iSep 500+

Ultrafiltration

The iSep 500+ ultrafiltration (UF) modules incorporate a vacuum-driven, backwashable, spiral-wound membrane design—ideal for handling highly fouling water and wastewater streams. With open feed channels and an integrated tank design, iSep modules excel in managing elevated solids and oil concentrations, surpassing the capabilities of many standard polymeric UF modules available today. As the latest advancement in UF technology, these modules deliver consistent high-quality permeate regardless of challenging feed conditions. Their design minimizes the need for pre-filtration and reduces the system footprint, with the added advantage of allowing rapid solids removal during backwashing. In some cases, iSep 500+ modules can even eliminate the need for extensive pre-treatment systems, such as clarifiers, significantly reducing costs, operational complexity, and space requirements. Capable of directly treating some of the most difficult water and wastewater streams, iSep 500+ modules provide a low total cost of ownership by reducing both capital and operational expenses. This optimization enhances the overall efficiency and performance of wastewater treatment processes.

MEMBRANE CHARACTERISTICS

Membrane	Ultrafiltration
Membrane chemistry	PES / PVDF
Construction	Negative pressure ultrafiltration module
Pore size	0.03 µm (PES) / 0.06 µm (PVDF)

MODULE SPECIFICATIONS

Model	iSep 500+ (PES) / iSep 500+ (PVDF)
Feed channel	90 mil corrugated
Membrane area	27.4 m^2 (295 ft^2)
Operational gross flux range[1]	25–45 lmh (15–25 gfd)
Recommended backwash flux rate	40–100 lmh (23–58 gfd)

1 Depending on feed water quality and operating conditions.

OPERATING PARAMETERS

Transmembrane pressure range	0.07–0.7 bar (1–10 psi)
Temperature range[1]	5–45 °C (41–113 °F)
pH range[1]	2.0–11.0
Applicable air scour rate	5.6 Nm^3/hr (3.5 scfm)
Cleaning chlorine tolerance	1,000 mg/L (PES) / 2,000 mg/L (PVDF)
Maximum feed TSS[2]	1,000 mg/L
Maximum feed oil and grease[2]	100 mg/L

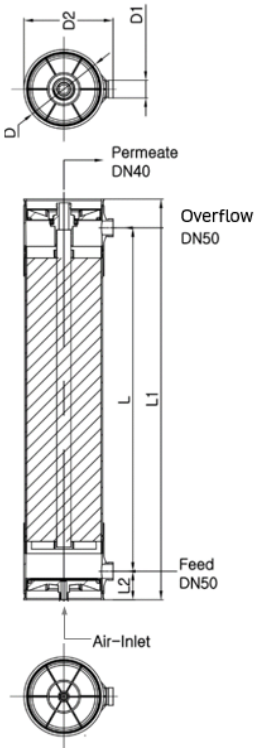
1 Temperature, pH limits, and cleaning procedures are further detailed in the iSep 500+ User Manual
2 Depending on feed water quality and operating conditions.

Leadership in Filtration

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Get the Most Out of Your Water

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PHYSICAL DIMENSIONS



MODULE

L	1175 mm (46.2 in)
L1	1369 mm (53.9 in)
L2	97 mm (3.8 in)
D	271.3 mm (10.7 in)
D1	60.3 mm (2.4 in)
D2	303 mm (11.9 in)
Dry module weight	35 kg (76 lbs)
Wet module weight	39 kg (82 lbs)

PHYSICAL DIMENSIONS

Feed/drain port	50.8 mm (2 in) DN50 coupling
Permeate port	38.1 mm (1.5 in) DN40 coupling
Overflow port	50.8 mm (2 in) DN50 coupling
Air inlet port	25.4 mm (1 in) MNPT

IMPORTANT INFORMATION

Start-up: MANN+HUMMEL Water & Membrane Solutions recommends an operational sequence that incorporates permeate production, backwash, cleaning, and module draining steps.

Cleaning: iSep 500+ UF modules must be cleaned routinely via backwash, chemically enhanced backwash (CEB), and clean-in-place (CIP) to ensure proper operation and prevent membrane damage

Storage: iSep 500+ UF modules must be stored appropriately to ensure proper operation and to prevent membrane damage.

CUSTOMIZABLE SPECIALTY ELEMENTS

MANN+HUMMEL Water & Membrane Solutions offers a full range of membranes and element designs for challenging water and process applications. Technologies include low-fouling reverse osmosis, submerged UF, continuous high temperature, ultra-high pressure, unique sanitary designs, and more. Contact us to customize a product that satisfies your specific requirement.

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