Sterlitech HF FO Hybrid Skid

The Skid Mounted Hollow Fiber Forward Osmosis Module simulates the flow dynamics of larger commercial membrane filtration systems; perfect for testing applications before scale-up.

This skid system is uniquely designed to evaluate the performance of forward osmosis processes, when combined with a pressure-driven spiral wound membrane for regeneration of the draw solution. Configured with a high-pressure line and a low-pressure line, the dual-module skid can be used for processing water and wastewater, chemicals, pharmaceuticals, and radioactive waste, as well as removing organics and heavy metals from solutions.

The system offers experimental control through adjustment of flow and pressure parameters, and is operable in both osmotically and pressure-driven modes. Integrated sensors display real-time data and store for later access and analysis.

Note: also available in analog

APPLICATIONS:
- Biological or Biopharmaceutical Processing
- Concentration of Fruit Juices and Extracts
- Food and Beverage Processing
- Desalination of Brackish Water or Seawater
- Oil and Gas Industry
- Municipal or Industrial Water and Wastewater Purification
- Recovery of Volatile Compounds from Aqueous solutions

STANDARD FEATURES:
- Operating Pressures to 80 psi (5.5 bar) on the Low Pressure Line and up to 1000 psi (69 bar) on the High Pressure Line
- Sea Water Rated Plumbing
- Digital Pressure and Flow Sensors
- Stainless Steel Frame with Heavy Duty Casters
- Operates in Both Pressure Driven and Osmotically Driven Modes

SPECIFICATIONS:

Number of Housings
- 1 x 1812 Housing
- 1 x Aquaporin Hollow Fiber FO Membrane Module (HFFO2 or HFFO06)

Housing Size
- 1812: 2.5 in (63.5 mm) × 16.93 in (430 mm)
- HFFO2: 2.8 in (70 mm) × 11.8 in (300 mm)
- or HFFO06: 1.9 in (50 mm) × 5.9 in (150 mm)

Effective Membrane Area
- 1812: Variable, max 0.45 cm²
- HFFO2: 2.3 m²
- or HFFO06: 0.6 m²

Flow Rates
- Maximum 1.8 GPM (6.7 LPM) on the high pressure line
- 0.01-0.85 GPM (0.032-3.2 LPM) on the low pressure line

Process Controls
- Bypass Valve
- Concentrate Pressure Control Valves: 0-1000 psi (0-69 bar)

Data Monitoring
- Flow Rate, Pressure, Temperature, Conductivity, Weight

Operating Pressure Range
- 0-1000 psi (0-69 bar) on the high pressure line
- 0-80 psi (0-5.5 bar) on the low pressure line

Electrical Supply
- 110V/60Hz, 1 Ph or 220V/50Hz, 1 Ph

Pump and Motor Rating
- Washguard Electric Motor
- High Pressure Positive Displacement Pump
- Low Pressure Gear Pump with Console Drive

System Dimensions/Weight
- 67 x 41 x 59 in. (170 x 104 x 150 cm)
- 650 lbs (295 kg)

Optional Accessories
- Temperature Controller, Conductivity Sensor, pH Sensor, and Digital Balance
Skid Configured with an 1812 housing and HFFO2/06 modules

Legends

V1: Pressure relief valve
V2: By-pass valve
V3: Low pressure control valve
V4: High pressure control valve
V5: Draw tank drain valve
V6: Feed tank drain valve
V7: Pressure control valve
V8: Bank selector valve #1
V9: Bank selector valve #2
V10: Back flow preventer valve #1
V11: Back flow preventer valve #2
PT1: Draw in pressure transmitter
PT2: Draw out pressure transmitter
PT3: Feed in pressure transmitter
PT4: Feed out pressure transmitter
FT1: By-pass flow rate transmitter
FT2: Draw flow rate transmitter
FT3: Feed flow rate transmitter
CT1: Feed conductivity transmitter
CT2: Draw conductivity transmitter
CT3: Remote conductivity transmitter
L1: Level switch

Electrical Signal
Low pressure fluid line
High pressure fluid line