

100 L REVERSE OSMOSIS PILOT PLANT DATA SHEET



Designed for pilot scale Nanofiltration and Reverse Osmosis trials

This plant is designed for the evaluation of RO & NF membranes as it accepts typical test modules. It has a high pressure capability and is simple to operate.

The best membrane for a given application can be selected from the company's process database and by trialling a number of membranes to achieve the optimum performance.

The pilot plant can be modified to suit customer specific requirements and trials can be carried out either at our customers' premises or at our Swansea facility. Our team of highly skilled engineers is well versed in separation applications utilising microfiltration, ultrafiltration, nanofiltration and reverse osmosis technologies.

Specification

Membrane area =	Up to 14.8m ² (depending on membrane configuration)
Operating pressure =	Up to 50 bar (depending on membrane configuration)
Operating pH =	2.0 – 10 pH (depending on membrane chosen)
Operating temperature =	10 – 50°C
Permeate flow rates =	Typically from 50 to 200 l/hr (depending on membrane area chosen)
Concentrate flow rates =	Up to 1,500 l/hr
Dimensions =	0.7m x 1.6m x 1.7m high
Weight =	250kg (empty)
Area of use =	Non-hazardous area, IP55
Pumps =	P1, feed pump, up to 1,500 l/hr at 50 bar, variable speed

Features and instrumentation

Manufactured with 316L stainless steel contact surfaces and EPDM seals. Includes a Pure-Screen pre-filter, tubular heat exchanger, multiple sample points, pressure relief valve, and high pressure feed pump. Instrumentation includes inlet and outlet Pressure Indicators over the membranes, Temperature Indicator with permeate and concentrate variable area flowmeters.

Installation Requirements

Installed Power =	▶ 5.5 kW, 3 Phase, 415V, 50 Hz (3P, N & E)
Termination Points =	▶ Direct feed inlet (bypass tank) = 1½" clamp
	▶ Concentrate outlet = 1½" clamp
	▶ Permeate outlet = 1" clamp
	▶ Heat Exchanger = ½" BSP female, inlet and outlet

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