



MAIN FEATURES & BENEFITS

- Developed as pre-filter to protect membranes
- Also suitable for the cost-effective final filtration of liquids
- High dirt holding capacity at low differential pressure
- High flow rate
- Highly resistant construction

PRODUCT DESCRIPTION

The Donaldson (P)-PP-FC100 precision graded density filter elements are a further development of our already well proven nominal rated depth (P)-PP-FC100 filter, often used as water filters, chemical filters or trap filters. These high-performance elements excel in dirt holding capacity and give extremely low clean pressure losses as a result of the strictly controlled manufacturing of the fibre matrix.

The polypropylene-fibres used are without the need for binders, resins or lubricants during the extrusion process. This results in a one-piece construction that is resistant to unloading and media shedding. True depth filtration results from the closely controlled fibre production in manufacturing, and also the process environment which ensures a consistent and reliable high-quality element. All the layers are inter-linked to offer maximum support while ensuring that the high void volume is maintained, but with increasing fibre density towards the element centre. This results in true depth filtration, ideal for use as water filters, chemical filters and trap filters.

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 absolute rated (P)-PP-FC100 depth filter is designed and developed as pre-filter in front of membrane filters or as low-cost alternative to membrane-based final filters in non-food and beverage applications.

INDUSTRIES



- Food & Beverages
- Chemical
- Engineering
- Industrial Water Supply
- Environment

PRODUCT SPECIFICATIONS

Features	Specifications	
Absolute Retention rates	1µm, 3µm, 5µm, 10µm, 25µm, 50µm, 75µm, 100µm	
Maximum Operating Temperature:	80 °C (176 °F) continuous	
Recommended filter element change	1.5 bar (21.76 psi) differential pressure)	
Maximum differential pressure	3.5 bar (50 psi) @ 20°C (68°F) 1 bar (14.5 psi) @ 60°C (140°F) 0.5 bar (7.25 psi) @ 80°C (176°F)	
Recommended Surface Load for Continuous Operation (10" element):	Liquid Water Fruit Juice Beer Wine Sparkling Wine	Surface Load [hl/h] 8 6.5 5 5 5
Recommended Surface Load for Temporary Operation (10" element):	Liquid: Water Fruit Juice Beer Wine Sparkling Wine	Surface Load [hl/h]: Max. 20 Max. 15 Max. 12 Max. 12 Max. 12
Cumulative Steaming Time*:	Steam Sterilization is not recommended	

* 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

APPLICATIONS

Typical applications for PP-FC100 filter elements include:

Purification of Food and Beverage products:

- Water
- Mineral water
- Soft Drinks
- Beer
- Wine
- Spirits
- Syrups

Filtration of pharmaceutical products:

- Ophthalmic
- Diagnostic reagents
- Serum Products
- Isotonic Salt Solutions

Purification of chemicals:

- Acids
- Bases
- Complexing agents
- Alcohols, Aldehydes
- Etchants
- Chlorinated and fluorinated solvents
- Esters and Ketones
- Photo-lithographic liquids

MATERIAL COMPLIANCE USA

All components of the PP-FC100 filter element are FDA listed for food contact use in the Code of Federal Regulations (CFR), Title 21:

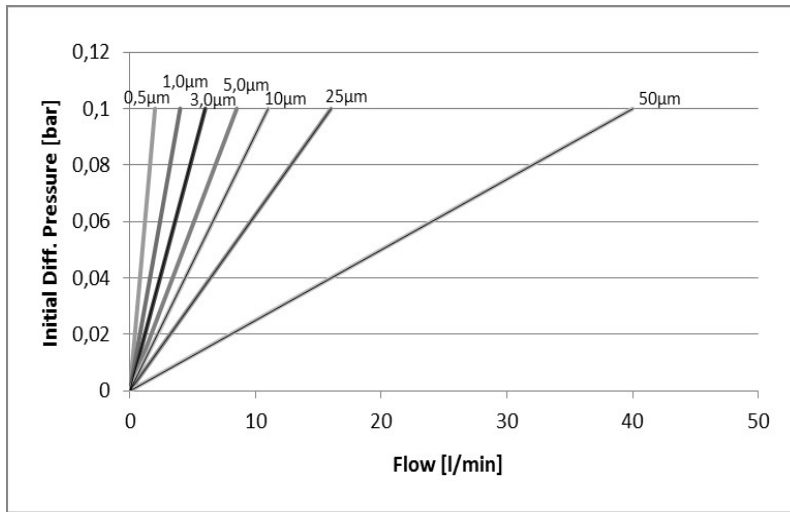
Materials of construction		CFR Title 21
Filter Matrix	Polypropylene	§ 177.1520
End caps	Polypropylene	§ 177.1520
O-rings	EPDM	§ 177.2600
Alternatively:	EPDM PTFE over Silicone PTFE over viton	177.2600 177.1550 177.1550

MATERIAL COMPLIANCE (EU)

The Donaldson (P)-PP-FC100 filter element meets the guideline for Food Contact Use as given in European Regulation (EC) Number 1935/2004. All polymeric components (Polypropylene) meet the requirements of EU Directive 2002/72/EC and subsequent amendments incl. 2008/39/EC relating to plastic materials and articles intended to come into contact with foodstuffs.

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

FLOW CHARACTERISTICS



(P)-PP-FC100, 10",
deionised water, 25°C

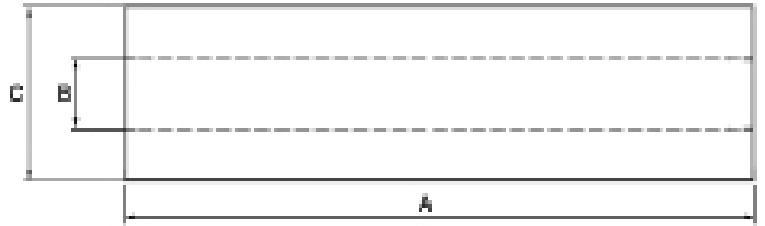
RETENTION RATES

Particle Retention			
Pore Rating [µm]	99,98 % (β = 5000) [µm]	99,9 % (β = 1000) [µm]	90,0 % (β=10) [µm]
0,5	0,5	0,25	< 0,2
1	1	0,35	< 0,3
3	3	1,2	1
5	5	3	2,6
10	10	7	5
25	25	13	10
50	50	35	20
75	75	55	50
100	100	84	70

AVAILABLE END CAP CONFIGURATIONS

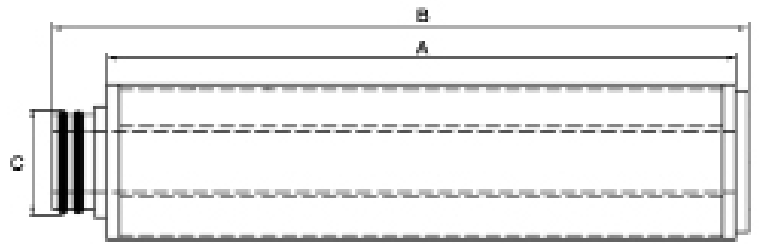
Dimensions DOE connection						
Size	A		B		C	
	mm	inch	mm	inch	mm	inch
5"	125	4,92	28	11,02	63	2,48
10"	250	9,84	28	11,02	63	2,48
20"	508	20	28	11,02	63	2,48
30"	762	30	28	11,02	63	2,48
40"	1016	40	28	11,02	63	2,48

DOE: Double open end



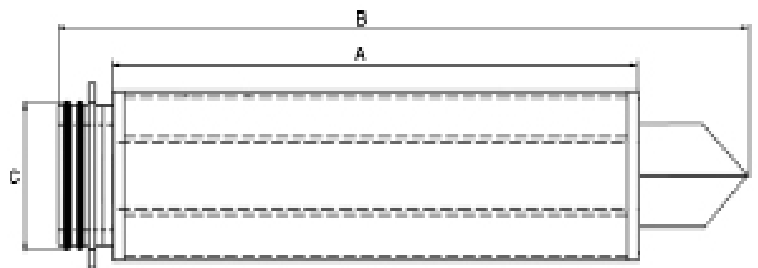
Dimensions Code 3 connection						
Size	A		B		C	
	mm	inch	mm	inch	mm	inch
5"	127	5	149	5,87	63	2,48
10"	252	9,92	274	10,79	63	2,48
20"	509	20,03	531	10,91	63	2,48
30"	763	30,03	785	30,91	63	2,48
40"	1017	40,03	1039	40,91	63	2,48

Code 3: 2 x 222 O-rings, flat end cap



Dimensions Code 7 connection						
Size	A		B		C	
	mm	inch	mm	inch	mm	inch
5"	127	5	196	7,72	63	2,48
10"	252	9,92	321	12,64	63	2,48
20"	509	20,03	578	22,76	63	2,48
30"	763	30,03	832	32,76	63	2,48
40"	1017	40,03	1086	42,76	63	2,48

CODE 7: 2 x 226 O-rings, bayonet 2 locking tabs, locating fin



Dimensions Code 8 connection						
Size	A		B		C	
	mm	inch	mm	inch	mm	inch
5"	127	5	191	7,52	63	2,48
10"	252	9,92	316	12,44	63	2,48
20"	509	20,03	573	22,56	63	2,48
30"	763	30,03	827	32,56	63	2,48
40"	1017	40,03	1081	42,56	63	2,48

CODE 8: 2 x 222 O-rings, locating fin



Other end cap configurations on request



donaldson.com/process

Donaldson Company, Inc.
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Contact us



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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