |
|-------------|---------------------|
| **Inlet-quick connect** | 8mm (5/16") OD | 8mm (5/16") OD |
| **Outlet-quick connect** | 8mm (5/16") OD | 8mm (5/16") OD |
| **Drain RO-quick connect** | 8mm (5/16") OD | 8mm (5/16") OD |
| **Reservoir feed/return-quick connect** | 8mm (5/16") OD | 8mm (5/16") OD |
| **Positioning** | Wall, bench or under bench mounted. | Wall, bench or under bench mounted. |
| **Environment** | Clean dry indoor. Temp 5 - 40°C. Humidity max 80% non-condensing. | Clean dry indoor. Temp 5 - 40°C. Humidity max 80% non-condensing. |
### Electrical Requirements

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains Input</td>
<td>100-240V ac, 50-60Hz all models</td>
</tr>
<tr>
<td>System Voltage</td>
<td>24V dc</td>
</tr>
<tr>
<td>Power Consumption with boost pump</td>
<td>90VA</td>
</tr>
<tr>
<td>Power Consumption without boost pump</td>
<td>60VA</td>
</tr>
<tr>
<td>Fuses</td>
<td>2 x T6.3 Amp</td>
</tr>
<tr>
<td>Reservoir level connection</td>
<td>Jack Plug 3.5mm</td>
</tr>
<tr>
<td>Noise Level</td>
<td>&lt;45dBA</td>
</tr>
</tbody>
</table>

### User Interface

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>Continuous graphical and numerical reservoir level display</td>
</tr>
<tr>
<td></td>
<td>Graphical flow schematic on screen with mimic display</td>
</tr>
<tr>
<td></td>
<td>Intuitive icons (Multilingual)</td>
</tr>
<tr>
<td>Adjustable settings</td>
<td>Auto restart after power failure</td>
</tr>
<tr>
<td></td>
<td>Audible alarm</td>
</tr>
<tr>
<td></td>
<td>Water purity units</td>
</tr>
<tr>
<td></td>
<td>Water purity</td>
</tr>
<tr>
<td>Indicators</td>
<td>Reverse osmosis permeate water</td>
</tr>
<tr>
<td></td>
<td>De-ionized water</td>
</tr>
<tr>
<td></td>
<td>Temperature</td>
</tr>
<tr>
<td></td>
<td>Reservoir</td>
</tr>
<tr>
<td></td>
<td>Pre-treatment cartridge</td>
</tr>
<tr>
<td></td>
<td>UV lamp</td>
</tr>
<tr>
<td></td>
<td>Ion-exchange cartridge</td>
</tr>
<tr>
<td>Indicators</td>
<td>Conductivity</td>
</tr>
<tr>
<td></td>
<td>Temp compensated resistivity/conductivity</td>
</tr>
<tr>
<td></td>
<td>Degrees centigrade</td>
</tr>
<tr>
<td></td>
<td>% Full</td>
</tr>
<tr>
<td></td>
<td>Maximum remaining life indicator</td>
</tr>
<tr>
<td>Alarms-Audiovisual</td>
<td>Purified water purity</td>
</tr>
<tr>
<td></td>
<td>Reservoir</td>
</tr>
<tr>
<td></td>
<td>Reservoir Low level control disconnect alarm</td>
</tr>
<tr>
<td></td>
<td>UV failure alarm</td>
</tr>
<tr>
<td></td>
<td>Pre-treatment cartridge</td>
</tr>
<tr>
<td></td>
<td>UV lamp</td>
</tr>
<tr>
<td></td>
<td>Ion-exchange cartridge</td>
</tr>
<tr>
<td>Alarms-Audiovisual</td>
<td>Outside set point alarm</td>
</tr>
<tr>
<td></td>
<td>Low level</td>
</tr>
<tr>
<td></td>
<td>Level control disconnect alarm</td>
</tr>
<tr>
<td></td>
<td>Non start or current outside limits</td>
</tr>
<tr>
<td></td>
<td>Change reminder</td>
</tr>
<tr>
<td></td>
<td>Change reminder</td>
</tr>
<tr>
<td>Outputs</td>
<td>RS232 Printer connection</td>
</tr>
<tr>
<td></td>
<td>RS232 Remote display connection</td>
</tr>
<tr>
<td></td>
<td>Volt free contact-internal</td>
</tr>
</tbody>
</table>

### Safety Features

- Power fail safe
- Boost pump protection from particulates
- Re-circulation pump protection from particulates
- Low operating voltage 24V
- Audio visual alarms
- Adjustable alarm settings
<table>
<thead>
<tr>
<th>Special Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low noise levels – minimum intrusion</td>
</tr>
<tr>
<td>Flow rate upgradable</td>
</tr>
<tr>
<td>Optional internal boost pump for low pressure feed waters</td>
</tr>
<tr>
<td>Optional printer kit for record of operating parameters</td>
</tr>
<tr>
<td>Optional remote display</td>
</tr>
<tr>
<td>Intermittent re-circulation “sleep” mode</td>
</tr>
<tr>
<td>Optional point of use filter</td>
</tr>
<tr>
<td>Dual position dispense tap</td>
</tr>
<tr>
<td>Optional purpose designed docking vessel DV25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purification Methods</td>
</tr>
<tr>
<td>Adsorption</td>
</tr>
<tr>
<td>Reverse Osmosis</td>
</tr>
<tr>
<td>Ultra Violet radiation multi wavelength</td>
</tr>
<tr>
<td>Ion-exchange</td>
</tr>
<tr>
<td>Point of use filtration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purified Water Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Make Up Rate</strong></td>
</tr>
<tr>
<td>*</td>
</tr>
<tr>
<td><strong>Daily Output(nominal max)</strong></td>
</tr>
<tr>
<td><strong>Dispense Rate from Tap</strong></td>
</tr>
<tr>
<td><strong>Output reverse pressure (max)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purity: (from dispense tap)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inorganic-Typical</td>
</tr>
<tr>
<td>Total Organic Carbon(TOC)</td>
</tr>
<tr>
<td>**Bacteria</td>
</tr>
<tr>
<td>pH</td>
</tr>
<tr>
<td>Particles</td>
</tr>
</tbody>
</table>

* Standard conditions are 4 bar inlet pressure, 0 bar back pressure at 15 degrees centigrade, fed with potable water and a clean pre-treatment cartridge. Refer to flow tables to allow for the effects of temperature and pressure outside these conditions.

** Subject to correct operating and maintenance procedures.

As part of our policy of continual improvement we reserve the right to alter the specifications given in this document.
PURELAB Option-Q Reverse Osmosis Capacity Charts

Graph 1 - Nominal Flowrate vs Inlet Pressure for PURELAB Option-Q7

Graph 2 - Nominal Flowrate vs Inlet Pressure for PURELAB Option-Q15
4. CONTROLS

The PURELAB Option-Q operates with a tactile membrane touch pad control panel which has a graphics display window and three program function control buttons.

Details of how to use the controls will be given in the appropriate sections.

<table>
<thead>
<tr>
<th>Control Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCESS</td>
<td>Turns the process ON/OFF.</td>
</tr>
</tbody>
</table>

The PURELAB Option-Q control panel has a range of control icons as follows:

<table>
<thead>
<tr>
<th>Button</th>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEFT</td>
<td></td>
<td>Menu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scroll</td>
</tr>
<tr>
<td>RIGHT</td>
<td></td>
<td>Reset</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mute Alarm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accept</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Printer</td>
</tr>
</tbody>
</table>
**5. INSTALLATION INSTRUCTIONS**

Please read these instructions in conjunction with the installation instructions for the Docking Vessel LA621 or reservoir.

**5.1 Unpacking the PURELAB Option-Q**

The following items should be supplied with your PURELAB Option-Q:

1. PURELAB Option-Q unit
2. Cartridge Pack LC163
3. By-pass block fitted in the unit
4. Installation kit (LA513 or LA506)
5. Operator manual
6. Mains Lead

**5.2 Positioning the PURELAB Option-Q**

Before commencing with installation and operation of the PURELAB Option-Q unit, please read and observe the following points.

*Environment*

The unit should be installed on a flat, level surface, in a clean, dry environment. The unit can also be wall mounted against a vertical wall capable of supporting the weight (for this we recommend the use of the wall mounting kit Part No LA610).

**CAUTION!** If unit is to be wall mounted, ensure it is mounted on a substantial brick or concrete solid wall capable of supporting the operating weight of the system. If mounting the unit on the wall, use the wall mounting kit and follow the instructions included in the kit.

*Note:* Refer to specifications for unit weights.

The unit is designed to operate safely under the following conditions:

- Indoor Use
- Altitude up to 2000m
- Temperature Range 5 - 40°C
- Maximum Relative Humidity 80% @ 31°C decreasing linearly to 50% @ 40°C, non-condensating

The unit is in Installation Category II, Pollution Degree 2, as per IEC1010-1.
**Electrical**

The unit can be connected universally to any electrical supply in the range of 100 - 240V and 50 - 60Hz. The mains lead is supplied with a molded plug on one end and a molded connector to the unit on the other. The unit should be connected to an earth.

**Drain**

A semi rigid flexible connection to a sink or suitable drain capable of handling at least 1.5l/min is required. The drain point should have a gravity fall below the level of the unit and any connections direct to drain should have an air-break device fitted.

**Feed Water**

The feed water should be of good quality and comply with specifications provided. This should enter the unit via an 8mm (5/16") O/D semi rigid tube, and should be in the temperature range 1 to 35°C.

**CAUTION!** Operating temperatures outside the range 1 to 35°C will cause damage to the PURELAB Option-Q unit.

For pressurized feeds, the minimum direct inlet pressure is 4.0bar (60psi) and maximum inlet pressure is 6bar (90psi). Higher feed water pressures must be reduced using a pressure regulator valve (Part No. LA512).

Reservoir feeds to the PURELAB Option-Q unit should be positioned at the same height, or above the unit, to provide a positive flooded inlet pressure.
5.3 Connecting up the PURELAB Option-Q

Once the PURELAB Option-Q unit has been positioned either on a wall or on a bench, it should be connected as follows:

- Mains water inlet tube
- Drain
- Re-circulation from reservoir or DV25
- Outlet to reservoir or DV25

**Step 1 - Fitting Tubes**

1. PUSH in collet on connector.
2. PULL out transit plug.
3. CUT a clean square end on an 8mm (5/16") OD semi rigid drain tube.
4. PUSH tube into connector.

**CAUTION!** Do not restrict drain line.

**CAUTION!** If the water supply is at a pressure greater than 6bar (90psi) fit a pressure regulator (LA512).
Step 2 - Connect Electrical Supply

1. PLUG mains lead into the socket on the left hand side of the **PURELAB Option-Q** unit.
2. PLUG mains lead into mains socket.

Step 3 - Connect High/Low Level Switch to Reservoir

1. INSERT jack plug into the level control socket located at rear of unit and reservoir.
Step 4 - Positioning Dispense Tap

The Dispense Tap may be fitted at a high level or a low level on the PURELAB Option-Q unit, to allow for easier access when wall mounted.

To alter the location of the Dispense Tap:

1. Switch the PURELAB Option-Q off at the power switch at the top left hand side of the unit.
2. Ensure the water supply is turned off.
3. Dissipate pressure by opening the dispense tap.
4. Open the front door.
5. Remove the LC163 cartridge. (See Section 7.2).
6. Unscrew the two panel fixing screws located on the right hand side of the door opening.
7. Remove side panel by sliding the panel to the rear. Once unhooked, remove.
8. Remove screws holding dispense tap manifold.
9. Locate manifold in alternative position.
10. Replace panel.
11. Replace LC163 cartridge. (See Section 7.2).
12. Switch electrical power on.
13. Switch water supply on.
14. Press the process button.
15. Ensure correct operation of dispense tap.
5.4 Initial Controller Set-Up

The \textit{PURELAB Option-Q} control panel is fitted with three control buttons. These are:

1. The PROCESS button, which switches the purification process ON and OFF.
2. Two software controlled touch pad buttons which are used to control set-up and process control functions.

When the \textit{PURELAB Option-Q} unit is started for the first time after installation the following steps should be followed to set-up system preferences:

\textbf{Step 1 - Setting Up Menu Options}

\textbf{Switch} the mains power on to initialize the controller hardware set-up sequence.

\textbf{Note:} Always allow the initialization process to complete. This is indicated by the appearance of the MENU icon on the control screen.

PRESS the MENU button to go to the next screen to activate the set-up menu sequence.

A series of set-up screens will now be displayed. Various control icons are used to allow you to step through the set-up instruction process. These icons include:

- A “scroll” icon indicated by an arrow \(\uparrow\)
- An “accept” button indicated by a tick \(\checkmark\)
- A “selection” icon indicated by a \(\downarrow\)

\textbf{Step 2 - Auto / Manual Restart}

This allows the selection of the AUTO/MANUAL restart option. If auto restart is selected the unit will automatically restart after a power failure. In manual mode the unit will remain in standby. Select the option required using the \(\uparrow\) button and accept with the \(\checkmark\) button.

\textbf{Step 3 - Audible Alarm Enabled / Disabled}

This display provides the option of either enabling the audible alarm causing it to sound or disabling the audible alarm causing it to remain muted whilst it flashes the alarm icon. Select the option required using the \(\uparrow\) button and accept with the \(\checkmark\) button.
Step 4 - Water Purity Unit Setting

This screen will allow the setting of the preferred water purity unit of measure to either, $\text{M} \Omega \cdot \text{cm}$ or $\mu \text{S/cm}$. Once selected, all future water purity measurements will be displayed with your unit of choice. Select the option required using the $\square$ button and accept with the $\checkmark$ button.

Step 5 - Purity Alarm Setting

This screen is used for setting the value at which the water purity alarm activates.

If the $\text{M} \Omega \cdot \text{cm}$ water purity alarm unit setting was chosen, then the following water purity alarm choices will be displayed.

- 15M$\Omega$.cm
- 10M$\Omega$.cm
- 1M$\Omega$.cm

If the $\mu \text{S/cm}$ water purity alarm unit setting was chosen, then the following water purity alarm choices will be displayed.

- 0.07$\mu$S/cm
- 0.1$\mu$S/cm
- 1.0$\mu$S/cm

Select the alarm setting required using the $\square$ button and accept with the $\checkmark$ button.

Note: To reset any of the set-up parameters, restart from the set up menu and follow instructions from Step 1.

Setting Up Display and Replacement Timer

Turn the unit off at the power inlet module. To enter the replacement timer set-up, press the left hand touch pad button and at the same time turn the power on. A graphic of the ion-exchange cartridge, UV lamp, pre-treatment cartridge and clock graphics are displayed with hourly timer status.

CAUTION! Before re-setting any of the cartridge timers, ensure that the appropriate new cartridges have been installed and securely located correctly in the PURELAB Option-Q.

Step 1 - Ion-exchange Cartridge Timer

Setting this screen will cause the ion-exchange cartridge timer to reset to the preset value of 4380 hours (6 months).

Press $\checkmark$ to jump to the next consumable or $\leftarrow$ to initiate reset.

Press $\checkmark$ to reset timer or press $\times$ to abort reset.

Press $\checkmark$ to jump to the next consumable.
Step 2 - UV Lamp Replacement Timer
Setting this screen will cause the UV Lamp timer to reset to the preset value of 8760 hours (1 year).
Press \( \checkmark \) to jump to the next consumable or \( \rightarrow \) to initiate reset.
Press \( \checkmark \) to reset timer or press \( \xmark \) to abort reset.
Press \( \checkmark \) to jump to the next consumable.

Step 3 - Pre-treatment Cartridge Replacement Timer
Setting this screen will cause the pre-treatment cartridge timer to reset to the preset value of 4380 hours (6 months).
Press \( \checkmark \) to jump to the next consumable or \( \rightarrow \) to initiate reset.
Press \( \checkmark \) to reset timer or press \( \xmark \) to abort reset.
Press \( \checkmark \) to jump to the next consumable.

Step 4 - Accessing the Process On Display Screens
The normal process screen will display newly installed SETUP preferences showing the following process information:
- Output water purity
- Water temperature
- Process mimic
- Reservoir level
- Scroll \( \rightarrow \) and Print \( \print \) icons

The following display screens can be scrolled through:
- RO water conductivity.
- Ion-exchange cartridge replacement timer (hours remaining).
- UV tube replacement timer (hours remaining).
- Pre-treatment cartridge replacement (hours remaining).

Step 5 - Report Printing (Only if connected to LA618)
To print a report press the \( \print \) icon.
5.5 Initial Start Up

1. The **PURELAB Option-Q** should be installed correctly as described in Section 5.

2. TURN ON the feedwater supply to the unit and adjust the inlet pressure. The **PURELAB Option-Q** will operate on a feedwater pressure between 4.0bar (60psi) and 6.0bar (90psi). Where feedwater pressures are inadequate an internal optional boost pump should be fitted.

3. CHECK all hose connections are water-tight and that there are no leaks.

4. The **PURELAB Option-Q** units are supplied containing traces of preservative used during the manufacturing process. To ensure optimum performance the unit should be rinsed to drain. Both the 'DRAIN' and 'OUTLET' tubes should initially be directed to a drain or sink.

5. DISCONNECT the pump feed tube at the reservoir outlet and direct to a drain or sink.

6. The unit is supplied without the LC163 ion-exchange cartridge pack fitted but has the by-pass block in place as shown in Section 8.

7. ENSURE the cartridge by-pass block is left in place until the unit has been rinsed.

8. TURN ON the electrical supply to the unit and switch the mains switch at the power inlet module on the left-hand side of the unit to the ON position.

9. CHECK that the water supply has been turned on, PRESS the PROCESS button and the unit will start.

10. LEAVE the unit running for 2 hours to drain. For critical applications the unit should be left to rinse overnight.

11. After 2 hours, PRESS the PROCESS button to stop the unit. The pump feed tube can now be reconnected to the reservoir.

12. The unit has now been rinsed.

13. REMOVE the by-pass block. (Store in the front door).

14. INSERT Ion-exchange cartridge LC163. (See Section 7.2).

15. PRESS the PROCESS button to begin the water purification process.
6. OPERATION

The **PURELAB Option-Q** will run automatically and will signal alarm conditions to ensure prompt efficient system management and corrective action.

*Note:* To ensure that water purity remains at a high level it is important to leave the unit in process mode.

**Dispensing**

The unit should now be processing the specified standard of purified water and there should be no alarms activated.

If the unit is not processing, press PROCESS to start it. Wait until the water purity reaches the preferred purity level before use. Dispense water from the dispense tap by pulling the tap handle forward.

**6.1 Intermittent Mode**

During periods of non-use the unit will automatically operate in intermittent mode to maintain water quality. This mode will function after the reservoir has been filled and the level maintained for 1 hour. The unit will re-circulate the reservoir contents for 10 minutes every hour.

Pressing the PROCESS button at any time during this mode will initiate re-circulation.
6.2 Alarm Conditions

Alarms will signal at the following conditions:

**Replace Ion-exchange Cartridge**

The ion-exchange cartridge replacement alarm is signalled by an audible alarm and flashing icon at the default setting of 4380 hrs (6 months) of use. Press the button to mute the audible alarm. Follow the instructions to replace the ion-exchange cartridge. (See Section 7.2).

**Replace UV Lamp**

The UV lamp replacement alarm is signalled by an audible alarm and flashing icon at the default setting of 8760 hrs (1 year) of use. Press the button to mute the audible alarm. Follow the instructions to replace the UV lamp. (See Section 7.3).

**Replace Pre-treatment Cartridge**

The pre-treatment cartridge replacement alarm is signalled by an audible alarm and flashing icon at the default setting of 4380 hrs (6 months) of use. Press the button to mute the audible alarm. Follow the instructions to replace the pre-treatment cartridge. (See Section 7.1).

**UV failure**

The UV failure alarm is signalled by an audible alarm and flashing cross over the replace UV icon. Press the button to mute the audible alarm. Follow the instructions to replace the UV lamp. (See Section 7.3).

The **PURELAB Option-Q** will continue to run without the UV lamp operating.

**CAUTION!** Long term operation without the UV lamp in operation will compromise performance and is not recommended.

**Low Level Alarm**

When the low level alarm sounds, the mimic reservoir on the display will flash and a crossed bell icon mute symbol will appear. To mute the low level alarm sound PRESS the button. The **PURELAB Option-Q** will automatically refill the reservoir.

**Water Purity Alarm**

This alarm will signal if the water purity deviates from the preset parameters and will cause the water purity to flash and an alarm to sound, until water purity improves to within acceptable purity limits. Press the button to mute the alarm. If water purity stays outside acceptable limits replace the ion-exchange pack following the instructions in Section 7.2.
Reservoir Level Disconnect Fault Alarm

The reservoir level disconnect fault alarm condition will signal with an audible alarm and flashing icon. Press the \( \sqrt{X} \) button to mute the alarm. This alarm condition will cause the process to turn off. Connect the reservoir level and press the process key to clear the alarm.
7. MAINTENANCE

Any maintenance work not detailed in this handbook should be carried out by an approved supplier or distributor. If further information is required on any aspect of maintenance please contact Customer Service.

Identification of Consumables

There are three types of unique replacement consumables designed for use in the PURELAB Option-Q units and these are illustrated with the following part numbers:

- LC140  Pre-treatment cartridge
- LC163  Ion-exchange cartridge
- LC118  UV lamp

All consumables are accessible after opening the front door cover.

To protect the inlet solenoid valve, RO boost pump (when fitted) and re-circulation pump from possible debris in the water, the unit incorporates two strainers.

**WARNING!** ALWAYS CHECK THAT THE MAINS ELECTRICAL POWER AND FEED WATER SUPPLIES ARE SWITCHED OFF BEFORE ATTEMPTING TO CHANGE THE PURELAB OPTION-Q CONSUMABLES.

Frequency of Consumable Replacement

The following frequency of consumable replacement is recommended as a guide assuming typical usage*:

- Pre-treatment - LC140  max 6 months
- Ion-exchange - LC163  max 6 months**
- UV lamp - LC118  max 12 months
- Reverse Osmosis - LC143  every 2 – 3 years (not an operator replacement item)

* These frequencies are only estimates and replacement will depend on the application and feed water quality.

** Standard conditions are 4bar (60psi) inlet pressure at 15°C, potable water with clean pre-filter.

**CAUTION!** Ensure that the display and replacement timer settings are reset after replacing consumables. (Refer to Section 5.4).
7.1 Replacing the LC140 Pre-treatment Cartridge

The pre-treatment cartridge should be replaced when indicated by the change reminder.

Step 1 - Switch Unit Off
1. SWITCH the PURELAB Option-Q off at the power switch at the top left hand side of the unit.
2. ENSURE pressure has dissipated from the unit by opening the dispense tap.

Step 2 - Remove Pre-treatment Cartridge
1. OPEN front door.
2. IDENTIFY the pre-treatment cartridge (LC140).
3. REMOVE the reducing fitting from the elbow at the bottom of the cartridge, by pushing back the retaining collet on the push fit connector and withdrawing the reducer.
4. REMOVE the reducing fitting from the elbow at the top of the cartridge.
5. REMOVE exhausted cartridge from retaining clips and discard.

Note: The consumable is non-hazardous. Dispose of as ordinary waste, observing all local and national regulations.

Step 3 - Replacing the Pre-treatment Cartridge
1. UNPACK new cartridge and remove the two protective transit plugs sealing the inlet and outlet connection.
2. SECURE the new cartridge into its retaining clips ensuring the cartridge is the correct way up.
3. REFIT the inlet tubing into the bottom of the cartridge by pushing the reducer into the elbow connector until locked and held by the retaining collet.
4. REFIT the outlet tubing at the top of the cartridge.
5. RESET pre-treatment cartridge timer. (See Section 5.4 - Setting Up Display and Replacement Timer).
6. PRESS the PROCESS button to start the unit.
7. CHECK the unit for leaks and close front door.
7.2 Replacing the LC163 Ion-exchange Cartridge Pack

The ion-exchange cartridge pack should be replaced in the following circumstances:

- The water purity alarm monitor indicates that the pack requires changing.
- If the system is being re-commissioned or sanitized after an extended period in which it was not used.
- When indicated by the change reminder.

**Step 1 - Switch Unit Off**

1. SWITCH the **PURELAB Option-Q** off at the power switch at the top left hand side of the unit.
2. OPEN the dispense tap to relieve any residual pressure from the system.

**WARNING!** ENSURE THE UNIT IS ISOLATED BEFORE REMOVING THE ION-EXCHANGE CARTRIDGE.

**Step 2 - Remove Ion-exchange Cartridge**

1. OPEN the front door.
2. PUSH on cartridge top cap.
3. LIFT up cartridge.
4. SLIDE out cartridge.
5. DISCARD used ion-exchange cartridge.

**Note:** The consumable is non-hazardous. Dispose of as ordinary waste, observing all local and national regulations.

**Step 3 - Replace Ion-exchange Cartridge**

1. REMOVE a new cartridge pack from its packaging.
2. REMOVE the sealing plugs from the inlet and outlet ports.
3. WET ‘O’ rings and SLIDE new cartridge into position.
4. POSITION cartridge onto spigots, PUSH into unit.
5. ENSURE guide has dropped down past retainer.
6. CLOSE front door.
7. RESET ion-exchange pack timer. (See Section 5.4 - Setting up Display and Replacement Timer).
8. PRESS the process button to start the unit.
9. CHECK the unit for leaks.
7.3 Replacing the Ultraviolet Lamp (LC118)

The UV lamp should be changed under the following circumstances:

- When indicated by the change reminder, due to the decline in the short wave radiation.
- If Lamp failure alarm occurs several times.

**Step 1 - Switch Unit Off**
1. SWITCH off the electrical supply at the mains.
2. DISCONNECT the mains plug from the unit.
3. RELIEVE pressure by pressing the dispense tap.

**Step 2 - Remove UV from PURELAB Option-Q**
1. OPEN the front door panel.
2. PULL UV unit out of the top and bottom retaining clips. (First cut transit straps if still in place).
3. REMOVE top and bottom spring clip.
4. UNPLUG the white lamp plug fitted to the top of the UV unit.
5. UNPLUG the white lamp plug fitted to the bottom of the UV unit.

**CAUTION!** Hold on to the pins on the lamp in case the lamp falls out and breaks.

**Step 3 - Remove Lamp Plates**
1. UNDO screws in plate at top.
2. REMOVE plate at top.
3. UNDO screws in plate at bottom.
4. REMOVE plate at bottom.
5. REMOVE ‘O’ rings from the UV lamp and retain.

**CAUTION!** Hold on to UV lamp whilst removing plates to ensure it does not fall out and break.

**Step 4 - Remove UV Lamp (LC118)**
1. REMOVE old UV lamp from the centre bore of the housing.

**Step 5 - Replace UV Lamp (LC118)**
1. UNPACK new UV lamp.

**CAUTION!** Take care not to touch the surface of the glass. Ideally wear gloves, handle with soft cloth and wipe the surface with alcohol before fitting into the housing.

2. SLIDE the new UV lamp into the center bore of the UV housing.
3. Note orientation of pins on each end.
Step 6 - Replace Lamp Plates (LC118 only)
1. REPLACE ‘O’ rings on the end of the UV lamp.
2. PUSH ‘O’ rings into recesses.
3. REFIT plate on the bottom of the unit.
4. TIGHTEN screws on the plate.
5. FIT plate on top of UV lamp assembly.

Step 7 - Assemble UV (LC118)
1. PLUG the white lamp clip into the bottom of the UV unit.
2. REFIT spring clip.
3. PLUG in the white lamp clip into the top of the UV unit.
4. REFIT spring clip.
5. REFIT the UV housing on securing screws.
6. TIGHTEN securing screws.

Step 8 - Set UV Change Reminder
1. SEE Section 5.4 - Setting Up Display and Replacement Timers.
7.4 Cleaning the Re-Circulation Strainer

The re-circulation strainer should be checked and cleaned periodically to ensure that the strainer does not become clogged or broken.

**Step 1 - Remove Re-circulation Strainer**

1. OPEN front door.
2. ISOLATE inlet water to the re-circulation strainer.
3. REMOVE the ion-exchange cartridge to gain access to the re-circulation strainer.
4. REMOVE the re-circulation strainer by depressing the collars on either side of the strainer and disconnect tubing.

**Step 2 - Dismantle the Re-circulation Strainer**

1. HOLD re-circulation strainer over a sink or receptacle.
2. UNSCREW re-circulation strainer.
3. REMOVE mesh filter.
4. CHECK mesh filter for signs of wear or damage, replace or clean as necessary.

**Step 3 - Reassemble the Re-circulation Strainer**

1. INSERT mesh filter into strainer, ENSURE it is facing the correct direction.
2. SCREW up the re-circulation strainer.

**Step 4 - Replace the Re-circulation Strainer**

1. REPOSITION the re-circulation strainer.
2. REFIT tubes to re-circulation strainer, ENSURE it is facing the correct direction.
3. REPOSITION the ion-exchange cartridge into its support clips.
4. RE-ESTABLISH inlet water supply.
5. TURN on power.

7.5 Replacement of LC143 Reverse Osmosis Cartridge(s)

The reverse osmosis cartridge should be replaced if the permeate water purity or flow rate is not adequate and does not meet predicted or previous performance.

For information regarding the replacement of the LC143 reverse osmosis cartridge contact Customer Service.

**WARNING!**

ALL NEW RO CARTRIDGES ARE FILLED WITH A BACTERIOSTATIC SOLUTION TO PREVENT BACTERIAL CONTAMINATION DURING STORAGE. THE RO CARTRIDGES WILL THEREFORE REQUIRE RINSING PRIOR TO USE.
8. SANITIZATION PROCEDURE

8.1 Liquid sanitization

The unit is sanitized to reduce the growth of microbiological contamination within the unit. The PURELAB Option-Q 7/15 has a built-in sanitization port, which allows the sterilant to be introduced into the water feeding the RO. Please read this entire section to become familiar with the procedure before you start.

The sanitization frequency required is dependent on the feedwater, local environment, usage patterns and application. As a general rule, ELGA LabWater recommends sanitization of the RO at 6 monthly intervals. However, the period between sanitizations could be extended in particular circumstances. For example, microbial growth will usually be lower with clean feed water, well-maintained pre-treatment, low temperatures and heavy usage.

**WARNING!** ALWAYS WEAR RUBBER GLOVES, APRON AND FACEMASK. DO NOT BREATHE FUMES OR ALLOW TO COME IN CONTACT WITH SKIN OR EYES. ALWAYS FOLLOW RECOMMENDATIONS FOUND IN THE MANUFACTURER’S MATERIAL SAFETY DATA SHEET AND ANY APPLICABLE OSHA STANDARDS FOR THE CHEMICAL BEING USED.

Minncare Cold Sterilant is a Peracetic and Hydrogen Peroxide based solution.

Refer to the Minncare label for additional information and follow all applicable directions for use on the manufacturer’s label in conjunction with the following instructions.

**8.1.1 Standard sanitization**

**Step 1 - Start Sanitization Cycle**

1. ENSURE that the reservoir level indication on the graphics display is showing >40%. If display shows >70% or 100%, dispense water until display changes to >40%.

2. PRESS the PROCESS button to stop the process.

3. TURN OFF the electrical power supply.

4. APPLY a suitable warning label such as “DO NOT USE / CONTAINS STERILANT”.

5. RELIEVE residual pressure by opening the dispense tap and directing water to drain.

6. CLOSE the dispense tap.

7. DISCONNECT outlet tube at reservoir inlet and re-direct to a large container (>5litres) – refer to Process flow diagram on p6.
8. RE-DIRECT the drain tube to the same large container.

Step 2 – Pour sterilant into Sanitization Port
1. UNSCREW cap on sanitization port.
2. MEASURE out 20ml of Minncare Cold Sterilant and SLOWLY POUR into the sanitization port.
   
   Note: It is recommended that you add the chemical in 10ml steps. If the chemical level rises too high in the sanitization port, refit the cap and then remove it. This will allow room for the remaining 10ml.
3. REFIT cap on sanitization port.

Step 3 - By-pass Block
1. REMOVE the by-pass block from its storage position located on the inside of the front door.

Step 4 - Remove Ion-exchange Cartridge Pack
1. REMOVE ion-exchange cartridge.
2. PLACE cartridge safely to one side.

Step 5 - Fit By-pass Block
1. WET ‘O’ rings on by-pass block.
2. SLIDE by-pass block into unit.
3. ENSURE by-pass block is locked in place.
Step 6 - Start the Sanitization Process
1. RESTORE the power.
2. PRESS the PROCESS button to start the process.
3. ALLOW the unit to operate for 20 secs and collect the combined flows into the large container.
4. PRESS the PROCESS button to stop the process.
5. TURN electrical supply off.

Step 7 – Contact time
1. ALLOW the unit to stand for a minimum of 36 minutes, a maximum of 60 minutes.

Step 8 – Post Sanitization Rinse
1. RECONNECT the drain tube to a suitable drain.
2. DIRECT the outlet tube to drain.
3. RESTORE the power.
4. PRESS the PROCESS button and leave the system to rinse for 20 minutes.
   Note: during this period the recirculation pump will operate intermittently.
5. CHECK the outlet flow for residual Minncare to ensure that it has been rinsed to less than 1ppm concentration. If the test is positive continue to rinse until a negative result is obtained.
6. PRESS the PROCESS button to stop the rinse.
7. TURN electrical supply off

Step 9 - Remove By-pass Block
1. PUSH and TILT by-pass block.
2. SLIDE out of unit.
3. PLACE in storage area.

Step 10 - Replace Ion-exchange Cartridge Pack
1. INSERT ion-exchange cartridge into the compartment.
2. ENSURE the cartridge is locked in position.
3. CLOSE front door.
Step 11 - Return to Normal Operation
1. RECONNECT the outlet tube to the reservoir.
2. RESTORE the power
3. REMOVE the “DO NOT USE / CONTAINS STERILANT” label.
4. PRESS PROCESS button to return to normal operation.
5. CHECK the system for leaks.

Step 12 – Rinse containers
1. RINSE the container used during the process as directed on the manufacturer’s label.
2. STORE or DISPOSE of any remaining chemical as directed on the manufacturer’s label.

8.1.2 Sanitization Procedure for the delivery system, docking vessel/reservoir

The deliver system and docking vessel/reservoir may be sanitized to destroy bacteria within the pipework and filters of the unit. This sanitization of the system is recommended to be performed if high levels of bacterial contamination are found in the product water. Should bacterial contamination of the product water be suspected, samples should be taken by trained staff and analyzed for bacterial counts. If the counts are abnormally high, ELGA LabWater technical support or your local representative should be contacted for advice and assistance.

It is recommended that only ELGA LabWater service personnel or other fully trained staff should perform the sanitization procedure for the docking vessel/reservoir.
8.2 Tablet sanitization.

The PURELAB Option-Q unit has a sanitization port and by-pass block, which allows the sanitization agent to be introduced into the system in the form of a tablet. Recommended maximum frequency of cleaning once per month.

The unit is sanitized to destroy the bacteria within the pipework, and the filters of the unit. It is also possible to sanitize the reservoir at the same time as the unit. (See Section 8.2.2). Please read this entire section to become familiar with the procedure before you start. Sanitization is required in the following circumstances:

- Once a month to maintain low bacterial counts.
- If the unit has not been used for a prolonged period of time.

**WARNING!** ALWAYS WEAR RUBBER GLOVES, APRON AND FACEMASK. DO NOT BREATHE FUMES OR ALLOW TO COME IN CONTACT WITH SKIN OR EYES. ALWAYS FOLLOW RECOMMENDATIONS FOUND IN THE MANUFACTURERS MATERIAL SAFETY DATA SHEET AND ANY APPLICABLE OSHA STANDARDS FOR THE CHEMICAL BEING USED.

**WARNING!** LABEL THE MACHINE WITH APPROPRIATE WARNING SINGS SUCH AS “DO NOT USE/CONTAINS STERILANT” (NOT PROVIDED).

8.2.1 Standard sanitization

**Step 1 - Start Sanitization Cycle**

1. ENSURE that the reservoir level indication on the graphics display is showing >40%. If display shows >70% or 100%, dispense water until display changes to >40%.
2. PRESS the PROCESS button to stop the process.
3. TURN OFF the electrical power supply.
4. RELIEVE residual pressure by opening the dispense tap and directing water to drain.
5. CLOSE the dispense tap.

**Step 2 - Insert Tablet into Sanitization Port**

1. UNSCREW cap on sanitization port.
2. INSERT ONE EfferSan™ tablet.
3. REFIT cap on sanitization port, hand tight.

**Step 3 - Insert Tablet into Sanitization By-pass Block**

1. REMOVE the sanitization by-pass block from its storage position located on the inside of the front door.
2. UNSCREW cap on sanitization by-pass block.
3. INSERT ONE EfferSan™ tablet.
4. REFIT cap on by-pass block, hand tight.
Step 4 - Remove Ion-exchange Cartridge Pack
3. REMOVE ion-exchange cartridge.
4. PLACE cartridge safely to one side.

Step 5 - Fit Sanitization By-pass Block
4. WET ‘O’ rings on by-pass block.
5. SLIDE Sanitization by-pass block into unit.
6. ENSURE Sanitization by-pass block is locked in place.

Step 6 - Start the Sanitization Process
6. DISCONNECT outlet tube at reservoir inlet and re-direct to drain.
7. RESTORE the power.
8. PRESS the PROCESS button to start the re-circulation process.
9. ALLOW the sanitization cycle to continue for 30 minutes.
10. PRESS the PROCESS button to stop the re-circulation process.
11. TURN electrical supply off.

Step 7 - Remove By-pass Block
4. PUSH and TILT by-pass block.
5. SLIDE out of unit.
6. PLACE in storage area.

Step 8 - Replace Ion-exchange Cartridge Pack
4. INSERT ion-exchange cartridge into the compartment.
5. ENSURE the cartridge is locked in position.
6. CLOSE front door.

Step 9 - Return to Normal Operation
6. TURN on power.
7. RECONNECT the outlet tube to the reservoir.
8. PRESS PROCESS button to return to normal operation.
9. CHECK the system for leaks.
8.2.2 Sanitization of Unit and Reservoir

Note: It is recommended that the flushing process is performed outside of working hours.

Step 1 - Start Sanitization Cycle
1. ENSURE that the reservoir level indication on the graphics display is showing >40%. If display shows >70% or 100%, disperse water until display changes to >40%.
2. PRESS the PROCESS button to stop the process.
3. TURN OFF the electrical power supply.
4. RELIEVE residual pressure by opening the dispense tap and directing water to drain.
5. CLOSE the dispense tap.

Step 2 - Insert Tablet into Sanitization Port
1. UNSCREW cap on sanitization port.
2. INSERT ONE EfferSan™ tablet.
3. REFIT cap on sanitization port, hand tight.

Step 3 - Insert Tablet into Sanitization By-pass Block
1. UNSCREW cap on sanitization by-pass block.
2. INSERT ONE EfferSan™ tablet.

Note: If the system requires, two EfferSan™ tablets can be installed at the same time into the by-pass block.

Step 4 - Remove Ion-exchange cartridge pack
1. OPEN front door.
2. REMOVE ion-exchange cartridge.
3. PLACE cartridge to one side.

Step 5 - Fit by-pass block
1. WET ‘O’ rings on by-pass block.
2. SLIDE by-pass block into unit.
3. ENSURE by-pass block is locked in place.

Step 6 - Start Sanitization Process
1. RESTORE power.
2. PRESS the PROCESS button to start the sanitization process.
3. ALLOW the sanitization PROCESS to continue for 60 minutes.
4. PRESS the PROCESS button to stop the sanitization process.
Step 7 - System Flushing
1. ENSURE the electrical supply is switched off.
2. DISCARD the majority of the reservoir contents to drain, via the reservoir tap.
3. DISCONNECT outlet tube at the reservoir inlet and direct to drain.
4. RESTORE the power supply.
5. PRESS the process button to start system flushing. The system will operate automatically during flushing and it is recommended that the system is flushed overnight.
6. PRESS the process button to stop the system flushing.
7. ENSURE the electrical power supply is switched off.

Step 8 - Remove By-pass Block
1. PUSH and TILT by-pass block.
2. SLIDE out of unit.
3. PLACE in storage area.

Step 9 - Replace Ion-exchange Cartridge Pack
1. INSERT ion-exchange cartridge into the compartment.
2. ENSURE the cartridge is locked in position.
3. CLOSE front door.

Step 10 - Return to Normal Operation
1. TURN on power.
2. RECONNECT the outlet tube to the reservoir.
3. PRESS PROCESS button to return to normal operation.
4. CHECK the system for leaks.
8.2.3 EfferSan™ Sanitization Tablet - Safety Information

General Description: White solid tablet, which rapidly dissolves in water, used for sanitization applications.

Hazard Assessment: Contains sodium dichloroisocyanurate dehydrate, and is therefore toxic by inhalation, ingestion and skin contact.

Properties: Soluble in water, pH 6, Non-combustible.

Handling Precautions: Keep container tightly closed in a dry place. Wear protective clothing when handling.

Spillages: If tablets are dry and uncontaminated collect up and place in heavy duty plastic bag. Do not return to original container. Wash away any residues with copious amounts of water.

Toxicity: Serious risk of poisoning by inhalation or ingestion. Irritating to skin, eyes and respiratory system.

First Aid: **Eyes** - thoroughly wash out with clean water for at least 15 minutes. Seek medical advice.

**Inhalation** - remove from exposure, rest and expose to fresh air. In severe cases, obtain medical attention and treat for acute chlorine poisoning.

**Skin** - drench the skin with plenty of water. Remove contaminated clothing and wash before reuse. In severe cases, obtain medical advice.

**Mouth** - wash out the mouth thoroughly with water and give large quantity of milk to drink. Obtain medical advice.

Note: A comprehensive Data Sheet is available on request and is supplied with each packet of tablets.
9. TROUBLE SHOOTING

This section highlights the problems that could occur with the PURELAB Option-Q unit and how to rectify them. The unit will normally sound an alarm and the respective icons will flash. The alarm sound can be silenced by pressing the mute button. If the unit cannot be repaired using this manual please call either your supplier or local distributor. (See Section 13 - Useful Addresses).

<table>
<thead>
<tr>
<th>Problems</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>No display message</td>
<td>Check mains supply and lead.</td>
</tr>
<tr>
<td></td>
<td>Check that the mains power is switched on.</td>
</tr>
<tr>
<td></td>
<td>Check fuse in power inlet module and replace if blown.</td>
</tr>
<tr>
<td>Reservoir low level audible alarm sounds</td>
<td>Press the crossed bell button to mute alarm.</td>
</tr>
<tr>
<td></td>
<td>The reservoir will automatically refill.</td>
</tr>
<tr>
<td></td>
<td>Check that process mimic is showing reservoir filling.</td>
</tr>
<tr>
<td></td>
<td>Check feedwater supply. Check connections to Reservoir.</td>
</tr>
<tr>
<td>UV lamp failure audible alarm sounds</td>
<td>Press the crossed bell button to mute alarm.</td>
</tr>
<tr>
<td></td>
<td>Check that all electrical connections have been secured.</td>
</tr>
<tr>
<td></td>
<td>Follow UV lamp replacement procedure when applicable.</td>
</tr>
<tr>
<td></td>
<td>Optionally you can temporarily continue without the UV lamp.</td>
</tr>
<tr>
<td>Ion-exchange cartridge replacement alarm</td>
<td>Replace ion-exchange cartridge pack. (See Section 7.2 - Replacing the LC163 Ion-exchange cartridge).</td>
</tr>
<tr>
<td>Pre-treatment cartridge replacement alarm</td>
<td>Replace pre-treatment cartridge. (See Section 7.1 - Replacing the LC140 pre-treatment cartridge).</td>
</tr>
<tr>
<td>Water purity alarm</td>
<td>Check alarm set value is correct. (See Section 5.4, Step 5 - Purity Alarm Setting).</td>
</tr>
<tr>
<td></td>
<td>Allow unit to recirculate. If alarm persists replace ion-exchange cartridge. (See Section 7.2 - Replacing the LC163 Ion-exchange cartridge).</td>
</tr>
<tr>
<td></td>
<td>If problem persists beyond that expected from normal operating conditions, contact your local distributor.</td>
</tr>
<tr>
<td>Reservoir level disconnect fault alarm</td>
<td>Check that the level controls are correct. (See Section 5.3, Step 3 - Connect High/Low Level Switch to Reservoir).</td>
</tr>
<tr>
<td></td>
<td>If problem persists contact your local distributor.</td>
</tr>
<tr>
<td>Output flow outside specification.</td>
<td>Check supply pressure. (See Section 5.2 - Positioning the PURELAB Option-Q).</td>
</tr>
<tr>
<td></td>
<td>Check RO flow-rate for the unit against the graphs shown in Section 3.3, which details treated water output vs temperature and feedwater pressure.</td>
</tr>
<tr>
<td></td>
<td>Check the inlet strainer / receiver strainer are clean. (See Section 7.4 - Cleaning Inlet Strainer and Section 7.5 - Cleaning Recirculation Strainer).</td>
</tr>
<tr>
<td></td>
<td>Contact service technician to fit or replace optional booster pump.</td>
</tr>
<tr>
<td>UV replacement alarm</td>
<td>Replace UV Lamp. (See Section 7.3 - Replacing the Ultraviolet Lamp).</td>
</tr>
<tr>
<td>Unit noisy</td>
<td>Open front door and secure pipework to stop vibration.</td>
</tr>
<tr>
<td>No flow from dispense tap</td>
<td>Push PROCESS button.</td>
</tr>
<tr>
<td></td>
<td>Check reservoir level is &gt;40%.</td>
</tr>
</tbody>
</table>
10. CONSUMABLES AND ACCESSORIES

<table>
<thead>
<tr>
<th>Consumables</th>
<th>Max. Service Life*</th>
<th>Max. Shelf Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC140 (Pre-treatment cartridge)</td>
<td>6 months</td>
<td>2 years</td>
</tr>
<tr>
<td>LC143 (Reverse Osmosis cartridge module)</td>
<td>Typical life 2-3 years</td>
<td>2 years</td>
</tr>
<tr>
<td>LC163 (ion-exchange cartridge Pack)</td>
<td>6 months maximum</td>
<td>2 years</td>
</tr>
<tr>
<td>LC118 (UV lamp)</td>
<td>12 months</td>
<td>5 years</td>
</tr>
<tr>
<td>LC145 (POU Filter)</td>
<td>6 months</td>
<td>5 years</td>
</tr>
<tr>
<td>LC136** (Composite Vent Filter)</td>
<td>6 months</td>
<td>2 years</td>
</tr>
<tr>
<td>LC123*** (Pre-treatment Filter)</td>
<td>6 months</td>
<td>2 years</td>
</tr>
</tbody>
</table>

* Service Life is an estimate only, and will depend on the application and feed water quality. Care should be taken to order the correct consumable items.

** Required for reservoirs (LA611, LA612, LA613).

*** Required for optional pre-treatment filter housing (LA518).

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Cat No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation kit</td>
<td>LA513</td>
</tr>
<tr>
<td>Installation kit (with saddle valve)</td>
<td>LA506</td>
</tr>
<tr>
<td>Pressure regulator valve (inlet)</td>
<td>LA512</td>
</tr>
<tr>
<td>Pre-treatment filter housing</td>
<td>LA518</td>
</tr>
<tr>
<td>Wall mounting kit (PURELAB Option)</td>
<td>LA610</td>
</tr>
<tr>
<td>25 liter reservoir</td>
<td>LA611</td>
</tr>
<tr>
<td>40 liter reservoir</td>
<td>LA612</td>
</tr>
<tr>
<td>75 liter reservoir</td>
<td>LA613</td>
</tr>
<tr>
<td>Wall mounting kit (25 &amp; 40 liter reservoir and DV25)</td>
<td>LA591</td>
</tr>
<tr>
<td>Wall mounting kit (75 liter reservoir)</td>
<td>LA592</td>
</tr>
<tr>
<td>Flow upgrade kit (7-15l/hr)</td>
<td>LA605</td>
</tr>
<tr>
<td>RS232 Printer kit</td>
<td>LA618</td>
</tr>
<tr>
<td>RS 232 Remote display kit</td>
<td>LA675</td>
</tr>
<tr>
<td>Remote dispense valve</td>
<td>LA521</td>
</tr>
<tr>
<td>Chlorine test kit</td>
<td>TEST30679</td>
</tr>
<tr>
<td>Docking Vessel – DV25</td>
<td>LA621</td>
</tr>
<tr>
<td>Pre-filter if boost pump fitted</td>
<td>LA582</td>
</tr>
</tbody>
</table>
11. KEY TO CONTROL PANEL

11.1 Icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔔</td>
<td>Mute Alarm</td>
</tr>
<tr>
<td>✚</td>
<td>Accept</td>
</tr>
<tr>
<td>⬇️</td>
<td>Scroll</td>
</tr>
<tr>
<td>⏸️</td>
<td>Auto Restart</td>
</tr>
<tr>
<td>⏴️</td>
<td>Manual Restart</td>
</tr>
<tr>
<td>📖</td>
<td>Set Up Menu</td>
</tr>
<tr>
<td>⬇️</td>
<td>Cursor Option Choice</td>
</tr>
<tr>
<td>📚</td>
<td>Cursor Selection Choice</td>
</tr>
<tr>
<td>✗</td>
<td>Cancel</td>
</tr>
<tr>
<td>⚡️</td>
<td>Reset</td>
</tr>
<tr>
<td>⚡️</td>
<td>Printer</td>
</tr>
</tbody>
</table>

11.2 Alarm Conditions

<table>
<thead>
<tr>
<th>Icon</th>
<th>Alarm Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚔️</td>
<td>Replace Ion-exchange Cartridge</td>
</tr>
<tr>
<td>⚔️</td>
<td>Replace UV Lamp</td>
</tr>
<tr>
<td>⚔️</td>
<td>Replace Pre-treatment Cartridge</td>
</tr>
<tr>
<td>⚔️</td>
<td>UV Fail (Cross Flashes)</td>
</tr>
<tr>
<td>⚔️</td>
<td>Reservoir Level – Disconnect Fault</td>
</tr>
</tbody>
</table>

11.3 Replacement Timers

<table>
<thead>
<tr>
<th>Replacement Timer</th>
<th>Icon</th>
<th>Preset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ion-exchange Cartridge</td>
<td>⚔️</td>
<td>4380 hours ( = 6 months)</td>
</tr>
<tr>
<td>UV Lamp</td>
<td>⚔️</td>
<td>8760 hours ( = 12 months)</td>
</tr>
<tr>
<td>Pre-treatment Cartridge</td>
<td>⚔️</td>
<td>4380 hours ( = 6 months)</td>
</tr>
</tbody>
</table>
## 11.4 Low Level, Quality and Standby Alarms

<table>
<thead>
<tr>
<th>Screen</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Screen" /></td>
<td>Low level alarm</td>
</tr>
<tr>
<td><img src="image2" alt="Screen" /></td>
<td>Process on and water purity alarm</td>
</tr>
<tr>
<td><img src="image3" alt="Screen" /></td>
<td>Standby and purity alarm</td>
</tr>
<tr>
<td><img src="image4" alt="Screen" /></td>
<td>Standby position</td>
</tr>
</tbody>
</table>
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13. USEFUL CONTACT DETAILS

ELGA LabWater
Lane End Industrial Park
High Wycombe
Bucks
HP14 3BY
UK

Tel: +44 (0) 203 567 7300
Fax: +44 (0) 203 567 7205
E-mail: techsupport@elgalabwater.com

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or contact ELGA at the number above.