Plug-and-play water treatment
ensures quality and reduces installation time

When installation time and product quality have top priority, a factory-built solution offers many advantages. A Romanian manufacturer of spirits can attest to this with their newly installed water treatment plant from EUROWATER.

A water treatment solution consists of several treatment steps - filtration, softening, membrane filtration, booster pumps – all controlled from a central control cabinet. Basically, two approaches can be used when installing such a solution.

1. The water treatment units and components are delivered individually and assembled on site.
2. A factory-built system where all units and components are installed on a frame or skid; the "plug-and-play" approach.

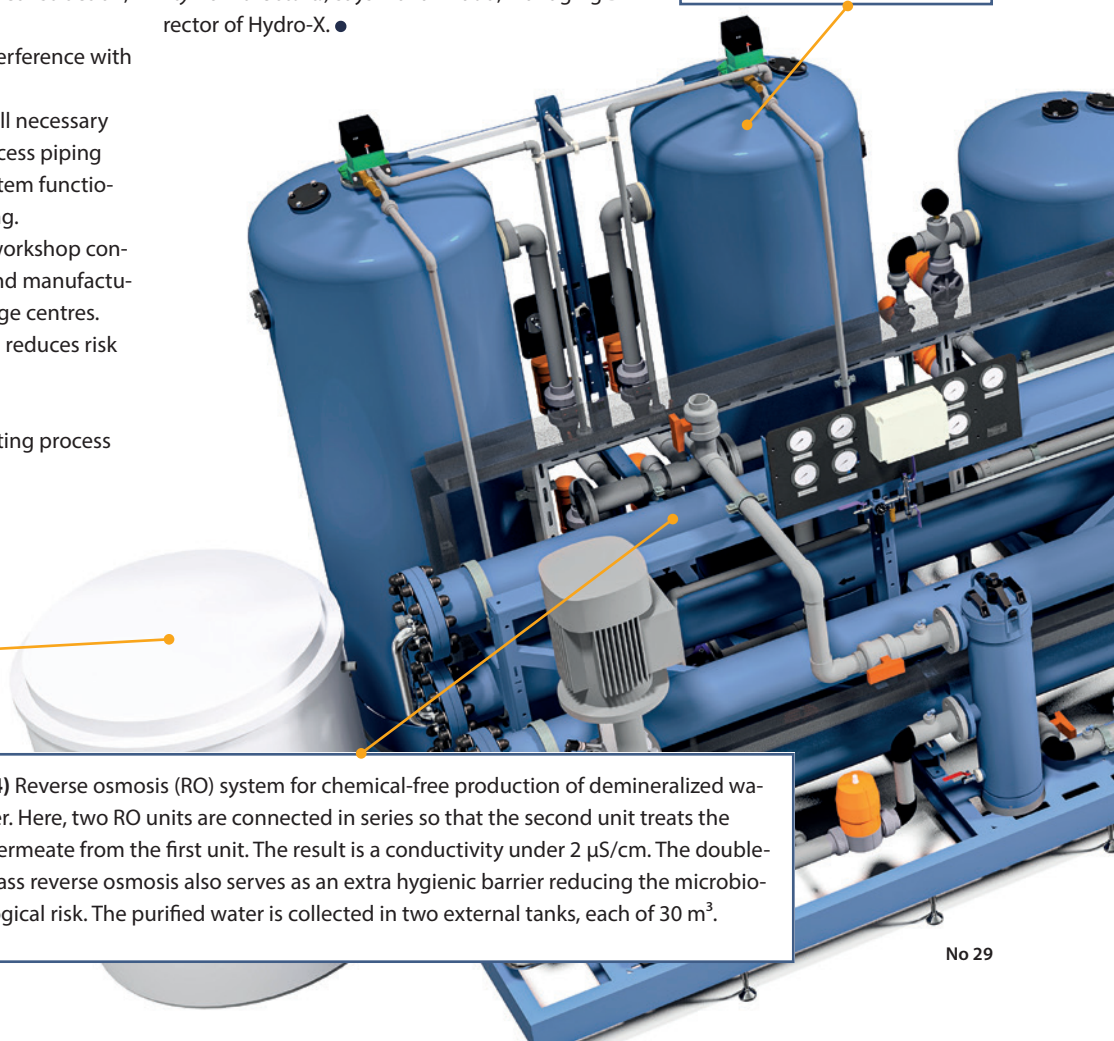
The plug-and-play approach offers several advantages:

- Factory-built systems allow parallel construction, reducing installation time on site.
- Off-site construction eliminates interference with facility production.
- A single-source design comprises all necessary system components, including process piping and wiring, and ensures proper system functionality and component dimensioning.
- Assembly takes place under ideal workshop conditions with full access to testing and manufacturing equipment as well as knowledge centres.
- Fewer on-site contractor manhours reduces risk of safety incidents.
- Testing is done before shipment.
- Straightforward connection to existing process equipment.

Customer case

Alexandrion, a Romanian brandy manufacturer, chose a plug-and-play solution. The complete water treatment system was assembled at the EUROWATER production facility in Denmark. Upon completion and testing, the entire solution was shipped to the customer location, where it was installed. This was managed by the local EUROWATER distributor in Romania, Hydro-X. *"The installation time was very short. From placing the two frames on site, it only took two days to make piping and electrical connections between the frames and tying it into the existing process. The plant produced high water quality from the start."*, says Florian Radu, Managing Director of Hydro-X. ●

(3) Softening unit for reducing the hardness in the water and preventing calcium deposits in the subsequent membrane filtration unit. Softened water is collected in an external water tank of 19 m^3.



Brine tank for regenerating the ion exchange softeners.

(4) Reverse osmosis (RO) system for chemical-free production of demineralized water. Here, two RO units are connected in series so that the second unit treats the permeate from the first unit. The result is a conductivity under 2 µS/cm. The double-pass reverse osmosis also serves as an extra hygienic barrier reducing the microbiological risk. The purified water is collected in two external tanks, each of 30 m^3.

Pure water treatment since 1936

SILHORKO-EUROWATER has more than 80 years of experience within the fields of developing, manufacturing, selling and servicing complete water treatment plants for the food and beverage industry, heat and power plants, waterworks, hospitals and other industries. The main applications are product water, boiler water, process water, cooling water, rinse water and drinking water. The company has more than 410 highly qualified employees at 23 sales and service offices around Europe. For more information, please visit www.eurowater.com

BY JENS O. GJERLØFF, MARKETING MANAGER, SILHORKO-EUROWATER A/S

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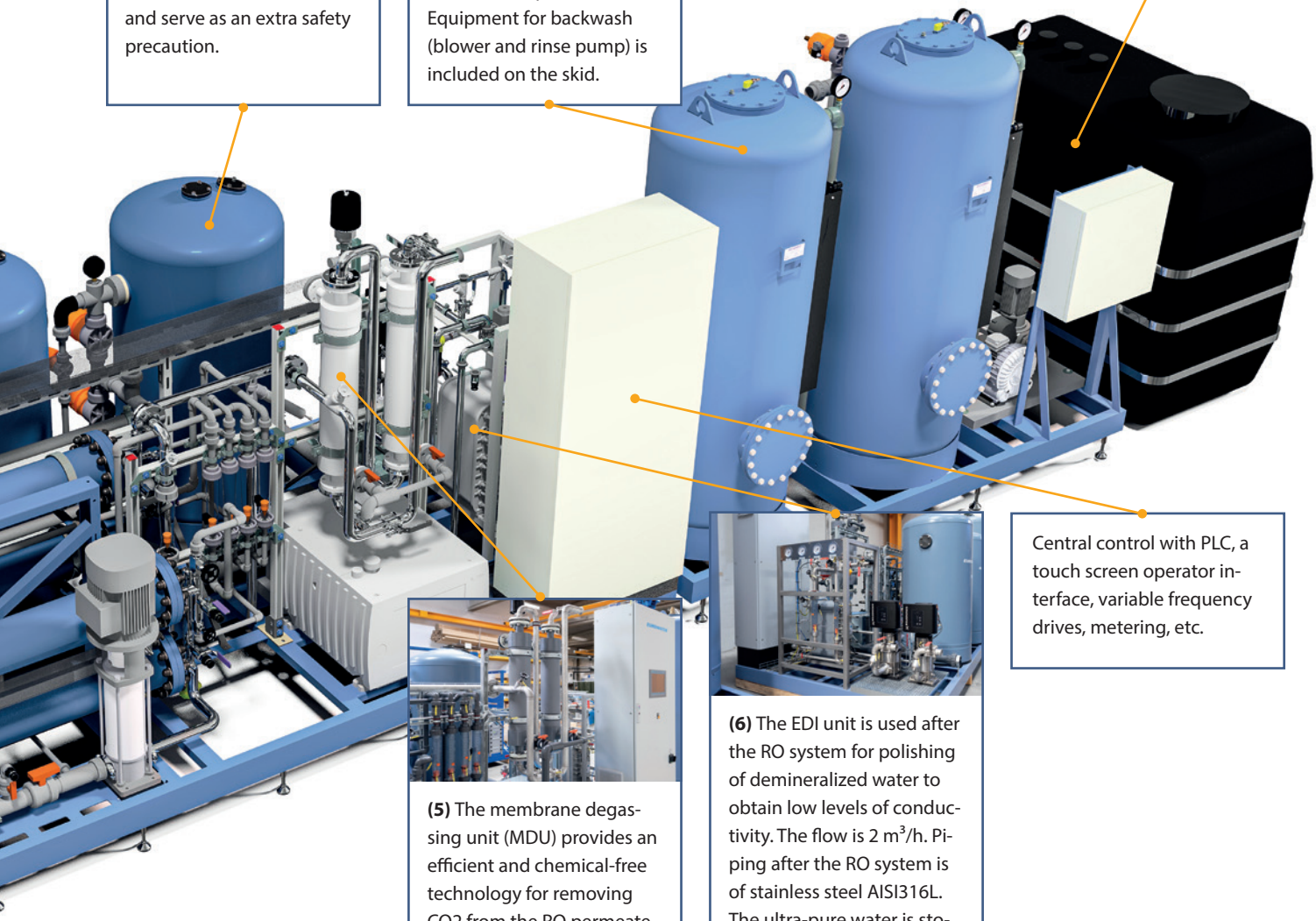
(2) Activated carbon filters remove colour, taste and odour from the water and serve as an extra safety precaution.

(1) Removal of iron and manganese from groundwater in automatic pressure filters. Equipment for backwash (blower and rinse pump) is included on the skid.

2,500 L storage of backwash water for pressure filters.



(5) The membrane degassing unit (MDU) provides an efficient and chemical-free technology for removing CO2 from the RO permeate, thus improving EDI performance considerably.

(6) The EDI unit is used after the RO system for polishing of demineralized water to obtain low levels of conductivity. The flow is 2 m^3/h. Piping after the RO system is of stainless steel AISI316L. The ultra-pure water is stored in two external tanks, each of 15 m^3.

Central control with PLC, a touch screen operator interface, variable frequency drives, metering, etc.