

## Duo-Fine® II Series Filter Cartridges

### Designed to Provide Efficient Particle Removal in Liquid or Gas Systems

- Superior filtration performance
- More economical than depth type cartridges
- Excellent classifying filter
- Optional 100% bubble point testing
- Rigid polypropylene outer cage protects filter media in harsh operating environments
- Available with extended core
- Imprinted for easy identification
- Excellent chemical compatibility

### Performance Specifications<sup>1</sup>

#### Filter grades

0.2, 0.45, 1, 3, 10, 30, 50  $\mu\text{m}$

#### Recommended change-out differential pressure<sup>2</sup>

2.4 bard (35 psid)

#### Maximum differential pressure

4.8 bard (70 psid) @ 20°C (68°F)

2.8 bard (40 psid) @ 65°C (150°F)

#### Sterilization

All Duo-Fine II Series cartridges may be autoclaved for 30 minutes at 121°C (250°F) under no end load conditions.



<sup>1</sup> With compatible fluids that do not swell, soften or attack any of the filter components.

<sup>2</sup> Provided that the maximum differential pressure is not exceeded based on temperature limits defined above.

## Product Specifications

### Materials of construction

Filter media:

50 µm:	Spunbonded polyester
All other grades:	Borosilicate microfiberglass with acrylic binder
Support material:	Spunbonded polyester
Netting:	Polypropylene
Hardware:	Polypropylene
Sealing:	Thermal bond
Gaskets/O-rings:	Silicone elastomer, nitrile, fluorocarbon elastomer, hydrocarbon rubber, FEP encapsulated silicone, expanded PTFE, white nitrile, white silicone

### Dimensions (nominal)

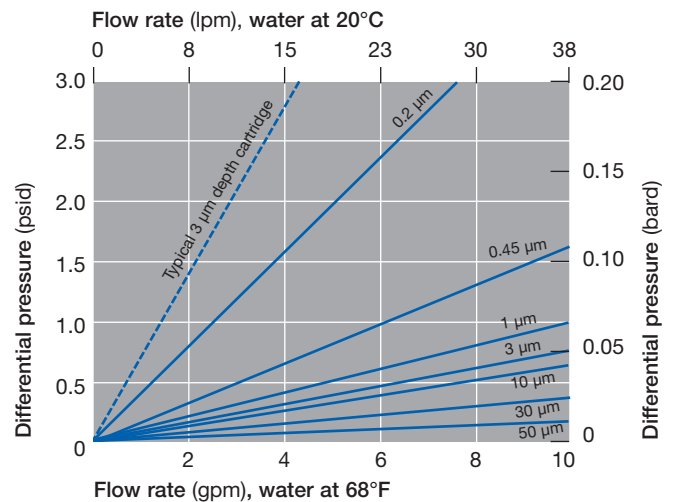
Outside diameter	6.6 cm (2.6 in)
Lengths:	10.2 cm (4 in), 24.8 cm (9.75 in), 25.4 cm (10 in), 49.5 cm (19.5 in), 50.8 cm (20 in), 74.3 cm (29.25 in), 76.2 cm (30 in), 99.1 cm (39 in), 101.6 cm (40 in)

## Particle Retention (µm)

Cartridge Designation	Liquid Service (by ASTM F-795 Test)		Gas Service
	90% Efficiency	>99.9% Efficiency	Removal Efficiency by DOP Test
DFNT 0.2	0.2	1	99.999%
DFNT 0.45	0.45	2	99.998%
DFNT 1	1	4	96%
DFNT 3	3	10	_____
DFNT 10	10	18	_____
DFNT 30	30	45	_____
DFNT 50	50	75	_____

Liquid removal ratings are based on Pall's Dynamic Efficiency test protocol. This single pass, destructive challenge test is based on ASTM F-795 test procedures for determining the performance of a filter.

## Typical Flow vs. Differential Pressure for Application Sizing



Unit conversion: 1 bar = 100 kPa

Flow rate is for a 25.4 cm (10 in) cartridge. For liquids other than water, multiply differential pressure by fluid viscosity (cP).

## Ordering Information

Pall Part Number = DFNT 1 - 2 U 3 - 4 5 - 6

**Table 1**

Code	Filter grades (µm)
0.2	0.2
0.45	0.45
1	1
3	3
10	10
30	30
50	50

**Table 2**

Code	Cartridge lengths (cm/in) nominal
4	10.2/4
9.75	24.8/9.75
10	25.4/10
19.5	49.5/19.5
20	50.8/20
29.25	74.3/29.25
30	76.2/30
39	99.1/39
40	101.6/40

**Table 3**

Code	Gasket/O-ring materials
S	Silicone
N	Nitrile
E	Hydrocarbon rubber
V	Fluorocarbon elastomer
T	FEP encapsulated silicone (O-rings)
M	White silicone
W	White nitrile (gaskets)
X	No O-ring required (M2 style only)
T	Expanded PTFE (gaskets)

**Table 4**

Code	End configurations
Blank	DOE with elastomer gasket seals and end caps
1X	DOE 2.54 cm (1 in) extended core
M2	SOE flat closed end, fits housings with 020 O-ring post
M3	SOE flat closed end, external 222 O-rings (retrofits other manufacturers' Code 0) <sup>3</sup>
M3H	SOE large diameter closed end external 222 O-rings
M5	DOE, internal 120 O-rings (retrofits 213 O-ring style) <sup>3</sup>
M6	SOE flat closed end, external 226 O-rings (retrofits other manufacturers' Code 6) <sup>3</sup>
M7	SOE fin end, external 226 O-rings (retrofits other manufacturers' Code 7) <sup>3</sup>
M8	SOE fin end, external 222 O-rings (retrofits other manufacturers' Code 5) <sup>3</sup>
M10	DOE, internal O-rings (fits other manufacturers' housings) <sup>3</sup>
M11	SOE flat closed end, internal 120 O-ring (retrofits other manufacturers' X style) <sup>3</sup>
M20	SOE with internal O-rings (same as M10), closed end with deep recess

**Table 5**

Code	Bubble test option
Blank	Sample bubble tested
B	100% bubble test

**Table 6**

Code	Packaging
Blank	Standard packaging
-BLK	Bulk packaging <sup>3</sup>

<sup>3</sup> For details, contact Pall Corporation.



Pall Corporation

**Fuels and Chemicals**

25 Harbor Park Drive  
 Port Washington, NY 11050  
 +1 516 484 3600 telephone  
 +1 888 873 7255 toll free US

**Visit us on the Web at [www.pall.com](http://www.pall.com)**

Pall Corporation has offices and plants throughout the world. For Pall representatives in your area, please go to [www.pall.com/contact](http://www.pall.com/contact).

Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit [www.pall.com](http://www.pall.com) to verify that this information remains valid.

© Copyright 2005, 2012, Pall Corporation. Pall, , and Duo-Fine are trademarks of Pall Corporation.

® Indicates a Pall trademark registered in the USA. **Filtration. Separation. Solution.<sup>SM</sup>** is a service mark of Pall Corporation.