nx filtration

Technical datasheet

WMC110 UF150

Hollow fiber ultrafiltration module for water and wastewater applications

Release TDS009 – WMC110 UF150, Rev. 01 - 20240704

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General Information

The WMC110 UF150 ultrafiltration module is used for potable water production, RO pretreatment, municipal and industrial wastewater treatment for low flow rates and pilots. These modules excel in removing turbidity, suspended solids, and virus and bacteria. The modules offer outstanding pH and chlorine resistance, excellent mechanical strength of the fibers, and improved fouling behaviour compared to existing ultrafiltration membranes.

Membrane characteristics

Membrane material	Modified PES
Membrane fiber inner diameter	0.8 mm (0.031”)
Pore size	0.02 µm
MWCO [1]	150 kDa
Filtration mode	Inside-Out; Vertical
Operation mode	Dead-end or cross-flow

Operating Conditions [2]

Typical flux	50 – 100 l/m²/h (30 – 60 gfd)
Backwash flux	100 – 250 l/m²/h (60 - 150 gfd)
Max. system pressure [3]	5 bar (72 psi)
Max. transmembrane pressure [3]	3 bar (44 psi)
Max. backwash pressure [3]	3 bar (44 psi)
Max. active chlorine concentration	500 ppm @ pH>10
Max. cumulative active chlorine exposure	250,000 ppm-hours @ pH>10
Max. particle size	200 µm
Max. TSS	200 ppm
Max. turbidity	100 NTU
Max. Temperature during operation & cleaning	40°C (104°F)
pH range during operation	2-12
pH range during cleaning	1-13

[1] Molecular Weight Cut Off (MWCO) is an estimation as it depends on size, shape, charge and polarity of the compound being tested, as well as test conditions. Measured with dextran.
[2] The limitations shown here are for general use. The values may be more conservative for specific projects to ensure the best performance and longest life.
[3] Maximum pressures at 20°C (68°F).

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Module Specification – Union

Materials of Construction

Housing	PVC-U
Potting	Epoxy resin

Dimensions

Membrane Surface Area	14.7 m²
L1.0	1546 mm (60.87”)
L1.1	132 mm (5.20”)
L2.0	1678 mm (66.08”)
L2.1	61 mm (2.40”)
D1.0	110 mm (4.33”)
D1.1	1.0” BSP
D1.2	5.0” BSP
D2.0	110 mm (4.33”)



Assembly Components

(1) Module	WMC110 UF150
(2) Union end	TP 110mm Union End
(3) Nut	TP 110mm Wartel
(4) O-ring	TP End Cap O-ring 110mm

Available Sets (Components 1-4)	WMC110 UF150 Union Set	WMC110 UF150 Union US Set [5]
Set-Code	SETUF0022	SETUF0037

[5] US Sets include additional transition pieces (not shown) for permeate and feed/concentrate connections to allow for connection to standard US piping (permeate: 1”; feed/concentrate; 2.5”). For further information, please contact your local sales representative.

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Storage Information

New modules in original packaging can be stored for max. 1 year from shipping date in a dry place, protected from sunlight or any heat source, at temperatures between 1 and 40°C (33 and 104°F);

Ex-factory storage solution: 84wt% water, 15wt% glycerin and 1wt% sodium metabisulfite;

Weight Information

Weight	WMC110 UF150 Union Set
Dry weight Module including assembly components	12.5 kg (28 lbs)
Filled Module including assembly components	25 kg (55 lbs)

Shipping Information

Each module is individually packed in a vacuum sealed plastic bag. Modules and assembly components are shipped in the same cardboard box:

- Shipping weight per box: 15 kg (33 lbs.);
- Box dimensions: 180 x 25 x 25 cm; 70.9 x 9.8 x 9.8 in (L x W x H);

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