

ZeeWeed* Pressurized Ultrafiltration

FACT SHEET

Model ZW700B-8060 (Oil & Gas Industry)

Description and Use

As a pioneer of membrane technology, Veolia leverages decades of research, development, and operational experience to offer the most advanced ultrafiltration technology in the market.

The ZeeWeed 700B line of products contains our SevenBore* fiber technology with an inside-out flow orientation (Figure 1). The SevenBore fiber is regarded as the most robust polyethersulfone (PES) product on the market. The ZW700B membrane consistently outperforms conventional filtration technology while meeting or exceeding regulatory requirements and materials of construction requirements in the Oil & Gas Industry.

Typical Applications

Versatile and reliable, the pressurized ZeeWeed 700B is ideally suited for use in seawater applications in the Oil & Gas industry. Compared to granular filter media and cartridge filters, ZeeWeed membranes produce superior water quality and are virtually unaffected by variable raw water quality - all at a cost comparable to conventional filtration technology.

The horizontal configuration allows stacking elements in a compact fashion thereby reducing weight and space requirements. When used to pre-treat water in a sulfate removal process, the ZeeWeed 700B membrane extends the life of downstream RO or NF membranes by up to 70%, reduces maintenance requirements and provides a favorable OPEX compared to systems using conventional cartridge filters.



Figure 1: ZeeWeed 700B PES UF membrane

General Properties

- UF membrane – for optimal removal of particulates, bacteria and viruses
- PES membrane fibers with 7 bores - provides high mechanical strength (20x that of single fibers) and chemical resistance
- Inside-Out filtration – eliminates air scouring step and additional related equipment

Storage and Handling

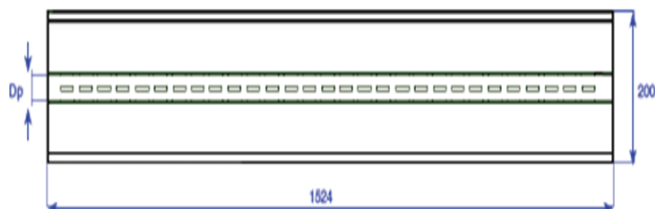
All elements are filled with glycerin when new, which is part of the fiber manufacturing and preservation process. Elements must be stored in a dry and normal ventilated location, away from any sources of heat, ignition and direct sunlight in the original packing. The storage temperature must be between 5°C and 35°C (45°F to 91°F).

Product Specifications

Description	Measurement
Model	ZeeWeed 700B-8060UF10/7B/X/0.8/40
Surface area	40 m ² (431 ft ²)
Max shipping weight¹	19 kg (42 lb)
Lifting weight²	19-25 kg (42-55 lb)
Membrane material	PES
Fiber diameter	OD: 3.6 mm, ID: 0.8 mm x 7
Flow path	Inside-Out
Membrane housing	PVC – 1524mm x Ø200mm
Module info	FRP 8" RO style housing

¹Packaged; ²Varies with solids accumulation

Product Dimensions



Typical Process Conditions

Description	Measurement
Maximum temperature	40°C (104°F)
Max pressure	5 bar (72.5 psi)
Typical operating TMP	< 1.0 bar (<14.5 psi)
TMP maximum	2.5 bar (36.3 psi)
Clean water flow	800 to 1000 l/m ² barh (32 to 41 gfd/psi)
Backwash flow	250 l/h (150 gfd)
Cleaning pH range	1.0-13.0
Hypochlorite	50-200 ppm
Hydrogen peroxide	100-200 ppm

Benefits for Offshore O&G

- Commercially proven configuration
- No air scouring required
- Higher backwash rates reduce system oversizing
- More compact footprint and lighter design compared to multi element vertical UF
- Increased reliability due to SevenBore fibers
- Supplier flexibility for future retrofits
- System availability greater than 95%
- Meets materials of construction requirements