

# SpinTek ST-II L: Centrifugal Membrane System for Ultra- and Microfiltration

Centrifugal and high shear action



Single or 3 disk models available



Variety of pore sizes available



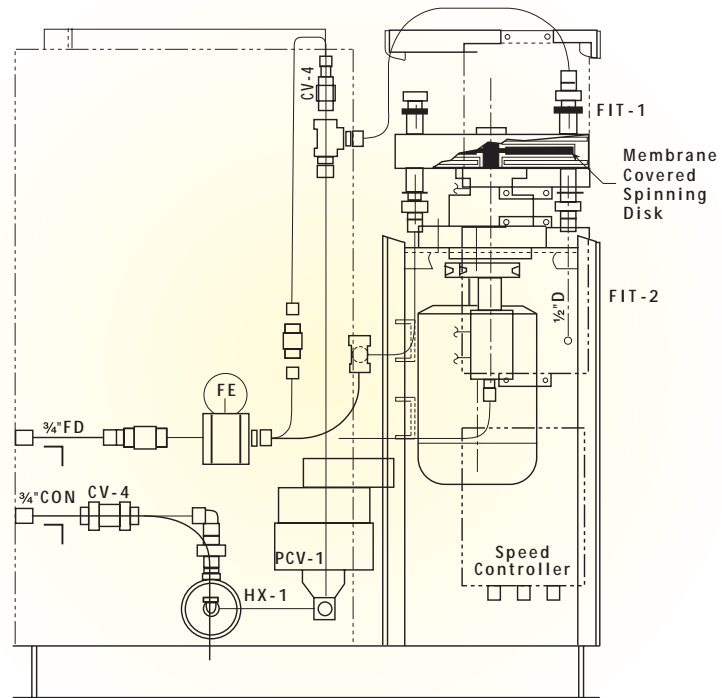
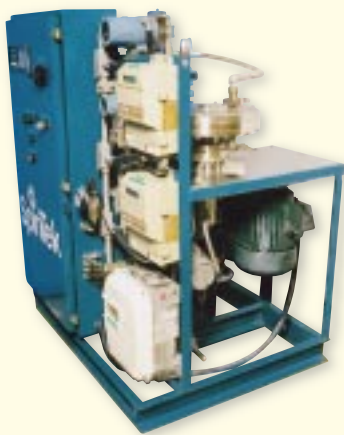
Ideal as pilot system or small production system



Explosion proof optional



316 stainless steel construction



## >General

The SpinTek™ ST-II L is a compact cross flow membrane system that utilizes the unique SpinTek process of centrifugal action and shear force to prevent membrane fouling common to conventional systems. The ST-II L has wide open channels, uninhibited by mesh type turbulence promoters, allowing the system to process a wide variety of viscous solutions containing moderate to high solids.

The membrane can be easily removed from the system for inspection after testing or operation. The ST-II L membrane surface can be fully inspected unlike most other membrane systems.

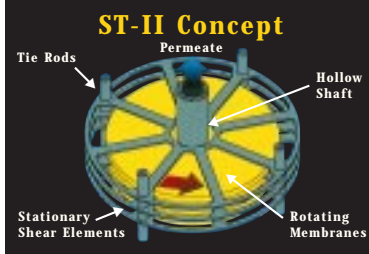
## >Membranes

The ST-II L can use a wide variety of ceramic or stainless steel membranes. Typical ceramic membranes include titania ( $\text{TiO}_2$ ), alumina ( $\text{Al}_2\text{O}_3$ ), zirconia ( $\text{ZrO}_2$ ), or combinations of the three. Membrane pore sizes are available from 0.07 micron up to 3 microns. Stainless steel membranes are available in pore sizes from 1 to 10 micron. SpinTek can install custom or prototype membranes on SpinTek ST-II disks.



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## > Controls and Instrumentation

The SpinTek ST-II L is fully instrumented and automated for production use or pilot testing. The ST-II L controller is simple to operate with a NEMA 4 rated panel, lights, and switches. Explosion proof ratings are also available.

Standard control system includes full PLC control with an operator interface terminal for setpoint entry. Instruments include a variable frequency drive with power output, a feed pressure transmitter with PID pressure control, temperature transmitter and heat exchanger for full temperature control. Alarms are provided for customer specifications. The ST-II L rotor

motor has a variable speed from 0 to 1200 rpm. Special instrumentation can be provided upon request.

## > Construction

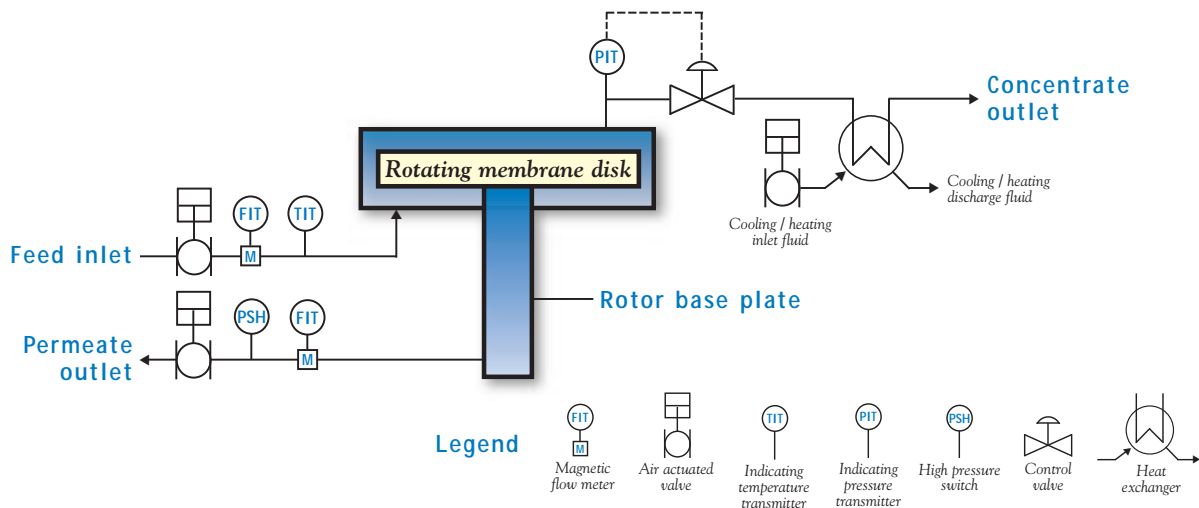
The ST-II L is built to process an extensive range of feed solutions. To meet the stringent requirements of industrial filtration, all wetted parts of the ST-II L are manufactured of 304 SS standard. 316 SS, PTFE and Viton are optional. Special systems can be manufactured with alternate alloys and elastomers.

All components of the system are rated for operation at 100 psig that allows for the use of microporous and ultrafiltration membranes.

## ST-II L Flow data, power requirements and dimensions

Model Number		Membrane Module	Connections Swagelok™ Female Tube Fittings			Rotor Motor	Skid	Weight
Model	Qty	Total Area ft <sup>2</sup> [m <sup>2</sup> ]	Feed	Concentrate	Permeate	Hp [kW]	L x W x H inches [cm]	lbs [kg]
ST-II-1	1	1.0 [0.09]	3/4"	3/4"	1/2"	2.0 [1.5]	34 x 42 x 48 [86 x 107 x 122]	1000 [450]
ST-II-3	3	3.0 [0.28]	3/4"	3/4"	1/2"	3.0 [2.25]	34 x 42 x 48 [86 x 107 x 122]	1200 [544]

## ST-II L Process and instrum diagram



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