Prostak™
Microfiltration Modules

For Convenient and Economical Perfusion and Clarification/Concentration Applications

Prostak™ modules are tangential flow stacked plate membrane devices with open feed channels, made for use in Prostak™ tangential flow filtration (TFF) systems.

Prostak™ open channel modules are available with microporous membranes and are steam sterilizable for at least 20 cycles.

Versatility

Prostak™ open-channel modules are available in four sizes: 2, 4, 10 and 20 Stack, making them applicable for bench-top, pilot and production scale systems.

Reliability

Membrane and module integrity is tested on every module during manufacturing.

Easy to Validate

No adhesives and only two materials of construction to simplify validation of extractables.

Merck

High Product Recovery

The open channel design and the low hold-up volume allow for a high product recovery and makes the flow path gentle to process fragile cells and shear-sensitive materials.

Typical Applications

Prostak™ microfiltration modules can be used for perfusion or for clarification/harvest operations, in any of these typical applications:

- Mammalian, bacterial and mycelial cell suspensions
- Emulsions and colloidal suspensions
- Viruses, proteins and other bio-organic macromolecular solutions
- Polysaccharides and other high-viscosity solutions

- Yeast, algae and other high solids suspensions
- Protein precipitates
- Perfusion
- Vaccines

Physical Specifications

Recommended Prefiltration				
150 µm nominal				
Materials of Construction				
Polysulfone (10% glass filled) plates; Membrane: Durapore® hydrophilic or hydrophobic PVDF microporous membranes				
Channel Height				
Approximately 0.5 mm				
	2 Stack	**4 Stack**	**10 Stack**	**20 Stack**
Dry Weight (kg)	1.6	2.1	3.6	6.2
Length (cm)	38.9	38.9	38.9	38.9
Width (cm)	19.8	19.8	19.8	19.8
Height (cm)	4.6	5.6	8.1	12.4
Approximate Internal Volume				
Total Volume (ml)	500	700	1250	2500
Feed Side (ml)	300	420	750	1500
Filtrate Side (ml)	200	280	500	1000
Effective Membrane Area				
Area (m²)	0.17	0.33	0.84	1.7

Operating Guidelines

Maximum Inlet Pressure		
at <50°C		5.5 bar (80 psi)*
at 50 – 80°C		4.1 bar (60 psi)
Maximum Transmembrane Pressure - Forward		
at <50°C		4.1 bar (60 psi)*
at 50 – 80°C		2.1 bar (30 psi)
Reverse Transmembrane Pressure		not recommended
pH Range	**short duration (<1 hr cycle)**	**continuous**
Durapore® Hydrophilic PVDF Membrane	1 – 11	2 – 10
PZHK Membrane and Hydrophobic PVDF	1 – 13	2 – 12

*Note: Durapore® 0.65 µm membrane, 3.5 bar maximum forward pressure

Sterilization Guidelines

Steam (in Place)	
Steam Pressure	20 psi (1.4 bar)
Steam Temperature	126 °C (259 °F)
Maximum Feed to Retentate Pressure Drop	0.14 bar (2 psi)
Maximum Transmembrane Pressure - Forward	0.14 bar (2 psi)
Cycle Time	1 Hour

Ordering Information

Modules

Pore Size (µm)	2 Stack	4 Stack	10 Stack	20 Stack
Microporous Membranes - Hydrophilic PVDF Durapore® Membrane				
0.1	PSVV AG0 21	PSVV AG0 41	PSVV AG1 01	SK2P 127 E1
0.22	PSGV AG0 21	PSGV AG0 41	PSGV AG1 01	SK2P 484 E0
0.45	PSHV AG0 21	PSHV AG0 41	PSHV AG1 01	SK2P 242 E9
0.65	PSDV AG0 21	PSDV AG0 41	PSDV AG1 01	SK2P 446 E0
Microporous Membranes - Hydrophobic PVDF Durapore® Membrane				
0.22	—	—	—	SK2P 344 W2
0.45	SK2P 012 W6	—	—	SK2P 013 W4
PZHK Membrane - Hydrophobic PVDF				
200*	—	—	—	SK2R B30 A1

*Nominal Molecular Weight Limit in kilodaltons
There is one module per package. Sanitary gaskets are supplied with each module to provide a leak-free connection between the module(s) and holder.

Holder and Spare Parts

Part	Description	Material of Construction	Catalog Number	Quantity/Pack
Holder	Prostak™ holder	Stainless Steel	PSKPMF001	1
Sanitary Gaskets	Short sanitary gasket kit, for use without holding plates.	Silicone	PSKP02200	12 for permeate, 12 for feed/retentate
	Tall sanitary gasket kit, for use with gasket holding plates.	Silicone	PSKP0220P	16 for permeate, 16 for feed/retentate
		EPDM	PSKP0210P	16 for permeate, 16 for feed/retentate
Gasket Support Plates (Optional)	Gasket support plate, for non-steaming applications	Polycarbonate	PSKPMFG06	6
	Gasket support plate, for steaming applications	Polysulfone	SK2P007W8	6

For information on Prostak™ holders and systems, please contact your local account representative or visit **MerckMillipore.com**
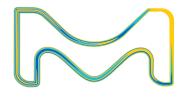

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To Place an Order or Receive Technical Assistance

Please visit
MerckMillipore.com/contactPS

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