



filtration

HYDROFLUX
industrial

WRC200 dNF40 Integrated Rack Design

**Technical
Datasheet**

Hollow fiber nanofiltration membrane module for water
and wastewater applications

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Product description

The WRC200 dNF40 Integrated Rack Design nanofiltration modules have the following features:

- Use for treatment of ground and surface water; reuse of industrial and municipal wastewater effluents;
- Excellent removal of color, turbidity, divalent ions and dissolved organics, including micropollutants;
- Inside-out operation in a cross-flow filtration mode, backwashable;
- Limited pretreatment required, no coagulation and no sludge production;
- Vertical mounting with rack connection capability;
- Excellent pH and chlorine tolerance;

Membrane specifications

| | |
|---|-----------------|
| Membrane material | Modified PES |
| MWCO ¹ | 400 Dalton |
| Min. MgSO ₄ rejection ² | 91% |
| Membrane charge | Negative @ pH=7 |
| Membrane fiber inner diameter | 0.7 mm |

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.

² Test conditions: 5.0 mMol/L MgSO₄, 3.0 bar, 25°C, v=0.5 m/s.

Typical operating ranges

| | |
|--|---|
| Max. system pressure ³ | 10 bar (145 psi) |
| Max. transmembrane pressure ³ | 6 bar (90 psi) |
| Max. backwash pressure ³ | 6 bar (90 psi) |
| Max. temperature during operation & cleaning | 40°C (104°F) |
| pH range during operation | 2-12 |
| pH range during cleaning | 1-13 |
| Max. active chlorine concentration | 500 ppm @ pH>10 |
| Max. cumulative active chlorine exposure | 250,000 ppm-hours @ pH>10 |
| Cross-flow velocity range ⁴ | 0.1 – 1.0 m/s (2.25 – 22.5 m ³ /h per module) 0.33 – 3.3 ft/s (9.9 – 99 gpm per module) |

³ Maximum pressures at 20°C.

⁴ Recommended velocity depends on feed water quality.

Feed water specifications

| | |
|--------------------|---------|
| Max. TSS | 300 ppm |
| Max. turbidity | 150 NTU |
| Max. particle size | 150 µm |

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Module specifications

Membrane Surface Area 50 m² (538 ft²)

Module Dimensions

| | | | |
|----|------------------|----|-------------------------|
| L1 | 1534 mm (60.39") | D1 | 200 mm (7.87") |
| L2 | 196 mm (7.71") | D2 | 168 mm (6.61") |
| L3 | 84 mm (3.30") | D3 | 2.0" Victaulic Style 75 |
| L4 | 256 mm (10.07") | D4 | 219 mm (8.62") |
| L5 | 2046 mm (80.55") | | |
| L6 | 1878 mm (73.94") | | |
| L7 | 339 mm (13.35") | | |
| L8 | 365 mm (14.37") | | |

Materials of construction

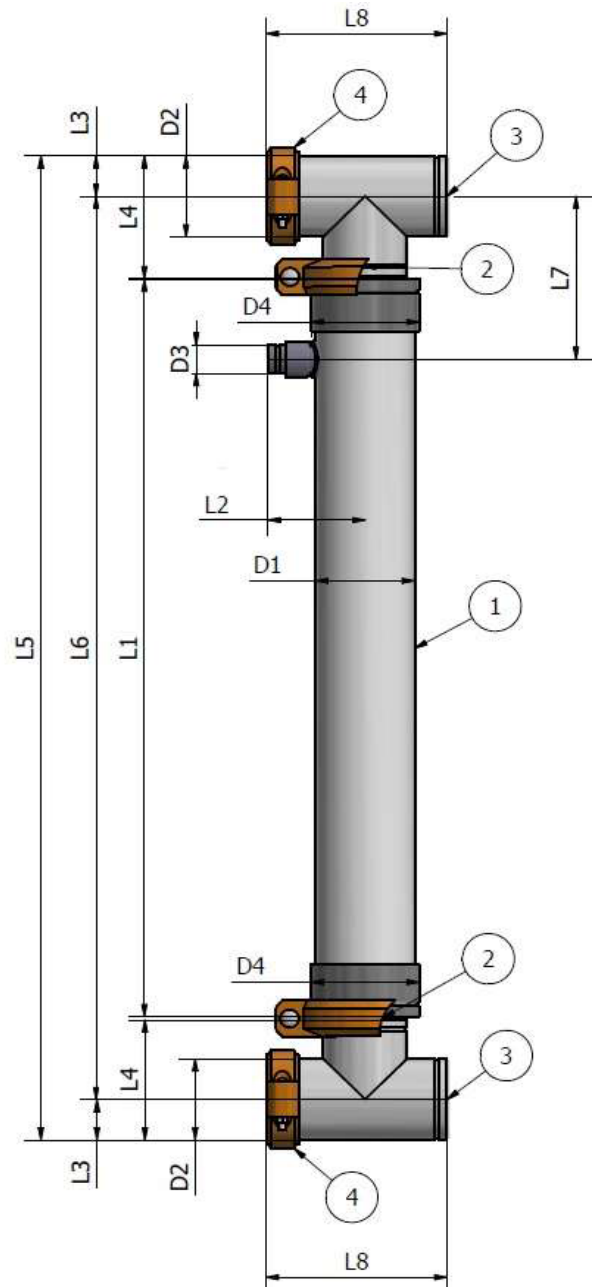
Housing PVC-U Cream

Internals PVC-U

Material Epoxy resin

Assembly components

1. Module
2. Feed/concentrate connection; Victaulic-CPVC-Reducing Coupling Style 358
3. Endcap; Victaulic-6" CPVC-Tee (No. 352)
4. Grooved coupling; Victaulic-CPVC-IR-Transition Coupling Style 357



Product certifications



K100616

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Weight information

- Module (without accessories): 33.5 kg (74.5 lbs);
- Module with all accessories (2 endcaps + grooved couplings): 52 kg (115.5 lbs);
- Module full of water and all accessories: 88 kg (194 lbs);

Storage instructions

- 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 0 and 40°C (32 and 104°F);
- Ex-factory storage solution: 79% water, 20% glycerin and 1% sodium bisulfite;

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;
- For large shipments, modules are loaded in a wooden crate with a max. of 20 modules per crate. Crate dimensions: 102 x 126 x 174 cm; 40 x 50 x 68 in (L x W x H)
- Shipping weight per module: 34.5 kg (76.5 lbs.);
- Shipping weight per endcap set: 18 kg (40 lbs.);
- Shipping weight per crate (20 modules), excl. endcap sets: 732.5 kg (1630 lbs.);

Release WRC200 dNF40 IRD -TDS 20210316

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