

MEDICA[®] bioX



Operator Manual

MANU40669 VERSION 03 5/21

Product No. MBIOXXM2-230

Content

1. INTRODUCTION	3
1.1 Health & Safety	3
1.2 Product Model	3
1.3 Use of this Manual	3
1.4 Installation and commissioning	3
1.5 Electrical Supply Connections	3
1.6 Starting Up	4 - 5
1.7 pH Adjustment	5
1.8 Environment	6
1.9 Customer Support	6
2. IMPORTANT HEALTH AND SAFETY INSTRUCTIONS	7
2.1 Environment	7
2.2 Electricity	7
2.3 Ultraviolet Light	8
2.4 Control of Substances Hazardous to Health (COSHH)	8
2.5 Personal Protective Equipment	8
3. YOUR GUIDE TO YOUR MEDICA biox	9
4. CONSUMABLES AND ACCESSORIES	10 - 11
5. MAINTENANCE	12
5.1 Replacing the LC225 - M2 Resin Medica Pack (pH control)	12 - 15
5.2 Replacing the LC224 - M1 Foam Media Cartridge	16 - 18
6. TECHNICAL SPECIFICATIONS	19 - 20
7. USEFUL CONTACT DETAILS	20
8. WARRANTY / CONDITIONS OF SALE	21 -22

The information contained in this document is the property of VWS (UK) Ltd, trading as ELGA LabWater, and is supplied without liability for errors or omissions. No part of this document may be reproduced or used except as authorized by contract or other written permission from VWS (UK) Ltd. The copyright and all restrictions on reproduction and use apply to all media in which this information may be placed.

VWS (UK) Ltd. pursue a policy of continual product improvement and reserve the right to alter without notice the specification, design, price or conditions of supply of any product or service.

© VWS (UK) Ltd. 2021 – All rights reserved.

ELGA® is a registered trademarks of VWS (UK) Ltd.

1. INTRODUCTION

1.1 Health & Safety

Please ensure you have read the health and safety notes in section 2 before commencing any maintenance. All safety information detailed in this operator manual is highlighted as a WARNING and CAUTION.

If this unit is used contrary to the instructions in this operator manual, then the safety of the user may be compromised. See section 2 'Important Health and Safety Instructions'

1.2 Product Model

This Operator's Manual has been prepared for MEDICA biox product model:

- MEDICA biox MBIOXXM2-230

1.3 Use of this Manual

This manual contains details on maintaining the MEDICA biox unit to ensure a safe and reliable biochemistry effluent treatment for ROCHE clinical analyzers.

1.4 Installation and Commissioning

MEDICA biox should be installed and commissioned by an ELGA VEOLIA approved Service Engineer.

1.5 Electrical Supply Connection

It is important to have a reliable power supply for the MEDICA biox. It is recommended to use a power outlet clearly labelled to avoid accidental isolation. A failure of the power supply system will cause a drop in performance.



CAUTION!

Only use the appliance coupler mains lead and power supply provided. The use of these will ensure adequate earth protection is provided.

1.6 Starting up

The system will work automatically when plugged in.

LED Operation / Modes		
Light	Description	Action
 <p>Green Light ON / Red Light OFF</p>	<p>"Normal Operation" The system operates normally.</p>	<p>None</p>
 <p>Flashing Green Light / Amber ON</p>	<p>"Normal Operation No Water" The system is operated under normal conditions without water.</p>	<p>Turn on the water supply Open the inlet valves 1 to 4 deactivating the system bypass valves. See section 4 for details</p>
 <p>Green Light ON / Amber Flashing</p>	<p>"LC225 Pack Reminder" Amber light will flash continuously.</p>	<p>Replace the LC225 M2 Resin Media Pack. See section 5 ` Maintenance`</p>
 <p>Green OFF / RED Light ON and the alarm is active</p>	<p>"Overflow Alert Alarm" The effluent level is too high. The system overflows.</p>	<p>Contact service support Activate the system bypass valves 1 to 4. See section 4 for details</p>

  Green OFF / RED Light ON and the alarm is active	<p>"Over Temperature Alarm" (Critical)</p>	<p>Contact service support Activate the system bypass valves 1 to 4. See section 4 for details</p>
	<p>"Extractor Alarm" (Critical)</p>	<p>Contact service support</p>

1.7 pH Adjustment

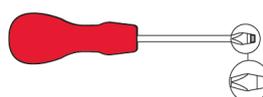
Before making pH adjustment, see section 6 'Technical Specifications'.

The pH value at the output of MEDICA biox is related to the pH value at its input.

If the pH is outside the standards required by the regulations, the performance of the system can be adjusted to meet the required standard.

It is recommended to perform a test of the feedwater pH value during installation, calculate the average pH values collected then compare this average to the adjustment table below: Set the cartridge in position 3 for Roche Cobas 6000 system and position 4 for Roche Cobas 8000 system.

Performance Setting LC225	
Input pH Valve	Position
9	1
10	2
11	3 (Cobas 6000)
12	4 (Cobas 8000)



1.8 Environment

MEDICA biox unit should be installed on a flat, level surface, in a clean, dry environment, temperature 5-40°C. See section 2 ' Important Health and Safety Instructions'

1.9 Customer Support

If you need help with your MEDICA biox, please call your local ELGA representative.

For the address of the nearest ELGA LabWater Sales and Service office visit the country list on our website.

www.elgalabwater.com

Or contact ELGA LabWater at:

E-mail: techsupport@elgalabwater.com

E-mail: info@elgalabwater.com

2. IMPORTANT HEALTH AND SAFETY INSTRUCTIONS



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.

2.1 Environment



CAUTION!

Clean dry indoor. Temp 5-40°C.

Humidity max 80% non-condensing.

Failure to follow the environmental specification could result in damage to the system.



WARNING!

UNIT TO BE PLACED IN A ROOM WHICH IS A MINIMUM OF 10m³ AND VENTILATED TO PROVIDE AIR MOVEMENT OF SIX AIR CHANGES EVERY HOUR.



WARNING!

IF CRITICAL ALARMS ARE ACTIVATED. ACTIVATE THE BYPASS VALVES, AND ISOLATE THE UNIT FROM THE MAINS ELECTRICAL SUPPLY, AND CONTACT YOUR SERVICE PROVIDER.

2.2 Electricity

The appliance coupler (mains lead) or power supply 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.



WARNING!

ONLY USE THE APPLIANCE COUPLER (MAINS LEAD) AND POWER SUPPLY PROVIDED.

THE USE OF THESE WILL ENSURE ADEQUATE EARTH PROTECTION IS PROVIDED.

IF THE EQUIPMENT IS USED IN A MANNER NOT SPECIFIED BY ELGA VEOLIA, THE PROTECTION PROVIDED BY THE EQUIPMENT MAY BE IMPAIRED, POSITION THE POWER SUPPLY SO THAT IT CANNOT COME INTO CONTACT WITH WATER.

2.3 Ultraviolet Light



WARNING!

UNDER NO CIRCUMSTANCES SHOULD THE LAMP BE CONNECTED AND ACTIVATED WHEN OUTSIDE THE HOUSING. EXPOSURE COULD CAUSE SERIOUS INJURY TO EYES AND SKIN.

ENSURE THE UV LAMP IS DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS.

2.4 Control of Substances Hazardous to Health (COSHH)



WARNING!

CONSUMABLE PACKS/CARTRIDGES MUST BE HANDLED AS APPROPRIATE. DISPOSAL METHOD MUST COMPLY WITH LAB INSTRUCTIONS.

AN INCINERATION BIOHAZARD BAG IS PROVIDED WITH NEW CARTRIDGES/PACKS.

Material safety data sheets covering the various replaceable purification packs are available upon request.

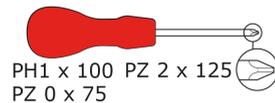
2.5 Personal Protective Equipment



WARNING!

MAINTENANCE MUST BE CARRIED OUT WITH PROPER PROTECTIVE EQUIPMENT THAT INCLUDES STERILE LATEX/NITRILE GLOVES CAT 3, A DISPOSABLE LABORATORY COAT, A FFP3 MASK, AND SAFETY GLASSES WHEN HANDLING SYSTEM COMPONENTS AND ITS CONSUMABLES.

Tools and PPE EQUIPMENT (Items Not supplied)



EN388 & EN374



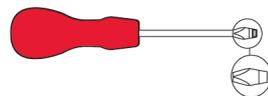
EN14126



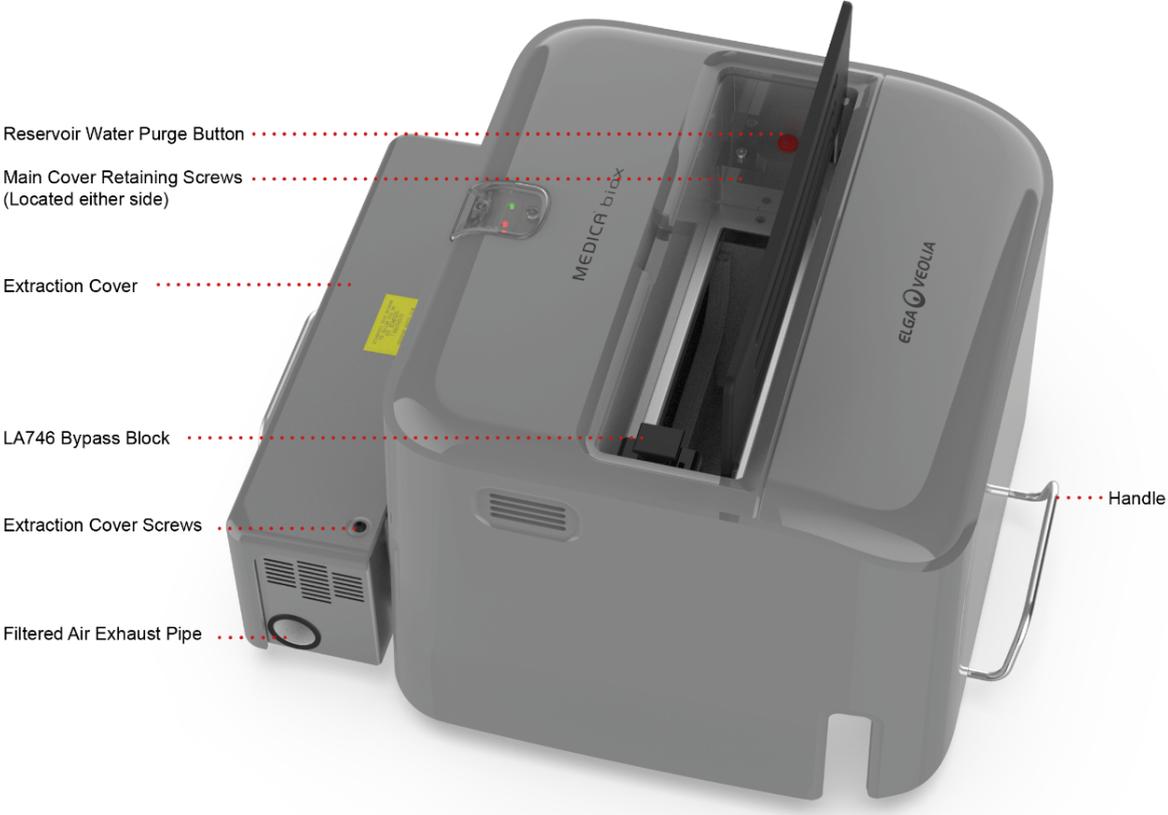
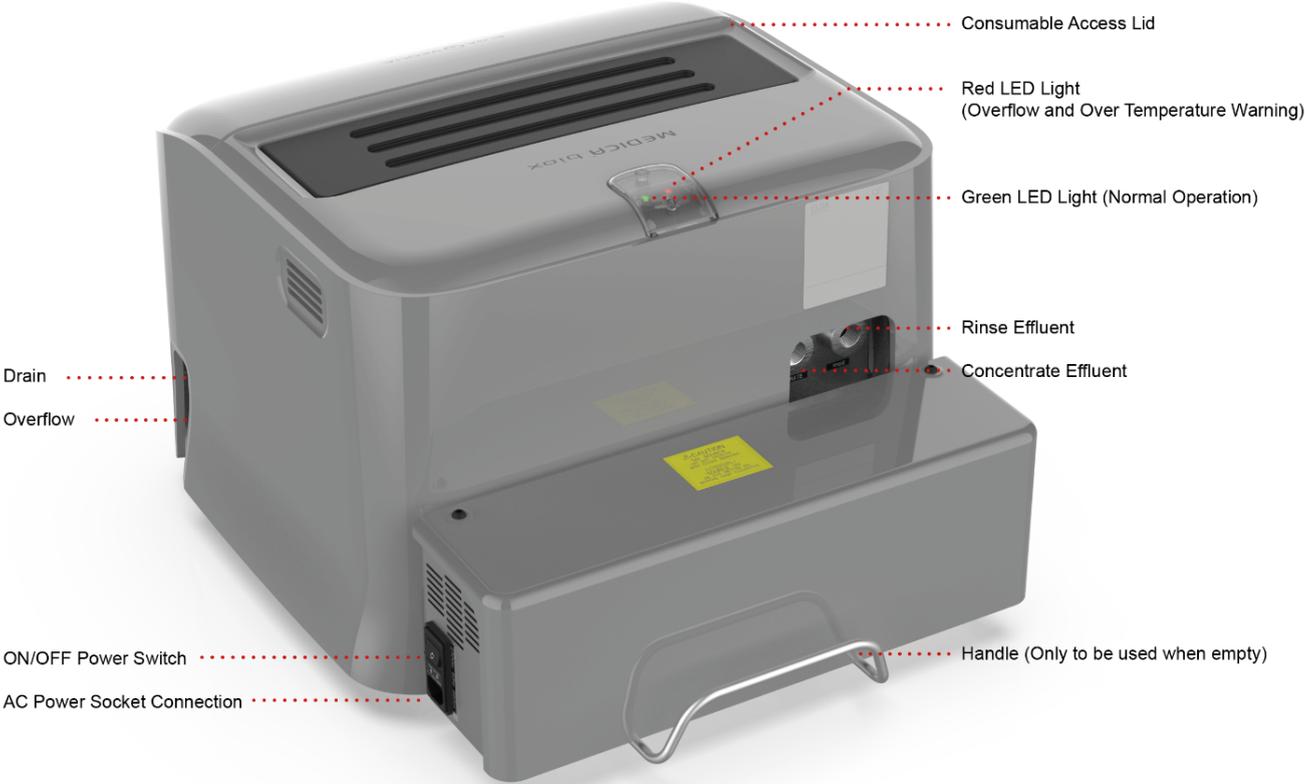
Goggles



FFP3 EN:149



3. YOUR GUIDE TO YOUR MEDICA bioX



4. CONSUMABLES AND ACCESSORIES

Consumables and Accessories			
Part No.	Description	Typical Service Life*	Max. Shelf Life
LA825	MEDICA biox Install Kit (System Bypass)	N/A	N/A
LA746	Bypass Block (Used during a service Sanitization)	N/A	N/A
LC224	M1 Foam Media Cartridge	Cobas 6000 (all) and Cobas® 8000 (2 modules) every 12 months Cobas 8000 (3 and 4 modules) every 6 months assuming that input pH <10.	2 years
LC225	M2 Resin Media Pack	6 months for Cobas 6000 2 months for Cobas 8000	2 years
LC286	Air Filter (Service Engineer replacement part)	6 months	5 years
LC158	UV Light (Service Engineer replacement part)	2 years	5 years
CT3	Disinfection CT3 Tablets	6 Months	2 years

*Service Life is an estimate only and will depend on the application and feed water quality. Please take care to ensure you order the correct consumable items.

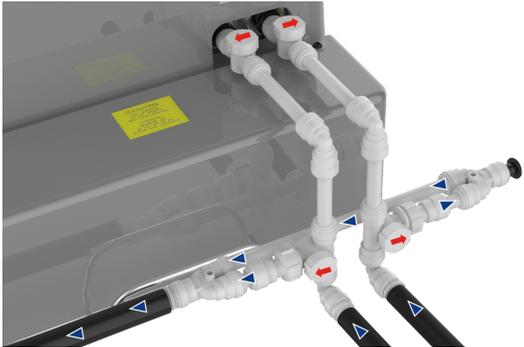
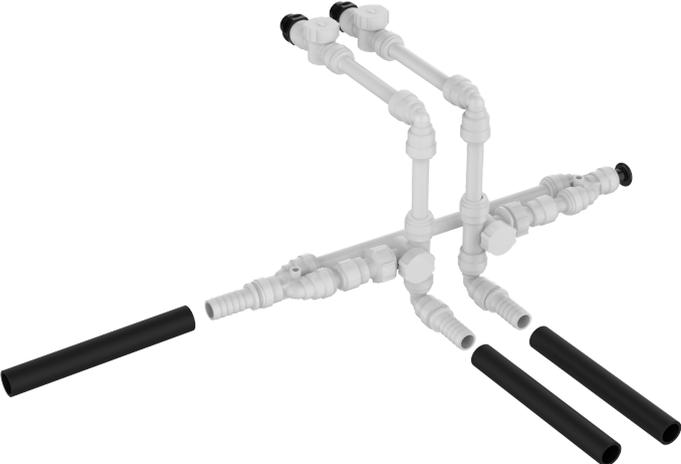
LC224 - M1 Foam Media Cartridge



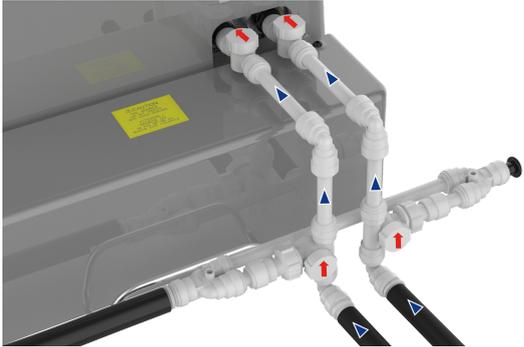
LC225 - M2 Resin Media Pack



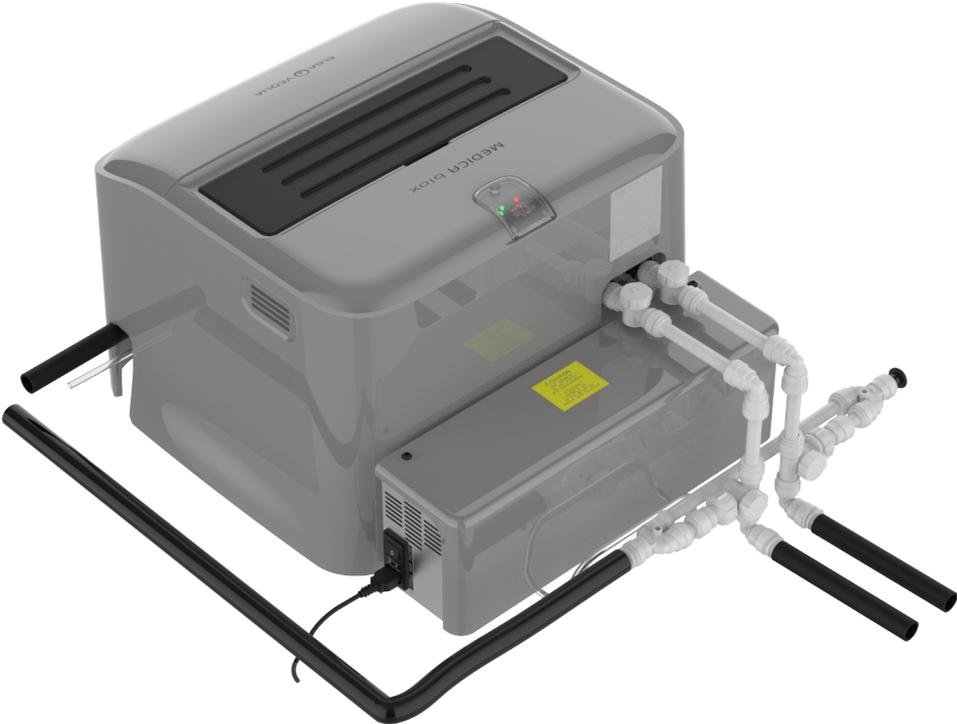
LA825 - MEDICA biox M2 ROCHE Install Kit (System Bypass)



System Bypass Valves (Activate)



System Bypass Valves (deactivate)



5. MAINTENANCE

Only suppliers or authorized dealers can perform the maintenance operations included in this manual. Maintenance can be performed only by personnel who have received appropriate training in bio safety. Note: Disposal method must comply with lab instructions.

5.1 Replacing the LC225 - M2 Resin Medica Pack (pH control)

MEDICA biox contains a resin media pack that must be changed every 6 months for Cobas 6000, 2 months for Cobas 8000 to ensure proper system performance.

Step 1 – Switch off the unit

- DISCONNECT electric the power for the MEDICA biox.



WARNING!

ALWAYS CHECK THAT THE MAINS ELECTRICAL POWER IS SWITCHED OFF BEFORE STARTING THIS PROCEDURE.

Step 2 – Remove LC225 - M2 Resin Media Pack



**DANGER
BIOHAZRD**

PACKS/CARTRIDGES MUST BE DISCARDED IN ACCORDANCE WITH THE INSTRUCTIONS OF THE LAB FOR PRODUCTS CONSIDERED TO BE A BIOHAZARD.

A BAG FOR INCINERATION WILL BE PROVIDED WITH NEW PACKS/CARTRIDGES.



WARNING!

ALL SPILLS SHOULD BE TREATED AS BIOHAZARD. PERSONAL PROTECTIVE EQUIPMENT (PPE) MUST BE WORN BEFORE REMOVING THE LC225.



EN388 & EN374



EN14126

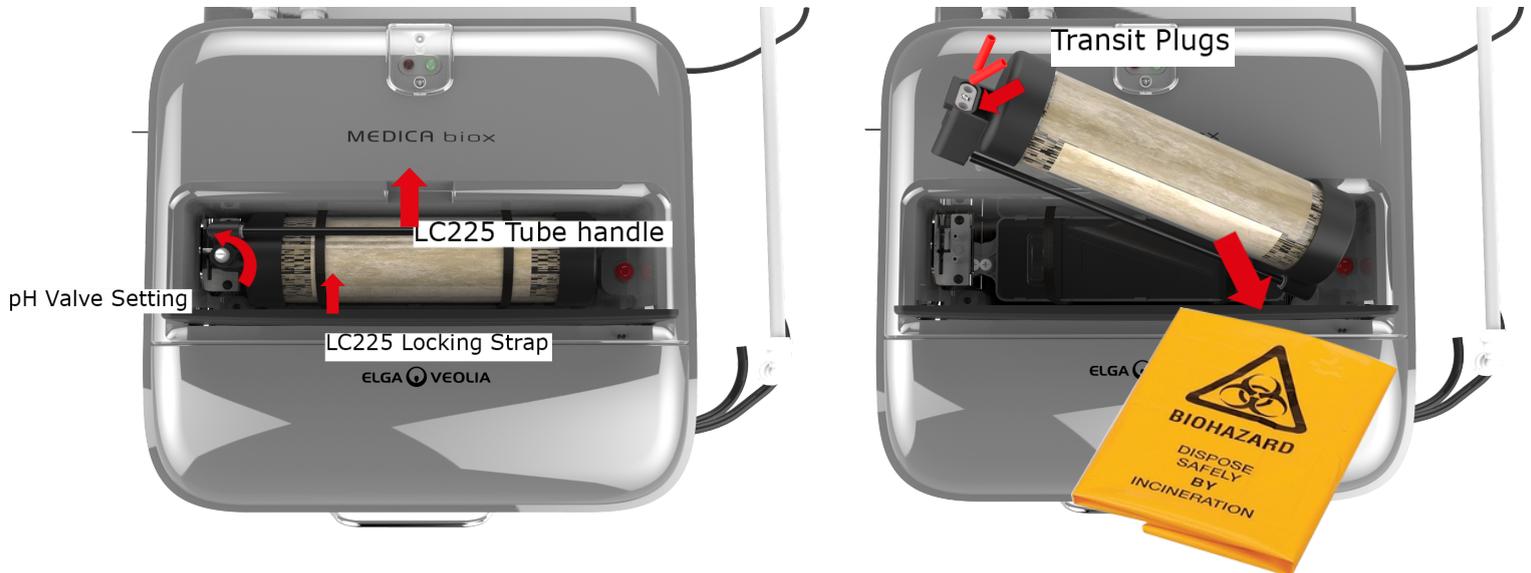


Goggles



FFP3 EN:149

- REMOVE locking straps from around the LC225 M2 Resin Media Pack.
- PULL the tube handle to remove the pack and insert transit plugs into the holes.
Note pH valve setting for later and close pH valve to 1.
- PLACE the used pack into the bag for incineration and then dispose in accordance with the instructions of the laboratory in effect for products considered a biohazard.



Step 3 – Installation of the new LC225 - M2 Resin Media Pack

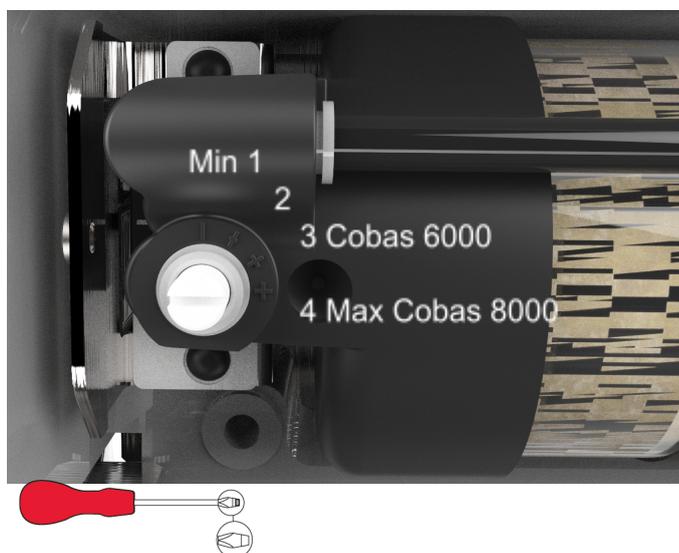
- UNPACK LC225 pack from it's packaging and remove the transit plugs.
- PLACE the LC225 pack into the consumables opening and align with the pin connection.
- PUSH LC225 pack onto the pin connection and replace the locking straps.
- CONNECT and SWITCH ON the power supply.



Step 4 – Setting LC225 - M2 Resin Media Pack performance level

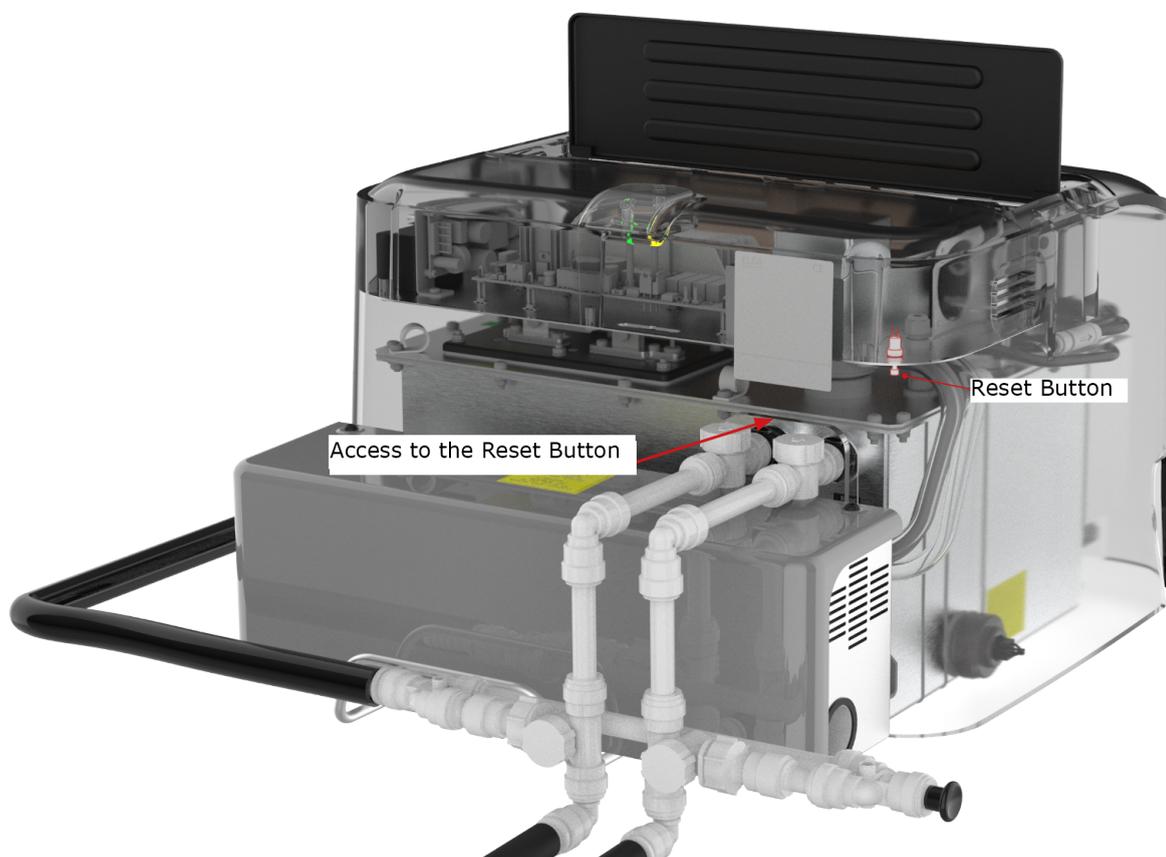
- Adjust the appropriate setting for the pack, use the same setting.
All new packs have a default set to the valve position 1 (pH 9).

Performance Setting LC225	
Input pH Valve	Position
9	1
10	2
11	3 (Cobas 6000)
12	4 (Cobas 8000)



Step 5 – Reset LC225 - M2 Resin Media Pack Reminder

- PRESS and hold the Pack Reset Button. This button is located underneath the control panel and is accessible via a gap in the moulding between Rinse Effluent and Concentrate Effluent pipes.



- WHILE holding the reset button, press the reservoir water purge button repeatedly to cycle through the different reset options as listed below:



1 Amber flash = 1 month, 2 Amber flashes = 2 months, 3 Amber flashes = 4 months,
4 Amber flashes = 6 months, 5 Amber flashes = 1 year

Once 5 Amber flashes has been reached the sequence will start over.

Cobas 6000 is every 6 months - 4 Amber flashes

Cobas 8000 is every 2 months - 2 Amber flashes

- When the required reset option is reached, release the reset button and the MEDICA bioX will return to normal operation.

MEDICA bioX LC225 - M2 Resin Media Pack replacement is now complete.

5.2 Replacing the LC224 - M1 Foam Media Cartridge

MEDICA biox contains a foam media cartridge that needs to be changed every 12 months for Cobas 6000 and Cobas 8000 (2 modules) and every 6 months for Cobas 8000 (3 and 4 modules) assuming that input pH <10 to ensure proper system performance.

Step 1 – Switch off the unit

- DISCONNECT electric the power for the MEDICA biox.

ALWAYS CHECK THAT THE MAINS ELECTRICAL POWER IS SWITCHED OFF AND EFFLUENT BYPASS IS ACTIVATED BEFORE STARTING THIS PROCEDURE.

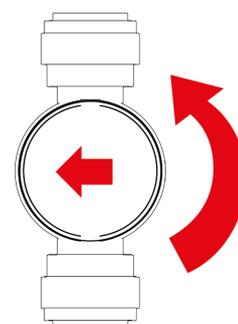
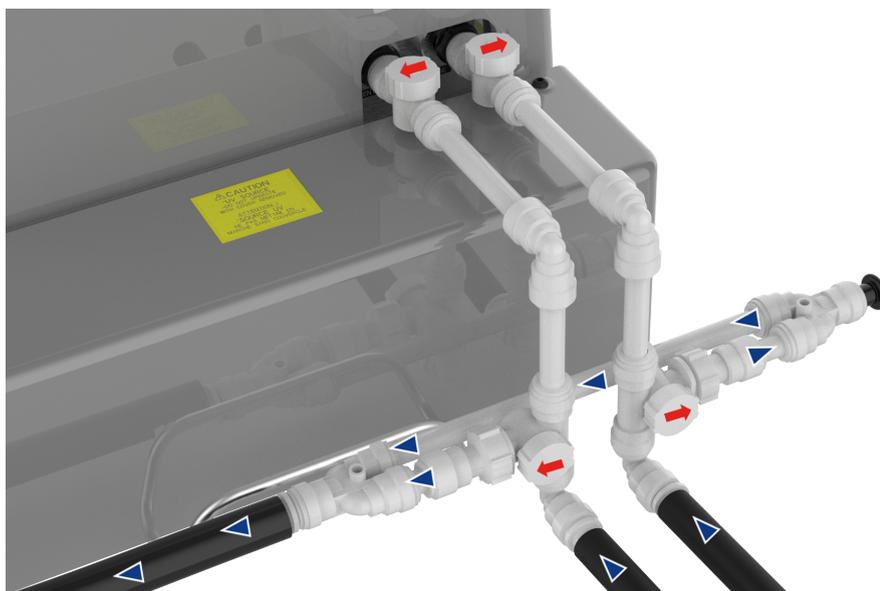


CAUTION!

DURING BYPASS EFFLUENT WILL NOT BE TREATED AND EFFLUENT SHOULD BE COLLECTED IN LINES WITH LOCAL REGULATIONS.

- STOP the entry of concentrated effluent and effluent rinse by activating the system bypass valves diverting the flow to drain.

System Bypass Valves (Activate)



Step 2 – Remove LC224 - M1 Foam Media Cartridge

PACKS/CARTRIDGES MUST BE DISCARDED IN ACCORDANCE WITH THE INSTRUCTIONS OF THE LAB IN EFFECT FOR PRODUCTS CONSIDERED TO BE A BIOHAZARD. A BAG FOR INCINERATION WILL BE PROVIDED WITH NEW PACKS/ CARTRIDGES. ALL SPILLS SHOULD BE TREATED AS A BIOHAZARD. PERSONAL PROTECTIVE EQUIPMENT (PPE) MUST BE WORN BEFORE REMOVING THE LC224.



DANGER BIOHAZRD

WARNING!



EN388 & EN374



EN14126



Goggles



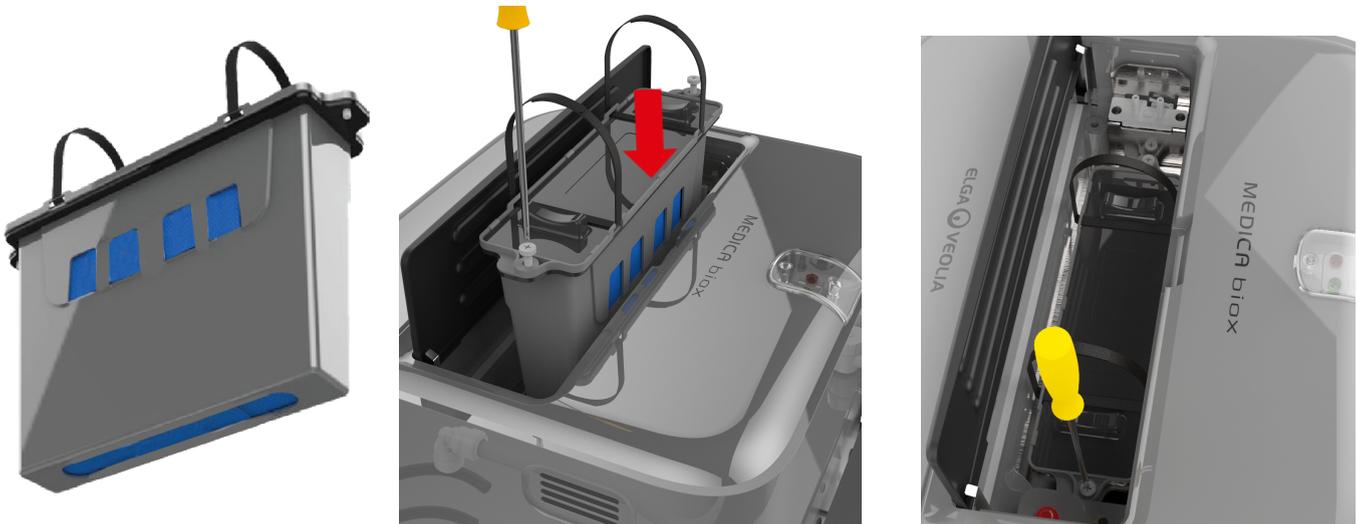
FFP3 EN:149

- REMOVE locking straps from around LC225 - M2 Resin Media Pack.
- REMOVE LC225 - M2 Resin Media Pack by pulling upwards on the pipe handle.
- UNSCREW locking screws on LC224 - M1 Foam Media Cartridge.
- REMOVE LC224 lift locking straps on the cartridge and drain to empty its contents into the tank.
- PLACE the used cartridge into the bag for incineration and then dispose in accordance with the instructions of the laboratory in effect for products considered a biohazard.



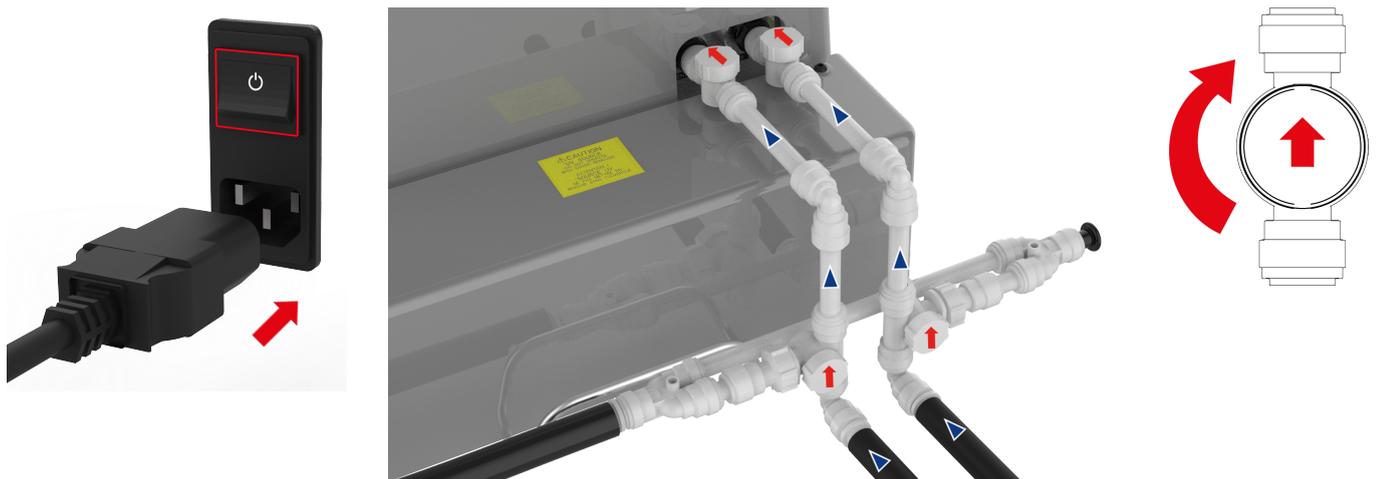
Step 3 – Installation of the LC224 - M1 Foam Media Cartridge

- UNPACK the new LC224 cartridge.
- SCREW the holding screws into the cartridge.
- INSERT LC224 into the tank, making sure that the cartridge is positioned correctly against the tank, and tighten the screws so as to seal the system.
- REPLACE LC225 - M2 Resin Media Pack.



Step 4 – Switching on the unit and deactivate the system bypass Valves

- RECONNECT the power supply cable to the unit.
- SWITCH ON the unit.
- DEACTIVATE the System Bypass Valves to allow the flow of effluent back into the unit.



System Bypass Valves (deactivate)

MEDICA bioX LC224 - M1 Foam Media Cartridge replacement is now completed.

6. TECHNICAL SPECIFICATIONS

MEDICA biox	
PRODUCT FEEDWATER (Effluent from clinical analyser)	
Type of treatment	Clinical analyzer effluents (concentrated and diluted)
Temperature	5 - 40 °C (Recommended 15 - 25 °C)
Water inlet requirements (Gravity feed MEDICA Biox)	Minimum height of 250mm from ground
Flow Rate (continuous flow)	<160 l/h (maximum at 15°C)
Flow Rate (intermittent flow)	<240 l/h (for a maximum of 60 seconds for a period of 5 minutes)
Maximum Inlet pressure	0.5 bar
Minimum Inlet Pressure	Gravity feed
PRODUCT OUTLET (Treated Effluent from clinical analyzer)	
Flow Rate (Outlet)	120 l/h Typical (240 l/h Max)
Output condition to the drain (leave a space in the open air)	Max Height 900mm (Ground to pipe) If the sewer is at more than 150mm from the ground, provide a lift pump for the overflow.
E.coli by micro plates	<15 n/100ml
Enterococci by mirco plates	<15 n/100ml
Pathogenic staphylococci	0 n/100ml
BOD	<200mg/l O ₂
COD	<1000mg/l O ₂
Total Nitrogen	<50mg/l N
pH	<9
CONNECTIONS	
Concentrate Effluent Inlet	Stem Adaptor BSP PM0151514E to 15mm Emergency shut off valve to Inlet 15mm JG tube
Rinse Effluent Inlet	Stem Adaptor BSP PM0151514E to 15mm Emergency shut off valve to Inlet 15mm JG tube
Drain Outlet	19mm ID x 26mm OD BRAIDED PVC
Outlet Overflow	19mm ID x 26mm OD BRAIDED PVC
ELECTRICAL REQUIREMENTS	
Mains Input	230Vac, 50Hz (+/- 10%)
System control voltage (not including UV)	24Vdc
Power consumption (peak demand)	450VA
NOISE	
Normal operation	MAX 80db

DIMENSIONS AND WEIGHTS	
Packaging Dimensions	Width 750mm, Depth 685mm, Height 700mm
Dimensions	Width 529mm, Depth 674mm, Height 357mm
Supply weight	56kg
Operational weight	45kg
Installation	Floor

Dependent on feed water, as part of our policy of continual improvement we reserve the right to alter the specifications given in this document.

7. USEFUL CONTACT DETAILS

ELGA VEOLIA – Global Operations Centre
 Lane End Industrial Park
 High Wycombe
 Bucks HP14 3BY
 UK

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

For the address of the nearest ELGA LabWater Sales and Service office visit the country list on our website.

www.elgalabwater.com

Or contact ELGA LabWater at the number above.

8. 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) 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 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:

the date of installation, or 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 labour for the first ninety (90) days of the above warranty period is included in the warranty; thereafter, labour 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.

Products or components manufactured by companies other than VWS (UK) Ltd. or its affiliates ("Non - VWS (UK) Ltd. products") are covered by the warranty, if any, extended by the Product manufacturer. VWS (UK) Ltd. hereby assigns to the purchaser any such warranty; however VWS (UK) LTD. EXPRESSLY DISCLAIMS ANY WARRANTY WHETHER EXPRESSED OR IMPLIED, THAT THE NON - VWS (UK) Ltd. PRODUCTS ARE MERCHANTABILITY OR FIT FOR A PARTICULAR PURPOSE.

NOTICE

VWS (UK) Ltd. is constantly striving to improve its products and services. Consequently, the information in this document is subject to change without notice and should not be construed as a commitment by VWS (UK) Ltd. Also VWS (UK) Ltd. assumes no responsibility for any errors that may appear in this document. This manual is believed to be complete and accurate at the time of publication. In no event shall VWS (UK) Ltd. be liable for incidental or consequential damages in connection with or arising from the use of this manual.

VWS (UK) Ltd. warrants its products against defects in materials and workmanship as described in the Warranty statement on the preceding pages.

Languages

Please scan the QR Code or use the URL below to view or download the language files.
Authentication Pin Number:1937



<https://www.elgalabwater.com/medica-biox-manual>

The Labwater Specialists

ELGA VEOLIA is the global laboratory water brand name of Veolia. The information contained in this document is the property of VWS (UK) Ltd, trading as ELGA Veolia, and is supplied without liability for errors or omissions. VWS (UK) Ltd.

2021 - All rights reserved ELGA, PURELAB are registered trademarks of VWS (UK) Ltd



Tel: +44203 567 7300 Email: info@elgalabwater.com Web: www.elgalabwater.com