



## Hollow Fiber UF Modules

MANN + HUMMEL ML860-HP UF modules feature a 0.025-micron pore size Polyacrylonitrile (PAN) hollow fiber membrane potted in a U-shaped arrangement. With the ability to tolerate oil and grease, these modules are most suitable for treating oily waters and wastewaters from various industrial processes. They operate at a very low feed pressure due to the high hydrophilicity of PAN membrane, which leads to energy savings.

### MEMBRANE CHARACTERISTICS

Membrane Polymer	Polyacrylonitrile (PAN)
Nominal Pore Size	0.025 µm
Membrane Type	Hollow Fiber
Hollow Fiber Diameter OD/ID	2.1 mm/ 1.1 mm (0.083 inch/ 0.043 inch)

### MODULE SPECIFICATIONS

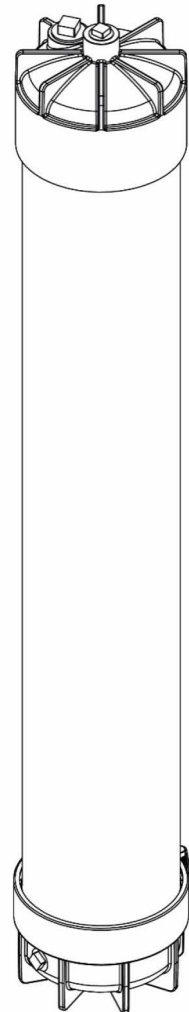
Housing Material	UPVC
Membrane Potting	Epoxy
Filtration/ Backflush Flow Path	Out → In / In → Out
Operating Mode	Dead-end
Preservative	Sodium meta-bisulphite
Nominal Membrane Area	48 m <sup>2</sup> (516 ft <sup>2</sup> )

### OPERATING PARAMETERS

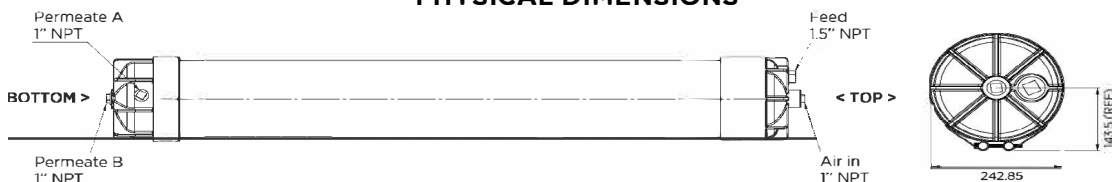
Filtrate Flow Range	0.45 - 3.8 m <sup>3</sup> /h (1.9 - 16.7 gpm)
Maximum Feed Pressure (at 20°C / 68°F)	5.0 bar (72.5 psi)
Maximum Transmembrane Pressure	1.0 bar (14.5 psi)
Maximum Backflush Pressure	7.6 m <sup>3</sup> /h (31.7 gpm)
Typical Air Scour Rate	4.2 - 8.3 Nm <sup>3</sup> /h (2.5 - 5.3 scfm)
Maximum Air Scour Pressure	0.5 bar (7.3 psi)
pH Range for Operation	2.0 - 10.0
Temperature Range	5 - 45°C (41 - 113°F)

### CLEANING PARAMETERS

pH Range	1.0 - 10.0
Maximum Temperature	40°C (104°F)
Maximum Active Chlorine Concentration	100 ppm
Maximum Active Chlorine Exposure	100,000 ppm-hours
Maximum Hydrogen Peroxide Concentration	500 ppm
Maximum Hydrogen Peroxide Exposure	500,000 ppm-hours



### PHYSICAL DIMENSIONS



Dry / Wet Weight	44 kg (97 lb) / 64kg (141 lb)
Module Diameter	225 mm (8.9 in)
Module Length	1,642 mm (64.6 in)
Feed / Reject Port	1.5" NPT
Permeate Port	1" NPT
Air Inlet Port	1" NPT