ZeeWeed* membranes for municipal drinking water
ZeeWeed membranes provide more public health protection and system reliability

Are you confident that your existing water treatment system can protect your community from viruses, bacteria and other harmful pathogens? From greenfield plants to retrofits, more communities are trusting ZeeWeed membranes to safeguard public health and ensure regulatory compliance—at a cost that is comparable to conventional technology.

As the pioneer of membrane technology, SUEZ draws on decades of research, development, and operational experience to bring water treatment plants of all sizes to communities throughout the world. From large membrane plants, capable of treating 100 MGD (380 MLD), to compact and cost-effective packaged plants for small towns, ZeeWeed systems consistently outperform conventional technology and meet or exceed increasingly stringent regulatory requirements—regardless of source water quality.

No matter what the water source, SUEZ’s unique offering of reinforced and high efficiency hollow fiber membranes provide outstanding versatility and value for water treatment plants, that ensure the best available protection from waterborne pathogens today, and well into the future.

The advantages of ZeeWeed membranes include:
- Pressurized or immersed systems to suit the application;
- Reduced lifecycle costs and extended membrane life;
- Simplified design and operation;
- Smaller footprints with reduced land acquisition costs;
- Outside-in flow path provides a more robust system;
- Consistent performance through virtually any change in raw water quality.

Membranes are based on filtration methods found throughout nature. ZeeWeed membranes are hollow polymer fibers with billions of microscopic pores on the surface. The pores are much smaller in size than common contaminants, bacteria and viruses. This physical barrier only allows clean water to pass while rejecting impurities—guaranteeing an exceptional water quality and clarity on a continuous basis. Application of pressure outside or a slight vacuum inside the fiber is all that is required to draw water into the membrane and filter out impurities.

ZeeWeed 1000 and 1500 series
- High efficiency design ensures low capital, operating and lifecycle costs
- Operator-friendly design
- Extremely compact footprint
- Ideal for retrofits

Typical drinking water treatment results
- **Bacteria** ………………………………………………………………………………………………………………… > 4-log removal
- **Giardia Cysts** ………………………………………………………………………………………………………………… > 4-log removal
- **Cryptosporidium Oocysts** ………………………………………………………………………………………………… > 4-log removal
- **Viruses** – ZeeWeed 500 …………………………………………………………………………………………………… > 2.0-log removal
- **Viruses** – ZeeWeed 1000 …………………………………………………………………………………………………… > 3.5-log removal
- **Turbidity** ………………………………………………………………………………………………………………………… < 0.1 NTU
- **Iron** ………………………………………………………………………………………………………………………………… < 0.05 mg/L†
- **Manganese** ……………………………………………………………………………………………………………………… < 0.02 mg/L†
- **TSS** ………………………………………………………………………………………………………………………………… < 1 mg/L
- **TOC** …………………………………………………………………………………………………………………………… 50-90% removal‡†
- **Asbestos** ………………………………………………………………………………………………………………………… < 5 µg/L
- **Color** …………………………………………………………………………………………………………………………… < 5 PCU‡†

‡ TOC and color removal is dependent on raw water quality
† pretreatment required

The advantages of ZeeWeed membranes include:
- Reinforced structure ensures long life
- Highest solids tolerance of any hollow fiber membrane
- Works through virtually any raw water quality change or upset
- Does not require preclarification

Olivenhain, CA
34 MGD (128,700 m³/d)
ZeeWeed 500

Racine, WI
50 MGD (189,250 m³/d)
ZeeWeed 1000

Chestnut, Singapore
72 MGD (272,520 m³/d)
ZeeWeed 500
trusted reverse osmosis (RO) pretreatment

Operational experience has proven that consistent high quality pretreatment is critical for long-term, successful RO operation for seawater and brackish water desalination. ZeeWeed UF membranes are the preferred pretreatment to produce consistent high quality feedwater with a silt density index typically < 3, often < 2, turbidity < 0.1 NTU and TSS < 1 mg/L, ensuring peak RO performance regardless of raw water quality.

ZeeWeed pretreatment advantages include:

- Higher quality RO feedwater;
- Simplified pretreatment process;
- Extended RO membrane life;
- Increased RO system efficiency;
- Lower chemical requirements for pretreatment and cleaning;
- Simplified retrofit of existing granular media filters.

conventional RO pretreatment process

ZeeWeed simplified RO pretreatment process