

# Bio-Lab Automatic Tangential Flow Filtration System



The Bio-Lab TFF automatic tangential flow filtration system is an easy-to-use automatic ultrafiltration UF/DF system, suitable for harvesting, clarification, concentration, diafiltration and buffer exchange in biopharmaceutical research and development and small-scale production of antibodies, vaccines, nucleic acid drugs, etc., and other processes. The systems have fully automatic intelligent design, automatically controlled TMP, and realize functions such as automatic concentration, equal volume diafiltration, automatic collection, and automatic data recording. There are 5 models of Bio-Lab TFF available: from lab to pilot scale membranes and with different modules options.

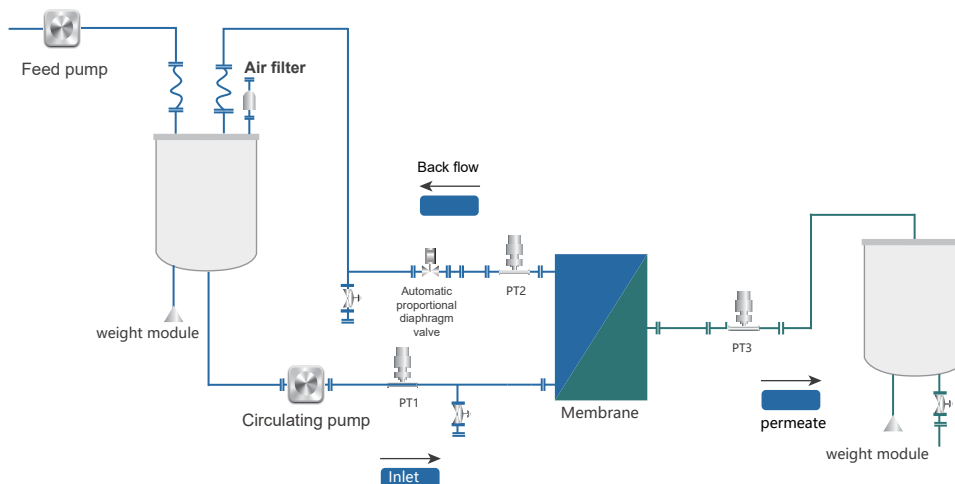
## Features

- High product integration, reasonable flow path layout, reducing system dead volume
- Fully automated design, automatic control of TMP, automatic concentration, diafiltration
- Automatic data recording and automatic backup, no risk of data loss
- Open design for easy operation
- Compatible with a variety of cartridges and cassettes (Millipore/Pall/Sartorius, etc.)
- Full set of verification documents and services available
- Equipped with weighing system for automatic and accurate control of the concentration volume and feeding speed

## Typical application cases

- E. coli/yeast cell harvesting and washing
- Clarification of cell lysates expressing intracellular soluble proteins
- Yeast culture medium clarification
- Inclusion body collection and washing
- Protein ultrafiltration concentration, buffer exchange
- Separation and fractionation of proteins with different molecular sizes

## Laboratory TFF system flow diagram



## System Configuration

Model	Bio-lab TFF18	Bio-lab TFF30	Bio-lab TFF60	Bio-lab TFF120	Bio-lab TFF180
Circulating pump flow rate	Peristaltic pump	Peristaltic pump	Quaternary diaphragm pump	Quaternary diaphragm pump	Quaternary diaphragm pump
	0-300 ml/min	Options: 2*13/14/16/25# hose max flow rate up to 2L/min	0-60 L/H	0-120 L/H	0-180 L/H
Feed pump flow rate	Peristaltic pump 0-300 ml/min		Peristaltic pump 0-1000ml/min	Peristaltic pump 0-1000 ml/min	Peristaltic pump 0-2000 ml/min
Maximum system pressure	2 bar	2 bar	6 bar	6 bar	6 bar
Membrane area	50cm <sup>2</sup> -0.1m <sup>2</sup>	50cm <sup>2</sup> -0.1m <sup>2</sup>	0.1-0.5 m <sup>2</sup>	0.1-0.5 m <sup>2</sup>	0.1-0.5 m <sup>2</sup>
Weighing module	Range 6200g, reading accuracy 0.01g		Range 10200g, reading accuracy 0.1g		
Circulating tank	PP material, optional: 500ml、1000ml、5000ml、8000ml				
Permeate tank	PP material, optional: 500ml、1000ml、5000ml、8000ml				
Magnetic stirring	Fitting to main cycle weighing system, adjustable variable speeds, real time recording of parameters				
Working temperature	2-40 C				
Pressure sensor	Inlet*1, back flow*1, permeate*1; detection range: 0-10bar				
Control mode	Constant pressure, constant flow, constant TMP, time, constant weight automatic replenishment, etc.				
PC with software workstation	HP / Lenovo / Huawei and other brands, memory ≥ 8G, hard drive ≥ 1T;				
<b>Options</b>					
Multi-Channel valve	Automatic switching of samples, buffers, water, BASE/ACID, CIP solutions, etc.				
pH	Detection range: 0-14, accuracy ±0.1				
CD	0-999mS/cm Accuracy ±3%		Measuring range:1μS/cm-100mS/cm, accuracy ±3%; 100-300mS/cm, accuracy ±5%		
Flow meter	Various brands available, ultrasonic flow meter				
Membrane fixture	Clamping fixture for membrane of 0.1 m <sup>2</sup> *5 and 0.5 m <sup>2</sup> *6				