



RO



NF



UF

MBR

Toray UF

TUF Rack Series

Rack Integrated Toray UF with PVDF Hollow Fiber Ultrafiltration Membrane Module

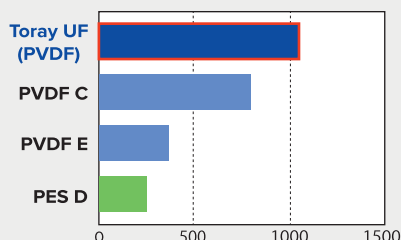
Pre-engineered, standardized rack design specialized for Toray UF modules to significantly reduce engineering design and installation costs.

Features

- Highly reliable Toray UF membrane.
- The same operation procedure as the Toray UF module.
- High feed pressure (≤ 6 bar) tolerance allows for direct connection to reverse osmosis membrane system.
- Modular and scalable design, ranging from 4 modules (2 pcs x 2 rows) to 28 modules (14 pcs x 2 rows).
- Compact piping arrangement, which saves engineering and reduces installation footprint.
- Shipped unassembled for easy transportation and lower shipment cost.

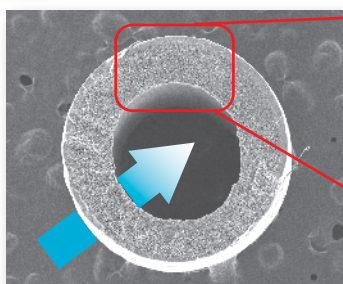
Characteristics

Mechanical Strength

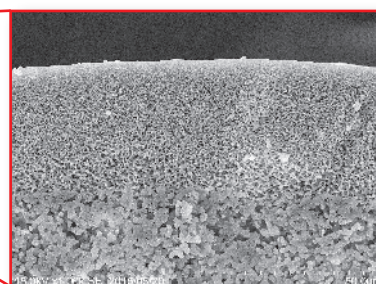


Outside-In Flow

Outside-In flow direction is ideal for treating water with high turbidity. Suspended solids are effectively removed during backwash and air scouring.



Cross-Section of the Composite Membrane



Low fouling layer

Support layer providing high permeability and durability

GLOBAL LOCATIONS

HEADQUARTERS Tokyo, Japan : +81-3-3245-4542

THE AMERICAS
California (TMUS) : +1-858-218-2360

EUROPE & SUB-SAHARAN AFRICA
Switzerland (TMEU) : +41-61-415-8710
Spain (TMSP) : +34-915-726-504

MIDDLE EAST
Saudi Arabia (TMME) : +966-13-568-0091
United Arab Emirates (TMME) : +971-4-392-8811

ASIA PACIFIC
China (TBMC) : +86-10-8048-5216
Singapore (TAS) : +65-6226-0525
South Korea (TAK) : +82-2-3279-1000



Specifications

Model	HFUG-2020HN		HFUG-2020RN*2
Membrane Material	PVDF(Polyvinylidene Fluoride)		
Nominal Pore Size *1	0.01 micrometers		
Membrane Surface Area m ² (ft ²)	90(969)		90(969)
Maximum Inlet Pressure kPa(psi)	600(87.0)		600(87.0)
Operating Temperature Range C(F)	1 - 40(33.8 - 104)		

*1: Estimated by model particles removal ratio.
*2: This model has a simple lid unlike original HN Model cap for easier rack assembly.



# of Modules	4	6	8	... ^{*1}	24	26	28
Length (mm)	810	1130	1450	... ^{*2}	4020	4340	4660
Width (mm)	730						
Height (mm)	2880						

*1: Rack expands by multiples of 2 up to 28.
*2: Rack lengthens by 320mm per expansion.

Toray UF Rack maintains the unique membrane fiber characteristics and features of the Toray UF line: High permeability, low fouling, and high mechanical strength.

Industry Leading TIPS UF Membrane

Toray's polyvinylidene fluoride (PVDF) hollow fiber membranes are manufactured via a thermally-induced phase separation (TIPS), producing the industry's strongest fiber. Our proprietary manufacturing process carefully controls the distribution and size of the membrane pores, ensuring high filtrate quality and reducing fouling potential.

Toray's PVDF membrane is highly resistant to chlorine and strong acids, allowing for effective chemical cleaning without shortening membrane life. Toray UF Modules effectively remove suspended solids, viruses, and bacteria and are certified for drinking water applications.

