

## Toray UF Replacement Membrane Modules

Engineered to  
replace PVDF-MF  
modules seamlessly

High Performance, Fully Compatible,  
Locally supported by FILTEC

**Direct retrofit for  
PVDF-MF modules.**

Achieve greater capacity and superior  
filtrate quality with tighter pore size.  
Lower lifetime OPEX.



# Toray vs. Other UF/MF Modules

## Common Issues in UF/MF Plants

- Higher fouling rates and rising TMP
- Larger pore size (0.1  $\mu\text{m}$ ) limiting removal of fine particles and pathogens
- Frequent CIP and operator attention
- Fibre breaks and integrity breaches
- Gradual loss of capacity over time
- High replacement cost of MF modules.



## How Toray UF Overcomes These

- ✓ Designed as direct retrofit for Pall/Asahi MF modules
- ✓ 0.01  $\mu\text{m}$  UF pore size (vs 0.1  $\mu\text{m}$  MF) for tighter particle and pathogen removal
- ✓ Toray TIPS-manufactured fibres resist breakage
- ✓ Longer cleaning intervals
- ✓ Up to 10-year pro-rata warranty
- ✓ Supported by FILTEC's nationwide service teams.

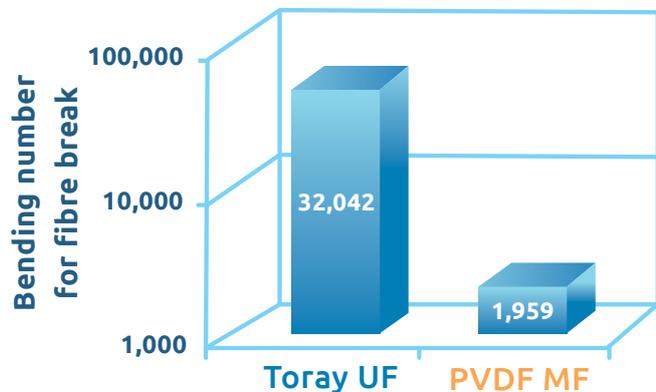
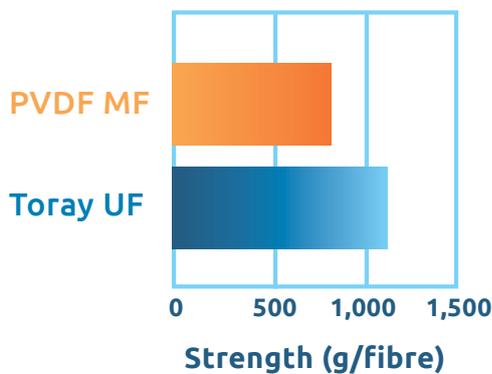


The Membrane Technologies Powered by

**TORAY**

Innovation by Chemistry

## Fibre Durability Comparison

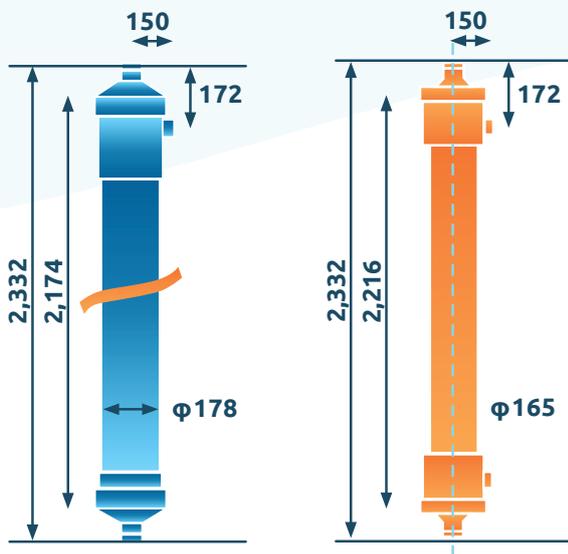


# Toray Membrane Specifications

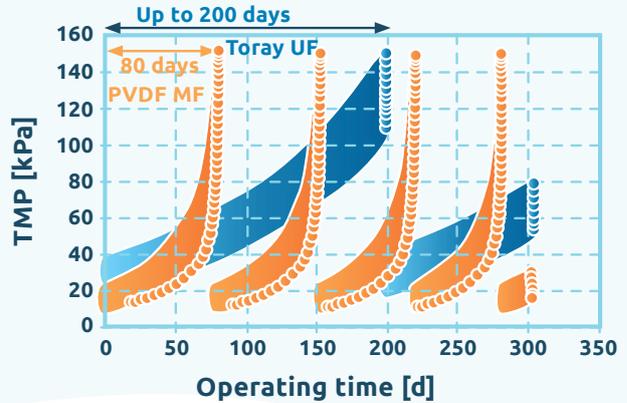
## Stronger Performance Same Footprint

- ✓ Similar length
- ✓ Similar 2" connections
- ✓ Slightly larger diameter for increased surface area

Toray HFUG-B2315AN      PVDF MF Module



## CIP Frequency Comparison



Note: CIP frequency estimation based on lab test conditions

## Test Conditions

Filtration Flux	Up to 83.3 LMH
Physical Cleaning	BW 60 sec -> AS 60 sec
TMC Condition	1 time/day, 300 mg-Cl <sub>2</sub>
Temperature	15 deg C

		TORAY HFUG-B2315AN	PVDF MF Module
Membrane Surface Area		75 m <sup>2</sup>	50 m <sup>2</sup>
Dimensions	Diameter (D)	178 mm	165 mm
	Length (L)	2,332 mm	2,332 mm
Connections	Top & Bottom	Housing type joint 2 inches (US)	Housing type joint 2 inches (US)
	Side	Screw 2.28 inches (original)	Screw 2.28 inches (original)
Weight (Full of Water)		65 kg	60 kg
Membrane Material		PVDF	PVDF
Pore Size		0.01 μm	0.1 μm

# FILTEC

Making Water Safer

## Key Operating Parameters Toray HFUG-B2315AN

- Membrane type: PVDF UF (0.01 µm)
- Membrane area: 75 m<sup>2</sup>
- Max filtrate flow: 12.5 m<sup>3</sup>/h
- Max backwash flow: 13.8 m<sup>3</sup>/h
- Normal operating TMP: 0–200 kPa
- Operating temperature: 1–40 °C
- pH range (filtration): 1–10
- pH range (cleaning): 0–12
- Applications: drinking water, industrial process water, RO pretreatment
- Certifications: NSF/ANSI/CAN 61,
- NSF/ANSI 419 (Cryptosporidium reduction)

## Regional Footprint

Our 20+ technicians across New Zealand and Australia operate from regional offices nationwide, providing local expertise and fast on-site support for our customers.



## Why Purchase Through FILTEC?

- ✓ Toray UF offers 50% more membrane area at the same price as typical MF replacements (e.g., Pall/Asahi), providing lower lifetime OPEX.
- ✓ Proven track record in the New Zealand market – FILTEC has been successful on all competitive tenders using Toray modules to date.
- ✓ Locally based service technicians supporting installation, commissioning and lifecycle operation.
- ✓ Backed by a team of 8+ process engineers for any technical queries.
- ✓ Optimised change-out procedures for quick, repeatable retrofit of Pall/Asahi modules.
- ✓ Ability to supply both Toray UF and other membrane suppliers, matching the best option to your plant's priorities (CAPEX, OPEX, risk profile).
- ✓ Support for councils and industrial customers including:
  - Site assessments and membrane selection
  - Integrity testing and troubleshooting
  - Operator training and optimisation advice.