

ELGA

PURELAB Option

# PURELAB®

Laboratory water purification systems





# PURELAB



“Water is all we do. We know water.”

We understand how important it is for scientists to obtain a choice of water qualities that range from primary grade, for simple routine washing and rinsing, through to ultra pure for the most critical science and analytical applications.

With this in mind, we applied our expertise gained from 50 years of innovation in water purification technologies, to design the unrivalled PURELAB range. Our reliable water purification systems are constructed from the highest quality components to ensure optimal purity, while a rapid and easy sanitization program contributes towards an uninterrupted workflow. Built-in economical processes result in the lowest consumable costs with the highest water quality and precision.

This brochure outlines the key features of all the products in our PURELAB range, which are designed to provide water purification systems covering the three different water types (Type I-III) required for research and testing applications.



## Your first step to pure water: the ELGA LabWater water analysis kit

An informed start for a streamlined solution

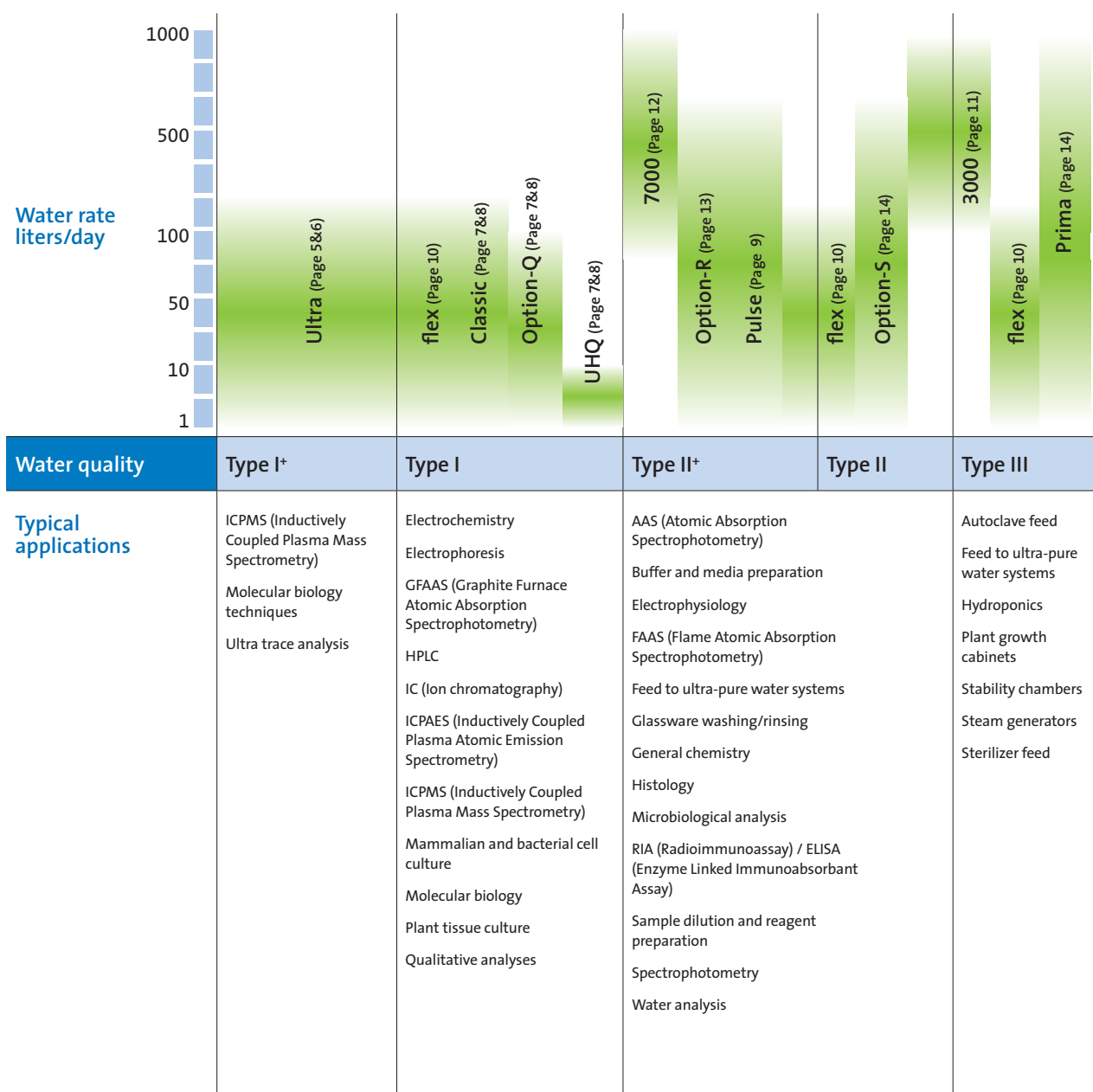
At ELGA we do not speculate or work on assumptions about your water quality. On our first visit to your laboratory we will carry out a test, on site, that analyzes your feed water quality.

Armed with data about your laboratory's water quality, required applications, lab design and budget, our sales team will deliver an informed proposal about the best water purification solutions to suit your needs.

# PURELAB product finder

## Matching systems to applications supporting you all the way

Water purification is often a complex process that incorporates multiple technologies into a single purification system; therefore, we have developed the product finder to help you select the best water purification system suited to your application needs. Our team of technical and application specialists is always available to answer any questions, as well as providing friendly, expert advice in choosing the most suitable water purification system.





# Worldwide service and support

## For total confidence in your pure water systems



Every PURELAB comes complete with one extra feature – first class service and support wherever you are in the world. ELGA has installed thousands of systems globally, and our service engineers will apply their expertise to the installation, validation and maintenance of your water purification systems in compliance with all the relevant codes.

Visit [www.elgalabwater.com](http://www.elgalabwater.com) to find your nearest contact.



### Service excellence

- We aim to provide first-time-fix service
- Preventative maintenance contracts are structured to match your precise needs, thereby minimizing interruptions to your workflow and sustaining system reliability
- All our calibration equipment is maintained to traceable standards and operated by fully trained service technicians, ensuring your water quality is consistently maintained at the required standard

### Training

- “Hands on” operation training is arranged on or off site to ensure optimal system performance and minimize the risk of an interrupted workflow

### Technical assistance

- Our specialized local team will ensure you find the perfect product to match both your budget and applications
- Our dedicated local help desk is always available to provide advice, troubleshooting and parts identification

### Online facility

- Locate your local service representative at [www.elgalabwater.com](http://www.elgalabwater.com)
- Learn more about water quality and standards by downloading a FREE Pure Labwater Guide
- Find a water purification system which meets your needs with our online product selector





## Validation support

Water systems that are employed within a validated laboratory should always operate within specification. This should be evidenced through documentation and trending should warn the user if performance is likely to fall below their requirements. ELGA offers a market-leading validation package with fully trained personnel using controlled equipment and documentation to support you throughout the validation process.

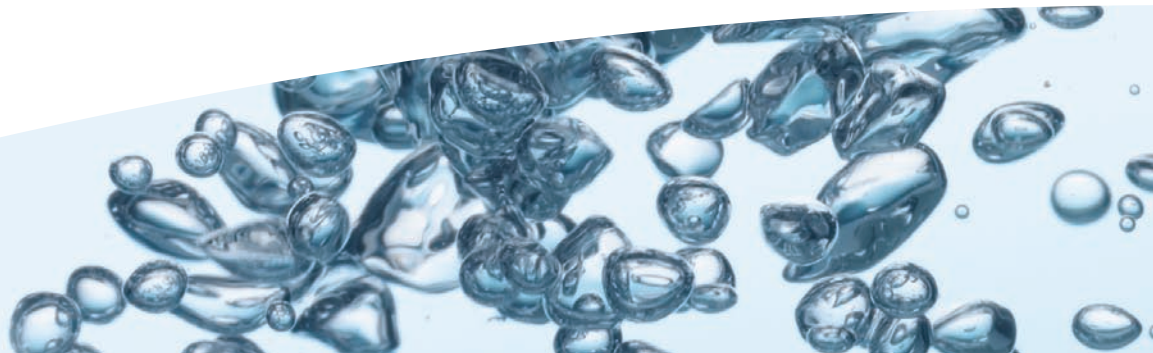
ELGA products are continually being developed to further support validation requirements. Developments include:

- PIN-coded access to software set points prevents unauthorized changes to operation or system settings
- Cartridge Identification (CID) technology provides full traceability of each cartridge for GLP and other validation requirements
- RS232 data port to enable downloading of data to PC or printer
- Water quality data available with or without temperature compensation

## Quality assured

Our commitment to the highest quality control processes guarantees reliability and compliance with both international, environmental and user organization standards

Designed and manufactured under an ISO9001:2000 total quality system. Tested to comply with CE, EMC, EN 61010 (UL CSA), PIRA, WEEE Directive and other standards as appropriate.





# PURELAB Ultra

## Delivering the ultimate in water purity for absolute confidence in your results

### The PURELAB solution for overcoming your water purification challenges

Challenge	PURELAB Solution
Your application demands the ultimate in water purity, i.e. simply having a resistivity of 18.2 MΩ-cm is not good enough	PureSure system provides the ultimate inorganic purity (guaranteeing the retention of silicon and boron species)
Organic breakthrough must be prevented	Constant real-time Total Organic Carbon (TOC) monitoring gives you peace of mind by letting you know what is happening with organic purity as you dispense your water sample
You cannot afford to stop work to change a purification pack	PureSure system ensures that work is not interrupted
The highest level of microbial purity is required throughout the entire life of the water purification system	Ongoing control to minimize potential bacterial growth is guaranteed through simple and complete sanitization of all wetted parts

### Designed to meet and exceed ultra pure (Type I) water quality

When your application requires the ultimate in water purity, PURELAB Ultra provides the perfect solution. Consistently delivering water purity to 18.2 MΩ-cm and underpinned by the unique PureSure system, the PURELAB Ultra enables you to focus on attaining accurate results as well as ensuring an uninterrupted work flow.

### Why the demand for ultimate water purity?



For the most sophisticated research and testing applications, e.g. ICPMS (Inductively Coupled Plasma Mass Spectrometry), ultra trace analysis and molecular techniques, it is critical that the ultimate water purity is employed to prevent interference and, therefore, inaccurate results from contaminating impurities (see examples in the table below).

Major molecular biology applications	PURELAB removes the impurity of concern
Gel preparation	Nucleases and bacteria
Hybridization mixes and PCR	Nucleases, bacteria and salt concentrations of Mg <sup>2+</sup> and Na <sup>+</sup>
Sequencing	Nucleases, bacteria, endotoxin, salt concentrations of Mg <sup>2+</sup> and Na <sup>+</sup> , humic acid
DNA to cell transfer	Endotoxins

#### 4 Unique PureSure system

- Ensures purity beyond just 18.2 MΩ-cm
- Extends the life of your purification cartridges
- Advance warning of cartridge change so you are free to continue your research

#### 3 Automatic self calibration of electronic circuitry –

- takes just 4 seconds every time the system is in process mode

#### 2 Unique volumetric profile dispense facility for easy

- recording, replication and speedy dispensing of multiple set volumes

#### 1 Efficient fast rinse ultrafiltration cartridge

- Filters out endotoxin, proteins and nucleases
- Rinses up to 7 times faster than other endotoxin filters
- Significantly reduces costs of sanitization

#### 5 Real-time TOC monitoring

- System reports on TOC every 2 seconds
- Ensures confidence in organic quality

#### 6 Sensitive electronic dispense offers accurate

- flow control from single droplets up to 2 liters/min

#### 7 PIN-coded protection of critical operating parameters

#### 8 Cartridge Identification technology

- Provides validatable traceability
- Your guarantee of capacity, quality and safety

#### 9 New Labpure purification cartridges

- High capacity cartridges
- Longer life in system

#### 10 Full spectrum UV treatment

- Low microbial and organic specification
- High transmittance synthetic quartz sleeve for higher efficiency
- Lamp failure alarm



### PureSure – your water purity guarantee

The PureSure system, exclusive to the PURELAB Ultra, consists of two purification cartridges and resistivity monitor units in series. This arrangement ensures purity at 18.2 MΩ-cm and gives advanced warning of purification cartridge exhaustion without compromising final water purity. The PureSure system allows each cartridge to be used to its full potential, resulting in savings and capacity gains.



# PURELAB Classic, Option-Q and UHQ

Economy without compromise  
for high performance,  
high purity, water production

## The PURELAB solution for overcoming your water purification challenges

Challenge	PURELAB Solution
Your application requires very high quality ultra pure water of 18.2 mΩ-cm	Microprocessor-controlled management systems provide continuous monitoring of water purity
You need the right product for your budget and dispensing needs	Combining high performance with economy, the PURELAB Classic, Option-Q and UHQ address a range of water feed and usage patterns
You need simple and clear operation	Easy-to-read electronic displays ensure at-a-glance water monitoring. Easy maintenance with clear cartridge change indication and adjustable audio-visual alarms ensure confidence and peace of mind
A high level of microbial purity is required throughout the entire life of the water purification system	Ongoing system sanitization to minimize microbial growth

## Designed to meet ultra pure (Type I) water quality

When ultra pure water is essential, but in a format that suits you, the PURELAB Classic, Option-Q and UHQ ranges offer a choice of system that will meet your needs while remaining budget-friendly.

## Ultra pure water — common applications:

- Electrochemistry
- Electrophoresis
- GFAAS (Graphite Furnace Atomic Absorption Spectrophotometry)
- ICPAES (Inductively Coupled Plasma Atomic Emission Spectrometry)
- ICPMS (Inductively Coupled Plasma Mass Spectrometry)
- IC (Ion chromatography)
- Immunocytochemistry
- Mammalian and bacterial cell culture
- Molecular biology
- Plant tissue culture
- Qualitative analyses



“Ultra pure water systems to match your budget”



### PURELAB Classic

#### The high usage option for pre-treated water feed

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An ideal choice for the lab requiring more than 20 liters/day of Type I water. Adjustable dispensing provides a flow rate of up to 2.0 liters/min and continuous water quality monitoring ensures ultra pure water with low bacterial specification. This range also provides the option to upgrade from single pack to twin pack purification.



### PURELAB Option-Q

#### Tap to Type 1 — the plug-and-go option for drinking water feed

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Providing ultra pure water direct from a drinking water supply without the need for a pre-treated feed, the PURELAB Option-Q can deliver 1.0 liter/min, for labs requiring up to 100 liters/day.



### PURELAB UHQ

#### The market's first personal water system

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The PURELAB UHQ is designed to meet the lower usage requirements of the individual user. Delivering ultra pure water from pre-treated or drinking water feeds at a rate of 0.75 liters/min, the PURELAB UHQ supplies 5-10 liters/day.



**1 Automatic intermittent recirculation** to maintain high water purity with a low bacterial specification

**2 Efficient fast rinse ultrafiltration cartridge**

- Filters out endotoxins, proteins and nucleases
- Rinses up to 7 times faster than other endotoxin filters
- Significantly reduces costs of sanitization

**3 Full spectrum UV treatment**

- Low microbial and organic specification
- High transmittance synthetic quartz sleeve for higher efficiency
- Lamp failure alarm



**4 PIN-coded access** to software set points to prevent unauthorized changes to operation or system settings

**5 Single purification pack design**, easily upgraded to dual pack



# PURELAB Pulse

## High quality, high volume water cost-effectively

The PURELAB Pulse incorporates patented 'Pulse Technology' to deliver Type II and III pure water at minimal running costs. Within the system the unique intelligent recirculation maintains consistent water quality at point of use. The PURELAB Pulse also reduces maintenance time, with longer intervals between sanitization and quick and easy replacement of consumables.

### The PURELAB solution for overcoming your water purification challenges

Challenge	PURELAB Solution
You need constant, reliable, high quality water at point of dispense.	Sophisticated integral recirculation ensures optimum water quality at point of dispense
You want the lowest costs of ownership and a long-serving piece of equipment	Robust electrodeionization processes provide a constant supply of high purity water at a minimal running cost

### Designed to meet and exceed Type II+ water quality

General laboratory grade water — common scientific applications:

- .....
- AAS (Atomic Absorption Spectrophotometry)
- Buffer and media preparation
- Electrophysiology
- FAAS (Flame Atomic Absorption Spectrophotometry)
- Feed to ultra pure water systems
- General chemistry
- Glassware washing/rinsing
- Histology
- Microbiological analysis
- RIA (Radioimmunoassay) / ELISA (Enzyme Linked Immunoabsorbant Assay)
- Sample dilution and reagent preparation
- Spectrophotometry

### Pulse Technology

The Pulse technology uses Electrodeionization (EDI) to purify the water instead of using deionization cartridges. EDI is an electrically-driven water purification process which involves the use of Ion Exchange Ions and Ion Permeable Membranes.

Resins are continuously regenerated by the electrical current and are never exhausted. The water quality is always maintained due the absence of the adverse effects given by exhaustion of a resin bed, such as silicon, boron or organic breakthrough.



- 1 Space-saving wrap-around reservoir with smooth sides and vented filtration for optimized water purity
- 2 Fully recirculating UV ensures the highest microbial quality
- 3 Height adjustable point-of-use dispense tap for choice of wall or bench mounting
- 4 Full recirculation guarantees water quality at point-of-use
- 5 Pulse Module (EDI purification)

# PURELAB flex

## Designed to make your life easier

The most innovative and flexible system in ELGA's PURELAB water purification range.

The PURELAB flex delivers consistent high water purity with economical and effortless operation and maintenance. Offering unsurpassed flexibility, the compact PURELAB flex is readily adapted to deliver your desired water purity with several dispense options, supporting all of your laboratory applications.



### The PURELAB flex solution for overcoming your water purification challenges

#### Your needs

You need absolute confidence in your water purity

You need a cost-effective system

#### PURELAB flex solution

Purified water is recirculated through the system to the dispense tip and is constantly monitored at point of dispense. Water quality can be recorded through data capture

Efficient purification ensures long term operational costs remain low

#### 1 Dispense button

- Press to be impressed – unique proportional control that gives you the feel of a pipette controller but with the ease of auto-volume dispensing

#### 2 Display

- Unique point-of-use display allows you to see water purity as you dispense

#### 3 Autovolume dispensing

- Select your required volume then simply press to dispense



#### 4 Dispense tip

- Flexible dispense tip filtration guarantees microbial purity
- Our filters can meet <1 CFU/ml or <1 CFU/10 ml, remove RNase, DNase and endotoxins

#### 5 Dispense handset

- Ergonomically designed to fit comfortably in the hand, and intuitive to use

# PURELAB 3000

## High volume delivery of purified water for general laboratory use

### The PURELAB solution for overcoming your water purification challenges

#### Challenge

Your application requires the removal of most contaminants, but highly purified or ultra pure water is not required

You want the lowest costs of ownership and a long-serving piece of equipment

The highest level of bacterial purity is required throughout the entire life of the water purification system

You need the flexibility to adapt to changes in usage requirement

Your external storage reservoir requires a water source

#### PURELAB 3000 Solution

Proven RO technology produces primary grade purified water (1-10 MΩ-cm)

Minimal purification consumables ensures long-term operational costs remain low

Effortless sanitization of the RO membrane minimizes bacterial growth and “build-up”

The system can be easily upgraded to meet changing purity or flow rate requirements

Produces sufficient volumes of water to feed an external storage reservoir for immediate use or distribution

### Designed to meet Type II or Type III water quality

When general laboratory and primary grade water is needed at high flow rates the PURELAB 3000 offers a reliable and consistent supply with the flexibility to meet your usage needs.



The PURELAB 3000 supplies pure water at flow rates suitable for a high-usage laboratory. The system is easily upgraded to increase flow rates from 60 to 120 liters/hr, and the simple addition of a purification pack will take you from Type III to Type II water, providing flexibility to adapt to changes in usage requirements.

### Common scientific applications:

Autoclave feed	Plant growth cabinets
Feed to ultra pure water system	Stability chambers
Feed an external storage reservoir for use or distribution	Steam generators
Hydroponics	Sterilizer feed

# PURELAB 7000

## High volume, high purity water for multiple application points

“The compact solution for small distribution loops”

### The PURELAB solution for overcoming your water purification challenges

#### Challenge

High volumes of Type II+ water are required

You need one system that will provide water for multiple applications, which may be distant from the purification system

#### PURELAB 7000 Solution

High flux RO, long-life deionization cartridges and UV photo-oxidation ensure consistent water quality cost-effectively at a high flow rate

The compact, under bench system provides a feed for small distribution loops

### Designed to provide Type II+ water quality

The PURELAB 7000 dispenses up to 4 liters/min of Type II+ water (>10 MΩ-cm) and can be connected to small distribution loops to feed an ultra pure system and two or three dispense points, as well as your main application. The system has an in-built reservoir to ensure your required pure water capacity is met at peak times.

### PURELAB 7000 applications:

AAS (Atomic Absorption Spectrophotometry)

Buffer and media preparation

Electrophysiology

Feed to ultra pure water systems

General chemistry

Glassware washing/rinsing

Histology

Microbiological analysis

RIA (Radioimmunoassay) / ELISA (Enzyme-linked immunosorbent assay)

Sample dilution and reagent preparation

Spectrophotometry

Water analysis

- 1 Reliable water quality**
  - Unique sanitization design for purification of RO membranes as well as the local distribution loop
  - Sanitization designed to run quickly and easily
  - User-defined, electronically protected sanitization reminders
- 2 Economic design**
  - Unique wrap-around reservoir
  - Easy-access doors and castors means system can be located under bench
- 3 Unique system operation protection**
  - Easy-to-use Building Management System
  - Automated alarms



- 4 Economic Purity**
  - Unique RO resin mix to optimize economy, increases yield of purification packs
  - Optional degassing system further increases capacity of purification packs
- 5 Purity**
  - Easily switch between ultrafiltration or sub-micron filtration for your application



# PURELAB Option-R

## High quality, high volume water cost-effectively

The PURELAB Option-R produces Type II+ grade water, better than double-distilled quality. Integral full recirculation of purified water maintains constant peak water purity and photo-oxidation ensures low bacterial counts. The range offers a choice of models to give flexibility in flow rate settings: providing either 7, 15, 30, or 60 liters/hr.

### The PURELAB solution for overcoming your water purification challenges

Challenge	PURELAB Solution
<p>Your application requires the removal of most contaminants but highly purified or ultra pure water is not essential. Your application may require high volumes of water</p>	<p>Sophisticated integral recirculation technology ensures optimum organic and inorganic quality where you need it — clear quality displays allow you to monitor quality in real-time at point of dispense</p>
<p>Reliable, high purity water with good inorganic and microbial specifications</p>	<p>Full recirculation ensures a high level of microbial control and easy use, and maintenance keeps quality high throughout the life of the product.</p>

### Designed to meet and exceed Type II+ water quality

#### Common scientific applications:

- AAS (Atomic Absorption Spectrophotometry)
- Buffer and media preparation
- Electrophysiology
- FAAS (Flame Atomic Absorption Spectrophotometry)
- Feed to ultra pure water systems
- General chemistry
- Glassware washing/rinsing
- Histology
- Microbiological analysis
- RIA (Radioimmunoassay) / ELISA (Enzyme Linked Immunoabsorbant Assay)
- Sample dilution and reagent preparation
- Spectrophotometry

**1 Space-saving wrap-around reservoir** with smooth sides and vented filtration for optimized water purity

**2 Fully recirculating UV** ensures the highest microbial quality

**3 Deionization purification**

**4 Height adjustable point-of-use dispense tap** for choice of wall or bench mounting

**5 Full recirculation** guarantees water quality at point-of-use





PURELAB

# Option-S and Prima

Simple and reliable delivery of purified water for the general laboratory



## PURELAB Option-S

The flexible solution for general laboratory grade water

Using multiple purification technologies, the PURELAB Option-S produces Type II grade water, better than single-distilled quality. The range offers a choice of models to give flexibility in flow rate settings: providing either 7, 15, 30, or 60 liters/hr.



## PURELAB Prima

The ultimate in flexibility for primary grade water

The compact PURELAB Prima systems provide Type III water and are available in a choice of flow rates, 7, 15, 30, 60, 90, or 120 liters/hr, to meet your specific needs.

Designed to meet Type II or Type III water quality

Common general scientific applications:

Autoclave feed

Feed to ultra pure water system

Hydroponics

Plant growth cabinets

Stability chambers

Steam generators

Sterilizer feed

## The PURELAB solution for overcoming your water purification challenges

### Challenge

Your application requires the removal of most contaminants but highly purified or ultra pure water is not needed

You want the lowest costs of ownership and a long-serving piece of equipment

### PURELAB Solution

Proven RO technology produces primary grade purified water (1-50  $\mu\text{S}/\text{cm}$ ).

Minimal purification consumables ensure long-term operational costs remain low

## Contact us:

ELGA offices and distributors are located in more than 60 countries and are fully trained in all ELGA systems.

To find your nearest ELGA representative, go to [www.elgalabwater.com](http://www.elgalabwater.com) and select your country for contact details.

### ELGA Global Operations Centre

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### Your local ELGA representative

## The LabWater Specialists

ELGA is an integral part of Veolia Water Solutions and Technologies, the world's leading water service company. Veolia Water Solutions and Technologies has a worldwide team of over 8,900 people and is renowned for its capabilities in providing water solutions to customers throughout the entire water cycle.

The ELGA team focuses exclusively on water and its purification. It continually contributes to the unique technical and scientific applications expertise developed during the past 50 years. We are experienced in meeting the challenges that arise during the development, installation and servicing of single point-of-use water purification systems as well as large projects involving consultation with architects, consultants and clients.



Commitment  
to global  
citizenship

The Veolia Environment Foundation supports worldwide projects contributing to sustainable development, with a special focus on outreach, workforce development and the environment.

Since 2004, with an annual budget of €5 million, the Foundation has supported more than 450 projects.

(see [www.fondation.veolia.com](http://www.fondation.veolia.com) for details)



Solutions & Technologies

[www.elgalabwater.com](http://www.elgalabwater.com)