

# Ultra Filtration 3255

## Cogent<sup>™</sup> M Tangential Flow Filtration System



- ▶ Extremely low hold-up volume for maximum product recovery
- ▶ Accurate scale down of production TFF systems
- ▶ Easy to use
- ▶ Easy to clean

processing from 300 mL

A state-of-the-art bench top TFF system  
capable of processing  
up to hundreds of liters

The Cogent M system is a compact, semi-automated tangential flow filtration (TFF) system ideally suited for process development optimization and scaling studies of recombinant protein products, vaccines, gene therapy constructs, and clotting factors. Benefiting from Millipore's industry leading bioprocess knowledge and expertise, the unit incorporates innovative and intelligent design features that enhance performance and enable a very low hold-up volume for maximum product recovery.

Equipped with a 10 liter tank, the Cogent M system can also be run in fed-batch mode using an optional transfer pump, which enables the system to process up to 100 liters or more based on sample and membrane characteristics.

The unique tank design incorporates maximum mixing capabilities and contributes to a low minimum working volume, and a proprietary membrane holder design with integrated sensors and sanitary connections greatly reduces hold up volume. The system uses from one to five Pellicon<sup>®</sup> 2 or Pellicon 3 Mini cassettes and supports a membrane area from 0.1 m<sup>2</sup> to 0.5 m<sup>2</sup>.

### Models Full-Scale Production

Instead of using the standard peristaltic pump, the Cogent M system utilizes a diaphragm pump and 316L stainless steel fluid path components, which are used in most full-scale production systems. By emulating the design of production equipment at the bench scale, customers are able to conduct scale down studies that will reproduce shear characteristics and contact materials typically found in full-scale production systems.

### Easy-to-Use System

With a state-of-the-art PLC control unit and touch screen buttons, the Cogent M system is easy to operate —no special training is required. In addition, the ability to establish set-points for automated control (such as target concentration) along with comprehensive safety features, allows unattended operation.

## Cleanability

The system is completely drainable and designed for clean-in-place (CIP). The smooth stainless steel surfaces and zero dead space provide enhanced cleanability using standard cleaning agents such as NaOH and NaOCl.

## Precise Retentate Flow Measurement

For critical applications that require assurance beyond the pressure flow curves included with the system, the Cogent M system can be fitted with an optional electromagnetic retentate flow meter that directly measures retentate flow with a high degree of accuracy, provided minimum conductivity requirements are met.



Easy to install and commission, the flow meter provides a high degree of measurement accuracy across a wide flow range. The stainless steel housing offers high sanitary safety and the PFA lining is fully compatible with high process temperatures, and with CIP and SIP cleaning processes.

## Applications

- Concentration and diafiltration
- Depyrogenation
- Desalting and buffer exchange
- Small molecule processing
- Cell harvesting/clarification
- Virus harvesting/clarification

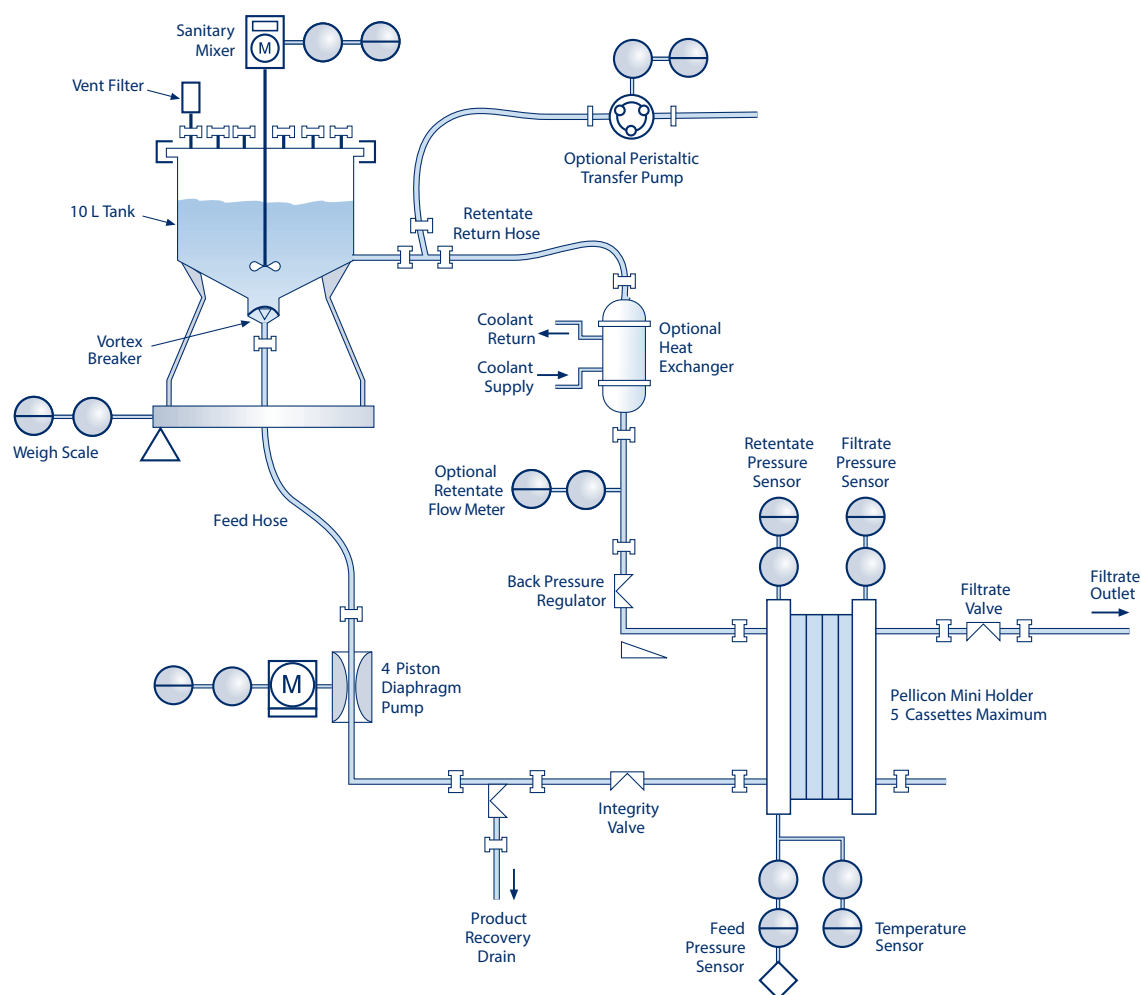
## Specifications

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Cassette	One to five Pellicon 2 or Pellicon 3 Mini cassettes (not included)
Cassette Holder	Pellicon Mini holder
Vent Filter	Opticap® XL 2 disposable capsule with hydrophobic Aervent® membrane
Filtration Area	0.1 m <sup>2</sup> – 0.5 m <sup>2</sup>
Tank Volume	10 L
Tank Mixer Volume	1.5 – 10 L
Hold-up Volume	< 10 mL (excluding cassette)
Pumps	
Feed:	0.2 – 4.5 L/min at 5 barg
Transfer (option):	0.16 – 2300 mL/min (tubing dependent)
Heat Exchanger (option)	0.2 kW
Retentate Flow Meter (option)	
Minimum conductivity:	≥ 5 µS/cm
Accuracy:	± 0.5%
Maximum System Pressure	6 barg prior to pump shut off
Minimum Recirculation Volume at Maximum Flow Rate	300 mL
Process Temperature	2 – 50 °C
Connection Hoses	1.0 bar maximum
Operator Interface	PLC via a touch screen
Operational Requirements	
Electrical:	Voltage/Current — Single Phase 100 VAC 50 Hz, 100 VAC 60 Hz, 120 VAC 60 Hz, 230 VAC 50 Hz
Amperage (maximum):	Europe: 2.5 amps North America and Japan: 5 amps
Over voltage category:	Category II
Compressed air:	Maximum 60 psi/413 kPa –20 °C dew point, oil-free
Environmental Operating Conditions	
Humidity:	10 – 85% non-condensing environment
Temperature range:	Ambient operational: 2 °C to 30 °C Process: 2 °C to 50 °C Storage: –10 °C to 55 °C
Maximum altitude:	< 2000 meters
Dimensions	
Height:	104 cm (41 in.)
Width:	70 cm (28 in.)
Depth:	44.5 cm (18 in.)
Weight:	59 kg (130 lbs)

Wetted Materials of Construction	EPDM, 316L stainless steel, Santoprene <sup>®</sup> elastomer, medical grade epoxy, and silicone
Surfaces	
Stainless steel – internal:	< 25 micro-inch (0.67 $\mu\text{m}$ ), Ra
External:	< 50 micro-inch (1.34 $\mu\text{m}$ ), Ra
Wetted Materials	All polymer wetted materials of construction are USP Class VI tested.
System Setup	Unit shipped requires minimal setup. Pellicon 2 or 3 Mini cassettes (not included) are installed by the user.
Regulatory Information	The Cogent M system meets the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC, and is CE marked.

### State-of-the-Art Design



## Regulatory compliances



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**Technologies Limited**

**HPLC Solutions   MultipleLabs   Analytical Bio-Med   Analytical Distributors   Analytical Foundation (Trust)**

**Corporate & Regd. Office:**  
Analytical House, # E67 & E68,  
Ravi Park, Vasna Road, Baroda,  
Gujarat 390 015. INDIA

T: +91 265 2253620  
+91 265 2252839  
+91 265 2252370  
F: +91 265 2254395

E: [info@hplctechnologies.com](mailto:info@hplctechnologies.com)  
[info@multiplelabs.com](mailto:info@multiplelabs.com)  
[info@analyticalgroup.net](mailto:info@analyticalgroup.net)  
[info@analyticalbiomed.com](mailto:info@analyticalbiomed.com)

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