



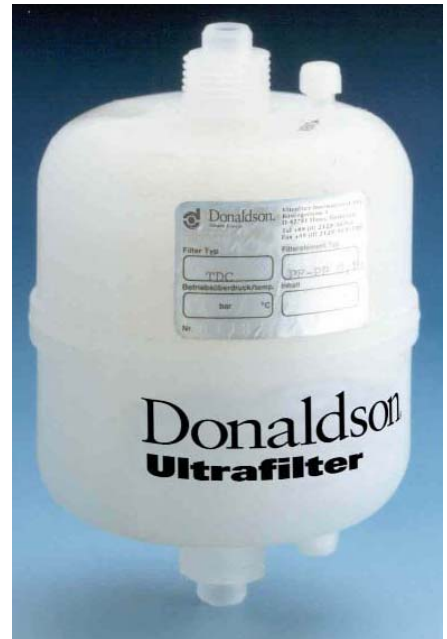
Donaldson.  
FILTRATION SOLUTIONS

# Process Filtration From Pure to Sterile

## Capsule Filters

### MAIN FEATURES & BENEFITS:

- Ready-to-use disposable filter units
- Sterilizable and regenerable
- Highly durable Polypropylene construction
- Excellent flow rate
- Approved for Food Contact Use acc. to CFR Title 21 & 1935/2004/EC



### INDUSTRIES:



- Food & Beverage



- Biotech



- Chemical



- Pharmaceutical & Health Care



- Cosmetics

Donaldson Filtration Deutschland GmbH  
Büssingstr. 1  
42781 Haan  
Germany

Donaldson®  
Ultrafilter

Web: [www.donaldson.com](http://www.donaldson.com)

## PRODUCT DESCRIPTION

Donaldson capsule filters are ready-to-use disposable filter assemblies. They are ideal for use in small batch and critical point-of-use applications, in liquid or gas service. Donaldson capsule filters incorporate the full range of Donaldson filtration media and removal ratings in compact, reliable assemblies. Each capsule filter assembly consists of a pleated filter element integrally sealed into a rugged polypropylene housing. A completely self-contained unit is formed by a state-of-the-art thermal bonding process, ensuring maximum filter integrity, security and performance. No glues, resins, adhesives, metals or other extraneous materials are used.

Donaldson capsule filters have high mechanical strength to withstand shocks, back pressurization, multiple sterilizations and rigorous daily use. Four sizes are available, each with a variety of connections for easy connection to virtually any filtration system. All Donaldson filtration media are available in capsule filters, with surface areas up to 2.000 cm<sup>2</sup>.

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**. All Donaldson Capsule filters have passed the USP Class VI tests for plastics. The filter elements are manufactured in accordance with the manufacturing requirements, have no migration of filter media, are non-fibre releasing and are thermally welded without the use of binders or other chemical additives.

## GENERAL PRODUCT SPECIFICATIONS

### General Product Specifications

<b>Effective Filtration Area</b>	• UFTD – L : 2.000 cm <sup>2</sup> (2 ft <sup>2</sup> )
	• UFTD – S : 1.000 cm <sup>2</sup> (1 ft <sup>2</sup> )
<b>Operative Temperature Range</b>	• 0°C – 40°C (32°F – 100°F)
<b>Maximum Temperature</b>	• 70°C at 2.5 bar (160°F at 35 psi)
<b>Operating Pressure</b>	Gas Applications • 5 bar at 40°C (75 psi at 100°F)
	Liquid Applications • 3,5 bar at 40°C (50 psi at 100°F)

## MATERIAL COMPLIANCE USA

All components of the Donaldson capsule filters are FDA listed for food contact use in the **Code of Federal Regulations (CFR), Title 21**

Filter Materials	CFR Title
<b>Filter Housing:</b>	Polypropylene 177.1520
<b>Filter Medium / Membrane:</b>	Polyethersulfone 177.2240
	Polypropylene 177.1520
	Poly-Tetra-Fluor-Ethylene 177.1550
<b>Support Material:</b>	Polypropylene 177.1520
<b>Sealing Method:</b>	Thermal Bonding

## MATERIAL COMPLIANCE EU

The Donaldson Capsule filter elements meet the guideline for Food Contact Use as given in **European Regulation (EC) Number 1935/2004**. All polymeric components (Polypropylene, Polyethersulfone, PTFE) meet the requirements of EU Directive 2002/72/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.

## AUTOCLAVING

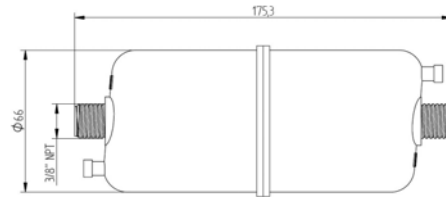
Autoclave at a minimum of 121°C (for 60 minutes) or at 125°C (for 45 minutes). Donaldson capsule filters can be repeatedly autoclaved without loss of integrity. In-line steam sterilization is not recommended, as this will exceed the material design limits and may result in a damage of the plastic housing. To prevent recontamination of the sterilised capsule filter, it is recommended that the filter element is sterilised in special bags.

These special bags (paper bags as per DIN EN 868-4, hot and self-sealing transparent bags made of paper and plastic composite foil as per DIN EN 868-5 or other equivalent packaging) provide a barrier against micro-organisms but are permeable to water vapour.

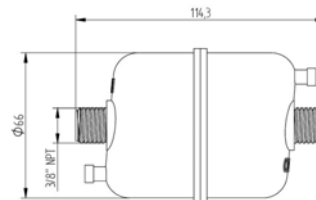
## GENERAL DIMENSION INFORMATION

All Donaldson capsule filters are equipped with two thread Luer-lok® for venting, draining or sampling functions. The following connections are available for both capsule filter types:

- ▶ 3/8" Hose Barb
- ▶ 1/4" MNPT
- ▶ 3/8"
- ▶ 3/8" FNPT MNPT



UFTD-L



UFTD-S

## PRODUCT SPECIFICATIONS CAPSULE FILTER TYPE UFTD – PF – PES “W”

- ▶ One way disposable membrane filter for Food & Beverage applications

**Membrane Material**

- Polyethersulfone

**Absolute Retention Ratings**

- 0,2 µm, 0,45 µm, 0,6 µm

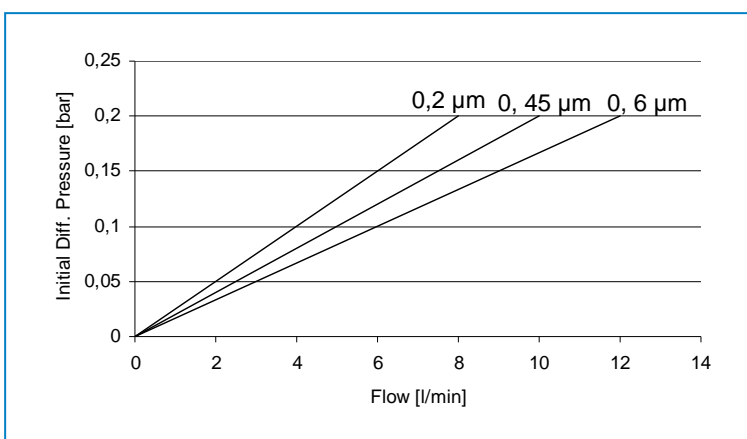
**Bacterial Retention (ASTM F838-83 Challenge, Brev. diminuta)**

- UFTD - PF – PES “W”, 0,2 µm      LRV > 7/cm<sup>2</sup>

**Integrity Test: Minimum Bubble Point (Water)**

Filter Grade	Minimum Bubble Point [bar / psi]
0,6 µm	1,24 bar / 18 psi
0,45 µm	2,21 bar / 32 psi
0,2 µm	3,03 bar / 44 psi

## FLOW CHARACTERISTICS



Data given for type UFTD-S PF-PES “W” with 3/8” connection.

## PRODUCT SPECIFICATIONS CAPSULE FILTERS TYPE UFTD - PF - PT

- ▶ One way disposable membrane filter for aggressive solvents or gas and vent applications

**Membrane Material**

- Poly-Tetra-Fluor-Ethylene

**Absolute Retention Rating**

- 0,2 µm

**Bacterial Retention (ASTM F838-83 Challenge, Brev. diminuta)**

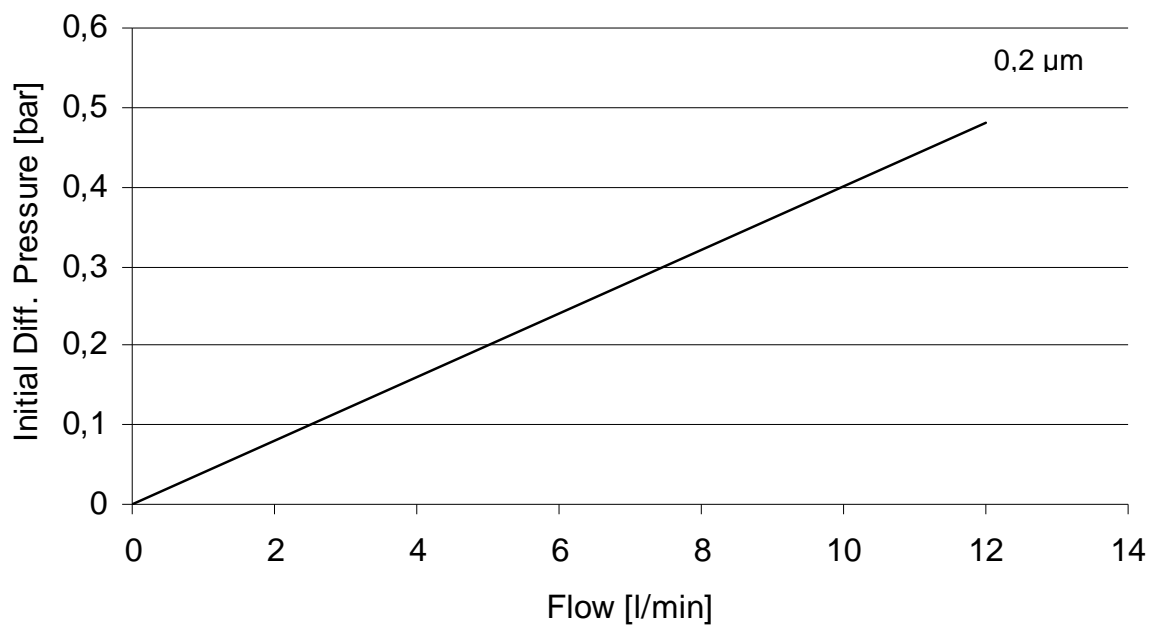
- UFTD - PF - PT, 0,2 µm      LRV > 7/cm<sup>2</sup>

**Integrity Test: Minimum Bubble Point (IPA/Water: 60 % / 40 %)**

Filter Grade	Minimum Bubble Point [bar / psi]
UFTD - PF - PT, 0,2 µm	> 1,0 bar / 14 psi

## FLOW CHARACTERISTICS

Data given for type UFTD-S PF-PT with 3/8" connection



## PRODUCT SPECIFICATIONS CAPSULE FILTERS TYPE UFTD - PF - PP

- ▶ One way disposable membrane filter for aggressive liquids or gas, compressed air and vent applications

**Membrane Material**

- Polypropylene

**Absolute Retention Rating**

- 0,2 µm

**Bacterial Retention (ASTM F838-83 Challenge, Brev. diminuta)**

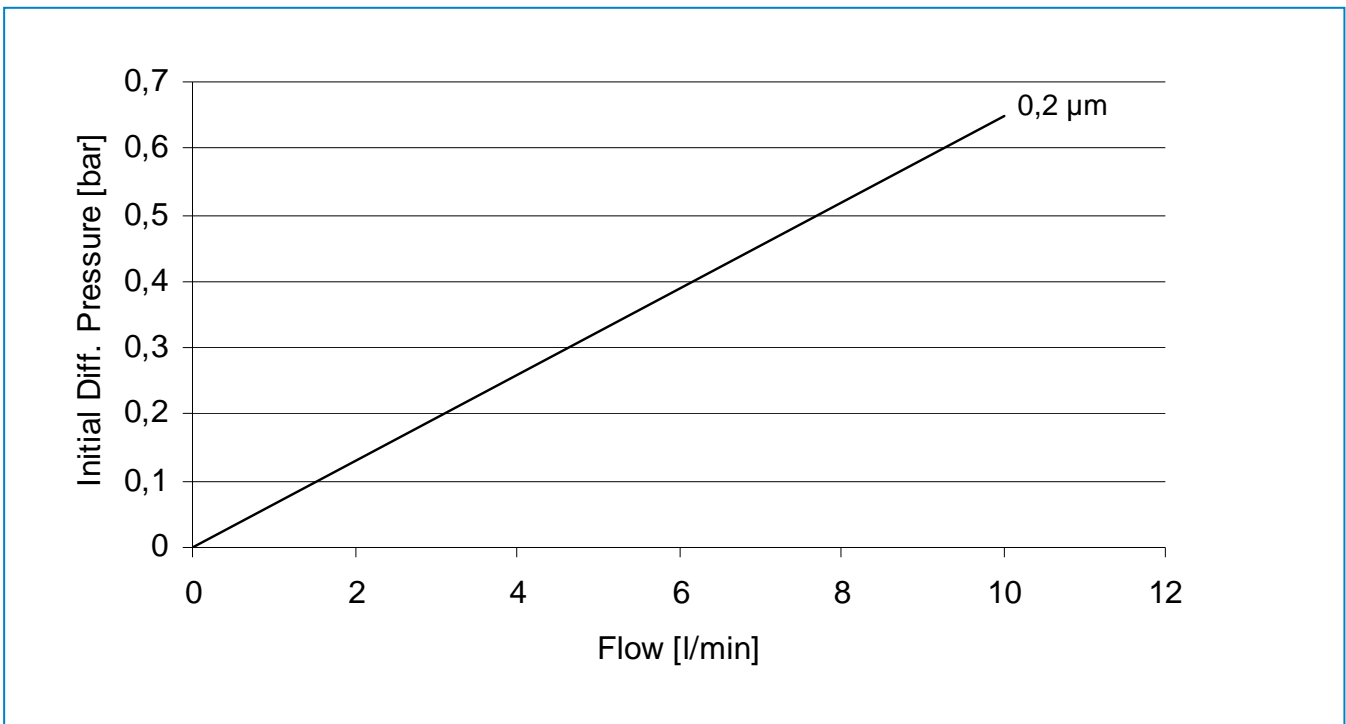
- UFTD - PF - PP, 0,2 µm      LRV > 7/cm<sup>2</sup>

**Integrity Test: Minimum Bubble Point (IPA)**

Filter Grade	Minimum Bubble Point [bar / psi]
UFTD - PF - PP, 0,2 µm	> 0,6 bar / 9 psi

## FLOW CHARACTERISTICS

Data given for type UFTD-S PF-PP with 3/8" connection



## PRODUCT SPECIFICATIONS CAPSULE FILTER TYPE UFTD – PP100

- ▶ One way disposable absolute rated depth filter for applications in Food & Beverage, Pharma or chemical industries

### Filter Material

- Polypropylene

### Absolute Retention Ratings

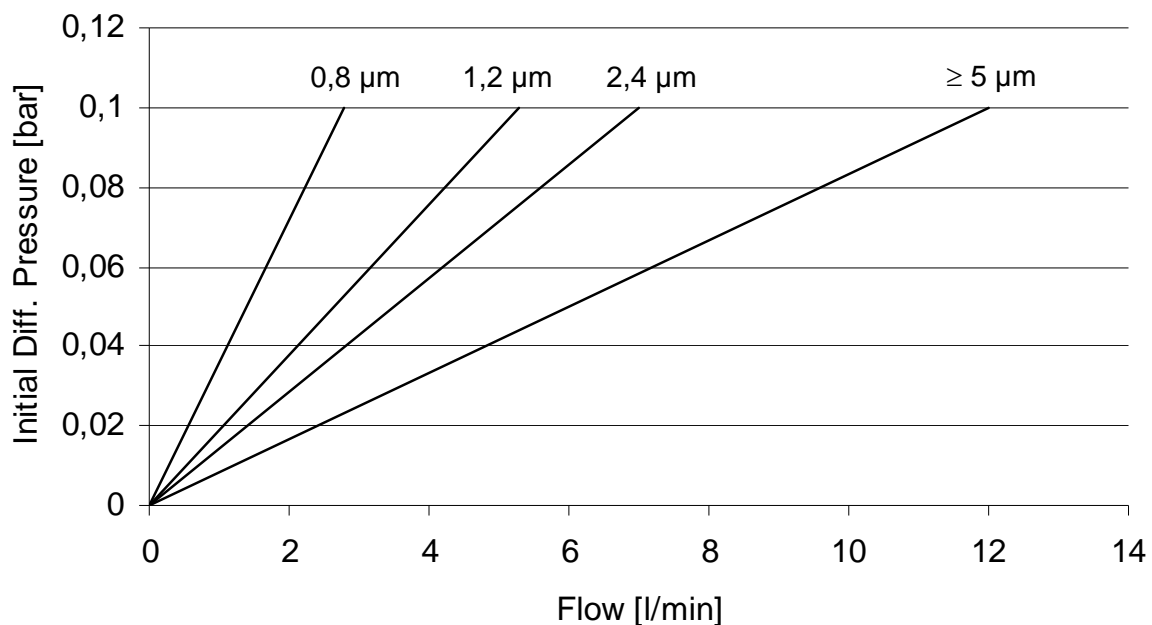
- 0,8 µm, 1,2 µm, 2,4 µm, 5 µm, 7 µm, 10 µm

### Particle Retention

Retention Grade	Percent Removal		
	100 %	99 %	90 %
0,8	0,80	0,72	0,50
1,2	1,20	1,10	0,70
2,4	2,40	2,30	2,00
5	5,00	4,50	3,00
7	7,00	6,50	5,00
10	10,00	9,50	7,50

## FLOW CHARACTERISTICS

Data given for type UFTD-S PP100 with 3/8" connection



## PRODUCT SPECIFICATIONS CAPSULE FILTER TYPE UFTD – PP

- ▶ One way disposable nominal rated depth filter with outstanding life time and excellent flow rate

### Filter Material

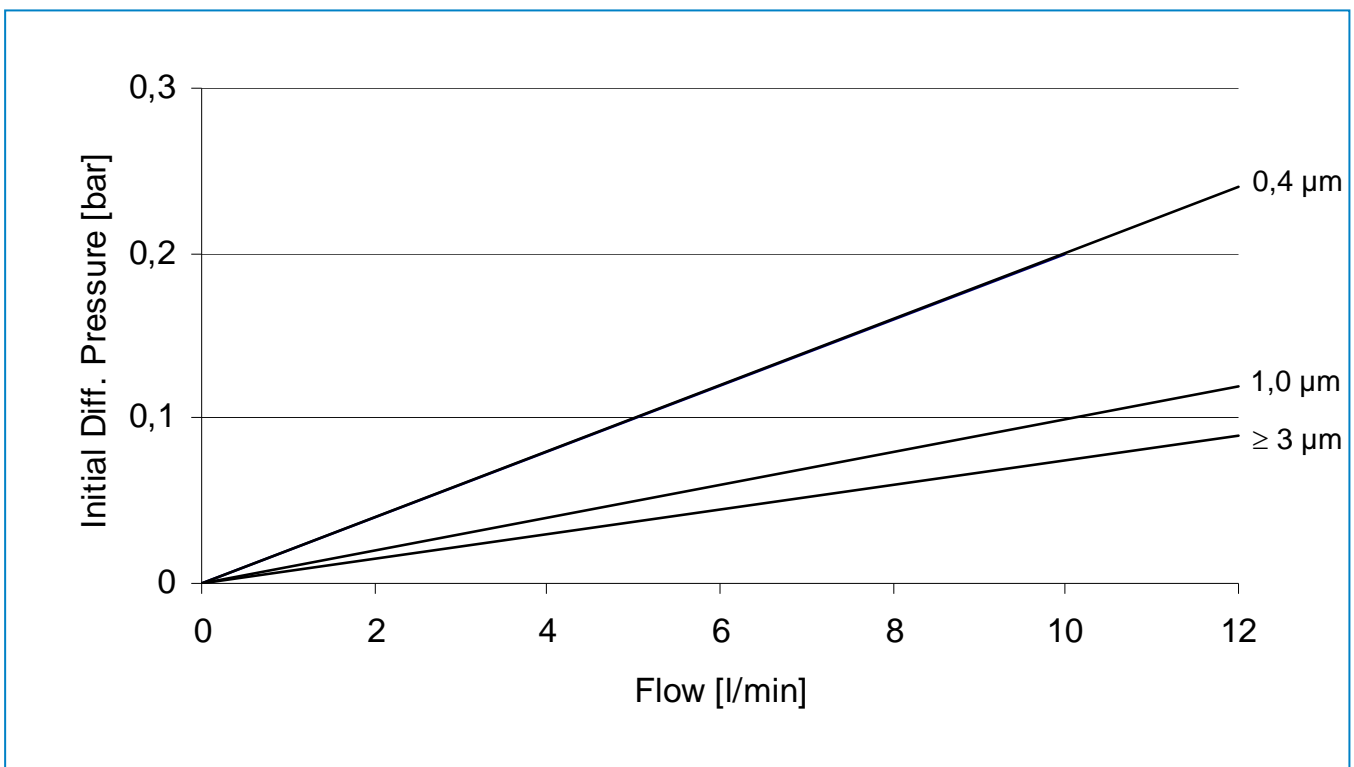
- Polypropylene

### Nominal Retention Rating

- 0,4  $\mu\text{m}$ , 1  $\mu\text{m}$ , 3  $\mu\text{m}$ , 5  $\mu\text{m}$ , 10  $\mu\text{m}$ , 30  $\mu\text{m}$

## FLOW CHARACTERISTICS

Data given for type UFTD-S PP with 3/8" connection)



Technical alterations reserved 04/2009

- For information on various integrity test equipment or test services, please contact your Donaldson Sales Engineer and visit our website at [www.donaldson.com](http://www.donaldson.com)!

(Rev02 – 07/10)

