PureULTRA II Ultrafiltration

Pressure-driven UF modules

PureULTRA II modules feature a polyvinylidene fluoride (PVDF) hollow-fiber UF membrane that offers high chemical tolerance as well as physical robustness. The tight pore size helps in the removal of solids, pathogens, and other suspended foulants. The unique PVDF polymer allows the membrane modules to be cleaned aggressively without decline in operating flux or loss of membrane hydrophilicity. The membrane module design and optimum operating sequences provide consistent filtration efficiency and durability.

PureULTRA II UF modules can be used for a wide range of applications and can treat the entire spectrum of feed waters—including sea, surface, and well—as well as secondary and tertiary industrial and municipal wastewater.

This product specification sheet provides an overview of relevant technical data regarding PureULTRA II modules.

MEMBRANE CHARACTERISTICS

Membrane polymer	Polyvinylidene fluoride (PVDF)
Nominal pore size	0.025 µm
Membrane type	Hollow fiber
Hollow fiber diameter OD/ID	1.3/0.7 mm (0.051/0.028 in)

MODULE SPECIFICATIONS

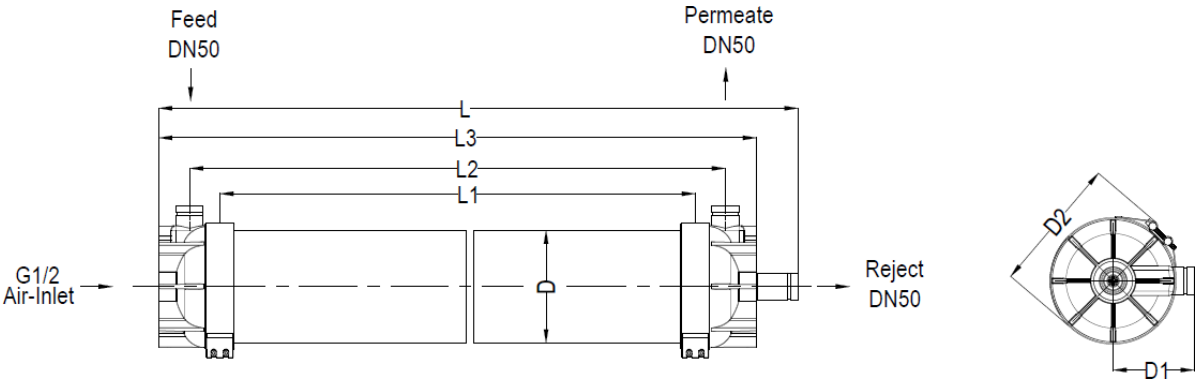
Housing material	UPVC
Membrane potting	Epoxy/PU
Filtration/backwash flow path	Out → in/in → out
Operating mode	Dead-end
Preservative	Sodium metabisulfite/glycerin

MODEL MEMBRANE AREA

PureULTRA II PHF-60-V	60 m^2 (646 ft^2)
PureULTRA II PHF-80-V	80 m^2 (861 ft^2)
PureULTRA II PHF-107-V	107 m^2 (1,152 ft^2)

PureULTRA II UF modules are certified to NSF/ANSI 61 and NSF/ANSI 419 standards and are manufactured in full compliance with the Halal requirements of Islamic law.

PHYSICAL DIMENSIONS



MODULE PARAMETERS	PHF-60-V	PHF-80-V	PHF-107-V
Dry/wet weight	51 kg (112 lb)/ 92 kg (202 lb)	54 kg (119 lb)/ 106 kg (234 lb)	62 kg (137 lb)/ 127 kg (280 lb)
Length (L)	1,507 mm (59.3 in)	1,860 mm (73.2 in)	2,360 mm (92.9 in)
L1	1,147 mm (45.2 in)	1,500 mm (59.1 in)	2,000 mm (78.7 in)
L2	1,277 mm (50.3 in)	1,630 mm (64.2 in)	2,130 mm (83.9 in)
L3	1,415 mm (55.7 in)	1,768 mm (69.6 in)	2,268 mm (89.3 in)
Module diameter (D)	250 mm (9.8 in)	250 mm (9.8 in)	250 mm (9.8 in)
D1	180 mm (7.1 in)	180 mm (7.1 in)	180 mm (7.1 in)
D2	300 mm (11.8 in)	300 mm (11.8 in)	300 mm (11.8 in)
Feed/reject port	2″ Victaulic	2″ Victaulic	2″ Victaulic
Permeate port	2″ Victaulic	2″ Victaulic	2″ Victaulic

OPERATING PARAMETERS	
Filtrate flow range	2.1–12.8 m^3/h (9.2–56.5 gpm)
Maximum feed pressure (at 20°C/68°F)	6.4 bar (92.8 psi)
Maximum transmembrane pressure	2.3 bar (33.4 psi)
Maximum backflush pressure	2.7 bar (39.2 psi)
Typical air scour rate	5–14 Nm^3/h (3.0–7.1 scfm)
Maximum air scour pressure	1.2 bar (17.4 psi)
pH range for operation	2.0–11.0
Temperature range	1–40 °C (33.8–104 °F)

CLEANING PARAMETERS	
pH range	2.0–12.0
Maximum temperature	40 °C (104 °F)
Maximum active chlorine concentration	3,000 ppm
Maximum active chlorine exposure	≤1,000,000 ppm·hour
Cleaning chemicals	Sodium hypochlorite, caustic, hydrochloric acid

IMPORTANT INFORMATION

Storage and handling: PureULTRA II modules must be handled and stored appropriately to ensure proper operation and prevent membrane damage. Please see the PureULTRA II User Manual.

Installation and start-up: PureULTRA II modules must be installed correctly before start-up. For a detailed installation and start-up procedure, please see the PureULTRA II User Manual.

Cleaning: PureULTRA II modules must be cleaned routinely via backwash to ensure proper operation and prevent membrane damage. Please see the PureULTRA II User Manual.

MANN+HUMMEL Water & Membrane Solutions reserves the right to change specifications without prior notification.

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