



InoCep[®]

Ceramic Hollow Fibre Membrane

Long-lasting superior ceramic hollow fibre membrane for extreme conditions

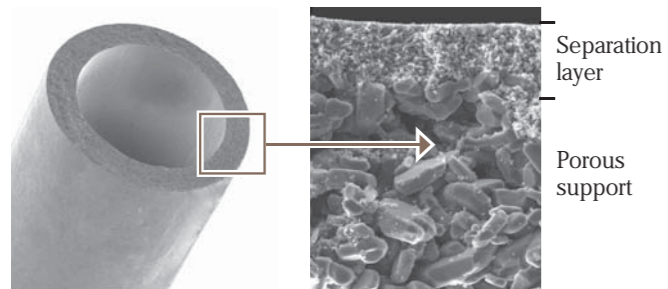
Exploiting the superior chemical, thermal and mechanical stability of $\alpha\text{-Al}_2\text{O}_3$ material, InoCep[®] enjoys long service-life and high filtration rate even for highly demanding applications.

Product Features & Benefits

- Acid/base resistant
- Excellent thermal stability
- High flux

Operation Features & Benefits

- Easy cleaning
- Proven long service life
- High packing density

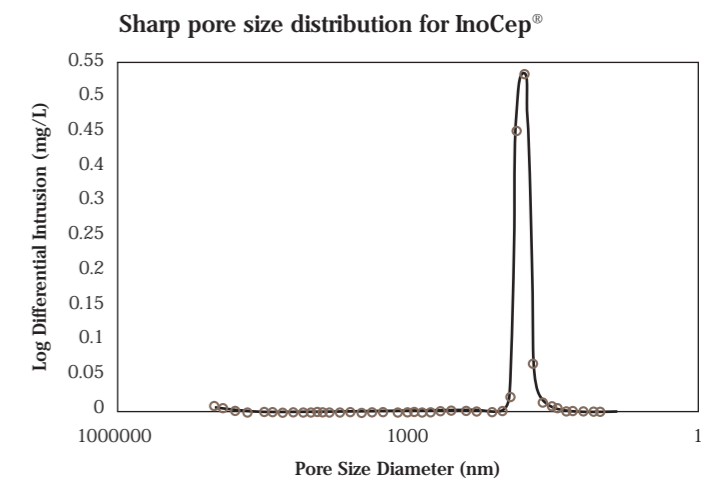


Cross-section of InoCep[®] fibre with magnified view of its asymmetric structure



Membrane Comparison		
Membrane Type	InoCep [®]	Multichannel Ceramic Monoliths
Solvent, Acid/Base, Thermal Stability	Excellent	Excellent
Lifespan	Long	Long
Operating Pressure	High	High
Water Pathway in Substrate	Short	Long
Mechanical Strength	Strong	Strong

Module Comparison		
Module Type	InoCep [®]	Multichannel Ceramic Monoliths
Packing Density	High	Low
Sealing Gasket	Less	Many
Rate of Fouling	Less	More
Footprint	Small	Large
Cost of Maintenance	Low	High



Membrane Specifications

InoCep® Membrane	M1400	M800	M500	M200	M100	M40	M20
Pore Size (nm)	1400	800	500	200	100	40	20
Clean Water Flux (LMH @ 1 bar)	4500	2500	2800	1500	750	300	250
Structure	Symmetric		Asymmetric				
Membrane Material	α -Al ₂ O ₃						
Coating Material	Uncoated		α -Al ₂ O ₃				
Operating Temperature (°C)	-5 – 120						
pH Resistance	0 - 14						
Max Operating Pressure (bar)	6						

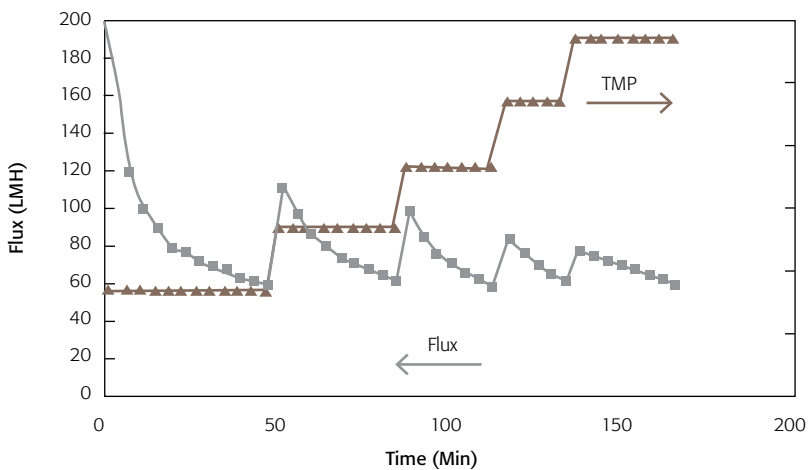
Module Specifications

InoCep® Module	MM004	MM080	MM5
Membrane Area (m ²)	0.04	0.8	5
Flow Type	Inside-Out		
Housing Material	SS316		
O-ring Material	Silicone		EPDM
Feed Connection (in)	1"	4"	8"
Permeate Connection (in)	1/4"	1/2"	1 1/4"
Max Operating Pressure (bar)	6		
Operating Temperature (°C)	-5 – 120		
Warranty (Factory Standard)	1 year		

Case Study

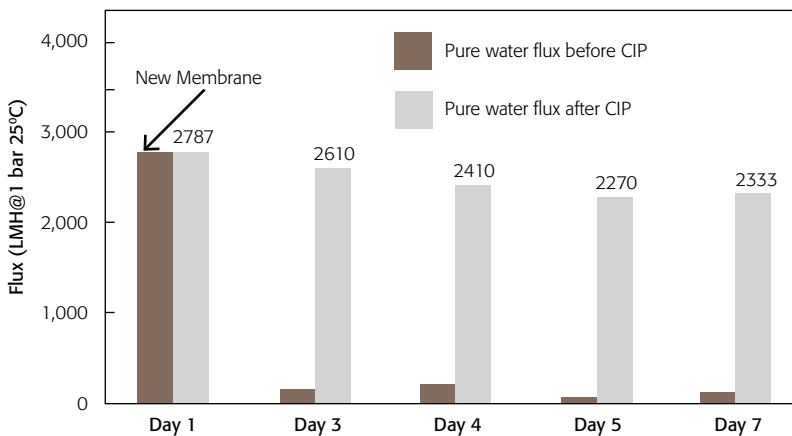
Beer Clarification

Replaces Conventional Treatment Method – Kieselguhr



- Ability to withstand high TMP compared to polymeric membranes which have tolerance level of max 2 bars

Pure water flux recovery after CIP



- Close to complete flux recovery after every CIP

Key Applications

- Laundry wastewater recycling
- Acid/caustic purification
- Emulsified oily water separation
- Beer clarification
- Cold sterilisation of skim milk

About Hyflux

Hyflux is one of the world's leading technology-driven environmental companies, with operations and projects in Southeast Asia, China, India, the Middle East, North Africa and Europe.

Hyflux's spirit of innovation and entrepreneurship drives its technological advancements in membranes, project management, and operations and maintenance.

Hyflux is committed to providing cost-effective, reliable and sustainable solutions to its customers worldwide, from seawater reverse osmosis desalination, water recycling, wastewater and potable water treatment, to renewable resources management in the fields of oil recycling and beer clarification. The company is building the world's largest membrane-based seawater reverse osmosis desalination plant in Magtaa, Algeria.

Hyflux was voted the Water Company of the Year in 2006 by Global Water Intelligence. It was conferred the Forbes Best Companies under One Billion in 2005 and 2006, and won Frost and Sullivan's Technology Innovation of the Year Award 2007- Desalination Technologies (Asia Pacific) and its Technology Innovation of the Year Award 2007- Residential Water Treatment Equipment Market (Southeast Asia).

For more information on Hyflux, please visit <http://www.hyflux.com>

For more information on Hyflux membranes, please visit <http://www.hyfluxmembranes.com>

Other Products



KRISTAL®

The preferred polymeric membrane with unparalleled performance in operational consistency and stability



MES

Compact and flexible platform for membrane evaluation



FerroCep®

World's toughest stainless steel membrane that provides superior separation performance

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