

Ultipleat® G2 SP DR Filters

Ultipleat® G2 SP DR KC Assemblies



Data Sheet MEUPG2SPDREng

Description

The Pall Ultipleat G2 SP DR filter is designed specifically for high flow and improved particle removal in critical surface preparation chemicals such as HF, BOE, and TMAH. The SP DR filter features a highly asymmetrical membrane construction, developed using Pall's proprietary membrane modeling technology (MMT).

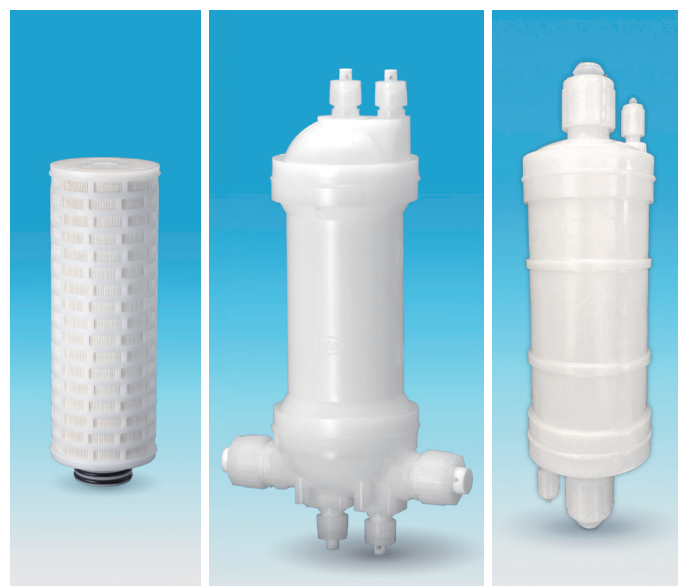
The pore size distribution of the membrane uniformly transitions from microporous to nanoporous throughout its depth. The result is a new, application-specific membrane morphology designed for deep submicron retention of particles down to 2 nanometers. This retention is achieved without the flow restriction limitations of conventional membrane pore structures.

The 2 nanometer, 5 nanometer and 10 nanometer Ultipleat G2 SP DR filters utilize a native polyarylsulfone membrane with over 40% higher surface energy than typical surface modified non-dewet PTFE membranes.

The Ultipleat G2 SP DR KC assemblies are completely disposable filter units. They are ideally suited for the filtration of etchant, low temperature stripping chemicals, and DI water.

Features & Benefits

- MMT-enhanced dual retention of particles
- Superior HF filtration
- Higher flow rates and longer life
- Hyperfine microporous membrane matrix
- High surface energy membrane for minimized microbubble formation
- Faster tool qualification for reduced cost of ownership
- Prevent process contamination by using KC disposable assemblies



G2 Cartridge

G2 Kleen-Change
(PFA)

G2 Kleen-Change
(HDPE)

Specifications

Materials of Construction

Components	Materials
Filter Medium	Polyarylsulfone
Support and Drainage	Polyethylene
Core, Cage and End Caps	Polyethylene
Sealing Methods	Melt seal
O-ring Options	FEP encapsulated fluoroelastomer FFKM

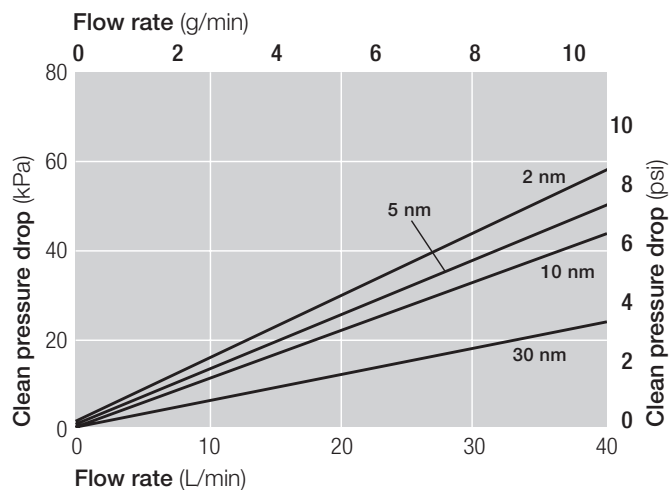
Product Name	Ultipleat G2 SP DR Filters			
Removal Ratings	30 nm	10 nm	5 nm	2 nm
Media Wettability	Hydrophilic	Hydrophobic		
Filter Areas	1.9 m ² / 20.6 ft ²	1.4 m ² / 15.0 ft ²		
Maximum Operating Temperature	70 °C / 158 °F			
Maximum Forward Differential Pressure	0.1 MPa / 15 psid @ 70 °C / 158 °F			

Product Name	Ultipleat G2 SP DR KC Assemblies				
	PFA ¹			HDPE	
Housing Material					
Removal Ratings	10 nm	5 nm	2 nm	5 nm	2 nm
Media Wettability	Hydrophobic			Hydrophobic	
Filter Areas	1.4 m ² / 15.0 ft ²			1.4 m ² / 15.0 ft ²	
Flow	Inline	L-flow	T-flow	Inline	
	LDFGN1	LDFDL1	LDFDT1	LDDGN1	
Maximum Operating Temperature	70 °C / 158 °F			60 °C / 140 °F	
Maximum Operating Pressure	0.49 MPaG / 70 psig @ 25 °C / 77 °F			0.49 MPaG / 70 psig @ 25 °C / 77 °F	
	0.34 MPaG / 50 psig @ 70 °C / 158 °F			0.34 MPaG / 50 psig @ 60 °C / 140 °F	
Maximum Forward Differential Pressure	0.1 MPa / 15 psid @ 70 °C / 158 °F			0.1 MPa / 15 psid @ 60 °C / 140 °F	

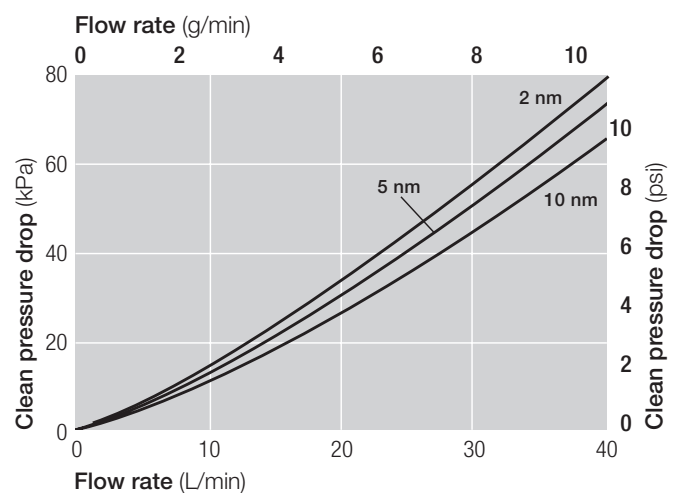
¹ All fluoropolymer materials made without PFOA

Typical Flow Characteristics – 1 cP fluid, 20 °C

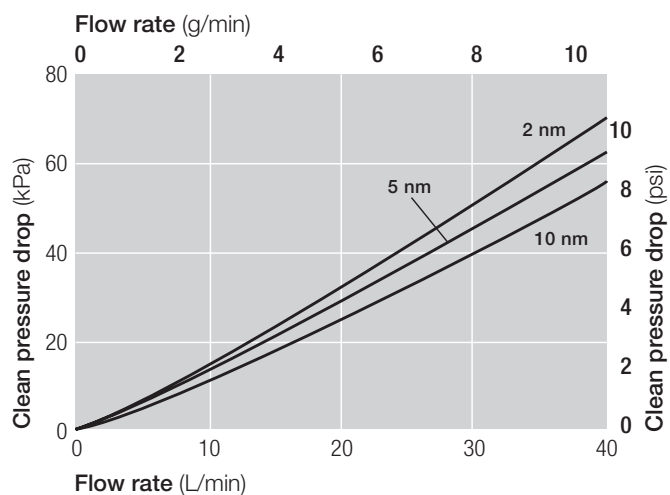
Ultipleat G2 SP DR filters



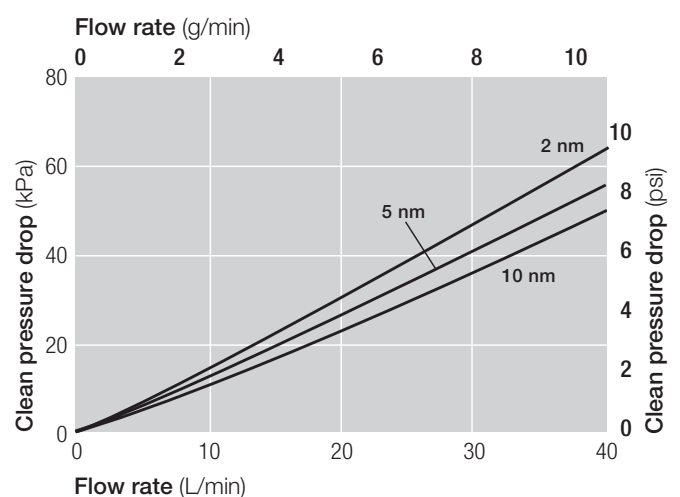
Ultipleat G2 SP DR KC assemblies T-flow, L-flow, Inlet: 3/4 inch



Ultipleat G2 SP DR KC assemblies Inline, Inlet: 3/4 inch



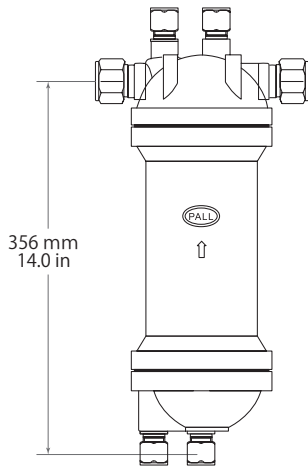
Ultipleat G2 SP DR KC assemblies T-flow, Inline, Inlet: 1 inch



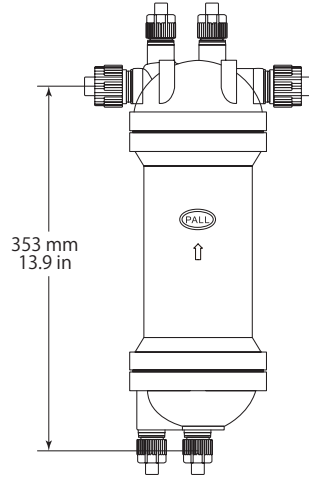
Dimensions (nominal)

Ultipleat G2 SP DR KC Assemblies (PFA Capsule)

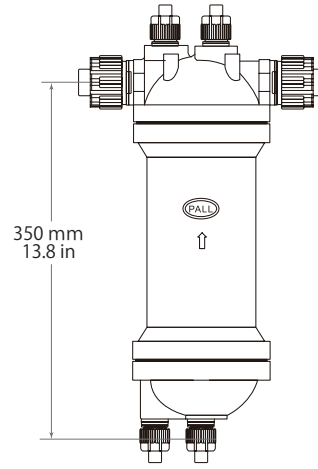
LDFDT1 □ 128E2



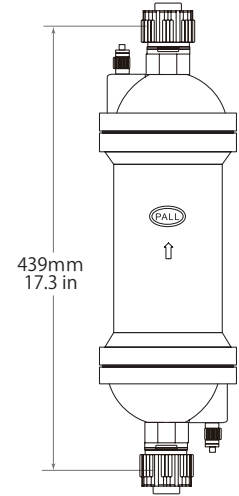
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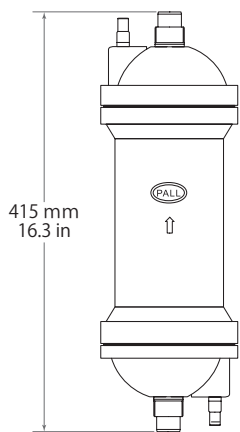
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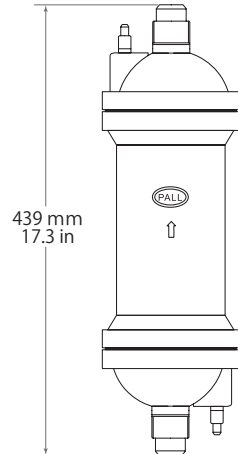
LDFGN1 □ 164E71



LDFGN1 □ 12E51

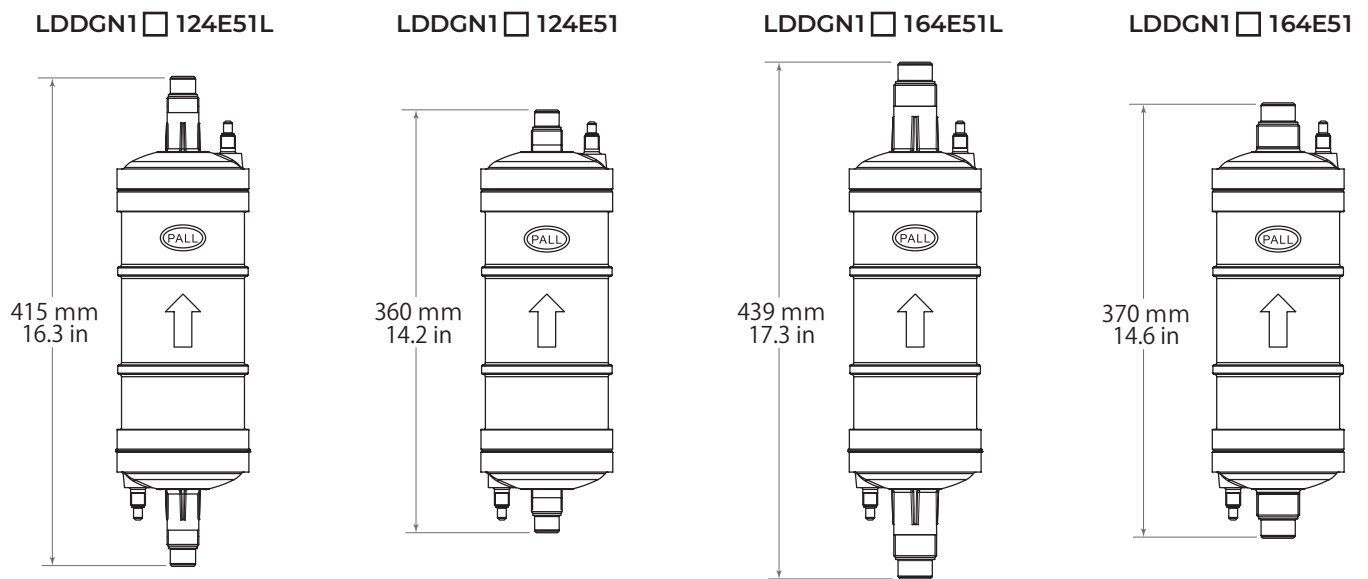


LDFGN1 □ 164E51



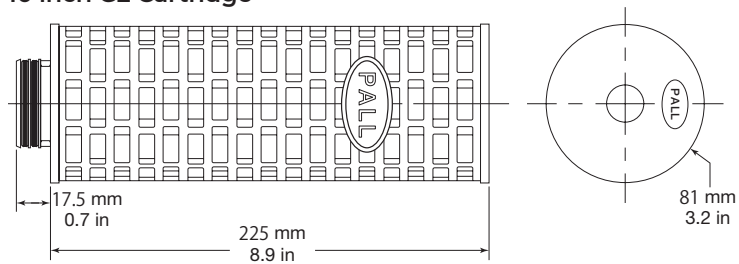
Dimensions (nominal)

Ultipleat G2 SP DR KC Assemblies (HDPE Capsule)

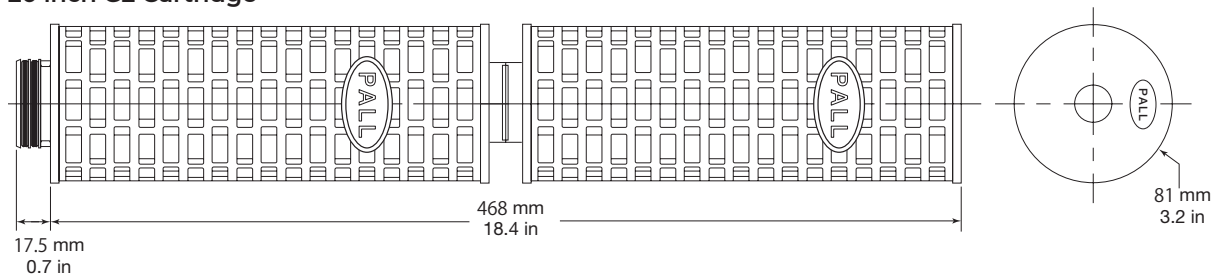


Ultipleat G2 SP DR Filters

10 inch G2 Cartridge



20 inch G2 Cartridge



Part Numbers / Ordering Information

Ultipleat G2 SP DR KC Assemblies (PFA Capsule)

LDF 1 1 2 3 E 4 5

Table 1

Code	Flow
DT	T-flow
DL	L-flow
GN	Inline

Table 2

Code	Removal Ratings
HSAH	2 nm
HSSH	5 nm
HSVH	10 nm

Table 3

Code	Inlet / Outlet	Vent / Drain		Memo
		Head End	Bowl End	
12	3/4" in male	3/8" in male	3/8" in male	Inline
128	3/4" in male	1/2" in male	1/2" in male	T-flow / L-flow
164	1" in male	1/4" in male	1/4" in male	Inline
168	1" in male	1/2" in male	1/2" in male	T-flow
17	1" in female	1/2" in female	1/2" in female	Inline

Table 4

Code	Connections
2	Super Pillar Type (Nippon Pillar) ²
51	Flare style
71	Super Pillar 300 P series (Nippon Pillar) ²

² Pillar is a trademark of Nippon Pillar Packing Co.

Table 5

Code	Prewet Option	Scope
None	Dry	30 nm
-K6	Dry, Low metal extractables ³	30 nm
-K13C	Prewet filter (packaged in DI water), Low metal extractables ³	5 nm, 10 nm,
-K13D	Prewet filter (packaged in DI water), Low metal extractables ³	2 nm

Ultipleat G2 SP DR KC Assemblies (HDPE Capsule)

LDDGN1 1 2 E51 3

Table 1

Code	Removal Ratings
HSAH	2 nm
HSSH	5 nm

Connections; Flare style

Table 2

Code	Inlet / Outlet	Vent / Drain		Total Length
		Head End	Bowl End	
124	3/4" in male	1/4" in male	1/4" in male	360 mm (14.2 in)
124L	3/4" in male	1/4" in male	1/4" in male	415 mm (16.3 in)
164	1" in male	1/4" in male	1/4" in male	370 mm (14.6 in)
164L	1" in male	1/4" in male	1/4" in male	439 mm (17.3 in)

Table 3

Code	Prewet Option	Scope
-K13C	Prewet filter (packaged in DI water), Low metal extractables ³	5 nm
-K13D	Prewet filter (packaged in DI water), Low metal extractables ³	2 nm

³ Please contact Pall for the extractable conditions

⁴ Not all code combinations have part numbers available.
Please contact Pall for part number availability.

Part Numbers / Ordering Information

Ultipleat G2 SP DR Filters

ABDG 1 2 3E 3 4

Table 1

Code	Length (Nominal)	
	Inch	mm
1	10	225
2	20	468

Table 2

Code	Removal Ratings
HSAH	2 nm
HSSH	5 nm
HSVH	10 nm
HSQ	30 nm

Table 3

Code	O-ring Material
H1	FEP-encapsulated fluoroelastomer
H38	FFKM

Table 4

Code	Prewet Option	Scope
None	Dry	Available
-K3	Prewet filter (packaged in DI water)	5 nm, 10 nm
-K6	Dry, Low metal extractables ³	30 nm
-K13C	Prewet filter (packaged in DI water), Low metal extractables ³	2 nm, 5 nm, 10 nm
-K13D	Prewet filter (packaged in DI water), Low metal extractables ³	2 nm

³ Please contact Pall for the extractable conditions

⁴ Not all code combinations have part numbers available.
Please contact Pall for part number availability.



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