



# LIFETEC™ PT N

## ABSOLUTE MEMBRANE FILTER ELEMENTS

Process Filtration

The Donaldson LifeTec™ PT N filter element is a sterile grade, pleated, high performance ePTFE membrane filter, featuring Tetratex® media. These elements offer excellent performance in critical compressed air and technical gas applications within the processed food and beverage industry. With this exceptional media and polypropylene construction, these elements provide:

- Tetratex® ePTFE media is hydrophobic and features a highly porous structure for high flow rates and low pressure drop.
- Log reduction value greater than 7 for 0.2 micron and larger particles
- Thermally welded construction for extraordinary durability and low extractables
- Compliance with EU and USA requirements for food contact use under 1935/2004/EC and CFR Title 21
- Compliance with USP Class VI plastics biological reactivity tests

The LifeTec™ PT N is a premier option for supporting product and process integrity in the processed food and beverage industry.



LIFETEC™ PT N

FEATURES	BENEFITS
Tetratex® ePTFE membrane media	High porosity for exceptional flow characteristics and low pressure drop, which decrease total cost of ownership
Log reduction value greater than or equal to 7 at 0.2 micron	Helps ensure product and process integrity in critical processed food and beverage applications
Inherently hydrophobic media	Supports high flow rates, low pressure drop, and excellent dewetting characteristics.
Many common sizes and configurations available	Ability to configure elements to meet most processed food and beverage application flow requirements
Integrity testable according to HIMA* and validated retention of bacteria and viruses	Provides assurance of integrity and performance over the life of the element
Non-fiber releasing, biologically inert media	All components comply with EU and USA requirements for food contact use under 1935/2004/EC and CFR Title 21

## INDUSTRIES AND APPLICATIONS

INDUSTRIES		APPLICATIONS	
Food	Food Ingredients	Aseptic Packaging	Tank Ventilation
Dairy	Alcoholic Beverages	Fermentation Air	Nitrogen Blanketing

## SPECIFICATIONS

### CUMULATIVE STEAM CYCLES

The PT N is rated for >100 steam sterilization cycles with 121° C (250° F) saturated steam.

Figures based on steaming resistance lab tests.

Filter elements must be checked in actual use.

Contact Donaldson for recommended Autoclaving/Steam procedures.

### QUALITY TEST

All products have been inspected and released by Quality Assurance as having met the following requirements:

- All sterile filters are integrity tested to verify compliance with established quality and design specifications and to assure consistent and reliable performance.
- All PT N filter elements are completely staged, assembled, tested and packaged in Class 7 clean room facility, whose Quality Management System is approved by an accredited registering body to the appropriate ISO 9001 Quality Systems Standard.

### MATERIAL COMPLIANCE USA

All components of the PT N filter element are FDA listed for food contact use in the Code of Federal Regulations (CFR), Title 21.

MATERIALS		CFR TITLE 21
Membrane	PTFE	177.1550
Upstream Support	Polypropylene	177.1520
Downstream Support	Polypropylene	177.1520
Outer Guard	Polypropylene	177.1520
Core	Polypropylene	177.1520
End Caps	Polypropylene	177.1520
O-Rings	EPDM	177.2600
	Silicone	177.2600
Sealing Method	Thermal Bonding	

## INTEGRITY TESTING

Bubble-Point-Test*			Diffusions test / Forward Flow Test*		Water Intrusion Test	
Filter Grade	Minimum Bubble Point		Filter Grade	Maximum Diffusion Value	Filter Grade	Maximum Diffusion Value
	bar	psi				
LifeTec™ PT N 0.2µm	1.0	14	LifeTec™ PT N 0.2µm	20 ml/min @ 0.8 bar (12 psi)	LifeTec™ PT N 0.2µm	1.0 ml/min per 250 mm (10") element after 5 min @ 2.0 bar (29 psi)

\* The values are based on a mixture of 60% IPA / 40% water as wetting fluid at 25°C.

Integrity test to be done by Water Intrusion Test. For information on test equipment or test services, please contact your Donaldson Sales Engineer and visit our website at [www.donaldsonprocessfilters.com](http://www.donaldsonprocessfilters.com).

## MATERIAL COMPLIANCE EU

The PT N filter element meets the guideline for Food Contact Use as given in European Regulation (EC) Number 1935/2004. All polymeric components (polypropylene, PTFE) meet the requirements of EU Directive EC/10/2011 relating to plastic materials and articles intended to come into contact with foodstuffs.

Migration tests have been carried out in simulant after flushing or in flow conditions.

For specific details on the O-Rings, please contact your Donaldson Sales Engineer.

### BACTERIA RETENTION RATES (according to HIMA challenge per ASTM)

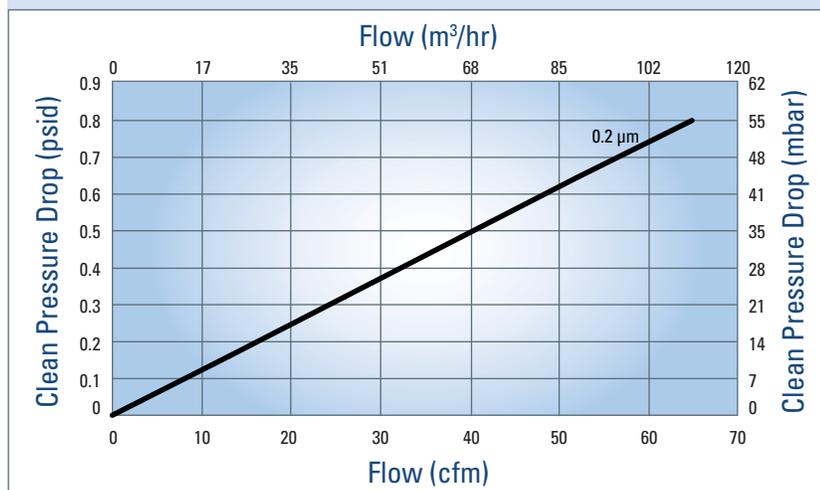
Filter Grade	Microorganism	LRV / cm <sup>2</sup>
PT N 0.2 µm	Serratia Marcescens	> 7
	Brevundimonas diminuta	> 7

### PRODUCT SPECIFICATIONS

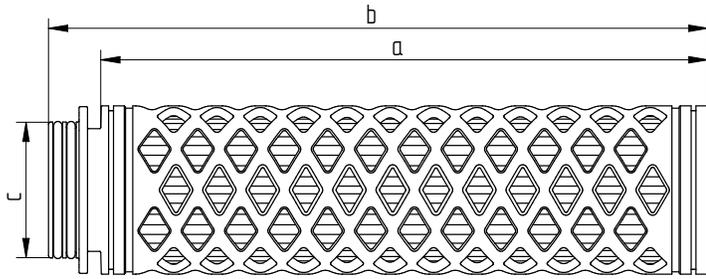
Filter Grade	0.2 µm (Retention Rates LRV ≥ 7 cm <sup>2</sup> )			
Filtration Surface	0.85 m <sup>2</sup> per 250 mm element (10")			
Maximum Differential Pressure (Liquid and gas in forward flow)	Operating temperature		Differential pressure	
	°C	°F	bar	psi
	38	100	5.5	80
	66	150	4.1	60
	82	180	2.1	30
Cumulative Steaming Time* (Independent of the flow direction)	121°C Saturated Steam for 30 minutes (Forward flow recommended) up to 150 cycles			
	134°C Saturated Steam for 20 minutes (Forward flow recommended) up to 150 cycles			
	141°C Saturated Steam for 10 minutes (Forward flow recommended) up to 150 cycles			
Maximum Differential Pressure (Steam / independent of the flow direction)	Operating temperature		Differential pressure	
	°C	°F	bar	psi
	121	249	1.5	22
	135	275	1	14.5
	141	285	0.5	7

\* Figures are based on lab tests to evaluate steaming resistance. Filter elements need to be checked in actual use. Contact Donaldson for recommended Autoclaving/Steaming procedures. For the filtration of aqueous solutions the PT N membrane filter has to be pre-wetted with a suitable liquid of low surface tension (e.g. IPA).

### PT N FLOW CHARACTERISTICS (AIR)

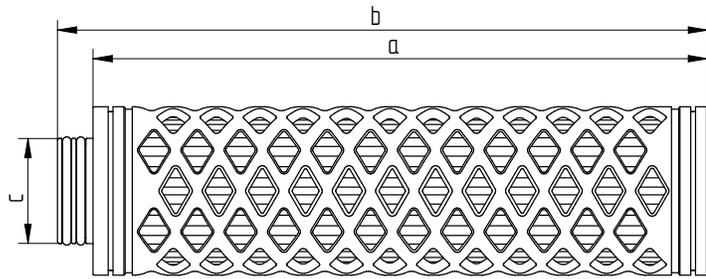


## DIMENSIONS



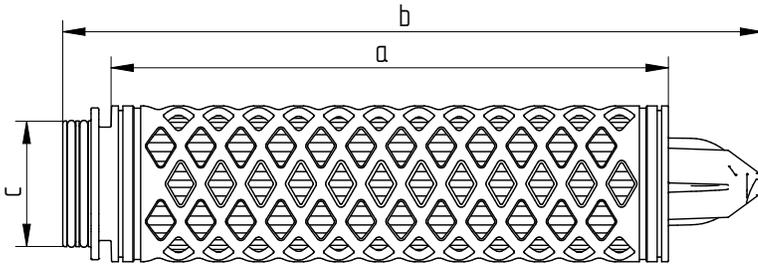
CODE 2 Connection							
Filter Size		Dimensions					
		a		b		c	
mm	in.	mm	in.	mm	in.	mm	in.
254	10	254	10.0	274	10.8	56	2.2
508	20	495	19.5	516	20.3	56	2.2
762	30	737	29.0	757	29.8	56	2.2
1016	40	978	38.5	1001	39.4	56	2.2

Code 2: 2 x 226 O-Rings, bayonet 2 locking tabs, flat end cap, integrated reinforcement ring



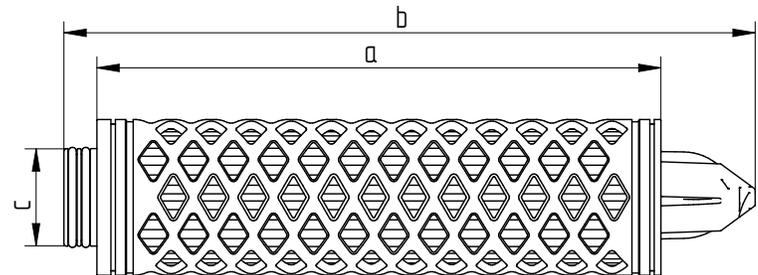
CODE 3 Connection							
Filter Size		Dimensions					
		a		b		c	
mm	in.	mm	in.	mm	in.	mm	in.
254	10	257	10.1	272	10.7	43	1.7
508	20	498	19.6	513	20.2	43	1.7
762	30	739	29.1	754	29.7	43	1.7
1016	40	983	38.7	998	39.3	43	1.7

Code 3: 2 x 222 O-Rings, plug connection, flat end cap, integrated reinforcement ring



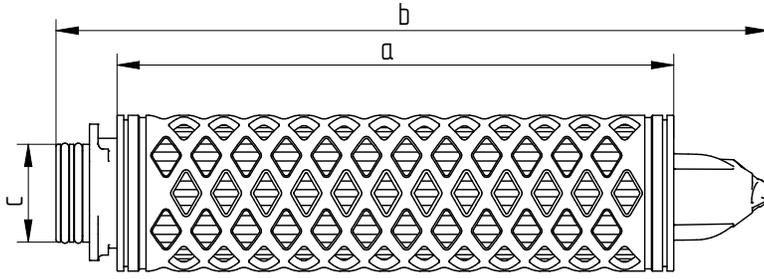
CODE 7 Connection							
Filter Size		Dimensions					
		a		b		c	
mm	in.	mm	in.	mm	in.	mm	in.
254	10	251	9.9	315	12.4	56	2.2
508	20	493	19.4	556	21.9	56	2.2
762	30	734	28.9	800	31.5	56	2.2
1016	40	978	38.5	1041	41.0	56	2.2

Code 7: 2 x 226 O-Rings, bayonet 2 locking tabs, locating fin, integrated reinforcement ring



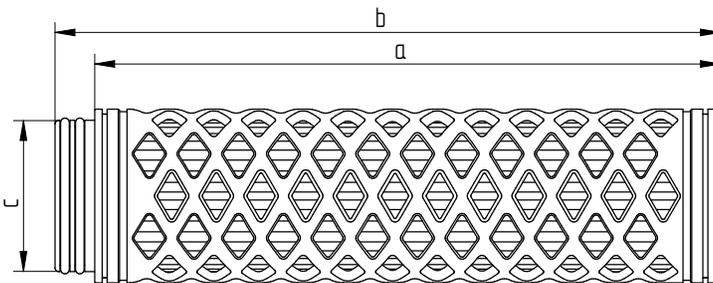
CODE 8 Connection							
Filter Size		Dimensions					
		a		b		c	
mm	in.	mm	in.	mm	in.	mm	in.
254	10	254	10.0	310	12.2	43	1.7
508	20	495	19.5	554	21.8	43	1.7
762	30	739	29.1	795	31.3	43	1.7
1016	40	980	38.6	1036	40.8	43	1.7

Code 8: 2 x 222 O-Rings, plug connection, locating fin, integrated reinforcement ring



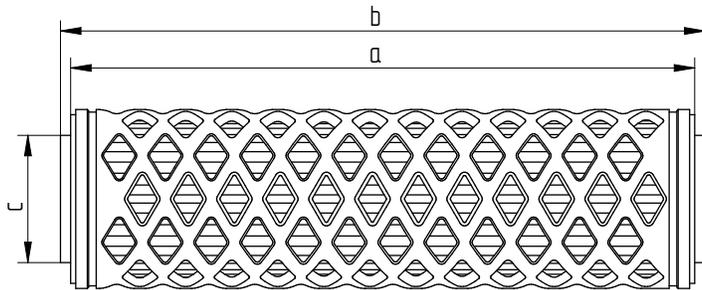
CODE 9 Connection							
Filter Size		Dimensions					
		a		b		c	
mm	in.	mm	in.	mm	in.	mm	in.
254	10	249	9.8	320	12.6	43	1.7
508	20	493	19.4	561	22.1	43	1.7
762	30	734	28.9	805	31.7	43	1.7
1016	40	975	38.4	1046	41.2	43	1.7

Code 9: 2 x 222 O-Rings, bayonet 3 locking tabs, locating fin, integrated reinforcement ring



UF Connection							
Filter Size		Dimensions					
		a		b		c	
mm	in.	mm	in.	mm	in.	mm	in.
254	10	251	9.9	269	10.6	61	2.4
508	20	493	19.4	511	20.1	61	2.4
762	30	737	29.0	752	29.6	61	2.4

Code UF: 2 x 226 O-Rings, plug connection, flat end cap, integrated reinforcement ring



DOE Connection							
Filter Size		Dimensions					
		a		b		c	
mm	in.	mm	in.	mm	in.	mm	in.
254	10	244	9.6	249	9.8	51	2.0
508	20	500	19.7	505	19.9	51	2.0
762	30	754	29.7	759	29.9	51	2.0
1016	40	1008	39.7	1013	39.9	51	2.0

DOE: Double open end with EPDM gaskets



**Important Notice**

Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



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