



# SMART, SUSTAINABLE **BREWERY SOLUTIONS**

BREWERY TECHNOLOGY  
YOU CAN RELY ON

[foodandbeverage.pentair.com](http://foodandbeverage.pentair.com)



# BREWING PERFECTION

WATER  
TREATMENT

BEER MEMBRANE  
FILTRATION

CO<sub>2</sub> RECOVERY

PROCESS  
VALVE  
TECHNOLOGY

MICRO  
FILTRATION

WATER  
DEAERATION

AFTER MARKET  
SERVICE

CARBONATION,  
BLENDING & DOSING

QUALITY  
CONTROL  
EQUIPMENT

## BENEFITS

- Optimized beer quality
- Maximized process uptime
- Minimized product loss





# PENTAIR® Brewery Solutions

**Your customers know a great beer when they taste it. But only you know what needs to be done to create the perfect brew.**

**Pentair partners with brewers to not only produce flavor-rich beers, but help them to optimize quality, maximize process uptime and reduce product loss.**

#### **Scope of Supply**

- Quality Control Equipment
- Process Valve Technology
- Beer Membrane Filtration
- CO<sub>2</sub> Recovery
- High Gravity Brewing
- Microfiltration
- Water Treatment
- Process Engineering Expertise
- After Market Service

From quality control solutions to hygienic process valves, carbonation units to beer membrane filtration systems, CO<sub>2</sub> recovery systems to microfiltration components and service support, Pentair can help you deliver what your customers want – brewed perfection.

#### **Related Pentair Product Lines**

- HAFFMANS™
- SÜDMO™
- UNION ENGINEERING™
- X-FLOW™



# PENTAIR® HAFFMANS™ QUALITY CONTROL EQUIPMENT

Distinct taste and highest quality, that's what consumers aim for when buying your product. The constant need for efficiency, variety and flexibility in production puts additional pressure on food and beverage processors.

Pentair Haffmans quality control equipment puts you at ease when it comes to product quality and optimizing the management of key parameters such as CO<sub>2</sub> and O<sub>2</sub> – so you can focus on that distinct taste.

Pentair Haffmans quality control devices are available for portable, lab or inline usage and include the measurement of O<sub>2</sub>, CO<sub>2</sub>, turbidity and foam; microfiltration of gas liquid and steam; monitoring of keg/bottle washing and pasteurization – helping you to understand and manage quality.

#### Scope of Supply

- O<sub>2</sub> & CO<sub>2</sub> Management
- Foam Stability Measurement
- Turbidity Control
- Monitoring of Keg and Bottle Washing & Pasteurization
- Process Engineering Expertise
- After Market Service

# UNDERSTANDING QUALITY



## **BENEFITS**

- Extensive quality control solution
- Extend product shelf life
- Improve beer stability
- Access 75 years of market leading expertise



# ELEVATED EFFICIENCY

## BENEFITS

- Effortless maintenance
- Superior robust design
- Boost operational performance
- Access 60+ years of process expertise



# PENTAIR® SÜDMÖ™ PROCESS VALVE TECHNOLOGY

As the need for efficiency, safety and sustainability in the food & beverage market increases, suppliers of process equipment have to continue to respond with advanced expertise.

Whether meeting the strictest regulations or developing complete solutions - we have products and services that fit; resulting in reliable operations through easy maintenance and optimized cleaning with Pentair Südmö's valve technology.

## Scope of Supply

- Hygienic & Aseptic Process Valves
- Valve Control Technology
- Valve Manifolds
- Application Engineering
- Process Engineering Expertise
- After Market Service

Hygienic and aseptic process valves, valve control technology, manifolds, application engineering and service - benefit from the industry's quality leading solutions.

Pentair Sudmo helps to maximize process uptime and provides your customers with what they will appreciate - a safer and more efficient operation.





# PENTAIR® BEER MEMBRANE FILTRATION

The best and most consistent beer quality – that is what brewers all over the world strive for – whether operating a small craft brewery or supervising high amounts of output in the largest breweries.

Pentair, pioneers in membrane technology, provides breweries with a clearer way to filter their beer through a reliable, agile, and sustainable filtration process.

Coupled with Pentair project management and ongoing service support, Pentair BMF Systems help breweries create quality beer while meeting market demand through process efficiencies in predictable output and sustainable utility consumption.

#### Scope of Supply

- Complete BMF systems for every brewery:
  - 30-80 hl/hour                      Batch processing
  - 150-250 hl/hour                  Batch processing
  - 200-900 hl/hour                 Batch processing
  - 200-900 hl/hour                 Continuous processing
- In-house membrane technology
- Optional smart steering function
- Inline cleaning capability



# CLEAR CONSISTENCY



## BENEFITS

- Satisfy customers with brewed perfection
- Reduce system downtime with dedicated service
- Ecofriendly, cleaner operation with membranes
- Benefit from predictable output
- Retain flexibility with system agility

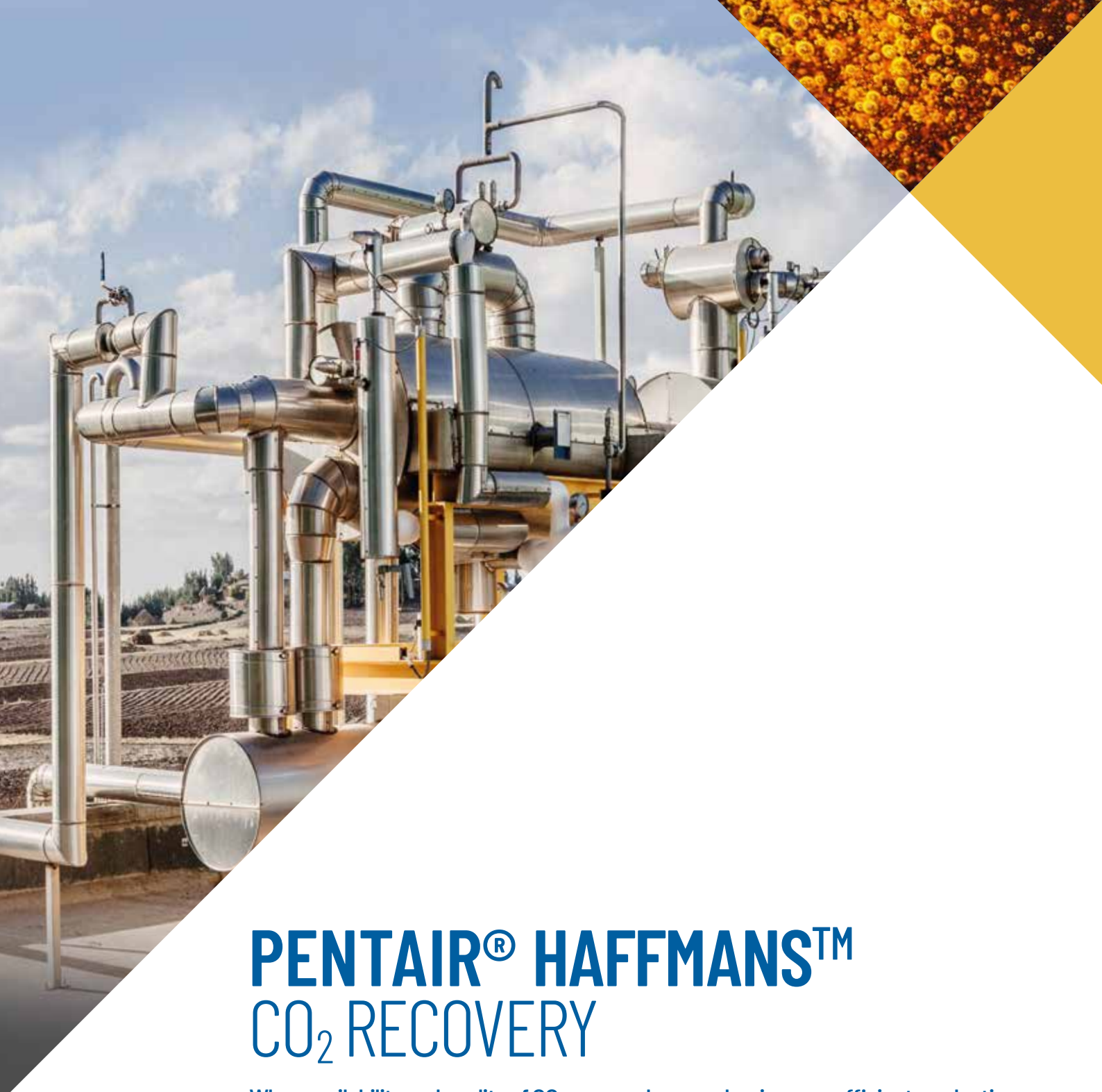
# NURTURING INGREDIENTS



## BENEFITS

- Become CO<sub>2</sub> self-sufficient
- Reduce your carbon footprint
- Access technical support should you need it
- Benefit from the flexibility of a compact skid mounted design for quick installation





# PENTAIR® HAFFMANS™ CO<sub>2</sub> RECOVERY

**When availability and quality of CO<sub>2</sub> sources become key in every efficient production process, capturing and using your own food-grade CO<sub>2</sub> becomes valuable.**

**Pentair Haffmans recovery systems are designed to recover CO<sub>2</sub> from the fermentation processes at your own brewery, ensuring self sufficient CO<sub>2</sub> supply – for high efficiency, maximized resource availability and reliable processes.**

#### **Scope of Supply**

- Standard, Containerized or Customized CO<sub>2</sub> Recovery Units
- CO<sub>2</sub> Liquefaction Units
- Gas Washer
- Quality Control Management
- Process Engineering Expertise
- After Market Service

Pentair Haffmans CO<sub>2</sub> recovery solutions include containerized and plug-and-play units, based on amine and membrane technology. Start nurturing one of your most valuable ingredients and resources, CO<sub>2</sub>.



# PENTAIR® HIGH GRAVITY BREWING

Beer lovers around the world are constantly looking for new taste experiences and like to enjoy various beer types. The brewer's challenge is to not only create rich, flavorful and various beer types, but also to maximize product safety, optimize output, and deliver the highest quality beer possible.

**Pentair's High Gravity Brewing (HGB) Technology allows you to boost your brewery's capacity considerably and have a variety of products without having to invest in brewing house, tank or filter capacity.**

The idea behind HGB is to make and ferment wort with a high original wort content. Less water and energy are required and brewers are able to blend the brew into different end-products later.

Pentair High Gravity Brewing consists of a modular membrane filtration unit, water deaeration systems plus blending, carbonation and optional dosing units. This keeps the footprint of your process plant low and helps to avoid the cost associated with multiple process lines – to boost your brewing efficiency significantly.

#### Scope of Supply

- Beer Membrane Filtration Systems
- Water Deaeration & Distribution Systems
- Carbonation, Blending & Dosing Units
- Process Valve Technology
- Quality Control Equipment
- Process Engineering Expertise
- After Market Service



# BOOSTING EFFICIENCY

## BENEFITS

- Track and optimize your filtration process
- Turn brewery hindsight into foresight
- Ensure consistent product quality
- Reduce production risks
- Meet market demands



# CLEAN MEDIA



## BENEFITS

- Robust construction and flexible modular filter design
- Filter elements easy to be cleaned or replaced
- Easy up-and-down scaling of filter capacity
- High filter capacities possible





# PENTAIR® HAFFMANS™ MICROFILTRATION

**Whether you are producing beverages or working in an industry where hygienic processes are key, it is indispensable to filter gases, liquid and steam to prevent contamination of your process or product.**

**Pentair brings decades of experience with the Haffmans CPM range to bring your microfiltration to another level and to ensure hygienic, safe and clean media.**

#### **Scope of Supply**

- Robust construction and flexible modular filter design
- Filter elements easy to be cleaned or replaced
- Easy up-and-down scaling of filter capacity
- High filter capacities possible

Pentair Haffmans is your equipment supplier for filtering from pre-, sterile and venting to coalescence and activated carbon filters for gas filtration. Our other product ranges take care of the filtration of liquids and steam.

Pentair Haffmans CPM products help to maximize the process safety – adding clean media to your valuable products.



# PENTAIR® X-FLOW™ WATER & WASTEWATER TREATMENT

Many industries are facing increasing challenges in water and wastewater treatment to reduce the impact on the environment. In many parts of the world, water scarcity is a growing issue. In order to secure future access to reliable water sources, crucial reuse opportunities have to be seized today.

**With X-Flow, Pentair delivers membrane technology that is used to address these issues worldwide. We deliver you membrane technologies with low costs of ownership and high efficiency.**

Pentair X-Flow delivers membrane solutions and application know-how to OEMs and contractors. As a leading pioneer and developer of membrane-based filtration solutions, we believe membranes will be essential in the purification processes of the future. Considering the increasing global health and environmental concerns, and dwindling natural resources, we see membrane technology as essential for the health of our world and for continued access to safe, clean water.

#### **Pentair X-Flow Membrane+ Approach**

- Mitigate engineering and implementation risks
- Enables cost optimization
- Help avoid design errors and changes
- Committed to first-time-right project delivery and a smooth takeover by your customer



# IMPROVING WATER

## BENEFITS

- Reducing costs for waste disposal
- Lowering water consumption
- Acquire appealing energy
- Sustainable membrane filtration solutions

# OPTIMIZING PERFORMANCE



## BENEFITS

- Reduce process downtime
- Lower overall operational cost with regular service
- Optimize resource utilization
- Improve overall product quality





# PENTAIR® AFTER MARKET SERVICE

**You are operating a state-of-the-art production plant that requires optimal performance over the life cycle, with minimum production losses and strict compliance with industry regulations.**

**Together we achieve this with aligned service schedules, supported by adequately trained personnel and supply of original spare parts and consumables - to run your plant at full capacity and guaranteeing the required quality level at minimum operational cost.**

#### **Scope of Supply**

- After sales support & on-site repairs
- Training & supervision
- Original spare parts & consumables
- Preventive, predictive & corrective maintenance
- Remote program management via connected products
- Service Packages

Pentair's After Market Service offers a variety of options, tailor made to meet your specific requirements.

After sales support, on-site repairs, training and supervision, original spare parts and consumables, preventive and corrective maintenance plus remote program management will keep your plant up and running - that's what we call optimizing performance.

# STRONG BRANDS IN BREWING

## Pentair® Südmo™

Pentair Südmo Hygienic & Aseptic Process Valve Technology, manufactured in Riesbürg, Germany, and Hamilton, New Zealand, and assembled in the United States of America, offers more than 60 years of experience in stainless steel hygienic and aseptic process valves and fittings, complete manifolds and prefabricated units for the food, dairy, beverage, pharmaceutical, chemical, and cosmetic industries.

## Pentair® Haffmans™

Pentair Haffmans Quality Control Equipment and CO<sub>2</sub> Recovery Solutions, manufactured in Venlo and Enschede, The Netherlands, offers over 75 years of experience in quality control equipment, micro-filtration, and carbon dioxide (CO<sub>2</sub>) recovery systems for the brewing, soft drink, wine, bioethanol, and biogas industries.

## Pentair® X-Flow™

Pentair X-Flow Membrane Filtration Technology, manufactured in Enschede, The Netherlands, provides purification and filtration process solutions with a low total cost of ownership and high efficiency. Pentair X-Flow helps equipment manufacturers, engineering and construction contractors to exceed expectations with membranes that make the difference, even in the most challenging conditions.

## MAKING A REAL DIFFERENCE FOR YOU

Insist on Pentair for smart, sustainable brewing solutions.

Visit [foodandbeverage.pentair.com](https://foodandbeverage.pentair.com)



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