

Aquaporin Inside® ESSENCE go

Lab-scale Forward Osmosis system



Lower dead volume

Natural concentration using Forward Osmosis (FO) for lower feed volumes.

Plug-N-Play

Ready to use with one place operation & control from human machine interface (HMI)

Compact design

Lower footprint allows easy installation in facilities with limited spaces.

Wide range of applications

Compatible to test a range of applications using Aquaporin Inside® technology.

Process monitoring & data logging

Key process data can be visualized, saved and transferred from HMI using a USB stick.

The ESSENCE go is a lab-scale system to start testing and develop new applications using the Aquaporin Inside® Natural Concentration Technology, both in food and industrial applications. The system has a compact size and low dead-volume, which is ideal for early stage development, and can also serve as starting point for further scale-up and developing.

The system is capable of continuous online monitoring of key process parameters, making it easy to both control your experiments, analyzing data and optimizing the process conditions. The ESSENCE go is the combination of simplicity and power to help you unlock the potential of the Aquaporin Inside® technology.

EXAMPLES OF APPLICATIONS

Food and beverage



Juices & ingredients



Aromas & extracts



Coffee & tea



Recovery of valuables

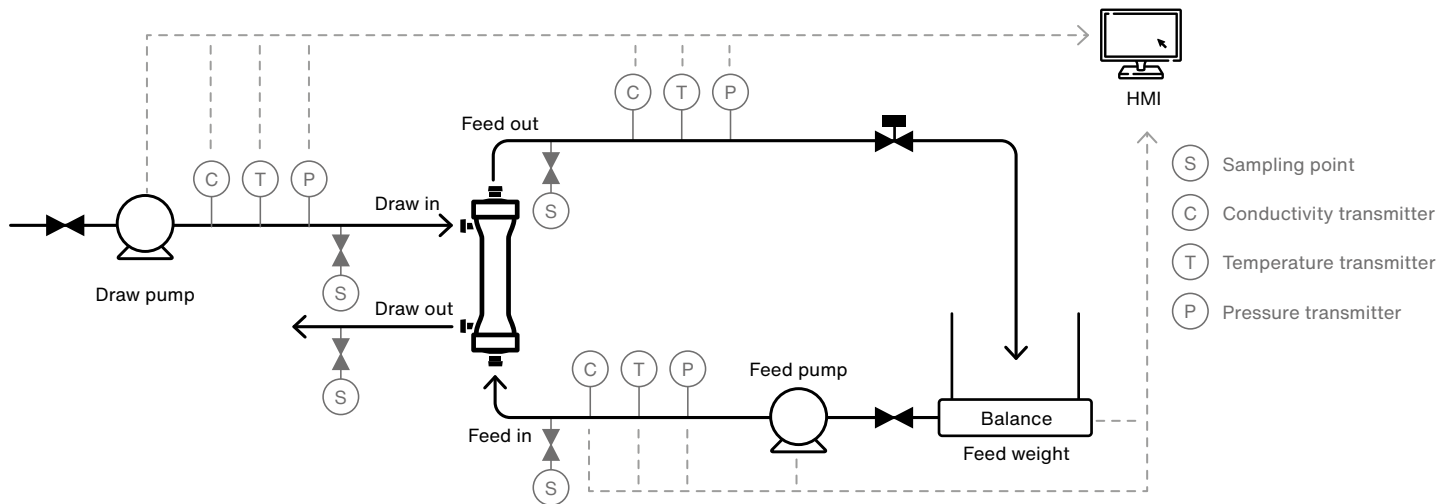


Dewatering of complex feeds



Bioproducts

SYSTEM CONFIGURATION WITH
AQUAPORIN INSIDE® HFFO® MEMBRANE



UNIT SPECIFICATIONS

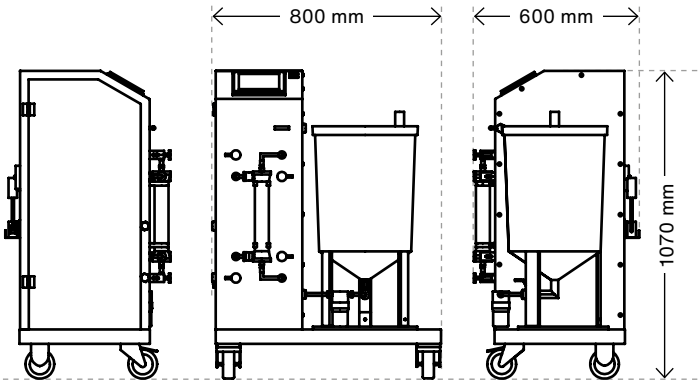
Support structure	AISI 304 Frame Heavy duty caster wheel support
Weight	100 kg (excluding feed volume)
Feed tank	AISI 304 construction 30 L capacity with conical bottom
Electric supply	100–240 VAC 50 / 60 Hz 1 Phase
Membrane module	1 x HFFO®2 or HFFO®2 Food 2.3 m² active membrane area
Contact materials	AISI 316 Fittings Food Grade PU Tubing
Conformity	CE
Directives Followed	Electromagnetic Compatibility Directive (EMC) 2014/30/EU Low Voltage Directive (LVD) 2014/35/EU Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU

PROCESS SPECIFICATIONS

pH range	2–12 (3–10*)
Inlet pressure range	0–12 bar (0–4 bar*)
Operating viscosity	0–100 cP (0–60 cP*)
Flow range	0–90 LPH (0–60 LPH*)
Data recording	Pressure, temperature, conductivity, pump speed, feed weight
Temperature range	5–95 °C (5–40 °C*)
Max particle size	50 µm*
Conductivity range	0–300 mS/ cm
Pump type	Gear pump with control drive
Sampling	Feed In & Out Draw In & Out
Pressure control	Feed

* Recommended process specifications while operating with HFFO® membrane module. Check the membrane datasheet for additional information.

DIMENSIONS



DISCLAIMER:

1. Lab Unit is not intended for commercial production of food products.
2. For using other membrane module, refer to the membrane datasheet or ask our experts.
3. Automatic operation mode using HFFO®2 or HFFO®2 Food modules within allowed conditions. Manual operation mode possible.
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