

Type I+ Water

Liters per day: 1 - 120

18.2 MΩ.cm

Key Features

- ☒ Real-time TOC
- ☒ Fully re-circulating
- ☒ Integrated filtration
- ☒ Multiple dispensing

Ideally suited for:

- Mass Spectrometry
- Molecular biology
- Ultra trace analyses
- Electrochemistry
- Atomic Spectroscopy
- Liquid Chromatography
- Ion Chromatography
- Cell cultures
- Qualitative Analyses
- Gas Chromatography
- Immunochemistry

## Flexible. Configurable. Simple.

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

When you require the ultimate in water purity, PURELAB Chorus 1 provides the perfect solution. Consistently delivering water purity of 18.2 MΩ.cm (Type I+/I) and underpinned by the advanced PureSure® deionization system, the PURELAB Chorus 1 enables you to focus on attaining accurate results while ensuring an uninterrupted work flow.



Model shown is PURELAB Chorus 1 with Advanced Halo Dispense

### Advanced PureSure Deionization

Eliminates trace ions that leach into your water, and provides advanced warning to change the purification packs.

### Fully Recirculating

Ensuring microbial purity and guaranteeing pure water at the point-of-use.

### Real-time TOC Monitoring

Provides complete confidence in organic purity.

### Integrated Filtration

Ultrafiltration or microfiltration filters out endotoxins, proteins, nucleases and particulates.

### Full Spectrum UV Treatment

### Data Capture

Data capture via USB for system performance validation and software updates.

## Halo Dispense Solutions



### Flexible Dispensing

- Variable flow
- Auto-volume dispense
- Hands free
- Locked dispense
- Hand-held dispensing

### Multiple Positioning

Position the dispenser independent from the water purification system. Optimize your lab space.

### Real-Time TOC monitoring

Water purity is monitored right up to the point of use for complete peace of mind with real-time TOC monitoring for critical applications.






### Halo Glow

The unique glow changes colour and flashes alerting you to changes in system performance.

### Clear Display

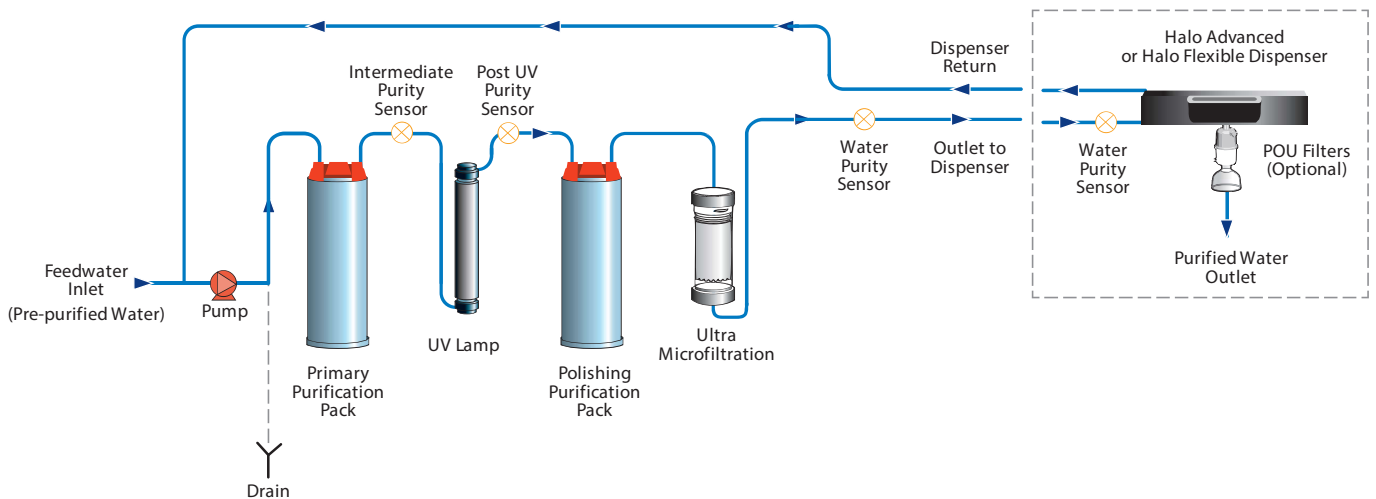
Prioritized information displayed at all times (system status, TOC, alarm) for absolute confidence as you dispense.



|  |   |   |
|--|---|---|
|    |  |  |
| <b>Halo Dispenser</b>  | <b>Halo Advanced Dispenser</b>  | <b>Halo Flexible Dispenser</b>  |
| Fixed  | Fixed   | Flexible  |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Variable flow rate dispense</li> <li><input checked="" type="checkbox"/> Drop-by-drop control</li> <li><input checked="" type="checkbox"/> Locked dispense</li> </ul> |   |   |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Purity monitoring to point-of-use</li> <li><input checked="" type="checkbox"/> Auto volume dispense</li> </ul>  |   |   |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Flexible handset</li> </ul>   |   |   |

# PURELAB Chorus 1

## Process Flow PURELAB Chorus 1 Analytic



## Specifications

TREATED WATER SPECIFICATIONS

| APPLICATION                | LIFE SCIENCE   | ANALYTICAL RESEARCH          | GENERAL SCIENCE              |
|----------------------------|--|------------------------------|------------------------------|
| Dispense Flowrate          | Up to 2.0 l/min <sup>†</sup>   | Up to 2.0 l/min <sup>†</sup> | Up to 2.0 l/min <sup>†</sup> |
| Inorganics @25°C           | 18.2 MΩ.cm   | 18.2 MΩ.cm                   | 18.2 MΩ.cm                   |
| Total organic carbon (TOC) | 1-3 ppb*   | 1-3 ppb*                     | 3-10 ppb*                    |
| Bacteria                   | <0.1 CFU/ml <sup>°</sup>   | <0.1 CFU/ml <sup>°</sup>     | <0.1 CFU/ml <sup>°</sup>     |
| Bacterial Endotoxin        | <0.001 EU/ml   | <0.001 EU/ml <sup>°</sup>    | <0.001 EU/ml <sup>°</sup>    |
| pH                         | Effectively neutral  | Effectively neutral          | Effectively neutral          |
| Particles                  | <0.01 μm   | <0.05 μm                     | 0.2 μm <sup>°</sup>          |
| RNase                      | <0.002 ng/ml   | <0.002 ng/ml <sup>°</sup>    | <0.002 ng/ml <sup>°</sup>    |
| DNase                      | <20 pg/ml  | <20 pg/ml <sup>°</sup>       | <20 pg/ml <sup>°</sup>       |
| Purification pack capacity | Liters to 18.2 MΩ.cm = 94,100/(μS/cm + (2.3 x ppm CO <sub>2</sub> )) |                              |                              |

\* Dependant on feed water – recommended feed <50 ppb TOC ° With POU filter fitted †When connected to Halo, Advanced or flexible

FEEDWATER REQUIREMENT

|  |   |                |                |
|--|---|----------------|----------------|
| Source – originally from potable supply, then pretreated                         | Preferably RO produced by PURELAB Chorus 3 or filtered service deionization (SDI) or distilled. Note: mixed bed or twin bed deionized supplies should be cation limited at exhaustion |                |                |
| Fouling index (max)  | 1 for all models. A 5-10 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  | <50 ppb max (RO feed)   |                |                |
| Carbon dioxide   | 30 ppm (max recommended)  |                |                |
| Silica   | 2 ppm (max recommended)   |                |                |
| Particulates   | Filtration down to 5-10 micron advisable to protect internal and/or point of use filters  |                |                |
| Temperature  | 1-35°C (Recommend 10-15°C)  |                |                |
| Flowrate (maximum requirement)   | 130 l/hr (34 USG)   |                |                |
| Drain requirements   | Up to 2 l/min (0.5 USG)   |                |                |
| Feedwater pressure   | 0.7 bar (10 psi) maximum; 0.07 bar (1 psi) minimum  |                |                |
| * Fit LA652 Pressure Regulator where feedwater pressure exceeds specified limits |   |                |                |
| Dimensions   | Height 435mm, Width 375mm, Depth 340mm  |                |                |
| Weight   | 19 kg (42 lbs)  | 19 kg (42 lbs) | 18 kg (40 lbs) |

## Type I Water

Liters per day: 1 - 100

18.2 MΩ.cm

## Key Features

- ☒ Tap-to-ultrapure
- ☒ Fully re-circulating
- ☒ Integrated filtration
- ☒ Multiple dispensing

## Ideally suited for:

- Mass Spectrometry
- Molecular biology
- Electrochemistry
- Atomic Spectroscopy
- Liquid Chromatography
- Gas Chromatography
- Immunochemistry
- General laboratory
- Spectrophotometry

## Flexible. Configurable. Simple.

### One complete solution for the laboratory

PURELAB Chorus 1 Complete provides a complete solution from tap to ultrapure water direct from a potable water supply, and is ideal for laboratories needing up to 100 liters of 18.2 MΩ.cm ultrapure water. With its simple and ergonomic design and ease-of-use, water can be dispensed directly from the system or from a choice of additional Halo Dispensers.

### Fully Recirculating

Recirculation of purified water through our modular reservoir to maintain consistent peak water purity at 18.2 MΩ.cm.

### ELGA Biofilter (optional)

When fitted, PURELAB Chorus 1 Complete produces water which is free from biologically active impurities.

### Single System Solution

Perfect single system solution for analytical and life science applications requiring 18.2 MΩ.cm.

### Easy Access

Front entry service doors provide quick and easy access to consumables.

### Space Saving Design

Designed to be modular and stackable to save space, whether wall-mounted or under the bench.

### Data Capture

Data capture via USB for system performance validation and software updates.



## Halo Dispense Solutions

The modular nature of PURELAB Chorus 1 Complete means that your dispense solutions sit independently from the unit. You can even have the Halo Dispenser installed in an adjacent laboratory. With Halo Dispenser you have the ultimate flexibility.

### Clear Display

Prioritized information displayed at all times (system status, alarm) for absolute confidence as you dispense.

### Multiple Positioning

Position the dispenser independent from the water purification system. Optimize your lab space.

### Flexible Dispensing

- Variable flow
- Auto-volume dispense
- Hands free
- Locked dispense
- Hand-held dispensing

| Halo Dispenser   | Halo Advanced Dispenser | Halo Flexible Dispenser |
|--|-------------------------|-------------------------|
| Fixed  | Fixed                   | Flexible                |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Variable flow rate dispense</li> <li><input checked="" type="checkbox"/> Drop-by-drop control</li> <li><input checked="" type="checkbox"/> Locked dispense</li> </ul> |                         |                         |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Purity monitoring to point-of-use</li> <li><input checked="" type="checkbox"/> Auto volume dispense</li> </ul>  |                         |                         |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Flexible handset</li> </ul>   |                         |                         |

## Reservoir Solutions

Our unique range of storage solutions are designed to maintain optimum purity of stored water and provide effective protection against airborne contaminants. They are designed to accommodate PURELAB Chorus water purification systems by maximizing the space in a single integral, compact unit or to sit independently to suit the layout of your laboratory.

### Dispense Tap

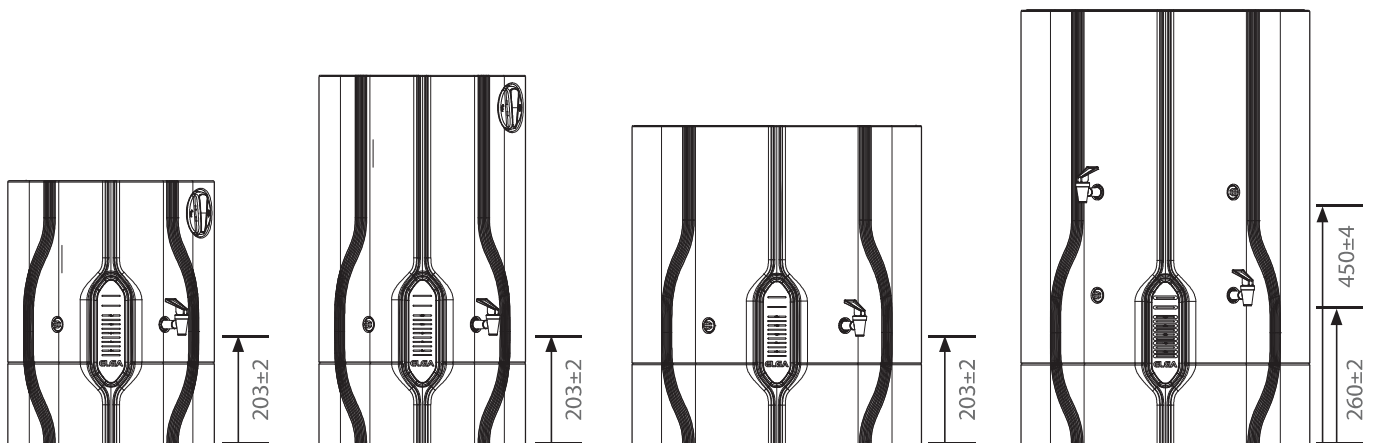
Positioned to minimize accidental operation or damage (choice of positions).

### Advanced vent filtration

Prevents the ingress of airborne bacteria, particulates, organic vapours and CO<sub>2</sub>.

### Hygienic Overflow

Hygienic overflow in the unlikely event of water system malfunction.



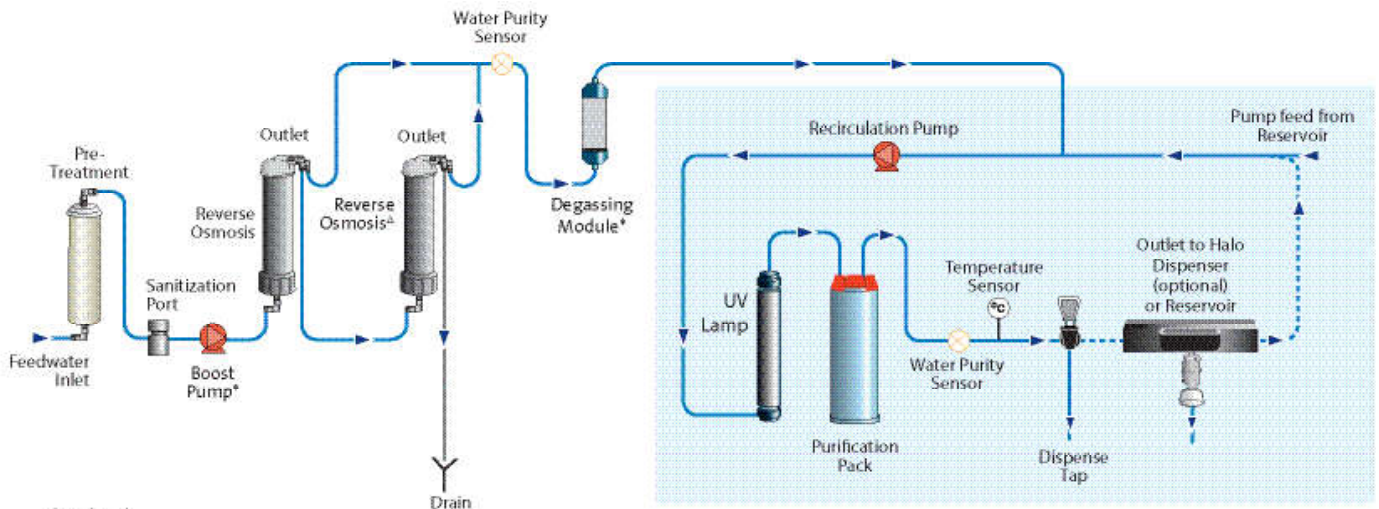
Capacity: 15 liters  
Dimensions (mm):  
470 (h) x 376 (w) x 340 (d)  
Flow Rate: 6 l/min

Capacity: 30 liters  
Dimensions (mm):  
660 (h) x 376 (w) x 340 (d)  
Flow Rate: 8 l/min

Capacity: 60 liters  
Dimensions (mm):  
570 (h) x 532 (w) x 522 (d)  
Flow Rate: 10 l/min

Capacity: 100 liters  
Dimensions (mm):  
806 (h) x 532 (w) x 522 (d)  
Flow Rate: 10 l/min

Process Flow PURELAB Chorus 1 Complete



\*Optional  
 † second RO module for the 20l variant only

Specifications

TREATED WATER SPECIFICATIONS

| APPLICATION                | PURELAB Chorus Complete  |                           |
|----------------------------|--|---------------------------|
| Nominal output at 15°C     | 10 l/hr  | 20 l/hr                   |
| Dispense Flowrate          | >1.5 l/min   | >1.5 l/min                |
| Inorganics @25°C           | 18.2 MΩ.cm   | 18.2 MΩ.cm                |
| Total organic carbon (TOC) | <10 ppb  | <10 ppb                   |
| Bacteria                   | <0.1 CFU/ml <sup>°</sup>   | <0.1 CFU/ml <sup>°</sup>  |
| Bacterial Endotoxin        | <0.001 EU/ml <sup>°</sup>  | <0.001 EU/ml <sup>°</sup> |
| pH                         | Effectively neutral  | Effectively neutral       |
| Particles                  | 0.2 μm <sup>°</sup>  | 0.2μm <sup>°</sup>        |
| RNase                      | <0.002 ng/ml <sup>°</sup>  | <0.002 ng/ml <sup>°</sup> |
| DNase                      | <20 pg/ml <sup>°</sup>   | <20 pg/ml <sup>°</sup>    |
| Purification pack capacity | Liters to 18.2 MΩ.cm = 94,100/(μS/cm + (2.3 x ppm CO <sub>2</sub> )) |                           |

<sup>°</sup> With POU filter fitted

FEEDWATER REQUIREMENT

|                                |   |
|--------------------------------|---|
| Source                         | Potable mains water supply  |
| Fouling index (max)            | <10   |
| Free Chlorine                  | 0.5 ppm max   |
| Carbon dioxide                 | Ideally <20 ppm   |
| Silica                         | 30 ppm (max recommended)  |
| Temperature                    | 1-35°C (Recommend 10-15°C)  |
| Flowrate (maximum requirement) | 130 l/hr (34 USG)   |
| Drain requirements             | Up to 2 l/min (0.5 USG)   |
| Feedwater pressure             | 4.0 bar (60 psi) min; 6 bar (90 psi) max*<br>With boost pump: flooded suction (min) to 2.0 bar (30 psi) max |

\* Fit LA652 Pressure Regulator where feedwater pressure exceeds specified limits

|                          |  |                |
|--------------------------|--|----------------|
| Dimensions               | Height 679mm, Width 376mm, Depth 353mm |                |
| Weight (with boost pump) | 17 kg (38 lbs)                         | 18 kg (40 lbs) |
| Weight                   | 15 kg (33 lbs)                         | 16 kg (36 lbs) |