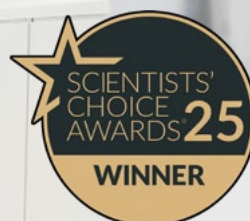


A Robust system for your essential science

Milli-Q® SQ 2Series
Water Purification Systems

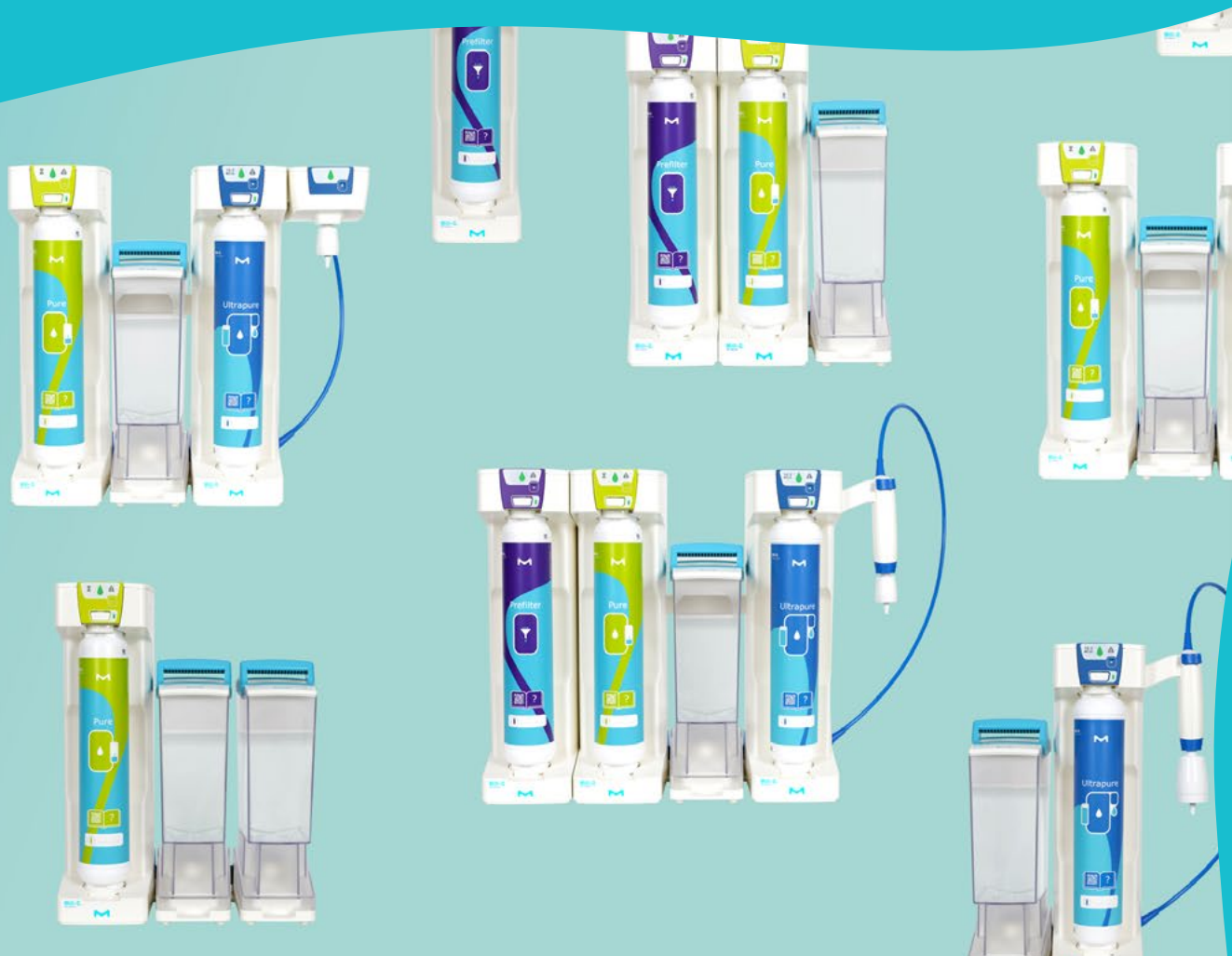


The Life Science business of Merck operates as MilliporeSigma in the U.S. and Canada.

Milli-Q®
Lab Water Solutions

A new way to think about ultrapure water

Milli-Q® SQ 2Series



Best New General Lab Product of the Year
as voted by the readers of SelectScience®.

Now, every lab bench can easily access freshly purified ultrapure water — even those without a direct water supply.

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



Prefilter Module (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



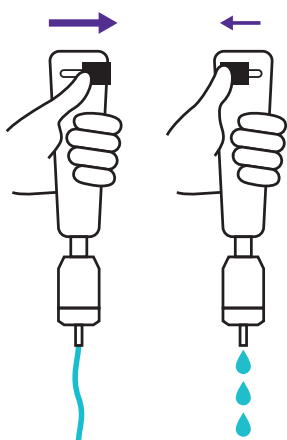
SQPAK™ Bio Final Filter

Removes pyrogens, nucleases, proteases and bacteria

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

ULTIMATE simplicity

EASY & INTUITIVE TO OPERATE FOR ANY USER



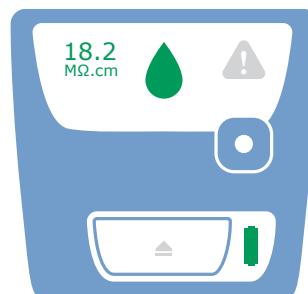
ERGONOMIC HANDSET DISPENSER

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, such as
water quality,
water availability,
system alerts, and
much more.

* When used with an SQPAK™ Final Filter.
With SQPAK™ Bio Final Filter, flow rate ≥ 1.0 L/min and < 1.6 L/min.

**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 to its long lifetime
(built and tested to last up to
7 years of usage).

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

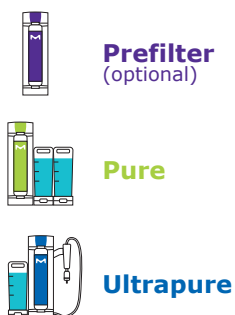
Milli-Q® SQ 2Series systems have the same footprint as a sheet of A4 paper (22 x 27 cm/ unit). The dispensing module fits your busy bench with no water inlet required. Only an electrical outlet is needed to dispense ultrapure water at your bench.

ULTRA COMPACT

unlimited SCALABILITY

ADAPT TO FIT YOUR SET UP & EVOLVE AS YOU NEED

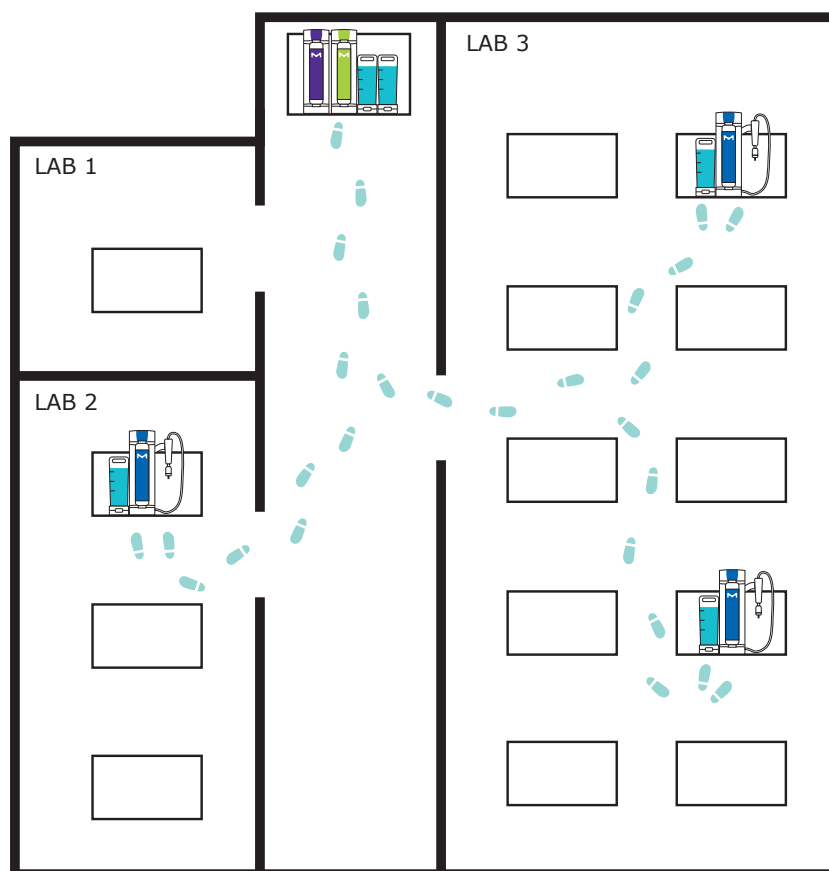
Simply select the configuration that best fits your space and user requirements, then easily expand with more modules as your lab evolves.



Cartridges can be individually replaced when fully used.



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 5x Milli-Q® SQ Switch tanks.

UNIQUE innovations



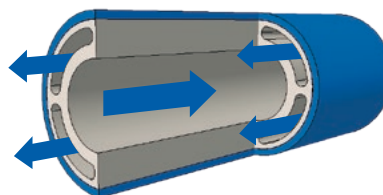
Rapid production of purified RO water keeps your workflow on the go

- 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 the cartridge when needed.



Intuitive dispensing of 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)

Tank usage
simulated
and tested
for a 7 year
lifetime.

**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 identified as **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 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.¹



Materials

Limited material requirements² for multiple dispensing locations thanks to a modular design that only duplicates the ultrapure water dispensing module.³



circular Economy

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

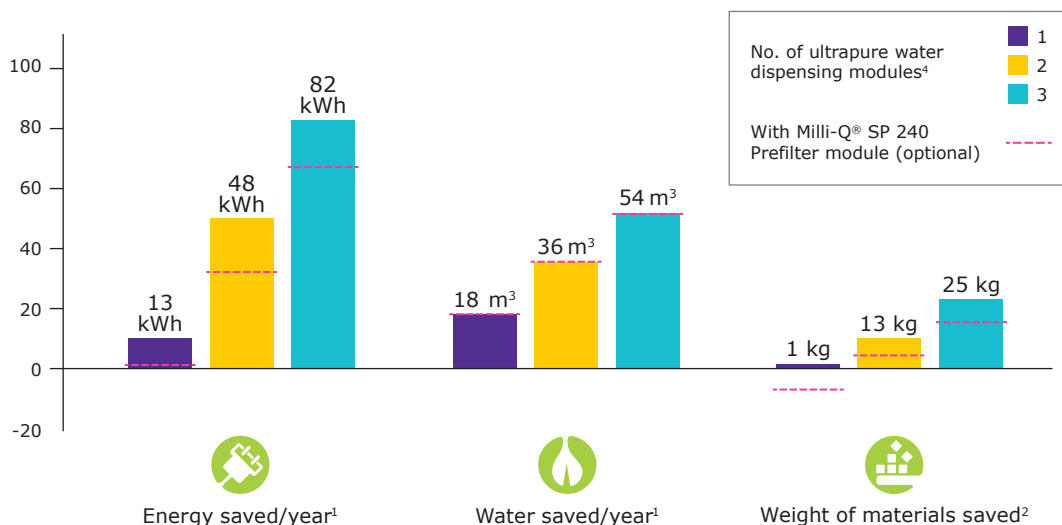


packaging

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 modules⁴ (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 modules⁴ 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 [$18.2 \text{ M}\Omega\cdot\text{cm}$ @ 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
US Pharmacopoeia	Purified water in bulk
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 1
Chinese National Standard GB/T 33087	Ultrapure water
JIS K0557	A4 water

Choice of polishers & final filters to fit different user requirements¹

With SQPAK™ TOC Quanta Cartridge

TOC	$\leq 5 \text{ ppb}^{(2)}$
-----	----------------------------

With SQPAK™ Final Filter

Particulates	None $\geq 0.22 \mu\text{m}$
Bacteria	$\leq 10 \text{ cfu/L}$ (typically $\leq 1 \text{ cfu/L}$)

With SQPAK™ Bio Final Filter

Bacteria	$\leq 10 \text{ cfu/L}$ (typically $\leq 1 \text{ cfu/L}$)
Pyrogens (endotoxins)	Not detectable, under limit of detection $< 0.001 \text{ EU/mL}$
RNases	Not detectable, under limit of detection $< 1 \text{ pg/mL}$
DNases	Not detectable, under limit of detection $< 5 \text{ pg/mL}$
Proteases	Not detectable, under limit of detection $< 0.15 \mu\text{g/mL}$

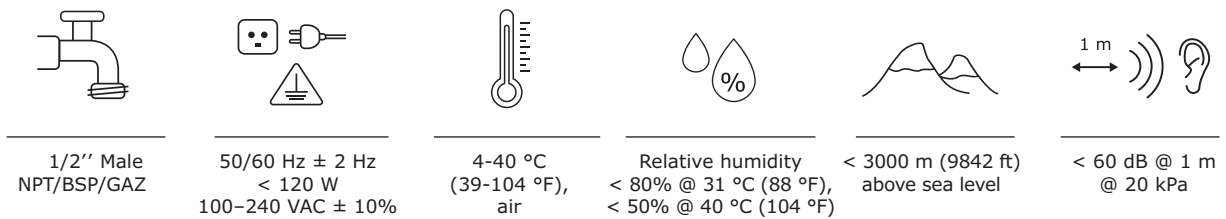
1. These values are typical and may vary depending on the nature and concentration of contaminants in the feed water.

2. With SQPAK™ Final Filter and under controlled laboratory conditions.




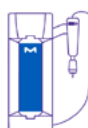
Dimensions & Operating Weights



Connections & Environment



Feed Water Specifications

	 Milli-Q® SR Production Station	 Milli-Q® SP Prefilter Module Recommended	 Pressure Regulator Recommended	 Milli-Q® SQ 200P System
Pressure	2 – 3 bar	1 – 6 bar	3 – 6 bar	1- 6 bar
Free chlorine	< 0.5 ppm	< 2 ppm		
Langlier Saturation Index (LSI)	< 0.3			
Silt Density Index (SDI)	< 5	< 7		
Temperature	5 – 35 °C (41 – 95 °F)			5 - 35 °C (41- 95 °F)
Conductivity	< 2000 μ S/cm			< 100 μ S/cm
TOC	< 2 ppm			< 50 ppb

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 Milli-Q® SQ 200 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 Milli-Q® SQ 200 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
- Order accessories separately to connect 50 L tank to a washer
- Install Dispensing Module next to ultrapure water need
- Expand capabilities with additional autonomous Milli-Q® SQ 200 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

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

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 Milli-Q® SQ 200 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 Milli-Q® SQ 200 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



- Connect system to a pressurized pure water loop or tank

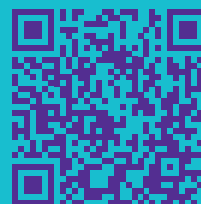
Included:



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



*Gravity valve (ZSQ240GVT0) included in the shipping kit.
†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.



ZSQ240GVT0
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 bar 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 (purchased separately).



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 (purchased separately).

Milli-Q® Services		Cat. No.
3-Year Extension of Service Warranty (per configuration component)	Milli-Q® SQ 2Series Remote Installation Support & Technical Assistance	ZWSQ2INSUP
	Milli-Q® SR 240	ZWSQ2S5EXW
	Milli-Q® SR 240L	ZWSQ2S6EXW
	Milli-Q® SR 240XL	ZWSQ2S7EXW
	Milli-Q® SQ 200	ZWSQ2S1EXW
	Milli-Q® SQ 200P	ZWSQ2S2EXW
	Milli-Q® SQ 240C	ZWSQ2S3EXW
	Milli-Q® SQ 240CV	ZWSQ2S4EXW
Power cords		Cat. No.
For WEU, CEE, GR, IR, RU, TR, IL, PK, CL, ID, KP, KR, PH, VN (230 V)		FTPF01866
For US, CA, CO, GT, MX, PE, TW		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 (E216983)
- Access to CB certificate: 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

Merck KGaA
Frankfurter Strasse 250
64293 Darmstadt, Germany

SigmaAldrich.com

Configure and order your solution at
SigmaAldrich.com/Milli-Q-SQ-2Series



To place an order or receive technical assistance in the U.S. and Canada, call toll-free 1-800-645-5476
For other countries across Europe and the world, please visit: **SigmaAldrich.com/offices**
For Technical Service, please visit: **SigmaAldrich.com/techservice**

We have built a unique collection of life science brands with
unrivalled experience in supporting your scientific advancements.

Millipore® Sigma-Aldrich® Supelco® Milli-Q® SAFC® BioReliance®

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