



G&G TECHNOLOGIES, INC.

# TANGENTIAL FLOW FILTRATION SKIDS



## Scale Up with Confidence: Versatile Solutions for Tangential Flow Filtration

Our TFF Skid Product line offers unmatched versatility for downstream purification applications with a broad array of products ranging from TFF Screening to Pilot Scale to cGMP Production skids. Whether you prefer Hollow-Fiber Filters or Flat-Sheet Membranes, our TFF skids are filter agnostic and can accommodate any type of membrane. Our designs are built in accordance with ASME BPE standards and integrate retentate vessels, pumps, controls, and analytical instruments into a compact package. Our team of industry professionals will work with you to determine your exact requirements and will design a package to optimize your process performance.

### Product Array

- Bench-Top Testing Systems
- TFF Screening Systems
- Flexible TFF Workstations
- Pilot Scale Systems
- Production Scale Systems
- Parallel-Flow High-Flux Systems
- Continuous Single-Pass Systems
- HF Perfusion Filtration Systems

### Applications

- Vaccines
- Monoclonal Antibodies
- DNA and mRNA
- Proteins
- Recombinant Molecules
- Lipid-Nanoparticles
- Biological Materials

### Processes

- Harvest and Clarification
- Concentration
- Desalting and Diafiltration
- Product Purification
- Buffer Exchange
- Particle Size Exclusion
- Final Formulation

6 Grandview St.  
Coventry, RI 02816  
401-295-4000

[info@ggtechnologies.com](mailto:info@ggtechnologies.com)  
[www.ggtechnologies.com](http://www.ggtechnologies.com)

## Features and Benefits

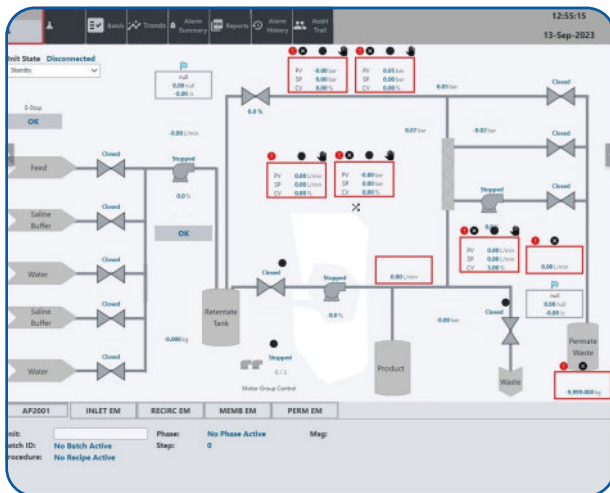
- A Wide Product Array to Facilitate Scale-Up
- Hollow Fiber and Flat Sheet Membrane Options
- Filter Manufacturer Agnostic
- High Quality Single-Use Assemblies
- Low-Holdup and High Yield
- High Retentate Vessel Turn-Down
- Efficient Retentate Mixing
- Secure and User-Friendly Software
- Integration with a variety of Analytical Sensors



## Secure and User Friendly Software

G&G Technologies' turn-key control system automates process control and features user-set recipes, historical trending, batch control, and multiple secure user levels and options for Delta-V and SCADA integration.

Our 21 CFR Part 11 compliant software simplifies data management and traceability, ensuring security and regulatory compliance.



## High Quality Flow Paths

- Assembled in ISO 14644-1 Classified Cleanrooms
- Gamma Sterilized with at least 25 kGy Dose
- Fully Traceable Batch Records
- USP Class VI Material Certification
- Flexible and Custom Designs and Components
- Fast Prototyping and Delivery

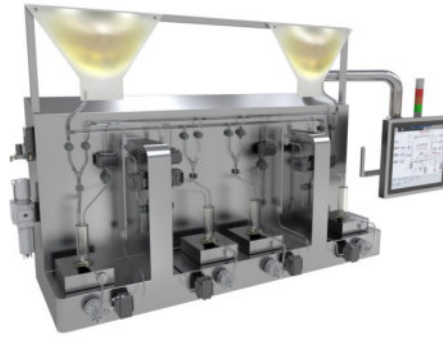


# Tangential Flow Filtration Systems



## Bench Top TFF

- 500 mL/Min Recirculation Rate
- Diafiltration Valves
- Load Cells



## TFF Screening System

- Four Parallel Process Operations
- 500mL/min Recirculation Rate
- Analytical Instrumentation Array



## HF Perfusion System

- Four Parallel Process Operations
- Load Sensing and Dosing
- Pneumatic Dome Pumps



## Flat Sheet TFF

- 80 L/Min Recirculation Rate
- Flat Sheet Filter Holder
- Turn-Key Automation and Controls



## Single-Pass TFF

- 70 L/Min Flow Rate
- Pressure and Flow Controls
- Manual and Automated Options



## Flexible TFF Workstations

- Platform for Scaling up Processes
- Configurable as needed
- G2 VersaFlow Pump Options



## Pilot Scale Systems

- 20 L/Min Recirculation Rate
- Analytical Instrument Array
- up to 5L Retentate Bottle



## Product Scale TFF

- 80 L/Min Recirculation Rate
- Analytical Instrument Array
- 50L Single-Use Mixer



## High-Flux TFF

- up to 120 L/Min Recirculation Rate
- Two Parallel Process Operations
- Analytical Instrument Array



## Options and Accessories



### Single-Use Mixers and Retentate Vessels

- On-Board options up to 100 Liters
- Stand-Alone options up to 500 Liters



### Permeate Pumps

- Peristaltic Pumps
- Up to 16 LPM



### Cassette Holders

- Flat Sheet TFF Pod Holder
- Manually or Hydraulically Loaded
- Stainless Steel Construction



### Backpressure Control Valves

- Accommodates Line Sizes up to 1" ID
- Responsive Controls



### Feed Pumps

- Diaphragm Pumps up to 250 LPM
- Centrifugal Pump up to 140 LPM



### Analytical Instrument Arrays

- UV, pH, Conductivity, and Temperature
- Single Use Flow Cell



### Scales and Load Cells

- High Accuracy and Repeatability
- Sanitary Stainless Steel Construction



### Fluid Selection Valves

- Manual, Pneumatic, or Electric Control
- Minimal Dead Legs and Hold-Up

## Contact Information

### United States of America

G&G Technologies, Inc.  
6 Grandview Street  
Coventry, RI02906  
+1-401-295-4000  
info@ggtechnologies.com

 **For More Information, Visit**  
[www.ggtechnologies.com](http://www.ggtechnologies.com)

