

Hollow Fiber TFF Modules Steamer Line

Autoclavable



Executive Summary

Hollow Fiber TFF Modules | Steamer Line membrane products incorporate our latest glycerin free low extractables, heat resistant modi-fied polyethersulfone (m-PES) membrane technology. All Steamer Line modules are gamma irradiated and ready to use without any tedious pre-rinse. After a quick buffer conditioning the module is ready to be used or autoclaved. For autoclaving directions, please see the Steamer Line Validation Guide. Steamer Line modules are fully scalable from batch volumes from 10 mL up to 250 L with corresponding membrane surface areas from 0.056 ft² (0.0052 m²) up to 26.9 ft² (2.5 m²).

Features and Benefits

The Steamer Line modules offer true ready to use tangential flow filtration.

- No pre-rinse required (glycerin free)
- Ready to use
- Easy and reliable scale up and scale down
- Gamma irradiated
- Cost efficient
- Free of time-consuming cleaning validation
- Integrity tested with individual lot number for easy traceability

Relevant Applications

Sartorius Hollow Fiber Modules are designed for biopharmaceutical processing. They can be used for the following applications:

Upstream

- Cell perfusion
- Rapid clarification

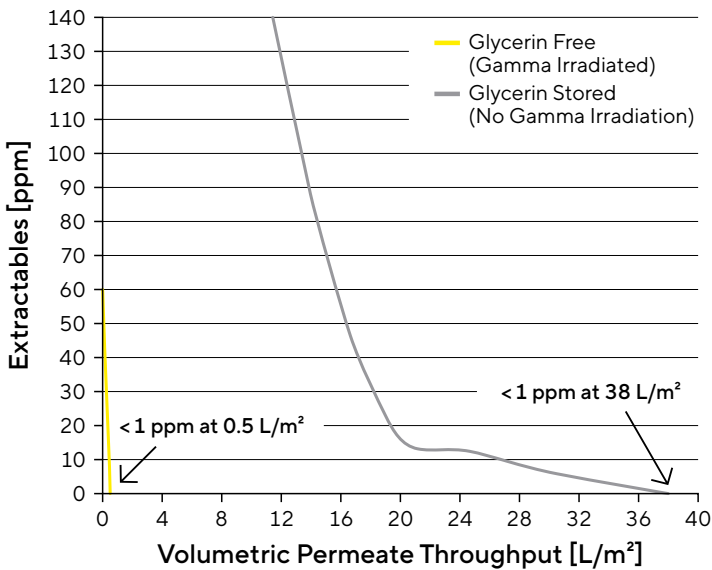
Downstream

- Concentration
- Diafiltration

Glycerin Free Stored – Ready to Use

Extractables Flush Analysis

Glycerin Free vs. Glycerin Stored



Membrane

m-PES 30 kD, 1 mm Fiber ID

Extractant

Water (20 °C)

Technical Specifications

Attribute	Hollow Fiber TFF Modules Steamer Line
Biocompatibility	The module as assembled is USP Class VI compliant
Membrane	Modified Polyethersulfone (m-PES)
Housing	White Polysulfone
Encapsulant	Epoxy

Technical Specifications

Name	Scale	Fiber Length	Dimensions in inches (cm)	Membrane surface area ft ² (m ²)*	Recommended batch volume per module	Connections	
						Feed Retentate	Permeate
Discover	Lab	12 inch	0.38×12.88 (0.95×32.72)	0.056 (0.0052)	10–250 mL	Luer Lock	Luer Lock
		24 inch	0.38×24.38 (0.95×61.93)	0.115 (0.0107)	50–400 mL		
		41 inch	0.38×42.38 (0.95×107.65)	0.208 (0.0193)	80–850 mL		
Explorer	Lab	12 inch	0.50×12.28 (1.27×31.20)	0.17 (0.0155)	150–750 mL	½-inch TC	⅜-inch Hose Barb
		24 inch	0.50×23.82 (1.27×60.50)	0.35 (0.0321)	250–1500 mL		
		41 inch	0.50×41.18 (1.27×106.20)	0.62 (0.0579)	300–3000 mL		
Researcher	Lab Pilot	12 inch	0.75×12.28 (1.91×31.20)	0.48 (0.0444)	400–2000 mL	¾-inch TC	⅝-inch Hose Barb
		24 inch	0.75×23.66 (1.91×60.10)	1.01 (0.0940)	700–4000 mL		
		41 inch	0.75×41.77 (1.91×106.10)	1.85 (0.1716)	1000–8000 mL		
Researcher XL	Lab Pilot	12 inch	0.75×12.28 (1.91×31.20)	0.66 (0.0617)	0.56–2.8 L	¾-inch TC	⅝-inch Hose Barb
		24 inch	0.75×23.66 (1.91×60.10)	1.41 (0.1305)	0.98–5.6 L		
		41 inch	0.75×41.77 (1.91×106.10)	2.57 (0.2383)	1.40–11.2 L		
Investigator	Lab Pilot	12 inch	1.32×12.01 (3.34×30.50)	1.4 (0.13)	1–6 L	1½-inch TC	½-inch TC
		24 inch	1.32×23.50 (3.34×59.70)	3.0 (0.28)	2–12 L		
		41 inch	1.32×41.50 (3.34×105.4)	5.4 (0.51)	3–25 L		
Mini-Bioproducer	Pilot Production	12 inch	2.70×15.00 (6.86×38.10)	6.6 (0.61)	5–50 L	1½-inch TC	¾-inch TC
		24 inch	2.70×26.50 (6.86×67.30)	14.5 (1.35)	10–100 L		
		41 inch	2.70×44.49 (6.86×113.00)	26.9 (2.50)	25–250 L		

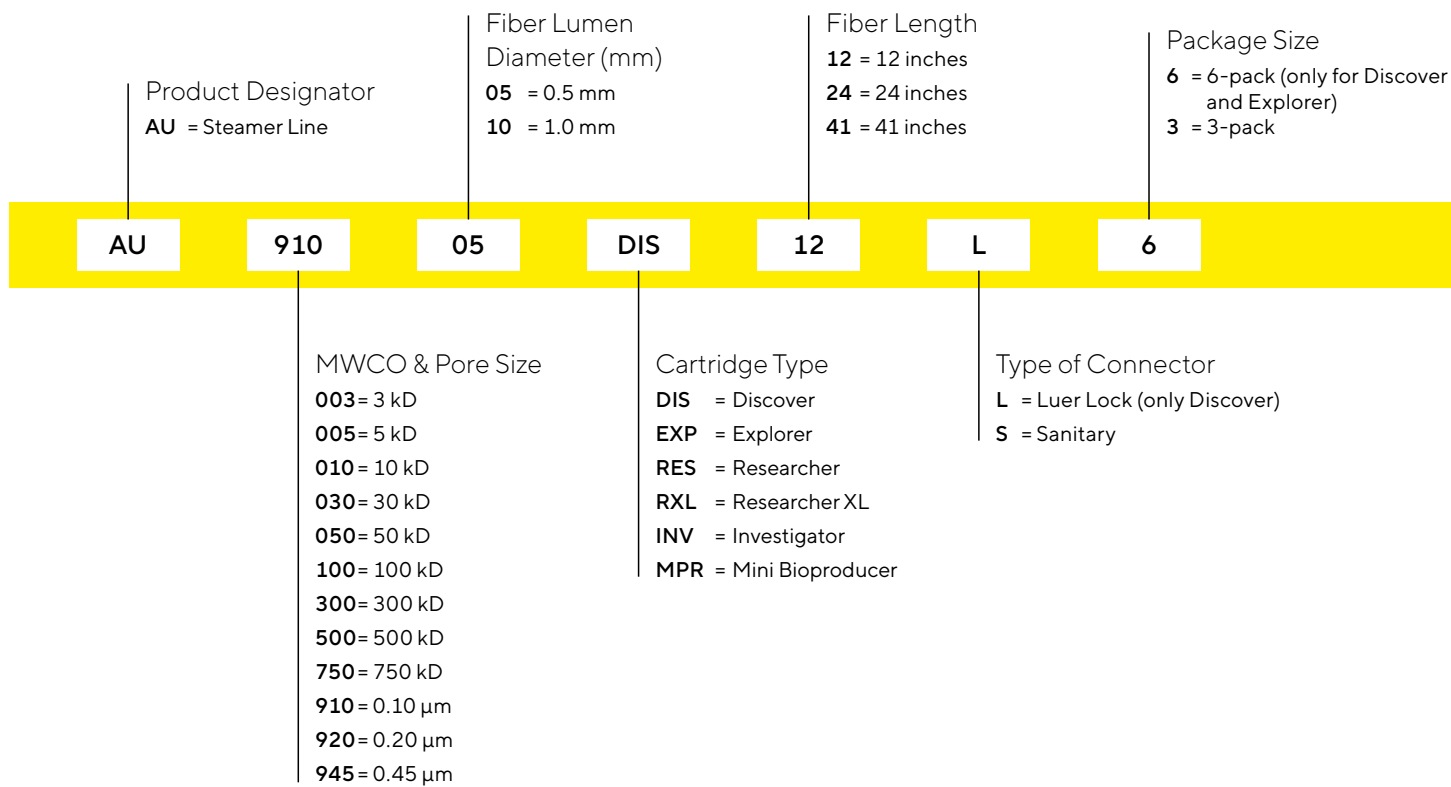
* Membrane surface valid for all fiber IDs. For number of fibers per module please consider the Validation Guide.

Available MWCO and Pore Sizes for Different Fiber IDs

The tables stated below are valid for all sizes and lengths, if not stated otherwise.

Fiber ID	MWCO									Pore Size		
	3 kD	5 kD	10 kD	30 kD	50 kD	100 kD	300 kD	500 kD	750 kD	0.1 μm	0.2 μm	0.45 μm
0.5 mm	■	■	■	■	■	■	■	■	■	–	–	–
1.0 mm	■	■	■	■	■	■	■	■	■	■	■	■

Ordering Information

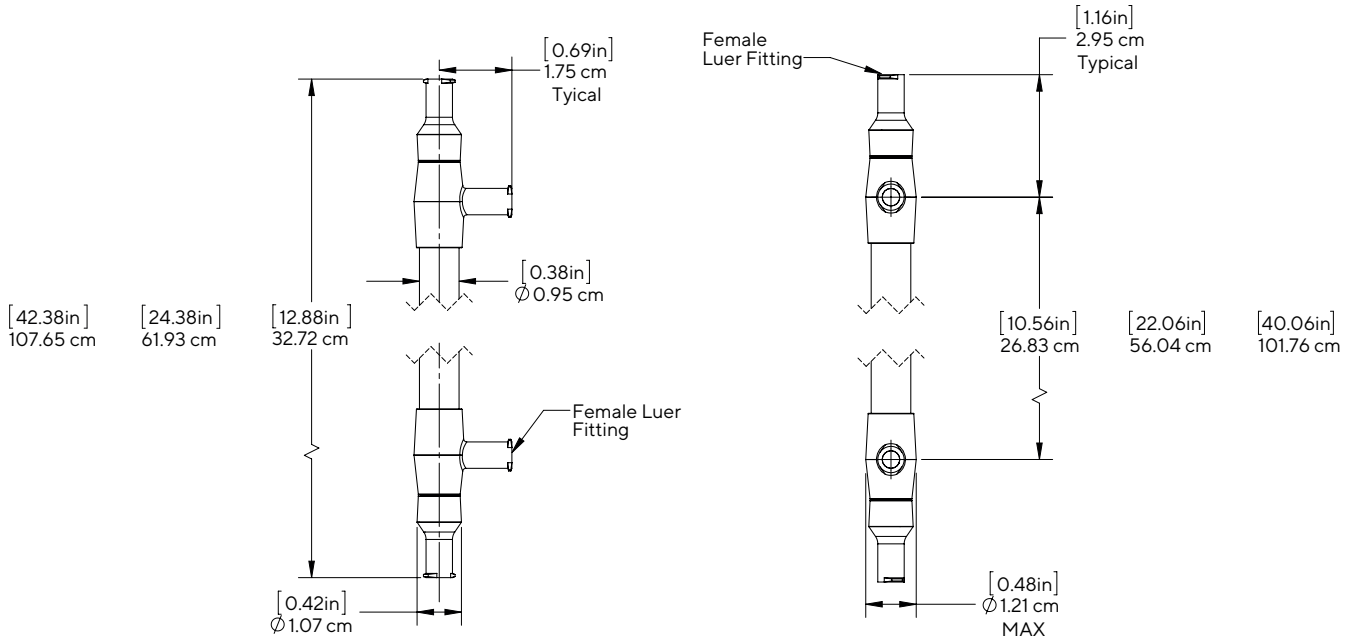


Please consult the specification table on page 3 to learn more about the possible combinations.

Overview

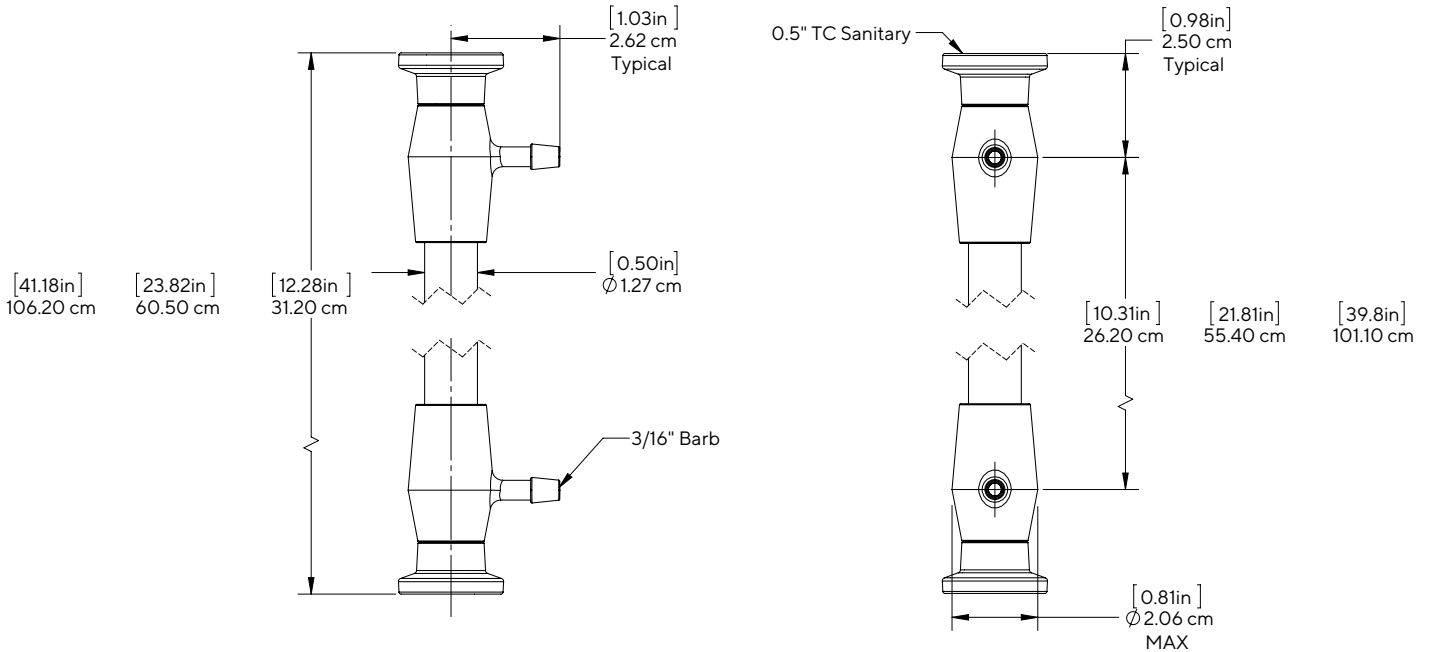
Discover

Exact length for different Fiber length: 12, 24 or 41 inch



Explorer

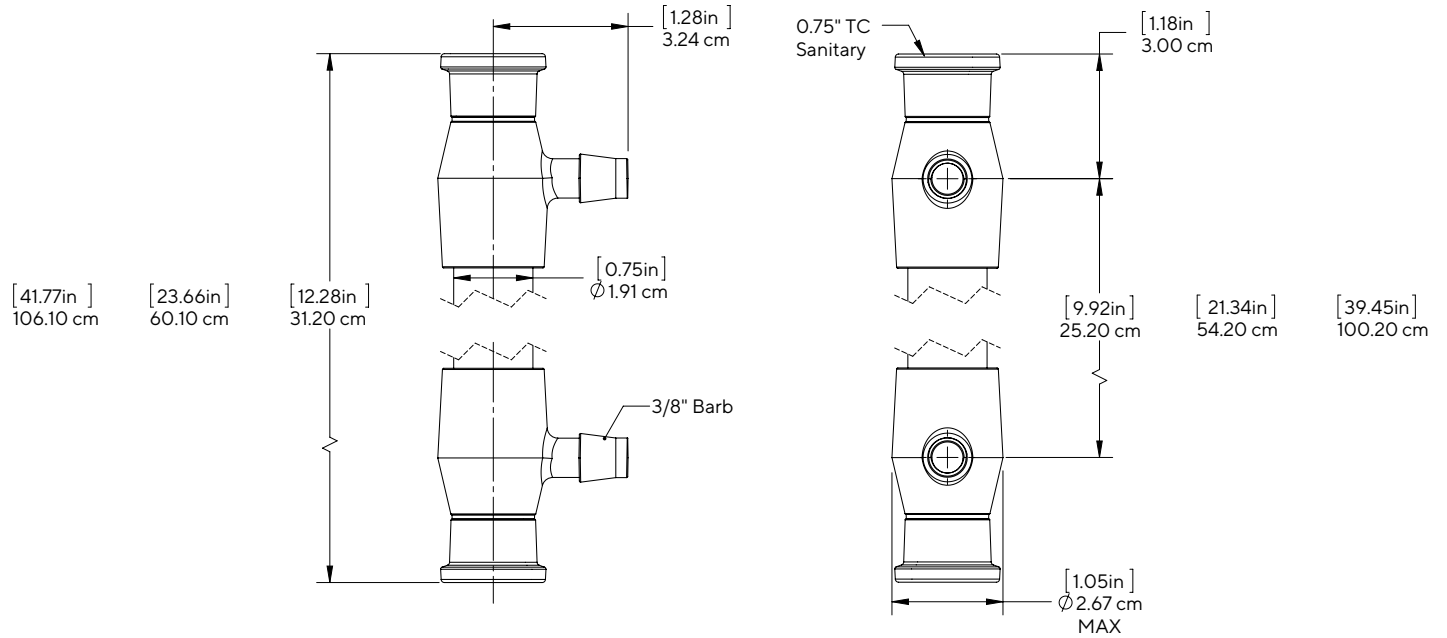
Exact length for different Fiber length: 12, 24 or 41 inch



Overview

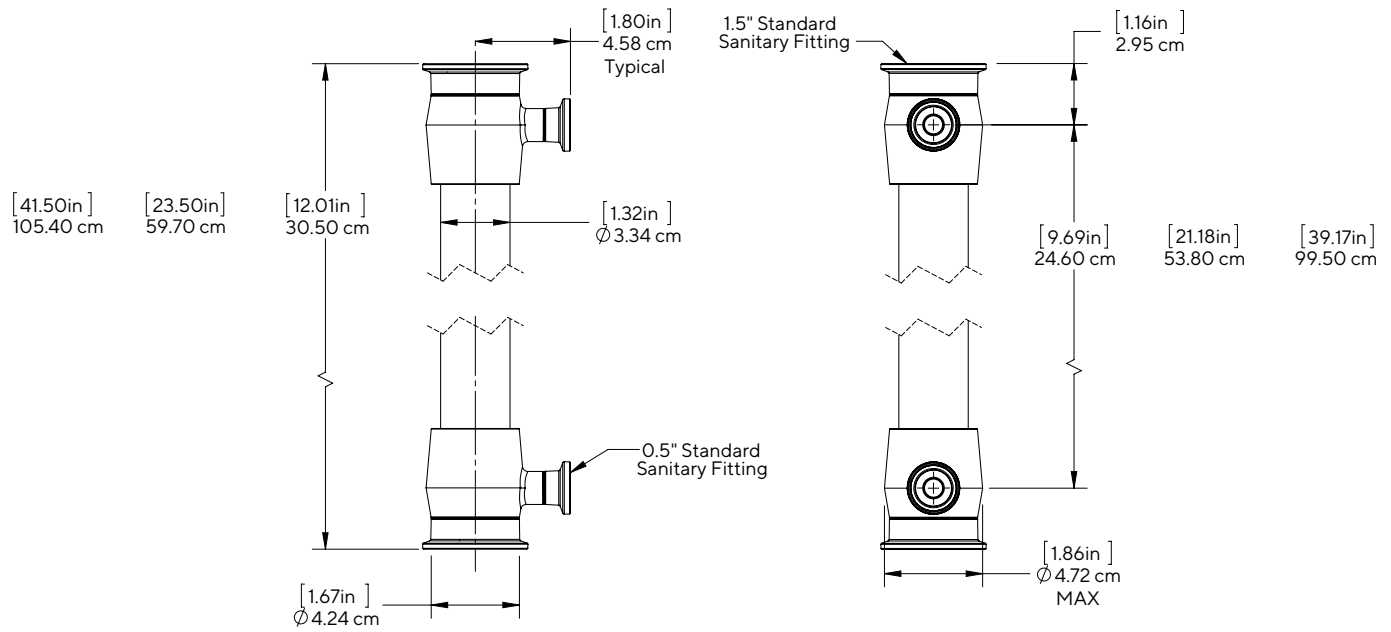
Researcher & Researcher XL

Exact length for different Fiber length: 12, 24 or 41 inch



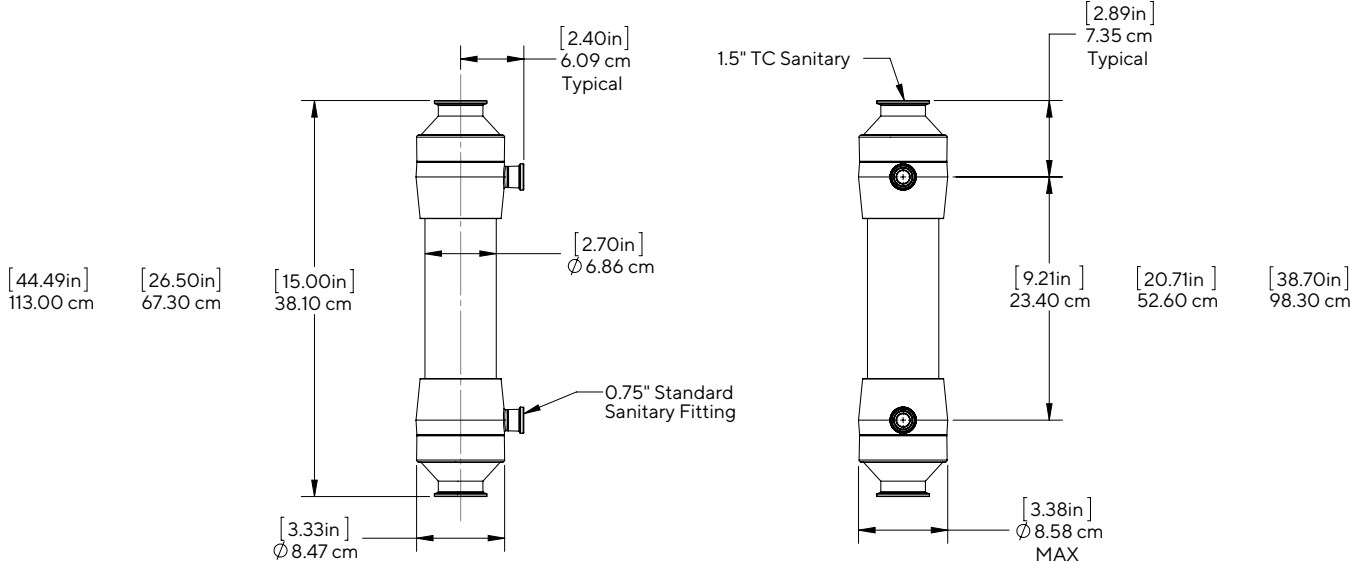
Investigator

Exact length for different Fiber length: 12, 24 or 41 inch



Mini Bioproducer

Exact length for different Fiber length: 12, 24 or 41 inch



Germany

Sartorius Stedim Biotech GmbH
August-Spindler-Strasse 11
37079 Goettingen
Phone +49 551 308 0

USA

Sartorius Stedim North America Inc.
565 Johnson Avenue
Bohemia, NY 11716
Toll-Free +1 800 368 7178

 **For more information, visit**
www.sartorius.com