MEMBRATEST HP
PILOT PLANT FOR TESTING POLYMERIC MEMBRANES
MICROFILTRATION, ULTRAFILTRATION, NANOFILTRATION, REVERSE OSMOSIS

Description

To carry out experiments with membrane separation technologies, Sepra offers MEMBRATEST HP, a system that allows testing a very wide range of spiral wound membranes dimension 1,8”x12” in the entire field of separation processes (microfiltration, ultrafiltration, nanofiltration, reverse osmosis).

The system is complete with all the elements for its conduction, so it simply has to be connected to a process line where the liquid to be treated is available or to an optional feed tank previously loaded with the appropriate quantity of sample liquid (normally 8-100 liters).

The high flexibility of MEMBRATEST HP allows you to verify the performance of different types of membrane with limited use of resources (time and material cost). With MEMBRATEST HP, fully significant results are obtained with regard to the effectiveness of separation (rejection data); Indicative data can also be obtained regarding permeability, the evolution of soiling and washing methods.

MEMBRATEST HP is made entirely of AISI316, with the sole exception of the flow meters and the permeate collection pipe (made of plastic materials resistant to high temperature and acid/alkaline washing). The construction of this line entirely in AISI316 steel is available as an option, possibly with sanitary fittings, for special applications.

The researcher using MEMBRATEST HP can evaluate the feasibility of a process and build a forecast of cost, investment and operation of a possible industrial plant, alternating the different types of membrane and configuration.
The features of the standard version are listed below.

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What does the MEMBRATEST HP HP standard fit

- 10 liters stainless steel feed tank
- Centrifugal pump in AISI316, pre-feed
- Prefiltration cartridges (available in different porosities to choose from 1-3-5-10-20-50µm)
- Positive displacement piston pump in AISI316, with operating pressure up to 70 bar to feed the section under high pressure, complete with controls and safety systems to work with different types of diaphragms
- Membrane housing in AISI316 for (1) 1,8”x12" spiral wound membrane element, can contain different elements that vary according to the degree of filtration (MF/UF/NF/RO), the material, the construction
- Heat exchanger for temperature control
- Flow meters for permeate and concentrate flow measurement
- Diaphragm inlet and outlet pressure gauges
- Connection pipes made of AISI316/PE, including manual control valves with industrial fittings
- Component support frame made of AISI304
- Electrical panel for alarm control, management of installed components and safety locks
- Spiral wound membrane sample ports (recommended by our technicians according to your specific application)

SEPRA offers optional accessories and customized versions with solutions that can meet the needs of each specific project.

Optional Accessories

- 100 liters polyethylene or stainless steel feed tank, with or without jacket
- Temperature control chiller
- Multi-membrane configuration
- Pumps in special construction
- Sanitary fittings for food/pharmaceutical version
- Analog Measuring Instruments
- PLC with datalogging and remote control

Images

Below are examples of Membratest_HP





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