

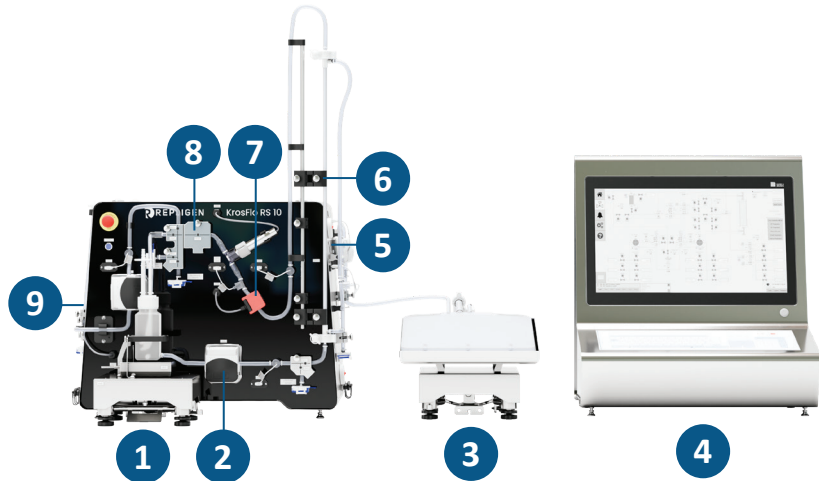
# KrosFlo® RS 10 TFF Systems

Data Sheet

1/8" KrosFlo® Single-use Tangential Flow Filtration (TFF) Systems integrate unique hardware to deliver significantly higher product yields and operational efficiency through end-to-end automation for bench scale manufacturing.

## Components

1. Recirculation vessel weigh scale
2. Maglev, Diaphragm or Peristaltic pump (feed)
3. Permeate collection bag weight scale
4. 21" Touch screen and keyboard
5. Peristaltic pump (permeate control)
6. Hollow Fiber or Cassette-holder
7. Reusable flowmeter (retentate)
8. TMP control valve
9. Peristaltic pump (addition)

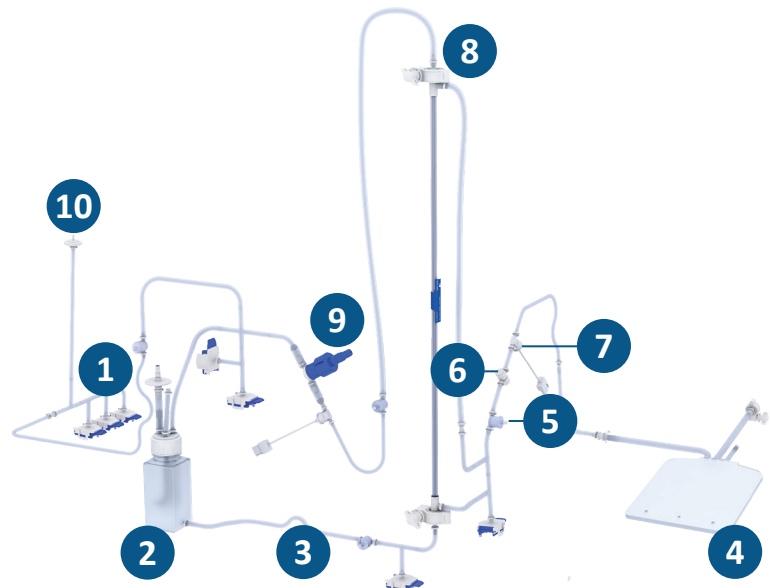


## ProConnex® Single-use Flow Paths

ProConnex® Flow Paths integrate advanced fluid management technologies such as injection molded tubing, pump heads, filters, and sensors into one single-use device. Since the entire flow-path assembly is one piece, users experience error-free installation in a matter of minutes driving enhanced process efficiency.

## Components

1. CPC AseptiQuik® G connectors
2. Recirculation vessel
3. Pump head (optional on QF/ML)
4. Permeate collection bag
5. Pressure sensors (addition, feed, permeate, retentate)
6. UV sensor
7. Conductivity and temperature sensor (optional: retentate, permeate)
8. Hollow fiber holder
9. pH sensor
10. Process air filter



*Compliance: USP Class VI pre-irradiated single-use assemblies.*

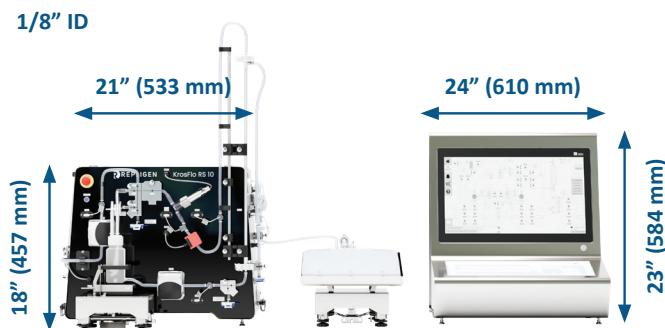
*Preliminary data sheet only. Subject to change. Final system specifications to be confirmed upon delivery.*

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## KrosFlo RS 10: Single-use System Overview and Specifications

## System Specifications

System Size (H x W x D)	Process Unit: 18 in x 21 in x 15 in Control Unit: 23 in x 24 in x 15 in
System Weight	Process Unit: 105.8 lbs, (48 kg) Control Unit: 53 lbs, (24 kg)
Power Requirements	120-240 VAC, 1ph, 50/60 Hz, 10A
Instrument Air Supply	6-8 Barg, 8 mm OD push-in connect tube
Network Connection	RJ45 Network for PLC RJ45 Network for HMI
Materials of Construction	304 L SS #3A (Enclosure), Plexiglass, Silicon, Rubber
Leveling and Mounting	Threaded leveling feet included, threaded holes for mounting
HMI Size	21" Diagonal
Cooling Method	Dual cooling fans, protected & filtered vents
Operating Conditions	17-27°C, 20-80% relative humidity
Storage Conditions	-5-50°C
Installation	Category II (over voltage), IEC 664
Ingress Protection	IP54
Compliance	CFR21P11, CE, UL61010, RoHs, REACH, ALCOA+



## Process Specifications

Recirculation Loop Volume	<35 mls (without membranes and optional sensors)
Flow Feed Pump Max Rate	Centrifugal: 1.15 LPM, Peristaltic: 0.34 LPM, Diaphragm: 0.5 LPM
Addition Pump Max Flow Rate	Peristaltic: 0.34 LPM
Permeate Pump Flow Range	Peristaltic: 0.001 – 0.15 LPM
Cassettes Supported	TangenX® (Repligen), Pall, Sartorius, Millipore
Cassette Membrane Area: Max Holder Range	0.01 – 0.5 m <sup>2</sup>
Cassette Membrane Area: Optimal Range	0.01 – 0.1 m <sup>2</sup>
Standard Hollow Fiber Cartridges Supported	Repligen C, D, & T Series (MicroKros, MidiKros & MidiKros TC)
Hollow Fiber Membrane Area: Recommended Range	20 – 610 cm <sup>2</sup>

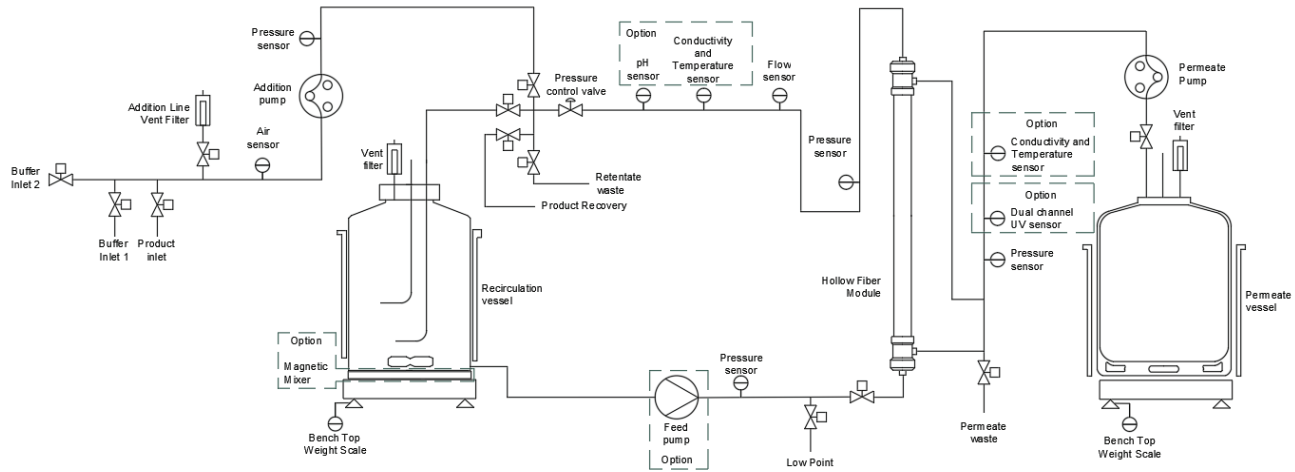
## Analytical Specifications Overview

Weight Scale Range & Readability (Recirculation & Permeate)	Max: 20 kg. Readability: 0.1 g
Magnetic Stirrer Range & Power	120 – 1200 rpm. 10 W
UV Sensor Range & Accuracy	0-3 AU. 0-2: ±1% full scale, 2-3: ±2% full scale
UV Sensor Type	In-line single-use flow cell
Conductivity Range & Accuracy	0–100mS/cm. 0.1-2 ±0.1, 2-100 ±5%
pH Range & Accuracy	3-10 pH ±1.5
Flow Sensor Range & Accuracy	0–1 LPM 0-0.15: ± 0.0015 LPM + 1%, 0.15-1: ± 2%
Flow Sensor Type	Clamp-on ultrasonic
Pressure Range & Accuracy	0–4.14 bar. ±3% of reading
Pressure, pH, Conductivity & Temperature Sensor Type	In-line single-use probe
Temperature Range & Accuracy	2-50°C. ±0.2

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Expand filtration capabilities and automate more process sequences with additional valves

Single-use 1/8" Tangential Flow Filtration (TFF) System process flow diagram



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Customer Service

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**CTech™ FlowVPX® (KrosFlo® RS 10 RPM™ Only)**

Linear Range-Finder Technology	Automatically identifies linear region of absorbance data to verify compliance with Beer-Lambert Law
Flow Cell Volume	3 mm Flow Cell: 0.9 mL
Spectroscopic Engine	CTech™ Beams™ System Light Source
Qualification Slope Range	0.10 Au/mm to 46 Au/mm using NIST-traceable slope standards
Qualification Slope Repeatability	≤ 2% Relative Standard Deviation (RSD)
Maximum Pathlength	3 mm Flow Cell: 3.000 mm
Minimum Pathlength Step	0.001 mm
Wavelengths Available	260 nm, 272 nm, 280 nm, 310 nm
Wavelength Tolerance	± 0.5 nm
Material of Construction (FlowVPX head)	316 L Stainless Steel
Material of Construction (SUFC)	Polyphenylsulfone (PPSU)
Acquisition Time	4+ seconds (dependent on method)
Accuracy	3%
Compliance	USP, EP, & JP, IP65,

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