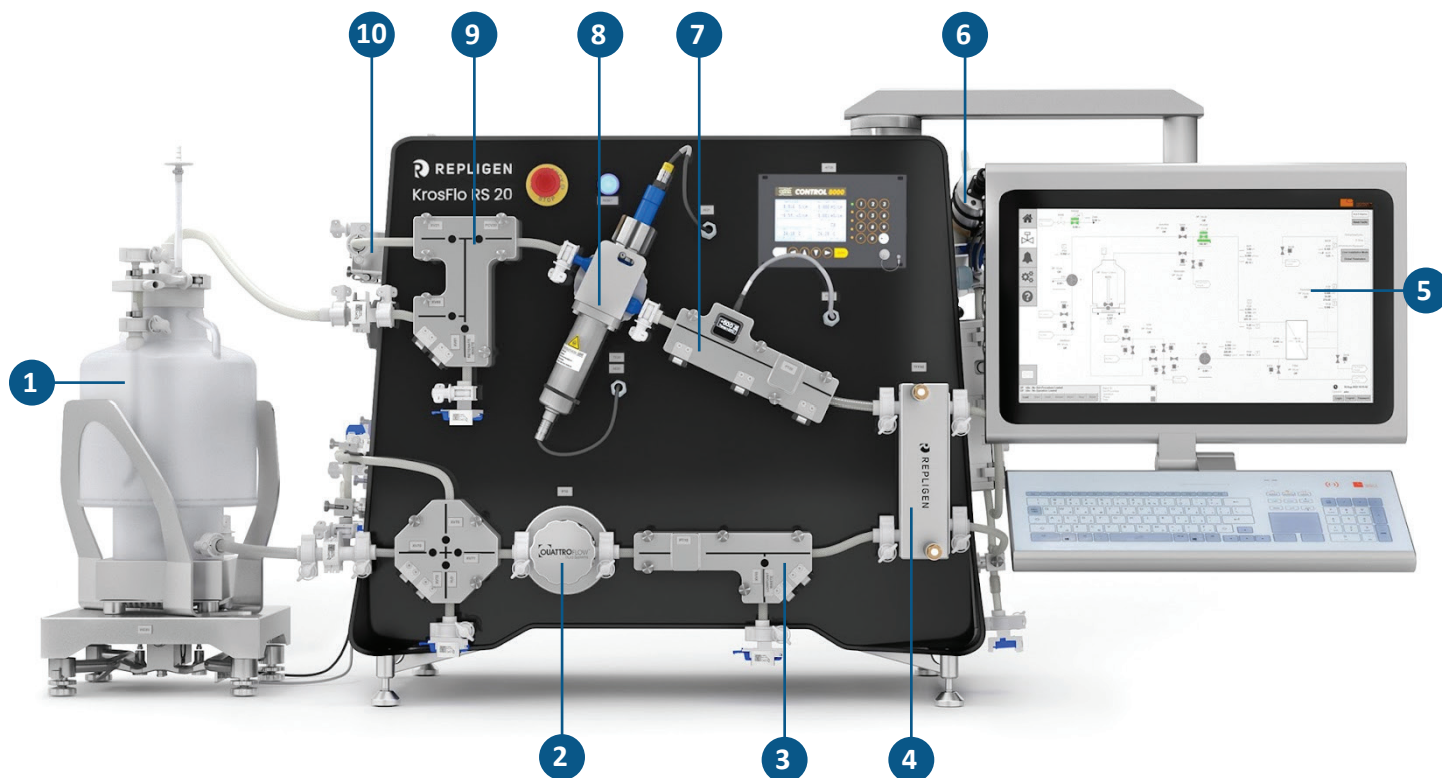


KrosFlo® RS 20 TFF Systems

Data Sheet

Fully Automate Processes with a Suite of Integrated Hardware Components

¼" KrosFlo® Single-Use Tangential Flow Filtration (TFF) Systems integrate unique hardware to deliver significantly higher product yields and operational efficiency through increased automation capabilities.



Components

- | | |
|---|--|
| 1. Recirculation vessel with weigh scale | 6. Permeate UV sensor (Optional) |
| 2. Diaphragm pump (Feed and Recirculation) | 7. Flow meters (Retentate and Permeate) |
| 3. Pressure sensors (Addition, Recirculation, Retentate and Permeate) | 8. Retentate Conductivity, Temperature, and pH Sensor (Optional) |
| 4. Cassette holder | 9. TMP control valve |
| 5. 21" touch screen and keyboard | 10. Peristaltic pump (Addition) |

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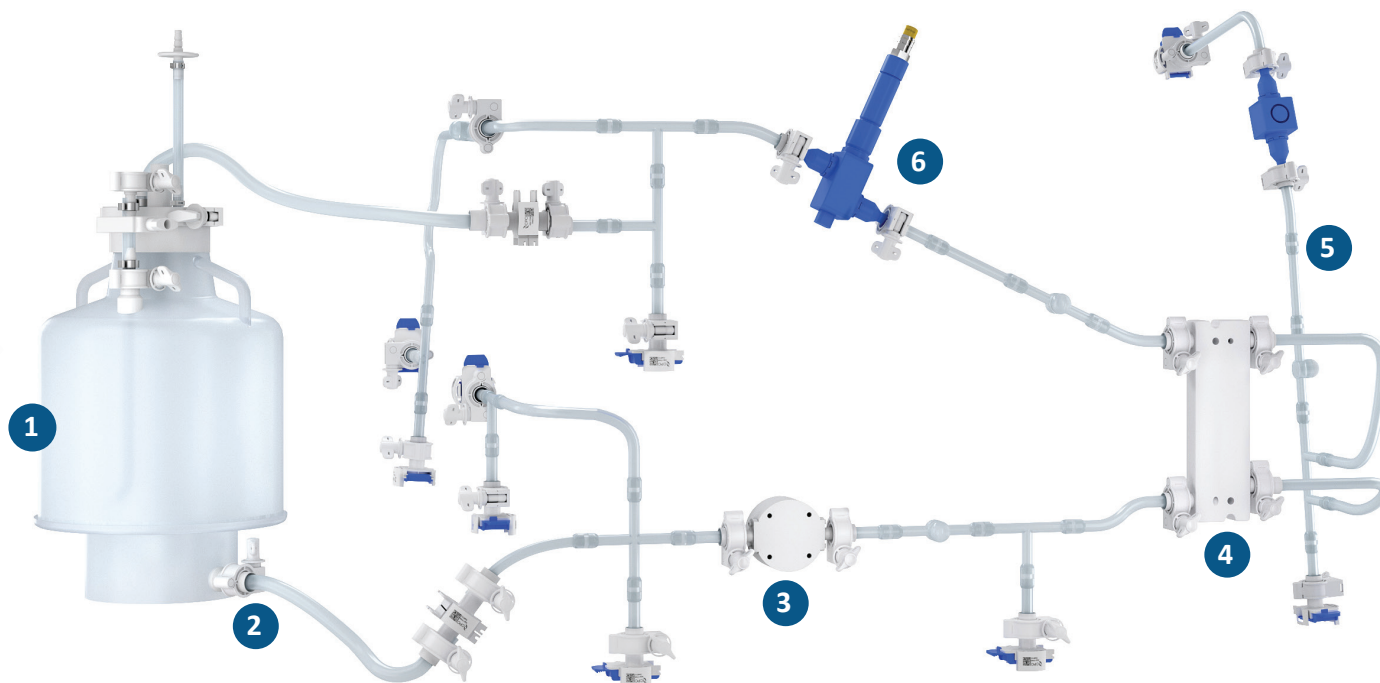
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Deliver High Recovery and Operational Simplicity with Engineered Flow Paths

ProConnex® Flow Paths integrate advanced fluid management technologies, including over-molded connections, pump heads, tubing, filters, and sensors in a single-use device. Flow paths easily attach to the system to simplify operation and increase process efficiency.



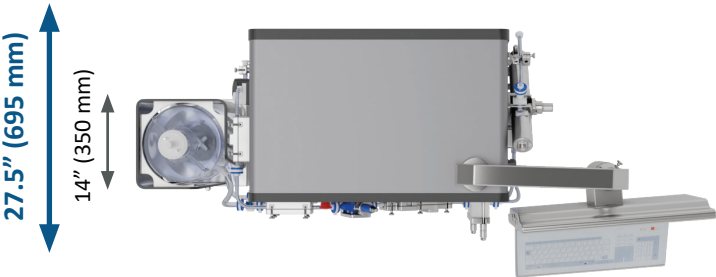
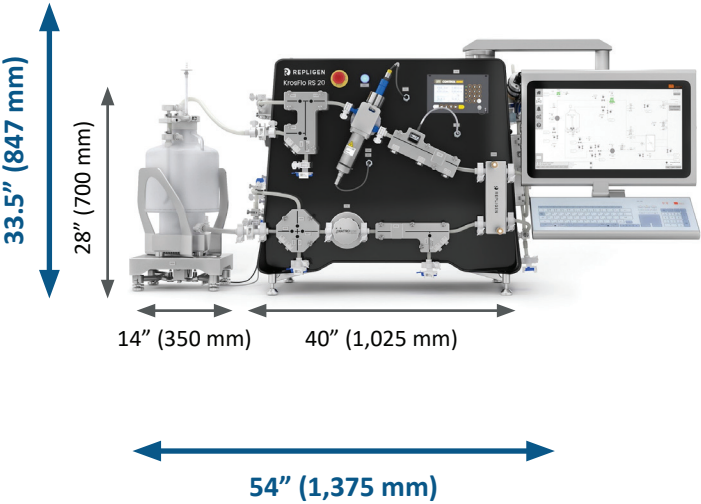
Components

1. Recirculation bottle
2. Recirculation loop inlet ports
3. Diaphragm pump head
4. Filter plate insert
5. Over-molded connections
6. Integrated sensors

Signature Features and Advanced Engineering

cGMP compliant, fully automated ¼” Single-Use Tangential Flow Filtration (TFF) System, with low hold-up volume, small footprint, and outstanding performance.

Dimensions



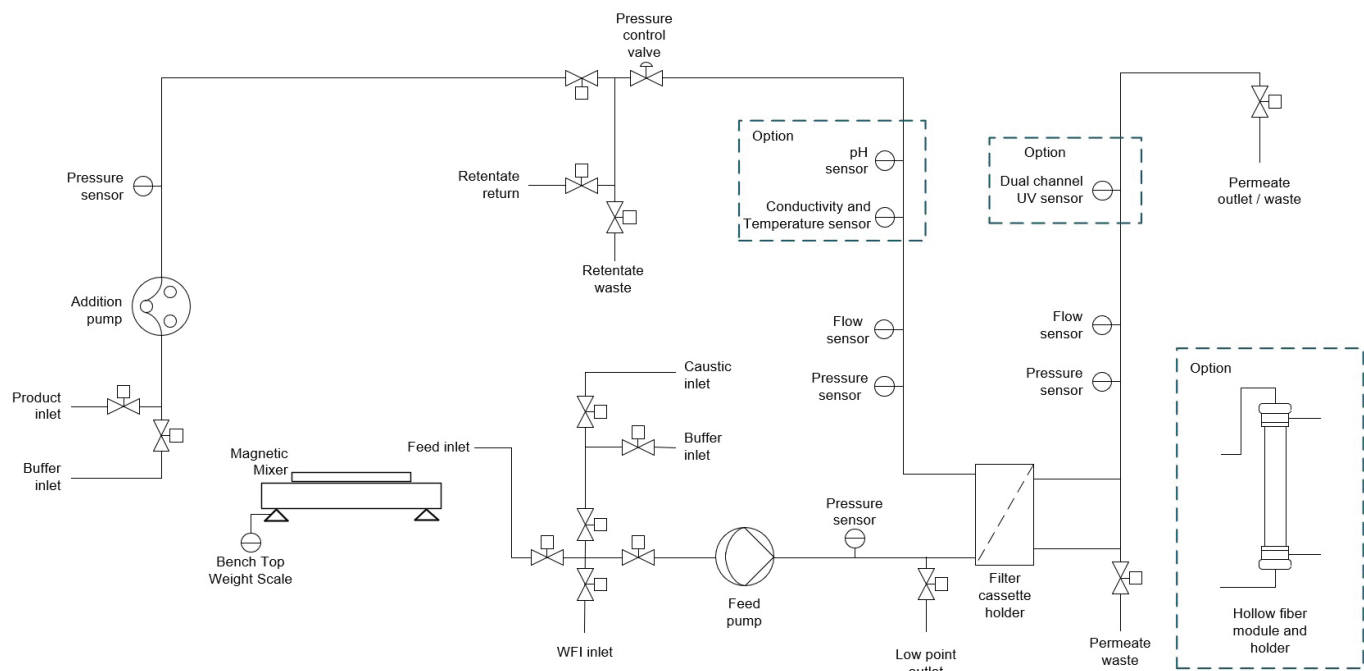
System Process Overview	
Flatsheet Membrane Area	0.1 - 0.5 m ²
Hollow Fiber Membrane Area	0.05 - 1.0 m ²
Standard Hollow Fiber Modules	Spectrum® MiniKros and MiniKros Sampler
Addition Flow Rate	Maximum 0.8 LPM
Recirculation Flow Rate	Maximum 3 LPM
Recirculating Loop Volume (System Only)	≤ 50 - 70 mL *
Total Minimum Working Volume	150 - 600 mL *

*Dependent on configuration. Does not include membrane hold-up volume.

System Mechanical Overview	
System Size	1,025 mm W x 695 mm D x 847 mm H 40" W x 27.5" D x 33.5" H
Power Main	120 - 240 VAC (+/- 10%), 1 ph, 50/60 Hz, 15A
MoC	304 L SS #3A (System)

Expand Filtration Capabilities and Automate More Process Sequences With Additional Valves

Single-use ¼" Tangential Flow Filtration (TFF) System process flow diagram.



KrosFlo RS 20 TFF System Specifications

Membrane Area	0.1 - 0.5 m ²
Recirculation Pump	3.4 LPM Diaphragm
Addition Pump	0.8 LPM Peristaltic
Over Pressure Protection	Yes
Maximum Flow Path Pressure	4 bar
Recirculation Loop Volume	≤ 50-70 mL excluding membrane
Operating Temperature Range	4 - 40 (°C)
Pneumatic Supply	5.8 - 8 barg
Main Unit Dimensions	1,025 mm W x 695 mm D x 847 mm H
Power Requirements	120 - 240 VAC, 1 ph, 50/60 Hz, main fuse 15A
Flow Measurement Locations	Retentate, permeate
Flow Measurement Range	0 - 5 LPM
Flow Measurement Accuracy	0 - 1 LPM: ± 0.03 LPM, 1 - 5 LPM: ±3% of reading
Pressure Measurement Locations	Feed, Retentate, Permeate, Addition
Pressure Measurement Range	0 - 4 bar
Pressure Measurement Accuracy	± 0.06 bar or ± 1.5% of reading
Conductivity Measurement Locations	Optional: Retentate
Conductivity Measurement Range	0.1 mS/cm to 150 mS/cm
Conductivity Measurement Accuracy	± 2% of reading + 1% of full scale
UV Measurement Location	Optional: Permeate
UV Measurement Range	0 - 2 AU
UV Measurement Accuracy	±1% of reading +1% of full scale
UV Sensor Wavelength	Optional: 254/280 nm or 280/300 nm

KrosFlo RS 20 TFF System Specifications	
pH Measurement Location	Optional: Retentate
pH Measurement Range	3 - 10 pH
pH Measurement Accuracy	±0.2 pH (0 - 2 bar, 4 - 50° C)
Enclosure Ratings	IP54 minimum
PLC	Allen Bradley CompactLogix
HMI	21" Touch screen and glass keyboard with Industrial PC mounted in control cabinet
Software Platform	KlariFi™ Software
Operating System	Windows 10
Network Connection	Ethernet/IP, RJ45
Network Connectivity	External monitoring and control ready. Dedicated network connections for both the PLC and the HMI. Ready for connection to Active Directory domain for consolidated logons
Compliance and Regulatory	UL61010-1, CE, RoHS, REACH, 21 CFR Part 11, EU Machinery Directive, ALCOA+
Weigh Scale Dimensions	350 mm W x 350 mm D
Weigh Scale Capacity	60 kg
Weigh Scale Readability	0.002 kg
Magnetic Stirrer Power	Max. 100 W

Customer Service

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