

Benchtop qEV Tangential Flow Filtration Systems

Supporting your journey of establishing a complete nanoparticle isolation bioprocessing workflow.



qEV Tangential Flow Filtration (TFF) systems concentrate samples prior to qEV isolation, and concentrate purified isolates post-isolation. Built to complement your qEV workflow, they facilitate scale-up alongside our automated chromatography systems, custom columns, and single-particle measurement platforms.

qEV TFF systems are available in two forms:

- ▶ A standard model, for routine research laboratory use
- ▶ A qEV TFF model suited to cGMP-compliant environments and large-scale production. cGMP compliance is supported through the selection and validation of components in direct contact with process fluids or product. 21 CFR Part 11 compliant.

To discuss specific requirements, please get in touch.

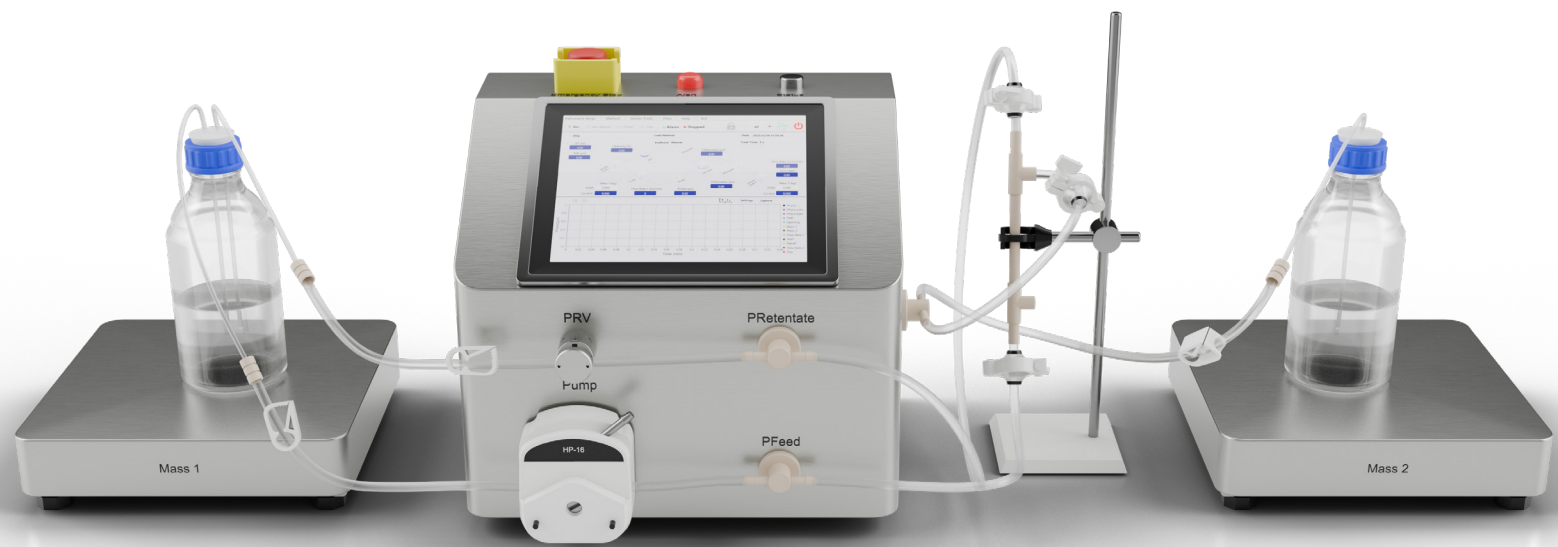
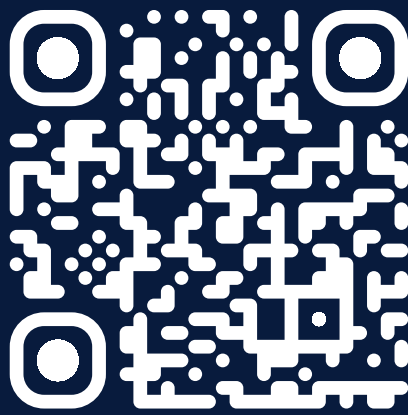


Table 1: Specifications of Key Components

Component	Details: qEV TFF (Standard model)	Details: qEV TFF (for cGMP environments)
Processing capacity guidelines filter-dependent)	▶ Sample input: 0.5 L (concentrate up to 10-fold) to 10 L ▶ Concentrate: up to 5 L ▶ Permeate: up to 10 L	▶ Sample input: 0.5 L (concentrate up to 10-fold) to 20 L ▶ Concentrate: up to 5 L ▶ Permeate: up to 18 L
Filtration	▶ Compatible with both hollow fibre and cassette membranes; 3-750 kDa filters ▶ For EV processing, keep the shear rate below 2000 s⁻¹ to avoid shear-induced damage. Consult the filter manufacturer's specifications for compatibility with your TFF pump's maximum flow rate.	▶ As per the Standard model, with cGMP compliance established
Pump	▶ 1x peristaltic pump ▶ Flow rate 0.14 - 2.2 L/min ▶ Compatible with SEC process and cleaning fluids	▶ 2x cGMP-compliant peristaltic pumps (one for the feed, one for recirculation) ▶ Flow rate 0.14 - 4.5 L/min
Pressure regulating valve (PCV)	▶ Hygienic pinch valve design – leak-proof, easy to maintain and clean	▶ As per the Standard model, with cGMP compliant components
Scales (x2)	▶ Maximum capacity: 25 kg; Accuracy: ±5 g; Readability: 1 g	
Software, console, connections & display	▶ Controlled via a display screen ▶ Measure and control transmembrane pressure ▶ Displays real-time data, process parameters, status, pressure alarm, and control options ▶ Ports and connections for integrating sensors, pumps and other devices	▶ As per the Standard model, with software compliant to 21 CFR part 11
Tubing set	▶ Platinum-cured silicone ▶ As per customer order; dependent on filter	▶ As per the Standard model, with cGMP compliance established
Disposable mixing tank package	▶ n/a	▶ 5 L single-use mixing vessel and tubing for pre-, in-, or post-filtration fluid mixing ▶ cGMP-compliant medical-grade plastics; compatible with common chemicals and solvents used in bioprocessing and pharmaceutical production
Pressure sensors	▶ 3 pressure sensors (in feed line, retentate line, and permeate line) ▶ Range: 0-145 psi ▶ Accuracy: 0.5% FS	▶ As per the Standard model, with cGMP compliance established ▶ Range: 0-60 psi ▶ Accuracy: ±0.1 psi (0-6 psi), ±3% (6-30 psi), ±5% (30-60 psi)

Learn more



www.izon.com/qev/tff

