

WMC200 dNF

Hollow fiber nanofiltration membrane module for water
and wastewater applications

WMC200 dNF

General Information

The WMC200 dNF modules are designed for water treatment, including ground and surface water, as well as industrial and municipal wastewater reuse. These modules excel in removing color, turbidity, and dissolved organic molecules, including micropollutants such as pharmaceuticals, pesticides, and PFAS. The modules offer outstanding pH and chlorine resistance, require minimal pretreatment, no coagulation, and produce no sludge.

With dNF40 and dNF80, two different types of dNF membranes are available offering different flux and rejection characteristics. The choice between dNF40 and dNF80 depends on specific requirements and objectives of the application.

Membrane characteristics

Membrane material	Modified PES
Membrane charge	Negative @ pH=7
Membrane fiber inner diameter	0.7 mm
Filtration mode	Inside-Out; Vertical
Operation mode	Cross-flow

Product specifications	dNF40	dNF80
MWCO ¹	400 Dalton	800 Dalton
Min. MgSO ₄ rejection ²	91%	76%
Typical permeate flow range	0.5-1.1 m ³ /h (2.2-4.9 gpm)	0.65-1.3 m ³ /h (2.9-5.7 gpm)

Operating Conditions

Max. system pressure ³	6 bar (87 psi)
Max. transmembrane pressure ³	6 bar (87 psi)
Max. backwash pressure	4 bar (58 psi)
Max. active chlorine concentration	500 ppm @ pH>10
Max. cumulative active chlorine exposure	250,000 ppm-hours @ pH>10
Max. particle size	150 µm
Max. TSS	300 ppm
Max. turbidity	150 NTU
Max. Temperature during operation & cleaning	40°C (104°F)
pH range during operation	2-12
pH range during cleaning	1-13
Cross-flow velocity range ⁴	0.1-1.0 m/s (0.33-3.3 ft/s)
Module feed flow range	2.1-21 m ³ /h (9.2-92 gpm)

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 PEG.

² Test conditions: 5.0 mMol/L MgSO₄, 3.0 bar, 20°C, v=0.5 m/s.

³ Maximum pressures at 20°C.

⁴ Recommended velocity depends on feed water quality and system configuration.

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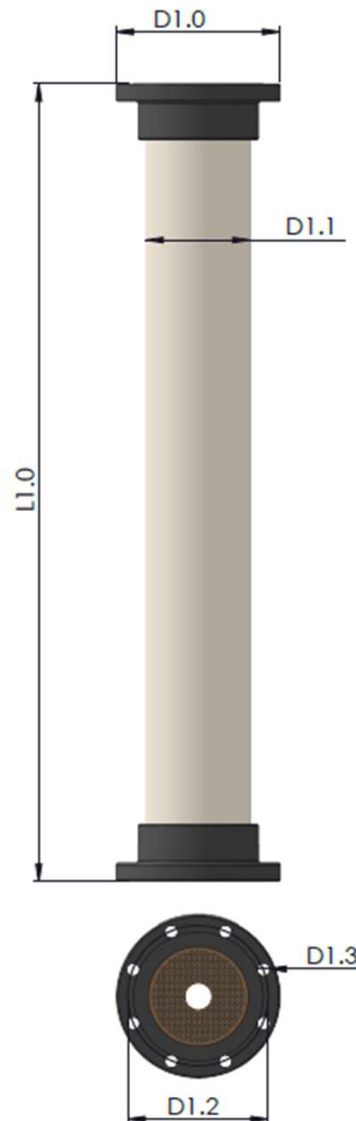
Module Specification

Materials of Construction

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

Dimensions

Membrane Surface Area	43 m ²
L1.0	1536 mm (60.47")
D1.0	315 mm (12.40")
D1.1	200 mm (7.87")
D1.2	270 mm (10.63")
D1.3	22 mm (0.87")



Available Module types

	WMC200 dNF80	WMC200 dNF40
Product-Code	ELENF0001	ELENF0002

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;

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Connection Configuration – Flange

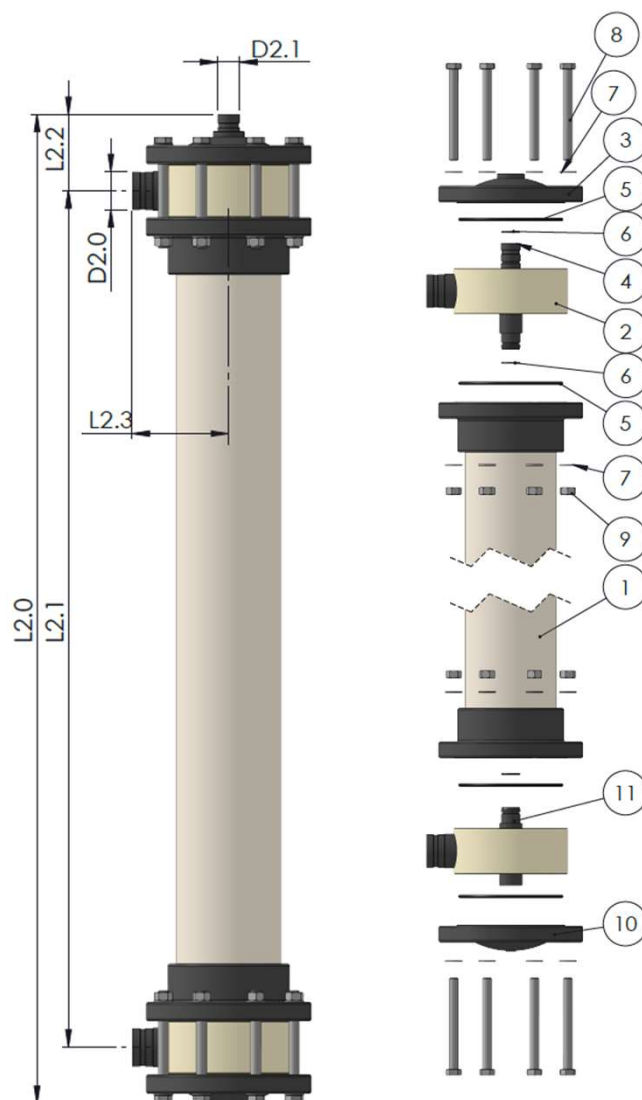
The WMC200 is a stand-alone filtration module designed for vertical skids. Its flexible and expandable concept allows for easy integration with individual connections for feed, concentrate, and permeate. It seamlessly adapts to customer-built skids, providing efficient and reliable filtration in a compact,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

Dimensions

L2.0	1891 mm (74.45")
L2.1	1637 mm (64.45")
L2.2	146 mm (5.75")
L2.3	184 mm (7.24")
D2.0	2.5" Victaulic OGS groove
D2.1	1.25" Victaulic OGS groove

Assembly Components

(1)	WMC200 dNF Module
(2)	Intermediate Ring
(3)	Flange (open; top side)
(4)	Permeate interconnector (open; top side)
(5)	O-ring EPDM Ø215.27×6.99 (feed side)
(6)	O-ring EPDM Ø34.52×3.53 (permeate side)
(7)	Washer DIN125-M20
(8)	Hexbolt DIN931-M20×200
(9)	Hexnut DIN934-M20
(10)	Flange (closed; bottom side)
(11)	Permeate interconnector (closed; bottom side)



Available Sets (Components 1-11)

WMC200 dNF80 Flange Set

WMC200 dNF40 Flange Set

Set-Code	SETNF0001	SETNF0002
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WMC200 dNF

Weight Information

Weight	WMC200 dNF Flange Set
Dry weight Module (without assembly components)	35.5 kg (78.5 lbs)
Dry weight Module including assembly components	56.5 kg (124.5 lbs)
Filled Module including assembly components	110 kg (242.5 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: 45.5 kg (100.5 lbs.);
- Shipping weight Flange assembly components (flanges, rings, connectors, o-rings, bolts, nuts, washers): 22 kg (48.5 lbs.);

For large shipments, modules are loaded in a wooden crate with a max. of 8 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 (8 modules), excl. assembly components: 410 kg (904 lbs.)

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