



**Donaldson**  
FILTRATION SOLUTIONS

## **PT N** **ABSOLUTE MEMBRANE** **FILTER ELEMENTS**

Process Filtration

**The Donaldson LifeTec™ PT N filter element is a sterile grade, pleated high performance PTFE membrane filter.**

It provides the greatest assurance of filtration performance, stability and durability against chemicals even under severe process conditions.

The hydrophobic PTFE filter medium is a highly porous membrane structure that ensures high flow rates and a high absorption of particles during the entire service life time. The end caps and PTFE membrane are thermally welded without the use of binders. This results in an integral filter cartridge which provides maximum durability range against chemicals with minimal extractables.

This extremely durable design maintains consistent porosity and impurity retention throughout its service life without shedding or unloading contaminations.

All components meet the EU and USA requirements for Food Contact Use in accordance with CFR (Code of Federal Regulations) Title 21 and 1935/2004/EC. The filter element is manufactured in accordance with the manufacturing requirements, has no migration of filter media, is non-fiber releasing and is thermally welded.



**PTN**  
(formerly PF-PT N)

### **FEATURES & BENEFITS**

- Excellent material resistance towards aggressive media
- Inherently hydrophobic PTFE membrane
- Sterile grade at 0.2 µm (HIMA/ASTM)
- High flow rates
- Biologically inert
- Approved for Food Contact Use according to CFR Title 21 & 1935/2004/EC

## APPLICATIONS

### INDUSTRIES & APPLICATIONS

Food	Pharmaceutical
Dairy	Chemical

### AIR & GAS PURIFICATION

Compressed Air	Tank Ventilation
Fermented Air	Technical Gases

### CHEMICAL PURIFICATION

Highly Concentrated Acids	Complexing Agents	Chlorinated and Fluorinated Solvents
Highly Concentrated Bases	Alcohols, Aldehydes	Esters and Ketones
Oxidizing Agents	Etchants	Photolithographic Liquids

## SPECIFICATIONS

### CUMULATIVE STEAM CYCLES

The PT N is rated for >100 steam sterilization cycles with 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	

## 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.

## INTEGRITY TESTING

### BACTERIA RETENTION RATES (ACCORDING TO HIMA CHALLENGE PER ASTM)

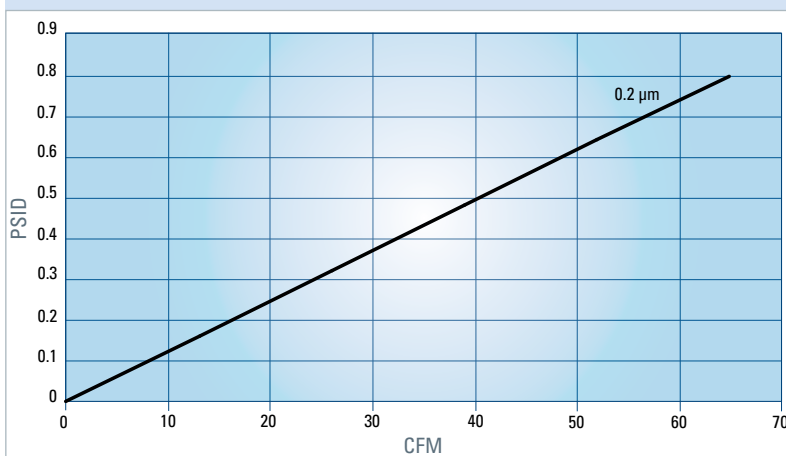
Filter Grade	Microorganism	LRV / cm <sup>2</sup>
PT N 0.2 µm	Serratia Marcescens	> 7
	Brevundimonas diminuta	> 7

Filter Grade	0.2 µm (Retention Rates LRV $\geq$ 7 cm <sup>2</sup> )	
Filtration Surface	$\geq$ 0.6 m <sup>2</sup> per 250 mm element (10")	
Maximum Differential Pressure	Operating Temperature	Differential Pressure
	100°F	80 psi
	150°F	60 psi
	180°F	30 psi

\* 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)

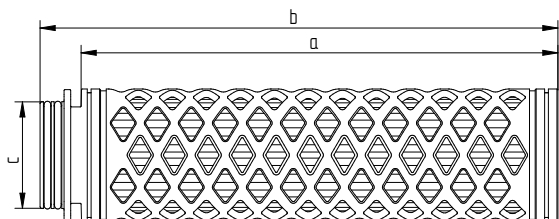


### WATER INTRUSION TEST

Filter Grade	Maximum Diffusion Values
0.2 µm	0.60 ml/min per 10" element after 10 min @ 29 psi

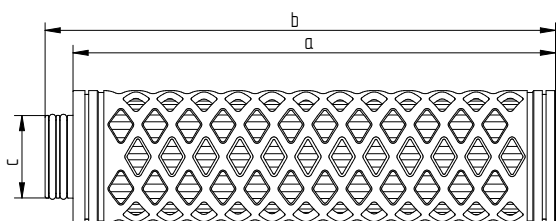
Integrity test to be done by Water Intrusion Test. For information on test equipment or test services, please contact your Donaldson Sales Engineer and visit our website at [www.donaldsonprocessfilters.com](http://www.donaldsonprocessfilters.com).

## DIMENSIONS



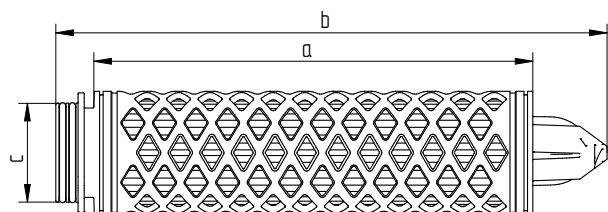
CODE 2 Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	10.0	10.8	2.2
20"	19.5	20.3	2.2
30"	29.0	29.8	2.2
40"	38.5	39.4	2.2

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



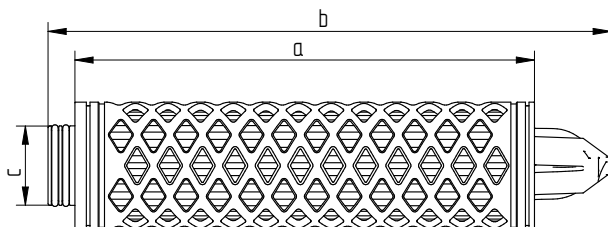
CODE 3 Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	10.1	10.7	1.7
20"	19.6	20.2	1.7
30"	29.1	29.7	1.7
40"	38.7	39.3	1.7

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



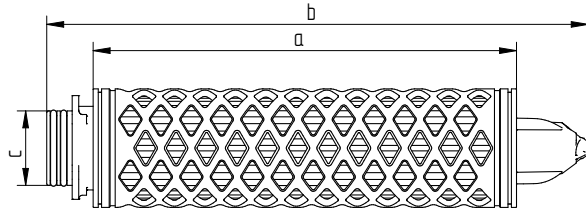
CODE 7 Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	9.9	12.4	2.2
20"	19.4	21.9	2.2
30"	28.9	31.5	2.2
40"	38.5	41.0	2.2

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



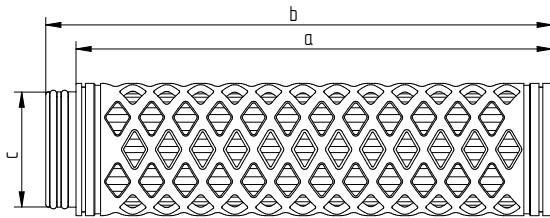
CODE 8 Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	10.0	12.2	1.7
20"	19.5	21.8	1.7
30"	29.1	31.3	1.7
40"	38.6	40.8	1.7

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



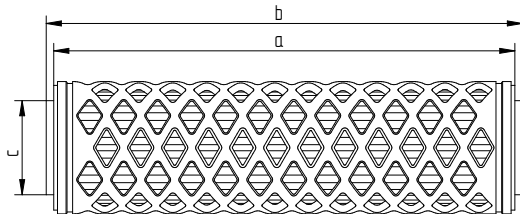
CODE 9 Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	9.8	12.6	1.7
20"	19.4	22.1	1.7
30"	28.9	31.7	1.7
40"	38.4	41.2	1.7

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



UF Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	9.9	10.6	2.4
20"	19.4	20.1	2.4
30"	29.0	29.6	2.4

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



DOE Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	9.6	9.8	2.0
20"	19.7	19.9	2.0
30"	29.7	29.9	2.0
40"	39.7	39.9	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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