SARTORIUS

Product Datasheet

Hollow Fiber TFF Modules Single-Use Line

Gamma Irradiated, Humectant-Free and Ready to Use

Executive Summary

Single-use Line hollow fiber modules offer you the perfect solution to save money and time, preserve space, and increase flexibility through scalable design. They provide a linear and predictive scale-up process from laboratory to pilot-scale to manufacturing scale by using matching materials, fluid-path length, and performance characteristics. The modules are fully scalable from batch volumes from 10 mL up to 1,500 L with corresponding membrane surface areas from 0.056 ft² (0.0052 m²) up to 166.0 ft² (15.42 m²). Molecular weight cut-offs (MWCO) in the range from 3 kD to 750 kD and in pore sizes from 0.1 µm to 0.45 µm, with lumen ID's of 0.5 mm and 1.0 mm are offered.

Features and Benefits

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

Relevant Applications

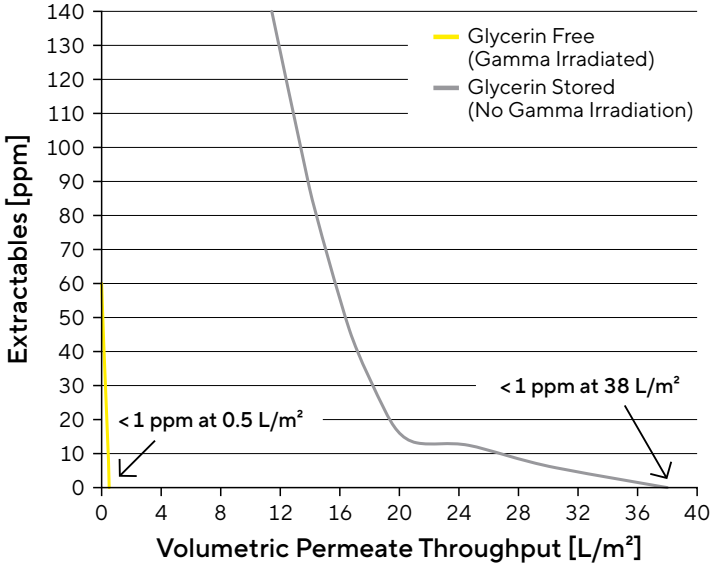
Sartorius Hollow Fiber Modules are designed for biopharmaceutical processing. They can be used for the following applications.

Upstream
- Cell harvest
- Cell or lysate 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 | Single-Use Line
Biocompatability	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	3⁄16-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 × 31.2)	0.48 (0.0444)	400 – 2000 mL	¾-inch TC	⅜-inch Hose Barb
		24 inch	0.75 × 23.66 (1.91 × 60.1)	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	⅜-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)	1.4 – 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		
Bioproducer	Production	12 inch	3.50 × 15.00 (8.89 × 38.10)	13.1 (1.21)	25 – 100 L	1½-inch TC	1-inch TC
		24 inch	3.50 × 26.50 (8.89 × 67.30)	29.0 (2.69)	50 – 250 L		
		41 inch	3.50 × 44.49 (8.89 × 113.00)	53.8 (5.00)	100 – 500 L		
Maximizer	Production	24 inch	4.62 × 28.80 (11.73 × 73.15)	58.4 (5.42)	100 – 500 L	2-inch TC	1½-inch TC
		41 inch	4.62 × 46.50 (11.73 × 118.1)	104.9 (9.74)	250 – 1000 L		
Grand XL ** (only with 1.0 and 2.0 mm Fiber IDs)	Production	24 inch	6.015 × 32.65 (15.28 × 82.93)	87.2 (8.10)	250 – 800 L	6-inch TC*** Reducer Adaptors	1-inch TC
		43 inch	6.015 × 51.65 (15.28 × 131.19)	166.0 (15.42)	400 – 1500 L	6-inch TC Standard Sanitary × 2½-inch Standard Sanitary Fitting	

* Membrane surface valid for all fiber IDs. For number of fibers per module please consider the Validation Guide.
** Grand XL dimension are with adaptors.
*** Grand XL Single-use need adaptor kit: BAADAPTGRAXXTC
The adapter kit includes two 6-inch (15.24 cm) × 2½-inch (6.35 cm) TC adaptor end caps, two 6-inch (15.24 cm) TC platinum cured silicone gaskets, and two 6-inch (15.24 cm) TC white nylon clamps.

Available MWCO and Pore Sizes for Different Fiber IDs

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

	MWCO									Pore Size		
Fiber ID	**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	■	■	■	■	■	■	■	■	■	■	■	■

* Not available for Grand XL

Ordering Information

Product Designator
SU = Single-use Line

Fiber Lumen Diameter (mm)
05 = 0.5 mm
10 = 1.0 mm

Fiber Length
12 = 12 inches
24 = 24 inches
41 = 41 inches
43 = 43 inches (only for Grand XL)

Package Size
H = 1-pack for Maximizer
L = 1-pack for Grand XL
3 = 3-pack from Researcher to Bioproducer
6 = 6-pack for Discover and Explorer

SU	910	05	DIS	12	L	6

MWCO & Pore Size
003 = 3 kD
005 = 5 kD
010 = 10 kD
030 = 30 kD
050 = 50 kD
100 = 100 kD
300 = 300 kD
500 = 500 kD
750 = 750 kD
910 = 0.10 µm
920 = 0.20 µm
945 = 0.45 µm

Cartridge Type
DIS = Discover
EXP = Explorer
RES = Researcher
RXL = Researcher XL
INV = Investigator
MPR = Mini Bioproducer
PRO = Bioproducer
MAX = Maximizer
GRA = Grand XL

Type of Connector
L = Luer Lock (only for Discover)
S = Sanitary

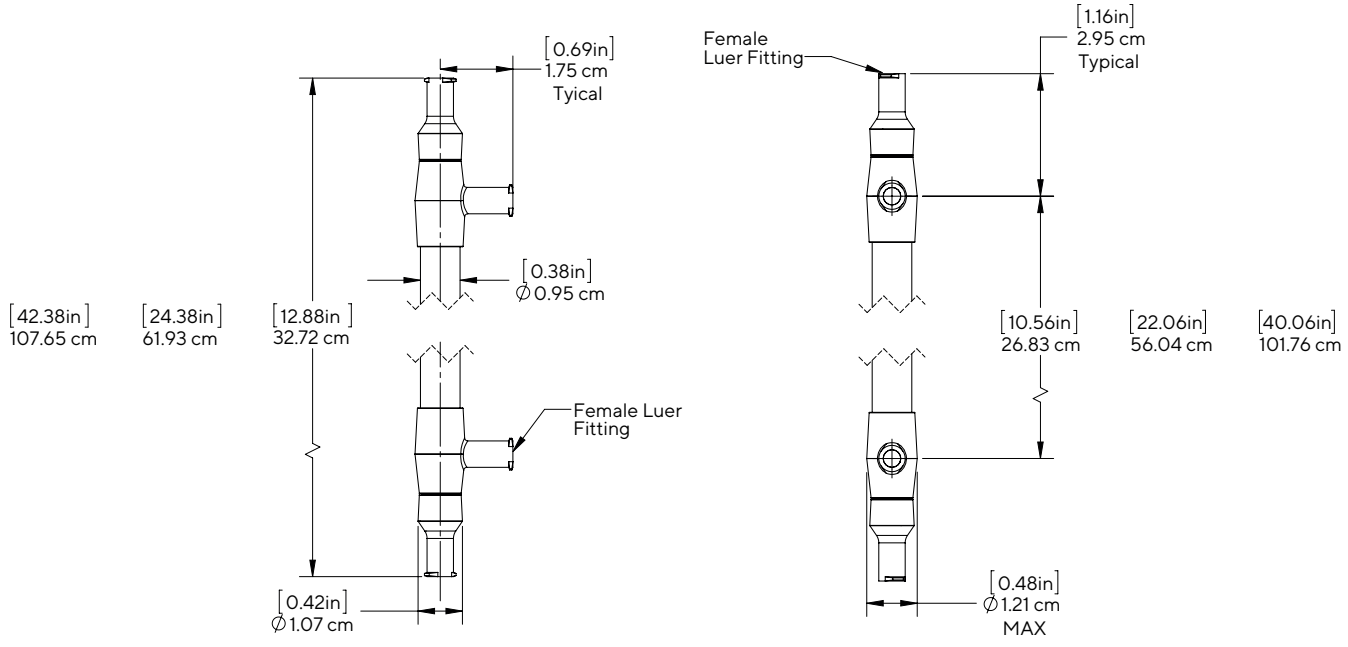
Surface area (only for Grand XL)
5 = Grand 43 XL 15 m²
8 = Grand 24 XL 8 m²

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

Overview

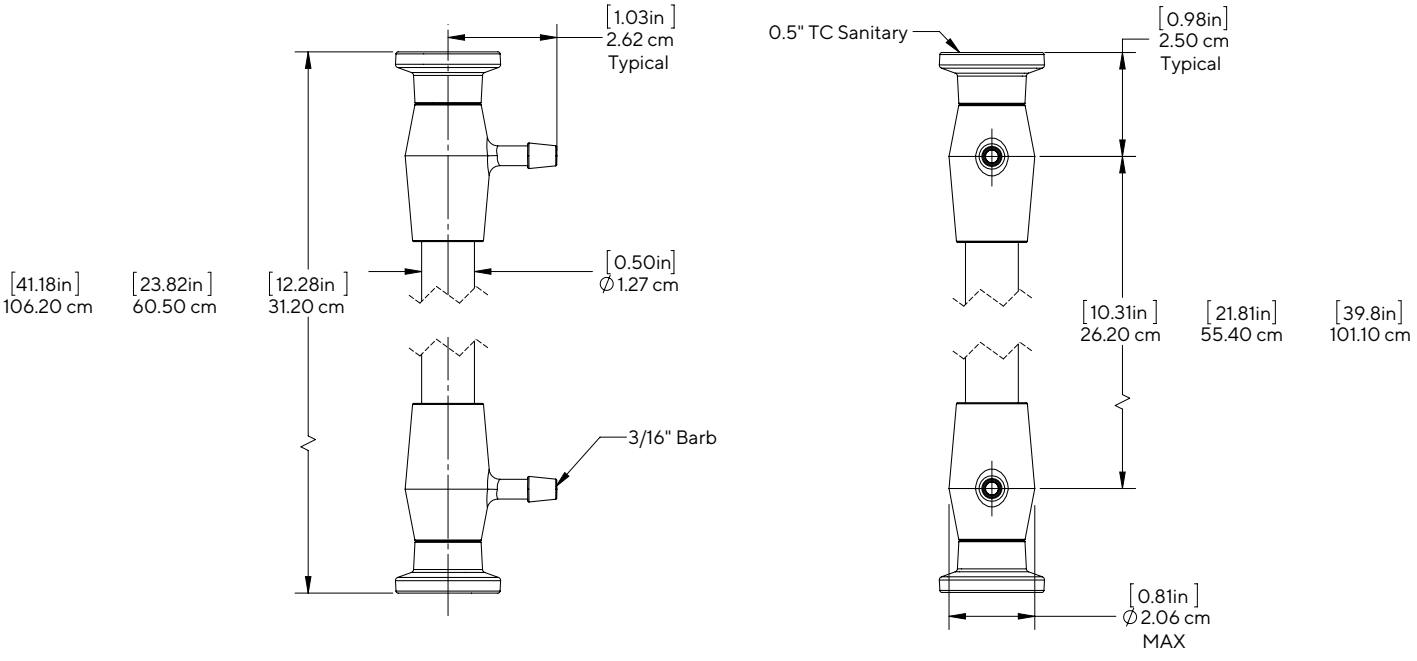
Discover

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



Explorer

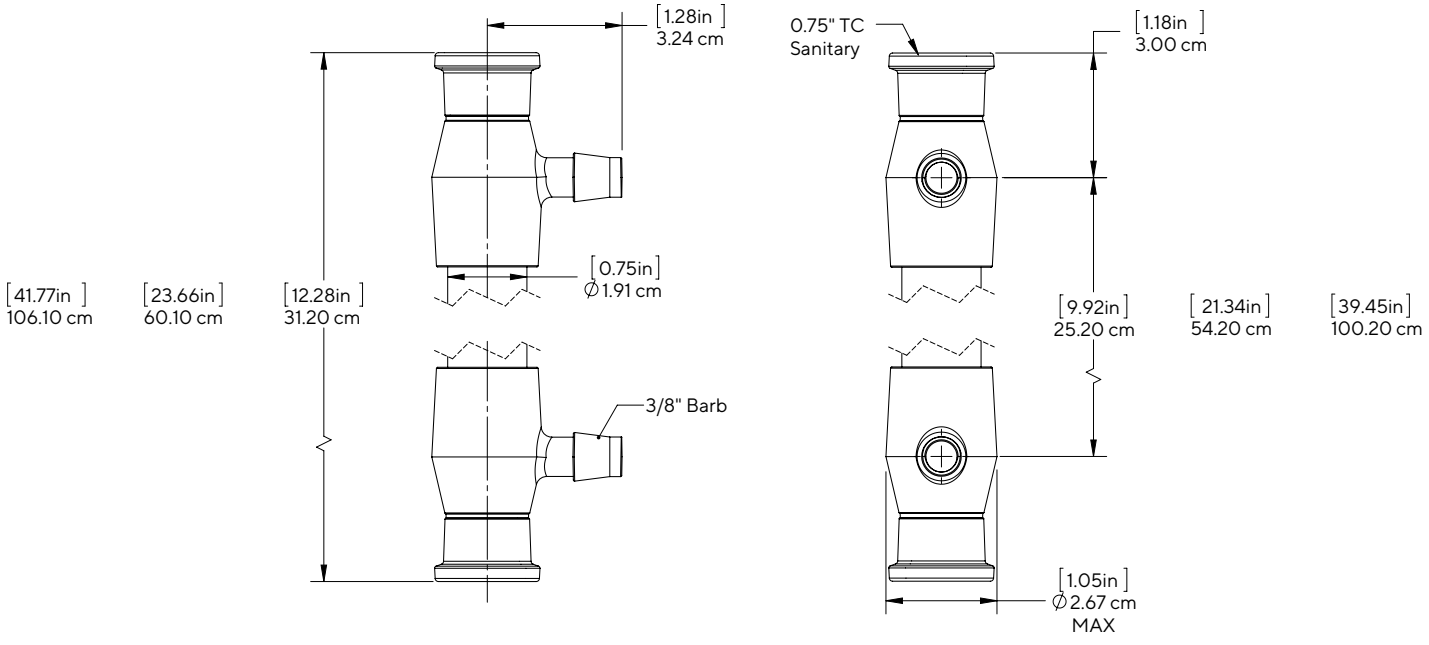
Exact length for different Fiber length: 12, 24 or 41 inch



Overview

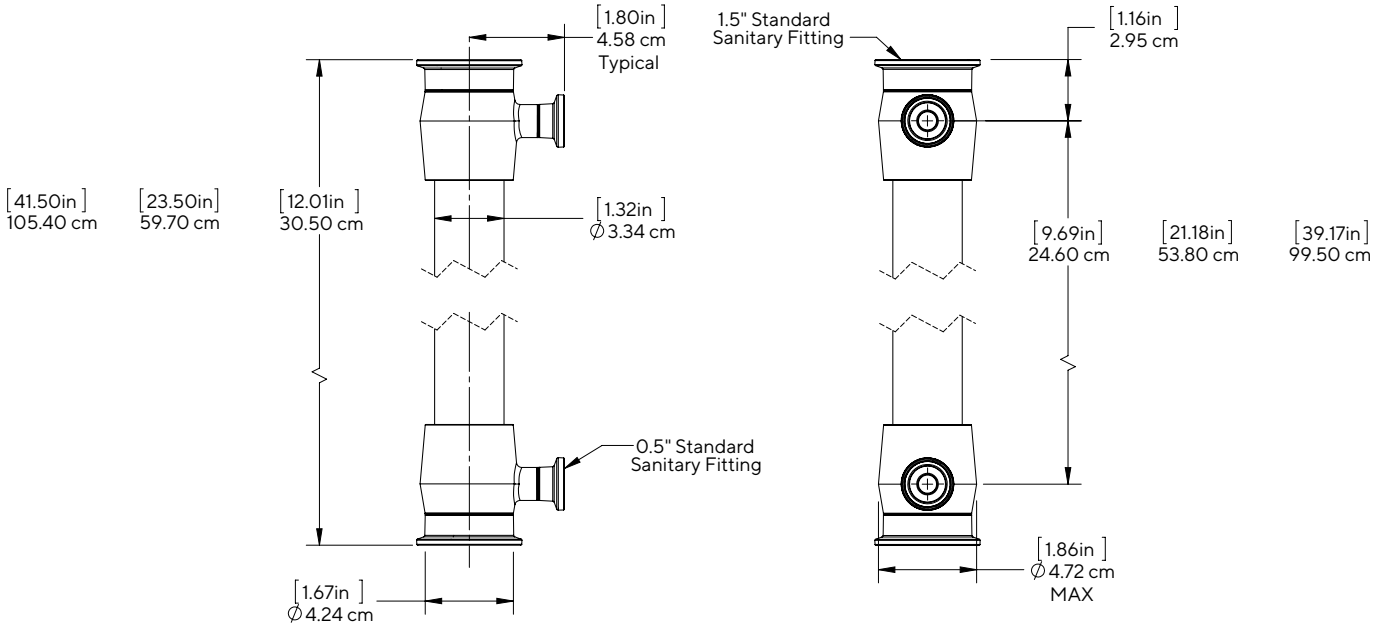
Researcher & Researcher XL

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



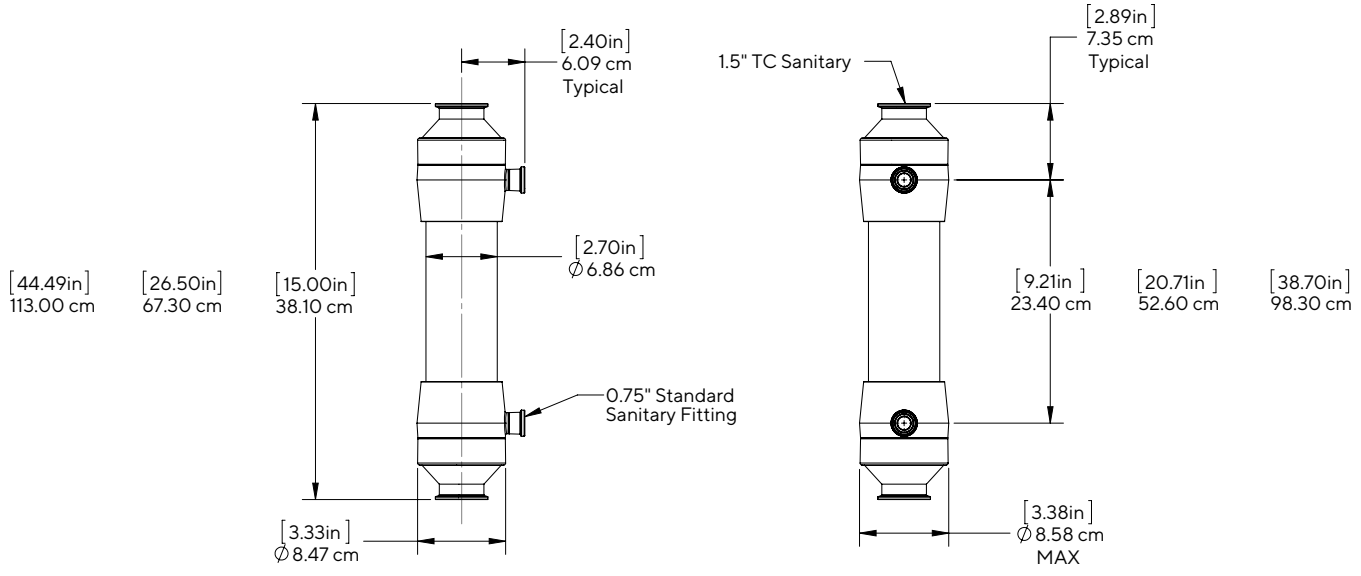
Investigator

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



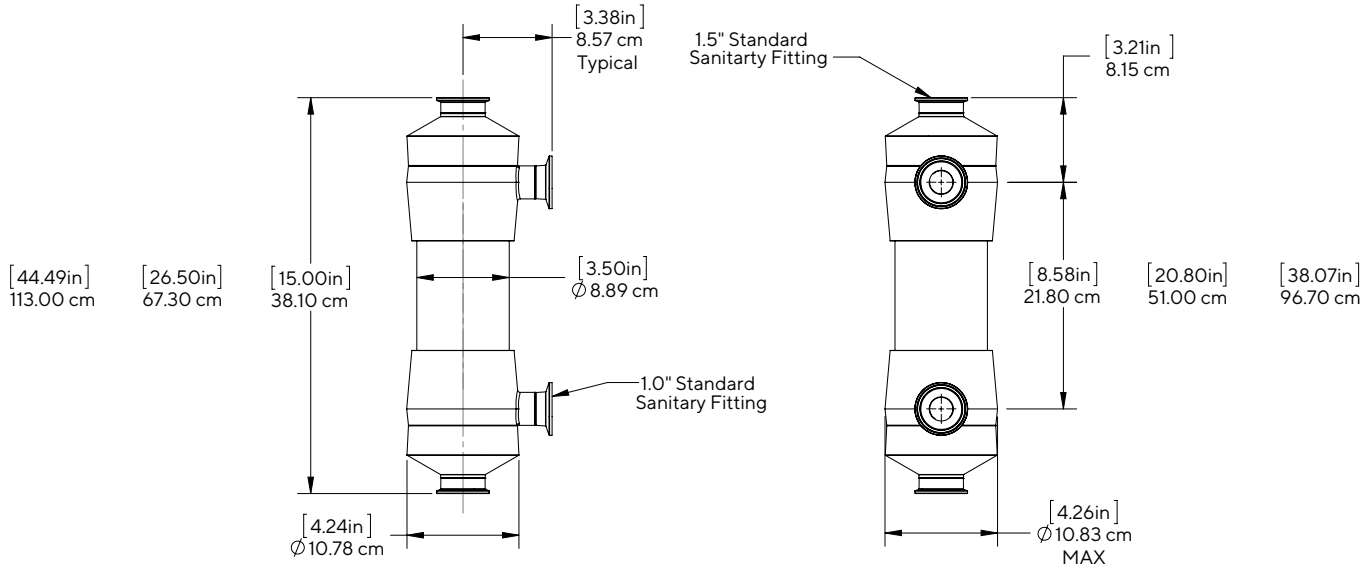
Mini Bioproducer

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



Bioproducer

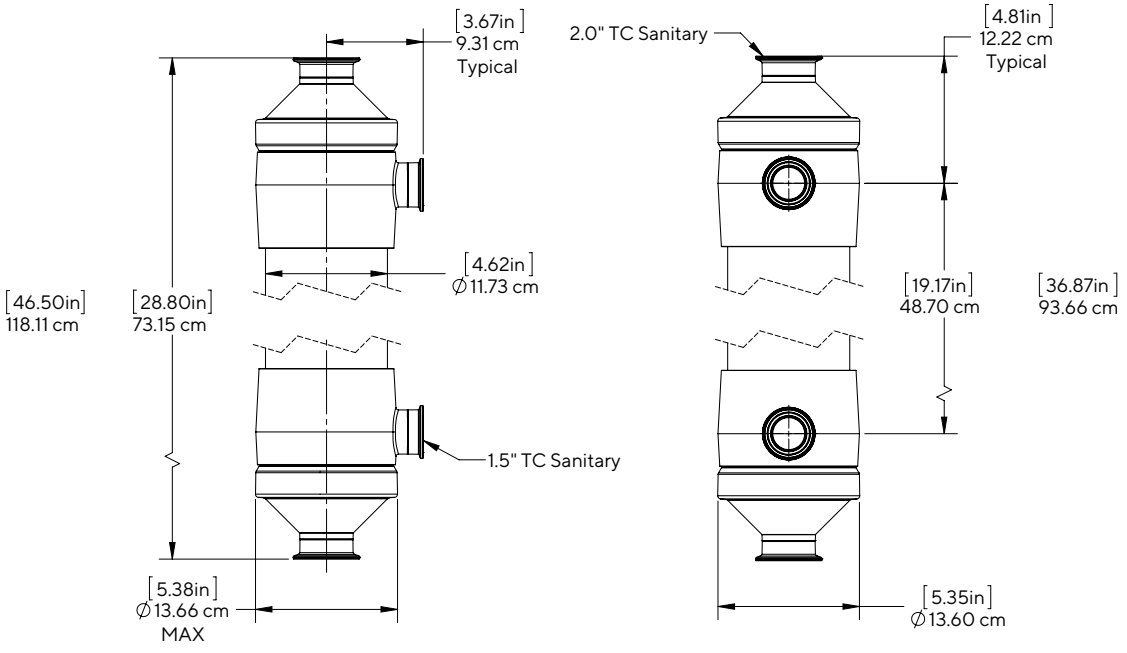
Exact length for different Fiber length: 12, 24 or 41 inch



Overview

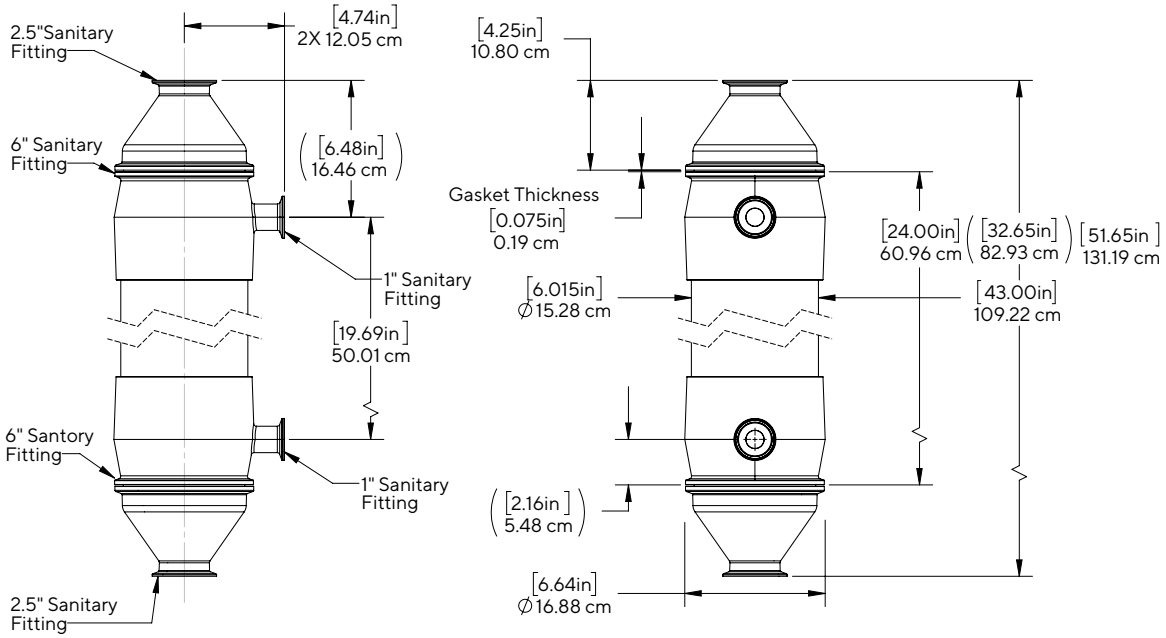
Maximizer

Exact length for different Fiber length: 24 or 41 inch



Grand XL*

Exact length for different Fiber length: 24 or 43 inch



* Shown with removable adaptors

Note: Grand XL Single-use need adaptor kit: BAADAPTGRAXXTC
The adapter kit includes two 6-inch (15.24 cm) × 2½-inch (6.35 cm) TC adaptor end caps, two 6-inch (15.24 cm) TC platinum cured silicone gaskets, and two 6-inch (15.24 cm) TC white nylon clamps.

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Specifications subject to change without notice.
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