

SciLog® SciFlex® TFF

- intelligent bioprocessing system
- semi-automated TFF

The SciLog® SciFlex® TFF is an automated tangential flow filtration system.

The SciFlex® TFF is a semi-automated, single-use tangential flow filtration (TFF) system that automatically monitors, adjusts and documents pressures and flow rate to optimize filtration speed and maximize filter life and efficiency, eliminating the need for constant monitoring during runs.

The SciFlex® system's 'Open Architecture' design means there is no need to change filter or membrane types because this system will work with any supplier's filter. An integrated scale can be used to gravimetrically control concentration, while the inline SciPres® pressure sensors monitor transmembrane pressure to prevent extreme pressure over the membrane.

Features and Benefits

- Automated onboard filtration methods
- OPC data collection via ethernet
- Integrated SciPres® pressure sensors
- Safe, walk-away system operation
- Intuitive application interface
- 'Open Architecture' engineering enables this system to work with most filters or membranes



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The SciFlex® TFF semi-automated system offers three modes of process control:

- Constant Rate TFF: Maintain rate, monitor pressure. The system will ensure pressure does not exceed set point.
- Constant Pressure TFF: Maintain pressure, monitor rate. The system will ensure rate does not exceed set point.
- Manual Operation: User definable motor set point.
- Constant Rate / Constant Pressure TFF is available as an optional upgrade: Maintain rate set by user as well as transmembrane pressure by modulating a nonproduct contact proportional valve in the retentate line. The system will ensure pressure does not exceed set point.

Batch control is ensured:

- Recipes can be conveniently stored and recalled at the time of execution to save time and reduce the risk of parameters being installed incorrectly.
- Up to 10 sequential steps can be stored to provide continuous processing.



Simple Concentration Method Example:

- A user selected concentration factor is implemented as soon as the run begins an initial weight set point is established from the integrated scale.
- Filtration continues until the predetermined concentration factor is reached, while the inline pressure sensors monitor transmembrane pressure (TMP) to prevent extreme pressures over the membrane.
- The SciFlex® automatically stops the method when the target weight is reached and displays a note to prevent accidental restart of the system at the endpoint.
- Diafiltration can then occur at any time after the note is cleared in another fully automated mode.

Specifications

	Description
Dimension	Footprint as small as 20" x 30" (0.50m x 0.76m), varies by model.
Enclosure & Rating	304 stainless steel framework, mobile platform with pharmaceutical-grade casters, NEMA 4X, IP65 rated cabinet
Pressure Sensors	Accommodates 3 x disposable pressure sensors. The calibrated pressure range is 0 - 60 psi. Any point within this range can be recalibrated using an external pressure reference source.
Power	208V single phase, 60Hz, 20A; or 208V three phase, 60Hz, 20A; or 220V +/- 10% single phase, 50 Hz, 20A
I/O Ports	Connections for 3 x SciPres® pressure sensors, 1 x SciCon® conductivity sensor, retentate quantification and permeate flow rate / quantification.
Operational Mode	Endpoint concentration and diafiltration modes, manual mode.

Options and Accessories

- The SciLog® SciFlex® system is available in three styles and can be configured to be fully automated
- TMP valve required to enable process point recover for paused states or alarms
- Constant rate / constant pressure TFF is available as an upgrade
- A variety of pumps is available for recirculation, permeate and diafiltration
- Automated transmembrane pressure valve
- Inlet fluid selection valve
- Retentate quantification, permeate quantification, electrical specification and pneumatic specification
- WeighStation™
- Test manifold
- SciLog® sensors
- UV sensor for quantification of extremely high retentate protein concentrations and detection of extremely low concentrations of product leaks through filter into permeate
- Single-use bioprocessing containers and manifolds
- Single-use flowmeter can replace any balance

Ordering Information

Please contact your local Parker domnick hunter representative to discuss how these systems can be configured for your needs.



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