

# PURELAB

ANALYTICAL RESEARCH



## PURELAB® Ultra

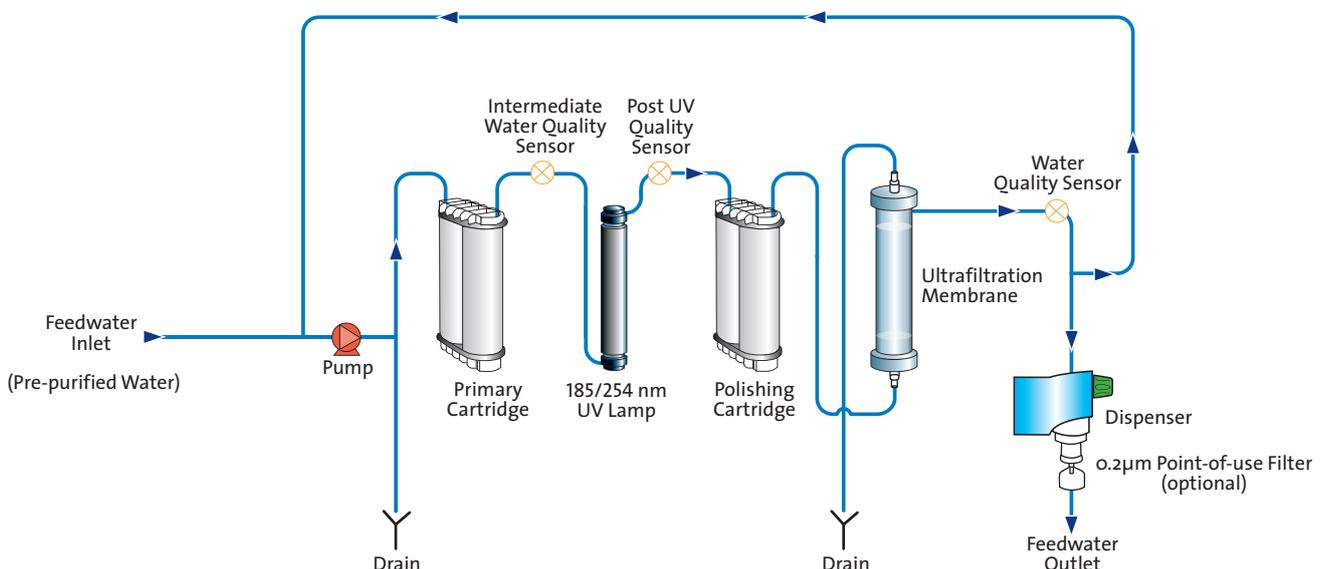
The PURELAB Ultra is the intelligent Type I ultrapure water purification system for your most critical applications. It incorporates many unique and innovative features that set it apart from other systems and guarantees high water purity of 18.2 MΩ-cm.

- Twin purification pack “PureSure” system guarantees water purity. It stops organics leaching in to the final water purity
- Real-time TOC monitoring ensures confidence in organic quality (Genetic and Analytic models only)
- PureSure system ensures that work is not interrupted by cartridge replacement
- Ongoing bacterial performance guaranteed through complete sanitization of all wetted parts
- Suitable for applications such as ICP-MS, LC-MS, HPLC, AAS, GC-MS, DNA sequencing, PCR, Molecular Biology and Plant Tissue



**Guaranteed water purity for your critical applications**

### Process Flow PURELAB Ultra Genetic



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### Treated Water Specifications

Model	Life Science		Analysis		General Science
	Genetic	Bioscience	Analytic	Ionic	Scientific
Flowrate	2.0 l/min max	2.0 l/min max	2.0 l/min max	2.0 l/min max	2.0 l/min max
Inorganics	18.2 MΩ-cm	18.2 MΩ-cm	18.2 MΩ-cm	18.2 MΩ-cm	18.2 MΩ-cm
TOC	<1 ppb <sup>2</sup>	3 – 10 ppb <sup>1</sup>	<1 ppb <sup>2</sup>	3 – 10 ppb <sup>1</sup>	3 – 10 ppb <sup>1</sup>
Bacteria	<0.1 CFU/ml <sup>3</sup>	<0.1 CFU/ml <sup>3</sup>	<0.1 CFU/ml <sup>3</sup>	<0.1 CFU/ml <sup>3</sup>	<1 CFU/ml <sup>3</sup>
Bacterial endotoxin	<0.001 EU/ml	<0.001 EU/ml	–	–	–
pH	Effectively neutral	Effectively neutral	Effectively neutral	Effectively neutral	Effectively neutral
Particles	Ultrafiltration	Ultrafiltration	0.05 µm	0.05 µm	0.2 µm <sup>2</sup>
RNase	<0.002 ng/ml	<0.002 ng/ml	–	–	–
DNase	<20 pg/ml	<20 pg/ml	–	–	–
Labpure cartridge capacity (LC182)	Liters at 18.2 MΩ-cm = 80,000 / µS/cm + ( 2.3 x ppm CO <sub>2</sub> )				

<sup>1</sup> Dependant on feedwater <sup>2</sup> With LC185 Low TOC Purification Cartridge fitted and fed with purified water from PURELAB Option-R/Pulse or other feeds with <20 ppb TOC. Otherwise TOC will be 1-3 ppb. <sup>3</sup> With POU filter fitted.

### Dimensions and weights

Dimensions	Height 490mm (19.3"), Width 410mm (16.2"), Depth 365mm (14.4")				
Weight	15.0kg (33.1 lb)	14.5kg (32.0 lb)	15.0kg (33.1 lb)	14.5kg (32.0 lb)	14.0kg (30.8 lb)

### Feedwater Requirements

Parameter	Limits
Source - originally from potable supply, then pre-treated	Preferably reverse osmosis (RO) or filtered service deionisation (SDI) or distilled. Note: mixed bed or twin bed deionised supplies should be cation limited at exhaustion.
Fouling Index (max)	1 for all models. A 0.2 micron membrane prefilter is recommended for all non-RO feeds
Service Deionization (SDI) - MΩ-cm	1 MΩ-cm minimum resistivity at exhaustion
Reverse Osmosis (RO) - µS/cm	Recommended <30 µS/cm
Free chlorine	0.05 ppm max
TOC	Recommended 50 ppb max
Carbon dioxide	30 ppm max
Silica	2 ppm max
Particulates	Filtration down to 0.2 micron advisable to protect internal and/or point of use filters
Temperature	1 - 40°C - Recommended 10 - 15°C
Flowrate (maximum requirement)	130 l/hr
Drain requirements (gravity fall with air gap). Maximum during service	Up to 2 l/min
Feedwater Pressure	0.7 bar (10 psi) maximum, 0.07 bar (1 psi) minimum

### Electrical Requirements

Mains input	100 - 240V ac, 50 - 60Hz all models
System voltage	24V dc
Power consumption during recirculation	60VA
Power consumption during dispense	75VA
Fuses	2 x T6.3 Amp
Reservoir level connection	Jack Plug 3.5mm
Noise level during recirculation	<40dBA

### ELGA LabWater

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