

PureULTRA PHF-50-V (Retrofit Module)

Pressure-driven UF modules

PureULTRA PHF-50-V modules feature a polyvinylidene fluoride (PVDF) hollow-fiber ultrafiltration (UF) membrane that offers high chemical tolerance and 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 and loss of membrane hydrophilicity. The membrane module design and optimum operating sequences provide consistent filtration efficiency and durability.

These modules can be used for a wide range of applications and handle virtually any feedwater source, including seawater, surface water, well water, and secondary or tertiary wastewaters—for both industrial and municipal systems.

MEMBRANE CHARACTERISTICS

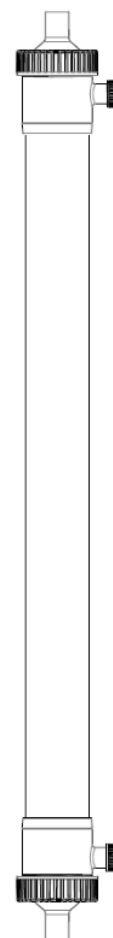
Membrane polymer	Polyvinylidene fluoride (PVDF)
Nominal pore size	0.025 µm
Membrane type	Hollow fiber
Hollow-fiber diameter OD/ID	1.3/0.7 mm (0.051/0.028 inch)

MODULE SPECIFICATIONS

Model	PureULTRA PHF-50-V
Nominal membrane area	50 m ² (538 ft ²)
Membrane potting	Epoxy/polyurethane (PU)
Filtration flow path	Outside in, dead-end flow

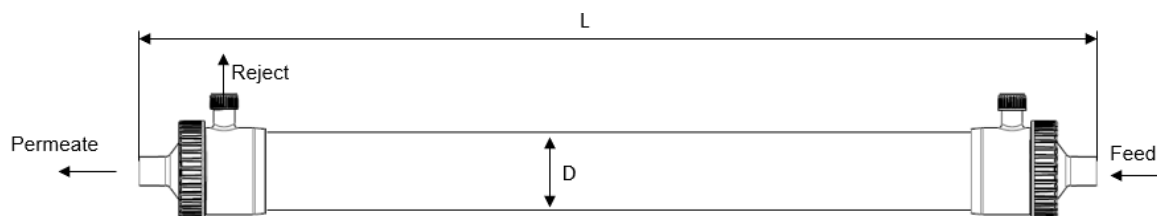
OPERATING PARAMETERS

Filtrate flow range	2.0-6.0 m ³ /h (8.8-26.4 gpm)
Maximum feed pressure (at 20°C / 68°F)	4.5 bar (65.3 psi)
Maximum transmembrane pressure	2.3 bar (33.4 psi)
Maximum backflush pressure	2.5 bar (36.3 psi)
Maximum air scour rate	12 m ³ /h (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	5,000 ppm
Maximum active chlorine exposure	≤ 1,000,000 ppm-hours
Cleaning chemicals	Sodium hypochlorite, caustic, hydrochloric/sulfuric/citric acid



PHYSICAL DIMENSIONS

Dry/wet weight	40 kg (88.2 lb) / 80 kg (176.4 lb)
Module diameter (D)	165 mm (6.5 in)
Module length (L)	2,418 mm (95.2 in)
Feed/permeate port	2"
Reject port	1.5"

IMPORTANT INFORMATION

Storage and handling:

Modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-50-V User Manual.

Installation and start-up:

Modules must be installed correctly before start-up. For a detailed installation and start-up procedure, please see the PureULTRA PHF-50-V User Manual.

Cleaning:

Modules must be cleaned routinely via backwash to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-50-V User Manual.

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

PureULTRA PHF-57-V (Retrofit Module)

Pressure-driven UF modules

PureULTRA PHF-57-V modules feature a polyvinylidene fluoride (PVDF) hollow-fiber ultrafiltration (UF) membrane that offers high chemical tolerance and 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 and loss of membrane hydrophilicity. The membrane module design and optimum operating sequences provide consistent filtration efficiency and durability.

These modules can be used for a wide range of applications and handle virtually any feedwater source, including seawater, surface water, well water, and secondary or tertiary wastewaters—for both industrial and municipal systems.

MEMBRANE CHARACTERISTICS

Membrane polymer	Polyvinylidene fluoride (PVDF)
Nominal pore size	0.025 µm
Membrane type	Hollow fiber
Hollow-fiber diameter OD/ID	1.1 / 0.65 mm (0.044/0.026 inch)

MODULE SPECIFICATIONS

Model	PureULTRA PHF-57-V
Nominal membrane area	55.7 m ² (600 ft ²)
Membrane potting	Epoxy/polyurethane (PU)
Filtration flow path	Outside in, dead-end flow

OPERATING PARAMETERS

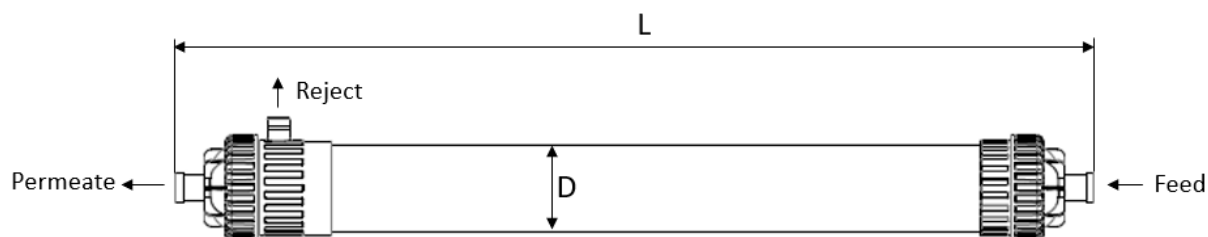
Filtrate flow range	2.2-6.7 m ³ /h (9.7-29.5 gpm)
Maximum feed pressure (at 20°C / 68°F)	4.5 bar (65.3 psi)
Maximum transmembrane pressure	2.3 bar (33.4 psi)
Maximum backflush pressure	2.5 bar (36.3 psi)
Maximum air scour rate	12 m ³ /h (7.1 scfm)
Maximum air scour pressure	1.2 bar (17.4 psi)
pH range 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-hours
Cleaning chemicals	Sodium hypochlorite, caustic, hydrochloric/sulfuric/citric acid

PHYSICAL DIMENSIONS



PHYSICAL DIMENSIONS

Dry/Wet Weight - kg (lb)	35 kg (77 lb) / 70 kg (154 lb)
Module diameter (D)	180 mm (7 in)
Module length (L)	1,919 mm (75.6 in)
Feed/permeate port	2" Victaulic
Reject port	1 ½" Victaulic

IMPORTANT INFORMATION

Storage and handling:

Modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-57-V User Manual.

Installation and start-up:

Modules must be installed correctly before start-up. For a detailed installation and start-up procedure, please see the PureULTRA PHF-57-V User Manual.

Cleaning:

Modules must be cleaned routinely via backwash to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-57-V User Manual.

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PureULTRA PHF-51-V (Retrofit Module)

Pressure-driven UF modules

PureULTRA PHF-51-V modules feature a polyvinylidene fluoride (PVDF) hollow-fiber ultrafiltration (UF) membrane that offers high chemical tolerance and 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 and loss of membrane hydrophilicity. The membrane module design and optimum operating sequences provide consistent filtration efficiency and durability.

These modules can be used for a wide range of applications and handle virtually any feedwater source, including seawater, surface water, well water, and secondary or tertiary wastewaters—for both industrial and municipal systems.

MEMBRANE CHARACTERISTICS

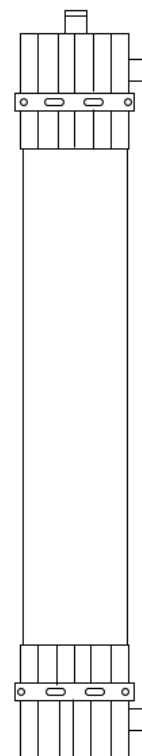
Membrane polymer	Polyvinylidene fluoride (PVDF)
Nominal pore size	0.025 µm
Membrane type	Hollow fiber
Hollow-fiber diameter OD/ID	1.3/0.7 mm (0.051/0.028 inch)

MODULE SPECIFICATIONS

Model	PureULTRA PHF-51-V
Nominal membrane area	51 m ² (549 ft ²)
Housing material	Unplasticized polyvinyl chloride (uPVC)
Membrane potting	Epoxy/polyurethane (PU)
Filtration flow path	Outside in, dead-end flow

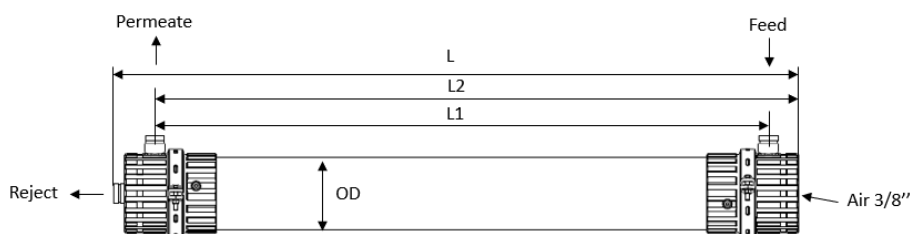
OPERATING PARAMETERS

Filtrate flow range	2.1–6.1 m ³ /h (9.2–26.9 gpm)
Maximum feed pressure (at 20°C/68°F)	6.25 bar (93.75 psi)
Maximum transmembrane pressure	2.3 bar (33.4 psi)
Maximum backflush pressure	2.5 bar (36.3 psi)
Maximum air scour rate	12 Nm ³ /h (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	2,000 ppm
Maximum active chlorine exposure	≤ 1,000,000 ppm-hours
Cleaning chemicals	Sodium hypochlorite, caustic, hydrochloric/sulfuric/citric acid



PHYSICAL DIMENSIONS

Dry/wet weight	48 kg (106 lb) / 83 kg (183 lb)
Module diameter (OD)	225 mm (8.9 in)
Module length (L)	1,860 mm (73.2 in)
L1	1,630 mm (64.2 in)
L2	18,20 mm (71.7 in)
Feed/reject port	2" Victaulic
Permeate port	2" Victaulic

IMPORTANT INFORMATION

- Storage and handling:** Modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-51-V User Manual.
- Installation and start-up:** Modules must be installed correctly before start-up. For a detailed installation and start-up procedure, please see the PureULTRA PHF-51-V User Manual.
- Cleaning:** Modules must be cleaned routinely via backwash to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-51-V User Manual.

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PureULTRA PHF-72-V (Retrofit Module)

Pressure-driven UF modules

PureULTRA PHF-72-V modules feature a polyvinylidene fluoride (PVDF) hollow-fiber ultrafiltration (UF) membrane that offers high chemical tolerance and 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 and loss of membrane hydrophilicity. The membrane module design and optimum operating sequences provide consistent filtration efficiency and durability.

These modules can be used for a wide range of applications and handle virtually any feedwater source, including seawater, surface water, well water, and secondary or tertiary wastewaters—for both industrial and municipal systems.

MEMBRANE CHARACTERISTICS

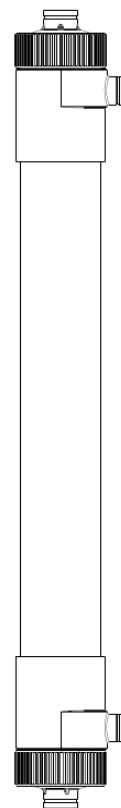
Membrane polymer	Polyvinylidene fluoride (PVDF)
Nominal pore size	0.025 µm
Membrane type	Hollow fiber
Hollow-fiber diameter OD/ID	1.3/0.7 mm (0.052/0.028 inch)

MODULE SPECIFICATIONS

Model	PureULTRA PHF-72-V
Nominal membrane area	72 m ² (775 ft ²)
Housing material	Unplasticized polyvinyl chloride (uPVC)
Membrane potting	Epoxy/polyurethane (PU)
Filtration flow path	Outside in, dead-end flow

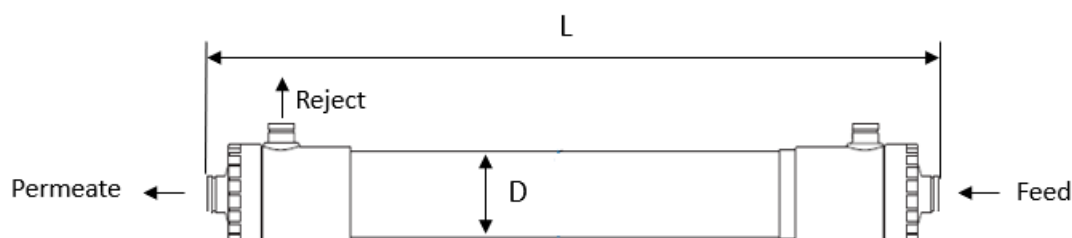
OPERATING PARAMETERS

Filtrate flow range	3.1-9.3 m ³ /h (13.6-40.8 gpm)
Maximum feed pressure (at 20°C / 68°F)	4.5 bar (65.3 psi)
Maximum transmembrane pressure	2.3 bar (33.4 psi)
Maximum backflush pressure	2.5 bar (36.3 psi)
Maximum air scour rate	12 m ³ /h (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-hours
Cleaning chemicals	Sodium hypochlorite, caustic, hydrochloric/sulfuric/citric acid



PHYSICAL DIMENSIONS

Dry/Wet weight	49 kg (108 lb) / 92 kg (203 lb)
Module diameter (D)	216 mm (8.5 in)
Module length (L)	2,160 mm (85 in)
Feed/permeate port	80 A
Reject port	65 A

IMPORTANT INFORMATION

- Storage and handling:** Modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-72/90-V User Manual.
- Installation and start-up:** Modules must be installed correctly before start-up. For a detailed installation and start-up procedure, please see the PureULTRA PHF-72/90-V User Manual.
- Cleaning:** Modules must be cleaned routinely via backwash to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-72/90-V User Manual.

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PureULTRA PHF-78-V (Retrofit Module)

Pressure-driven UF modules

PureULTRA PHF-78-V modules feature a polyvinylidene fluoride (PVDF) hollow-fiber ultrafiltration (UF) membrane that offers high chemical tolerance and 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 and loss of membrane hydrophilicity. The membrane module design and optimum operating sequences provide consistent filtration efficiency and durability.

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MEMBRANE CHARACTERISTICS

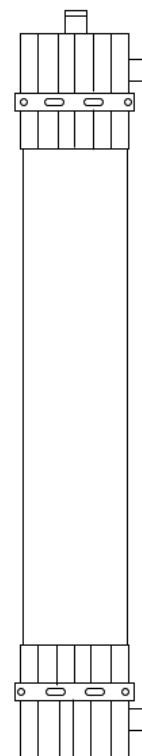
Membrane polymer	Polyvinylidene fluoride (PVDF)
Nominal pore size	0.025 µm
Membrane type	Hollow fiber
Hollow-fiber diameter OD/ID	1.3/0.7 mm (0.051/0.028 in)

MODULE SPECIFICATIONS

Model	PureULTRA PHF-78-V
Nominal membrane area	78 m ² (839 ft ²)
Housing material	Unplasticized polyvinyl chloride (uPVC)
Membrane potting	Epoxy/polyurethane (PU)
Filtration flow path	Outside in, dead-end flow

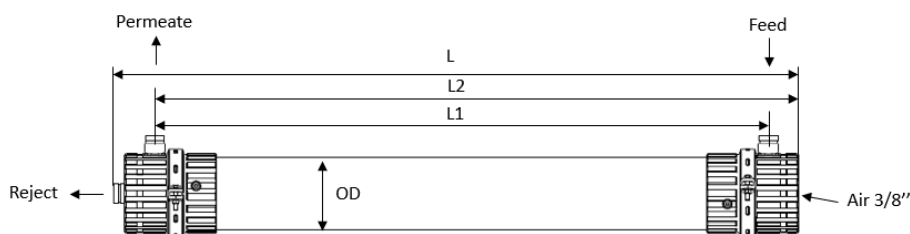
OPERATING PARAMETERS

Filtrate flow range	3.1–9.3 m ³ /h (13.6–40.8 gpm)
Maximum feed pressure (at 20°C/68°F)	6.25 bar (93.75 psi)
Maximum transmembrane pressure	2.3 bar (33.4 psi)
Maximum backflush pressure	2.5 bar (36.3 psi)
Maximum air scour rate	12 Nm ³ /h (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	2,000 ppm
Maximum active chlorine exposure	≤ 1,000,000 ppm-hours
Cleaning chemicals	Sodium hypochlorite, caustic, hydrochloric/sulfuric/citric acid



PHYSICAL DIMENSIONS

Dry/wet weight	61 kg (135 lb) / 100 kg (220 lb)
Module diameter (OD)	225 mm (8.9 in)
Module length (L)	2,360 mm (92.9 in)
L1	2,130 mm (83.9 in)
L2	2,265 mm (89.6 in)
Feed/reject port	2" Victaulic
Permeate port	2" Victaulic

IMPORTANT INFORMATION

- Storage and handling:** Modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-78-V User Manual.
- Installation and start-up:** Modules must be installed correctly before start-up. For a detailed installation and start-up procedure, please see the PureULTRA PHF-78-V User Manual.
- Cleaning:** Modules must be cleaned routinely via backwash to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-78-V User Manual.

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PureULTRA PHF-90-V (Retrofit Module)

Pressure-driven UF modules

PureULTRA PHF-90-V modules feature a polyvinylidene fluoride (PVDF) hollow-fiber ultrafiltration (UF) membrane that offers high chemical tolerance and 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 and loss of membrane hydrophilicity. The membrane module design and optimum operating sequences provide consistent filtration efficiency and durability.

These modules can be used for a wide range of applications and handle virtually any feedwater source, including seawater, surface water, well water, and secondary or tertiary wastewaters—for both industrial and municipal systems.

MEMBRANE CHARACTERISTICS

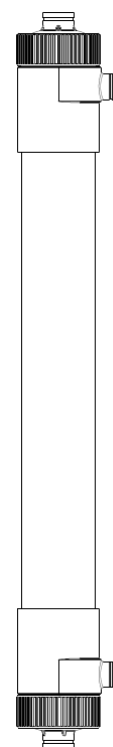
Membrane polymer	Polyvinylidene fluoride (PVDF)
Nominal pore size	0.025 µm
Membrane type	Hollow fiber
Hollow-fiber diameter OD/ID	1.1/0.65 mm (0.044/0.026 inch)

MODULE SPECIFICATIONS

Model	PureULTRA PHF-90-V
Nominal membrane area	90 m ² (969 ft ²)
Housing material	Unplasticized polyvinyl chloride (uPVC)
Membrane potting	Epoxy/polyurethane (PU)
Filtration flow path	Outside in, dead-end flow

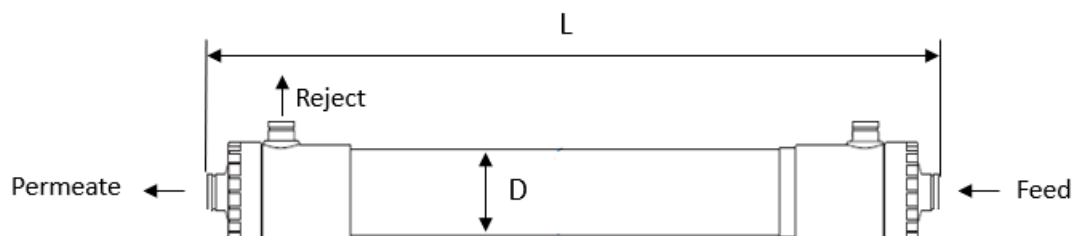
OPERATING PARAMETERS

Filtrate flow range	3.6-10.8 m ³ /h (15.9-47.6 gpm)
Maximum feed pressure (at 20°C / 68°F)	4.5 bar (65.3 psi)
Maximum transmembrane pressure	2.3 bar (33.4 psi)
Maximum backflush pressure	2.5 bar (36.3 psi)
Maximum air scour rate	12 m ³ /h (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-hours
Cleaning chemicals	Sodium hypochlorite, caustic, hydrochloric acid/sulfuric acid/citric acid



PHYSICAL DIMENSIONS

Dry/Wet weight	49 kg (108 lb) / 92 kg (203 lb)
Module diameter (D)	216 mm (8.5 in)
Module length (L)	2,160 mm (85 in)
Feed/permeate port	80 A
Reject port	65 A

IMPORTANT INFORMATION

- Storage and handling:** Modules must be handled and stored appropriately to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-72/90-V User Manual.
- Installation and start-up:** Modules must be installed correctly before start-up. For a detailed installation and start-up procedure, please see the PureULTRA PHF-72/90-V User Manual.
- Cleaning:** Modules must be cleaned routinely via backwash to ensure proper operation and to prevent membrane damage. Please see the PureULTRA PHF-72/90-V User Manual.

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

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