

# Closed, single-use, complete flow paths

## for optimized TFDF™

The single-use, Gamma-irradiated and closed ProConnex® Flow Path with integrated sensors enable seamless operation on a KrosFlo® TFDF™ (Tangential Flow Depth Filtration) System. ProConnex® TFDF™ Flow Paths arrive dry, sodium hydroxide, glycerin, preservative and ethanol free for a zero flush start state. Feed stream enters the bottom port. Retentate travels through the lumen and exits the top of the tube. Permeate exits the enclosure through the lower permeate port.



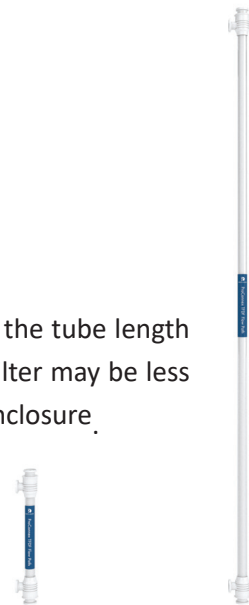
ProConnex® TFDF™ Flow Paths include:

- TFDF™ filter
- Disposable pump head
- Integrated sensors
- Tubing
- Aseptic connectors

To ensure linear scalability from 1 to 2000 L, the number of tubes per enclosure and the tube length increases. Tube length increases from 20 cm to 108 cm. The effective length of the filter may be less than the physical length of the filter. The number of tubes increases from 1 - 40 per enclosure.




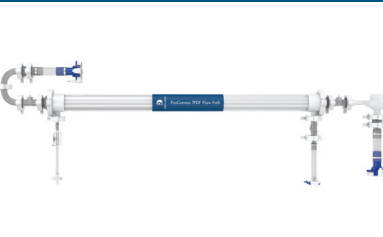
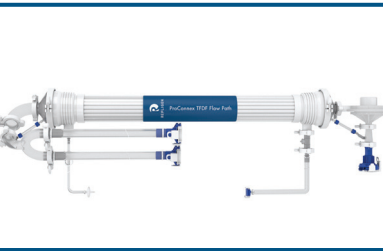
Number of tubes	1	10	40
Surface area (cm)	3 - 150	1500	6000



Length (cm)	20	108
Surface Area (cm <sup>2</sup> )	3	150

Actual products subject to change. All images shown for reference only.

# Specifications

ProConnex® TDF™ Flow Path	Lab-scale		Pilot-scale		Process-scale	
	Filter	Flow path	Flow path	Flow path	Flow path	Flow path
Type	3	3	150	1500	6000	
Surface area (cm <sup>2</sup> )	< 1 L	< 1 L	< 50 L	< 500 L	< 2000 L	
Recommended process volume (L)	20	20	108	108	108	
Total filter length (cm)	2.2	2.2	108	108	108	
Effective length (cm)	1	1	1	10	40	
Number of tubes	Yes	Yes	No	No	No	
Standard configuration made to stock	N/A	Yes	Yes	Yes	Yes	
Customizable	TFDF-3	STDFCL15111N	-	-	-	
Part number	ProConnex Flow Paths					

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Product Contact Materials of Construction	
TFDF filter module	Polysulfone, polypropylene, polyethylene terephthalate, urethane
Gaskets	Platinum cured silicone
Reducers	Polysulfone
Tubing	Platinum-cured silicone, C-Flex®†, PharmaMed®***
Aseptic connectors	Polycarbonate, platinum-cured silicone, polyethylene
Manifold	PVDF
Pump head	Polypropylene
Pressure sensors	Polysulfone
Connectors, hosebarb adaptors	Polypropylene
Air filter	PTFE, polyester, polypropylene
Various fittings**	PVDF, polypropylene

\*Materials of construction vary based on scale and subject to change based on customer specific designs. †Lab-scale only. \*\*Pilot and process scales only.

