



MEDICA®

High-efficiency CLRW clinical labwater

Sustainable design, outstanding uptime,
class-leading cost effectiveness.

ELGA  VEOLIA

Supporting human wellbeing

70% of all medical decisions are based on laboratory results. In a clinical environment, the lives of patients depend on accurate analysis.

A clinical analyser must receive a constant and reliable supply of CLRW (Clinical Laboratory Reagent Water).

The CLRW guideline – set by the Clinical and Laboratory Standards Institute (CLSI) – is a widely adopted standard for clinical diagnostics applications, and has been endorsed by the College of American Pathologists (CAP).

Since 1995, MEDICA has been the globally trusted solution for ultrapure water in the most prestigious

clinical analysis labs worldwide. ELGA's ultrapure expertise has been globally recognised with over 40 patents granted.

ELGA is part of Veolia, the world's largest environmental organisation. Veolia exists to ensure human progress, depollute vital resources, decarbonize ways of living, improve health & quality of life and in doing so deliver exceptional stakeholder returns.



Compact, integrated clinical labwater solutions

Every aspect of ELGA's client relationship is designed to protect the operations of the clinical diagnosis lab. Pre-installation site surveys recommend the most suitable systems and provide realistic information on the cost of ownership.



Reliability, efficiency, an outstanding user experience, cost effectiveness and continual improvements in sustainability are at the heart of the ELGA proposition.



All pre & in process purification is included in a single, compact, easy to install unit.



Water quality is ensured through automated recirculation through deionization (DI), ultraviolet purification (UV), microfiltration (MF) and ultrafiltration (UMF) components .



Single & multiple analysers are supported. Emergency bypass functionality protects laboratory output.



Integrated storage reservoirs with a composite vent filter (CVF) protect stored water from airborne CO2 and bacteria while saving space and simplifying installations.



Designs to prioritise availability & reliability minimise service interventions.



Environmental impact, consumable consumption and total cost of ownership are all optimised through the availability of Electrodeionization (EDI) options.



Large screens with easily navigable software communicate performance and are reachable via Veolia's remote monitoring platform: Hubgrade.



Seven year design lives, reduction in single use plastics, mercury free LED UV, high efficiency water recovery & optimised power management all contribute to environmental impact reductions.

Delivering trusted outcomes worldwide

ELGA's expertise has ensured that the MEDICA range is in service with every major diagnostic manufacturer worldwide.

Water quality is key to clinical diagnostic tests. However, its ability to dissolve compounds and gases makes it susceptible to contamination. Ionic, particulate & bacterial contamination can lead to a wide range of analytical errors and performance issues.

Non-specification water risks include reduced accuracy of pipetting volume, photometric reading errors, cuvette & reagent probe contamination, poor reagent stability, reduced calibration stability and sensitivity, incorrect level sensor operation leading to reagent wastage and capillary blocking & scaling.

The ELGA design ethos is built on reliability, efficiency, an outstanding user experience and continual improvements in sustainability. ELGA and its service partners deliver complete solutions that meet and exceed the compliance standards regulated and recommended by the FDA, EU, ISPE Engineering Guides, GMP & GAMP.

ELGA prioritises system uptime and consistency. As a result, customers benefit from reliable and efficient water purification systems that support clinical diagnosis processes at peak performance while minimising environmental impact.



Supporting high efficiency diagnostic workflows

The productivity, efficiency, and accuracy of laboratory workflows depend on the right water solution and the expertise of the provider. The right system depends on understanding the conditions in the lab.

ELGA's local team will guide you through the key decision criteria:

- 1 What are the specifications of your clinical analysers?
- 2 What is the source and quality of your feed water?
- 3 Are single or multiple clinical analysers present?
- 4 How much pure water is required per hour?
- 5 Where will the system be located in your lab?
- 6 What space is available for the purification system(s)?
- 7 What purchase options are preferred?
- 8 What kind of warranty and maintenance service is required?
- 9 How will your laboratory manage in the event of instrument downtime?
- 10 What sustainability targets do you need to meet?



Clinical analyser waste leadership

ELGA's long partnership with the clinical diagnosis sector has led ELGA to offer a unique solution to ensure regulatory compliance and enhance environmental protection.

In addition to ultrapure water, clinical diagnosis is also dependent upon plastics.

Plastics used in clinical diagnosis have long lives, are resistant to harsh chemicals and have a significant environmental impact. They cannot be removed through normal wastewater treatment. As a result, they ultimately end up in the ecosystem.

Plastic waste is a society wide challenge and REACH is tightening micro & nano plastic regulation.

MEDICA BIOX treats analyser liquid wastewater. It treats plastic at the source of production, directly from clinical analyser wastewater. Biohazard neutralisation is also delivered through UV oxidation of microorganisms.

BIOX reduces the release of microplastics, through ultrafiltration, enhancing environmental protection, and reducing the volume of analyser wastewater sent for external treatment.



A system for every laboratory

Water impurities that adversely affect clinical outcomes can also have detrimental effects on operational efficiency, team morale, professional reputations, career progression, equipment longevity, servicing costs and – of course – patients’ and clinicians’ confidence in laboratory outputs. ELGA offers a system for every specification of clinical diagnosis laboratory.

MEDICA®

Make Up Rates	50l/hr / 100l/hr / 150l/hr
Delivery Flow Rates	Up to 4.5l/min
Recovery Rates	40%
Built in Reservoir	75l
Product Water Spec	CLRW
Feed Water Requirements*	Potable Water*
Pre-Treatment:	Included
Availability	98% uptime with fix time < 3 hrs.
System resilience	Emergency bypass available
Multi system support	Ability to Duplex & Triplex easily for larger systems
Display	7 inch multitouch touchscreen
Remote Monitoring	Hubgrade for single or multiple systems
Backflow protection	Meets Category 5
Physical Dimensions	870 mm (height) / 794 mm (width) / 676 mm (depth)
UV	UV-C LED, 265nm

*For details check the Technical Sales Document



MEDICA® BIOX

Function(s)	>95% nanoplastic removal (≥60nm), biohazard elimination
Bypass functionality	Emergency bypass in place Ability to bypass the unit in case of emergency
Dimensions (mm)	460 (h) / 352 (w) / 810 (d)
UV	UV-C LED (265 nm)



UV-C LED Bacterial & Viral Inactivation

Pathogen	Type	UV dose (mJ/cm2)	Inactivation (%)	Reference
Escherichia coli ATCC 11229	Bacterium	10	99.999	Zimmer et al. 2002
Salmonella enteritidis	Bacterium	9	99.99	Tosa & Hirata 1998
Legionella pneumophila ATCC33152	Bacterium	9.6	99.999	Oguma et al. 2004
Hepatitis A HM175	Virus	29.6	99.99	Wilson et al. 1993
Poliovirus 1	Virus	27	99.99	Tree et al. 2005
SARS-CoV-2	Virus	5	99.9	Atari et al. 2023

2 Atari, N., Mamane, H., Silberbush, A. et al. Disinfection of SARS-CoV-2 by UV-LED 267 nm: comparing different variants. Sci Rep 13, 8229 (2023). <https://doi.org/10.1038/s41598-023-35247-9> Available on line at <https://www.nature.com/articles/s41598-023-35247-9#Tab3>

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3 A microplastic size classification scheme aligned with universal plankton survey methods Available online at: <https://www.sciencedirect.com/science/article/pii/S2215016121003095>

Resourcing the world  **VEOLIA**

Dedicated to Discovery

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