



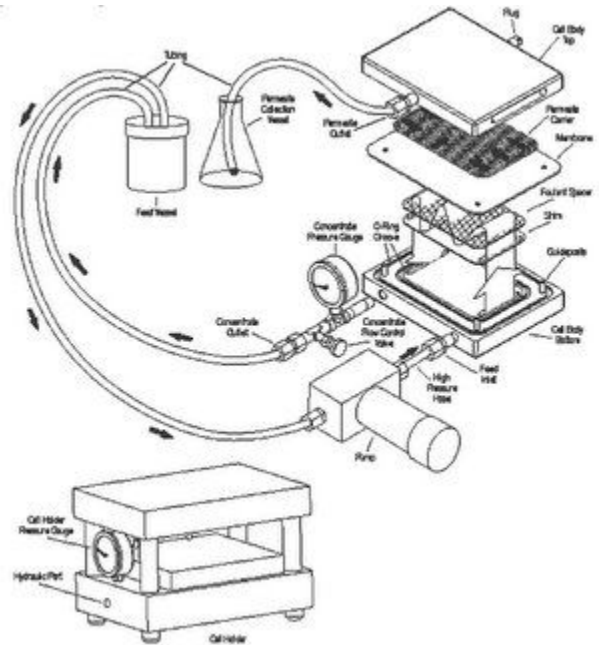
Sepa CF Systems Principles of Operation

The permeate carrier is placed into the Cell Body Top, which fits over the Guideposts. Guidepost location assures proper orientation of the cell body halves.

The cell body is inserted into the Cell Holder. Hydraulic pressure is applied to the bottom of the holder. This pressure causes the piston to extend upward and compress the cell body against the Cell Holder top. Double O-Rings in the cell body provide a leak-proof seal.

The feed stream is pumped from the user supplied Feed Vessel to the Feed Inlet. The Feed Inlet is located on the Cell Body 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 on the feed spacer and the fluid velocity used. A single piece of rectangular-Membrane is installed in the Cell Body Bottom on top of the Feed Spacer and Shim (optional). Precut membranes from Sterlitech or flat sheet membrane from any source may be used. Guideposts assure proper alignment of the membrane.

A portion of the solution permeates the Membrane and flows through the Permeate Carrier, which is located in the Cell Body Top. The permeate flows to the center of the Cell Body Top, is collected in a manifold, and then flows out through 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 through the Concentrate Flow Control Valve into a user-supplied vessel or back into the Feed Vessel as shown above.



Sepa-CF II Material of Construction Fluid Compatibility

The Cell Body is available in 316 stainless steel. Feed Fluids of strong acids may attack the cell body.

Max. Operating Temp 177°C (360°F)
Max. Operating Press. 69 Bar (1,000psig)