

secure clinical lab efficiency and uptime

with **Milli-Q® CLX 8Series**

High performance water purification
solutions for clinical analyzers



Remote Services Capable



The Life Science business of Merck operates
as MilliporeSigma in the U.S. and Canada.

Milli-Q®
Lab Water Solutions

Maximize Uptime with an Innovative All-in-One Water Solution

Experience uninterrupted direct feed to your clinical analyzers with this next-generation water purification solution that minimizes maintenance and maximizes productivity.

Milli-Q® CLX 8Series systems, combined with **MyMilli-Q™** digital capabilities, deliver high-quality purified water to clinical analyzers with ease and peace of mind. As a result, you remain fully operational, enabling rapid patient results and supporting timely clinical decision-making.

Supports Consistent Calibration & Analyses

- Reliable water quality
- Multi-sensor monitored
- Prevents bacterial contamination

Peace of Mind, Year After Year

- Robust manufacturing
- Responsive & specialized service team
- Long-lasting, validated design & components

Data Security & Compliance

- Advanced cybersecurity updates
- Supports traceability for accreditation
- Complies with CLSI standard and mercury regulations



Target 99.9% Uptime

- 24/7 self-monitoring with real-time alerts
- Predictive digital services
- Monitored emergency bypass

Seamless Workflow Integration

- Compact footprint
- Secure and guided interactions
- Integrated water dispenser (optional)

Contributes to Sustainability Goals

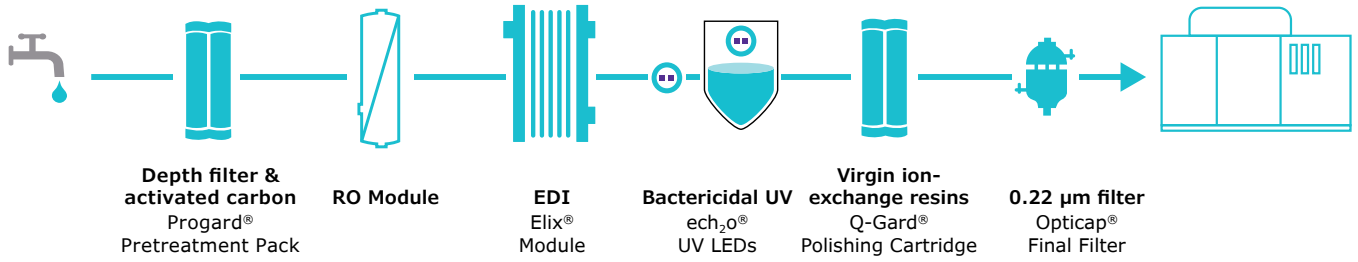
- Water-saving technology
- Mercury-free system
- Greener packaging

Supports Consistent Calibration & Analyses

Milli-Q® CLX 8Series systems reliably produce consistent-quality water that complies with feed water specifications for clinical analyzers.

Reliability is achieved through a thoughtfully designed purification chain that incorporates a range of patented technologies and multiple quality sensors. For additional bacterial control, a sanitary sampling valve is available as an option. See flow schematic, page 7.

Water Purification Technologies

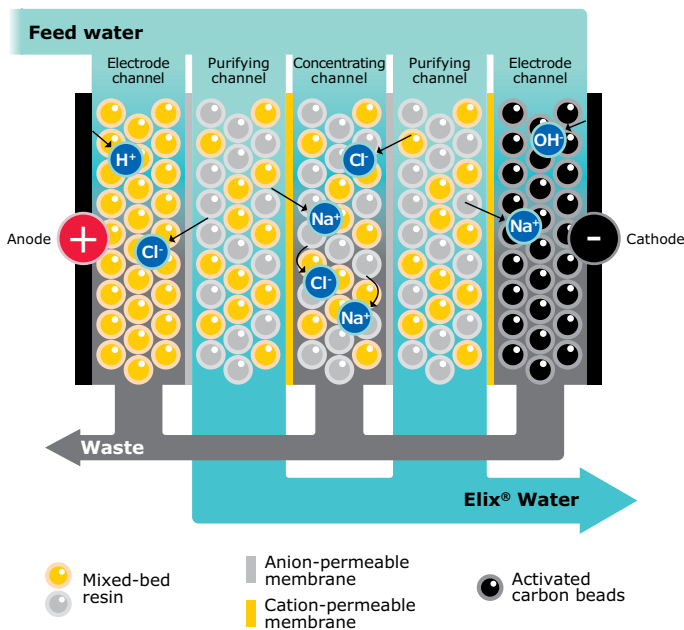


Contaminants Removed

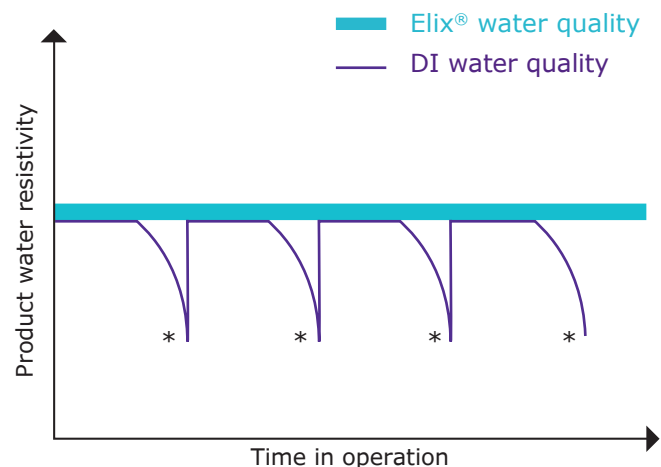
Contaminants Removed	Depth filter & activated carbon Progard® Pretreatment Pack	RO Module	EDI Elix® Module	Bactericidal UV ech2o® UV LEDs	Virgin ion-exchange resins Q-Gard® Polishing Cartridge	0.22 µm filter Opticap® Final Filter
Chlorine	✓					
Particulates	✓	✓				✓
Ions		✓	✓		✓	
Organics		✓			✓	
Bacteria		✓		✓		✓

EDI, electrodeionization; RO, reverse osmosis; TOC, total organic carbon; UV, ultraviolet.

The Elix® EDI Module



Unique Elix® electrodeionization (EDI) technology uses ion-exchange resins that are **continuously regenerated** by a small electrical field and does not require any additional consumables. It provides consistently high-quality pure water with **no resistivity drops**, while standard deionization (DI) requires frequent and costly cartridge replacements, represented by * in the graph below.



* DI cartridge replacement

Target 99.9% Uptime

Achieve uninterrupted feed to your analyzers with no unplanned downtime.

Already able to achieve 99.6% uptime* with Milli-Q® CLX 7000 systems, the Milli-Q® CLX 8Series with MyMilli-Q™ advanced capabilities allows labs to target 99.9% uptime thanks to a robust system design and enhanced service offering.



Remote Services Capable

Maximize uptime

- **Remote troubleshooting** for fast, professional diagnostics and potentially online repairs†
- **Predictive service** with Service Total Predict™ Plan lets us remotely monitor the health of key components and anticipate corrective actions
- **Emergency bypass mode** ensures continuous analyzer feed even if system is not operational; A new **resistivity indicator** (optional) ensures water quality control and timely replacement of the Q-Gard® cartridge
- **Optimally-sized, embedded tank** so water is always available to complete tests

Save time every day

- **24/7 Real-time monitoring** of alerts and alarms to solve issues faster
- **Full online access** to system and water quality data eases traceability for audits
- **Simplified management** of system, contract and consumables thanks to online services and lifetime indicators†
- **No constraints or system shutdown** when replacing consumables



* Uptime obtained across all Milli-Q® CLX 7000 systems worldwide connected to MyMilli-Q™ Remote Care. Data available upon request.

† With connection to MyMilli-Q™ Remote Care.

Peace of Mind, Year After Year

As an expert in laboratory water purification for more than 50 years with Milli-Q® systems, and decades of experience in clinical labs, this new solution offers the best reliability through:

Robust manufacturing supply chain—from raw materials to system quality certification.

Durable core components (including hydraulic and electronic) validated to last at least 7 years.

Certified service team delivers seamless lab integration, analyzer connection, and lifetime maintenance.

Backed by our ISO 9001-certified quality management system, you'll benefit from dependable performance and peace of mind in your clinical laboratory operations.

Seamless Workflow Integration

All needed information is visible at a glance.

The latest-generation touchscreen is large, responsive and easy to navigate. It can also be viewed and controlled online via MyMilli-Q™ Remote Care.



Minimal, rapid and secure user operations.



On-screen instructions guide secure cartridge replacements.



Easy front access. No need for tools or to open the system when replacing cartridges.



RFID technology automatically records information, prevents errors, and monitors lifetime of all consumables.

Free up lab space with a compact water system.

The vertical system design combines production, storage and distribution to analyzers, with an optional water dispenser.



The **manual purified water dispenser** lets you rinse and feed carboys with ease and speed at a flow rate of up to 2 L/min.



Compact footprint ($\leq 0.5 \text{ m}^2$) includes water storage tank (90 or 140 L).

Install the system wherever you want—no clearances needed; wheels allow **easy maneuvering** and back access.

Contributes to Sustainability Goals



Milli-Q® CLX 8Series systems are labelled Greener Alternative Products

As part of our Design for Sustainability approach to product development, the Milli-Q® CLX 8Series has been developed to deliver high-quality purified water with a reduced environmental footprint.

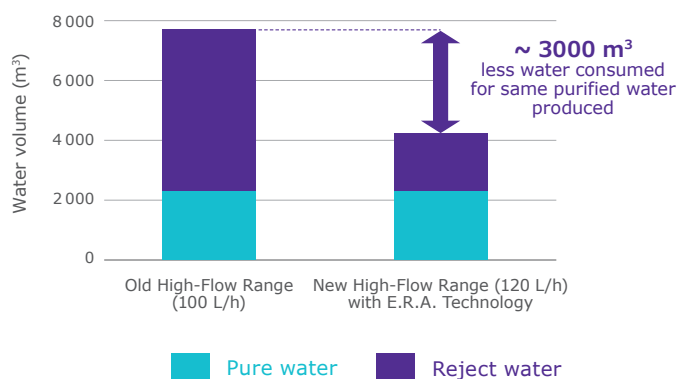
Key enhancements over older generation systems include:

- **Mercury-free** ech₂o® UV solutions replace traditional mercury lamps:
 - Bactericidal UV LEDs last twice as long, use less energy, and are more efficient, ensuring complete system and tank sanitization¹
 - Excimer UV lamp for TOC monitoring (optional)
- **Greener packaging:**
 - Product box made with sustainable forestry-certified cardboard, which is **over 50%** recycled content
 - Protective foam inserts composed of **over 80%** recycled content
- **Optimized lifetime** of UV LEDs and pumps by monitoring specific use

Additionally, the Milli-Q® CLX 8Series retains the water-saving and waste-reducing features of the previous series of systems:

- **Water savings:** E.R.A.® technology acts on the RO recovery loop by recycling part of the water rejected to the drain. It reduces water waste while extending RO module and Progard® pack lifetimes.
- **Waste reduction:** Elix® EDI technology eliminates the need for DI resin cylinder replacement and any other consumables (see page 3).

E.R.A.® technology reduces water consumption



Review the Design for Sustainability scorecard at SigmaAldrich.com/milliq-clx8 to support you in making greener purchasing decisions.



These innovations not only minimize environmental impact but also enhance operational efficiency and cost-effectiveness.

Data Security & Compliance

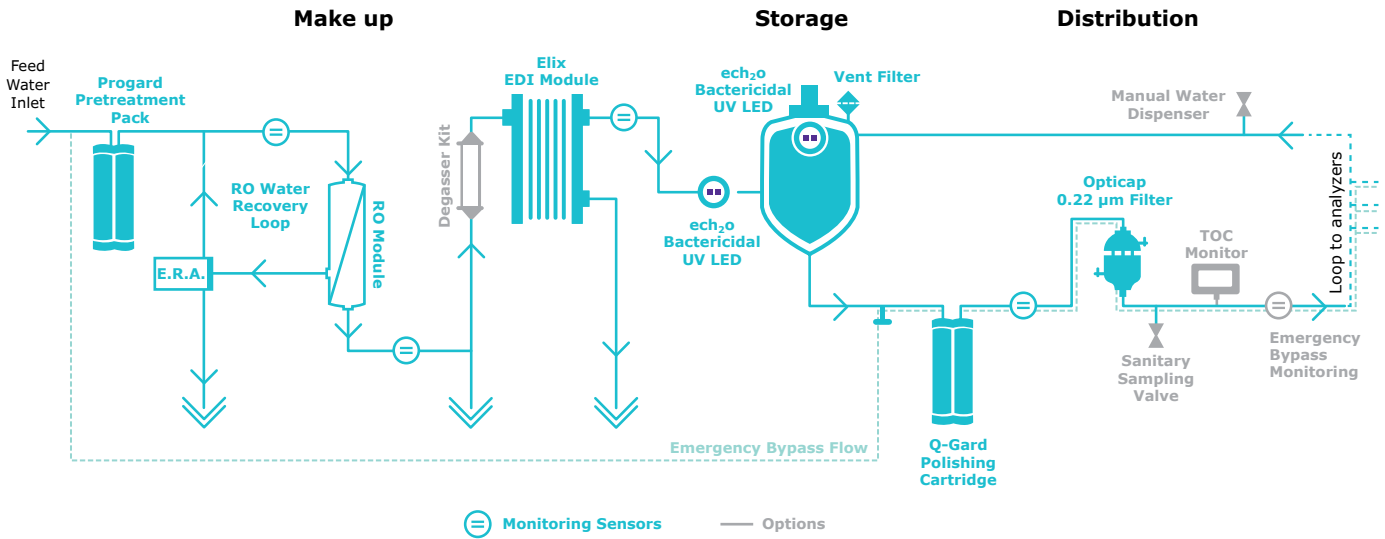
- **Enhanced cybersecurity:** Compliant with regulations (RED 2025 and CRA 2027); Software updates as needed to prevent cyberattacks.
- **Full data traceability:** Automatic recording of water quality, system performance, cartridge replacements, maintenance and service events support ISO 15189 and CLIA requirements for audits and accreditation.
- **Mercury-free UV solutions:** In anticipation of upcoming regulations (RoHS Directive 2027), ech₂o® LEDs for bactericidal treatment and ech₂o® excimer lamp for photo-oxidation in the TOC monitor replace mercury UV lamps.
- **Purified water quality** complies with CLSI GP 40 ED5-2024 guidelines for Clinical Laboratory Reagent Water (CLRW) and Special Reagent Water (SRW).
- **Analyzer specifications:** Water quality fits with all the major clinical analyzer brand specifications (Abbott, Beckman Coulter, Roche Diagnostics, Siemens Healthineers, Sysmex and others) for patient diagnostics and clinical trials in immunology, clinical chemistry, hematology, hemostasis, etc.

CLIA, Clinical Laboratory Improvement Amendments

1. Sorre M, Paragot C, Rajagopalan. Flint T, Moreau L. Bactericidal UVC LEDs for Ultrapure Water Applications. R&D Notebook 11: 2023. Merck KGaA, Darmstadt, Germany. www.sigmaaldrich.com/deepweb/assets/sigmaaldrich/marketing/global/documents/312/842/bactericidal-uvc-leds-rd011en-mk.pdf

Technical Appendix

Flow Schematic



Purified Water Specifications to Analyzers

Parameter	Description
Conductivity	<0.1 µS/cm @ 25 °C
Resistivity	> 10 MΩ.cm @ 25 °C
Bacteria	< 10 cfu/mL
Filtration	0.22 µm
Total organic carbon (TOC)	< 500 ppb
Distribution flow rate	4 L/min
Loop pressure	Adjustable: 0.9 to 2.1 bar

System Specifications Overview

	Milli-Q® CLX 8040	Milli-Q® CLX 8080	Milli-Q® CLX 8120	Milli-Q® CLX 8150
Dimensions (H x W x D)	1255 x 543 x 797 mm (49.4 x 21.4 x 31.4 in)	1255 x 543 x 797 mm (49.4 x 21.4 x 31.4 in)	1255 x 543 x 947 mm (49.4 x 21.4 x 37.3 in)	1255 x 543 x 947 mm (49.4 x 21.4 x 37.3 in)
Footprint	0.43 m ² (4.66 ft ²)	0.43 m ² (4.66 ft ²)	0.51 m ² (5.54 ft ²)	0.51 m ² (5.54 ft ²)
Operating weight	216 kg (476 lb) for LC 222 kg (489 lb) for HC	229 kg (505 lb) for LC 234 kg (516 lb) for HC	303 kg (668 lb)	318 kg (701 lb)
Tank volume (net)	90 L	90 L	140 L	140 L
Make-up flow rate to tank	40 L/h (10.6 gal/h)	80 L/h (21.1 gal/h)	120 L/h (31.7 gal/h)	150 L/h (39.6 gal/h)

LC, low chlorine system model; HC, high chlorine system model.

Ordering Information

Water purification systems	Cat. No.		
	220-240 V	120 V	100 V
Milli-Q® CLX 8040 (LC)	ZCLX51040	ZCLX61040	ZCLX71040
Milli-Q® CLX 8040 (HC)	ZCLX52040	ZCLX62040	ZCLX72040
Milli-Q® CLX 8080 (LC)	ZCLX51080	ZCLX61080	ZCLX71080
Milli-Q® CLX 8080 (HC)	ZCLX52080	ZCLX62080	ZCLX72080
Milli-Q® CLX 8120	ZCLX52120	ZCLX62120	ZCLX72120
Milli-Q® CLX 8150	ZCLX52150	ZCLX62150	ZCLX72150

LC, low chlorine system model; HC, high chlorine system model.

Water purification consumables	Cat. No.
Progard® 8 XL-S-C Pretreatment & Autocleaning Pack	PR0GTL8CS1
Progard® 8 XL-S-C Pretreatment & Autocleaning Pack (x2)	PR0GTL8CS2
Progard® 8 XL-S Pretreatment Pack	PR0GTL80S1
Progard® 8 XL-S Pretreatment Pack (x2)	PR0GTL80S2
Q-Gard® 8 Polishing Cartridge	QGARDTL804
ech ₂ o® mercury-free UV LED 8 in-line	ZLXUVL8L1
ech ₂ o® mercury-free UV LED 8 for ASM	ASMUVLPA8
Vent Filter 8 XL for Tank	TANKMPKL8
Opticap® 8 XL Filter	OPTIL84NN1

Recommended options and service contract	Cat. No.
Manual Water Dispenser	ZLXL8P0ULO
Emergency Bypass Resistivity Indicator Kit	ZLXLINDRES
Sanitary Sampling Valve	MXPESP18N
TOC Monitor Upgrade Kit	ZCLXL8T0C
Degasser Kit	ZLXLDEGK2
Milli-Q® Service Total Predict™ Plan	*

*Every lab is different, so our service plans are highly customizable. Review your options at [SigmaAldrich/milli-qservices](#)

International Regulatory Requirements

EU declaration of conformity – UL safety marking

Milli-Q® CLX 8Series systems have been designed and manufactured in accordance to the international standard and test method defined by the IECEE organization according CB Scheme process. CB Scheme process was applied for electromagnetic compatibility and safety compliance.

Milli-Q® CLX 8Series systems are also subject of the UL listing Marking Program and meets the following marking and registration requirements listed below:

- UL registration can be verified on the UL website: iq.ulprospector.com (E216983-D1002)
- Access to CB certificate: certificates.iecee.org (EM C No: FR_722592 and Safety No: DK-151264-M2-UL)



All our production sites are ISO 14001 certified, and all Milli-Q® systems comply with critical environmental regulations and directives, such as RoHS, REACH and WEEE (refer to our website for further information on WEEE). Since April 2022, our Molsheim site in France, where Milli-Q® systems are manufactured, is ISO 50001 certified on energy management.

As a member of the *Together for Sustainability* initiative, we encourage our suppliers to be assessed and ensure compliance with our standards and values in the categories of Environment, Labor and Human Rights, Ethics, and Sustainable Procurement. Today, **60% of the product's upstream supply chain and manufacturing** are covered by suppliers (Tier 1) who participate in the Together for Sustainability initiative with a valid assessment.



Milli-Q®

Lab Water Solutions

Merck KGaA
Frankfurter Strasse 250
64293 Darmstadt, Germany

[SigmaAldrich.com/labwater](https://www.SigmaAldrich.com/labwater)

For more information on Milli-Q® CLX 8Series systems, visit:

[SigmaAldrich.com/milliq-clx8](https://www.SigmaAldrich.com/milliq-clx8)



Read our White Paper on how to achieve a more efficient clinical laboratory:

[SigmaAldrich.com/clinicalguide](https://www.SigmaAldrich.com/clinicalguide)

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