Synergy®
Water Purification Systems

Ultrapure water at the point of use - with easy and convenient dispense!

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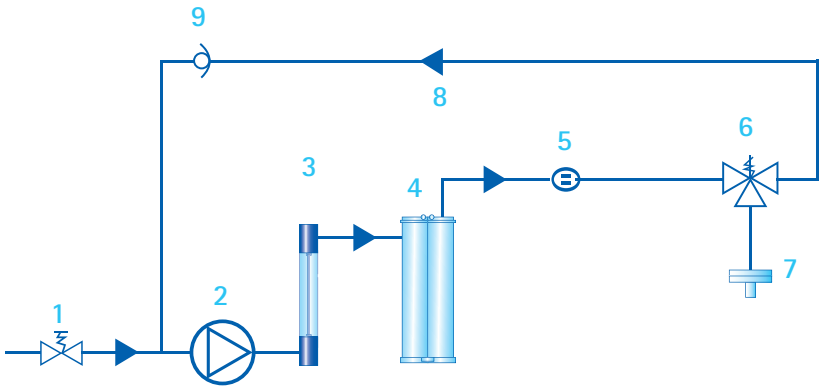
Your water purification needs	Our solution: the Synergy® range of water purification systems
Ultrapure water easily accessible wherever you need it in your lab	With the Synergy® range of water purification systems, you benefit from a choice of ultrapure water dispensing possibilities. The innovative, 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.
Point-of-use system to supply ultrapure water	Synergy® water purification systems produce ultrapure water using feed water from an existing pretreated pure water supply (such as a RiOs™ system).
Compact design for the most efficient use of your lab space	A small footprint makes it easy to install the Synergy® systems wherever you want to — on the bench, bench-integrated or on the wall.
Flow rates adapted to your ultrapure water needs	Systems in the Synergy® range can dispense more than 1.5 liters of ultrapure water per minute.
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	SynergyPak® purification cartridges enable easy and rapid replacement.

Synergy® Systems Water Purification Pathway

1. Inlet Solenoid Valve
2. Booster Pump
3. UV Lamp 185/254 nm (UV System)
4. SynergyPak® 1, 2 or 3
5. Product Resistivity Cell
6. Point-of-Use (POU) Solenoid Valve
7. Final Filter
8. Recirculation Loop
9. Check valve



Choose the solution that's right for you

Easy installation

Installing the Synergy® system is so easy you can do it yourself. Just connect the system to a pretreated water supply (e.g., from a RiOs™ system), plug it in, and insert the SynergyPak® purification cartridges. Then, if you have chosen the system with a Remote dispenser, follow the simple setup procedure — and your system is ready to use!

Optimized lab space

The Synergy® system's small footprint will allow you to find a space for it anywhere in your laboratory, either on or under the benchtop, or wall-installed. You choose the best location for your Synergy® system.

High ultrapure flow rates to match your requirements

With high flow rates above 1.5 liters per minute, the systems provide ultrapure water on demand in the volumes required to satisfy critical applications. When not in use, your Synergy® system will recirculate water in order to maintain 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.

The high quality ultrapure water produced by Synergy® 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 and molecular biology experiments.

Fine-tune your water quality

Point-of-use ultrapure water

For laboratories with an existing access to pure water, Synergy® systems provide a solution to point-of-use ultrapure water needs. The high quality ultrapure water produced by Synergy® systems is suitable for applications such as HPLC mobile phase preparation and sample dilution; buffer and cell culture media preparation; preparation of chemical solutions used with titrators, spectrophotometers, and electrophoresis systems.

Organic-sensitive applications

If you work with organic-sensitive applications such as HPLC, LC, GC or TOC analyses, the Synergy® UV system contains a built-in 185/254 nm UV lamp to reduce TOC to less than 5 ppb. 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. 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 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 Synergy® water purification unit. Select the free-standing or wall-installed model according to your needs – their ergonomy 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, Synergy® systems are also available with an integrated dispenser for use on the benchtop.

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 warning monitoring; the screen rotates for easy viewing wherever the system is located. Additional information on system operation and maintenance is provided by the *Quick Reference Guide* and *User Manual* stored on the water production unit.

User-friendly maintenance

The SynergyPak® purification cartridges integrate all the main purification technologies. The Synergy® system will automatically tell you when it's time to change the SynergyPak®, and "plug-and-use" design makes this easy to do in just a couple of 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

Specifications

Ultrapure (Type I) Product Water Quality*	Synergy® Systems
Resistivity	18.2 MΩ·cm @ 25 °C
Instant flow rate (with Application Pak final filter)	> 1.5 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
Feed water for use with Synergy® systems should be pretreated Type 2 or Type 3 grade water delivered at 0.3 bar maximum pressure. Recommended sources: RiOs™ system reverse osmosis water, and distilled or DI water.

System Information	
Dimensions (H x W x D)	54 x 29 x 38 cm (21.3 x 11.4 x 15 in)
Net weight (Synergy® system w/o 185/254 nm UV lamp)	6.7 kg (14.8 lb)
Net weight (Synergy® system with 185/254 nm UV lamp)	7.2 kg (15.9 lb)
Operating weight (Synergy® system w/o 185/254 nm UV lamp)	9.7 kg (21.4 lb)
Operating weight (Synergy® system with 185/254 nm UV lamp)	10.2 kg (22.5 lb)
Net weight (Remote dispenser)	2.15 kg (4.8 lb)
Operating weight (Remote dispenser)	2.68 kg (5.91 lb)
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	< 0.3 bar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For more information, please visit our website:

www.millipore.com/synergy

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