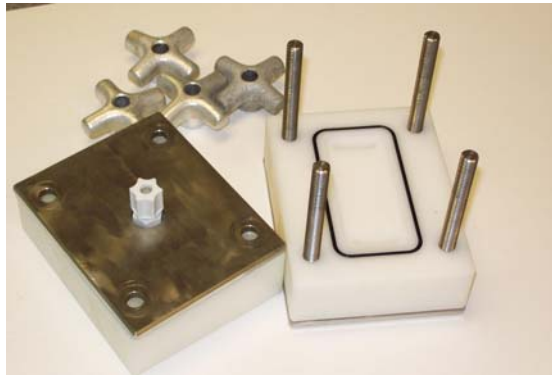


Sterlitech CF042 Cell



Description:

The Sterlitech CF042 membrane cell is a lab scale cross flow filtration unit that is designed to provide fast and accurate performance data with minimal amounts of product, expense, and time. The CF042 can be used in a variety of applications and with a variety of membranes.

Principle of Operation:

A single piece of rectangular membrane is installed in the base of the cell. The stainless support membrane is used as a permeate carrier. The two cell components are assembled using the stainless steel studs as guides. Use the “quick-release” hand nuts to tighten the components together.

The feed stream is pumped from the user supplied feed vessel to the feed inlet. The feed inlet is located on the cell bottom. Flow continues through a manifold into the membrane cavity. Once in the cavity, the solution flows tangentially across the membrane surface. Solution flow is fully user controlled and is laminar or turbulent depending upon the fluid viscosity and fluid velocity.

A portion of the solution permeates the membrane and flows through the permeate carrier, which is located on top of the cell. The permeate flows to the center of the cell body top, is collected in a manifold and then flows out the permeate outlet connection into a user-supplied permeate collection vessel. The concentrate stream, which contains the material

rejected by the membrane, continues sweeping over the membrane and collects in the manifold. The concentrate then flows out the concentrate tube into a vessel or back into the feed vessel.

Operating Parameters

Effective Membrane Area: 42 cm²
Maximum Pressure: 69 bar (1000 psi)
Maximum Operating Temp: 80°C (190°F)
O-rings: Buna (Viton Available)
pH Range: Membrane Dependent

Materials of Construction

Cell Body: Delrin Acetal
Top and Bottom Plate: 316L Stainless Steel
Quick Release Knobs: Stainless Steel
Support: 20 micron sintered 316L Stainless Steel

Connections

Feed: 1/4 inch FNPT
Concentrate: 1/4 inch FNPT
Filtrate: 1/8 inch FNPT

