Direct Pure Water Systems

Provide up to 45 liters pure water per hour

Pure water, Pure convenience. Direct Pure delivers.

Compact and small footprint
A space-saving solution

Introducing the Upgraded Direct Pure water purification system

Building upon the established stability and reliability of its predecessor, the upgraded Direct Pure water purification system incorporates state-of-the-art, customer-centered designs that focus on user experience. Its compact footprint allows for seamless integration into any laboratory setting while offering greater convenience in every aspect of use.

The benefits of the improvements

Convenience and Efficiency: Effortless water dispensing, simplified maintenance procedures, and consumable management.

Enhanced Process Control: Each purification module is equipped with monitoring devices, ensuring optimal performance and consistent water quality. Easy to track system performance and identify potential issues early.

Data Traceability: An enriched historical record coverage offers easy data retrieval and analysis.

Intuitive User Interface: A 2.4-inch high-resolution color touchscreen provides real-time information on consumable lifespan, system errors, alerts, and other critical parameters, simplifying operation and maintenance.

Improved assured performance: Multiple dependability features, including leak detection sensor, overflow sensor, and the water tank sanitization module with mercury-free germicidal UV toprovide added protection and peace of mind.

9 different Direct Pure models, one of them is sure to meet your needs

U, U Extended, U+, U+ Extended, Q, Q Extended, H, C and R.

Feed water		Model	Product water		Quick product snapshot
HP*	Tap		HP*	UP**	
	●	Direct-Pure U	● (RO)	●	For RO & ultrapure product water
	●	Direct-Pure U Extended	● (RO)	●	With a remote dispenser
	●	Direct-Pure U+	● (DI)	●	For DI & ultrapure product water
	●	Direct-Pure U+ Extended	● (DI)	●	With a remote dispenser
● ● ●		Direct-Pure Q		●	For ultrapure water, a 10L feed water tank is optionally available
● ● ●		Direct-Pure Q Extended		●	With a remote dispenser
	●	Direct-Pure H	● (DI)		For DI product water with tank recirculation
	●	Direct-Pure C	● (CLRW)		To feed analyzers with clinical laboratory reagent grade water
	●	Direct-Pure R	● (RO)		For RO product water

*HP: Purified water
**UP: Ultrapure water

Direct Pure U | Direct Pure U Extended | Direct Pure H

Variety of Choices:
System-Mounted or Remote Dispenser
8 Display Languages

Designed for Simplicity

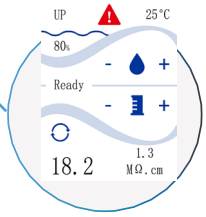
Reliable water quality

- A Temperature-independent RO system that maintains consistent reverse osmosis (RO) permeability across a broad range of ambient temperatures
- Automatic hourly recirculation of ultrapure water
- A tank recirculation loop designed to ensure optimal water quality within the storage tank (only for Direct Pure H)
- The optimized flow path design ensures a high level of water purity and stability while also enhancing the polishing efficiency of the purification resin

Easy to use

- The system comes with one single dispensing handle equipped with a touchscreen. An intuitive menu allows you to easily access to real-time water quality monitoring, manual and volumetric dispensing, adjustable flow rates, and system alerts
- Quick Installation. Effortless setup with intuitive plug-and-play connections; no tools or technical expertise required
- Simple maintenance and upkeep. The magnetic front cover offers instant access to consumables for rapid replacement

Built-in assurance features



- Automatic shutdown mechanism triggered by leak detection
- Consumables usage data are automatically tracked, enabling predictive maintenance and ensuring uninterrupted operation
- A universal inlet water level sensor to prevent system failures caused by air intake (for Direct Pure Q and Q Extended)

Data traceability

- Automatic data backup for up to 2 years, including historical water quality. parameters and alarm records, which can be easily exported and printed for further analysis and reporting
- Easily export data through various interfaces, such as LAN and USB, which can be seamlessly integrated into your existing laboratory management system for comprehensive analysis

Environmentally friendly

- A mercury-free 265 nm germicidal UV lamp is utilized in the sanitization module
- Digital and paperless data management minimizes paper consumption and waste
- The system is manufactured using green energy sources, such as solar power, which minimizes its carbon footprint and aligns with sustainable practices

Low running cost

- High-efficiency cartridges contribute to reduced operational expenses
- Small footprint and energy-efficient components minimize installation space and cost requirements while reducing energy consumption

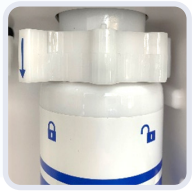
Quality by Design. Every Part Counts.

Cartridges

- High-pressure-rated housings, proprietary sealing technology, and a double O-ring design enhance leak resistance and operational confidence
- Color-coded labels and clear identification markings prevent incorrect installation, thereby maintaining the integrity of the purification system and ensuring consistent water quality
- An integrated single pretreatment P Pack offers an effective barrier against common contaminants found in tap water, including colloids, particles, and residual chlorine. It protects the downstream purification units and prolongs their lifespan

The specially designed installation structure makes it easy to secure the cartridge in place, ensuring a stable and reliable connection. The simple unlock and lock mechanism allows for quick and convenient cartridge changes.


unlock


lock

RO Pack

- It removes 95 – 99% of ions, and 99% of all dissolved large organics, microorganisms and particles
- It boasts a high flow rate of up to 45 L/h, ensuring efficient water purification
- RO permeate is rejected when its quality failes to meet the specified setpoint
- RO recovery loop is designed to optimize the water recovery rate and improve overall water utilization
- RO Self-maintenance and cleaning functions extend the lifespan and efficiency of the RO membrane, minimizing the frequency of manual interventions and downtime

RO membrane housed in a single pack

Final filter

- The dispenser is compatible with a variety of final filters from leading brands, offering tailored solutions for a range of applications
- RephiLe provides:
  - 0.2 µm PES High Flux Capsule Filter for particle- and bacteria-free ultrapure water
  - RephiBio filter for ultrapure water free from pyrogen, nuclease, protease, and bacteria
- Every final filter is equipped with a protective end-bell that provides an additional layer of defense against external contaminants

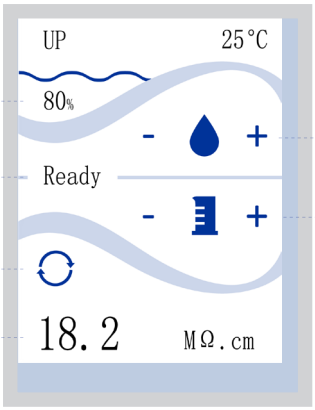

Rephibio filter


0.2 µm final filter

Dispenser

The ergonomic one-handed operation handle allows for easy use, even when wearing gloves or with wet hands. The system offers two alternative resting positions for the dispenser handle, ensuring convenient water dispensing in various installation settings.

Placement flexibility:
- Under the bench
- On the bench
- Wall-mouted



Tank level

System operating status

Recirculation

Water resistivity

Dispense rate adjustment

Volumetric dispensing

Remote dispenser

Direct Pure U Extended, U+ Extended and Q Extended models feature:

- A 3-meter remote water dispenser, providing convenient access to purified water from anywhere within the lab
- The dispenser is securely mounted on a standalone height-adjustable stand with an anti-skid base that keeps it securely in place
- The stand offers 360-degree rotation for ultimate convenience

Storage tank

- Models with a built-in 10-liter integrated HDPE tank are available. The all-in-one unit comes fully assembled for your convenience and includes a sanitization module that utilizes a pre-installed, mercury-free germicidal UV lamp, as well as a built-in continuous liquid level sensor for accurate, real-time measurement of tank water levels
- Scalable to 30/60/100/350 liters, each equipped with a mercury-free tank sanitization module

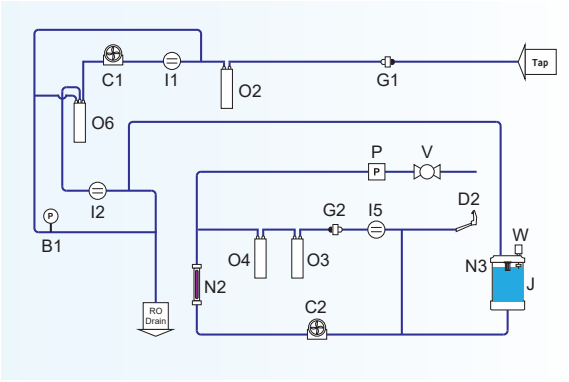
10-liter tank

30-liter tank 60-liter tank

Flow Schematics

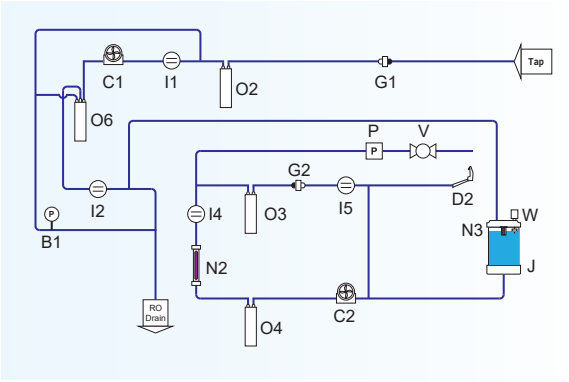
Direct Pure U & U Extended

Tap water to ultrapure & RO water (24, 45 L/h)



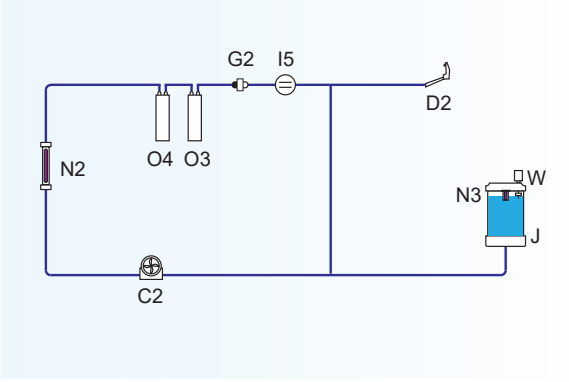
Direct Pure U+ & U+ Extended

Tap water to ultrapure & DI water (24, 45 L/h)



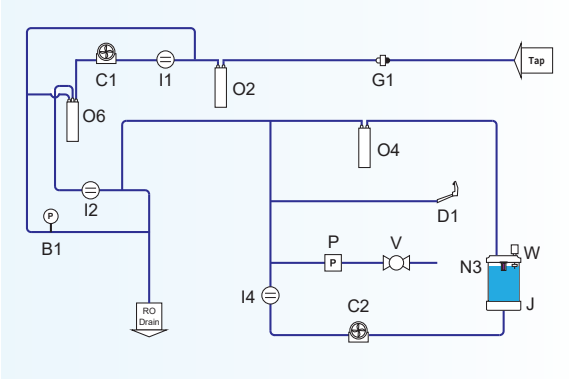
Direct Pure Q & Q Extended

Pure water to ultrapure water



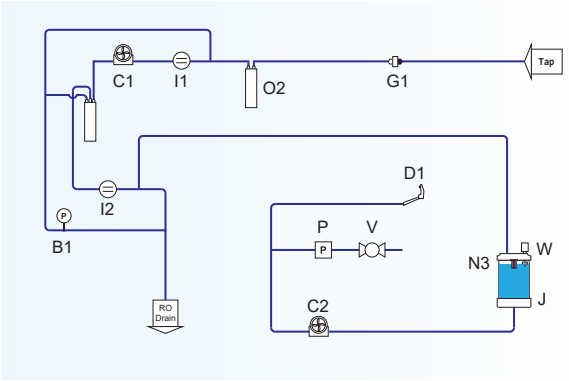
Direct Pure H

Tap water to DI water (24, 45 L/h)



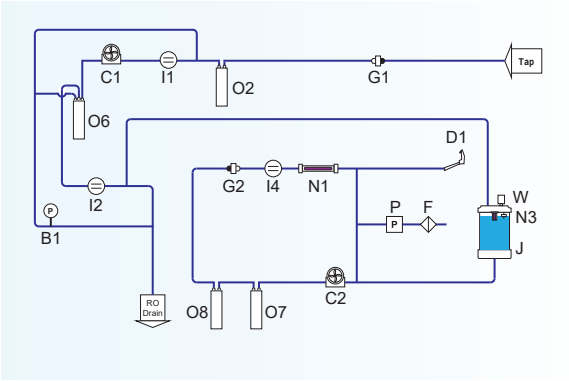
Direct Pure R

Tap water to RO water (24, 45 L/h)



Direct Pure C

Tap water to Pure water(CLRW) (24, 45 L/h)



B1 Pressure sensor	C1 RO booster pump	C2 Recirculation pump	D1 UP dispenser	D2 HP dispenser
F 0.2 µm capsule filter	G1 Inlet filter	G2 Inline filter	I1 Feed conductivity sensor	I2 RO conductivity sensor
I4 DI resistivity sensor	I5 UP resistivity sensor	J Pure water tank	N1 Bactericidal UV lamp	N2 TOC reduction lamp
N3 Tank UV lamp	O2 P Pack	O3 U Pack	O4 H Pack	O6 RO Pack(s)
O7 C Pack A	O8 C Pack B	P Pressure Switch	V Ball Valve	W Tank Vent Filter

Specifications

Parameter \ Model*		U & U Extended	U+ & U+ Extended	H	C	R	Q & Q Extended
Feed water		Tap water					Pure water
Conductivity / TDS		< 2000 µS/cm@25 °C / < 1000 ppm					< 100 µS/cm@25 °C
Temperature		5 - 35 °C (41 - 95 F)					
Pressure		0.1 - 0.6 MPa (1.0 - 6.0 bar)					0 - 0.1 MPa (0 - 1.0 bar)
Product water type		ultrapure & RO	ultrapure & DI	DI	CLRW	RO	ultrapure
Dimensions & Weight							
Dimensions W x D x H		with 10 L tank: 414 x 422 x 624 mm (16.3 x 16.6 x 24.5 in) without 10 L tank: 414 x 310 x 624 mm (16.3 x 12.2 x 24.5 in)					
Weight	net	21 kg	21 kg	20 kg	20 kg	19 kg	18 kg
	gross	30 kg	30 kg	29 kg	29 kg	28 kg	27 kg

* For brevity, 'Direct Pure' has been omitted fromall model names mentioned in this row.

Water Quality

Parameter	Ultrapure
Dispenser rate	Up to 2 L/min
Resistivity (@ 25 °C)	18.2 MΩ·cm
TOC*	< 5 ppb
Particles (> 0.2 µm)**	No particles with size > 0.22 µm
Microorganisms**	< 0.001 cfu/ml
Pyrogens (endotoxins)***	< 0.001 Eu/ml
RNase***	< 0.5 pg/ml
DNase***	< 10 pg/ml
Silica	< 2 ppb

* In the appropriate operating conditions.
** with a 0.2 µm final filter
*** with a RephiBio filter

Parameter	DI
Dispenser rate	Up to 2 L/min
Resistivity (@ 25 °C)	> 1 MΩ·cm (Product water quality stored in tank)
Silica	< 3 ppb

Parameter	CLRW
Dispenser rate	Up to 2 L/min
Resistivity (@ 25 °C)	> 10 MΩ·cm
TOC	< 30 ppb
Microorganisms	< 1 cfu/ml
Silica	< 5 ppb

Parameter	RO
Production rate	24, 45 L/h
Dispenser rate	Up to 2 L/min
Conductivity (@ 25 °C)	Typically < 20 µS/cm
RO rejection	97 to 98% ionic (new RO cartridge) > 99% organic > 99% particulates & bacteria

Water quality compliance

Ultrapure and pure water produced by Direct Pure system meets or exceeds requirements described by the organizations below:

Ultrapure water

- ASTM D 1193 Type 1 water
- ISO 3696 Grade 1 water
- CLSI Clinical Laboratory Reagent Water (CLRW)
- USP Purified Water
- EP Purified water

DI water

- ASTM D 1193 Type 2 water
- ISO 3696 Grade 2 water
- USP Purified Water
- EP Purified water

CLRW water

- CLSI Clinical Laboratory Reagent Water (CLRW)

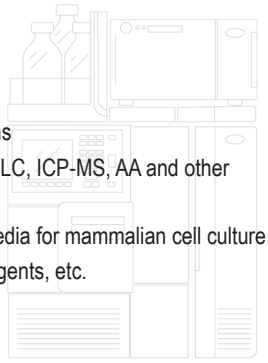
Ordering Info

Description	Cat. No.
Direct Pure water system, U 24 set	RS0U02000K
Direct Pure water system, U 24 set, with 10L tank	RS0U0200TK
Direct Pure water system, U 45 set	RS0U04000K
Direct Pure water system, U 45 set, with 10L tank	RS0U0400TK
Direct Pure water system, U 24 Extended set	RS0UP2000K
Direct Pure water system, U 24 Extended set, with 10L tank	RS0UP200TK
Direct Pure water system, U 45 Extended set	RS0UP4000K
Direct Pure water system, U 45 Extended set, with 10L tank	RS0UP400TK
Direct Pure water system, U+ 24 set	RSHU02000K
Direct Pure water system, U+ 24 set, with 10L tank	RSHU0200TK
Direct Pure water system, U+ 45 set	RSHU04000K
Direct Pure water system, U+ 45 set, with 10L tank	RSHU0400TK
Direct Pure water system, U+ 24 Extended set	RSHUP2000K
Direct Pure water system, U+ 24 Extended set, with 10L tank	RSHUP200TK
Direct Pure water system, U+ 45 Extended set	RSHUP4000K
Direct Pure water system, U+ 45 Extended set, with 10L tank	RSHUP400TK

Description	Cat. No.
Direct Pure water system, Q set	RS0Q00000K
Direct Pure water system, Q set, with 10L tank	RS0Q0000TK
Direct Pure water system, Q Extended set	RS0QP0000K
Direct Pure water system, H 24 set	RS0H02000K
Direct Pure water system, H 24 set, with 10L tank	RS0H0200TK
Direct Pure water system, H 45 set	RS0H04000K
Direct Pure water system, H 45 set, with 10L tank	RS0H0400TK
Direct Pure water system, R 24 set	RS0R02000K
Direct Pure water system, R 24 set, with 10L tank	RS0R0200TK
Direct Pure water system, R 45 set	RS0R04000K
Direct Pure water system, R 45 set, with 10L tank	RS0R0400TK
Direct Pure water system, C 24 set	RS0C02000K
Direct Pure water system, C 24 set, with 10L tank	RS0C0200TK
Direct Pure water system, C 45 set	RS0C04000K
Direct Pure water system, C 45 set, with 10L tank	RS0C0400TK

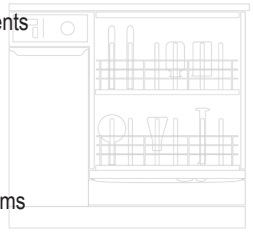
Main Applications

Ultrapure Water



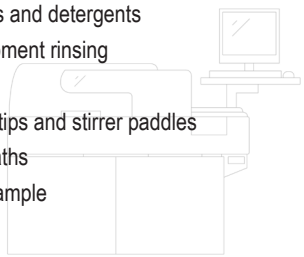
- HPLC mobile phase preparation
- Preparation of reagent blank solutions
- As sample diluent for GC, HPLC, UPLC, ICP-MS, AA and other analytical techniques
- Preparation of buffers and culture media for mammalian cell culture
- Preparation of molecular biology reagents, etc.

DI Water



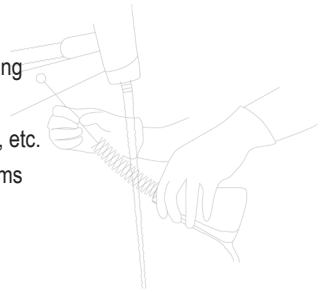
- Preparation of chemical and bio-reagents
- Preparation of culture media / buffer
- Water supply for clinical analyzers
- Medical device and equipment rinsing
- For serum and blood fractionation
- Water supply for ultrapure water systems

CLSI Water



- Dilution of clinical reagents, samples and detergents
- Automatic medical device and equipment rinsing
- Reaction cuvettes cleaning
- Feeding washing stations for probe tips and stirrer paddles
- Temperature controlled Incubator baths
- An interface between syringe and sample

RO Water



- Washing machine for glassware cleaning
- Feed water for laboratory animals
- Feed water for humidifiers, autoclaves, etc.
- Water supply for ultrapure water systems
- Hydroponics

RephiLe Bioscience, Ltd.
Toll Free: +1-855-RephiLe (+1-855-737-4453)
E-mail: info@rephile.com

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