

# Direct-Q<sup>®</sup> 3, 5, 8 Water Purification Systems

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

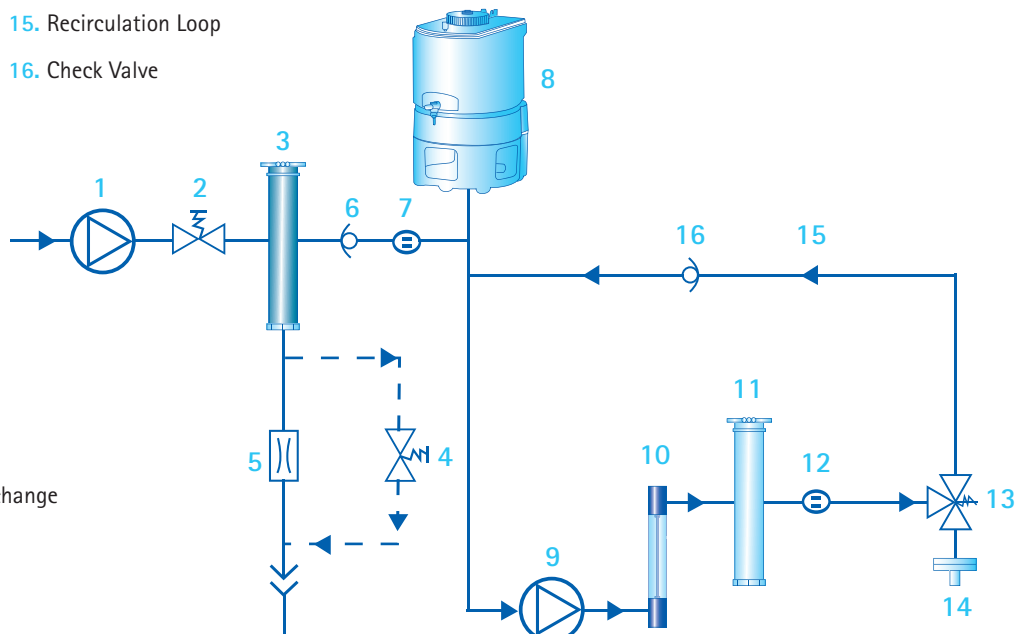


# Tap to pure and ultrapure water — with easy and convenient dispense!

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 <b>both pure and ultrapure water</b> 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 <b>Direct-Q® range</b> of water purification systems, you benefit from a choice of ultrapure water dispensing possibilities. The innovative, space-saving <b>Remote dispenser</b> offers you water delivery solutions to best fit the way you work, with <b>easy and convenient remote delivery</b> 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 <b>Direct-Q®</b> range includes <b>versatile solutions</b> that can be bench-integrated or bench- / wall-installed.
A choice of adequate storage volumes	Direct-Q® systems come either with an <b>integrated 6-liter reservoir</b> or an <b>external reservoir</b> (30 l or 60 l).
Flow rates adapted to your daily usage	Systems in the Direct-Q® range provide <b>3, 5 or 8 liters of pure water per hour</b> , 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 <b>ultrapure water per hour</b> .
High quality water to meet the requirements of your most critical applications	Options such as a <b>UV lamp</b> and a range of <b>Application Pak point-of-use polishers</b> are available to fine-tune your ultrapure water.
Easily accessible information on system operation	The <b>user-friendly display</b> provides system status at a glance; the concise <b>Quick Reference Guide</b> is a handy guide for daily operation.
Simple, low-level self-maintenance	<b>All-in-one SmartPak®</b> 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 System)
- 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 also 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

Merck Millipore's 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 [www.millipore.com/labwater](http://www.millipore.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.



# Merck Millipore 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.

## Watercare Pact Service portfolio

To optimize the performance and lifetime of your water purification system, Merck Millipore offers a complete portfolio of Service plans ranging from a single annual checkup to a full system cover. For more information, please check with your Merck Millipore applications specialist or visit our website: [www.millipore.com/labwater](http://www.millipore.com/labwater)





# Specifications

## Ultrapure (Type I) Product Water Quality\*

Resistivity
Production flow rate Direct-Q 3®
Production flow rate Direct-Q 5®
Production flow rate Direct-Q 8®
Instant flow rate (with Application Pak final filter)
TOC (w/o 185/254 nm UV lamp)
TOC (with 185/254 nm UV lamp)
Particulates (size > 0.22 µm)**
Bacteria**
Endotoxin***(pyrogens)
RNases***
DNases***

\* 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

## Direct-Q® Systems

18.2 MΩ·cm @ 25 °C
3 l/h @ 25 °C +/- 15 %
5 l/h @ 25 °C +/- 15 %
8 l/h @ 25 °C +/- 15 %
> 0.5 l/min
< 10 ppb
< 5 ppb
< 1 particulate/ml
< 0.1 cfu/ml
< 0.001 EU/ml
< 0.01 ng/ml
< 4 pg/µl

## Pure (Type III) Product Water Quality\*

Ionic rejection
Organic rejection for MW > 200
Bacteria and particulates

\* In regular operating conditions

> 96 %
> 99 %
> 99 %



System Information	
Dimensions (H x W x D)	54 x 29 x 38 cm (21.3 x 11.4 x 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

\* 30 l or 60 l depending on daily water usage



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