THINK OUTSIDE THE BOX

B°SMART™
External Filtration System
The B-SMART™ self-regulating system of Berghof Membranes that is positioned outside the bioreactor or feed tank and delivers clear advantages to improve your treatment process.

- **Self-regulating operation**
  The intelligently designed software of the B-SMART external system from Berghof Membranes continuously monitors system data in real time to control pump speed, backwash and cleaning frequency, thereby minimizing maintenance time and costs.

- **Fouling Control**
  The Berghof tubular PVDF membranes were designed with superior robustness to ensure long membrane life and easy cleanability. Based on the inside-out principle, feed flows in an axial direction inside the tube and clean water permeates through the membrane wall. This ensures superior fouling control.

- **Low Velocity & Low Energy**
  Berghof Membranes designed its innovative external system to help customers reduce energy costs. Through its advanced integrated software, the system automatically adjusts to varying feed conditions to operate at the lowest possible velocity to minimize energy usage.

- **Optimum Transmembrane Pressure (TMP)**
  Increasing TMP values pose a real challenge as a result of varying feed quality. The B-SMART self-regulating external system automatically adjusts system parameters to reduce fouling tendency and maintain optimum TMP values throughout the system.

- **Stable Permeate Flow**
  Regardless of feed flow and quality, the built-in intelligent software automatically adjusts system parameters to accommodate varying conditions to maintain desired output. Operators can count on the system’s performance to meet strict permeate standards and avoid costly shut-downs.

www.berghofmembranes.com
AUTOMATED CLEANING

The intelligent combination of variable velocity, backwashing, chemical enhanced backwash and cleaning in place makes the B-SMART system a revolutionary solution for the treatment of industrial effluent.

1. Variable crossflow velocity
If the normal TMP values are in excess of 10-15%, the system progressively increases crossflow velocity up to 2-3 m/s in order to create optimal turbulence to remove fouling & normalize TMP values.

2. Individual module backwash
If an increase in crossflow velocity is not sufficient to completely eliminate fouling, then the system will automatically initiate permeate backwash protocols.

3. Chemical-Enhanced Backwash
If neither increase in velocity or permeate backwash prove to be sufficient in restoring normal performance, the system implements a chemical-enhanced backwash to eliminate fouling.

4. Cleaning-In-Place (CIP)
In rare cases when abnormal fouling occurs in the wastewater, an automatic CIP is initiated to eliminate stubborn foulants.

www.berghofmembranes.com
BERGHOFF MEMBRANES
The leader in tubular membrane solutions

Berghof Membrane Technology GmbH (BMT), part of the Berghof Group, is the leading manufacturer of tubular membranes for the filtration and separation of process streams and wastewater in a variety of industries including dairy, landfills, food & beverage, chemical, pharmaceutical, and oil & gas.

BMT products are manufactured to the highest quality standards in the company’s fully automated facility in Eningen, Germany.

With more than 50 years of experience and over 1,000 installed systems across the globe, Berghof Membranes prides itself on the robustness, flexibility, energy efficiency and superior quality of its external filtration membranes and solutions.

When it comes to membrane filtration, think outside the box and contact Berghof Membranes today.

THINKING OUTSIDE THE BOX.

Many treatment systems are incapable of handling fluctuations in volume and concentration of industrial effluent and wastewater. In addition, these systems are prone to fouling and cleaning is a time consuming, costly and dirty process.

At Berghof Membranes we believe in external membrane filtration. Our treatment systems are placed outside the bioreactor or feed tank, which means the systems are easy to clean and maintain. Our membranes are superior in robustness, durability and fouling resistance.