

A close-up photograph of a dense array of yellow, cylindrical hollow fiber membranes, showing their circular cross-sections.

**PURON® MP**

# Solutions

Outside-In Hollow Fiber  
Treatment System for High Solids  
Water and Wastewater



# Market-Driven 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

*Meet the new standard in high solids water and wastewater treatment...*

### The PURON MP System Advantage:



**AVOID PRETREATMENT** – The PURON MP system's high flux and solids tolerance properties can eliminate the need for costly clarifiers and chemical pretreatments in tough applications.



**LESS DOWNTIME** – Polyester reinforced membranes and a unique single potting design help to avoid downtime associated with frequent cleaning cycles, sludging and fiber repair.



**LESS CHEMICALS** – Superior chemistry and a tight pore structure deliver more stable membrane performance without the need for extensive chemical cleans.



**SIMPLE OPERATION** – Minimal system connections, an intelligent user interface and outstanding membrane reliability make PURON MP one of the easiest-running filtration systems available.



**SAVE MONEY** – Superior output, simplified operation, reduced maintenance and pretreatment costs and a compact footprint all add up to cost savings for you!

The PURON® MP hollow fiber ultrafiltration system is an innovative, cost-effective solution for a variety of water and wastewater treatment applications.

### Primary Applications:



#### Industrial Water Solutions

- Achieves higher recoveries
- Removes suspended and colloidal solids
- Saves space versus conventional treatment



#### Tertiary Wastewater Treatment

- Can handle clarifier upsets
- Able to tolerate high coagulant doses for Phosphorus removal



#### Seawater Pre-treatment

- Requires significantly less space
- Longer RO membrane life
- Low overall operating cost



#### Potable Water Treatment

- Greater than 4-log removal of Giardia and Crypto
- Suited for turbid surface waters
- Handles high coagulant doses for TOC/Color removal

# Meaningful Product Features

*Easily installed and serviced, PURON® MP systems are designed for longevity and performance.*

Whether it's one of our standard systems or a custom-designed solution, the PURON MP system offers robust engineering and reliable operation in a fully scalable filtration system ranging from 6 to 80 high-output UF cartridges.

## The PURON MP System Design

### Excellent Membrane Chemistry

PVDF chemistry, tight UF pore size at 0.03 micron and narrow pore size distribution result in high, sustainable flux rates up to 60 gfd (100 lmh).

### Robust Fiber

The PURON polyester reinforced fibers are virtually unbreakable. Treatment systems utilizing the PURON MP product enjoy uninterrupted operation, low maintenance costs and minimal manpower for fiber repair.

Proprietary fiber tip seal



### Superior Cartridge Design

Single potting and improved aeration design eliminate internal cartridge sludging, improved solids drainage and allows operating at high solids loading at reduced cleaning frequency.

### Complete PURON MP System

Compact "6 Pack" Skid Design shown

Operation in "Dead End" mode leads to minimal system connections, simple system design and low capital costs.

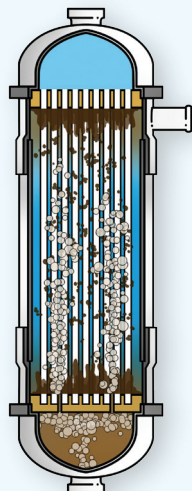


## A New Configuration in Hollow Fiber Membranes

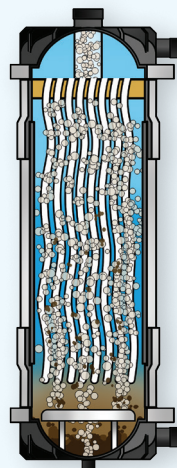
The unique free fiber construction offers the most effective solids management in the market

### Traditional Designs – Potting at Both Ends

Tightly packed dual-header designs restrict fiber movement creating dead zones where solids can accumulate. This "fiber sludging" reduces membrane surface area, system output and energy efficiency.



VS



### PURON MP Design – Single Potting

The innovative single-potting design allows the membrane fibers to move freely within the cartridge. This open configuration permits aeration to penetrate the fiber bundle and release filtered solids during air scouring.



# The PURON® MP 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
- Piloting
- Mechanical Design
- Global Fabrication
- Project Management
- Start Up and Commissioning
- KMS ASSIST® Service and Maintenance Program



## 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.



The PURON MP Pilot unit is a skid-mounted, fully automated, and easily installed system.

Contact your local Koch Membrane Systems representative for more information:

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