

# Automate and modernize 140 mL - 500 L

## flat sheet TFF processes

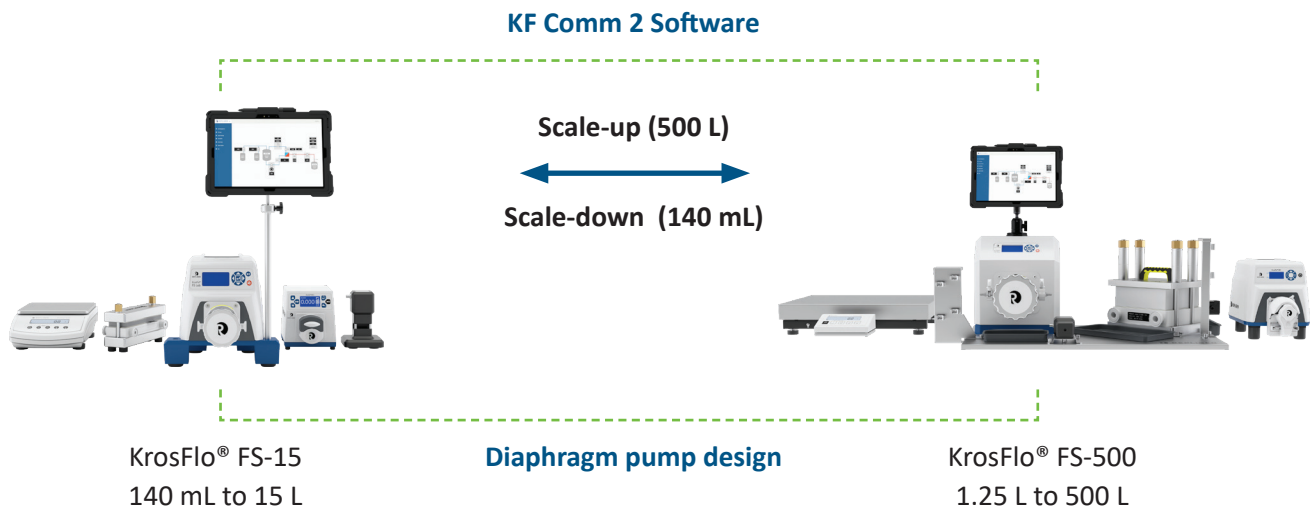
KrosFlo® FS-15 and FS-500 Systems for Tangential Flow Filtration (TFF) provide automated and modern flat sheet TFF system capability from 140 mL to 500 L. Modular plug-and-play hardware components, configurable ProConnex® Flow Paths and graphically-driven KF Comm 2 Software ensure optimal process fit with ease-of-use. Quattroflow™ pumps support high pressure processes up to 4 bar.

- Run processes up to 4 bar with Quattroflow™ pumps
- Automate complex Concentration (C) and Diafiltration (D) processes: C/D/DC and CFC/D/C
- Benefit from plug-and-play system components
- Access 13 built-in recipes
- Configure a fully single-use and gamma irradiated ProConnex® Flow Path from 250 components
- Comply with 21CFR Part 11 requirements



### Scale effortlessly from lab to pilot manufacturing

Transition seamlessly from small scale to larger process scales. The KrosFlo® FS-15 handles volumes from as small as 140 mL to 15 L. The KrosFlo® FS-500 is capable of larger volumes from 1.25 L to 500 L. These two KrosFlo® FS TFF Systems share common hardware architecture, software and pump technology.



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# Leverage an exclusive set of single-use and automation features



KrosFlo® FS TFF Systems compile the key features required for full automation of flat sheet TFF at the 140 mL to 500 mL scale. No other TFF system at this scale incorporates an equivalent set of automation features. Together, hardware integration, modern software and TMP control enable walk-away automation of complex processes such as CFC/D/C. Configure a closed and gamma irradiated ProConnex® Flow Path from over 250 components for additional ease-of-use and process safety.

	Feature	Benefit
Automation	Repligen-exclusive advanced microprocessor-based controller	Plug-and-play hardware configurability, built-in capacity for CFC/D/C process
	Repligen-exclusive ABV valve	Automated pressure measurement
	Graphically driven, touch screen interface	Intuitive user experience, time efficient system operation, reduced human error
	Centralized control and monitoring	Set-up, execution, monitoring through a single interface
Modernization	13 built-in process modes	Programming-free start-up
	Fully single-use ProConnex® Flow Paths	No CIP requirement, faster batch changes, reduced human error
	250 component ProConnex® configurability	Process flexibility, optimal flow path length and minimized hold-up volume
	21CFR Part 11 support (e-sig, multi-level admin)	Data security and integrity
	SQL database	Secure data storage for data integrity



## Configure an optimal flat sheet TFF system

KrosFlo® FS TFF Systems integrate up to nine components with specifications to achieve volumes between 140 mL to 500 L. The Quattroflow™ 150SU pump in the KrosFlo® FS-15 TFF System delivers flow rates up to three LPM and pressures up to 4 bar, supporting flat sheet cassettes up to 0.3 m<sup>2</sup>. The Quattroflow™ QF1200SU pump in the KrosFlo® FS-500 TFF System delivers flow rates up to 18 LPM and pressures up to 4 bar, supporting flat sheet cassettes up to 1.5 m<sup>2</sup>.



1. KF Comm 2 Software
2. Quattroflow™ diaphragm pump
3. Peristaltic auxiliary pump
4. Automatic Backpressure Valve (ABV)
5. Scale
6. TangenX® Flat Sheet Cassette Assembly
7. Permeate flow sensor

Specification	KrosFlo® FS-15	KrosFlo® FS-500
Typical process volumes	Up to 15 L+	Up to 500 L+
Maximum filter area	Up to 0.3 m <sup>2</sup>	Up to 1.5 m <sup>2</sup>
Maximum pressure	Up to 60 psi/4 bar	
Flow rate	Up to 3 LPM	Up to 18 LPM
Cassette holder	TangenX® SIUS® PD clamp	TangenX® SIUS® clamp
Reservoirs	1L PP, Ported Flat Bottom	20 L PP, Ported Flat Bottom
Mixing	Stir plate positioned on scale	
TMP control	Non-invasive/No-product contact	
Auxiliary pump	KRjr	KR1
Permeate flow meter	No	Yes
Flow Path	ProConnex® Flow Path - Single-use high pressure flow path	
Software	KF Comm 2 with optional 21CFR part 11 package	

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