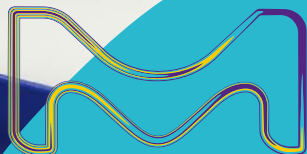


MERCK

# A ROBUST SYSTEM FOR YOUR ESSENTIAL SCIENCE

Milli-Q® SQ 2Series  
Water Purification Systems



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

Milli-Q®  
Lab Water Solutions

MILLI-Q® SQ 2SERIES

# A new way to think about ultrapure water

Milli-Q® SQ 2Series

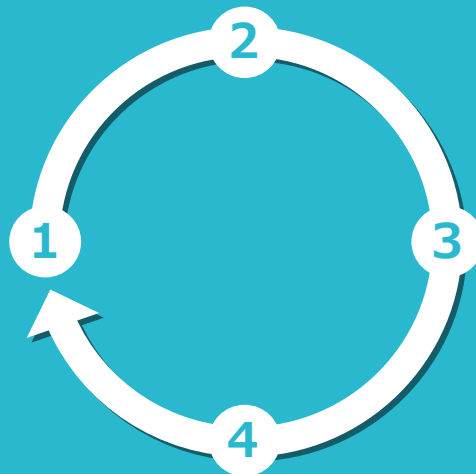


Every lab bench in need can now easily access freshly purified ultrapure water—even distant benches without feed tap water. New Milli-Q® SQ 2Series water purification systems are **simple, robust, innovative** and **completely scalable** so that you can focus on your science.

**1. RAPIDLY FILL**  
the 3.5L **Switch tank**  
with reverse osmosis  
(RO) water in as few  
as 6 minutes.



**2. EASILY CARRY**  
the **Switch tank** to  
your science.



**3. DISPENSE**  
freshly polished  
**18.2 MΩ.cm**  
ultrapure water at  
any bench.

**4. REPEAT**  
as needed.



# Reliable Quality

## ASSURED 18.2 MΩ·CM ULTRAPURE WATER AT ANY BENCH

Proven Milli-Q® water purification technologies mean you can trust your system is always ready to dispense consistent quality ultrapure water (18.2 MΩ·cm @25 °C).

For specifications on ultrapure water quality, refer to page 14.

## Pure RO Water Production Station



## Pretreatment unit (optional) boosts system performance

- **Prefiltration cartridge** removes chlorine, colloids and particulates from tap feed water to protect the production station's RO membrane
- **Booster pump** ensures constant high flow of pure RO water



- High-flow RO membrane (up to 42 L/h) fills the Switch tank in as few as 6 min — faster than your coffee break!
- Pure RO water quality is maintained by automatic rinsing of the RO membrane before tank filling and when system is idle

## Ultrapure Water Dispensing Module



## Final filters to match specific application needs



### SQPAK™ Final Filter

Removes particulates and bacteria



### SQPAK™ Bio Final Filter

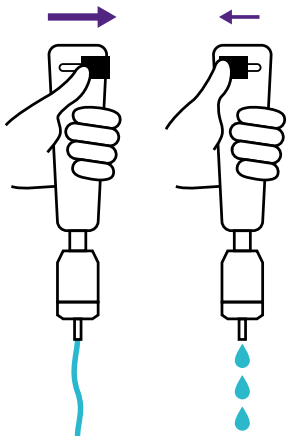
Removes pyrogens, nucleases, proteases and bacteria

- SQPAK™ Quanta polishing cartridge contains high-efficiency IQnano™ resin for removal of ions down to trace levels
- SQPAK™ TOC Quanta cartridge includes activated carbon for organic-sensitive applications
- Ultrapure water is automatically recirculated through photooxidation UV lamp and polishing cartridges



# ULTIMATE simplicity

## EASY & INTUITIVE TO OPERATE FOR ANY USER



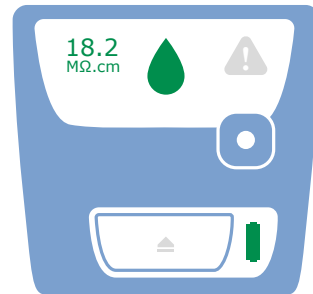
### ERGONOMIC HANDSET DISPENSER

smoothly adjusts  
from 1.6 L/min to  
drop by drop.



### MOBILE, TRANSPARENT SWITCH TANK

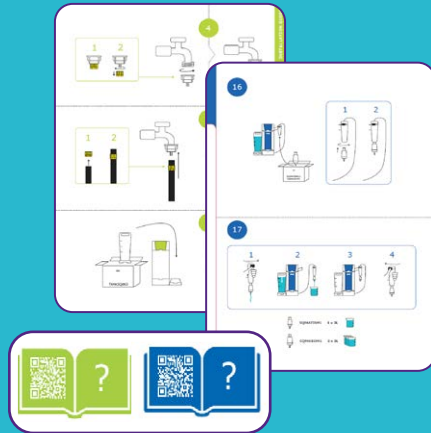
is easy and safe  
to carry, and gives  
immediate water level  
status, so there's no  
surprises when you  
go to dispense.



### UNIVERSAL INTERFACE

gives essential  
information at a  
glance.

**PROVEN,  
DO-IT-YOURSELF  
CONCEPT FOR  
RAPID UPSTART  
& EASY UPKEEP**



**Remote Install  
Support & Technical  
Assistance** will give  
you self-installation  
confidence.

### **30-MIN SELF- INSTALLATION**

Guided setup with  
printed, illustrative  
manuals and online  
how-to videos via  
QR codes.



### **MINIMAL MAINTENANCE**

Twist & Lock design  
means anyone can  
change cartridges  
and final filters,  
and there's no need  
to replace the UV  
lamp thanks its long  
lifetime.

### **CLEAR COLOR-CODING**

on packagings, manuals, cartridges and systems supports intuitive  
upstart and maintenance at each water purification step.





**UNIQUELY SMALL SIZE  
LEAVES SPACE FOR YOUR  
SCIENCE AT ANY BENCH**

Milli-Q® SQ 2Series systems have the same footprint as a sheet of paper (22 x 27 cm/unit). The dispensing module fits your busy bench with no water inlet required. Only an electrical outlet is needed to dispense ultrapure water at your bench.

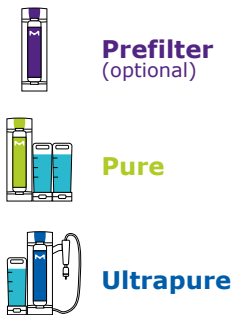
**ULTRA  
COMPACT**



# unlimited SCALABILITY

## ADAPT TO FIT YOUR SET UP & EVOLVE AS YOU NEED

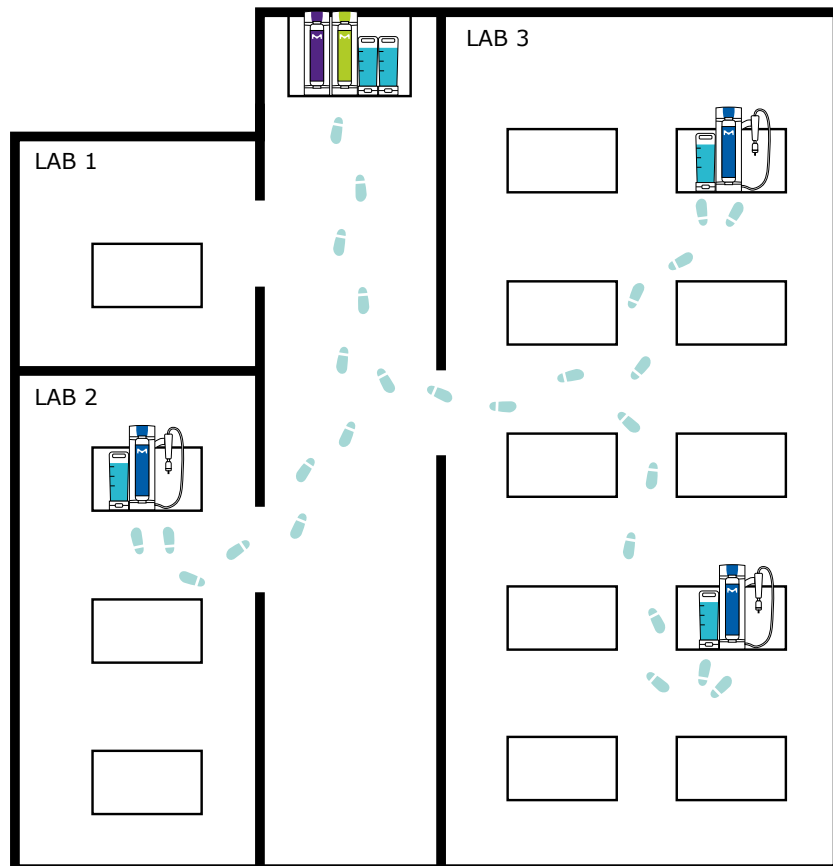
Simply select the configuration that best fits your space and user requirements, then easily expand with more modules as your lab evolves.



Cartridges can be individually replaced when exhausted.



Pure RO water production of **up to 42 L/h** lets you rapidly fill the Switch tank in as few as **6 minutes**. The dual tank production station supports unlimited ultrapure water dispensing modules.



The above configuration consists of 1x Milli-Q® SR 240L production station; 1x Milli-Q® SP 240 prefilter module; 3x Milli-Q® SQ 200 dispensing modules; and 4x Milli-Q® SQ Switch tanks.

# UNIQUE innovations



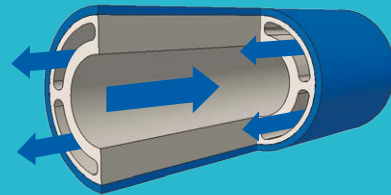
## Rapid pure RO water production keeps your workflow on the go

- Exceptionally high-flow RO membrane (up to 42 L/h) rapidly refills your tank in as few as 6 minutes.
- Membrane is housed in a compact, single cartridge with Twist & Lock design so you can easily and individually replace it when exhausted.



## Intuitive dispensing with high-quality ultrapure water thanks to intelligent mechanical and hydraulic design (patents pending)

- Ultrapure water **quality is secured** thanks to two-way 'multi-lumen' tubing, which recirculates water through the UV lamp, polishing cartridge and to the handset dispenser.



- Manually **master your flow rate** with just the push or pull of your thumb; mechanical dispensing lets you finetune the flow of ultrapure water, so you always hit your mark.

**8 technical & design IP (intellectual property) filings for Milli-Q® SQ 2Series systems.**

***One-time peace of mind with  
3-year extended warranty  
options***

*As these systems are designed to last, extended warranties simplify system coverage.*

**Built and tested to last**

From selection and development to validation and production, Milli-Q® SQ 2Series components, subassemblies and complete systems have been thoroughly tested to ensure their long lifespan.

- Roboticized endurance testing simulated 7 years of usage of:
  - Switch tank handling
  - Repeated handset dispensing
- Manufacturing is assisted by camera guidance and supported by AI (artificial intelligence)

7 years  
of tank  
usage  
tested.

**confidence  
in a robust  
system**



# supports sustainability



## MILLI-Q® SQ 2SERIES SYSTEMS ARE GREENER ALTERNATIVE PRODUCTS

As part of our **Design for Sustainability** approach to product development, Milli-Q® SQ 2Series systems were developed to deliver high-quality ultrapure water at multiple locations with a reduced environmental footprint compared to previous generation Direct-Q® systems.

As a result of these efforts, these new systems are labeled **Greener Alternative Products** thanks to improvements in the following sustainability characteristics versus previous generation systems. The following data represents a comparison versus Direct-Q® 3 systems:

We invite you to review the *Design for Sustainability Scorecards* at [SigmaAldrich.com/Milli-Q-SQ-2Series](https://SigmaAldrich.com/Milli-Q-SQ-2Series) to support you in making greener purchasing decisions.



## Energy & Emissions

**Less electricity** consumed thanks to simplified design, minimized electronics, and optimized stand-by mode (where most energy is consumed).



## water

RO recovery loop consumes **60%** less tap water.<sup>1</sup>



## Materials

**Limited material requirements<sup>2</sup>** for multiple dispensing locations thanks to a modular design that only duplicates the ultrapure water dispensing module.<sup>3</sup>



## Circular Economy

Designed to be easily maintained and disassembled to maximize its lifetime and facilitate end of life management.

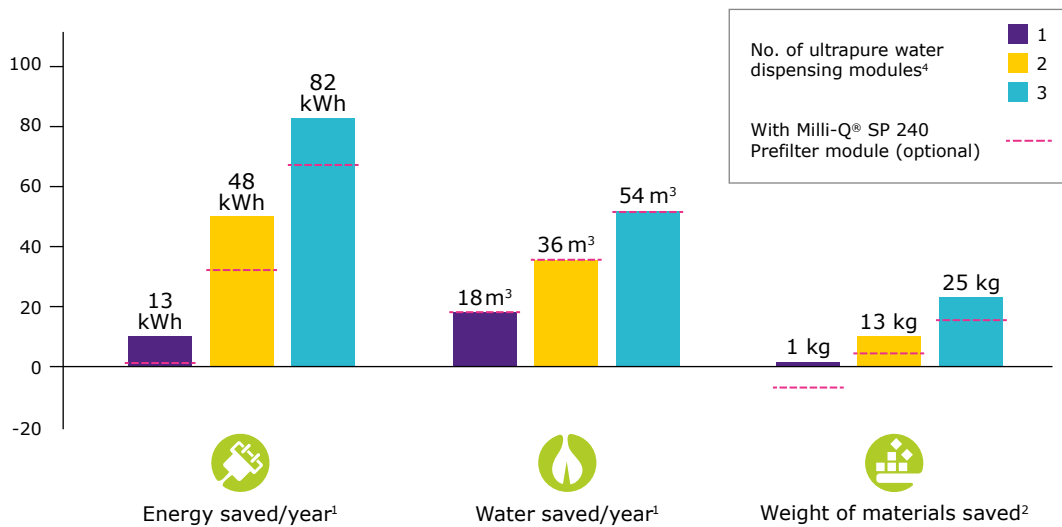


## packaging

**100%** recycled cardboard with sustainable forestry certification. Protective inserts made of polyethylene (PE) with **50%** recycled content.

Sustainability gains depend on the configuration selected. Below is a representative example of the savings achieved by progressively scaling up the Milli-Q® SQ 2series system with increasing numbers of dispensing modules<sup>4</sup> (similar to the setup with multiple dispensing modules on page 9) compared to increasing units of an older generation Direct-Q® 3 system.

**Savings achieved with the Milli-Q® SQ 240 system configuration by increasing the number of ultrapure water dispensing modules<sup>4</sup> vs. increasing units of Direct-Q® 3 systems**



- 1 Assuming 14 L ultrapure water dispensed for 260 days per year, per distribution station.
- 2 Throughout product life cycle, considering mass of equipment and consumables for 7 years.
- 3 Total mass increases if only one dispensing module.
- 4 Each dispensing module consists of one Milli-Q® SQ 200 dispensing module and one Milli-Q® SQ Switch tank.





## Water Specifications

The production station of the Milli-Q® SQ 2Series produces pure RO water:

- Ionic content: >96% rejected typically
- Organics & particulates: >99% rejected typically

The dispensing module of Milli-Q® SQ 2Series systems produces ultrapure water [18.2 MΩ·cm @ 25 °C] that fulfills the requirements of the below organizations when equipped with a Prefilter module, SQPAK™ TOC Quanta cartridge and SQPAK™ final filter.

Organization	Water Quality / Grade
European Pharmacopoeia	Purified water in bulk <sup>1</sup>
US Pharmacopoeia	Purified water in bulk <sup>1</sup>
Chinese Pharmacopoeia	Purified water
Japanese Pharmacopoeia	Purified water
ASTM® D1193-06	Type I water – Grade B
ISO 3696	Grade 1 water
Clinical and Laboratory Standards Institute (CLSI®)	Clinical Laboratory Reagent Water (CLRW)
Chinese National Standard GB/T 6682	Level I
Chinese National Standard GB/T 33087	Ultrapure water
JIS K0557	A4 water

## Choice of polishers & final filters to fit different user requirements<sup>1</sup>

### With SQPAK™ TOC Quanta Cartridge

TOC	≤ 5 ppb <sup>(2)</sup>
-----	------------------------

### With SQPAK™ Final Filter

Particulates	None ≥ 0.22 µm
Bacteria	≤ 10 cfu/L (typically ≤ 1 cfu/L)

### With SQPAK™ Bio Final Filter

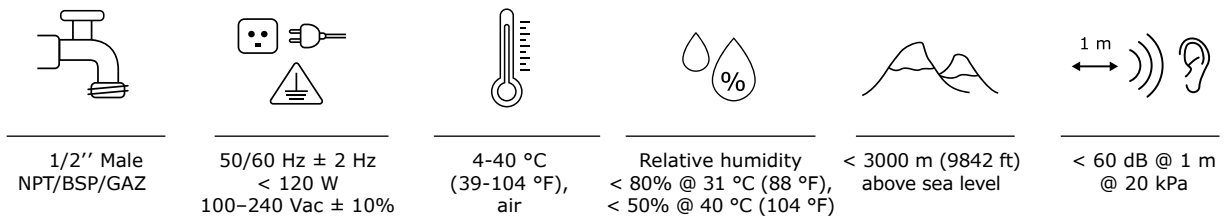
Bacteria	≤ 10 cfu/L (typically ≤ 1 cfu/L)
Pyrogens (endotoxins)	Not detectable, under limit of detection < 0.001 EU/mL
RNases	Not detectable, under limit of detection < 1 pg/mL
DNases	Not detectable, under limit of detection < 5 pg/mL
Proteases	Not detectable, under limit of detection < 0.15 µg/mL

1. These values are typical and may vary depending on the nature and concentration of contaminants in the feed water.
2. With SQPAK™ Final Filter and under controlled laboratory conditions.

## Dimensions & Operating Weights



## Connections & Environment




## Feed Water Specifications


	Production Station	Prefilter Module Recommended	Pressure Regulator Recommended
Pressure	2 – 3 bar	1 – 6 bar	3 – 6 bar
Free chlorine	< 0.5 ppm	< 2 ppm	
Langlier Saturation Index (LSI)	< 0.3		
Silt Density Index (SDI)	< 5		
Temperature	5 – 35 °C (41 – 95 °F)		
Conductivity	< 2000 µS/cm		
TOC	< 2 ppm		

## MILLI-Q® SQ 2SERIES CONFIGURATIONS

Select your purification cartridges, final filter(s), power cord(s), accessories and services in the next section.

**Milli-Q® SQ 240**  
ZSQ240R0TK\*\*



**Standard Configuration** 

- Suitable for one small team
- Install Dispensing Module next to ultrapure water need
- Expand capabilities with additional autonomous ultrapure water dispensing modules


*Included:*


**x1**  
ZSR240R0T0  
Milli-Q® SR 240 Pure RO Water Production Station

**x1**  
ZSQ200U0T0  
Milli-Q® SQ 200 Ultrapure Water Dispensing Module

**x2**  
TANKSQ003  
Milli-Q® SQ Switch 3.5L Tank

**Milli-Q® SQ 240L**  
ZSQ240RLTK\*\*



**Dual Tank Configuration** 

- Suitable for multiple or larger teams
- Install Dispensing Module next to ultrapure water need
- Expand capabilities with additional tanks and autonomous ultrapure water dispensing modules


*Included:*


**x1**  
ZSR240RLT0  
Milli-Q® SR 240L Pure RO Water Production Station

**x1**  
ZSQ200U0T0  
Milli-Q® SQ 200 Ultrapure Water Dispensing Module

**x3**  
TANKSQ003  
Milli-Q® SQ Switch 3.5L Tank

**Milli-Q® SQ 240XL**  
ZSQ240RXTK\*\*



**50 L Tank Configuration** 

- Suitable for direct feed of lab equipment from the 50 L tank
- Install Dispensing Module next to ultrapure water need
- Expand capabilities with additional autonomous ultrapure water dispensing modules

*Included:*

**x1**  
ZSR240RXT0  
Milli-Q® SR 240XL Pure RO Water Production Station

**x1**  
ZSQ200U0T0  
Milli-Q® SQ 200 Ultrapure Water Dispensing Module

**x2**  
TANKSQ003  
Milli-Q® SQ Switch 3.5L Tank

**x1**  
TANKSQ050  
Milli-Q® SQ XL 50L Tank

ordering  
information

**Milli-Q® SQ 240C**  
ZSQ240UCTK\*‡



**Combined Configuration**



- Suitable for one small lab or team
- Install system next to a sink
- Expand capabilities with additional autonomous ultrapure water dispensing modules

*Included:*



**x1**

ZSQ240UCT0  
Milli-Q® SQ 240C RO Water  
Production & Ultrapure  
Water Dispensing System



**x1**

TANKSQ003  
Milli-Q® SQ Switch  
3.5L Tank

**Milli-Q® SQ 240CV**  
ZSQ240UCVTK\*‡



**Combined, Preset Volume Configuration**



- Suitable for routine lab activities
- Repeat serial ultrapure water preset volume dispense from a fixed point
- Install system next to a sink
- Expand capabilities with additional autonomous ultrapure water dispensing modules

*Included:*



**x1**

ZSQ240UCVT0  
Milli-Q® SQ 240CV  
RO Water Production &  
Ultrapure Water Dispensing  
System, with Preset  
Volume Dispensing



**x1**

TANKSQ003  
Milli-Q® SQ Switch  
3.5L Tank

**Milli-Q® SQ 200P**  
ZSQ200UPT0†



**Pressurized Loop Configuration**



- Suitable for labs with a pressurized purified water loop
- Connect system to a pressurized pure water loop
- Expand capabilities by connecting additional systems to the pressurized pure water loop

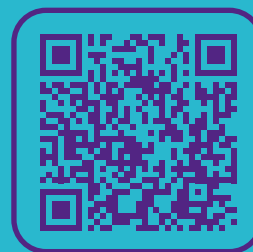
*Included:*



**x1**

ZSQ200UPT0  
Milli-Q® SQ 200P Ultrapure  
Water Dispensing from a  
Pressurized Pure Water  
Loop

Configure and order your solution at  
**[SigmaAldrich.com/Milli-Q-SQ-2Series](https://SigmaAldrich.com/Milli-Q-SQ-2Series)**



\*Gravity valve (ZSQ240GVT0) included in the shipping kit.  
†Two power cords required; Refer to Table on page 19.  
‡One power cord required; Refer to Table on page 19.

## PURIFICATION CARTRIDGES AND FILTERS



**SQPAKGARM1**  
SQPAK™  
Gard Pack



**SQPAKPR0M1**  
SQPAK™  
RO Cartridge



**SQPAKQUAM1**  
SQPAK™  
Quanta Cartridge



**SQPAKT0CM1**  
SQPAK™ TOC  
Quanta Cartridge



**SQPAKFINM1**  
SQPAK™  
Final Filter



**SQPAKBI0M1**  
SQPAK™  
Bio Final Filter

## ACCESSORIES



**TANKSQ003**  
Milli-Q® SQ Switch  
3.5 L Tank

To carry RO water from the production station to the dispensing module.



**ZSQ240GVTO**  
Milli-Q® SQ  
Gravity Valve

To dispense RO water from Switch tank.



**ZWATSENA1**  
Water Sensor

Stops system in case water is detected on the bench or floor.



**ZSR240PFT0**  
Milli-Q® SP 240  
Prefilter Module

Boosts performance of RO water production station. Includes a pressure regulator (see page 4). Requires one power cord (see page 19).



**ZFMQPR3BT0**  
Milli-Q® Pressure Regulator

Limits tap feed water pressure to 3 bars to optimize RO membrane performance.



**ZSQ240CTT0**  
Milli-Q® SQ Cleaning Tool

To sanitize the Switch Tank and RO water production station, along with cleaning tablets.



**ZWCL01F50**  
ROProtect C

**5874316024**  
EfferSan Effervescent Tablets (US only)

**5874316024C**  
EfferSan Effervescent Tablets (CA only)

Cleaning tablets to sanitize the Switch Tank and RO water production station, along with the Cleaning Tool.



Milli-Q® Services	Cat. No.
Milli-Q® SQ 2Series Remote Installation Support & Technical Assistance	ZWSQ2INSUP
	Milli-Q® SR 240
	Milli-Q® SR 240L
	Milli-Q® SR 240XL
<b>3-Year Extension of Service Warranty (per configuration component)</b>	Milli-Q® SQ 200
	Milli-Q® SQ 200P
	Milli-Q® SQ 240C
	Milli-Q® SQ 240CV

Power cords	Cat. No.
For WEU, CEE, GR, IR, RU, TR, IL, PK, CL, ID, JP, KP, KR, PH, TH, VN	FTPF01866
For US, CA, CO, GT, MX, PE, TW (115 V)	FTPF02471
For GB, IE, HK, MY, SG	SIMCABLE1
For Denmark	SIMCABLE2
For South Africa	SIMCABLE3
For Switzerland	SIMCABLE4
For China	SIMCABLE5
For India	SIMCABLE6
For Japan, Thailand	SIMCABLE7
For Argentina, Australia, New Zealand	SIMCABLE8
For Brazil	SIMCABLE11

## INTERNATIONAL REGULATORY REQUIREMENTS

### EU declaration of conformity – UL safety marking

Milli-Q® SQ 2Series systems have been designed and manufactured in accordance to the international standard and test method defined by the IECCE organization according CB Scheme process. CB Scheme process was applied for electromagnetic compatibility and safety compliance.

Milli-Q® SQ 2Series 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](http://iq.ulprospector.com) (E216983)
- Access to CB certificate: [certificates.iecee.org](http://certificates.iecee.org) (DK-137474-UL)

We also meet the regulatory requirements of the following organizations:



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. 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, **50% of the suppliers** for the Milli-Q® SQ 2Series participate in this initiative and have a valid assessment.



# Milli-Q®

Lab Water Solutions

Configure and order your solution at  
[SigmaAldrich.com/Milli-Q-SQ-2Series](https://SigmaAldrich.com/Milli-Q-SQ-2Series)



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