

GE Water & Process Technologies

ZeeWeed* 1500 Pressurized Ultrafiltration Experienced Evolution



imagination at work

ZeeWeed 1500 – Experienced Evolution

As a pioneer of membrane technology, GE leverages decades of research, development, and operational experience in developing the pressurized ZeeWeed 1500, the newest, most advanced addition to our lineup of UF membrane water treatment solutions. ZeeWeed systems are proven to consistently outperform conventional filtration technology while meeting or exceeding regulatory requirements, regardless of source water quality.

Versatile and reliable, the pressurized ZeeWeed 1500 is ideally suited for use in numerous applications including water treatment, tertiary filtration and pretreatment for brackish and seawater desalination. Compared to granular filter media, ZeeWeed systems produce superior water quality, provide simple, automated operation, and are virtually unaffected by variable raw water quality—all at a cost comparable to conventional filtration technology.

The ZeeWeed 1500 Advantage

Drawing on knowledge gained at some of the world's first—and some of the world's largest—operating UF membrane facilities, the pressurized ZeeWeed 1500 is designed to offer outstanding versatility and value. From packaged plants offering quick delivery and rapid installation to custom solutions engineered to meet exact specifications, ZeeWeed 1500 systems provide municipal and industrial customers with a wide range of unique advantages:

- Low-fouling PVDF membrane chemistry requiring less frequent and less aggressive cleaning
- Outside-in filtration process providing uniform flow distribution and solids loading with no blocked fibers
- Ultrafiltration barrier to produce high quality effluent that meets or exceeds treatment requirements
- High solids tolerance, capable of handling high turbidity spikes and coagulant doses
- Lower chemical usage over comparable systems
- Compact module and simple rack design, with on-rack inspection capability
- Ability to retrofit other outside-in UF and MF systems
- Simple, automated operation
- Packaged and custom designs for greenfield or retrofit solutions



Robust, Versatile Performance

ZeeWeed 1500 provides outstanding performance and value for a wide range of municipal and industrial filtration needs.

Water Treatment

- Meet or exceed increasingly stringent water treatment requirements
- Provide high level of public health protection from water borne pathogens
- Produce high-quality feedwater for reverse osmosis or for industrial water needs

Typical Treated Water Results

Turbidity	< 0.1 NTU*
Bacteria	> 4-log removal
Giardia	> 4-log removal
Cryptosporidium	> 4-log removal
Virus	> 2.0-log removal
Iron	< 0.05 mg/L†

* 95% of the time

† Pretreatment Required

‡ TOC and color removal is dependent on raw water quality

Manganese	< 0.02 mg/L†
TSS	< 1 mg/L
TOC	.50–90% removal‡
Arsenic	< 5 µg/L
Color	< 5 PCU‡

Pretreatment for Reverse Osmosis

- High-quality feedwater enables RO systems to operate at peak performance with reduced fouling and less cleaning
- Simplify overall pretreatment process
- Protect RO membranes from upset caused by highly variable raw water quality

Typical Pretreatment Results:

TSS	≤ 1 mg/L
Turbidity	≤ 0.1 NTU*
Silt Density Index	≤ 3

* 95% of the time

Tertiary Filtration

- Enhance treated effluent quality from secondary wastewater treatment process
- Easily retrofit underperforming granular media with advanced membranes
- Restore wastewater to high-quality treated effluent that can be safely reused for irrigation, aquifer recharge, or industrial process water

Typical Tertiary Filtration Results:

TSS	≤ 1 mg/L
Turbidity	≤ 0.1 NTU*
Silt Density Index	≤ 3

* 95% of the time

A Complete Portfolio of ZeeWeed Solutions

The pressurized ZeeWeed 1500 complements a growing family of GE UF membrane products engineered to provide an advanced, cost-competitive solution tailored to fit your needs, from a global industry leader in membrane filtration technology.

ZeeWeed 500

- Reinforced membrane fiber for longer life
- Highest solids tolerance of any hollow fiber membrane
- Robust performance through raw water quality changes or upsets
- Does not require preclarification
- Ideal for variable water quality and high levels of suspended solids



ZeeWeed 1000

- High efficiency design ensures low capital, operating and lifecycle costs
- Extremely compact footprint
- Ideal for retrofits of granular filter media
- Trusted solution for large-scale water treatment, and pretreatment for brackish and seawater desalination



ZeeWeed 1500

- Pressurized UF membrane for small- and medium size plants
- Packaged and custom skid-mounted designs for rapid delivery and installation
- Simple, compact rack design, with on-rack inspection capability
- Ability to retrofit conventional filter media and similar outside-in MF and UF systems



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