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INTRODUCTION

1.1 Use of this Manual
ELGA LabWater strive 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 30/60/120 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 30/60/120 is isolated before any items are changed or maintenance work performed.

The external isolator providing power to the unit should be positioned so that it is easily accessible.

⚠️ WARNING! THIS APPLIANCE MUST BE EARTHED.

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 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.

1.7 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.

1.8 Consumables.

<table>
<thead>
<tr>
<th>Consumables</th>
<th>Typical Service Life*</th>
<th>Max. Shelf Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC105 (UV lamp)</td>
<td>12 months</td>
<td>5 years</td>
</tr>
<tr>
<td>LC109 (UMF)</td>
<td>6 months</td>
<td>2 years</td>
</tr>
<tr>
<td>LC136 (Vent filter)</td>
<td>6 months</td>
<td>2 years</td>
</tr>
<tr>
<td>LC174 (Medpure L1 cartridge)</td>
<td>3-12 months</td>
<td>2 years</td>
</tr>
<tr>
<td>LC175 (Protek L1)*</td>
<td>6 months</td>
<td>2 years</td>
</tr>
<tr>
<td>LC177 (Protek L2)*</td>
<td>12 months</td>
<td>2 years</td>
</tr>
<tr>
<td>LC180 (RO cartridge 60 L/hr)</td>
<td>3 years</td>
<td>2 years</td>
</tr>
<tr>
<td>LC181 (E-Cartridge)**</td>
<td>3 years</td>
<td>2 years</td>
</tr>
<tr>
<td>CT3 (Sanitization tablet)</td>
<td>Typical usage 2 to 6 tablets per month***</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.

** Optional - Consumables not fitted as standard. Fit only after consultation with ELGA Technical Support

*** Sanitization tablets are used typically 2 to 6 tablets per 1 to 6 months depending on bacteria monitoring, local feed water conditions and usage.
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 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 11.

<table>
<thead>
<tr>
<th>BUTTON</th>
<th>ICON</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCESS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>✅</td>
<td>Accept Replacement dates</td>
</tr>
<tr>
<td>LEFT</td>
<td>✅</td>
<td>Shift Scroll Menu Up Down</td>
</tr>
<tr>
<td>CENTRE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RIGHT</td>
<td>✅</td>
<td>Mute Alarm Down</td>
</tr>
</tbody>
</table>
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.

**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 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.
2. PRESENT the ‘Master Key’ (black) or the ‘User key’ (blue) to the reader ensuring clean contact of both metallic components.
3. The display will show a padlock
4. REMOVE ‘Key’ from the reader.
5. The display will show a key
6. PRESS button.

*Note:* If no buttons are pressed the system will relock after 5 seconds.
Step 2 - Clock (screen 018)

1. PRESS \(\bigcirc\) to edit time
   OR
   PRESS \(\checkmark\) to proceed to step 3.
2. PRESS and HOLD \(\uparrow\) to increase or \(\downarrow\) to decrease hour.
3. PRESS \(\uparrow\) to step cursor onto minute.
4. PRESS \(\uparrow\) to increase or \(\downarrow\) to decrease minutes.
5. PRESS \(\checkmark\).

Step 3 - Date (screen 019)

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

1. PRESS \(\bigcirc\) to edit date
   OR
   PRESS \(\checkmark\) to proceed to step 4.
2. PRESS and HOLD \(\uparrow\) to increase or \(\downarrow\) to decrease day.
3. PRESS \(\uparrow\) to step cursor onto month.
4. PRESS \(\uparrow\) to increase or \(\downarrow\) to decrease month.
5. PRESS \(\uparrow\) to step cursor onto year.
6. PRESS \(\uparrow\) to increase or \(\downarrow\) to decrease year.
7. PRESS \(\checkmark\).

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 \(\bigcirc\) to change mode (\(\blacksquare\) = ON)
   OR
   PRESS \(\checkmark\) to proceed to step 5.
2. PRESS \(\checkmark\).

Note: The visual alarm cannot be disabled.
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 ✔.

Step 6 - Set UOM – Pressure (screen 022) R/RE variants only.

This screen allows preferred displayed units of water pressure to be set, to either, psi or Bar. This only indicates the pressure as measurement in the recirculation loop.

1. PRESS SCROLL 🔄 to change mode (psi or bar)
   OR
   PRESS TICK ✔ to proceed to step 7.
2. PRESS TICK ✔.

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 ✔.

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 100µS/cm).
   OR
   PRESS ✔ to proceed to step 10.

2. PRESS ✔.

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 MΩ.cm).
   OR
   PRESS ✔ to proceed to step 11.

2. PRESS ✔.

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 ✔.
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 \(\square\) 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.

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 \(\square\) to change (\(\square\) = ON)
   OR
   PRESS ✔ to proceed to step 14.

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

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 \(\square\) to edit night service start
   OR
   PRESS ✔ to proceed to step 15.
2. PRESS \(\uparrow\) to increase or \(\downarrow\) to decrease time in increments of 30 minutes.
3. PRESS \(\square\) to step to night service end.
4. PRESS \(\uparrow\) to increase or \(\downarrow\) to decrease time in increments of 30 minutes.
Step 15 - Operational days selection (screen 031)

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

Monday = 1, Sunday = 7

1. PRESS \( \bigcirc \) to enter selection screen
   OR
   PRESS ✔ to proceed to step 14.
2. PRESS \( \bigcirc \) to highlight box 1 (■ = Monday enabled)
   OR
   PRESS \( \uparrow \) 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 \( \uparrow \) 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.

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 \( \uparrow \) or \( \downarrow \) to adjust the viewing angle
   OR
   PRESS ✔ to proceed to step 17.
2. PRESS ✔.
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 .

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

Step 19 - Data output (screen 035)

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

1. PRESS to change ( = ON)
   OR
   PRESS to proceed to step 20.
2. PRESS .

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 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.

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.

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

Step 2 – Medpure L1 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 ✗ to abort reset.

3. PRESS ✓.

Step 3 – Composite Vent filter (CVF) 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 ✗ to abort reset.

3. PRESS ✓.

Step 4 - UV lamp 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 ✗ to abort reset.

3. PRESS ✓.

Step 5 - Protek L1/L2 replacement date
1. PRESS button to reset Protek L1/L2 replacement date
   OR
   PRESS ✔ to accept replacement date and proceed to UMF replacement.
2. PRESS ✔ confirm that resetting is required
   OR
   PRESS ❌ to abort reset.
3. PRESS ✔.

**Step 6 – UMF 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 ❌ 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 ❌ 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 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.

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 recirculate 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.

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.

5.2 Replacing Medpure L1 (LC174)

- 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 Medpure cartridge.
3. PUSH Medpure FORWARD, then LIFT, finally PULL to remove the used cartridge. Discard.
4. UNPACK new Medpure.
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.

CAUTION! If operating the unit with two Medpure L1 purification packs installed, both packs must be replaced at the same time. Failure to do so will result in low water purity.

5.3 Replacing Ultra-Microfilter (LC109)
The Ultra-Microfilter (UMF) should be replaced in the following circumstances:
- Fill the reservoir to 48.5 liters (Max. Fill),
- Power down system,
- Remove package from LC109 and discard preservative to drain,
- Remove LC109 from MEDCIA Pro system,
- Install new LC109,
- Close valve#2 (Located on top side of LC109 – 6mm shutoff valve connecting to reservoir).
  Note: If you received a high loop pressure alarm, you will then need to direct valve #2 (Marked as bypass procedure) – 6 mm tubing from the LC109 to drain as well.
- Direct the loop feed out to drain by using a 10mm tube or disconnect the loop return and direct to drain. (Make sure that the loop return is not connected to the MEDCIA Pro – the preservative will effect the purification packs).
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 Medpure 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.

**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.
5.5 Replacing Protek L1 (LC175) or Protek L2 (LC177) Pre-treatment Cartridges

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

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
6. PULL Protek forward
7. DISCARD 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 SLIDE Protek until it is fully engaged
11. CLOSE retaining clamp and fasten CLIP
12. The unit will automatically recognize the new cartridge and date.
5.6 Replacing E-Cartridge (LC181) standard on RE variant only

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.

3. PRESS ✓ to enter RO sanitization.

4. UNSCREW the large white lid on the left of the unit.
5. ADD 2 CT3 tablets.
6. REPLACE lid.
7. PRESENT GREEN sanitization to reader to confirm that CT3 has been added.

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.

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

<table>
<thead>
<tr>
<th>General Description:</th>
<th>White solid tablet, which rapidly dissolves in water, used for sanitization applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Assessment:</td>
<td>Contains sodium dichloroisocyanurate dehydrate, and is therefore toxic by inhalation, ingestion and skin contact.</td>
</tr>
<tr>
<td>Handling Precautions:</td>
<td>Keep container tightly closed in dry place. Wear protective clothing when handling.</td>
</tr>
<tr>
<td>Spillage:</td>
<td>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.</td>
</tr>
<tr>
<td>Toxicity:</td>
<td>Serious risk of poisoning by inhalation or ingestion. Irritating to skin, eyes and respiratory system.</td>
</tr>
</tbody>
</table>

**First Aid**

<table>
<thead>
<tr>
<th>Eyes:</th>
<th>Thoroughly wash out with clean water for at least 15 minutes. OBTAIN MEDICAL ATTENTION.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation:</td>
<td>Remove from exposure, rest and expose to fresh air. In severe cases, obtain medical attention and treat for acute chlorine poisoning.</td>
</tr>
<tr>
<td>Skin:</td>
<td>Drench the skin with plenty of water. Remove contaminated clothing and wash before re-use. In severe cases, obtain MEDICAL ADVICE.</td>
</tr>
<tr>
<td>Mouth:</td>
<td>Wash out the mouth thoroughly with water and give large quantities of milk to drink. Obtain MEDICAL ADVICE.</td>
</tr>
</tbody>
</table>

*Note: A comprehensive Data Sheet is available on request and is supplied with each packet of tablets*
7. **EMERGENCY BYPASS**

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

7.1 **Emergency bypass (MEDICA R/RE/RX)**

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 Medpure L1 cartridges to guarantee water purity.

7.2 **Emergency bypass (MEDICA B/S/SE)**

1. Ensure the process is OFF
2. Disconnect the electrical supply
3. Open the doors.
4. Close valve 1
5. Valve 2 should remain closed
6. **Remove yellow plastic cover 3**
7. Open valve 3
8. Monitor the level in the reservoir to ensure it does not overflow.
9. Monitor water purity independently or install new Medpure L1 cartridges to guarantee water purity.
7.3 Calculation for Medpure L1 Cartridge life

Calculate the maximum Medpure cartridge life 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 Medpure L1 cartridge in emergency bypass mode while maintaining a supply purity of 1MΩ at the analyzer, may be calculated as follows:

Single Pack

\[
\text{Time between pack changes} = \frac{120,000}{\text{Conductivity of mains water} \times \text{Water consumption of analyzer (l/hr)}}
\]

Example

Mains water conductivity = 605 µS/cm
Water consumption of analyzer = 20 l/hr

\[
\text{Time between pack changes} = \frac{120,000}{605 \times 20} = 9.9 \text{ hr}
\]

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 somewhat less (typically 20 to 40% 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.) 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

<table>
<thead>
<tr>
<th>Display id</th>
<th>icon</th>
<th>Alarm</th>
<th>Recommended Action</th>
</tr>
</thead>
</table>
| 672-98     | !    | Leak Detection   | • PRESS mute to silence alarm  
• REMOVE power rectify leak and dry sensors  
• Dry the contacts  
• POWER on to reset. |
| 672-97     | !    | Reservoir level controls | • PRESS mute to silence alarm  
• REMOVE power  
• Contact Technical Support |
| 672-96     | !    | High loop pressure | • PRESS mute to silence alarm  
• REMOVE power  
• Contact Technical Support |
| 672-95     | !    | Permeate over temperature | • PRESS mute to silence alarm  
• Potable feed temperature is unacceptably high >50°C  
• Contact Technical support |
| 672-94     | !    | Recirc. loop over temperature | • PRESS mute to silence alarm  
• Water temperature is unacceptably high >50°C  
• Contact Technical support |
| -93        | ![LC175/LC177] | Protek L1 incorrectly installed | • PRESS mute to silence alarm  
• CONFIRM Protek is correctly installed  
• POWER OFF/ ON to reset |
| -92        | ![LC174] | Medpure L1 incorrectly installed | • PRESS mute to silence alarm  
• CONFIRM Medpure L1 is correctly installed  
• POWER OFF/ ON to reset |
| -90        | ![1MΩ.cm] | Water purity alarm | • PRESS mute to silence alarm  
• CONFIRM purity displayed is suitable for application.  
• CHANGE Medpure L1 if water purity is insufficient |
| -89        | ![35°C] | Water temperature alarm | • PRESS mute to silence alarm  
• CONFIRM temperature is suitable for application.  
• ADJUST alarm setpoint or DIRECT water to drain to introduce cool water |
| -88        | ![100µS/cm] | Permeate purity alarm | • PRESS mute to silence alarm  
• CONFIRM purity displayed is suitable for application.  
• ADJUST alarm setpoint or contact local service provider. |
| -87        | ![35°C] | Permeate temperature alarm | • 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] | Break tank low | • PRESS mute to silence alarm.  
• CONFIRM pressure and flow of potable supply  
• If problem persists contact local service provider |
| -85        | ![UV lamp fail] | UV lamp fail | • PRESS mute to silence alarm  
• CHANGE lamp at the next opportunity |
## 9. KEY TO CONTROL PANEL

<table>
<thead>
<tr>
<th>ICON</th>
<th>DESCRIPTION</th>
<th>ICON</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>Accept</td>
<td>$\text{\textcircled{m}}$</td>
<td>User Recognition Key</td>
</tr>
<tr>
<td></td>
<td>Auto restart</td>
<td>$\text{\textcircled{l}}$</td>
<td>Locked</td>
</tr>
<tr>
<td></td>
<td>Scroll back</td>
<td>$\text{\textcircled{b}}$</td>
<td>Menu</td>
</tr>
<tr>
<td></td>
<td>Step back</td>
<td>$\text{\textcircled{u}}$</td>
<td>Mute alarm</td>
</tr>
<tr>
<td></td>
<td>Bell</td>
<td>$\text{\textcircled{p}}$</td>
<td>Night</td>
</tr>
<tr>
<td></td>
<td>Standby</td>
<td>$\text{\textcircled{q}}$</td>
<td>Option OFF</td>
</tr>
<tr>
<td></td>
<td>Calibration point</td>
<td>$\text{\textcircled{c}}$</td>
<td>Option ON</td>
</tr>
<tr>
<td></td>
<td>Cancel</td>
<td>$\text{\textcircled{c}}$</td>
<td>Output</td>
</tr>
<tr>
<td></td>
<td>Clock</td>
<td>$\text{\textcircled{c}}$</td>
<td>Recirculate</td>
</tr>
<tr>
<td></td>
<td>Date</td>
<td>$\text{\textcircled{c}}$</td>
<td>Reset</td>
</tr>
<tr>
<td></td>
<td>Day</td>
<td>$\text{\textcircled{c}}$</td>
<td>Right</td>
</tr>
<tr>
<td></td>
<td>Down</td>
<td>$\text{\textcircled{c}}$</td>
<td>Sanitization PASSkey</td>
</tr>
<tr>
<td></td>
<td>Drain</td>
<td>$\text{\textcircled{c}}$</td>
<td>Sanitization reminder</td>
</tr>
<tr>
<td></td>
<td>Save data</td>
<td>$\text{\textcircled{c}}$</td>
<td>Scroll</td>
</tr>
<tr>
<td></td>
<td>Hazard</td>
<td>$\text{\textcircled{c}}$</td>
<td>Transport mode</td>
</tr>
<tr>
<td></td>
<td>Feed</td>
<td>$\text{\textcircled{c}}$</td>
<td>UP</td>
</tr>
<tr>
<td></td>
<td>Fill</td>
<td>$\text{\textcircled{c}}$</td>
<td>Viewing angle</td>
</tr>
<tr>
<td></td>
<td>Add chemical</td>
<td>$\text{\textcircled{c}}$</td>
<td>Recirc</td>
</tr>
</tbody>
</table>
## 10. TECHNICAL SPECIFICATION

### Feedwater

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Measure</th>
<th>Range</th>
<th>Pretreatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium</td>
<td>Ca ppm as CaCO(_3)</td>
<td>&lt; 250</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 250</td>
<td>Softener or use very low RO recovery</td>
</tr>
<tr>
<td>Total chlorine</td>
<td>Cl ppm</td>
<td>&lt; 0.1</td>
<td>Protek L1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.1 to 0.5</td>
<td>Protek L1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 0.5</td>
<td>Protek L2</td>
</tr>
<tr>
<td>Silica</td>
<td>SiO(_2) ppm</td>
<td>&lt; 30</td>
<td>Protek L1 or L2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 30</td>
<td>20 inch cartridge depth filter*</td>
</tr>
<tr>
<td>Fouling Index</td>
<td>Fi</td>
<td>&lt; 20</td>
<td>Protek L1 or L2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 20</td>
<td>Backwashable media filter with a minimum flow rate of 20l/min</td>
</tr>
<tr>
<td>Iron/manganese</td>
<td>Fe/Mn ppm</td>
<td>&lt; 0.1</td>
<td>Protek L1 or L2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 0.1</td>
<td>Back-washable pre- filter *</td>
</tr>
<tr>
<td>Organics</td>
<td>TOC ppm C</td>
<td>&lt; 3</td>
<td>Protek L1 or L2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 3</td>
<td>Cylinder of carbon sized correctly</td>
</tr>
</tbody>
</table>

**TEMPERATURE**
4 - 40°C (Recommended 15 - 25°C)

**FLOWRATE** (maximum requirement @15°C)
9l/min

**Drain requirements (gravity fall with air gap).**
9l/min

**Feedwater Pressure**
6 bar (90 psi) maximum, 2 bar (30 psi) minimum.

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.

### Dimensions

<table>
<thead>
<tr>
<th></th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>820 mm</td>
<td>794 mm</td>
<td>470 mm</td>
</tr>
<tr>
<td></td>
<td>(32.8&quot;)</td>
<td>(31.8&quot;)</td>
<td>(18.8&quot;)</td>
</tr>
<tr>
<td></td>
<td>834 mm</td>
<td>44 kg</td>
<td>101 kg</td>
</tr>
<tr>
<td></td>
<td>(33.4&quot;)</td>
<td>(18.8&quot;)</td>
<td>(18.8&quot;)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 kg</td>
<td>102 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52 kg</td>
<td>109 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53 kg</td>
<td>110 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>44 kg</td>
<td>101 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 kg</td>
<td>102 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52 kg</td>
<td>109 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53 kg</td>
<td>110 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>44 kg</td>
<td>101 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 kg</td>
<td>102 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52 kg</td>
<td>109 kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53 kg</td>
<td>110 kg</td>
</tr>
</tbody>
</table>

* 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.
### Connections

<table>
<thead>
<tr>
<th>Connection</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet</td>
<td>10 mm OD tube</td>
</tr>
<tr>
<td>Drain</td>
<td>10 mm OD tube</td>
</tr>
<tr>
<td>Reservoir drain</td>
<td>10 mm OD tube</td>
</tr>
<tr>
<td>Recirculation loop outlet*</td>
<td>10 mm OD tube</td>
</tr>
<tr>
<td>Recirculation loop inlet*</td>
<td>10 mm OD tube</td>
</tr>
</tbody>
</table>

### Electrical Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains input</td>
<td>230 V ac, 50 Hz</td>
</tr>
<tr>
<td></td>
<td>115 V ac, 60 Hz</td>
</tr>
<tr>
<td>System control voltage (not including pumps and UV)</td>
<td>24 V dc</td>
</tr>
<tr>
<td>Power consumption (peak demand)</td>
<td>650 VA</td>
</tr>
<tr>
<td>Electrical protection rating</td>
<td>10 amp</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Flowrate</th>
<th>MEDICA Pro 30</th>
<th>MEDICA Pro 60</th>
<th>MEDICA Pro 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily usage - typical</td>
<td>240</td>
<td>480</td>
<td>960</td>
</tr>
<tr>
<td>Daily usage - maximum</td>
<td>720</td>
<td>1440</td>
<td>2880</td>
</tr>
<tr>
<td>Inorganic</td>
<td>&gt;10 MΩ. cm @ 25°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOC ppb</td>
<td>&lt;30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacteria</td>
<td>&lt;1 CFU/ml**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particles</td>
<td>0.05 µm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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12. USEFUL CONTACT DETAILS

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