

**Norit NV**

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## **Norit at Drinktec with Norit Clean Technologies**

**Hall A3, booth 313**

**From 14 – 19 September the brewing and beverage world will meet again in Munich, Germany for the Drinktec, the largest and world’s most important exhibition in the field of beverage and liquid food technologies. The Norit Group - one of the major exhibitors of Clean Technologies – will launch more than 15 innovations during the show for beverage and liquid food processing.**

Consumers have strong personal preferences for beverages and are especially brand loyal to specific soft drinks and beers. Even so, beverage and food producers cannot solely rely on this and must always be sensitive to consumer’s desires. While taste, convenience and variety are important, an ever-increasing criterion for consumer choice is how “green” they perceive the product and company to be. More than ever, this year’s Drinktec will have a strong focus on water. Every single beverage and food producer depends on the availability and the quality of water to produce their products. With the world facing a long-term water shortage, which will increase dramatically, water reduction is a must. The water challenge is one of the focal points when it comes to sustainable production. Taking these aspects into consideration, breweries and beverage producers cannot afford to neglect the environmental aspect in their business practices for a better and, most importantly, a promising future.

Norit’s Clean Technologies - world class consumables, components and standardized systems - help our valued customers in over 150 countries to meet and wherever possible exceed their sustainability efforts and to save money at the same time. Overall, Norit’s Clean Technologies provide greater process efficiency, longer lifecycles and cost savings, all of which ensures a more sustainable operation.

### **Beverage & food processing**

Norit’s innovative technologies such as valves, membrane technology for water utilities, carbon dioxide (CO<sub>2</sub>) systems, cold block systems and Diatomaceous Earth (DE)-free Beer Membrane Filtration (BMF) are combined in the most advanced, efficient and **sustainable brewing concept** in the world. The next generation of Norit’s DE-free membrane filtration will be launched during the show. The **next generation BMF** is more compact and modular with an advanced cleaning procedure. As a result, OPEX and water footprint are reduced. In addition, the flexibility of the system design offers breweries an easy option to neutralize the quality fluctuations of the raw materials.

During Drinktec, Norit will be introducing its innovative **sustainable beverage concept** for soft drink manufacturing. In addition to process Norit’s proven process water treatment and wastewater reuse technology, the concept includes amongst others **sugar decolorization** and **deodorization** with activated carbon.

Double seat valve (DSV) technology helps automate process plants in a simple, flexible and space reducing setup. The new generation **DSV Complete** Valve Series provides the ideal option for plug-and-play factory pre-mounted valve manifolds and excel through increased performance due to a new actuator and insert concept. Reduce the number of single valves, minimize downtimes and add more flexibility to your production with DSV Complete! The new generation of Norit Südmo’s decentralized control unit – **IntelliTop 2.0** – is designed to increase plant efficiency by controlling, monitoring and reporting on all valve functions in the process plant. This results in faster response time and virtually eliminates downtime in the process systems.

### **Utilities**

For the production of **liquid fermentation CO<sub>2</sub>**, the CO<sub>2</sub> has to be cooled down to -24 to -34 °C. Therefore, a CO<sub>2</sub> recovery plant is usually equipped with a cooling plant that uses typical NH<sub>3</sub> or Freon as coolant. Because of the environmental disadvantages of these cooling agents, the non-corrosive nature of CO<sub>2</sub> as refrigerant makes it safe for workers to use and for the environment. In addition, it offers good thermo-dynamic properties. With Norit Haffmans’ Heat Recovery System **LiquiVap** energy consumption of CO<sub>2</sub> Recovery Plants can be reduced by up to 60%.

Norit Haffmans’ **CO<sub>2</sub> Gas Ethanol Scrubber** is a proven technology for other fermentation industries such as wineries using a once through water wash system to remove water-soluble impurities, specifically ethanol, from by-product vented CO<sub>2</sub> gas – so-called volatile organic compounds (VOC). This technology, which with the use of special internal stainless steel packing material, in conjunction with a tower design, offers the most effective, economical solution for VOC removal - an optimal scrubbing effect with minimal water usage for maximum protection of the environment.

## Quality Control Support

Together with the o-DGM, a portable device for very fast and stable dissolved oxygen (DO) measurement in water and wastewater, the **Inpack TPO/CO2 Meter**, which determines the total oxygen content in bottles or cans by measuring the dissolved oxygen and the head space oxygen content of the packaged product in one single measurement complements, complements Norit Haffmans **Total O<sub>2</sub> Management** product portfolio. Total O<sub>2</sub> Management enables brewers and beverage producer to maximize the entire production process in a most cost-effective way while achieving consistent quality and high flavor stability during the product's shelf life.

In addition to the successful portable VOS ROTA **turbidity measurement** an **in-line** execution will be launched at Drinktec. Another innovation from Norit Haffmans is the **In-line Alcohol/Extract Measurement** based upon a selective measuring method, which provides a more accurate measurement that enables a better control of the production process.

In the field of wine and wine based beverages, Norit introduces an innovative water dispersible granulated activated carbon – **Bentonorit**<sup>®</sup> – that disperses into powder after contact with aqueous solutions and simplifies dosing into treatment tanks. It is scoopable and the risk of dust release is reduced to a minimum. Bentonorit<sup>®</sup> can be applied widely in the beverage industry, for example for the decolorization of wine and the improvement of organoleptic character of wine and wine based beverages.

## Water

### Process and Wastewater

Process and wastewater treatment are crucial in any industry, at one hand to meet the quality demands, but also the ever-tightening regulations against the lowest possible cost. Today re-use of process water is an affordable solution to reduce water consumption. Norit's **Water Audit** helps customers to determine the water footprint of an operation. Opportunities for water reduction are identified and sustainable modifications that are necessary to obtain or maximize the required water reduction are proposed to the customer.

Norit offers its extensive know-how in wastewater and process water treatment to breweries, malt houses, and the beverage, dairy, pharma and food industries around the world. Norit's **Airlift<sup>™</sup> Membrane BioReactor (MBR)** is the ultimate technology for treating wastewater in a clean and safe environment. Norit X-Flow's non-breaking and non-fouling tubular membranes operate at high fluxes and require a small footprint by keeping the membranes outside the bioreactor (side-stream).

### Potable Water

After successful testing, Norit Südmo is introducing a **Pilot Plant Sand Filtration for Mineral Water Treatment**, which removes iron, manganese, and headspace deaeration of methane and sulfide. The pilot plant allows for testing under production parameters and enables designing a tailor-made plant that meets customer's needs. In addition, the product loss during the test phase is reduced.

From whole building water treatment, such as in restaurants or hotels, to well water treatment in remote areas, Norit Filtrix's new point-of-entry **LineGuard UF-100** is a reliable source for clean and safe water. The compact water system with a capacity of 3.6 m<sup>3</sup>/h excels through low energy consumption and low maintenance while discharging only a minimum amount of wastewater.

For more information:

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## Norit NV

The Norit Group develops and applies state-of-the-art purification technologies to help society, through our clients, meet environmental, health, and safety challenges, and work towards a sustainable future.

Headquartered in The Netherlands, Norit supplies consumables, components, systems, and solutions, based on proprietary technology to a variety of industries including the water, beverage, food, chemical, pharmaceutical and marine industries. More than 8 percent of the world's population - over half a billion people – already consumes water purified by Norit!