

KSS Laboratory Cell CF-2

Crossflow Membrane Lab Test Unit



BENEFITS

- Small sample volume testing
- Simulated crossflow mode of operation
- Compact, self-contained unit
- Process operation up to 510 psi (35 bar)
- Regulated processing temperature
- Excellent simulation of separation characteristics of real process conditions

The KSS Laboratory Cell CF-2 test unit simulates process conditions to test the performance of various flat sheet membrane products for a quick feasibility evaluation of separation properties. Evaluation of microfiltration (MF), ultrafiltration (UF), nanofiltration (NF), and reverse osmosis (RO) membranes is achieved through a simple and effective testing process for proof of concept. Our Laboratory Cell CF-2 test unit can evaluate flat sheet membrane performance, with a diameter of 3 inches (75 mm) in a simulated crossflow operation.

The Laboratory Cell CF-2 requires only a small sample feed volume of 500 mL. The unit is built to be compact to accommodate small laboratory benches or fume hood environments, incorporating the membrane test cell, jacketed process vessel, recirculation pump, flow control valve, pressure indicator, and pressure relief and safety valves. The gear pump can simulate operating pressures up to 115 psi (8 bar) while an external pressurized inert gas source allows for simulations requiring up to 510 psi (35 bar)*. The jacketed process vessel enables a regulated process temperature via an external cooling or heating medium.

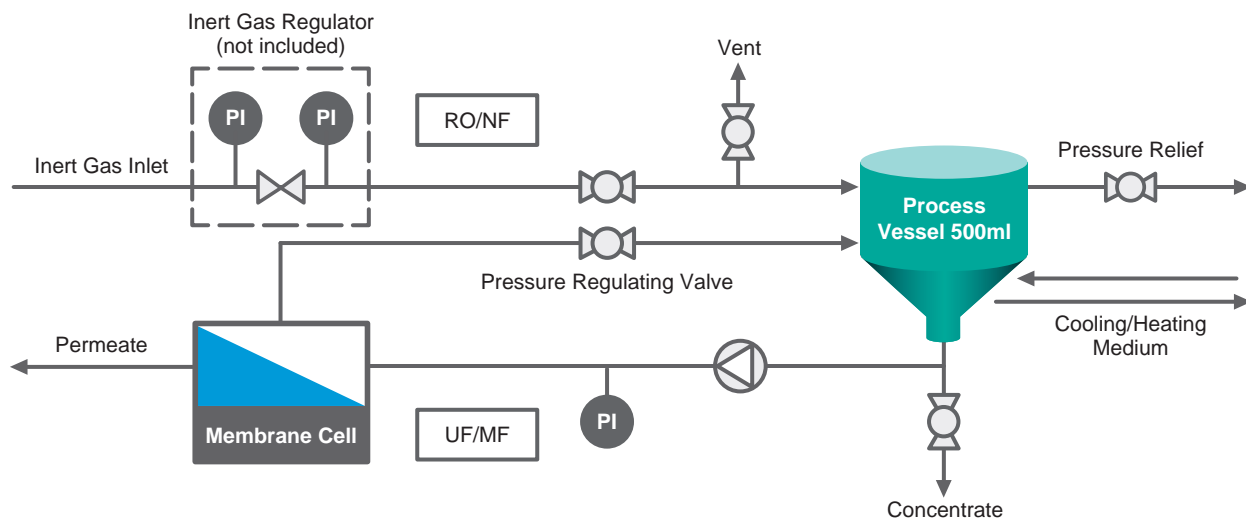
*With suitable pressure rating hose and hose connections.

Specifications

Membrane	Outside diameter	3.0 in (75 mm)
	Active membrane area	4.3 in ² (28 cm ²)
Materials	Wetted parts	SS316L, SS316Ti
	Non-wetted parts	SS304
	Frame	SS304
	Pump	SS316L, PEEK mod.
	Seal elastomers	EPDM, Viton/PTFE
Parameters	Feed volume (max)	500 mL
	Operating pressure (max)	510 psi (35 bar)*
	Operating temperature (max)	158°F (70°C)**
	Pump delivery rate	0.5 gpm at 115 psi (1.8 L/min at 8 bar)
	Typical crossflow rate	6 ft/s (2 m/s)
	Operation < 115 psi (8 bar)	Pressure regulating valve adjustment using supplied pump
	Operation > 115 psi (8 bar)	Addition of pressurized inert gas
Power Supply	1 phase	110V, 60 Hz (USA) 220V, 50 Hz (Europe)
Dimensions	Size (L x W x H)	14.5 x 13 x 16.5 in (370 x 330 x 420 mm)
	Weight	40 lb (18 kg)

* With suitable pressure rating hose and hose connections (high pressure hose not included)

** Membrane and feed solution dependent



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