

NuZar  
Lite

## Water Purification Systems

Compact  
and powerful

NuZar U Lite  
NuZar Q Lite  
NuZar R Lite  
NuZar H Lite



Systems are manufactured in Rephile's ISO 9001:2015 & ISO 14001:2015 certified facilities, and CE marked.

# About NuZar Lite Laboratory Water Systems

The NuZar Lite systems introduce a distinctive series to the RephiLe water purification portfolio. They can meet your pure water requirements while also saving valuable space for your research.

The NuZar lite system is ready to install right out of the packaging, and all setups are straightforward. The simplified and user-centered designs of the NuZar Lite series make them easy to use, even for inexperienced users. This contributes to streamlining workflows, ultimately enhancing the quality and productivity of the laboratory.

In general, NuZar lite systems can provide users with consistent water quality, effortless operation, user-friendly monitoring, and a favorable cost of ownership.

The series includes 4 models:



Feed Water		Product Water
HP*	Tap	UP** HP*
●	NuZar U Lite	● (RO)
●	NuZar H Lite	● (DI)
●	NuZar R Lite	● (RO)
●	NuZar Q Lite	●

\*HP: Purified water \*\*UP: Ultrapure Water

## Key Features

### Reliable, Stable, Traceable and Predictable

Simple installation and maintenance

- ◇ Easy to install and replace consumable

- ◇ Automatic RO membrane cleaning cycles (Cl<sub>2</sub> and pH cleaning)

Low running cost

- ◇ Self-maintenance functions for maximum RO membrane effectiveness and lifetime
- ◇ Highly-efficient cartridges

Reliable water quality and stable system performance

- ◇ Stable RO production rate over a wide range of temperatures
- ◇ Automatic flushing if quality of RO permeate falls below a pre-set set-point
- ◇ Automatic hourly recirculation of ultrapure water
- ◇ Eco-friendly: Mercury-free germicidal UV lamp in tank sanitation module



Data traceability

- ◇ Automatic data backup for up to 2 years
- ◇ Easy data transfer via USB

Compact and small footprint

- ◇ All-in-one design. Space-Saver
- ◇ An in-built single pretreatment P Pack
- ◇ Placement flexibility - on the bench or wall-mount
- ◇ Two dispenser positions if wall-mount
- ◇ Integrated 10L tank(Except NuZar Lite Q)



Data traceability



Low running cost



Small footprint



Environmentally friendly

## Components & Parts



### Cartridge

- Optimized flow design to improve water quality stability & efficiency of polishing resins
- High pressure rated housings, proprietary sealing, and double O-ring design ensures operational confidence
- Cartridge colors and labels to prevent incorrect installation



### Ergonomic dispenser with 2.4" color touch screen

- One dispenser for each system
- Intuitive display - water quality, volumetric dispensing and dispense rate
- System alerts are displayed on the touch screen
- Effortless adjustment - dispensing rate (up to 2 L/min), manual and volumetric dispensing
- Choice of final filters: RephiBio and 0.2 µm final filter



### Storage Tank

- A 10 L integrated HDPE tank (not for NuZar Q Lite) equipped with sanitization module, mercury-free germicidal UV lamp preinstalled.
- Tank recirculation function specifically for NuZar H Lite to guarantee water quality in the tank




Two dispenser heights for the ultimate in flexibility

Extendable to 30/60/100/350 L (with mercury-free tank sanitization module) if needed



Select a right NuZar system for your applications

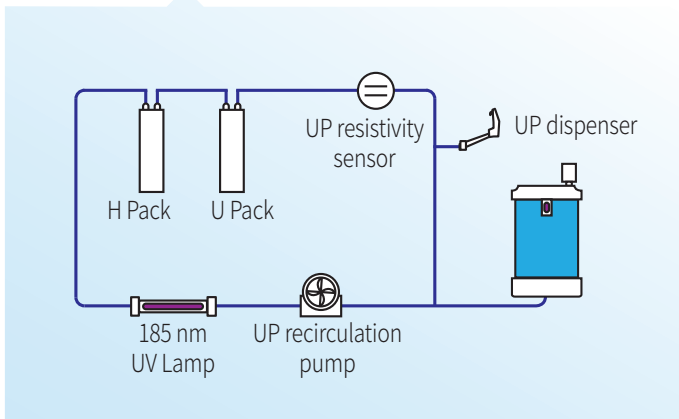
Easy Selections  
Peace of Mind!

NuZar System	Water type	Main Applications
	Ultrapure water	<ul style="list-style-type: none"> <li>HPLC mobile phase preparation</li> <li>Preparation of reagent blank solutions</li> <li>Sample diluent for GC, HPLC, ICP-MS or other analytical techniques</li> <li>Preparation of buffers and culture media for cell culture</li> <li>Preparation of molecular biology reagents, etc.</li> </ul>
	DI water	<ul style="list-style-type: none"> <li>Preparation of chemical and bio-reagents</li> <li>Preparation of culture media / buffer</li> <li>Water supply for clinical analyzers</li> <li>Medical device and equipment rinsing</li> <li>For serum and blood fractionation</li> <li>Water supply for ultrapure water systems</li> </ul>
	RO water	<ul style="list-style-type: none"> <li>Washing machine for glassware cleaning</li> <li>Feed water for laboratory animals</li> <li>Feed water for humidifiers, autoclaves, etc.</li> <li>Water supply for ultrapure water systems</li> <li>Hydroponics</li> </ul>

## Flow Schematics

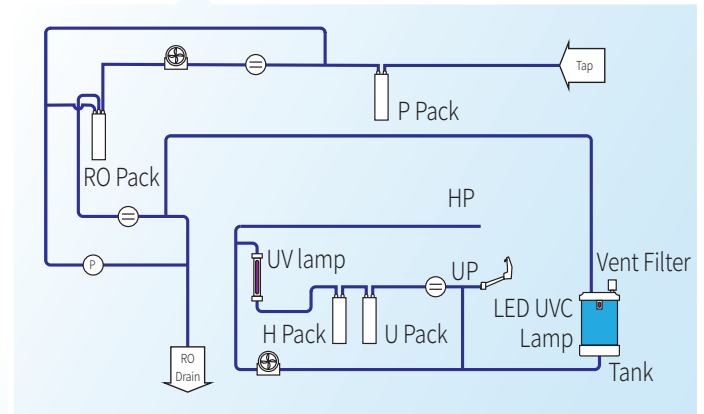
Rephile NuZar Lite systems incorporate advanced technologies and optimized flow paths to ensure exceptional water quality for customers' applications.

Comprehensive process control management with continuous water purity monitoring after every purification step. This allows consistent and reliable operation which ensures the product meets the NuZar Lite specifications.



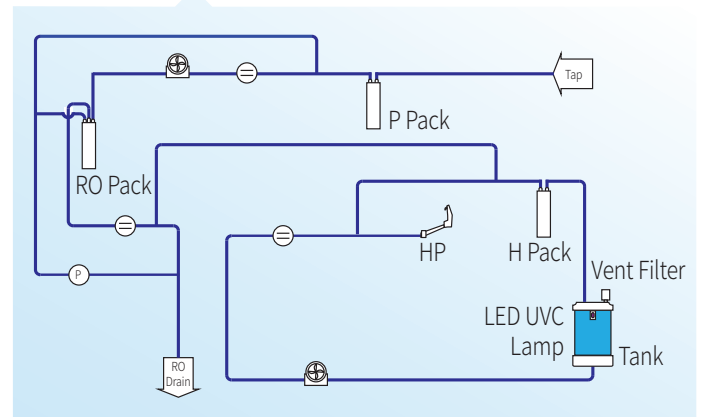
### NuZar **U** Lite

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



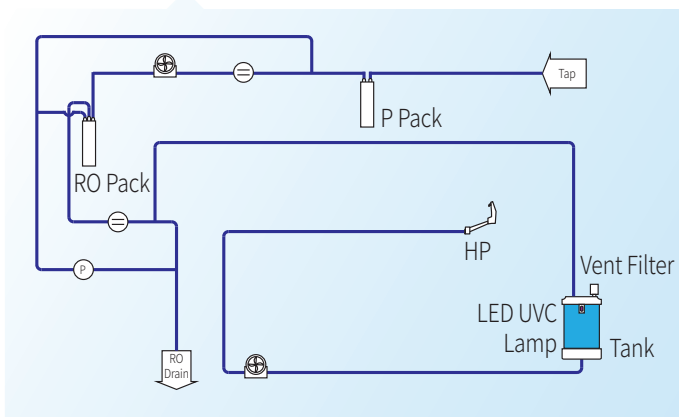
### NuZar **Q** Lite

Pure water to ultrapure water



### NuZar **H** Lite

Tap water to DI water (24 L/h) with tank recirculation function



### NuZar **R** Lite

Tap water to RO water (24 L/h) with automatic RO flush and rinsing

- Dispenser
- Conductivity / Resistivity Sensor
- Booster / Recirculation Pump
- Pressure Sensor

## Water Quality Compliance

Quality of ultrapure water meets or exceeds ASTM, CLSI, CAP and ISO Type I water standards.  
Quality of high pure water meets or exceeds ASTM, CLSI, CAP and ISO Type II water standards and also complies with the Purified Water requirements from the European and U.S. Pharmacopoeia.

## Specifications

General Specifications		NuZar Q Lite	NuZar U Lite	NuZar R Lite	NuZar H Lite
Operating voltage		24 VDC			
Input voltage		100 - 240 VAC $\pm$ 10%			
Main system power		< 100 W			
Feed Water Requirements					
Feed water conductivity / TDS		EDI, RO, Distilled, Deionized water	Tap water < 2000 $\mu$ S/cm / < 1000 ppm		
Operating temperature		5 – 35 °C			
Feed water pressure		0 - 1 bar (0 - 15 psi)*	1 - 6 bar (15 - 90 psi)		
Product Water Type		Ultrapure ●	Ultrapure & RO ● ●	RO ●	DI ●
Dimensions	w/integrated tank	NuZar U / H / R Lite : 414 x 422 x 624 mm (16.3 x 16.6 x 24.5 in)			
	W x D x H	NuZar Q Lite : 414 x 310 x 624 mm (16.3 x 12.2 x 24.5 in)			
Weight (Approximate)	net	18 kg	19 kg	19 kg	20 kg
	gross	27 kg	28 kg	28 kg	29 kg

\*It's recommended to use a pressure regulator if feed water pressure is above 15 psi (1 bar)

Product water Specifications	NuZar Q Lite Ultrapure water	NuZar U Lite Ultrapure water	NuZar H Lite DI water	NuZar R Lite RO water
RO Production rate	-	24 L/hr		
Dispenser rate	Up to 2 L/min			
Conductivity (@25°C)	-	-	-	Typically < 20 $\mu$ S/cm
RO rejection (Not for Q)	97 to 98% ionic rejection (new RO cartridge) > 99% organic rejection > 99% particulates & bacteria rejection			
Resistivity (@25°C)	18.2 M $\Omega$ ·cm	18.2 M $\Omega$ ·cm	> 1 M $\Omega$ ·cm (Product water quality stored in tank)	-
TOC	< 5 ppb*	< 5 ppb*	-	-
Particles	No Particles with size > 0.22 $\mu$ m**	No Particles with size > 0.22 $\mu$ m**	-	-
Microorganisms	< 0.01 cfu/ml**	< 0.01 cfu/ml**	-	-
Pyrogens (endotoxins)	< 0.001 Eu/ml***	< 0.001 Eu/ml***	-	-
RNase	< 0.5 pg/ml***	< 0.5 pg/ml***	-	-
DNase	< 10 pg/ml***	< 10 pg/ml***	-	-
Silica	-	-	-	-

\*When TOC Level of feed water is < 50 ppb.

\*\*with a 0.2  $\mu$ m final filter

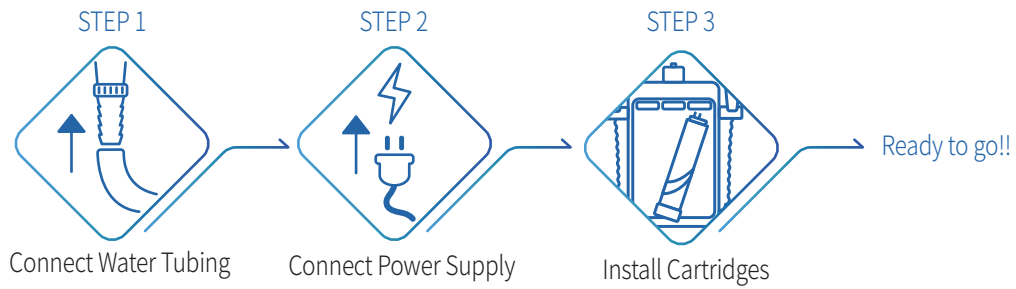
\*\*\*with a RephiBio filter and ISO Type I water standards

## Ordering Info

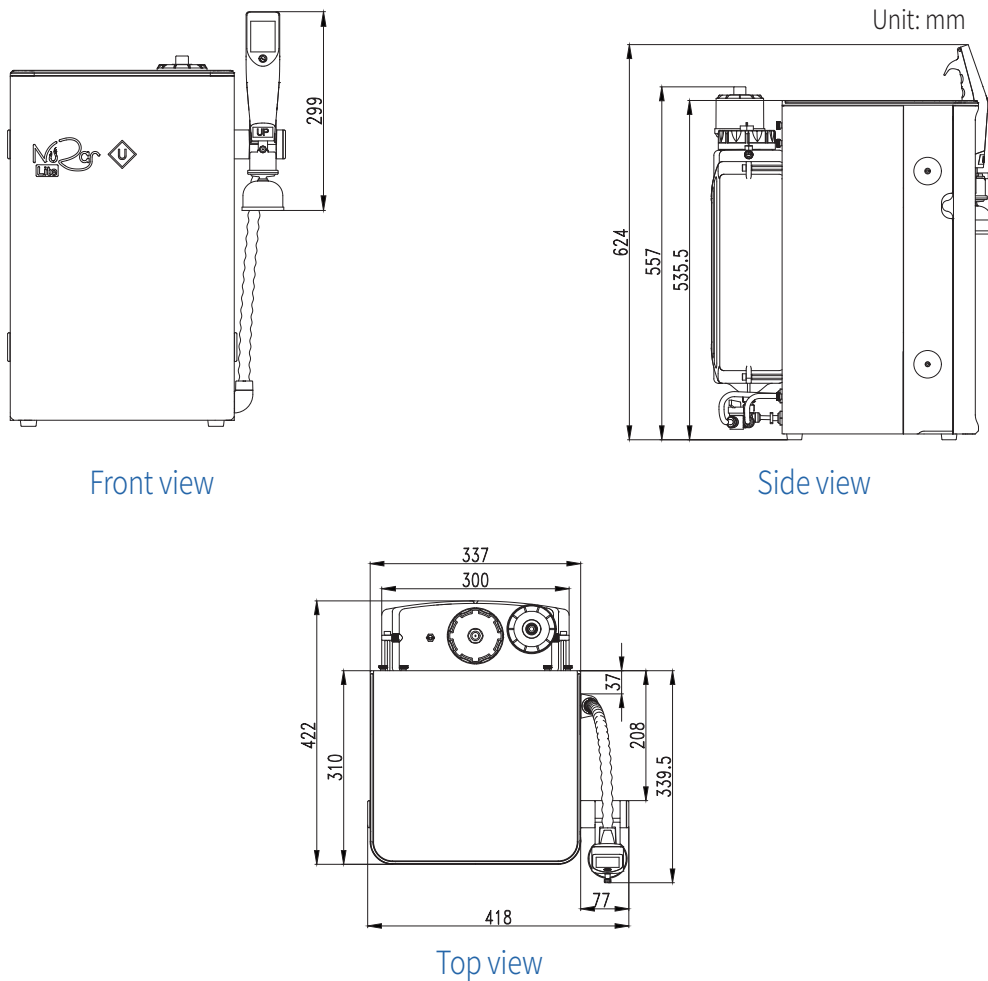
Description	Cat. No.
NuZar water system set, U Lite	RNLU020T1K
NuZar water system set, Q Lite	RNLQ010T1K
NuZar water system set, R Lite	RNLR020T1K
NuZar water system set, H Lite	RNLH020T1K

# Installation Information

Plug-N-Play with only 3 steps



## Installation instructions



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