

# Specifications



## TangenX® SIUS® and SIUS® PD Filter Plate Insert (FPI) Specifications

Product name	TangenX® SIUS® LV FPI	TangenX® SIUS® PD FPI	TangenX® SIUS® 75 FPI	TangenX® SIUS® 99 FPI
Holder compatibility	2BMC		4BMC, VxAC <sup>‡</sup>	VxAC <sup>‡</sup>
Cassette compatibility	LP1L, LP1J, LP1E, LP2L, LP2J, LP2E	L01L, L01J, L01E	G05L, G05J, G05E, G15L, G15J, G15E, G25L, G25J, G25E	
FPI	Polypropylene (Class VI, BSE free)			
Isolation plate	Polypropylene (Class VI, BSE free)			
Connections	Female luer with 1/8" NPT	Integral 0.5" tri-clamp	Integral 1" tri-clamp	Integral 1.5" tri-clamp
Maximum flowrate	0.48 LPM	9 LPM	49 LPM	140 LPM

<sup>‡</sup> For TangenX® SIUS® holder VxAC, use x = 1 for 10 m<sup>2</sup> cassettes, x = 2 for 20 m<sup>2</sup> cassettes, and x = 3 for 30 m<sup>2</sup> cassettes.

## TangenX® SIUS® and SIUS® PD Holder Specifications

Compatibility	TangenX® SIUS® PD Cassettes	TangenX® SIUS® Cassettes			
Product code	2BMC	4BMC	V1AC	V2AC	V3AC
Holder capacity	0.01 - 0.5 m <sup>2</sup> (0.1 - 5.4 sq ft)	0.5 - 5 m <sup>2</sup> (5.4 - 54 sq ft)	1.0 - 10 m <sup>2</sup> (10.8 - 108 sq ft)	1.0 - 20 m <sup>2</sup> (10.8 - 215 sq ft)	1.0 - 30 m <sup>2</sup> (10.8 - 323 sq ft)
Plates and tie-rods	304L stainless steel				
Rails	N/A		304L stainless steel		
Spacers	304L stainless steel		N/A		
Washers	304L stainless steel		Brass		
Hex nuts	Brass		304L stainless steel (hydraulic)		
Torque range	120 - 180 in-lbs (14 - 20 N-m)	300 - 450 in-lbs (35 - 50 N-m)	600 - 900 in-lbs (70 - 100 N-m)		
Hydraulic auto-torque	No		Yes		
Hex socket	11/16"		1 - 1/4"		

## Ordering information

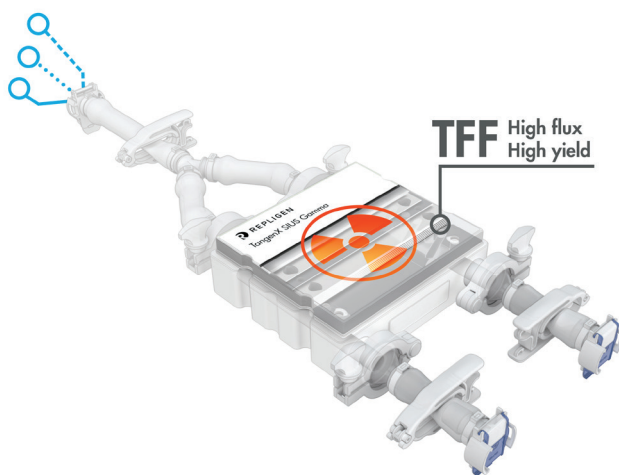
Device	Product name	Pressure/Quantity	Product number
Holder (without FPI)	TangenX® SIUS® PD 2BMC	N/A	TSLDI-2BMC
	TangenX® SIUS® 4BMC	N/A	TSPDI-4BMC
	TangenX® SIUS® VxAC <sup>‡</sup>	N/A	TSPDI-VxAC <sup>‡</sup>
Filter Plate Insert	TangenX® SIUS® LV Filter Plate Insert	0.48 LPM	TFPLS-LVFL
	TangenX® SIUS® PD Filter Plate Insert	9 LPM	TFPLS-SA08
	TangenX® SIUS® 75 Filter Plate Insert	49 LPM	TFP75-SE16
	TangenX® SIUS® 99 Filter Plate Insert	140 LPM	TFP99-SP20
Options	Torque wrench for TangenX® SIUS® PD Cassette	50 - 250 in-lbs	TX019
	Torque wrench for TangenX® SIUS® Cassette	200 - 1000 in-lbs	TX026
	TangenX® SIUS® PD Polypro Isolation Plate	1 pk	TFPLS-PP
	TangenX® SIUS® Polypro Isolation Plate	1 pk	TFPPS-PP

<sup>‡</sup> For TangenX® SIUS® holder VxAC, use x = 1 for 10 m<sup>2</sup> cassettes, x = 2 for 20 m<sup>2</sup> cassettes, and x = 3 for 30 m<sup>2</sup> cassettes.



# Experience higher flux, closed device, connectivity freedom

TangenX® SIUS® Gamma TFF Devices embody the performance and efficiency of TangenX® SIUS® Cassettes in a convenient, fully assembled, closed, and irradiated system. Acclaimed performance with up to 30% flux increase over conventional membranes, connectivity freedom, and a library of configurations, converge into one, simple TFF solution. Manufactured under ISO 9001, every membrane is evaluated for air integrity and hydraulic performance before assembly into a TFF device and exposure to gamma-irradiation. Use TangenX® SIUS® Gamma TFF Devices for gene therapy applications, bioburden-sensitive operations, and hazardous processes.



## Simplify connectivity

The diversity of connectivity options makes building closed systems a challenge. TangenX® SIUS® Gamma TFF Devices make life easier. Configure a ProConnex® Flow Path based on individual specifications, select a pre-built ProConnex® Flow Path that is ready-to-ship, or simply plug the filtration device into your existing flow path with genderless AseptiQuik® connectors.



### CONFIGURED FOR YOU

Build a specification-based flow path from a library of over 250 components with individual quality testing.



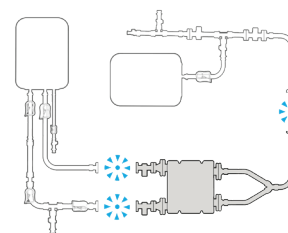
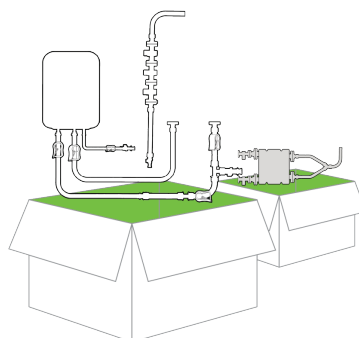
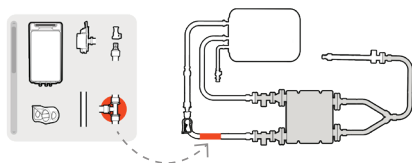
### READY TO SHIP

Order a pre-built and quality tested off-the-shelf ProConnex® Flow Path stocked for rapid delivery.



### PLUG INTO EXISTING

Leverage the flexibility of genderless connectors and seamlessly connect to your existing flow path.

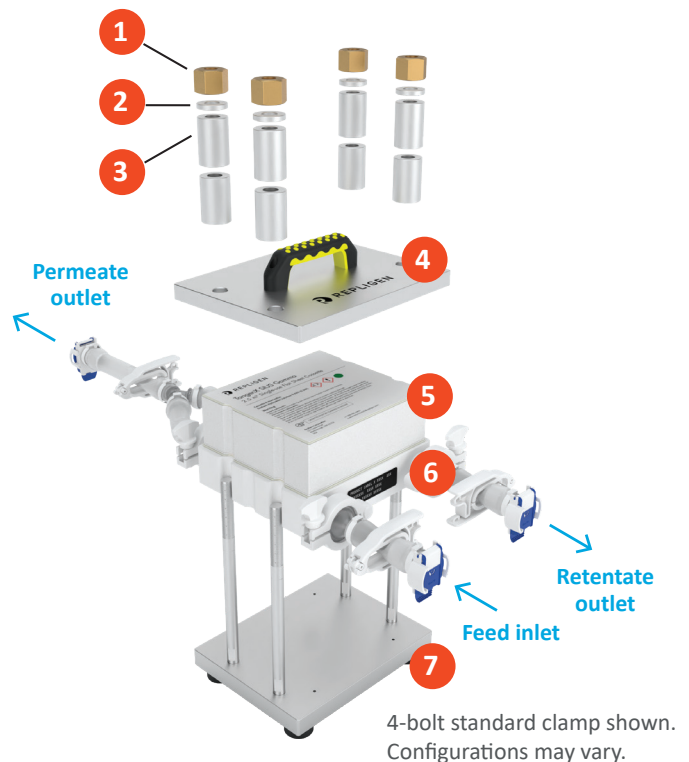


## Clamp and go. It's that easy.

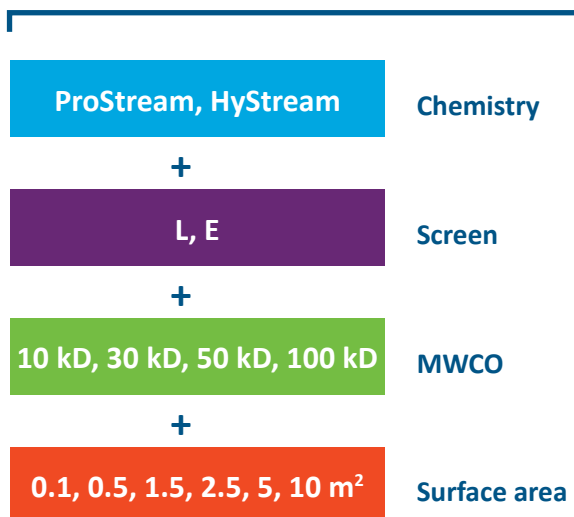
The TangenX® SIUS® Gamma TFF Device arrives as a fully assembled, closed device which includes a cassette, manifold, clamps, tubing, and genderless AseptiQuick® connectors.

### Components

1. Hex nut
2. Washer
3. 2" or 1" tie-rod spacer(s)
4. Holder top plate
5. TangenX® SIUS® Gamma TFF Device
6. Manifold
7. Holder bottom plate



### 96 configurations



### Diverse options for your diverse process needs

TangenX® SIUS® Gamma TFF Devices are offered with two membrane chemistries, two screen types, a wide selection of molecular weight cutoffs (MWCO), and a broad range of surface areas. With 96 configurations available, TangenX® SIUS® Gamma TFF Devices accommodate diverse process requirements for ultrafiltration and diafiltration applications from process development to commercial manufacturing.

Genderless AseptiQuick® connectors featured on TangenX® SIUS® Gamma TFF Devices afford compatibility freedom. Realize true ease-of-use in TFF by combining a TangenX® SIUS® Gamma TFF Device with a ProConnex® Flow Path. Build a customized single-use flow path from a library of over 250 quality-tested components.

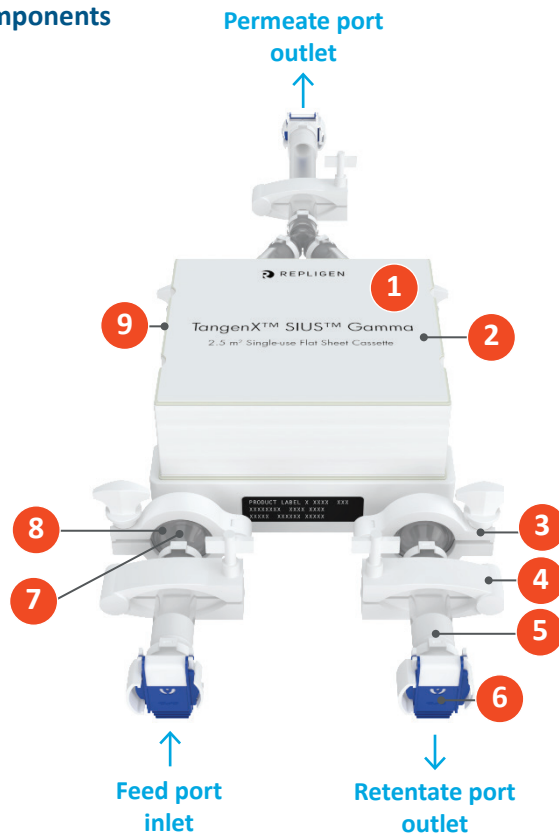
Simply clamp your TangenX® SIUS® Gamma TFF Device into a holder, connect to a flow path, and go. It's that easy.



# Materials of construction

## TangenX® SIUS® Gamma TFF Device components

1. TangenX® SIUS® Gamma Cassette
2. Cassette gaskets
3. Tri-clover clamps
4. Pinch clamps
5. Braided tubing
6. CPC AseptiQuik® connectors
7. Hose barb fittings
8. Tri-clover gaskets
9. Filter plate insert



Component	Material of construction
Cassette gaskets	Ethylene propylene diene rubber
Tri-clover clamps	Nylon glass filled
Pinch clamps	Nylon glass filled
Braided tubing	Platinum cured silicone
CPC AseptiQuik® connectors	Polycarbonate
Hose barb fittings	Polypropylene
Tri-clover gaskets	Platinum cured silicone
Filter plate insert	Polypropylene

## TangenX® SIUS® Gamma Cassette materials of construction

Modified polyether sulfone membrane  
 Polypropylene / Polyethylene substrate  
 Polypropylene screen  
 High density polyethylene channel spacer  
 Platinum cured silicone pressure sensitive adhesive  
 Polyurethane adhesive

Revised 08/11/2017



# Part numbers



Part number	Surface area (m <sup>2</sup> )	Membrane chemistry	Screen type
<b>MWCO 10 kD</b>			
PP010C01L	0.1	ProStream	L
PP010F05L	0.5		
PP010F15L	1.5		
PP010F25L	2.5		
PP010F50L	5		
PP010F99L	10		
XP010C01L	0.1	HyStream	L
XP010F05L	0.5		
XP010F15L	1.5		
XP010F25L	2.5		
XP010F50L	5		
XP010F99L	10		
PP010C01E	0.1	ProStream	E*
PP010F05E	0.5		
PP010F15E	1.5		
PP010F25E	2.5		
PP010F50E	5		
PP010F99E	10		
XP010C01E	0.1	HyStream	E*
XP010F05E	0.5		
XP010F15E	1.5		
XP010F25E	2.5		
XP010F50E	5		
XP010F99E	10		
<b>MWCO 30 kD</b>			
PP030C01L	0.1	ProStream	L
PP030F05L	0.5		
PP030F15L	1.5		
PP030F25L	2.5		
PP030F50L	5		
PP030F99L	10		
XP030C01L	0.1	HyStream	L
XP030F05L	0.5		
XP030F15L	1.5		
XP030F25L	2.5		
XP030F50L	5		
XP030F99L	10		
PP030C01E	0.1	ProStream	E*
PP030F05E	0.5		
PP030F15E	1.5		
PP030F25E	2.5		
PP030F50E	5		
PP030F99E	10		
XP030C01E	0.1	HyStream	E*
XP030F05E	0.5		
XP030F15E	1.5		
XP030F25E	2.5		
XP030F50E	5		
XP030F99E	10		

Part number	Surface area (m <sup>2</sup> )	Membrane chemistry	Screen type
<b>MWCO 50 kD</b>			
PP050C01L	0.1	ProStream	L
PP050F05L	0.5		
PP050F15L	1.5		
PP050F25L	2.5		
PP050F50L	5		
PP050F99L	10		
XP050C01L	0.1	HyStream	L
XP050F05L	0.5		
XP050F15L	1.5		
XP050F25L	2.5		
XP050F50L	5		
XP050F99L	10		
PP050C01E	0.1	ProStream	E*
PP050F05E	0.5		
PP050F15E	1.5		
PP050F25E	2.5		
PP050F50E	5		
PP050F99E	10		
XP050C01E	0.1	HyStream	E*
XP050F05E	0.5		
XP050F15E	1.5		
XP050F25E	2.5		
XP050F50E	5		
XP050F99E	10		
<b>MWCO 100 kDa</b>			
PP100C01L	0.1	ProStream	L
PP100F05L	0.5		
PP100F15L	1.5		
PP100F25L	2.5		
PP100F50L	5		
PP100F99L	10		
XP100C01L	0.1	HyStream	L
XP100F05L	0.5		
XP100F15L	1.5		
XP100F25L	2.5		
XP100F50L	5		
XP100F99L	10		
PP100C01E	0.1	ProStream	E*
PP100F05E	0.5		
PP100F15E	1.5		
PP100F25E	2.5		
PP100F50E	5		
PP100F99E	10		
XP100C01E	0.1	HyStream	E*
XP100F05E	0.5		
XP100F15E	1.5		
XP100F25E	2.5		
XP100F50E	5		
XP100F99E	10		

\*E-screen recommended for high viscosity feed solutions.



# Specifications



Module characteristic	Surface area <sup>†</sup>				
	0.1 m <sup>2</sup>	0.5 m <sup>2</sup>	1.5 m <sup>2</sup>	2.5 m <sup>2</sup>	5 m <sup>2</sup>
Channel path length	16 cm				
Hold-up volume	61 mL	509 mL	874 mL	1026 mL	1470 mL
Working volume	0.2 L	1 L	3 L	5 L	10 L
Maximum temperature	40° C				
Maximum pressure (forward)	60 psi (4 bar)				
Maximum pressure (reverse)	7 psi (0.48 bar)				
Crossflow L-screen		2 - 4 L/min	6 - 12 L/min	10 - 20 L/min	20 - 40 L/min
Crossflow E-screen		3 - 6 L/min	9 - 18 L/min	15 - 30 L/min	30 - 60 L/min
ΔP L-screen	10 psi (0.7 bar)				
ΔP E-screen	5 psi (0.35 bar)				
Air Integrity test pressure	7.3 psi (0.5 bar)				
Maximum air diffusion rate	323 ccm/m <sup>2</sup>				
AseptiQuik® connector	G (genderless)				
Torque range	120 - 180 in-lbs (14 - 20 N-m)	300 - 450 in-lbs (35 - 50 N-m)			

<sup>†</sup> The 10 m<sup>2</sup> TangenX® SIUS® Gamma TFF Device is a kit that consists of two cassettes, each 5 m<sup>2</sup> in size, joined in parallel using “Y” connectors.

