

# PURELAB flex

Pure and ultrapure laboratory water from a single system





## Your laboratory water specialists

ELGA has been a trusted name in water purification for over 50 years, pioneering innovative technologies and award winning product design for our customers. Part of the world's leading water services company Veolia Water Solutions and Technologies, ELGA have the most comprehensive range of water purification systems available today for laboratory research, healthcare and diagnostics.

Water is the most common reagent used in today's laboratories for research and testing applications and we understand how important accurate consistent test results are. The award winning PURELAB flex range is designed around your needs, delivering accuracy, flexibility and ease of use with an innovative and ergonomic design.

## Find a PURELAB flex to match your application



PURELAB flex 2



PURELAB flex 3&4



PURELAB flex 1



PURELAB flex 3&4



PURELAB flex 1

Daily volume	>10 Liters	<10 Liters	>10 Liters	<10 Liters	>10 Liters
Water quality	Type I ultrapure water		Type II/Type II+ pure water		Type III RO water
Feedwater source	Pre-purified water	Pre-purified or tap water	Pre-purified water	Pre-purified or tap water	Pre-purified water
Typical applications	Electrochemistry Electrophoresis GFAAS (Graphite Furnace Atomic Absorption Spectrophotometry) HPLC IC (Ion Chromatography) ICPAES (Inductively Coupled Plasma Atomic Emission Spectrometry) ICPMS (Inductively Coupled Plasma Mass Spectrometry) Mammalian and bacterial cell culture Molecular biology Plant tissue culture Qualitative analyses		AAS (Atomic Absorption Spectrophotometry) Buffer and media preparation Electrophysiology FAAS (Flame Atomic Absorption Spectrophotometry) Feed to ultrapure water systems Glassware washing/rinsing General chemistry Histology Microbiological analysis RIA (Radioimmunoassay) / ELISA (Enzyme Linked Immunoabsorbant Assay)		Autoclave feed Feed to ultrapure water systems Hydroponics Plant growth cabinets Stability chambers Steam generators Sterilizer feed



reddot design award winner 2011



## Water purification made easy

Intuitive to use, ergonomic handset design

Clear water purity display for absolute confidence as you dispense

Realtime TOC monitoring for critical analytical applications

Prioritized information shown at all times (system status, TOC, alarm)



Flexible dispensing in four different ways:

- Variable flow – drop by drop or up to 2 liters per minute
- Autovolume dispense from 50ml to 60 liters and repeat dispensing
- Hands free with optional foot pedal
- Locked dispense for glassware filling

## POU filters for multiple applications

- Remove endotoxins, DNase, RNase and bacteria
- Conforms to international water standards e.g. CLSI, CLRW, ISO 3696: Grade 1,2,3, ASTM D1193-06, Pharmacopeia USP, EP and JP



## Optional accessories

- Wall mounting bracket
- Foot pedal
- Thermal printer
- Point of Use filters
- Leak sensor

## Designed for today's laboratories



## Quick and easy sanitization

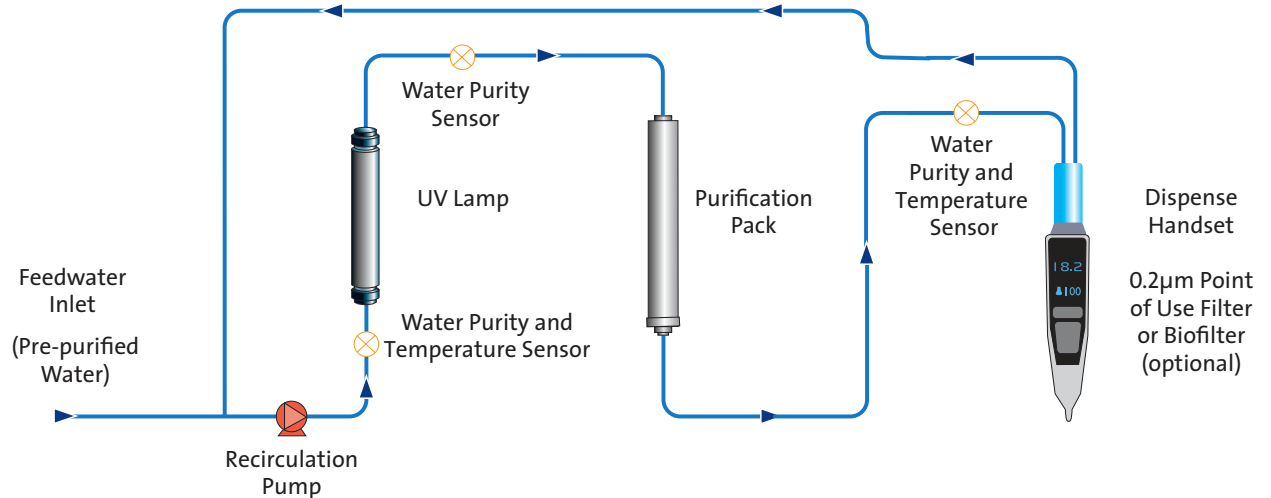
Minimize microbial growth to give you absolute confidence in the water purity. The simple procedure involves one single sanitization pack so no harsh chemicals need to be ordered, handled or mixed. No additional consumables need to be replaced during this short process.

## Global network, local support

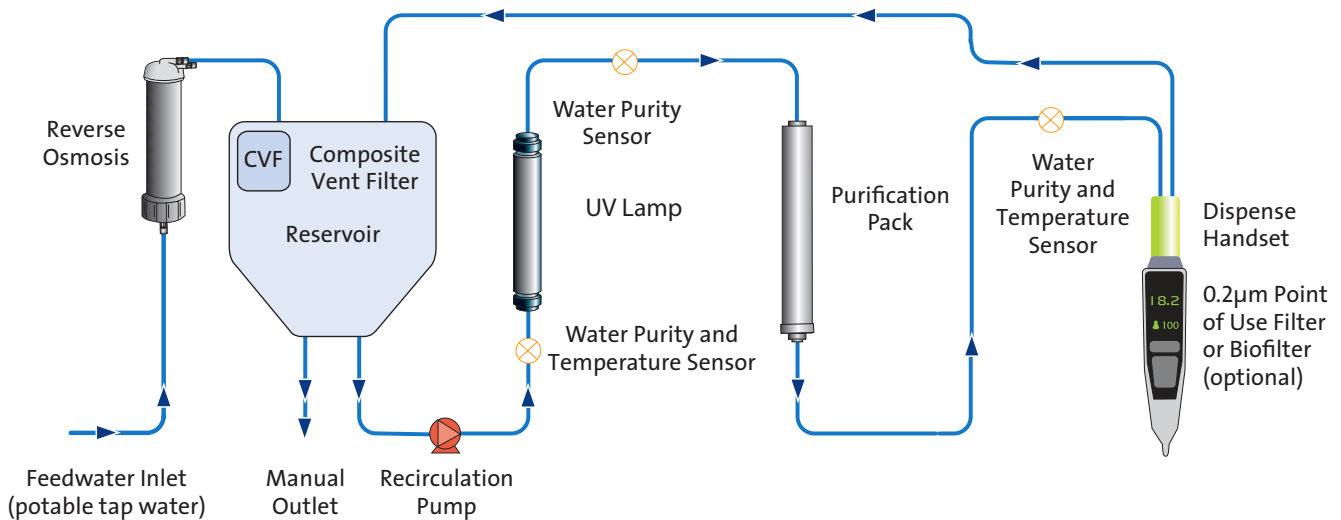
Our highly trained service engineers will apply their expertise to the installation, validation and maintenance of your water purification system. We aim to provide a first-time-fix service.

# Inside the PURELAB flex

### PURELAB flex 2 Process Flow Diagram



### PURELAB flex 3 Process Flow Diagram



**Want to know more?**

Find out more or book your demonstration at [www.purelabflex.com](http://www.purelabflex.com)

## Commitment to quality

PURELAB flex systems are supplied with a Certificate of Conformity, ensuring they have been manufactured and tested at ELGA LabWater Global Operations, whose Quality Management System is approved by Lloyds Register Quality Assurance (LRQA) and complies with BS EN ISO 9001:2008.

ELGA's manufacturing facility has been approved by LRQA and complies with the environmental management system ISO 14001:2004.

The PURELAB flex has been designed to conform to the requirements of the Waste Electrical & Electronic Equipment (WEEE) Directive and the Restriction of Hazardous Substance (RoHS) Directive.

## Assured safety

The PURELAB flex is compliant with CE directives associated with safety and electromagnetic compatibility and is approved and tested by an accredited external company. The PURELAB flex is also compliant with the requirements of IEC/EN61010-1 and UL61010-1 and is marked with an ETL label showing compliance.

## Treated Water Specifications

MODEL	PURELAB flex 1	PURELAB flex 1 With Purification Pack	PURELAB flex 2	PURELAB flex 3	PURELAB flex 4
Daily volume	>10 liters	>10 liters	>10 liters	<10 liters	<10 liters
Delivery flow rate – maximum	Up to 2 l/min	Up to 2 l/min	Up to 2 l/min	Up to 2 l/min	Up to 2 l/min
Reverse osmosis make up flow rate	N/A	N/A	N/A	Up to 10 l/hour	N/A
Inorganics (resistivity @25°C)	As per feedwater	18.2 MΩ-cm	18.2 MΩ-cm	18.2 MΩ-cm	18.2 MΩ-cm
Organics (TOC) – typical	Dependant on feedwater	Dependant on feedwater	<5ppb <sup>1</sup>	<5ppb <sup>1</sup>	<5ppb <sup>1</sup>
Direct from internal reservoir	N/A	N/A	N/A	Type III / RO water <sup>2</sup>	Type III / RO water <sup>2</sup>
Bacteria – typical (when fitted with POU Filter)	-	<1 CFU/10ml	<1 CFU/10ml	<1 CFU/10ml	<1 CFU/10ml
Bacteria – typical (when fitted with Biofilter)	-	<1 CFU/10ml	<1 CFU/10ml	<1 CFU/10ml	<1 CFU/10ml
Endotoxin (when fitted with Biofilter)	N/A	<0.001 EU/ml	<0.001 EU/ml	<0.001 EU/ml	<0.001 EU/ml
DNase (when fitted with Biofilter)	N/A	N/A	<20 pg/ml	<20 pg/ml	<20 pg/ml
RNase (when fitted with Biofilter)	N/A	N/A	<0.002 ng/ml	<0.002 ng/ml	<0.002 ng/ml

<sup>1</sup> Dependant on feedwater <sup>2</sup> (Equal to or >) Type III RO Water

## Dimensions and weights

Dimensions	Width 236mm, Depth 374mm, Height minimum 900mm, Height maximum 1020mm			Width 236mm, Depth 470mm, Height minimum 900mm, Height maximum 1020mm	
Operational weight	10kg (22lb)	10.5kg (23.1lb)	11kg (24.2lb)	23kg (57.3lb)	23kg (57.3lb)
Installation	Bench/wall	Bench/wall	Bench/wall	Bench/wall	Bench/wall

## Feedwater requirement

Source	Originally from potable supply, then pre treated. Preferably reverse osmosis (RO) or filtered service deionization (SDI) or distilled.			Potable Tap Water	Originally from potable supply, then pre treated. Preferably reverse osmosis (RO) or filtered service deionization (SDI) or distilled.
Conductivity	<1 µS/cm <sup>3</sup>	<1 µS/cm <sup>3</sup>	<1 µS/cm <sup>3</sup>	<2000 µS/cm <sup>4</sup>	<30 µS/cm
<b>Contaminant</b>					
Hardness	N/A	N/A	N/A	<350 ppm as CaCO <sub>3</sub>	TBC
Free Chlorine	<0.05 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>	<0.5 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>
Chloramine	<0.05 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>	<0.2 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>
Total Chlorine	<0.05 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>	<0.5 ppm Cl <sub>2</sub>	<0.05 ppm Cl <sub>2</sub>
Silica	<2 ppm	<2 ppm	<2 ppm	<30 ppm SiO <sub>2</sub>	<2 ppm SiO <sub>2</sub>
Carbon Dioxide Maximum	<0.1 ppm	<0.1 ppm	<0.1 ppm	<30 ppm (recommended <20 ppm)	<30 ppm (recommended <20 ppm)
Fouling index	<1	<1	<1	<1	<1
Iron / Manganese	N/A	N/A	N/A	<0.05 ppm	N/A
Organics (TOC)	N/A	N/A	N/A	<2 ppm	<50 ppb recommended
Particulates	A 0.2 micron membrane pre filter is recommended for all non-RO feeds to extend point-of-use filter life				N/A
Temperature	4 - 40°C (Recommended 10 - 25°C)				
Flowrate (requirement at 15°C)	<2 l/min	<2 l/min	<2 l/min	Up to 75 l/hr	Up to 60 l/hr
Drain requirements (gravity fall with air gap)	None required	None required	None required	>90L/hr	>70L/hr

<sup>3</sup> If feedwater is in the range of 1 µS/cm – 30 µS/cm you will need a pre-conditioning cartridge <sup>4</sup> Purification pack life may vary with feedwaters >1400 µS/cm

## Feedwater pressure

Maximum	22psi (1.5bar)	22psi (1.5bar)	22psi (1.5bar)	90psi (6bar) <sup>5</sup>	90psi (6bar)
Minimum	Flooded suction	Flooded suction	Flooded suction	30psi (2bar) <sup>5</sup>	1psi (0.07bar)

<sup>5</sup> If <60psi (4 bar) a separate boost pump is recommended

## Electrical requirements

Mains Input	100-240V ac, 50-60Hz				
System control voltage (not including pumps and UV)	24V dc				
Power consumption during peak demand	120VA	120VA	120VA	100VA	100VA
Noise level	<40dBa				

## ELGA LabWater

Tel: 630 343 5251 Fax: 630 910 4798

Email: [elga.usa@veolia.com](mailto:elga.usa@veolia.com) Website: [www.elgalabwater.com](http://www.elgalabwater.com)

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