

Ultrapure Water System LabAqua

Description

The Labaqua systems produce ultrapure and fresh water directly from tap water. Labaqua ultrapure systems are multi-purpose water purification systems and offer:

- Ultrapure (Grade 1) water is dispensed through the point-of-use filter on the front panel.
- Pure (Grade 2) water is dispensed directly from the storage tank.

All cartridges and filters are easily accessible and no tools are required to replace them. The Labaqua system can be installed on a laboratory bench or mounted on a wall.

Available Models

- **LabAqua Trace**
Produces water that meets the requirements of inorganic analysis methods.
- **LabAqua HPLC**
Produces water with very low organic carbon (TOC) content meeting requirements of liquid chromatography methods. LabAqua HPLC water can also be used for some microbiological and molecular biology applications.
- **LabAqua Bio**
Produces water with very low organic and RNase/DNase content that is intended for the use in molecular biology, including RNase sensitive applications.

Specifications

- Boost pump
- Pre-filter set
- Reverse osmosis module
- Deionization module
- Final stage polishing module
- 30L storage tank with an integrated Grade 2 dispensing valve
- Recirculation system



Ultrapure water system LabAqua



Storage tank, 30 litres

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Description

LabAqua ultrapure systems are multi-purpose water purification systems. The LabAqua systems produce ultrapure and pure water directly from tap water.

Any configuration of a LabAqua ultrapure system produces both ultrapure and pure water. Ultrapure (Grade 1) water is dispensed through the point-of-use filter on the front panel. Pure (Grade 2) water is dispensed directly from the storage tank.

LabAqua Trace ultrapure water can be used for the demanding applications including, but not limited to: General laboratory applications, Inorganic trace analysis.

With resistivity of 18.2 Mega - Ohm*cm (0.055 µS/cm) ultrapure water produced by a LabAqua system exceeds requirements of all relevant standards (ISO 3696 Grade 1, ASTM Type I, CLSI Type I). Purified water is collected in a storage tank. An integrated recirculation system ensures consistent quality of water and reduces total organic carbon (TOC) to very low levels: <2ppb.

Pure water produced by the LabAqua systems complies with the requirements of ISO 3696 Grade 2 water and can be used for labware washing, wet chemistry methods, flame spectrophotometers, etc.

All LabAqua systems have a controller with a color graphic LCD display for water quality indication. The LCD display provides all necessary information about system status, as well as system flow-chart the remaining pre-filter life and deionization (DI) module performance. The smart DI module monitoring system also provides a reduction in running costs. A user is instructed to replace the DI module only when the module is near the end of its service life.

All cartridges and filters are easily accessible and no tools are required to replace them. The LabAqua system can be installed on a laboratory bench or mounted on a wall.



Display LabAqua

Benefits

- **Volumetric dispense** - enables the user to set accurate dispensing volume for each dispense cycle. The dispense volume can be set either from the keyboard or by using "teaching" mode.
- **Water quality** - embedded recirculation loop ensures stable premium water quality and enables practical elimination of Total Organic Carbon (TOC).
- **Low running costs** - performance of the deionization and polishing modules is constantly monitored. Monitoring algorithm enables cutting running costs, as replacement of the modules is requested only when service life is close to the end.
- **Color graphic LCD display** - system component status is reflected on the display in an intuitive color pattern (Green/Yellow/Red).
- **System flowchart** - shows all component status and water quality parameters at a glance.

Ultrapure Water System - LabAqua

Technical Data LabAqua

Ultrapure (Grade 1) water resistivity	18.2 MΩ x cm
Ultrapure (Grade 1) water conductivity	0.055 µS/cm
Pure (Grade 2) water resistivity	> 10 MΩ x cm
Pure (Grade 2) water conductivity	< 0.1 µS/cm
TOC	Model Trace: < 10 ppb Model HPLC and Bio: < 5 ppb
RNase	Only model LabAqua Bio: < 0.01 ng/ml
DNase	Only model LabAqua Bio: < 4 pg/µl
Bacteria	< 0.01 CFU/ml
Endotoxins	Models Trace and HPLC: < 0.15 EU/ml Model Bio: < 0.001 EU/ml
Particels > 0.22 µm	< 1/ml
Deionization module life (standard module)	1 m ³
Storage tank	30 L
Feed water pressure	0.5 – 5 bar
Feed water conductivity	< 1300 µS/cm
Dimensions (W x D x H)	320 x 560 x 620 mm
Weight	24-26 kg (depends on model)
Power consumption	130 W
Nominal operating voltage	100 – 240 VAC; 50/60 Hz

Technical Requirements

The technical specification of the system is ensured if the following minimum requirements for tap water are met and the maintenance requirements are fulfilled in a timely manner.

Type of feedwater	Potable
Minimum pressure	≥ 0.5 bar
Maximum pressure	≤ 5 bar
Conductivity	< 1300 µS/cm
Temperature	5 to 35°C
pH	4 – 10
Fouling index	< 10
Iron	< 0,1 ppm as CaCO ₃
Aluminium	< 0.05 ppm as CaCO ₃
Manganese	< 0.05 ppm as CaCO ₃
Free Chlorine	< 1 ppm
Langerier Saturation Index	< +0.2
TOC	< 2000 ppb

Optional Accessories

- External prefilter Polyphosphate/Carbon/1 µm with manometer
- External prefilter set Carbon/1 µm with manometer
- Internal prefilter set
- Polish module
- Deionization module
- Microfilter 0.22 µm non sterile
- Microfilter 0.22 µm sterile
- Ultrafilter
- UV bulb 254 nm
- UV bulb 185 nm
- Storage tank 60 Litres
- Storage tank 100 Litres
- Remote grade 1 water dispenser: For dispensing ultrapure water according to ISO 3696
- Remote grade 2 water dispenser: Set with 3 m supply hose and water distribution module

LabAqua Ultrapure Water System



Models / Applications

	Applications	LabAqua Models		
		Trace	HPLC	Bio
General laboratory applications	Glassware rinsing	•	•	•
	Laboratory washer	•	•	•
	Autoclaves	•	•	•
	Electrochemistry	•	•	•
	Wet chemistry	•	•	•
	Spectrophotometry	•	•	•
	Buffer- and media preparation	•	•	•
	Reagent preparation	•	•	•
Inorganic analysis methods	Flame atomic absorption spectrophotometry	•	•	•
	Graphite atomizer atomic absorption spectrophotometry	•	•	•
	Plasma mass-spectrometry (ICPMS)	•	•	•
	Plasma-spectrophotometrie (ICPOES)	•	•	•
	Ion chromatography	•	•	•
Organic analysis methods	Liquid chromatography (HPLC/UHPLC)		•	•
	Gas chromatography		•	•
	TOC (Total Organic Carbon) measurement		•	•
Molecular biology	Flow cytometry			•
	Cell- and tissue culture			•
	Molecular biology			•

LG_097_E 03/2025 Subject to technical changes and errors.