

PureULTRA II Ultrafiltration Pressure-Driven UF Modules

PureULTRA II modules feature Polyvinylidene Fluoride (PVDF) hollow fiber UF membrane that offers high chemical tolerance along with physical robustness. The tight pore size helps in 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 and 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 while treating the entire spectrum of feed waters from sea, surface, well, and secondary & tertiary wastewaters – both industrial and municipal.

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 mm / 0.7 mm (0.051 inch / 0.028 inch) |

MODULE SPECIFICATIONS

| | |
|--|----------------------------------|
| Housing Material | UPVC |
| Membrane Potting | Epoxy / PU |
| Filtration / Backwash Flow Path | Out → In / In → Out |
| Operating Mode | Dead-end / Cross-Flow |
| Preservative | Sodium meta-bisulphite/ Glycerin |

| Model | Membrane Area |
|-----------|--|
| PHF-60-V | 60 m ² (646 ft ²) |
| PHF-80-V | 80 m ² (861 ft ²) |
| PHF-107-V | 107 m ² (1152 ft ²) |

OPERATING PARAMETERS

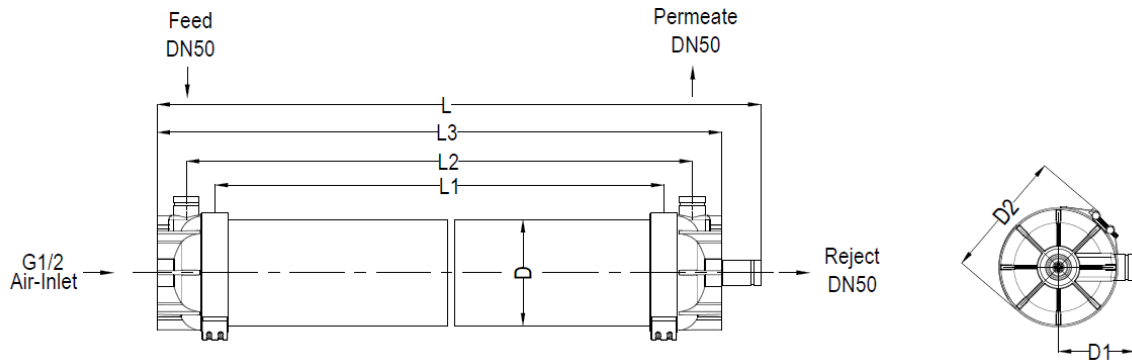
| | |
|---|--|
| Filtrate Flow Range | 2.4 - 12.8 m ³ /h (10.6 - 56.5 gpm) |
| Maximum Feed Pressure (at 20°C / 68°F) | 6.4 bar (92.8 psi) |
| Maximum Transmembrane Pressure | 2.3 bar (33.4 psi) |
| Maximum Backflush Pressure | 2.7 bar (39.2 psi) |
| Typical Air Scour Rate | 5 - 14 m ³ /h (3.0 - 7.1 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 | 1.0 - 12.0 |
| Maximum Temperature | 40°C (104 °F) |
| Maximum Active Chlorine Concentration | 2,000 ppm |
| Maximum Active Chlorine Exposure | >1,000,000 ppm-hours |
| Cleaning Chemicals | Sodium Hypochlorite, caustic, hydrochloric acid / sulfuric acid / citric acid |



PHYSICAL DIMENSIONS



| Model | L | L1 | L2 | L3 | D | D1 | D2 |
|-----------|----------------------|----------------------|----------------------|----------------------|--------------------|--------------------|---------------------|
| PHF-60-V | 1507 mm (59.3 in) | 1147 mm (45.2 in) | 1277 mm (50.3 in) | 1415 mm (55.7 in) | 250 mm (9.8 in) | 180 mm (7.1 in) | 300 mm (11.8 in) |
| PHF-80-V | 1860 mm (73.2 in) | 1500 mm (59.1 in) | 1630 mm (64.2 in) | 1768 mm (69.6 in) | 250 mm (9.8 in) | 180 mm (7.1 in) | 300 mm (11.8 in) |
| PHF-107-V | 2360 mm (92.9 in) | 2000 mm (78.7 in) | 2130 mm (83.9 in) | 2268 mm (89.3 in) | 250 mm (9.8 in) | 180 mm (7.1 in) | 300 mm (11.8 in) |

| | 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) |
| Module Diameter | 250 mm (9.8 in) | 250 mm (9.8 in) | 250 mm (9.8 in) |
| Module Length | 1507 mm (59.3 in) | 1860 mm (73.2 in) | 2360 mm (92.9 in) |
| Feed / Reject Port | 2" Victaulic | 2" Victaulic | 2" Victaulic |
| Permeate Port | 2" Victaulic | 2" Victaulic | 2" Victaulic |

IMPORTANT INFORMATION

Storage & Handling:

PureULTRA II modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see the PureULTRA Operation and Maintenance Manual.

Installation & Start-Up:

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

Cleaning:

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

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

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