nx filtration

Technical datasheet

WMC200 UF150

Hollow fiber ultrafiltration module for water and wastewater applications

Release TDS007 – WMC200 UF150, Rev. 01 – 20240704

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General Information

The WMC200 UF150 ultrafiltration module is used for potable water production, RO pretreatment, municipal and industrial wastewater treatment. 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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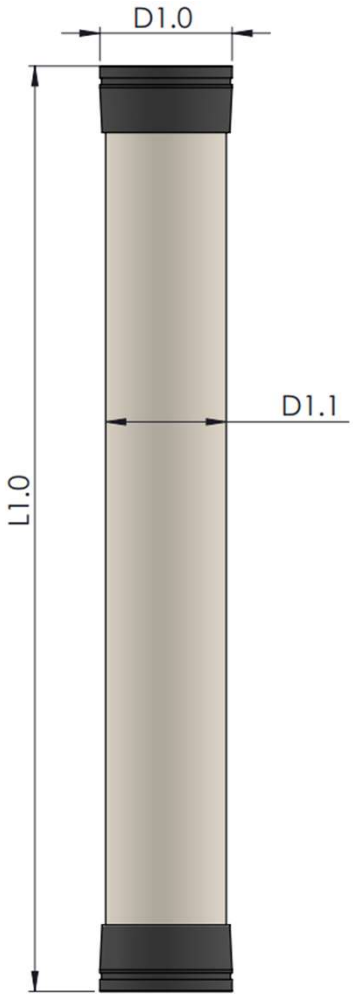
Module Specification

Materials of Construction

Housing	PVC-U
Internals	ABS/PP/Noryl
Potting	Epoxy resin

Dimensions

Membrane Surface Area	43 m²
L1.0	1537 mm (60.51”)
D1.0	Victaulic OGS-groove 8"
D1.1	200 mm (7.87”)



Available Module type	WMC200 UF150
Product-Code	ELEUF0020

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;

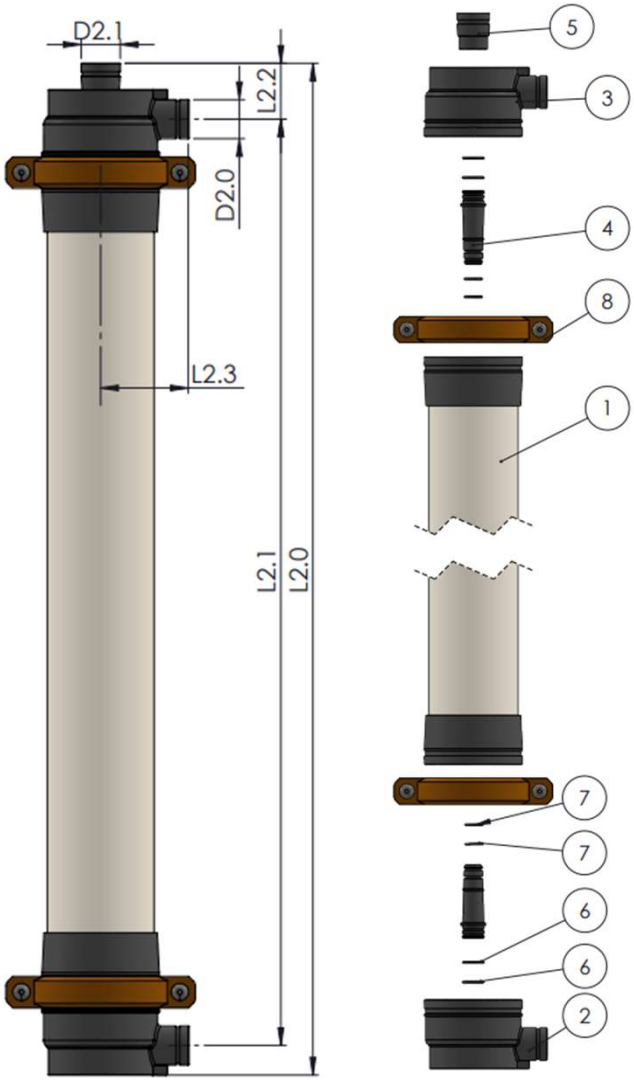
WMC200 UF150

Connection Configuration – Groove

The WMC200 is a stand-alone filtration module designed for vertical skids. Its flexible and expandable concept allows for easy integration with individual connections for feed, concentrate, and permeate. It seamlessly adapts to customer-built skids, providing efficient and reliable filtration in a compact, open-platform design.

Dimensions

L2.0	1900 mm (74.80”)
L2.1	1739 mm (68.48”)
L2.2	105 mm (4.13”)
L2.3	165 mm (6.50”)
D2.0	2.5” Victaulic OGS groove
D2.1	2.5” Victaulic OGS groove



Assembly Components

(1)	WMC200 UF Module
(2)	End Cap Groove 8" Blank
(3)	End Cap Groove 8" Open
(4)	WMC200 groove permeate port
(5)	Permeate endcap connector
(6)	O-ring EPDM Ø40.8x4.6 mm
(7)	O-ring EPDM Ø34x4 mm
(8)	Victaulic Coupling Style 75 8" Gasket E

Available Set (Components 1-8)	WMC200 UF150 Groove Set
Set-Code	SETUF0020

WMC200 UF150

Weight Information

Weight	WMC200 UF150 Groove Set
Dry weight Module (without assembly components)	27.5 kg (61 lbs)
Dry weight Module including assembly components	37.5 kg (83 lbs)
Filled Module including assembly components	78 kg (172 lbs)

Shipping Information

Each module is individually packed in a vacuum sealed plastic bag. For small quantities, modules and endcaps are shipped in separate cardboard boxes:

- Shipping weight per module: 34.5 kg (76 lbs.);
- Shipping weight per endcap assembly (2 end caps + grooved couplings): 11 kg (24 lbs.);

For large shipments, modules are loaded in a wooden crate with a max. of 20 modules per crate:

- Crate dimensions: 100 x 126 x 173 cm; 40 x 50 x 68 in (L x W x H);
- Shipping weight per crate (20 modules), excl. assembly components: 630 kg (1389 lbs.)

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