

Instruction for use

# PuraMem® Selective, Performance, Flux – Modules

## SPECIFICATIONS

### PURAMEM® SELECTIVE, PURAMEM® PERFORMANCE, PURAMEM® FLUX

#### General

- Membrane Material: Silicone-coated PAN
- Spiral-Wound Modules:

Type	1812	2512	2520	2540	4020	4040	8040*
Nominal Size (Dia x L)	1.8"×12"	2.5"×12"	2.5"×20"	2.5"×40"	4.0"×20"	4.0"×40"	8.0"×40"
Membrane Area (m <sup>2</sup> ) <sup>1</sup>	0.15	0.25	0.80	2.0	2.4	6.0	30.0
Typical Feed Flow (L·h <sup>-1</sup> )	300	800	800	800	2800	2800	12500
Standard Feed Spacer (all)	30 mil (0.76 mm)						

\* Female type of permeate tube connection.

## SOLVENT STABILITY

- PuraMem® membranes are stable in mild and non-polar solvents<sup>2</sup>:
  - e.g. Alcohols (e.g. Methanol, Ethanol, 2-Propanol)
  - Aliphatic hydrocarbons (e.g. Hexane, Heptane)
  - Aromatic hydrocarbons (e.g. Toluene, Xylene)
  - Butyl Acetate, Ethyl Acetate
  - Methyl-Ethyl-Ketone
  - Methyl-tert-Butyl-Ether
- PuraMem® membranes are not recommended for use in aqueous/water mixtures. For aqueous/organic solvent mixtures, please contact us for membrane recommendations.

## USE CONDITIONS

Typical Operating Pressure (bar)	20-40
Maximum Pressure (bar)	60
Maximum Temperature (°C)	50
Allowable pH	7

## PERFORMANCE

PuraMem® Selective, Performance and Flux are composite membranes. Molecules solubility (and not diffusion!) dominates the membrane separation. Therefore, the cut-off of the membrane is strongly dependent on the solvent-solute combination. MWCO obtained in one standard system is not characteristic for this type of membrane. Best suitable membrane for the application can be chosen by testing in real solution.

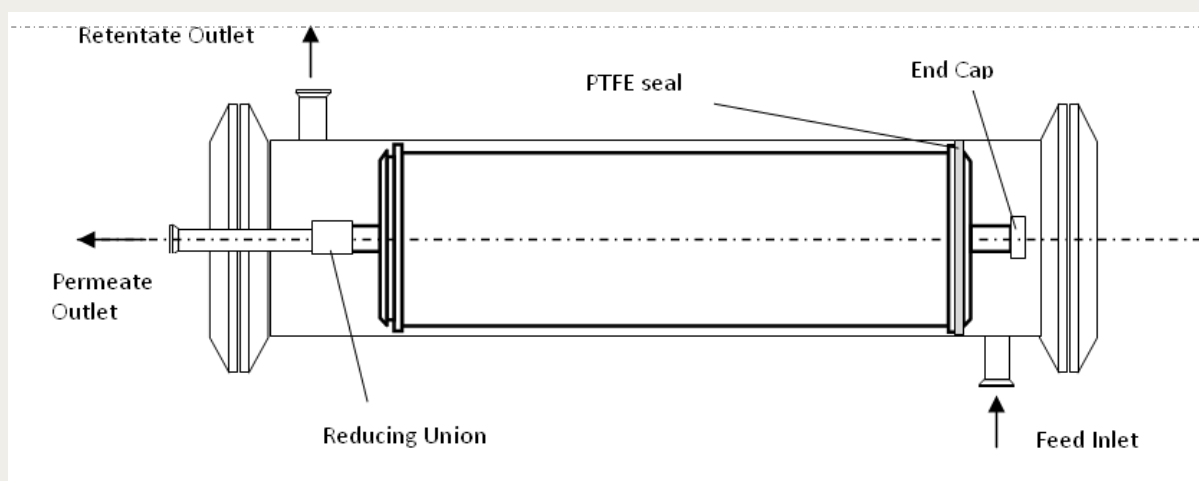
Permeate flux <sup>2,3</sup>

Solvent	Toluene	Heptane	Methylet hylketon	Ethanol
PuraMem® Selective	30	15	20	4
PuraMem® Performance	50	60	80	10
PuraMem® Flux	70	80	100	15

1 Membrane area is a nominal value and depends on the spacer dimensions used in the module.

2 Data referring to membrane sheets with pure solvents. If you intend to use a solvent not listed above please contact us for further advice.

3 Minimal permeate flux, data are approximate and based on flat-sheet membrane. Test conditions: 30 bar and 30°C



## MODULE POSITION IN HOUSING MODULE INSTALLATION PROCEDURES

1. Membrane module should be installed inside a housing in a way that the PTFE seals is facing the feed inlet.
2. Close or block one side of the permeate tube of the membrane module, using a 3/4" compressed fitting cap.
3. Connect the centre tube of the housing flange to the membrane module permeate tube, using a 3/4" x 1/2" compressed fitting reducing union. Please make sure that the tubes are connected straight, and do not apply excess force onto the tubes while tightening the nuts.
4. Hold the assembly horizontally and insert the membrane module inside the housing slowly. Please keep the assembly straight and do not bend the module or tube, and do not force the module into the housing

5. Attach the flange with centre tube onto the housing using the clamps.
6. Attach the blank flange to the other end of the housing using the clamps

Attach the flange with centre tube onto the housing using the clamps.

7. Attach the blank flange to the other end of the housing using the clamps

## PRECONDITIONING OF MEMBRANE MODULES

PuraMem® Selective, Performance and Flux membranes do not require preconditioning. Stable membrane performance is achieved after 3-4 hours filtration.

## STORAGE OF USED MODULES

Once installed and preconditioned, the membrane module should not be removed from the module housing. If the module will not be used for prolonged periods, the module housing should be filled with an appropriate organic solvent and the module stored *in situ*. The preconditioning procedure should be carried out prior to re-use. Please contact us if you have any questions.

### Disclaimer

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