

## Technology Note 25

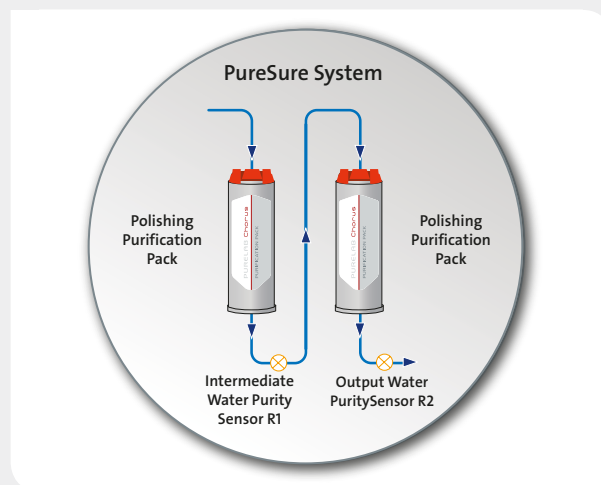
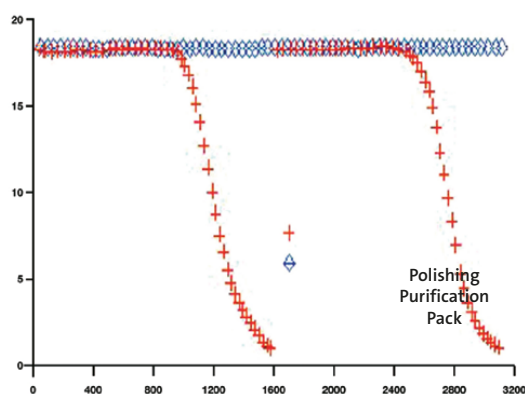
# PURESURE<sup>®</sup> Technology used in PURELAB<sup>®</sup> Chorus 1

### How it works.

The PURELAB Chorus features a unique double purification pack and monitoring system which provides key benefits to the user:

- Guaranteed water purity
- No break-through of organics, silicon or boron
- Increased security
- Capacity gains

As shown in Figure 1, the PURELAB Chorus 1 incorporates two purification packs, each containing deionization resins and other media, and 2 water purity sensors: one to measure the purity as resistivity of the water after the first pack (R1) and the other at the end of the purification sequence (R2) just prior to the point of use.



### Results

Typical resistivity values at these two points, as the unit is used, are shown in Figure 2. As the deionization capacity of the primary purification pack starts to exhaust, after approximately 930 liters of water have been used, the intermediate resistivity at R1 starts to fall from its initial value of 18.2 MΩ-cm. However, the resistivity of the product water at R2 is still maintained at 18.2 MΩ-cm by the polishing purification pack.

When the resistivity at R1 has fallen to 1 MΩ-cm (after 1580 liters in this example) the primary purification pack is removed and discarded. It is replaced by the polishing pack and a new pack is fitted in the polishing position. This process can be repeated indefinitely.

In this way, a highly regenerated unused pack is always present in the polishing position.

ELGA LabWater  
T: +44 (0) 203 567 7300  
F: +44 (0) 203 567 7205  
E: [info@elgalabwater.com](mailto:info@elgalabwater.com)  
W: [www.elgalabwater.com](http://www.elgalabwater.com)

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