UF Membrane
Model Specifications

MF HOLLOW FIBRE MEMBRANE:

Polyethersulfone (PES) Microfiltration (MF) Filters

- Highly Hydrophilic
- Highly Asymmetric Membrane
- Good flow rate and long life
- Good Chemical & thermal resistant
- Absolute Pore size of 0.2 micron

Category		Spec.	Spec.	Remarks
Hollow fibre Membrane	Material	Polyether Sulfone	Poly Sulfone	
	Pore Size	0.1㎛	0.1㎛	Nominal
	Size (Od/Id)	① 570/360 ② 460/270 ③ 350/150	① 580/390 ② 900/700 ③ 1000/800	Error: ±40㎛
	Pressure Resistance	5.2kg/cm^2	4.0kg/ cm^2	Error: ± 0.3kg/cm^2
Module	LP (Liquid permeability)	8.5 (cc/cm^2·min·(kgf/cm^2))	14 (cc/㎠·min·(kgf/ cm^2))	Error: ± 1.5
	Number of Filaments			

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Polysulfone (PS) Microfiltration (MF) Filters:

- Permanently Hydrophilic
- Highly Asymmetric Polysulfone Membrane Media
- Prominent Flow Rate & Good Capacity
- Good Chemical Resistance
- Absolute Pore Size of 0.2μm (＞99.9% Retention Rating)

Advantages:

- Q-Tec Membrane's Hollow Fibres feature equal thickness of membranes to help guarantees high pressure resistance
- Bacteria are removed through smaller holes and flow rate increases as holes get bigger
- Q-Tec Membrane's consistently made circularly shaped pores create a higher flow rate
- Q-Tec - Equally distributed pores (number and size) increase membrane life

Q-Tec Standard Size Modules:

Length	40""	20"	40""	10""
Diameter	4""	4""	8""	1.8""

Custom size modules are available as well

PERFORMANCE SPECIFICATIONS:

lux(10 inch)	5.4 /min(1.42gal/min)	
Liquid Permeability	14 ± 0.5 [cc/cm^2$min(kgf/cm^2$)]	Performance based upon operating conditions below
Operating Pressure	1.4 kgf/cm^2$(20psi)	Fixed pressure
Differential Pressure (ΔP)	< 0.1kgf/cm^2$(1.4psi)	
Temperature	25°C (77°F)	

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TYPE:

lux(10 inch)	Hollow Fibre
Material	580/380 ± 30μm%
Fibre Od / Id	1.4 kgf/cm²$(20psi)
Cartridge (Module) Configuration	Dead-End Type

MATERIAL:

Filter Media	Highly Asymmetric Polysulfone Membrane
Hardware	Polycarbonate or ABS or Polyacrylate
Potting	Polyurethane
Sealing	Polyurethane Bond

DIMENSIONS:

Outside Diameter	2.25"(7.0cm)
Standard Lengths	10"(25.4cm) 20"(50.8cm) 30"(76.2cm) 40"(102cm)
Surface Area	1.65m² per 10"(25.4cm) Equivalent

APPLICATION DATA (Operating Limits)

Max. Operating Pressure	5.0kgf/cm²#(70psi)
Recommended Operating Pressure	2.5kgf/cm²#(35psi)
Max. Operating Temperature	55°C (131 °F)
pH Range	Nominal 3.0 ~ 12.0

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UF HOLLOW FIBRE MEMBRANE:

Polyethersulfone (PES) Ultrafiltration (UF) Hollow Fibre

- Good Chemical Resistance
- Pore Size of 0.03 ~ 0.05㎛
- Permanently Hydrophilic
- Highly Asymmetric Polyethersulone Membrane Media
- High Flow Rate & extended filter life
- Fibre material can be PS or PVDF also

Q-Tec Standard Size Modules:

Length	40""	20"	40""	10""
Diameter	4""	4""	8""	1.8""

Custom size modules are available as well.

PERFORMANCE SPECIFICATIONS:

Liquid Permeability	0.1 ± 0.05[cc/cm²&min (kgf/cm²$)]	Performance based upon operating conditions below
MWCO	300k - 500k	
Operating Pressure	2.0 kgf/cm² &(29.4psi)	Fixed pressure
Differential Pressure (ΔP)	< 0.1kgf/cm²$(1.4psi)	
Temperature	25℃ (77℉)	

TYPE:

Membrane Type	Hollow Fibre
Material	PES (Polyethersulfone)
Fibre Od / Id	580/380㎛.
Cartridge (Module) Configuration	Dead-End or Cross-Flow Type

UF Membrane
Model Specifications

MATERIALS OF CONSTRUCTION:

Filter Media	Highly Asymmetric Polysulfone Membrane
Hardware	Polycarbonate or ABS or Polyacrylate
Potting	Polyurethane

APPLICATION DATA (Operating Limits):

Max. Operating Pressure	5.0kgf/cm^2 (73psi)
Recommended Operating Pressure	2.5kgf/cm^2 (36psi)
Max. Operating Temperature	40°C (104 °F)
pH Range	Nominal 3.0 ~ 12.0

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PVDF Membranes:

The structure of our PVDF membrane has large pores on both the inner and outer surface that are equally distributed. In other words, we can make a membrane with high flow rate.

We can change a structure and shape of a membrane just by using a weaving method as well as making a membrane by coating it over a Braid.

We can make a PVDF membrane with porous shape and double-structure with dense layers. In addition to that, outer surface of the membrane can either be porous or non-porous depending on the weaving method.

We can make MF, UF membranes using the same solution and are currently concentrating on making MF membrane and is set out to make UF membrane in the future.

Braid Coating Membrane has been made using PES (Polyethersulfon) and we are now developing a membrane using PVDF Industrial module that can be applicable to water treatment system.

A Braid acts as a supporter and PES skin layer has replaced the filtration ability, showing high flow rate and high degree of strength.

We are also currently developing a membrane with PVDF instead of Polymer that can be applicable to many fields.

Our membranes are more porous than others and depending on the weaving method, we are able to make membranes that have higher flow rate and are denser.

Below is the chart of our PVDF membrane capabilities:

Test Item		Unit	Result
LP (Liquid Permeability)		(cc/cm^2 · min · (kgf/cm^2))	5.0 ± 0.5
Internal pressure Test	Super Pure Water	(kgf/cm^2)	greater than 4.0
Pressure Resistance		1-(Lp4/Lp1)	0.2 ± 0.03
Membrane Size	Outer Diameter	(㎛)	510 ± 20
	Inner Diameter	(㎛)	360 ± 20
(M.W.C.O)		Hemocyanin(2mil)	More than 90%
Materials			PVDF

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The above data is based on the lab test our lab team did. Source water used in a liquid permeability test was super pure water and the temperature was 77±0.5°F. Length of the fibre is 4centimeters and 5 bundles were put into the acrylic tube during the test.