

Direct-Q® 3, 5, 8 Water Purification Systems

Tap to pure and ultrapure water —
with easy and convenient dispense!



The life science business of
Merck KGaA, Darmstadt,
Germany operates as
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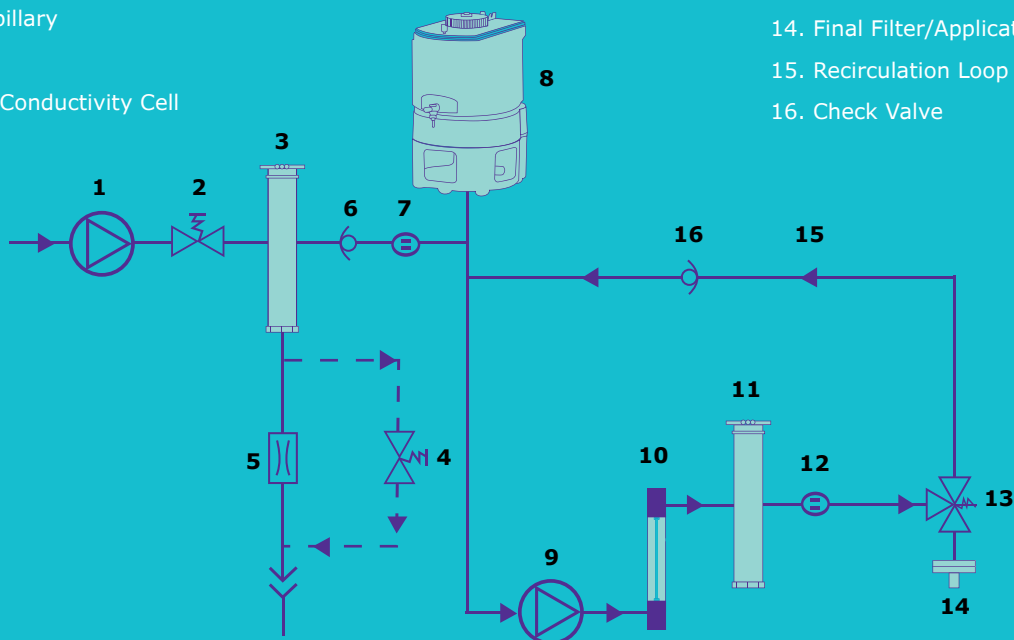
Milli-Q®
Lab Water Solutions

Tap to pure and ultrapure water — with easy and convenient dispense!

Your water purification needs	Our solution: the Direct-Q® range of water purification systems
High quality water produced directly from tap water	Direct-Q® systems deliver both pure and ultrapure water directly from tap for use with a wide variety of applications in your lab.
Ultrapure water easily accessible wherever you need it in your lab	With the Direct-Q® range of water purification systems, you benefit from a choice of ultrapure water dispensing possibilities. The innovative, space-saving Remote dispenser offers you water delivery solutions to best fit the way you work, with easy and convenient remote delivery up to two meters away from your water production unit.
Compact all-in-one system for the most efficient use of your lab space	The Direct-Q® range includes versatile solutions that can be bench-integrated or bench-/wall-installed.
A choice of adequate storage volumes	Direct-Q® systems come either with an integrated 6-liter reservoir or an external reservoir (30 L or 60 L).
Flow rates adapted to your daily usage	Systems in the Direct-Q® range provide 3, 5 or 8 liters of pure water per hour , covering lab needs of 50, 100 and 150 L of pure water per day.
Instant flow rates to match your needs	Direct-Q® systems dispense up to 30 L of ultrapure water per hour .
High quality water to meet the requirements of your most critical applications	Options such as a UV lamp and a range of Application Pak point-of-use polishers are available to fine-tune your ultrapure water.
Easily accessible information on system operation	The user-friendly display provides system status at a glance; the concise Quick Reference Guide is a handy guide for daily operation.
Simple, low-level self-maintenance	All-in-one SmartPak® cartridges enable easy and rapid replacement.

Direct-Q® Systems Water Purification Pathway

1. Booster Pump
2. Inlet Solenoid Valve
3. SmartPak® Part 1 (Pretreatment and RO Cartridge)
4. RO Reject Solenoid Valve
5. RO Reject Capillary
6. Check valve
7. RO Permeate Conductivity Cell
8. Reservoir (Built-in or separate, depending on model)
9. Distribution Pump
10. UV Lamp 185/254 nm (UV Systems)
11. SmartPak® Part 2 (Synthetic Activated Carbon & Ion Exchange Polisher Cartridge)
12. Product Resistivity Cell
13. Point-of-Use (POU) 3-way solenoid valve
14. Final Filter/Application Pak
15. Recirculation Loop
16. Check Valve



Choose the solution that's right for you

Easy installation

The Direct-Q® range of systems requires no special installation. You can easily set the system up yourself: just connect the system to your tap water supply, plug it in, and insert the SmartPak® purification cartridges. Then, if your configuration includes the Remote dispenser or a 30- or 60-liter reservoir*, follow the simple setup procedures — and your system is ready to use!

Optimized lab space

The compact, all-in-one Direct-Q® water purification unit lets you locate it nearly anywhere in your laboratory, either on or under the benchtop, or wall-installed.

* Direct-Q® 5 and Direct-Q® 8 systems are designed for use with a 30 L or 60 L external reservoir.



Flow rates to match your requirements

Choose the solution that best meets your lab's requirements with a Direct-Q® system that provides 3, 5, or 8 liters of pure water per hour, and more than 0.5 L of ultrapure water per minute (> 30 L per hour). When not in use, the Direct-Q® system automatically recirculates water in order to maintain high water quality, so that you do not have to wait when sourcing ultrapure water. For your convenience, and to save time, you can set the system to automatically deliver your selected volume of ultrapure water on demand.

Choice of storage volumes

With its built-in reservoir, the Direct-Q® 3 system can store 6 L of reverse osmosis (RO) water, while Direct-Q® 5 and 8 models are designed for use with a 30- or 60-liter reservoir. Just choose the storage volume that best meets your daily water volume needs.



Fine-tune your water quality

Both pure and ultrapure water

The Direct-Q® range of systems provides you with a convenient and flexible solution for your pure and ultrapure water needs, directly from potable tap water. You'll have access to ultrapure water for your critical applications, and pure water for less critical applications such as general glassware washing or final rinsing — from the same system! The high quality ultrapure water produced by Direct-Q® systems is suitable for applications such as production of mobile phase for chromatographic separations; preparation of blanks and standard solutions for spectrophotometry, spectroscopy or other analytical techniques; and preparation of buffers for biochemical experiments.

Organic-sensitive applications

Direct-Q® systems are also available with a built-in 185/254 nm UV lamp to reduce the level of organics for critical applications. Water with low TOC provides important benefits to HPLC users such as higher sensitivity and longer column lifetime. The same UV lamp also destroys bacteria.

Application Pak point-of-use polishers

Our range of Application Pak polishers makes it possible to fine-tune your ultrapure water quality to match your research needs. Are your applications sensitive to bacteria, particulates, pyrogens, nucleases, endocrine disruptors or volatile organic compounds? If so, just choose the appropriate final polisher from our range of Application Paks to provide optimal water quality for your requirements.

Please see EMDMillipore.com/labwater for more information.



Stay focused on your work

Versatile remote dispenser

Designed to fit perfectly into your lab environment, the versatile Remote dispenser can be placed up to two meters from your Direct-Q® water purification unit. Select the free-standing or wall-installed model according to your needs — their ergonomics will make either one a welcome addition to your lab, giving you the freedom to focus on your research, while dispensing ultrapure water exactly where you need it. Alternatively, Direct-Q® systems are also available with an integrated dispenser for use on the benchtop.

The design of the bench-installed Direct-Q® systems is also adapted to the height and shape of common laboratory glassware.



Milli-Q® offers more than water

Just the information you need

The intuitive color graphic display shows key system parameters at a glance, enabling easy water quality and maintenance warnings monitoring; the screen rotates for easy viewing wherever the system is located. A short Quick Reference Guide is conveniently located in the base of the system for immediate information; the complete User Manual can be stored at the back of the water purification unit.

User-friendly maintenance

The all-in-one SmartPak® purification cartridges are easily replaced in just a few minutes.

Milli-Q® Services portfolio

To optimize the performance and lifetime of your water purification system, we offer a complete portfolio of Milli-Q® Services ranging from a single annual checkup to full system coverage. For more information, please check with your applications specialist or visit our website:

EMDMillipore.com/Milli-Qservices



Direct-Q® System Specifications

Ultrapure (Type I) Product Water Quality*	Direct-Q® Systems
Resistivity	18.2 MΩ·cm @ 25 °C
Production flow rate Direct-Q® 3	3 L/h @ 25 °C ±15%
Production flow rate Direct-Q® 5	5 L/h @ 25 °C ±15%
Production flow rate Direct-Q® 8	8 L/h @ 25 °C ±15%
Instant flow rate (with Application Pak final filter)	> 0.5 L/min
TOC (w/o 185/254 nm UV lamp)	< 10 ppb
TOC (with 185/254 nm UV lamp)	< 5 ppb
Particulates (size > 0.22 µm)**	< 1 particulate/mL
Bacteria**	< 0.1 cfu/mL
Endotoxin***(pyrogens)	< 0.001 EU/mL
RNases***	< 0.01 ng/mL
DNases***	< 4 pg/µL

* In regular operating conditions

** With Millipak® Express 20 (0.22 µm) membrane filter or with BioPak® ultrafiltration cartridge as final polisher

*** Only with BioPak® ultrafiltration cartridge as final polisher

System Information

Pure (Type III) Product Water Quality*	
Ionic rejection	> 96%
Organic rejection for MW > 200	> 99%
Bacteria and particulates	> 99%

* In regular operating conditions







System Information

Dimensions (H × W × D)	540 × 290 × 380 mm (21.3 × 11.4 × 15 in.)
Net weight (Direct-Q® 3 system w/o 185/254 nm UV lamp)	8.1 kg (17.9 lb)
Net weight (Direct-Q® 3 system with 185/254 nm UV lamp)	8.6 kg (19.0 lb)
Net weight (Direct-Q® 5, 8 systems with 185/254 nm UV lamp)	7.6 kg (16.7 lb)
Operating weight (Direct-Q® 3 system w/o 185/254 nm UV lamp)	17.6 kg (38.8 lb)
Operating weight (Direct-Q® 3 system with 185/254 nm UV lamp)	18.2 kg (40.1 lb)
Operating weight (Direct-Q® 5, 8 systems with 185/254 nm UV lamp)	12.2 kg (26.8 lb)
Net weight (Remote dispenser)	2.15 kg (4.8 lb)
Operating weight (Remote dispenser)	2.68 kg (5.91 lb)
Built-in reservoir volume	6 L
Electrical feed voltage	100–250 V ±10%
Electrical feed frequency	50–60 Hz ±10%
Tap (feed) water connection	½" Gaz M
Tap (feed) water pressure	0.5 to 6 bar

Available System Configurations

Water Purification Systems

Available Configurations	Direct-Q® 3	Direct-Q® 5	Direct-Q® 8
 UV 185/254 nm	With/Without	With	With
 Remote dispenser	With/Without	With/Without	With/Without
 Built-in 6 L reservoir	With	Without	Without
 30/60 L reservoir*	Option	Required	Required

Milli-Q®

Lab Water Solutions

MilliporeSigma
400 Summit Drive
Burlington, MA 01803

EMDMillipore.com

To place an order or receive technical assistance in the U.S. and Canada, call toll-free 1-800-645-5476
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