

Membrane Filtration

Model L Membrane Filtration Pilot Plant

The Model L membrane filtration pilot plant is designed for performing preliminary membrane screening tests for all membrane filtration technologies (MF, UF, NF, and RO) quickly and economically on small volumes of feed material.

These tests will answer the following questions.

- Can membrane filtration generate the desired product?
- Which membrane(s) provide the most desirable performance characteristics?
- What are the approximate operating and performance parameters?

The Model L utilizes the M20 Lab Module™ for performing flat sheet membrane tests. Flat sheet membranes with different pore sizes and materials of construction can be tested during the same pilot run, allowing for a direct and accurate comparison of the performance characteristics of these membranes.

The Model L also includes a 2.5" diameter spiral membrane housing for performing small scale spiral membrane tests.

The pilot plant operates in batch or fed batch mode.

The Model L pilot plant is cart mounted on wheels for ease of setup and operation. The Model L pilot plant will be delivered with all the required components including membranes, operating manual, and data sheet templates.

Standard Features

- One, M20 Lab Module™ (flat sheet test unit)
- One, 2.5" diameter spiral membrane housing
- 4 gallon feed tank
- 7.5 Hp feed pump
- Pressure gauges
- Pressure control valve
- Cooling heat exchanger
- 316L stainless steel construction
- Cart mounted with wheels



Operating Conditions

M20 Lab Module

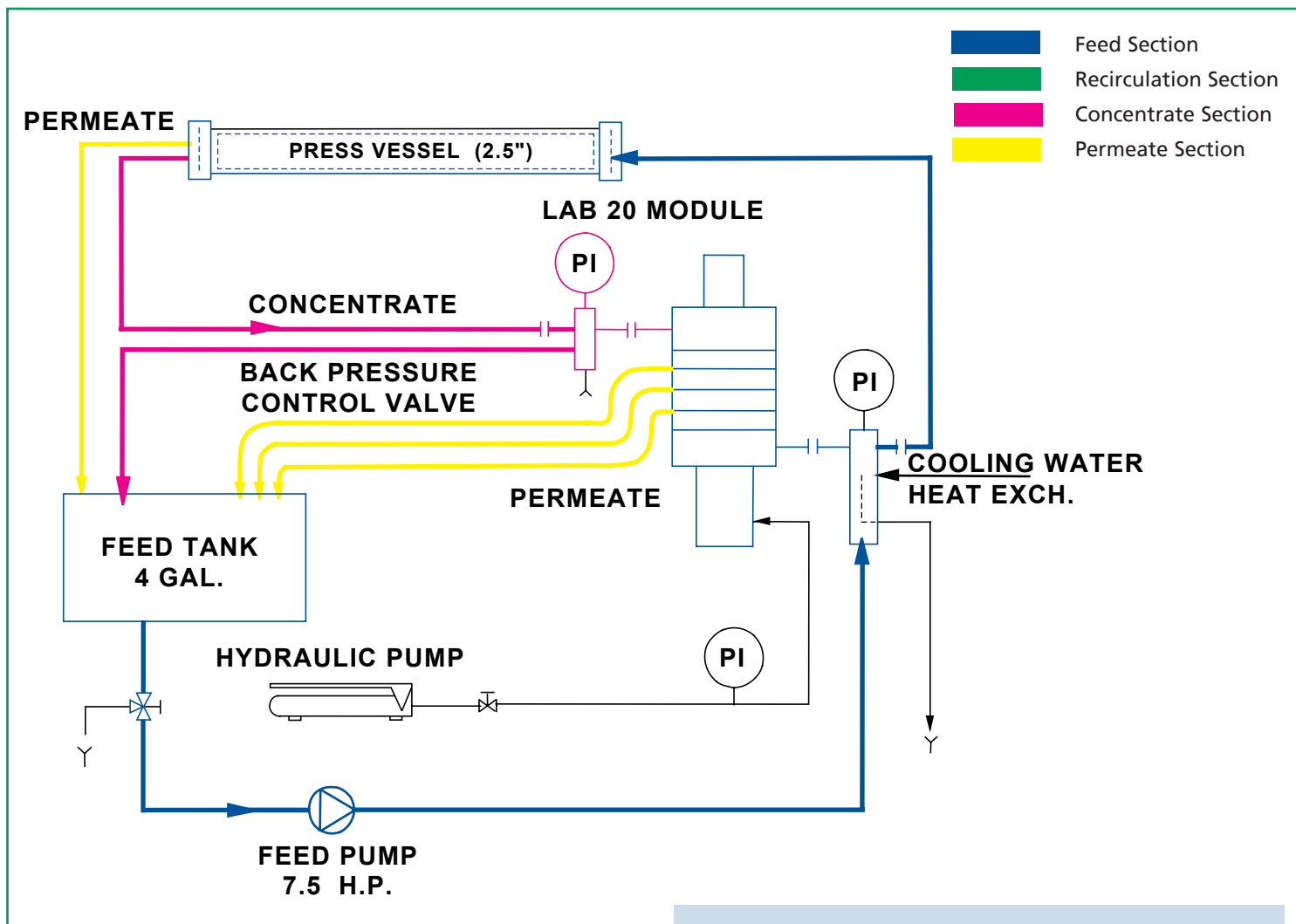
- | | |
|---------------------|------------------------------|
| • Membrane Area | 0.072 to 0.72 m ² |
| • Permeate Capacity | 1 to 8 gallons/hour |
| • Pressure | up to 1,000 psig |
| • Temperature | up to 200° F |

Spiral Membrane

- | | |
|---------------------|-----------------------|
| • Membrane Area | 1 to 2 m ² |
| • Permeate Capacity | 5 to 20 gallons/hour |
| • Pressure | up to 1,000 psig |
| • Temperature | up to 200° F |

Optional Features

- Feed processing and pretreatment equipment



Utility Requirements

- Power 230 V, 1 phase, 60 Hz
- Electric Service 20 amps / 230 V
- Cooling Water 5 gpm, 60° F
- CIP Water 5 gpm

The M20 Lab Module is a trademark of The Dow Chemical Company.

GEA Filtration is part of GEA, an international process engineering leader in the life sciences industry with more than 150 companies operating worldwide. As a team member with other technology leaders within the group, GEA Filtration is uniquely positioned to provide both customized membrane filtration plants as well as complete process lines specifically tailored to each customer's individual needs and requirements.

GEA Filtration is world renowned for its design of the most advanced cross-flow membrane filtration systems available, namely Reverse Osmosis (RO), Nanofiltration (NF), Ultrafiltration (UF) and Microfiltration (MF). We also offer a wide range of system configurations and membrane types to provide the customer with the most technically proficient and cost effective solution for each application.

For more information on the capabilities of our pilot plants, consult our website at www.geafiltration.com.

