



PURON[®] MBR

Solutions

Low energy, cost-effective MBR
wastewater treatment



Market-Driven Solutions

PURON® technology and solutions.

The Koch Membrane Systems' (KMS) family of PURON submerged membrane modules is providing industries and municipalities around the world with economical, comprehensive wastewater solutions.

Complete Solids Tolerance Solutions

Koch Membrane Systems offers a wide range of ultrafiltration products to meet any application challenge.

TARGA® II

Up to 50 mg/L

PURON® MP

Up to 1000 mg/L

PURON® HF

Up to 3,000 mg/L

PURON® MBR

Up to 15,000 mg/L

ABCOR®

Up to 500,000 mg/L

PURON Membrane

The PURON membrane, consisting of a 0.03 micron PVDF Ultrafiltration membrane provides excellent physical barrier to suspended solids, bacteria and other pathogens. The narrow pore size distribution ensures high permeability and sustainable operation.

PURON MBR Modules

The latest generation of high flux PURON modules for MBR applications are newly-designed and improved, while continuing to leverage the innovative PURON central aeration and single header design.

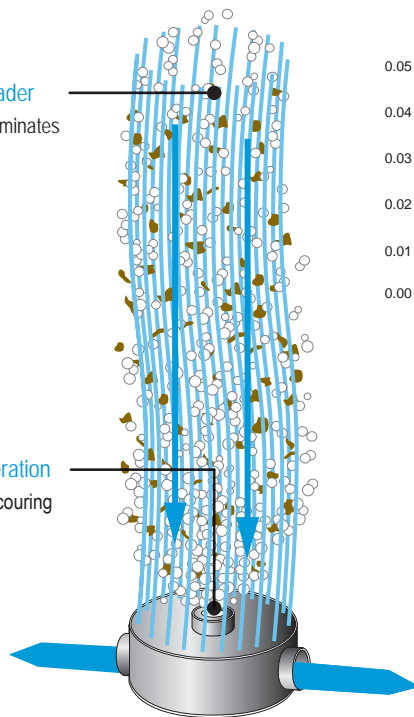
PURON MBR Systems

KMS isn't just a membrane company. PURON PLUS Engineered Systems feature comprehensive, complete packaged MBR systems for flow rates up to 200,000 GPD (760 m³/day). For larger flow rates, KMS offers pre-engineered modular MBR filtration systems for flow rates up to 1.8 MGD (6,840 m³/day) per train. KMS modular MBR systems can be arranged to meet almost any plant layout or required flow rate.

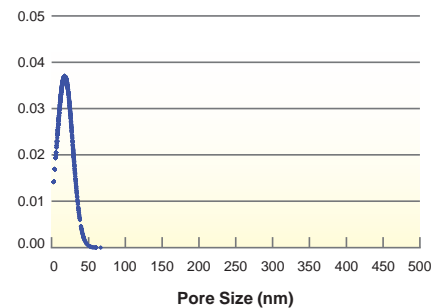
PURON Single Header Design

Single Header
Virtually eliminates clogging

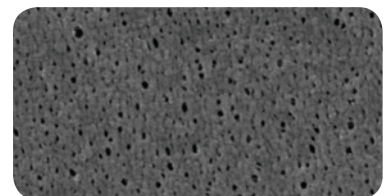
Central Aeration
Improves scouring efficiency



Tight Pore Size Distribution



SEM of PURON Membrane Surface



Value-Added Benefits

Our membrane bioreactor modules and systems bring energy-efficient solutions to communities everywhere.

Treatment plants faced with the challenges of a growing population, changing regulations, failing infrastructure, or outdated technology turn to KMS for answers.

Why PURON® MBR?

Unlike conventional wastewater treatment technology, PURON MBR ultrafiltration modules act as a physical barrier to bacteria, produce high quality effluent, require minimal space, and eliminate the need for secondary clarification.

PURON modules use a single header design with reinforced braided hollow fibers that are fixed only at the bottom. The sealed upper ends of the fibers are allowed to float freely. The modules are submerged in activated sludge, and a slight vacuum draws water from the outside wall of the fiber to the inside where it flows as clean filtrate. Only PURON modules position the aeration nozzle in the center of the fiber bundle to scour the entire fiber length, minimizing power consumption.

Not all submerged MBR membrane modules are the same. PURON single header design has quickly become the technology of choice for companies looking to reduce energy, minimize downtime, and increase flux, all within a small footprint.

Over 200 PURON MBR installations worldwide in municipal and industrial applications



Santa Paula, California USA

3.2 MGD (12,000 m³/day) MBR System for treatment of municipal wastewater



Aquapolo, São Paulo, Brazil

14.8 MGD (56,200 m³/d) Tertiary MBR System for treatment of municipal wastewater



Dongyang, Nanjing, China

13.2 MGD (50,000 m³/d) MBR system for treatment of a mixture of Industrial and Municipal Wastewater



Taixing, Jiangsu, China

13.2 MGD (50,000 m³/d) MBR system for treatment of a mixture of Industrial and Municipal Wastewater



Benefits

Built-in Reliability

- Single header design – minimal clogging
- Braided membrane fibers – no fiber breaks, minimal downtime
- Central aeration – highly effective, crash-resistant air scouring

Low Life-cycle Costs

- Efficient system design – less infrastructure, lower construction costs
- One of the lowest energy demand products in the market
- Best solids management – high productivity
- Title 22 compliant

The PURON® MBR Solution

Our best-in-class designs provide a truly integrated solution, from membrane chemistry, morphology and fabrication to process and application design, with dedicated technical support every step of the way.

KMS isn't just a membrane company. The KMS global team of engineers is ready to assist you with:

- Process & System Design
- Project Management
- Piloting
- Start Up and Commissioning
- Mechanical Design
- KMS ASSIST® Service and Maintenance Program
- Global Fabrication

Piloting – Unique solutions are our specialty...

Not all process streams are alike. New and specialized applications can benefit from pilot testing to develop and validate system designs.

Our Process Engineering Group stands ready to support those applications that require more process expertise, attention or testing. With a sizeable inventory of pilot systems in our fleet, a testing program can be up and running at your facility in a matter of days.



Contact your local Koch Membrane Systems representative for more information:

Corporate Headquarters

Koch Membrane Systems, Inc.

850 Main Street
Wilmington, Massachusetts 01887-3388
USA

Tel: +1-888-677-KOCH

Tel: +1-978-694-7000

Fax: +1-978-657-5208

International Offices

Europe/Middle East/Africa

Aachen, Germany
Dubai, UAE
Lyon, France
Madrid, Spain
Rogierowko, Poland
Stafford, United Kingdom
Vimercate, Italy
Wijnegem, Belgium

Asia/Pacific

Beijing, China
Mumbai, India
New Delhi, India
Shanghai, China
Singapore
Sydney, Australia

Latin America

Sao Paulo, Brazil

For complete contact information, visit:

www.kochmembrane.com

KOCH
MEMBRANE SYSTEMS