

ELGA

MEDICA Pro EDI

Operator Manual

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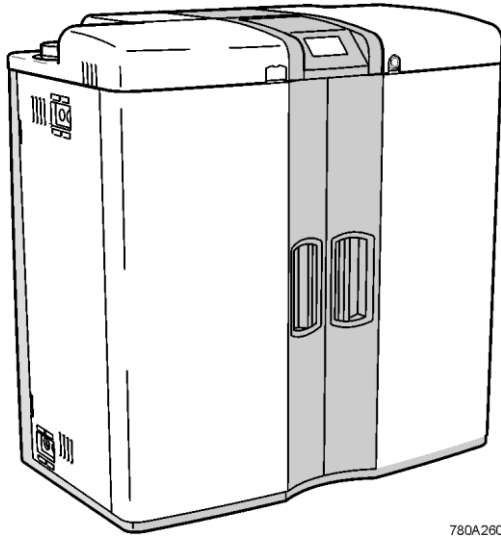
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INTRODUCTION



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1.1 Use of this Manual

ELGA LabWater strives to produce manuals that are as simple and accurate as possible. However, should you feel they can be improved in any way please email us at info@elgalabwater.com

This manual guides you through the installation, commissioning and basic operation of the **MEDICA Pro EDI** allowing you to obtain a guaranteed supply of purified water to meet your requirements. For more detailed information refer to the Operator Manual supplied on CD.

1.2 Customer Support

Service support and consumable items are available from your local supplier or distributor. Please contact info@elgalabwater.com for further information.

1.3 HEALTH AND SAFETY NOTES



WARNING! WARNINGS ARE GIVEN WHERE FAILING TO OBSERVE THE INSTRUCTIONS COULD RESULT IN INJURY OR FATALITY.



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

1.4 Electricity

It is essential that the electrical supply to the **MEDICA Pro EDI** is isolated before any items are changed or maintenance work performed.

The appliance coupler (mains lead) connected to the rear of the unit can be removed to isolate the power supply. If access to this is restricted then it is recommended that access to the supply socket is easily available to disconnect the electrical supply.

The unit must be earthed. Use of the recommended appliance coupler will ensure adequate earth protection.



WARNING! IF THE EQUIPMENT IS USED IN A MANNER NOT SPECIFIED BY ELGA, THE PROTECTION PROVIDED BY THE EQUIPMENT MAY BE IMPAIRED.

1.5 Pressure

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

Switch off the process and relieve pressure in the distribution loop by opening a point of use or dispense tap.

1.6 Hydrogen

Small quantities of Hydrogen gas are present in the drain line. Drain must be in a ventilated area.

1.7 Sanitization Chemicals

During the automatic sanitization cycles, CT3 tablets are used and relevant safety information is included in this handbook. A safety data sheet conforming to COSHH regulations is also provided with the disinfectant and should be read before any tablets are used.

1.8 Control of Substances Hazardous to Health (COSHH)

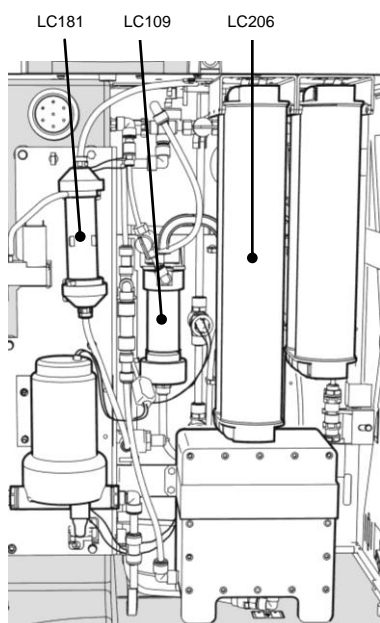
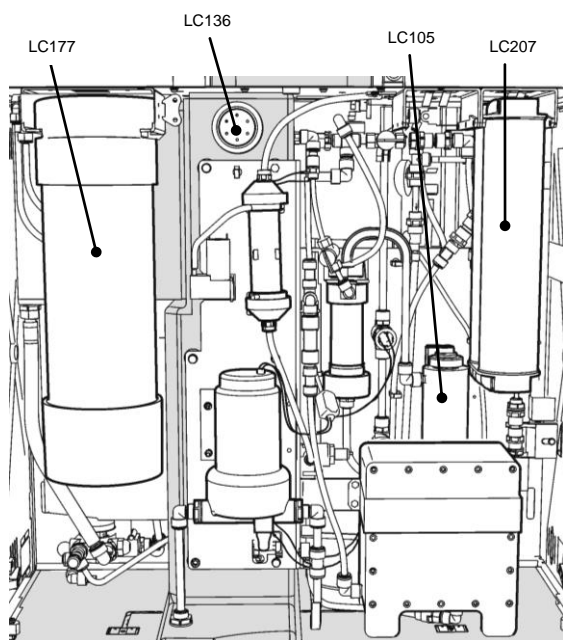
Material safety data sheets covering the various replaceable components are available upon request. Contact your local ELGA LabWater distributor.

1.9 Consumables.

Consumables	Typical Service Life*	Max. Shelf Life
LC105 (UV lamp)	12 months	5 years
LC109 (UMF)	12 months	2 years
LC136 M2 (Vent filter)	6 months	2 years
LC207 (DI Cartridge)	3-12 months	2 years
LC206 (Conditioning Cartridge)	2-6 months	2 years
LC 177 (Protek L2)*	12 months	2 years
LC193 (RO cartridge 120 L/hr)	3 years	2 years
LC181 (E-Cartridge)	3 years	2 years
CT3 (Sanitization tablet)	Typical usage 10 tablets per month	2 years

* 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.

* Restricted use based on feed water conditions. Refer to technical specification on page 31.



2. INSTALLATION AND COMMISSIONING

2.1 Installation

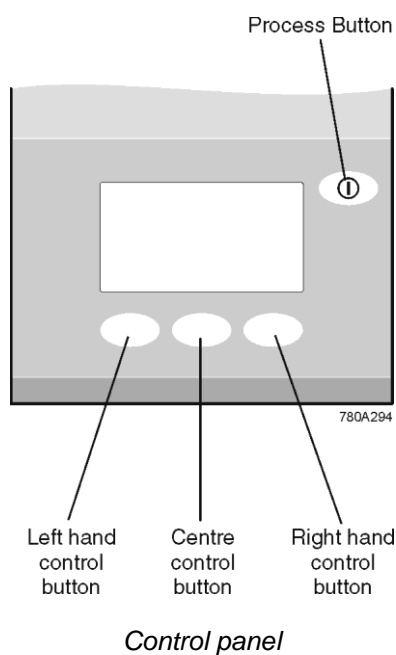
The unit is supplied with a quick start manual that allows the unit to be quickly installed and commissioned.

It is recommended that a trained ELGA representative carry out the installation of the product.

2.2 Commissioning

The unit is supplied with the software set in a commissioning mode that must be completed before being used to supply the application.

It is recommended that a trained ELGA representative complete the installation of the product.



3. CONTROLS

The **MEDICA Pro EDI** control panel has a range of control icons. General icons are as follows. Further icons are described in the appropriate sections a complete listing is included in Section 9.

BUTTON	ICON	Function
PROCESS		Turns the unit on/off
LEFT		Menu
		Scroll
		Shift
		Up
CENTRE		Accept
		Replacement dates
RIGHT		Mute Alarm
		Down

3.1 User Recognition Keys

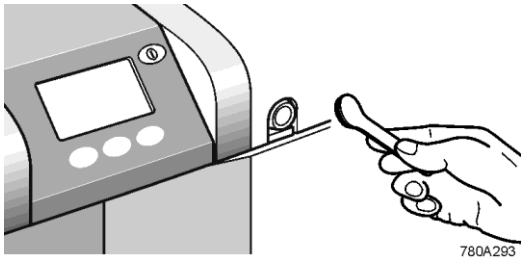
Your unit is supplied with the following User keys:

Master Key	(Black)	1off
User Key	(Blue)	4off
Sanitization Key	(Green)	2off

The Master Key should be stored in a safe place. The Master Key controls the access level of the other User Keys.

User Keys only have access to customer preference screens.

Sanitization Keys start the sanitization process and stop the general user from accidentally starting sanitization.



Present the Master or User Key



CAUTION! If the Master Key is lost a new Key can only be programmed by ELGA Service Engineers.

3.2 System Preferences

When the **MEDICA Pro EDI** unit is started for the first time after completing the commissioning routine the following steps should be carried out to set up your choices:

Note: Your choices can be changed and implemented during normal operation. It is not necessary to stop the unit.


Step 1 - System access (User Key)

The User Key prevents unauthorized access to specific settings. This ensures consistent system performance and operation.


Note: The User Key does not prevent access to the PROCESS function in case of emergency.

1. SWITCH on the main electrical supply to start the controller set-up sequence. This takes several seconds.

PRESENT the 'Master Key' (black) or the 'User key' (blue) to the reader ensuring clean contact of both metallic components.

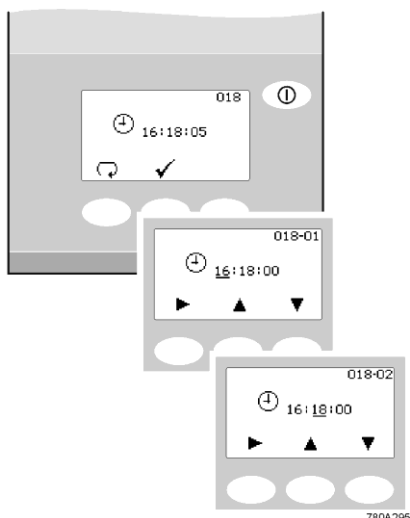
The display will show a padlock 

REMOVE 'Key' from the reader.

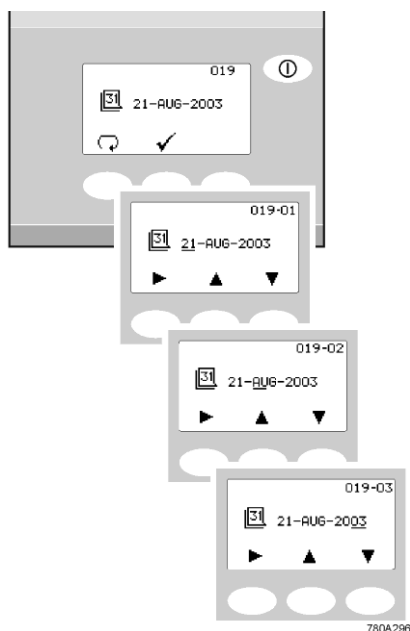
The display will show a key 

PRESS  button.

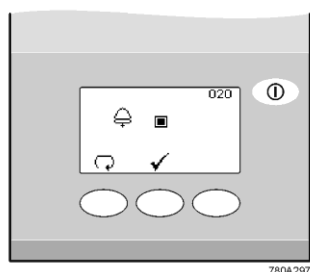
Note: If no buttons are pressed the system will relock after 5 seconds



Setting clock time











Set date screens














Audible alarm enable screen

Step 2 - Clock (screen 018)

1. PRESS  to edit time
OR
PRESS  to proceed to step 3.
2. PRESS and HOLD  to increase or  to decrease hour.
3. PRESS  to step cursor onto minute.
4. PRESS  to increase or  to decrease minutes.
5. PRESS .




Step 3 - Date (screen 019)

The date is used to initiate change reminders, the date will appear on printed records.

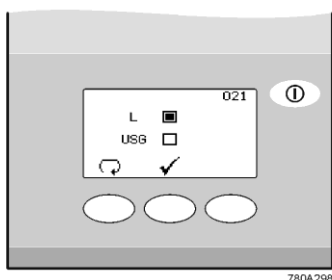
1. PRESS  to edit date
OR
PRESS  to proceed to step 4.
2. PRESS and HOLD  to increase or  to decrease day.
3. PRESS  to step cursor onto month.
4. PRESS  to increase or  to decrease month.
5. PRESS  to step cursor onto year.
6. PRESS  to increase or  to decrease year.
7. PRESS .

Step 4 - Audible alarm enabled/disabled (screen 020)

This screen provides the option of either turning on the audible alarm, causing it to sound (while the alarm icon flashes) or turning off the audible alarm meaning it will remain quiet

1. PRESS  to change mode (■ = ON)
OR
PRESS  to proceed to step 5.
2. PRESS .

Note: The visual alarm cannot be disabled.

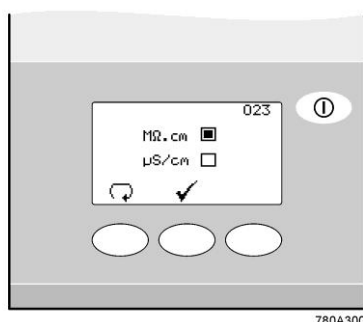


Set units of measure - volume

Step 5 –Set units of measure - Volume (screen 021)

This screen allows units of water volume to be set, to either **Litres** or **US Gallons**. This only indicates the volume in the reservoir.

1. PRESS to change (L or USG)
OR
PRESS to proceed to step 6.
2. PRESS .

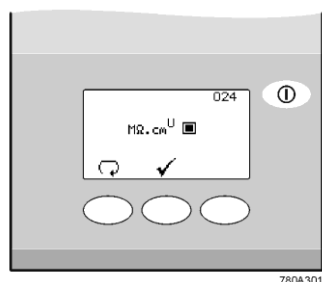


Water purity unit setting

Step 7 - Water purity unit setting (screen 023)

This screen allows preferred displayed units of water purity to be set, to either, **MΩ.cm** or **μS/cm**. This only affects the quality measurement in the recirculation loop.

1. PRESS SCROLL to change mode (MΩ.cm or μS/cm)
OR
PRESS to proceed to step 8.
2. PRESS .



Uncompensated water quality screen

Step 8 - Uncompensated water quality (screen 024)




A U will indicate uncompensated readings (recirculation loop only) in the normal process screen.

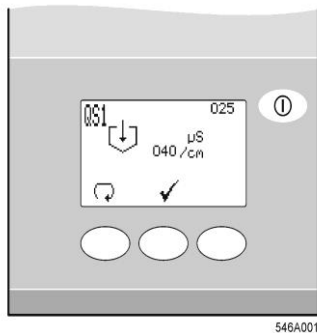
1. PRESS to change (■ = Uncompensated water quality ON)
OR
PRESS to proceed to step 9.
2. PRESS .

Note: This mode is for validation purposes only and should not be selected as standard.

Step 9 - RO water quality alarm settings QS1 (screen 025)

This screen is used to set the value at which the RO water quality alarm will sound. This alarm does not stop RO production but can extend or start flush routines.




1. PRESS  to select alarm point (Increments of 10, ranging from 20 to 100 $\mu\text{S}/\text{cm}$). If '0' is selected the alarm will be turned 'OFF'.
OR
PRESS  to proceed to step 10.
2. PRESS .

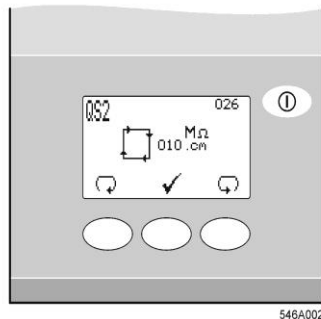


Alarm settings QS1 screen

Step 10 - Product water purity alarm settings QS2 (screen 026)

This screen is used to select the value at which the product water purity alarm will activate. The alarm does not stop the unit and will automatically reset if the purity level recovers




1. PRESS  to select alarm point (increments of 1, ranging from 1 to 10 $\text{M}\Omega\cdot\text{cm}$).
OR
PRESS  to proceed to step 11.
2. PRESS .

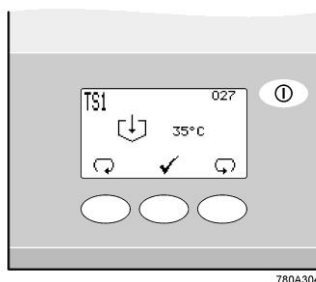


Alarm settings QS2 screen

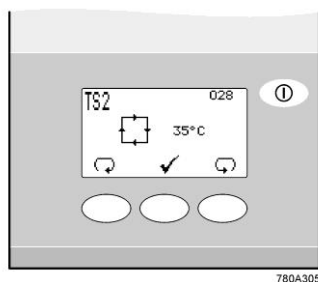
Step 11 - RO water temperature alarm settings TS1 (screen 027)

This screen is used to select the value at which the RO water temperature alarm will activate. The alarm does not stop the unit and will automatically reset if the temperature returns below the set point.

1. PRESS  to select alarm point (increments of 1, ranging from 20 to 50°C)
OR
PRESS  to proceed to step 12.
2. PRESS .



Alarm settings TS1 screen



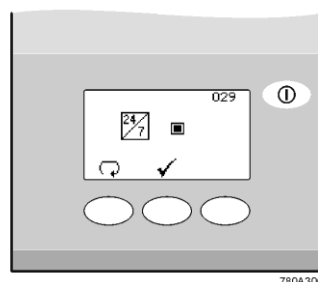
Alarm settings TS2 screen

Step 12 - Product water temperature alarm settings TS2 (screen 028)

This screen is used to select the value at which the product water temperature alarm will activate. The alarm does not stop the unit and will automatically reset if the temperature returns below the set point.

1. PRESS to select alarm point (increments of 1, ranging from 20 to 50°C)
OR
PRESS to proceed to step 13.
2. PRESS .

Note: If the water temperature rises above 55°C in the system it will alarm, stop and await operator intervention - alarm will be reset once power is removed for 5 seconds and then reinstated



Continuous operation screen

Step 13 - Continuous operation (screen 029)

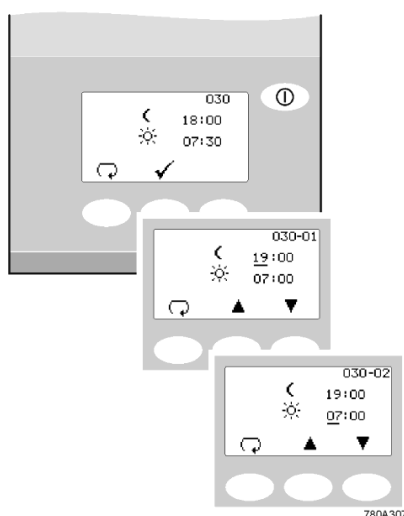
Continuous operation may be required in particular circumstances or when demand for water fluctuates.



CAUTION! During long periods of continuous operation and low usage the water temperature will rise. It is recommended that this function is only used when water usage is on average >50 litres/hr and water is used every day.

1. PRESS to change (■ = ON)
OR
PRESS to proceed to step 14.

Note: Proceed to step 16 if continuous operation is selected (■ = ON).



Setting period of operation

Step 14 - Periods of operation (screen 030)

For efficiency and to reduce the likelihood of heat build up the normal operational hours can be selected.

During 'OFF' periods the unit will automatically re-circulate water for a period of 10 minutes every two hours this will maintain water purity within the distribution loop.

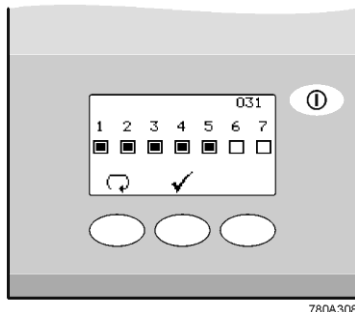
1. PRESS to edit night service start
OR
PRESS to proceed to step 15.
2. PRESS to increase or to decrease time in increments of 30 minutes.
3. PRESS to step to night service end.
4. PRESS to increase or to decrease time in increments of 30 minutes.
5. PRESS to enter times.
6. PRESS .

Note: Night service will only be operational if Continuous Operation is not enabled.

Step 15 - Operational days selection (screen 031)

Select the days that the **MEDICA Pro EDI** is required to operate by highlighting the relevant box.

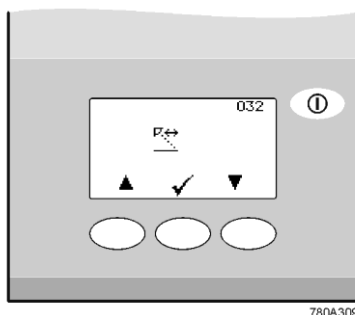
Monday = 1, Sunday = 7



Day selection screen

1. PRESS to enter selection screen
OR
PRESS to proceed to step 14.
 2. PRESS to highlight box 1 (■ = Monday enabled)
OR
PRESS to step to box (2).
- Note: A highlighted box indicates that the unit will be operational on that day between the times set in step 14.*
3. REPEAT, step 15 - item 2, to select further operating days or PRESS until the appears.
 4. PRESS .

Note: During the selected off periods the unit can be restarted by pressing PROCESS. A few minutes operation should be allowed before use to allow water purity to reach a high.

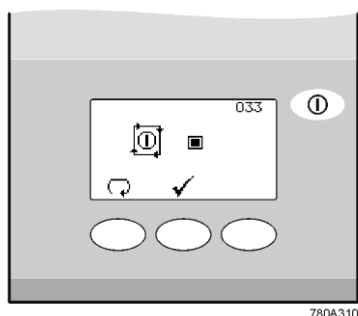


Viewing angle adjustment screen

Step 16 - Display viewing angle adjustment (screen 032)

The angle of the display can be adjusted up and down for better viewing of the screen.




1. PRESS and HOLD or to adjust the viewing angle
OR
PRESS to proceed to step 17.
2. PRESS .

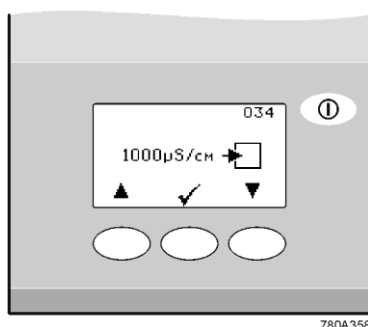


Auto-restart screen

Step 17 - Auto-restart (screen 033)

This allows selection of the AUTO restart option. If auto restart is selected the unit will automatically restart after a power failure. In manual mode the unit will stay in standby after a power failure.

1. PRESS  to change mode (■ = ON)
OR
PRESS  to proceed to step 18.
2. PRESS .





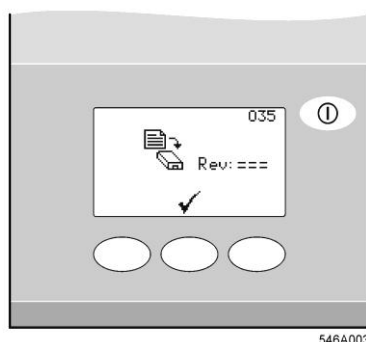
Feed Water Quality Screen

Step 18 - Feed Water Quality (screen 034)

An indication of the RO performance can be obtained using a calculation of ionic rejection in which the conductivity of the permeate is compared to that of the feedwater.

Enter the feedwater conductivity to obtain an accurate measurement.




1. PRESS  to reduce the value to the correct reading
2. PRESS  to accept

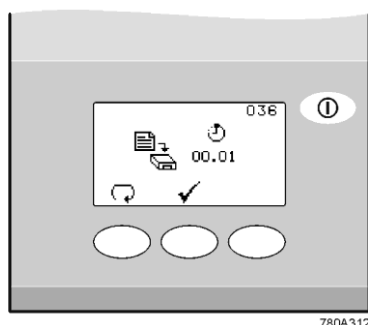


Data output screen

Step 19 - Data output (screen 035)

The **MEDICA Pro EDI** can transmit operational data to an Xport storage device.




1. PRESS  to format the storage device.
OR
PRESS  to proceed to step 20.
2. PRESS .



Data transmit screen

Step 20 - Data transmit (screen 036)

Setting the frequency of data transmittals to Xport.

1. PRESS  to change transmit intervals (1, 5, 15, 30min / 1,6 hour)
OR
PRESS  to proceed to step 21.
2. PRESS .

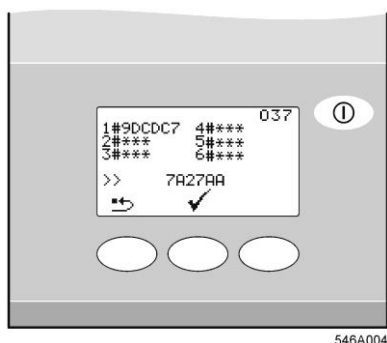
Note: PRESS PRINT during normal operation and current data will be transmitted if data output (035) is selected.

Step 21 - Programming of User Keys (screen 037)

During the life of the **MEDICA Pro EDI** you may need to delete or add User keys to prevent or allow access to user choices. This feature is only available to the Master key holder.



CAUTION! Do not press reset unless all User Keys are present.

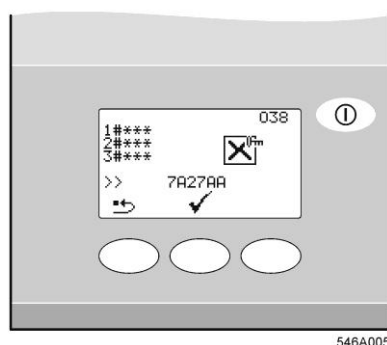


Programming of user keys screen

1. PRESS ↩ to delete all User keys
2. PRESENT the new User key to the reader.
3. PRESS →** to load new User key identification.
4. REPEAT instruction 2 and 3 until all User keys are registered (maximum of 6 users).
5. PRESS ✓ to complete settings.

Step 22 - Programming of Sanitization Keys (screen 038)

Sanitization Keys are required to start a Sanitization. These keys can be deleted or added.



Programming of Sanitization Keys screen

1. PRESENT Master key to the reader
2. PRESS ✓ until the Sanitization Key programming screen appears.
3. PRESS ↩ to delete all Sanitization keys
4. PRESENT the new Sanitization Key to the reader.
5. PRESS →** to load new Sanitization key identification.
6. REPEAT instruction 4 and 5 until all Sanitization keys are registered (maximum of 2 users).
7. PRESS ✓ to complete settings.


3.3 Setting Consumable Replacement Reminders

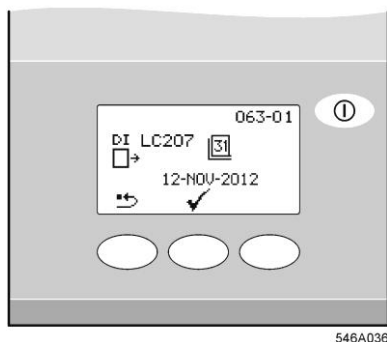
Step 1 - Enter consumable replacement timer set-up

1. TURN unit off at electrical supply.

Note: Allow time for the display to go blank after the power is removed.





2. SWITCH electrical supply on.

3. PRESS Master Key and PRESS  button to enter the Consumable Timer set up.







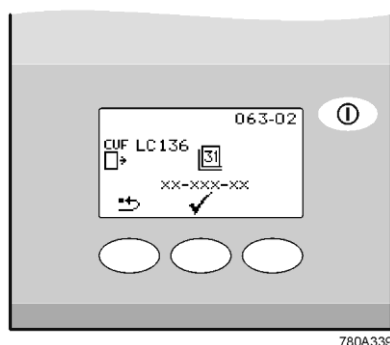
DI LC207 replacement date screen

Step 2 – Purification Pack (LC207) replacement date

1. PRESS  button to reset cartridge replacement date
OR
PRESS  to accept replacement date and proceed to CVF Reminder.
2. PRESS  to confirm that resetting is required
OR
PRESS *x* to abort reset.
3. PRESS .





Step 3 – Composite Vent filter (CVF) LC136M2 replacement date

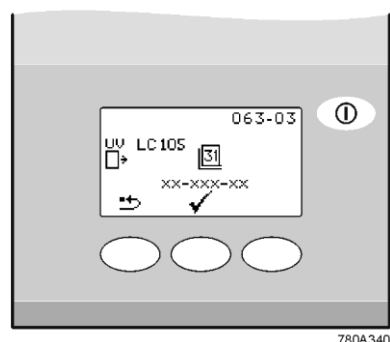
1. PRESS  button to reset CVF replacement date
OR
PRESS  to accept date and proceed to UV lamp Reminder.
2. PRESS  to confirm that resetting is required
OR
PRESS *x* to abort reset.
3. PRESS .



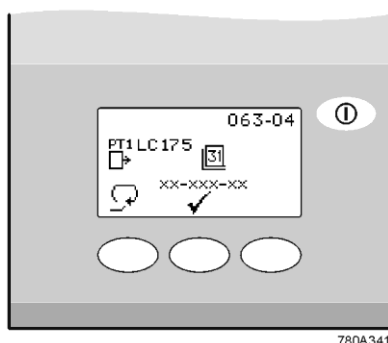
CVF replacement date screen

Step 4 - UV lamp (LC105) replacement date

1. PRESS  button to reset UV lamp replacement date
OR
PRESS  to accept replacement date and proceed to Protek Filter Replacement.
2. PRESS  confirm that resetting is required
OR
PRESS *x* to abort reset.
3. PRESS .

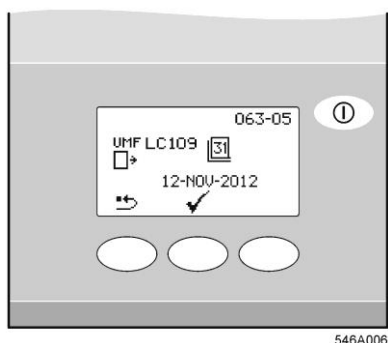


UV replacement date screen



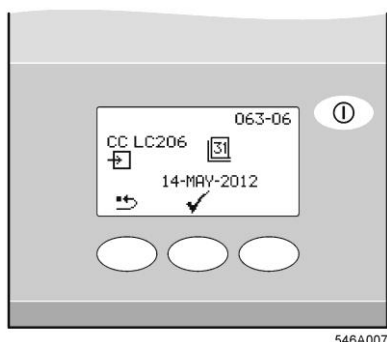
780A341

Pre-treatment cartridge replacement screen



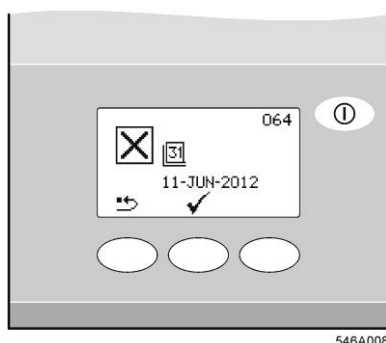
546A006

UMF replacement date screen



546A007

Conditioning Cartridge reminder screen



546A008

Sanitization reminder screen

Step 5 – Protek L2 (LC177).

1. PRESS button to reset Protek L2 (LC177) replacement date

OR

PRESS to accept replacement date and proceed to UMF replacement.

2. PRESS confirm that resetting is required

OR

PRESS **x** to abort reset.

3. PRESS .

Step 6 – UMF (LC109) replacement date

1. PRESS button to reset UMF replacement date

OR

PRESS to accept replacement date and proceed to Sanitization reminder.

2. PRESS confirm that resetting is required

OR

PRESS **x** to abort reset.

3. PRESS .

Step 8 – Conditioning Cartridge (LC206) reminder

1. Press button to reset cartridge replacement date

OR

Press to accept replacement date and complete settings.

2. PRESS confirm that resetting is required

OR

PRESS **x** to abort reset

3. PRESS .

Step 7 - Sanitization reminder

1. PRESS button to reset Sanitization replacement date

OR

PRESS to accept replacement date and complete settings.

2. PRESS confirm that resetting is required

OR

PRESS **x** to abort reset.


3. PRESS .


4. OPERATION

4.1 Night service/Operational day (screen 030)

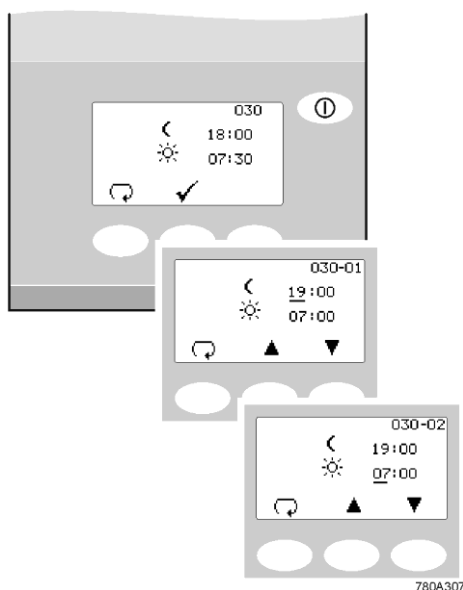
Refer to Section 3.2 - Step 14 and 15.

Your **MEDICA Pro EDI** can be programmed to operate on specific days between selected times. This is to optimize the efficiency of the unit and to minimize rises in water temperature.

During the 'sleep' period the unit will display .

It is possible to override this mode by PRESSING .

During the 'sleep' period the unit will run in intermittent recirculation (10 minutes every two hours) to maintain water purity around the distribution loop.



Night service/Operational day screen

4.2 Continuous Recirculation (24/7) (screen 029)

Refer to Section 3.2 - Step 13.

If the unit is set to continuous recirculation, it will constantly re-circulate the water and fill the reservoir as required.

It is recommended that the system only runs in continuous mode when the demand for water is high (greater than 50% of the make up flow)

During recirculation the water temperature will tend to increase slowly.

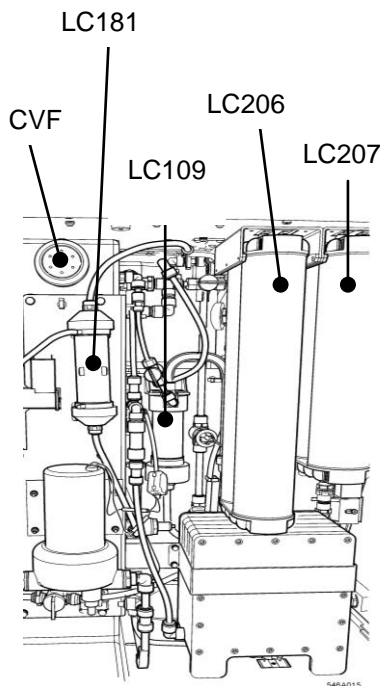
5. MAINTENANCE

An approved supplier or distributor should carry out any maintenance work not included in this handbook.

Note: Disposal of all end of life consumable items should be in accordance with local statutory regulations



WARNING! ALWAYS CHECK THAT THE MAINS ELECTRICAL POWER AND FEED WATER ARE SWITCHED OFF BEFORE ATTEMPTING ANY MAINTENANCE PROCEDURE.



General View

5.1 Replacing Composite Vent Filter (L136)

The Composite Vent Filter (CVF) should be replaced in the following circumstances:

- When indicated by the alarm (screen prompt) or after a maximum of six months.
1. ENSURE process is OFF and isolate power.
 2. OPEN front doors and locate CVF.
 3. UNSCREW old CVF and discard
 4. UNPACK new CVF.
 5. WRITE the installation date on the label of the filter for future reference.
 6. INSTALL filter.
 7. SWITCH on power.
 8. RESET consumable reminder as described in Section 3.3, Step 3.

5.2 Replacing Purification Cartridge LC207 or Conditioning Cartridge LC206.

• LC206:

- When the purity of water from the unit starts to deteriorate.

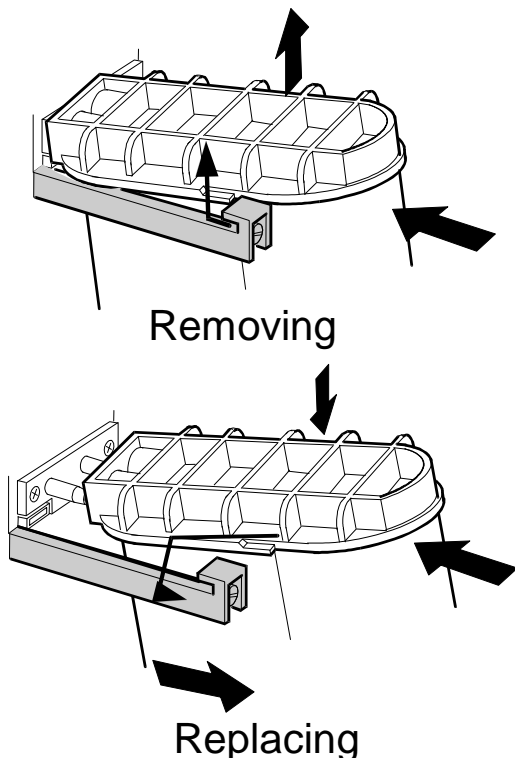
When indicated by the consumable alarm or after a maximum of six months.

1. ENSURE process is OFF and isolate power.
2. OPEN right hand door and LOCATE LC207 cartridge, the shorter pack on the right (above the EDI pulse module)
3. PUSH Purification cartridge FORWARD, then LIFT, finally PULL to remove the used cartridge. Discard.
4. UNPACK new LC207.
5. REMOVE sealing plugs from inlet and outlet ports.
6. Wet 'O' rings and SLIDE new cartridge into position pushing upwards against pack reader contacts.
7. EASE back and ENSURE that the pack is fully engaged (down) in the retainers.
8. SWITCH on power. FOLLOW screen prompts to accept new cartridge replacement date
9. START unit and allow to circulate until water quality is achieved.
10. RESET reminder as described in section 3.3, Step 2.

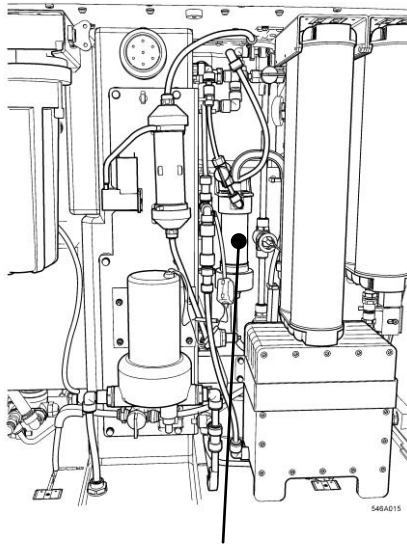
• LC207:

- The replacement of the LC206 pack is dictated by water usage and RO water quality.
- Pack needs replacing when indicated by alarm 57.
- Alarm 56 will come up before, when 10% of pack life remains, and will indicate approximate remaining life in days, based on recent usage patterns

1. ENSURE process is OFF and isolate power.
2. OPEN right hand door and LOCATE LC206 cartridge, the longer pack on the left (above the EDI module).
3. PUSH purification cartridge FORWARD, then LIFT, finally PULL to remove the used cartridge. Discard.
4. UNPACK new LC206.
5. REMOVE sealing plugs from inlet and outlet ports.
6. Wet 'O' rings and SLIDE new cartridge into position pushing upwards against pack reader contacts.
7. EASE back and ENSURE that the pack is fully engaged (down) in the retainers.
8. SWITCH on power. FOLLOW screen prompts to accept new cartridge replacement date.
9. RESET reminder as described in section 3.3, Step 2.



Purification Cartridge (LC207) and Conditioning Cartridge (LC206) removal and replacement.



Ultra-Microfilter

Ultra-Microfilter position

5.3 Replacing Ultra-Microfilter (LC109)

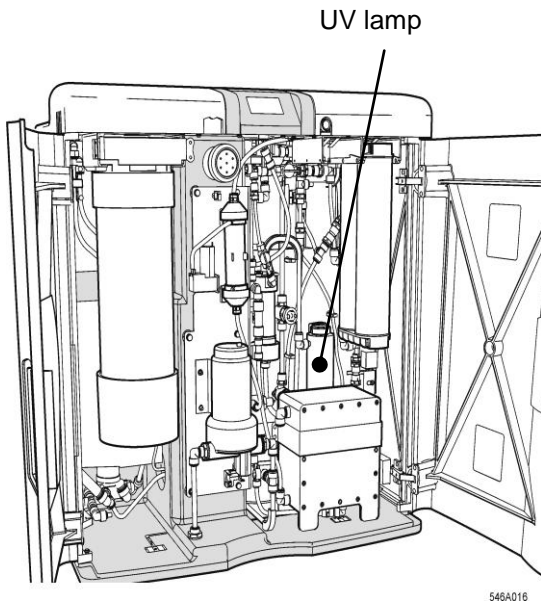
The Ultra-Microfilter (UMF) should be replaced in the following circumstances:

- When indicated by the consumable alarm
- After a maximum of 12 months use
- Product flow is no longer adequate
- Product water bacterial content is too high.

1. ISOLATE power
2. OPEN front doors and LOCATE UMF
3. UNSCREW lower connection

Note: At this stage a small quantity of water may spill.

4. UNSCREW UMF from top connection
5. INSTALL new UMF
6. RECONNECT
7. RINSE water to drain to recommission the system.
8. RESET reminder as described in section 3.3, Step 6.



UV lamp position

5.4 Replacing UV lamp (LC105)

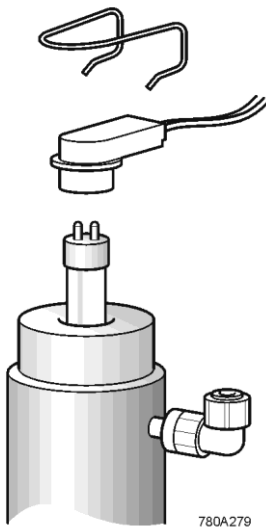
The UV lamp should be replaced in the following circumstances:

- When indicated by the consumable alarm.
 - After a maximum of twelve months use.
1. ENSURE process is OFF and ISOLATE power.
 2. OPEN the front doors.
 3. REMOVE pack to improve access to the UV lamp assembly
 4. LOCATE UV assembly on right-hand side of unit.
 5. REMOVE retaining spring clips from top and bottom of the lamp assembly
 6. REMOVE electrical connectors from top and bottom and take lamp from housing.



WARNING! IT IS STRONGLY RECOMMENDED THAT DURING THE HANDLING OF THE LAMP CUT-RESISTANT GLOVES BE WORN.

7. DISCARD lamp.

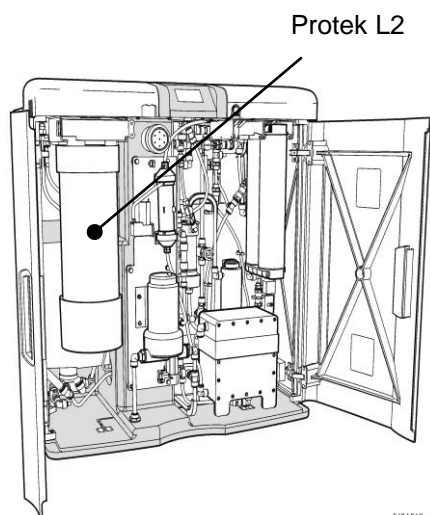


UV Lamp connection

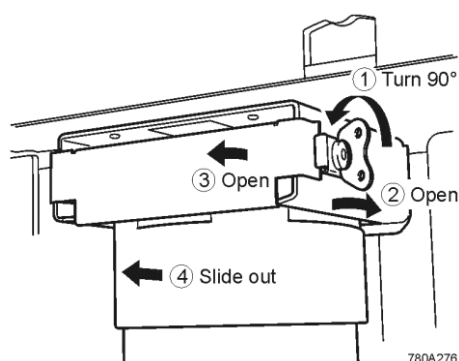


Caution! Dispose of lamp in accordance with local authority regulations.

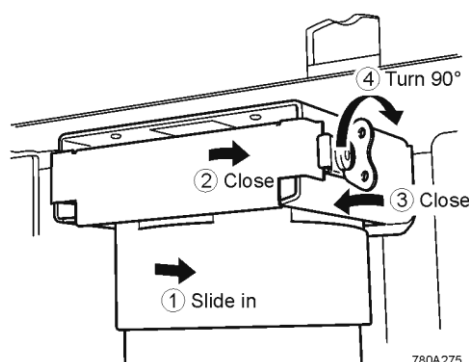
8. REMOVE new lamp from packaging and follow instructions included for cleaning.
9. REFIT into UV assembly.
10. RECONNECT to electrical connectors top and bottom.
11. REFIT retaining spring clips top and bottom
12. REPLACE Medpure pack (if fitted).
13. RESET consumable reminder as described in Section 3.3, Step 4.



Protek position



Protek L2 (LC177)



Protek L2 (LC177)

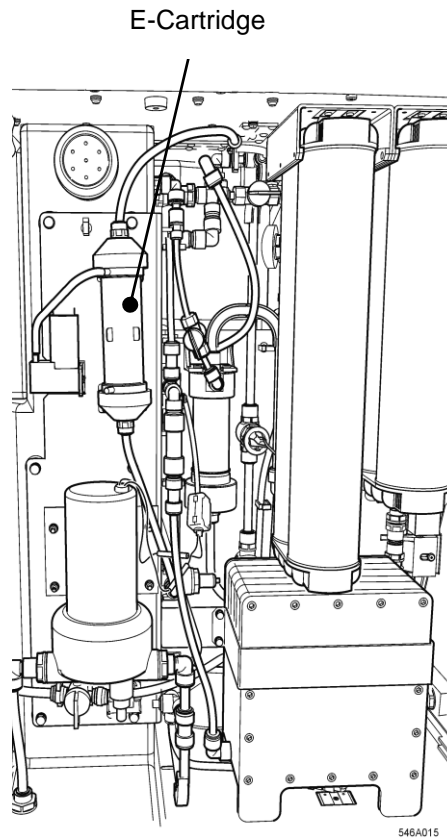
5.5 Replacing Protek L2 (LC177) or Carbon Filter (LC123) Pre-treatment.

The replacement frequency of the pre-treatment cartridge is dictated by the purity of the feed water. It should be replaced in the following circumstances:

- When indicated by the consumable alarm
- When indicated by the alarm 75
- After replacement of RO modules

5.5.1 Protek L2 (LC177)

1. ENSURE process is OFF and ISOLATE power.
2. OPEN front doors
3. LOCATE Protek
4. Remove lid from break tank and RELEASE any residual system pressure by OPERATING float valve.
5. TWIST to RELEASE clip and OPEN retaining clamp at top of cartridge Protek L2 (LC177).
6. PULL Protek L2 (LC177) forward
7. If replacing a Protek, discard the used cartridge in accordance with local regulations.
8. REMOVE new cartridge from packaging.
9. REMOVE sealing plugs from inlet and outlet ports.
10. Wet 'O' rings and SLID Protek until it is fully engaged
11. CLOSE retaining clamp and fasten CLIP
12. The unit will automatically recognize the new cartridge and date.
13. RESET reminder as described in section 3.3, Step 5.



5.6 Replacing E- Cartridge (LC181)

The E- cartridge should be replaced:

- When indicated by the alarm
1. ENSURE process is OFF and ISOLATE power.
 2. OPEN front doors
 3. LOCATE E – cartridge
 4. DISCONNECT tubing to air pump and inlet and outlet tubing from the E cartridge.
 5. REMOVE used cartridge from clip and discard in accordance with local regulations.
 6. TAKE new cartridge
 7. REMOVE sealing plugs from inlet and outlet ports
 8. LOCATE new cartridge in clip
 9. RE-CONNECT tubing

5.7 RO modules

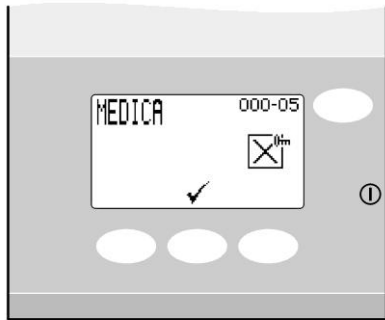
The reverse osmosis modules should be replaced if permeate water purity or flow rate is not adequate and does not meet predicted or previous performance. For information regarding the replacement of the reverse osmosis module contact Customer Services.

6. SANITIZATION

6.1 RO sanitization (Step 1)

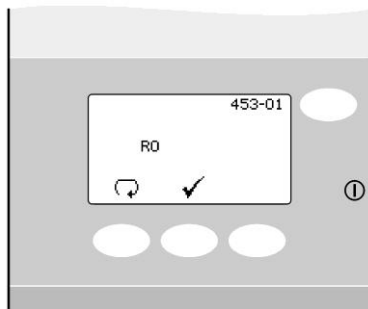
Sanitization of the finished installation is essential to ensure that the system is properly commissioned and capable of achieving the bacteriological control required for a typical application.

1. PRESENT GREEN sanitization key to reader.
2. PRESS ✓ to enter sanitization.



780A449

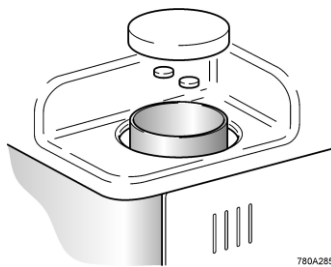
Sanitization selection screen



780A430

Enter RO sanitization

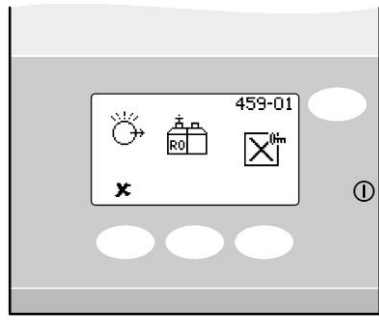
3. PRESS ✓ to enter RO sanitization.



780A285

Large white cap removal

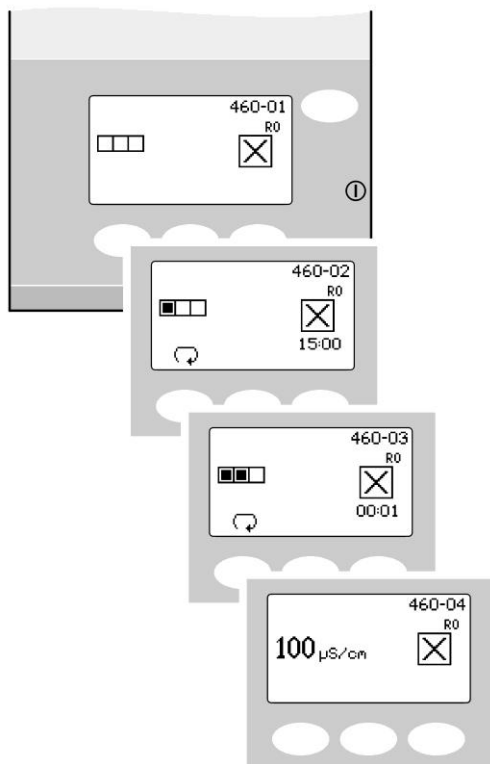
4. UNSCREW the large white lid on the left of the unit.
5. ADD 2 CT3 tablets.
6. REPLACE lid.



780A433

Confirmation CT3 is added

7. PRESENT GREEN sanitization to reader to confirm that CT3 has been added.

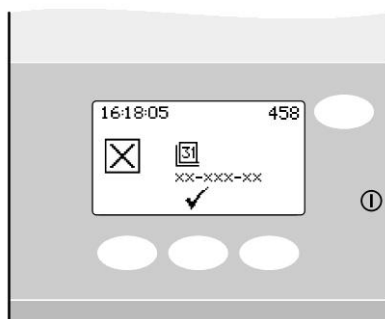


780A434

RO sanitization process steps

8. The system now enters a period of automatic sanitization lasting approximately 45 minutes

Once the step within the sanitization is complete the unit will go straight into process and continue to fill the recirculation reservoir



780A440

Set Sanitization reminder

9. PRESS ✓ to accept the sanitization reminder

6.2 Sanitization chemical safety data



WARNING! ENSURE THAT YOU AND OTHER STAFF WORKING ON THIS PRODUCT ARE FAMILIAR WITH THE POTENTIAL DANGERS AND THAT THE PROPER SAFETY EQUIPMENT IS AVAILABLE. IF IN DOUBT CONTACT YOUR LOCAL ELGA LABWATER REPRESENTATIVE.

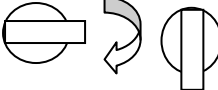

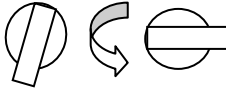
CT3 SANITIZATION TABLET - SAFETY INFORMATION

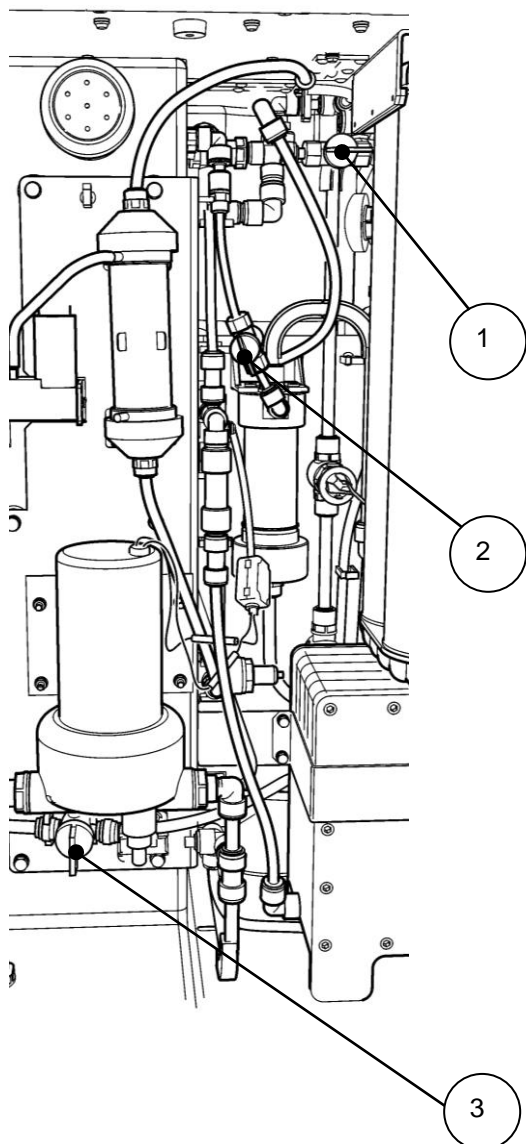
General Description:		White solid tablet, which rapidly dissolves in water, used for sanitization applications
Hazard Assessment:		Contains sodium dichloroisocyanurate dehydrate, and is therefore toxic by inhalation, ingestion and skin contact.
Properties:		Soluble in water. pH 6. Non-combustible.
Handling Precautions:		Keep container tightly closed in dry place. Wear protective clothing when handling.
Spillage:		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. OBTAIN MEDICAL ATTENTION.
	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 re-use. In severe cases, obtain MEDICAL ADVICE.
	Mouth:	Wash out the mouth thoroughly with water and give large quantities of milk to drink. Obtain MEDICAL ADVICE.
<i>Note: A comprehensive Data Sheet is available on request and is supplied with each packet of tablets</i>		

7. EMERGENCY BYPASS

Contact your local service provider before putting the unit into emergency bypass.

7.1 Emergency bypass

1. Ensure the process is OFF
2. Disconnect the electrical supply
3. **Open the doors.**
4. Close valve 1 
5. Close valve 2 
6. **Remove yellow plastic cover 3**
7. Open valve 3 
8. Close valve 3 when there is no requirement for purified water.
9. **Monitor water purity independently or install new LC207 cartridges to guarantee water purity.**



7.2 Calculation for DI Cartridge (LC207) Cartridge life

Calculate the maximum life of LC207 under emergency bypass processing and with your mains water conditions to maintain a supply purity of 1MΩ.cm to the analyzer

The maximum life expectancy of the LC207 cartridge in emergency bypass mode while maintaining a supply purity of 1MΩ at the analyzer, may be calculated as follows:

Single Pack

$$\text{Time between pack changes} = \frac{60,000}{\text{Conductivity of mains water} \times \text{Water consumption of analyzer (l/hr)}}$$

Example

Mains water conductivity = 605 μS/cm

Water consumption of analyzer = 20 l/hr

$$\text{Time between pack changes} = \frac{120,000}{605 \times 20}$$

Time between pack changes = 4.9 hr

In the absence of information on mains water conductivity, assume a pack life of 2 hr if the analyzer consumes 20 l/hr. If flows start to decline this may be improved by changing the UMF.

The capacity will be less (typically 80% less) if a water purity of 10 MΩ.cm is needed.

8. TROUBLE SHOOTING

If a problem occurs, the unit will normally sound an alarm and the respective icon will flash. The audible alarm can be silenced by pressing the mute button.

The appropriate action to then take (for the more common alarm displays) is shown on the Quick Reference Guide (fitted to the inside of the door of the **MEDICA Pro EDI**.) If the unit cannot be repaired using the information shown, please call your local ELGA LabWater representative (See Section 12.0 - Useful Contact Details).







































WARNING!

ALWAYS ENSURE THAT THE MAINS POWER SUPPLY IS ISOLATED BEFORE WORKING INSIDE THE UNIT.

Alarm Summary

Display id	icon	Alarm	Recommended Action
672-98		Leak Detection	<ul style="list-style-type: none"> PRESS mute to silence alarm REMOVE power rectify leak and dry sensors Dry the contacts POWER on to reset.
672-97		Reservoir level controls	<ul style="list-style-type: none"> PRESS mute to silence alarm REMOVE power Contact Technical Support
672-96		High loop pressure	<ul style="list-style-type: none"> PRESS mute to silence alarm REMOVE power Contact Technical Support
672-95		Permeate over temperature	<ul style="list-style-type: none"> PRESS mute to silence alarm Potable feed temperature is unacceptably high >50°C Contact Technical support
672-94		Recirc. loop over temperature	<ul style="list-style-type: none"> PRESS mute to silence alarm Water temperature is unacceptably high >50°C Contact Technical support
-93		Protek L2 incorrectly installed	<ul style="list-style-type: none"> PRESS mute to silence alarm CONFIRM Protek is correctly installed POWER OFF/ ON to reset
-92		LC207 incorrectly installed	<ul style="list-style-type: none"> PRESS mute to silence alarm CONFIRM Medpure L1 is correctly installed POWER OFF/ ON to reset
-90		Water purity alarm	<ul style="list-style-type: none"> PRESS mute to silence alarm CONFIRM purity displayed is suitable for application. CHANGE LC207 if water purity is insufficient
-89		Water temperature alarm	<ul style="list-style-type: none"> PRESS mute to silence alarm CONFIRM temperature is suitable for application. ADJUST alarm setpoint or DIRECT water to drain to Introduce cool water
-88		Permeate purity alarm	<ul style="list-style-type: none"> PRESS mute to silence alarm CONFIRM purity displayed is suitable for application. ADJUST alarm setpoint or contact local service provider.
-87		Permeate temperature alarm	<ul style="list-style-type: none"> PRESS mute to silence alarm CONFIRM temperature is suitable for application. ADJUST alarm setpoint or confirm potable supply temperature is suitable
-86		Break tank low	<ul style="list-style-type: none"> PRESS mute to silence alarm. CONFIRM pressure and flow of potable supply If problem persists contact local service provider
-85		UV lamp fail	<ul style="list-style-type: none"> PRESS mute to silence alarm CHANGE lamp at the next opportunity
60		Invalid C.C.	<ul style="list-style-type: none"> Check if you have re-installed old LC206 Put in new LC206
57		Replace LC206	<ul style="list-style-type: none"> LC206 is expired. Replace with new one.
56		LC206 reminder	<ul style="list-style-type: none"> Make sure you have a new LC206 ready in stock for replacement 10% of life left.

9. KEY TO CONTROL PANEL

ICON	DESCRIPTION	ICON	DESCRIPTION
	Accept		User Recognition Key
	Auto restart		Locked
	Scroll back		Menu
	Step back		Mute alarm
	Bell		Night
	Standby		Option OFF
	Calibration point		Option ON
	Cancel		Output
	Clock		Recirculate
	Date		Reset
	Day		Right
	Down		Sanitization PASSkey
	Drain		Sanitization reminder
	Save data		Scroll
	Hazard		Transport mode
	Feed		UP
	Fill		Viewing angle
	Add chemical		Recirc

10. TECHNICAL SPECIFICATION

Feedwater			
Source	Potable tap water as detailed below. Failure to comply with the minimum feedwater pretreatment recommendations will affect the life and performance of key components within the MEDICA Pro EDI , and may invalidate the warranty.		
Contaminant	Measure	Range	Pretreatment
Calcium	Ca ppm as CaCO ₃	< 250	None
		> 250	Softener or use very low RO recovery
Free chlorine <0.5 ppm LC123	Cl ppm	< 0.1	Protek L2
		0.1 to 0.5	Protek L2
		> 0.5	Protek L2
Chloramine	Chloramine ppm	<0.05	LC123
		0.5 to 1.0	Protek L2 if water usage is about 5000 litres per week.
		>1.0	Cylinder of carbon sized correctly.
Silica	SiO ₂ ppm	< 30	Protek L2
		> 30	20 inch cartridge depth filter*
		<30	LC123
Fouling Index	FI	<10	Protek L2
		>10	Backwashable media filter with a minimum flow rate of 20l/min
		<3	LC123
Iron/manganese	Fe/Mn ppm	< 0.05 to 0.1	Protek L2, LC123
		> 0.1	Back-washable pre- filter *
Organics	TOC ppm C	<3	Protek L2
		> 3	Cylinder of carbon sized correctly
TEMPERATURE	4 - 40°C (Recommended 15 - 25°C)		
FLOWRATE (maximum requirement @15°C)	9l/min		
Drain requirements (gravity fall with air gap).	20l/min		
Feedwater Pressure	6 bar (90 psi) maximum, 2 bar (30 psi) minimum.		

* Installed in feed water supply.

Note: If feedwater purity is variable or values are close to the top of one of the ranges, provide pre-treatment for the higher range or seek advice from Technical Support at ELGA LabWater.

Pre-treatment LC177 and LA727 (LC123) included in starter kits LC238 and LC237 respectively.

Dimensions		
Height	820 mm (32.8")	834 mm (33.4") including castors
Width	794 mm (31.8")	
Depth	470 mm (18.8")	
Unit Type	MEDICA Pro EDI 60	MEDICA Pro EDI 120
Supply weight	58 Kg	65 Kg
Operational weight	115 Kg	122 Kg
Installation	Floor/ bench	

Connections	
Inlet	10 mm OD tube
Drain	10 mm OD tube
EDI drain	10 mm OD tube
Recirculation loop outlet*	12 mm OD tube
Recirculation loop inlet*	12 mm OD tube

Electrical Requirements	
Mains input	230 V ac, 50 Hz 115 V ac, 60 Hz
System control voltage (not including pumps and UV)	24 V dc
Power consumption (peak demand)	650 VA
Electrical protection rating	10 amp

Safety Features	
Power fail safe Water temperature alarm* Water purity alarm* Leak detection alarm Access restricted by User Recognition key Low voltage control circuit - 24 V dc Visual alarms Audible alarms	

* Output to operate 24 V dc relay.

Product Water Specification	
Flowrate	MEDICA Pro EDI
Daily usage - typical	960
Daily usage - maximum	2880
Inorganic	>10 MΩ. cm @ 25°C
TOC ppb	<30
Bacteria	<1 CFU/ml**
Particles	0.05 µm

** System to be regularly sanitized and installed following ELGA LabWater installation design guidelines.

As part of our policy of continual improvement, we reserve the right to alter the specifications given in this document.

11. WARRANTY/CONDITIONS OF SALE

ELGA LabWater is a trading name of VWS (UK) Ltd.

General Limited Warranty

VWS (UK) Ltd. warrants the products manufactured by it against defects in materials and workmanship when used in accordance with applicable instructions for a period of one year from the date of shipment for the products. VWS (UK) Ltd. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED. THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The warranty provided herein and the data, specifications and descriptions of the VWS (UK) Ltd. products appearing in VWS (UK) Ltd. published catalogues and product literature may not be altered except by express written agreement signed by an officer of VWS (UK) Ltd. Representations, oral or written, which are inconsistent with this warranty or such publications are not authorized and, if given, should not be relied upon.

In the event of a breach of the foregoing warranty, VWS (UK) Ltd. sole obligation shall be to repair or replace, at its option, any product or part thereof that proves to be defective in materials or workmanship within the warranty period, provided the customer notifies VWS (UK) Ltd. promptly of any such defect. The exclusive remedy provided herein shall not be deemed to have failed of its essential purpose so long as VWS (UK) Ltd. is willing and able to repair or replace any nonconforming VWS (UK) Ltd. product or part. VWS (UK) shall not be liable for consequential, incidental, special or any other indirect damages resulting from economic loss or property damage sustained by any customer from the use of its products.

VWS (UK) Ltd. Warranty

VWS (UK) Ltd. warrants the water systems manufactured by it, BUT EXCLUDING MEMBRANES AND PURIFICATION PACKS, against defects in materials and workmanship when used in accordance with the applicable instructions and within the operating conditions specified for the systems for a period of one year from the earlier of:

- a) the date of installation, or
- b) the 120th day following the date of shipment.

VWS (UK) LTD. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED. THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The warranty provided herein and the data, specifications and descriptions of the VWS (UK) Ltd. systems appearing in VWS (UK) Ltd. published catalogues and product literature may not be altered except by express written agreement signed by an officer VWS (UK) Ltd. Representations, oral or written, which are inconsistent with this warranty or such publications are not authorised and, if given, should not be relied upon.

In the event of a breach of the foregoing warranty, VWS (UK) Ltd. sole obligation shall be to repair or replace, at its option, any product or part thereof that proves to be

defective in materials or workmanship within the warranty period, provided the customer notifies VWS (UK) Ltd. promptly of any such defect. The cost of labor for the first ninety (90) days of the above warranty period is included in the warranty; thereafter, labor cost shall be at the customer's expense. The exclusive remedy provided herein shall not be deemed to have failed of its essential purpose so long as VWS (UK) Ltd. is willing and able to repair or replace any nonconforming VWS (UK) Ltd. system or component part. VWS (UK) Ltd. shall not be liable for consequential, incidental, special or any other indirect damages resulting from economic loss or property damage sustained by any customer from the use of its process systems.

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