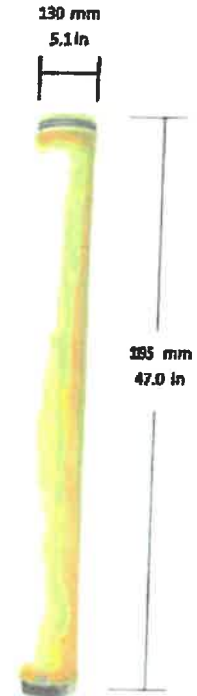


MEMBRANE FILTRATION MODULE SPECIFICATION

MODULE SPECIFICATIONS

Parameter	Details
Module Operating Process	Submerged Ultrafiltration
Typical Applications	General Applications
Membrane Type	Hollow Fiber
Filtration Flow Direction	Outside to Inside
Backwash Type	Air Scour with Liquid Backwash
Membrane Material	PVDF (Polyvinylidene Fluoride)
Other Wetted Module Components	Polyurethane, Polyethylene, Polyamide, EPDM
Nominal Membrane Pore Size	0.04 μm to 0.1 μm
Nominal Membrane Area	23.1 m^2 / 249 ft^2
Nominal Module Length (Overall)	1195 mm / 47.0 in
Nominal Module Diameter (Overall)	130 mm / 5.1 in
Approximate Module Mass	6.8 kg / 15 lb



MODULE OPERATING SPECIFICATIONS

Parameter	Details
Operating Temperature Range	> 0 to 35 °C / > 32 to 95 °F (Must not be exposed to freezing conditions)
Temperature Range for Transportation and Storage	Preferred range 5 to 25 °C / 41 to 77 °F Allowable range > 0 to 35 °C / > 32 to 95 °F (shipment/storage) in a temperature controlled container (or reefer) at 20 °C / 68 °F recommended). Modules must not be exposed to freezing conditions and must remain moist at all times.
Typical Feed pH Range	6.0 – 9.0 pH ^{Note I}
Allowable pH Range for Cleaning	2.0 – 10.0 pH typical ^{Note II}
Typical Maximum Available Trans-Membrane Pressure (TMP) in Filtration	85 kPa / 12.3 psi ^{Note III}
Maximum Allowable TMP at any time	± 150 kPa / ± 22 psi
Typical chlorine concentration during cleaning (MW or CIP)	50 – 200 mg/L @ 25 °C / 50 – 200 ppm @ 77 °F ^{Note IV}
Maximum chlorine concentration during cleaning	1000 mg/L @ 25 °C / 1000 ppm @ 77 °F ^{Note IV}
Maximum total exposure to chlorine during cleaning	500,000 mg.h/L @ 25 °C / 500,000 ppm.h @ 77 °F ^{Note IV}
Maximum separate exposure to chlorine in feed or during storage	< 1 mg/L average, < 5 mg/L maximum, pH > 6.5 @ 25 °C < 1 ppm average, < 5 ppm maximum, pH > 6.5 @ 77 °F 100,000 mg.h/L @ 25 °C / 100,000 ppm.h @ 77 °F ^{Note IV}
Maximum separate exposure to chloramines in feed or during storage	< 2.5 mg/L average, < 5 mg/L maximum, pH > 6.5 @ 25 °C < 2.5 ppm average, < 5 ppm maximum, pH > 6.5 @ 77 °F 150,000 mg.h/L @ 25 °C / 150,000 ppm.h @ 77 °F ^{Note IV}

Notes:

- i. Exposure to chlorine or chloramines is not recommended in feeds below 6.5 pH.
- ii. Occasional brief exposure during chlorine cleans to pH 10.5 is acceptable.
- iii. Warranty 3 year absolute followed by 7 year prorated warranty period.
- iv. Supplier will include all material and shipping cost in bid. Any additional cost must be paid by supplier.