Donaldson
FILTRATION SOLUTIONS

ULTRAPOLYPLEA® PP100
DEPTH FILTER ELEMENTS

Compressed Air & Process Filtration

Depth filter elements for particle removal from aqueous solutions, water and gases with an absolute retention rate.

Donaldson® Ultrapolyplea® PP100 depth filter elements are pleated all-polypropylene prefilters with an absolute retention rate between 0.45 µm and 40 µm.

All components meet the FDA requirements for the contact with food in accordance with CFR (Code of Federal Regulations) Title 21. Ultrapolyplea PP100 depth filters have passed the USP XX Class VI tests for plastics and are manufactured in accordance with cGMP requirements (current Good Manufacturer Practice), have no migration of filter media, are non-fiber releasing, and thermally welded without the use of binders or other chemical additives. The depth filter is prerinsed with 18 MΩ·cm water. This leads to extremely low extractables.

SEM of Ultrapolyplea PP100 depth filter element

Ultrapolyplea PP100

APPLICATIONS

Ultrapolyplea PP100 depth filter elements are designed and developed for the following industries and applications:

- Particle removal from water
- Paints and dyes
- Chemicals
- Jet printer inks
- Solvents
- Photolithographical liquids
- Etchants
- Coatings
- Biological liquids
- Saltwater & seawater
- Pharmaceutics
- Coolants
- Serums
- Isotonic salt solutions
- Cosmetics
- Inks and pigments
- Food and beverage
- Magnetic memory media
- Syrup
- Compressed air and other gases

FEATURES	BENEFITS
All-polypropylene construction	Wide chemical durability against numerous gases and liquids
Absolute particle removal from 0.45 µm to 40 µm	Precise particle retention at rated level, greater selection of optimum filter media
Tapered pore structure	Higher dirt holding capacity, larger throughputs, longer service life
Self-bonded filter media	Fixed pore structure, high containment of solid materials, no migration of filter media, non-fiber releasing
Contains no binders or adhesives	Wide solvent compatibility, extremely low extractables, immediately rinses to 18 MΩ·cm
Maximum effective surface area	Reduced pressure loss, high flow rates
Biologically inert and non-toxic	Meets FDA requirements for food contact, passed USP class VI biological tests for plastics

ULTRAPOLYPLEA® PP100

DIMENSIONS & SPECIFICATIONS

MATERIALS

Filter Media	Polypropylene
Upstream support	Polypropylene
Downstream support	Polypropylene
Outer guard	Polypropylene
End Caps	Polypropylene
O-Rings	Silicone, Buna N, EPDM or Viton®*

* Viton is a registered trademark DuPont Performance Elastomers LLC.

DIMENSIONS

Diameter	2.75"
Length	5", 10", 20", 30" or 40"

ABSOLUTE RETENTION RATE

0.45 µm, 0.6 µm, 0.8 µm, 1.2 µm, 2.4 µm, 5 µm, 7 µm, 10 µm, 20 µm, 30 µm, 40 µm

FILTRATION SURFACE

0.5 ft^2 for 10" element (10/30)

MAXIMUM DIFFERENTIAL PRESSURE

Operating Temperature	Differential Pressure
100°F	80 psid
150°F	60 psid
180°F	30 psid

STERILIZATION

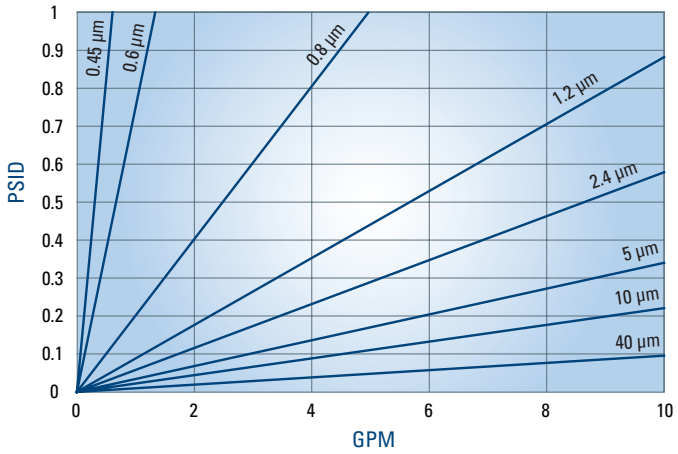
In-line sterilization with slow speed saturated steam	250-275°F for 30-60 minutes
Autoclave	260°F for 30-60 minutes

Ultrapolyplea PP100 depth filter elements are capable of repeated sterilization cycles

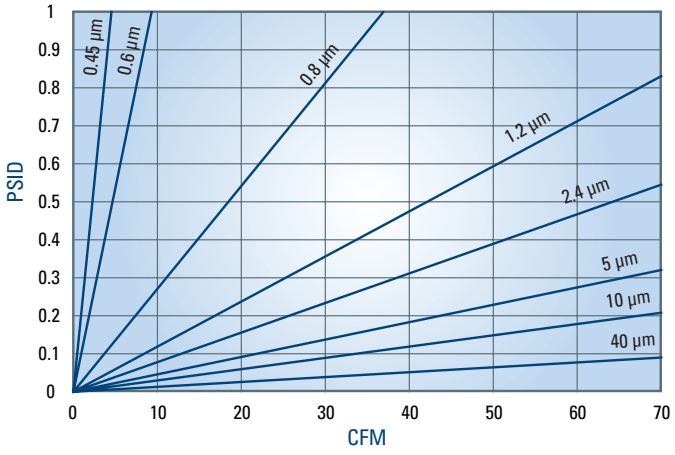
PARTICLE RETENTION

PP100	Percent Removal		
µm	100%	99%	90%
0.45	0.45	0.40	< 0.30
0.6	0.60	0.56	0.38
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
20	20.00	19.00	12.00
30	30.00	26.00	16.00
40	40.00	35.00	28.00

PP100 Differential Pressure Per Ten Inch Equivalent (TIE) —Water



PP100 Differential Pressure Per Ten Inch Equivalent (TIE) — Air



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Registered: Quality Management System 9001:2008 ISO

Ultrapolyplea PP100 Depth Filter Elements Data Sheet (09/11)