



## ***PURELAB® Option***

General Laboratory Grade  
Water Purification Systems

# PURELAB Option

## The essential element in your laboratory

PURELAB Option systems from ELGA are the very best solution for producing general laboratory grade water from a potable supply. They offer a wide range of flow-rates to suit your needs, advanced purification technologies to provide pure water on demand, plus microprocessor control for consistent quality. With applications ranging from glassware washing and the feeding of ultra-pure water systems to cell culture and media preparation, the PURELAB Option is the essential water purification system that no laboratory should be without.

### DESIGNED TO SUIT YOUR EXACT NEEDS

The PURELAB Option range is ergonomically designed to be easy to use and maintain, with back-lit LCD displays that allow you to check operations at a glance, user-friendly intuitive controls and simple replacement of consumables. PURELAB Option systems also offer a wide range of flow-rates from 7 to 80 liters per hour. Yet despite their comprehensive benefits, convenient operation and reliability, you will find them very economical to run, with low operating costs.

Different laboratory applications demand different water purity levels. To meet these needs, ELGA offers a choice of general laboratory grade water systems. The PURELAB Option-S series produces better than single-distilled quality, whilst the PURELAB Option-R and E series produce better than double-distilled quality. The E series is particularly cost-effective for higher volume needs and hard water areas. See the table below for details of the purification technologies and flow-rates featured, and find out which PURELAB Option system is best for your laboratory.

| THE PURELAB OPTION RANGE                     |  |  |   |   |   |   |
|--|--|--|---|---|---|---|
|  | S series   |  | R series  |   | E series  |   |
| Model  | S 7 / S 15   | S 30 / S 60                                      | R 7 / R 15  | R 30 / R 60                                       | E 5 / E 10  | E 25 / E 50 / E 80                              |
| <b>Water Purity</b>                          | Better than single-distilled<br>(1 to >10 MΩ-cm)   | Better than single-distilled<br>(1 to >10 MΩ-cm) | Better than double-distilled<br>(10 to >15 MΩ-cm)   | Better than double-distilled<br>(10 to >15 MΩ-cm) | Better than double-distilled<br>(10 to >15 MΩ-cm) | Better than double-distilled<br>(5 to 15 MΩ-cm) |
| <b>Flow Rates<sup>1</sup> (15°C)</b>         | 7 or 15 L/hr   | 30 or 60 L/hr                                    | 7 or 15 L/hr  | 30 or 60 L/hr                                     | 5 or 10 L/hr                                      | 25, 50 or 80 L/hr                               |
| <b>Purification Technologies:</b>            |  |  |   |   |   |   |
| • Pretreatment                               | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
| • Reverse osmosis                            | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
| • Ion exchange                               | ✓  | ✓  | ✓   | ✓   |   |   |
| • Photo-oxidation                            |  | ✓  | ✓   | ✓   | ✓   | ✓   |
| • Recirculation                              |  |  | ✓   | ✓   | ✓   |   |
| • 0.2 µm filtration (optional)               |  |  | ✓   | ✓   | ✓   |   |
| • ADEPT electrical deionization <sup>2</sup> |  |  |   |   | ✓   | ✓   |
| <b>Typical Applications</b>                  | Glassware washing/rinsing<br>Feed to ultra-pure water systems<br>Reagent make-up/dilution<br>Buffer and media preparation<br>General chemistry<br>Qualitative analyses<br>Feed to environmental cabinets |  | All the applications of the PURELAB Option-S series, plus<br>Flame Atomic Absorption<br>Tissue and cell culture<br>Cytology and Histology preparations<br>Electrophoresis<br>Spectrophotometry<br>Water analysis<br>Immuno-cytochemistry<br>Electrophysiology<br>Electrochemistry<br>General purpose HPLC |   |   |   |

<sup>1</sup> Subject to correct operating and maintenance procedures    <sup>2</sup> Incorporating ADEPT module capable of greater than 100 L/hr output

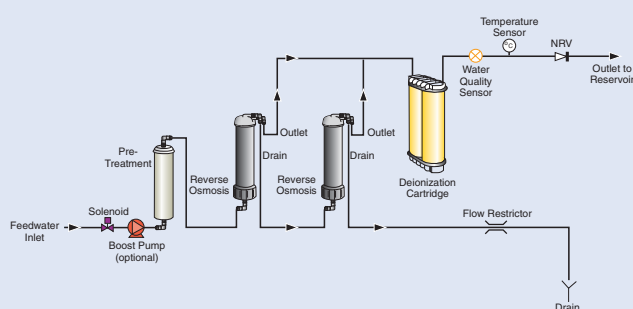
## PURELAB OPTION-S AT A GLANCE

The PURELAB Option-S series uses multiple purification technologies to produce general laboratory grade water, better than single-distilled quality. The range consists of smaller models with flow rates of 7 and 15 liters per hour, whilst the larger models deliver 30 and 60 liters per hour. Each system includes:

- **Unique GRID (Graphically Represented Intuitive Display) Control Panel** featuring user-friendly icons and simulation of operational mode, process flow path and reservoir water level – for enhanced system control (smaller models only)
- **Microprocessor-controlled system management with continuous water purity monitoring** – for consistent and reliable operation
- **Front-entry service doors for easy access to consumables** – making replacement simple and convenient
- **Cartridge change indicator** – to ensure optimal purification performance
- **Adjustable audio-visual alarms** – for total peace of mind
- **Data collection capabilities through RS232 interface** – for compliance with GLP guidelines (smaller models only)
- **Long life integral pre-filter** – for removing chlorine and gross particulate contamination, with an enhanced bacteriostatic effect
- **Latest high-flux reverse osmosis membrane** – to facilitate high flow rates and maximize efficiency
- **Unique high-capacity purification cartridge pack** – to remove organic and inorganic ionic impurities.



## TECHNOLOGICALLY ADVANCED DESIGN



Process Flow ■ PURELAB Option-S 7/15

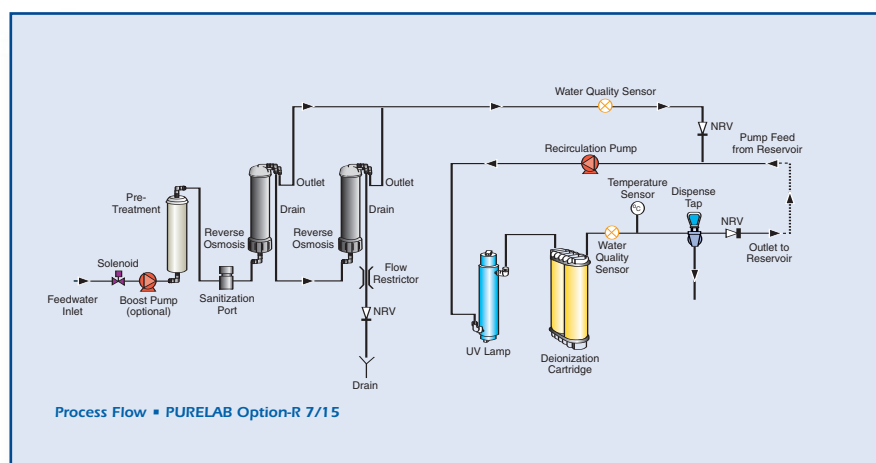
## PURELAB OPTION-R AT A GLANCE

The PURELAB Option-R series builds on all the features of the S series to deliver higher purity general laboratory grade water, better than double-distilled quality. The R series additionally includes:

- **Integral recirculation of purified water** – to maintain consistent peak water purity
- **Photo-oxidation technology** – ensuring that bacteria counts are low
- **Simple sanitization regime** – for optimizing system performance
- **Point-of-use final filter (optional)** – for confidence in the further reduction of bacteria and particle counts
- **Height adjustable point-of-use dispensing tap** – conveniently providing high quality purified water on demand (smaller models only)



## TECHNOLOGICALLY ADVANCED DESIGN



## PURELAB OPTION-E

The PURELAB Option-E series is a major step forward in the cost-effective production of general laboratory grade water, better than double-distilled quality. It utilizes a combination of technologies including reverse osmosis, adsorption, photo-oxidation and electrical de-ionization. But what sets it apart is the unique ADEPT process which provides a constant supply of high purity water and is more cost-effective and convenient when compared to replacement deionization cartridges or distillation. The range consists of smaller models with flow rates of 5 and 10 liters per hour and larger models which deliver 25, 50 and 80 liters per hour.

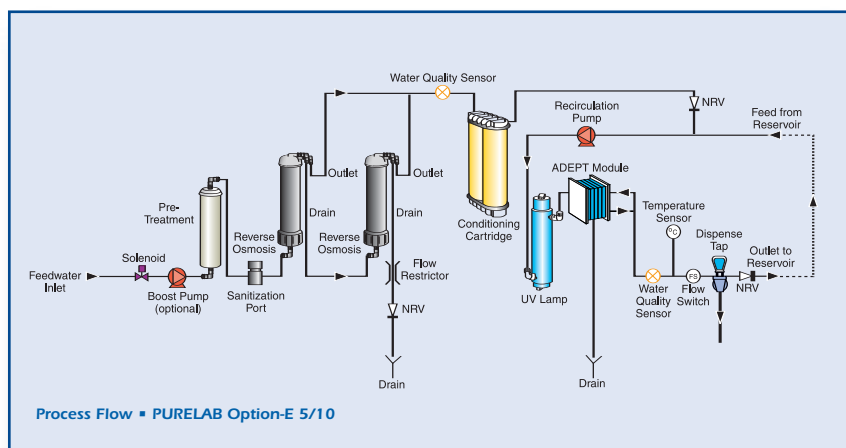


## PURELAB OPTION-E AT A GLANCE

- **Unique ADEPT electrical deionization process** – continually regenerates the internal deionization resins providing a constant supply of high purity water
- **Long lasting ADEPT module** – eliminates the need for replacement cartridges resulting in minimal running costs
- **A cost-effective choice for labs that require higher volumes of water** – especially in hard water areas where ion exchange cartridges normally have to be replaced frequently
- **Microprocessor-controlled system management with continuous water purity monitoring** – providing consistent and reliable operation
- **Unique GRID (Graphically Represented Intuitive Display) Control Panel** featuring user-friendly icons and simulation of operational mode, process flow path and reservoir water level – for enhanced system control (smaller models only)
- **Integral recirculation of purified water** – maintains consistent peak water purity (smaller models only)
- **Height adjustable point-of-use dispensing tap** – conveniently provides high quality purified water on demand (smaller models only)
- **Adjustable audio-visual alarms** – helping ensure quality at all times
- **Simple sanitization regime** – for optimizing system performance
- **Short wavelength photochemical reactor cell** – provides continuous disinfection and photo-oxidation, resulting in low bacteria levels
- **Integral conditioning cartridge** – treats the partially purified feedwater, eliminating the need for an external softener
- **Point-of-use final filter (optional)** – for confidence in the further reduction of bacteria and particle counts (smaller models only)



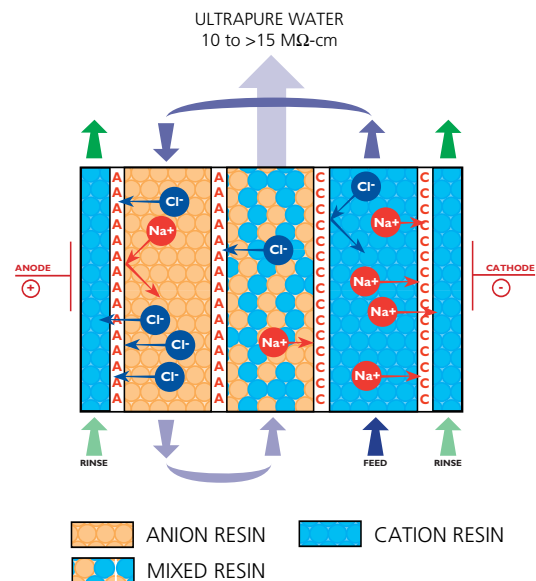
## TECHNOLOGICALLY ADVANCED DESIGN





## THE ADEPT MODULE

In a conventional deionization cartridge, water flows over ion-exchange resin beads which gradually lose their effectiveness as they collect impurities; the resins must then be replaced or regenerated. With ELGA's unique ADEPT process, the ionic impurities are transported out of the system by an electrical current, keeping the resins in a permanent high regenerative state, ensuring an indefinite supply of high purity water and eliminating the need for replacement cartridges.



## USER-FRIENDLY AND INFORMATIVE MONITORING

PURELAB Option systems make sure you are in full control at every stage. They continuously monitor water purity and operational parameters, displaying current data on a large LCD display allowing operational status to be checked at a glance. System monitoring is comprehensive and includes a continuous display of temperature compensated water purity, production mode, plus an indication of remaining consumable life. For total reassurance, you can also set audio and visual alarms to alert you in the unlikely event of a problem. Smaller models in the PURELAB Option range additionally feature a unique state-of-the-art GRID\* control panel indicating the process flow path, operational mode and reservoir water level, further enhancing system monitoring.



Simple, intuitive icons and read-outs

\* Graphically Represented Intuitive Display

## SIMPLE TO USE AND MAINTAIN

We have designed the PURELAB Option range to be very easy to use. The back-lit multi-functional control panel is extremely user-friendly with intuitive icons and step-by-step menus to guide you at each stage.

Maintenance is equally simple and straightforward, saving time and freeing up technicians for more important tasks. Direct access from the front-entry service doors, plus quick-fit connections, allow easy installation and replacement of consumables. There is also a simple sanitization regime on R and E series systems making routine maintenance quick and easy.



Just plug in a new cartridge

## MAXIMUM FLEXIBILITY

Flexibility and versatility are of key importance for laboratory water systems. With the PURELAB Option range, ELGA provides you with a wide choice of flow-rates, water qualities and purification technologies for matching your exact needs. PURELAB Option systems are compact in design and can be mounted on the bench, under the bench or on the wall, whichever is the most convenient use of space for you. There is also a wide range of accessories to further complement the PURELAB Option range including a remote display, printer kit, boost pump and a full range of water storage reservoirs.

## EASY COLLECTION OF OPERATING DATA

The smaller PURELAB Option models feature an RS232 port enabling you to make a permanent record of water quality and system parameters. This allows for compliance with Good Laboratory Practice (GLP) guidelines.

## TECHNICAL SPECIFICATIONS

| PURELAB Option model              | S 7 / S 15   | S 30 / S 60   | R 7 / R 15   | R 30 / R 60   | E 5 / E 10   | E 25 / E 50 / E 80  |
|-----------------------------------|--|---|--|---|--|---|
| <b>Performance Specifications</b> |  |   |  |   |  |   |
| Inorganics                        | 1 to > 10 MΩ-cm at 25°C  | 1 to > 10 MΩ-cm at 25°C   | 10 to > 15 MΩ-cm at 25°C   | 10 to > 15 MΩ-cm at 25°C  | 10 to > 15 MΩ-cm at 25°C   | 5 to 15 MΩ-cm at 25°C   |
| TOC <sup>1</sup>                  | <30 ppb  | < 50 ppb  | < 20 ppb   | < 50 ppb  | < 30 ppb   | < 20 ppb  |
| Bacteria <sup>2</sup>             | n/a  | < 1 CFU/ml  | < 1 CFU/ml   | < 1 CFU/ml  | < 1 CFU/ml <sup>3</sup>  | < 5 CFU/ml  |
| Particles                         | n/a  | n/a   | 0.2 µm POU filter (optional)   | 0.2 µm POU filter (optional)  | 0.2 µm POU filter (optional)   | n/a   |
| pH                                | Effectively neutral  | Effectively neutral   | Effectively neutral  | Effectively neutral   | Effectively neutral  | Effectively neutral   |
| <b>Product Specifications</b>     |  |   |  |   |  |   |
| Dimensions                        | Height: 460mm<br>Width: 410mm<br>Depth: 270mm  | Height: 740mm<br>Width: 570mm<br>Depth: 320mm   | Height: 460mm<br>Width: 550mm<br>Depth: 270mm                                      | Height: 740mm<br>Width: 570mm<br>Depth: 320mm   | Height: 460mm<br>Width: 550mm<br>Depth: 270mm                                      | Height: 740mm<br>Width: 570mm<br>Depth: 320mm   |
| Weight (standard models)          | S 7: 13.5 kg<br>S 15: 14.5 kg  | S 30: 52kg<br>S 60: 53kg  | R 7: 18 kg<br>R 15: 19 kg  | R 30: 53kg<br>R 60: 54kg  | E 5 : 21 kg<br>E 10 : 22 kg  | E 25: 75kg<br>E 50: 75kg<br>E 80: 75kg  |
| Operational Mode Displays         | Power on<br>Process on<br>Standby  | Power on<br>Process on/standby<br>Auto-Rinse<br>Disinfection  | Power on<br>Process on<br>Standby<br>Recirculation                                 | Power on<br>Process on/standby<br>Auto-Rinse<br>Disinfection<br>Recirculation                           | Power on<br>Process on<br>Standby<br>Recirculation                                 | Power on<br>Process on/standby<br>Auto-Rinse<br>Disinfection  |
| Safety Features                   | Power fail-safe<br>Automatic level controls<br>Audio-visual alarms<br>Auto-restart                                     | Power fail-safe<br>Automatic level controls<br>Audio-visual alarms<br>Auto-restart<br>Low feed shut-off | Power fail-safe<br>Automatic level controls<br>Audio-visual alarms<br>Auto-restart | Power fail-safe<br>Automatic level controls<br>Audio-visual alarms<br>Auto-restart<br>Low feed shut-off | Power fail-safe<br>Automatic level controls<br>Audio-visual alarms<br>Auto-restart | Power fail-safe<br>Automatic level controls<br>Audio-visual alarms<br>Auto-restart<br>Low feed shut-off |
| System Monitoring                 | • RO permeate purity<br>• Product water purity<br>• Product water temp.<br>• Reservoir level<br>• Consumable reminders | n/a<br>MΩ-cm or µS/cm<br>°C<br>% full<br>✓  | n/a<br>MΩ-cm<br>°C<br>n/a<br>✓   | µS/cm<br>MΩ-cm or µS/cm<br>°C<br>% full<br>n/a<br>✓   | µS/cm<br>MΩ-cm<br>°C<br>% full<br>n/a<br>✓   | µS/cm<br>MΩ-cm<br>°C<br>n/a<br>✓  |
| Dispense Flows (from tap)         | n/a  | n/a   | 1 L/min  | 1 L/min   | 1 L/min  | n/a   |
| <b>Feedwater Specifications</b>   |  |   |  |   |  |   |
| Source                            | Potable water  | Potable water   | Potable water  | Potable water   | Potable water  | Potable water   |
| Maximum FI                        | 10   | 10  | 10   | 10  | 10   | 10  |
| Maximum Conductivity              | 1400 µS/cm   | 1400 µS/cm  | 1400 µS/cm   | 1400 µS/cm  | 1400 µS/cm <sup>4</sup>  | 1400 µS/cm <sup>4</sup>   |
| Maximum Silica                    | n/a  | n/a   | n/a  | n/a   | 30 ppm   | 30 ppm  |
| Free Chlorine                     | <0.5 ppm   | <0.5 ppm  | <0.5 ppm   | <0.5 ppm  | <0.5 ppm   | <0.5 ppm  |
| Temperature                       | 1-35°C   | 1-35°C  | 1-35°C   | 1-35°C  | 1-35°C   | 1-35°C  |
| Pressure Maximum                  | • without boost pump<br>• with boost pump  | 6 bar (90 psi)<br>2 bar (30 psi)  | n/a<br>6 bar (90 psi)  | 6 bar (90 psi)<br>2 bar (30 psi)  | n/a<br>6 bar (90 psi)<br>2 bar (30 psi)  | n/a<br>6 bar (90 psi)   |
| Pressure Minimum                  | • without boost pump<br>• with boost pump  | 4 bar (60 psi)<br>flooded suction   | n/a<br>1.4 bar (20 psi)  | 4 bar (60 psi)<br>flooded suction   | n/a<br>1.4 bar (20 psi)  | 4 bar (60 psi)<br>flooded suction<br>n/a<br>1.4 bar (20 psi)  |

<sup>1</sup> Subject to suitable feedwater.

<sup>2</sup> Subject to correct operating and maintenance procedures.

<sup>3</sup> With the optional 0.2 µm POU filter.

<sup>4</sup> CO<sub>2</sub> < 30 ppm in potable feedwater.

## THE SINGLE SOURCE SOLUTION

PURELAB Option systems are part of the complete range of ELGA water purification systems designed to meet the pure water requirements of today's laboratories.

From glassware washing to molecular biology, every ELGA system has been carefully designed to give you uncompromising water quality in a cost-effective, convenient, and easy to use package.

With a network of over 600 service centers worldwide, ELGA provides an unrivalled package of service and support for its range of pure water

systems. Whatever support you require, ELGA's team of water treatment experts will respond quickly to ensure your total satisfaction with our products and services, guaranteed.

With our wide range of technologies, products and services, we can provide the right solution tailored to your own specific pure water needs.

Contact us today for further information on the water purification systems featured in this brochure or for details on other models in the range.



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Owing to a policy of continual improvement, we reserve the right to amend the specifications given in this brochure.

ELGA® is the global laboratory water brand name of Veolia Water.