



Life Sciences

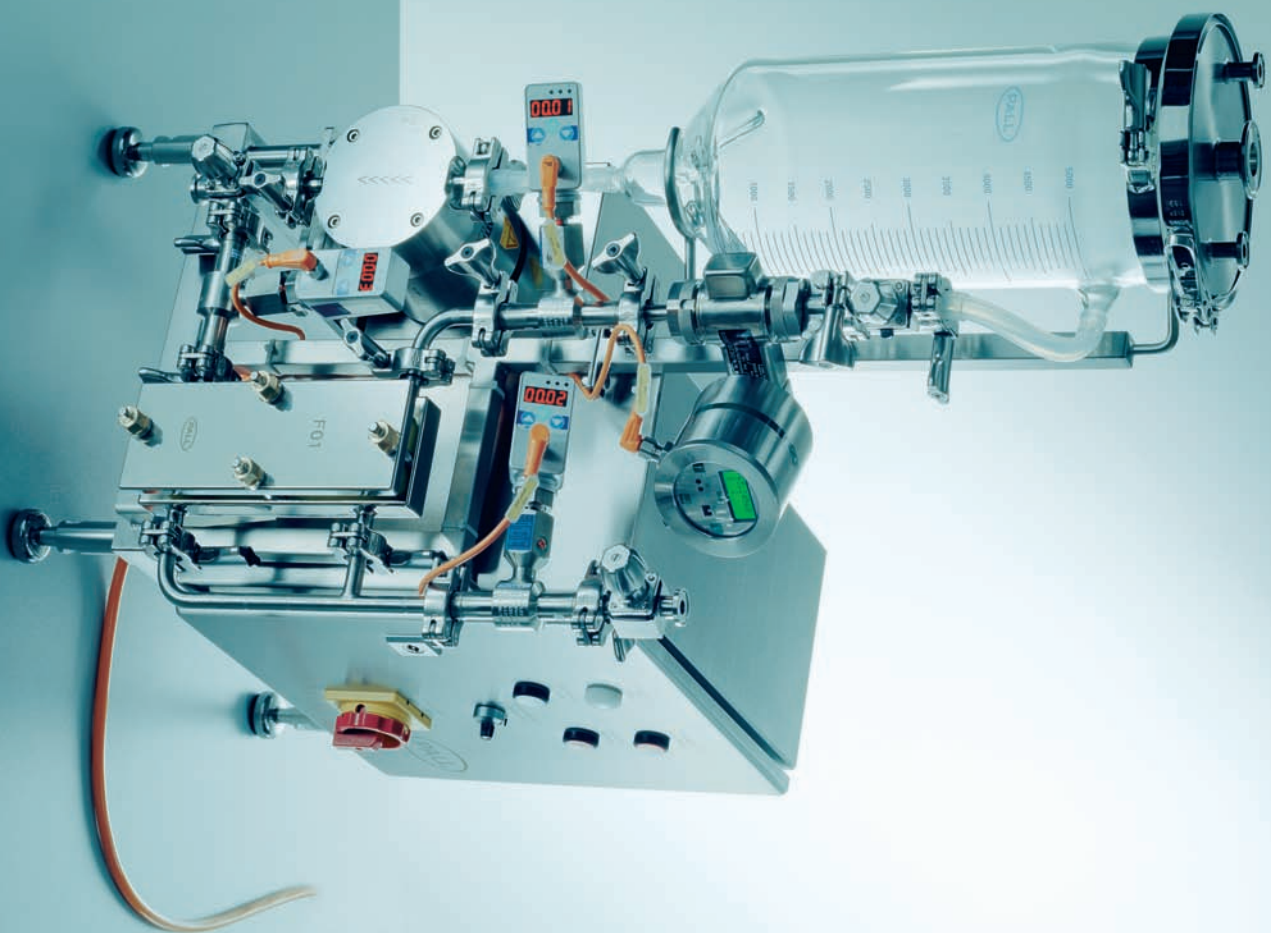
USD 2448



Centramate™ 500 S Tangential Flow Filtration (TFF) system

Scalable production technology in a compact bench top system





TIME TO CONCENTRATE

Centramate 500 S Tangential Flow Filtration (TFF) system

Scalable production technology in a compact bench top system

The Centramate™ 500 S bench top tangential flow filtration system provides biotechnology and biopharmaceutical drug developers & manufacturers with an ultra-compact portable unit for process development in ultrafiltration (UF) and microfiltration (MF) applications.

Designed for all applications requiring concentration and diafiltration of suspended microparticulates (such as cell suspensions and lysates) or dissolved solutes (such as proteins or nucleic acids), the sanitary, self-venting, fully drainable design meets the demands of cGMP environments, with full traceability of process-wetted materials.

Using the Centramate 500 S system for process development, time, risk and process volumes are all minimized.

Features

Compact Flowpath

The ultra compact flow path of the Centramate 500 S system allows users to operate at volumes as low as 170mL (when using a single Centramate membrane cassette) enabling high concentration factors and minimizing operating volumes.

Scalable Process Technology

Designed through experience, the Centramate 500 S system meets the requirements for cGMP equipment with a comprehensive qualification and documentation package, calibrated process instrumentation and hygienic design.

Direct Flow Measurement

The magnetic inductive flowmeter provides direct flow measurement during operation, making system operation safe, accurate and user friendly.

High Yield and Product Recovery

The hygienic, completely drainable flow path of the Centramate 500 S system enables high product yield, optimum product recovery and easy cleaning.

Safety in Operation

An adjustable pressure interlock provides product and operator safety in a robust and reliable TFF system.

Pressure Independent Flow

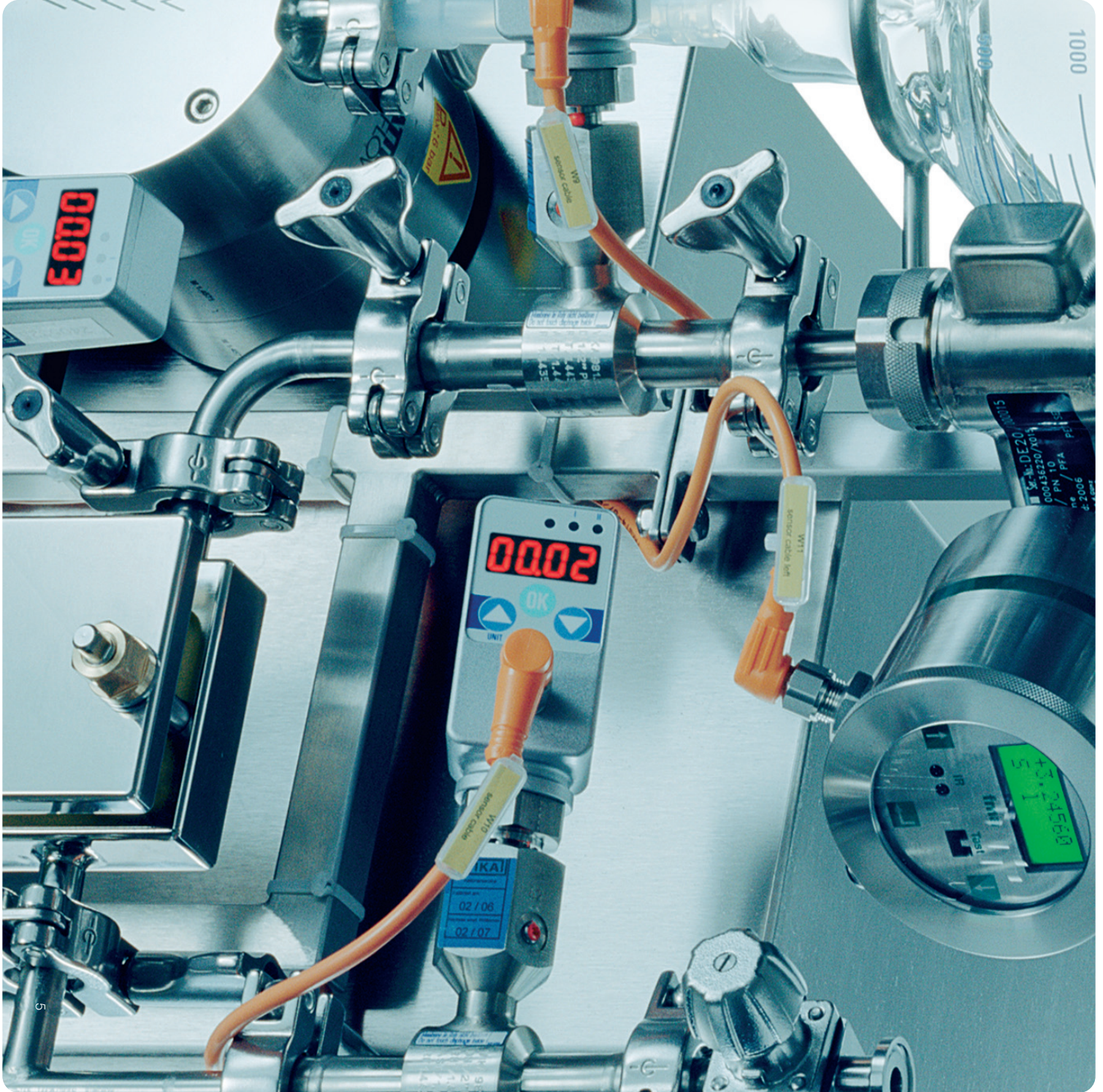
The 4 piston diaphragm pump delivers constant flow even as the system pressure increases.

Data Logging Capability

Data from the process instrumentation can be exported to a PC or laptop computer via the USB port on the Centramate 500 S system.

Documentation Package

- Calibration certificates for measuring instruments
- Electrical wiring documentation incl: certificates
- 3.1 certificates for product wetted parts
- Drawings (P&ID, Layout)
- Welding documentation incl: certificates
- FDA conformity (EPDM): CE declaration
- User manual
- Supplier literature
- Generic IQ documentation

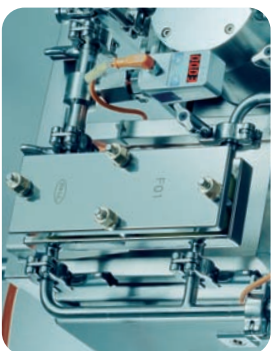




The graduated glass vessel provides full visibility and indication of fluid level during operation, so volumes can be closely controlled.



The positive displacement diaphragm pump provides pressure independent flow, ensuring critical parameters do not vary during concentration.



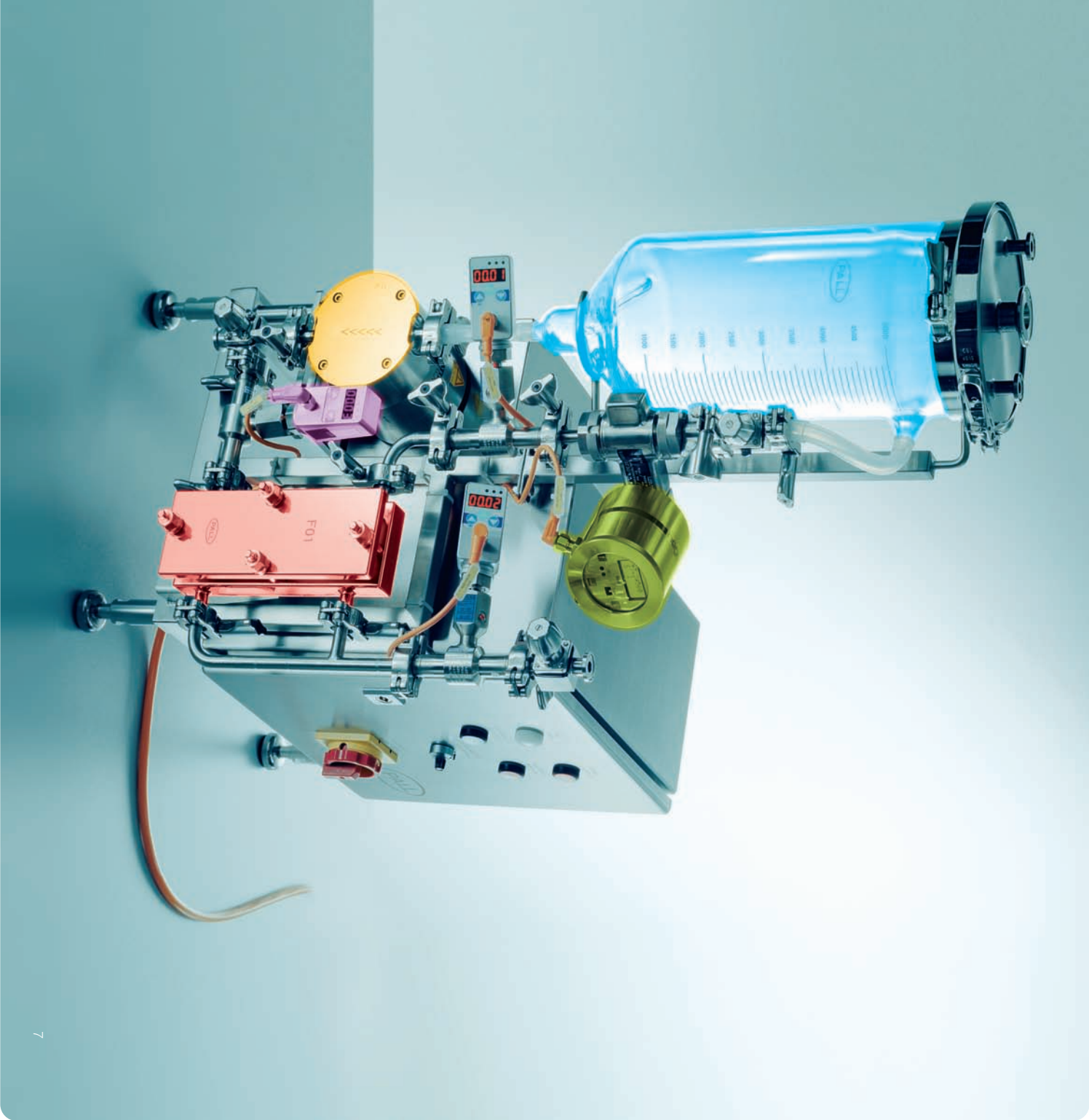
Scalable process technology makes the system ideal for scale-up and scale-down studies.

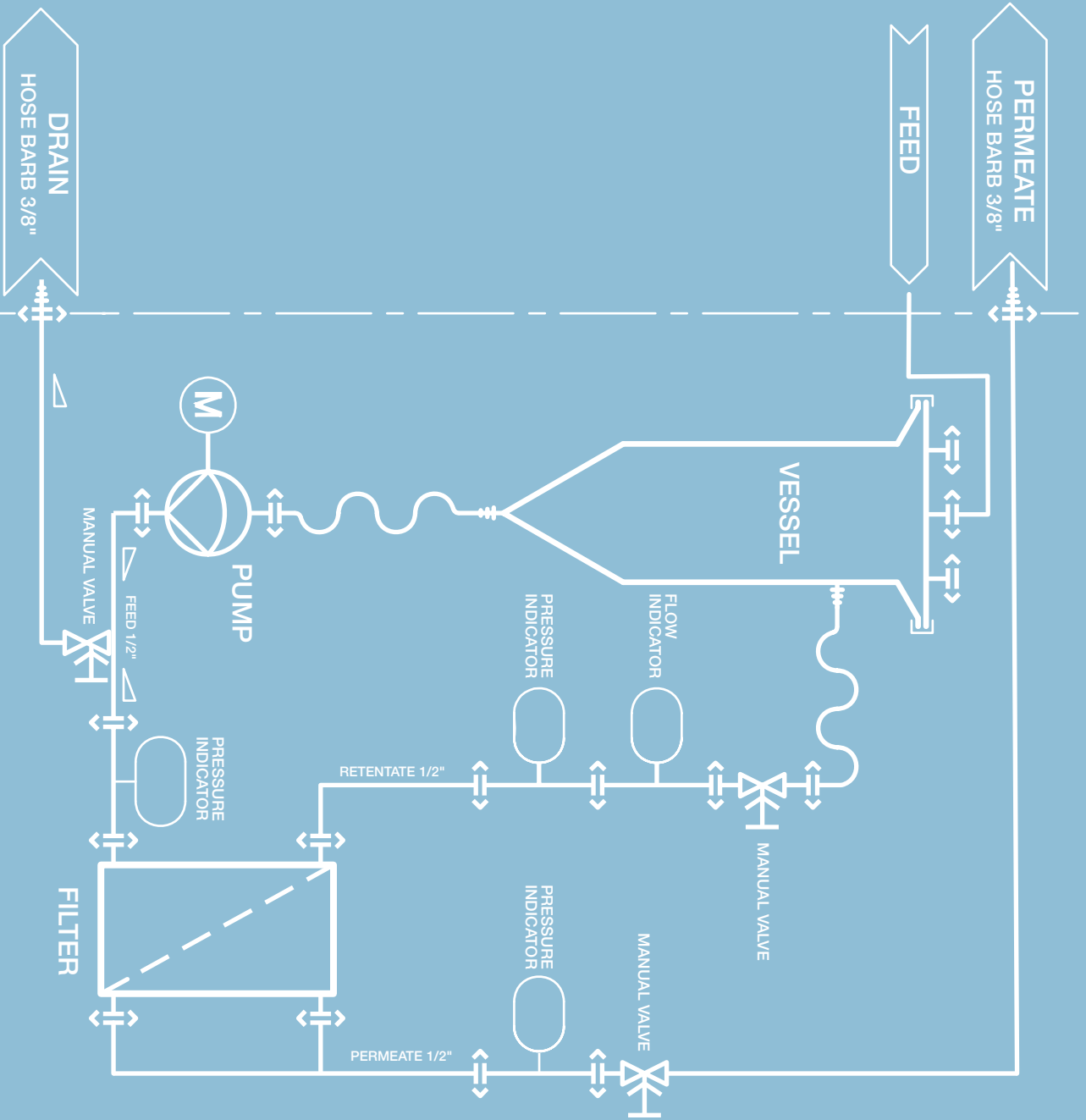


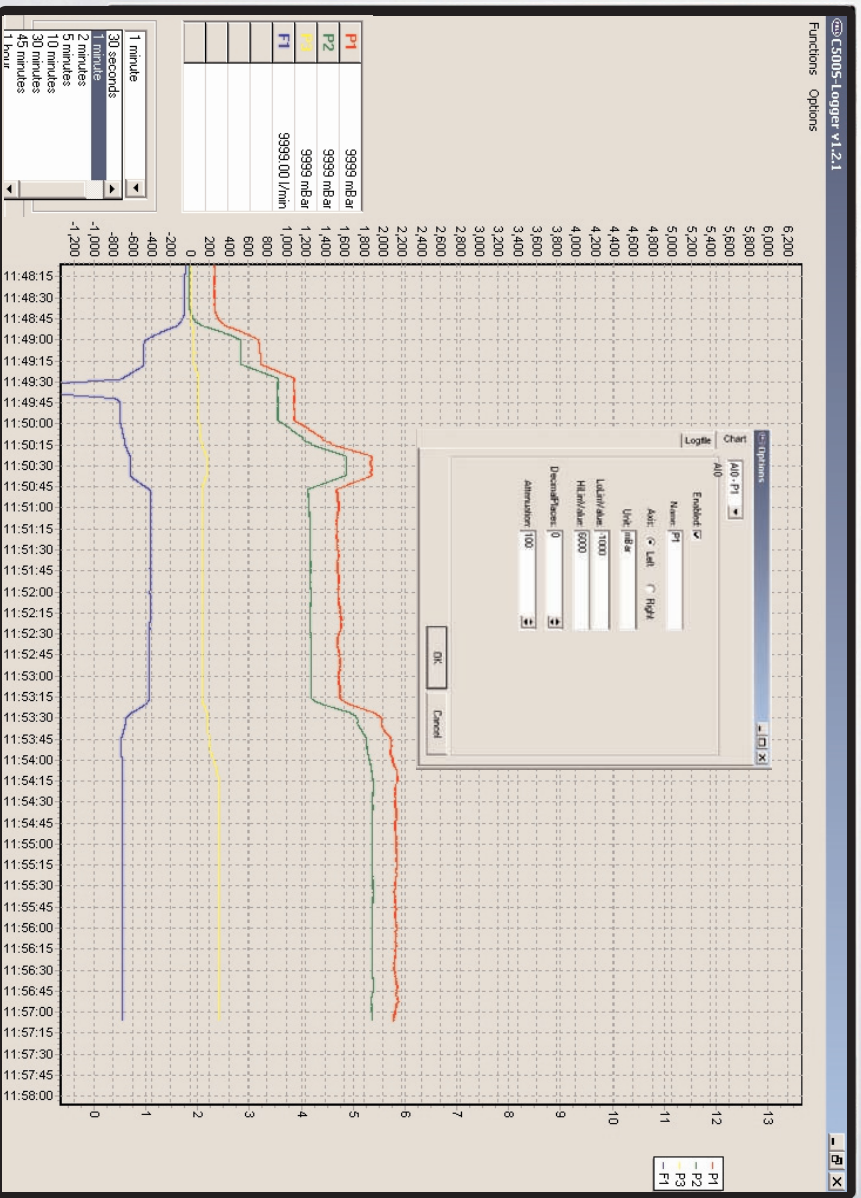
Direct flow measurement with the magnetic induction flowmeter means accurate, safe and simple operation.



With an interlock controlling the recirculation pump, operator and product safety is maximized.







To eliminate transcription and recording errors, the Centramate 500 S system has a built in data acquisition system which can be connected to a PC via a USB cable. The data can be imported easily into Microsoft® Excel®.

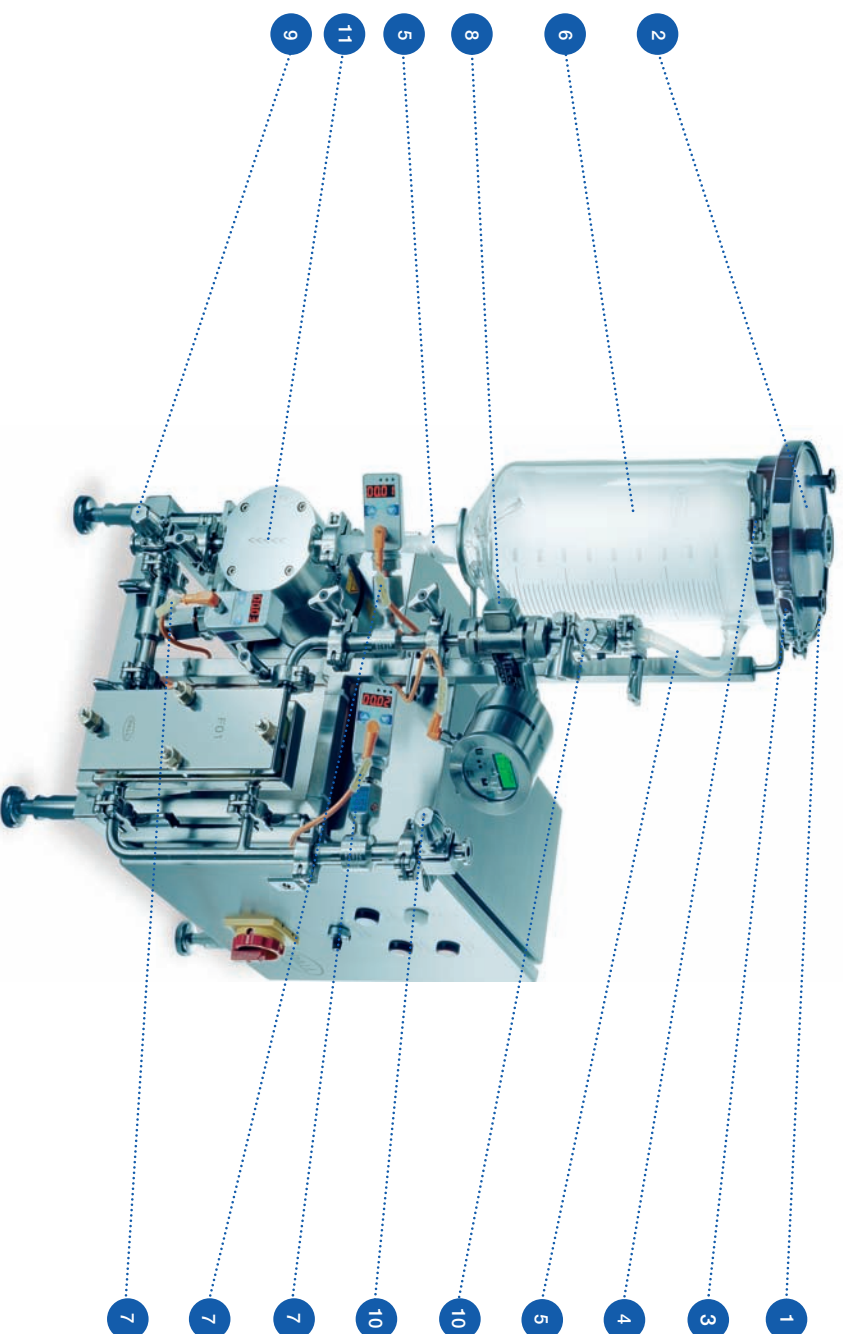
Ordering Information

Description	Part Number
Centramate 500 S system - 220V/50Hz	CM500SE

Spare Parts		
ID	Vessel Part numbers	
1	O-ring	CM005OR
2	Vessel lid	CM005LD
3	Vessel lid clamp	CM005LC
4	Support & clamp (including rubber)	CM005GS
5	Vessel inlet/outlet tubing	CM005TU
6	Glass Vessel	CM005GR

Description	Part Number
Centramate 500 S System - 110V/60Hz	CM500SW

Components			
7	Sensors	Pressure sensor	CM012PS
8		Flow Sensor	CM012FS
9	Valves	Drain valve	CM012DV
10		System valve	CM012SV
11	Pump	Membrane and spare kit	PQ808X01



Centramate 500 - Technical Specifications

Operating Conditions	
Pressure Range	0 to 6 barg (0 to 87 psig)
Temperature Range	0°C to +45°C (32°F to 113°F)
Flow Rate	15 - 600L/hr
Operating Volumes	
Maximum Working Volume⁽¹⁾	5 liter (nominal)
Minimum Working Volume⁽²⁾	170mL
Dimensions & Weight	
Dimensions	W 480mm x L 605mm x H 945mm (W 19" x L 24" x H 37")
Weight	50kg (110lb)
Power Requirements	
CM500SE Version	220V / 50Hz
CM500SW Version	110V / 60Hz
Power	370W

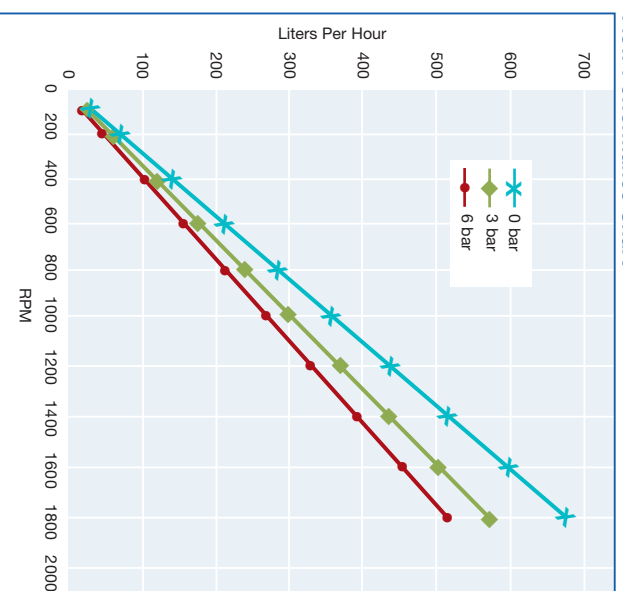
⁽¹⁾ 5 liter is the maximum batch volume. Larger volumes can be processed using a fed-batch approach.

⁽²⁾ 170mL is the minimum working volume when using a single Centramate membrane cassette. Actual minimum working volume will be dependent on the installed membrane area and should be measured.

Component Specifications

Component	Type	Materials	Surface Finish	Capacity/Other
Cassette Holder	Centramate	316L Stainless Steel	0.8µm Ra, electropolished	0.1 - 0.5m ² membrane area
Tie-rods & Washers	N/A	304 Stainless Steel	N/A	N/A
Nuts	N/A	Bronze	N/A	N/A
Vessel	N/A	Borosilicate Glass	N/A	5L
Recirculation Pump	4 piston diaphragm pump	316L Stainless Steel	0.8µm Ra, electropolished	600L/hr
Diaphragm	N/A	Santoprene [*]	N/A	N/A
Flowmeter	Magnetic Inductive	316L Stainless Steel	0.8µm Ra, electropolished	600L/hr
Pressure Indicator	N/A	N/A	N/A	N/A
Chemical Seal	N/A	316L Stainless Steel	0.8µm Ra	-1 to +6 bar
Transmitter	2-wire system	N/A	N/A	4 - 20 mA
Valves	Diaphragm	316L Stainless Steel	0.8µm Ra, electropolished	N/A
Diaphragm	N/A	EPDM	N/A	N/A
Piping	Weldtron, longitudinal seamed	316L Stainless Steel	0.8µm Ra, electropolished	N/A
Gaskets	1/2 inch sanitary	EPDM	N/A	N/A
Vessel Outlet /Inlet Tubing	N/A	Silicon	N/A	N/A
Frame	Enclosed square profile	304 Stainless Steel	N/A	N/A
Cabinet	N/A	304 Stainless Steel	N/A	IP54

Flow Performance Chart





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