

UltiKleen™ G2 Excellar Filter and KC Assemblies



Data Sheet MEUKG2EXEND

Description

UltiKleen G2 Excellar Filter

The UltiKleen G2 Excellar filter is constructed of the most technologically advanced non-dewetting all-fluoropolymer media that Pall offers for semiconductor applications. This filter is specifically designed to handle the aqueous-based, gas-generating chemicals vital for wafer cleaning (SC-1, SC-2 and SPM).

The non-dewetting property of the UltiKleen G2 Excellar filter is achieved using our proprietary Molecular Surface Tailoring (MST) technology for molecular-scale tailoring of the surface chemistry. Unlike conventional coating- and grafting-based methods, there is no potential for MST to compromise chemical compatibility or purity. With MST, the PTFE membrane remains robust and durable in highly corrosive acids, bases and organic compounds.

UltiKleen G2 Excellar KC Assemblies

UltiKleen G2 KC assemblies are completely disposable filter units that contain UltiKleen Excellar cartridges made of high-purity PFA. They are specifically designed and ideally suited for high-temperature process chemicals, particularly mixtures of sulfuric acid and hydrogen peroxide (SPM). The unique downstream venting-type assemblies allow bubbles to exhaust from chemicals efficiently and provide higher particle cleanliness levels.



Features & Benefits

- Non-dewetting PTFE membrane
- All-fluoropolymer construction
- Provided pretreated with Full-Fill¹ ultrapure water package
- High temperature and pressure capabilities
- Very high flow rates
- Low extractables (<30 ppb² in a 5% HCl extraction of 1.5 liters for 24 hours)
- G2-type KC assembly available with downstream venting
- Disposable filter unit with filter cartridge integrally sealed in housing
- Sealed assembly for safer handling and faster changeout
- 100% integrity tested

Specifications

Materials of Construction

Components	Materials
Filter Medium	Surface-modified PTFE
Media Support	PTFE
Core, Cage and End Ccaps	PFA
Sealing Methods	Melt seal
Housing	PFA
O-ring	FEP-encapsulated fluoroelastomer

¹ Package is completely filled with ultrapure water.

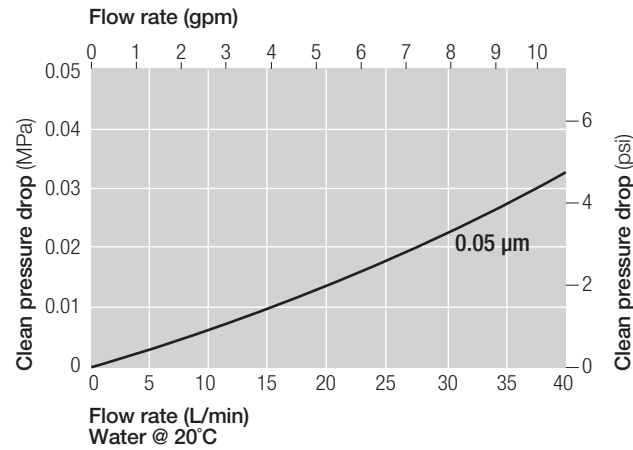
² Total metal concentrations in 13 elements: Li, Na, Mg, Al, K, Ca, Cr, Mn, Fe, Ni, Cu, Zn, Pb.

Removal Ratings and Operating Conditions

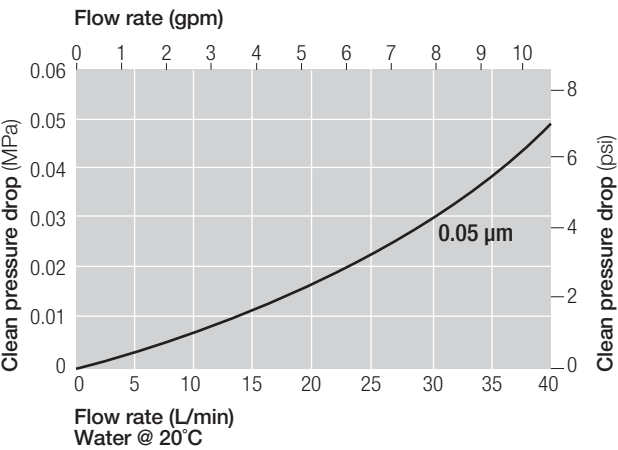
	UltiKleen G2 Excellar Filter			UltiKleen G2 Excellar KC Assemblies
	ABFG1	ABFG2	ABFG3	T-flow, in-line, L-flow (10")
Removal Ratings	0.05 µm			
Filter Area	2.2 m² / 23.7 ft²	4.4 m² / 47.4 ft²	6.6 m² / 71.1 ft²	2.2 m² / 23.7 ft²
Maximum Operating Temperature	170 °C / 338 °F			
Maximum Forward Differential Pressure			Maximum Operating Pressure	
0.59 MPaG (85.6 psig) @ 50 °C (120 °F)			0.49 MPaG (71 psig) @ 25 °C (77 °F)	
			0.39 MPaG (56.6 psig) @ 60 °C (140 °F)	
			0.34 MPaG (49.3 psig) @ 90 °C (194 °F)	
			0.20 MPaG (29.0 psig) @ 120 °C (248 °F)	
			0.15 MPaG (21.8 psig) @ 150 °C (302 °F)	
			0.12 MPaG (17.4 psig) @ 170 °C (338 °F)	

Typical Flow Characteristics - 1cP fluid, 20 °C

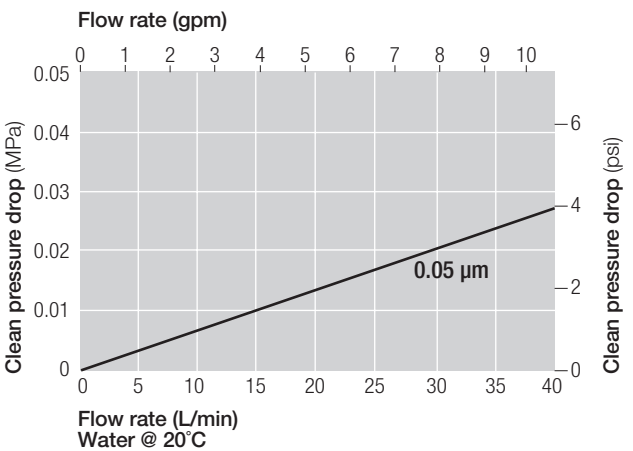
UltiKleen G2 Excellar KC Assembly
(in-line, 1" nozzle)



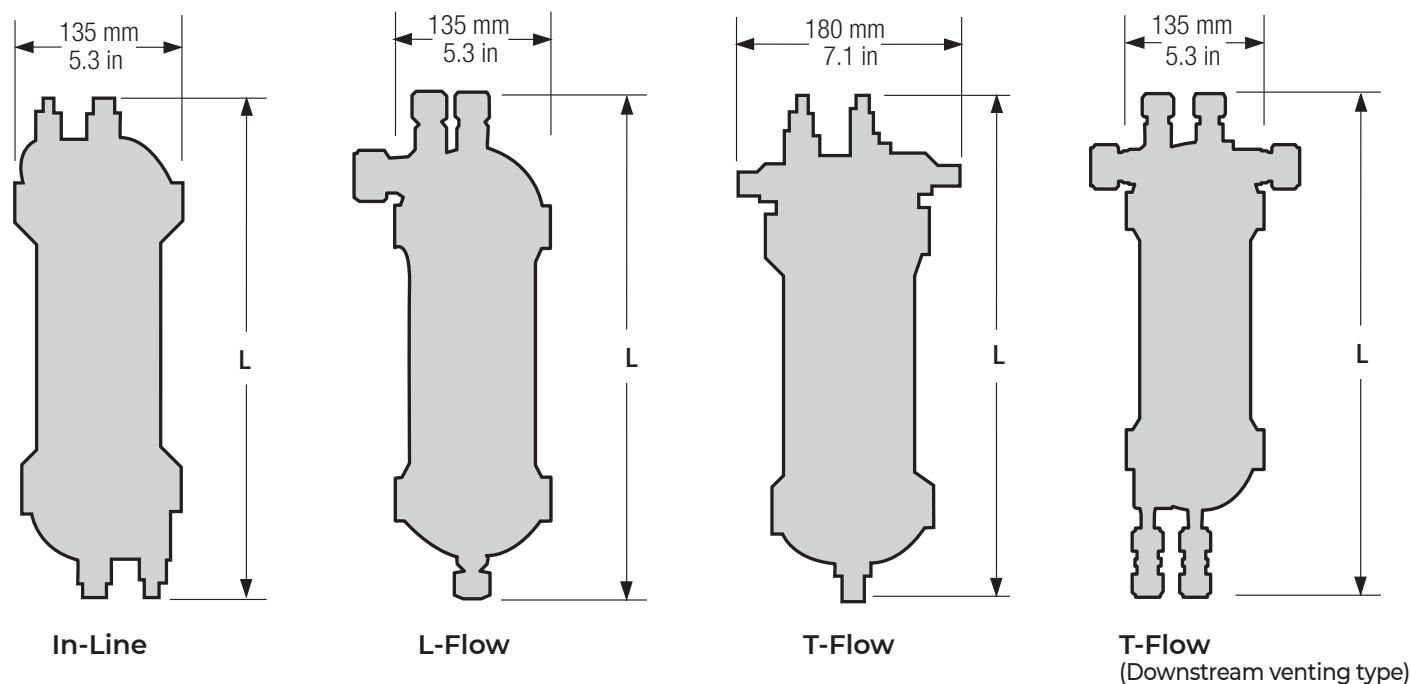
UltiKleen G2 KC Assembly
(L-flow and T-flow, 3/4" nozzle)



UltiKleen G2 Excellar Filter (254 mm / 10")



Dimensions (nominal)



Dimensions by Configuration

G2 Excellar KC Assembly (LDFG / LDFV)

In-Line	Nominal Length(L) (mm / in)	T-Flow	Nominal Length(L) (mm / in)	VT style	Nominal Length(L) (mm / in)	L-flow	Nominal Length(L) (mm / in)	VL style	Nominal Length(L) (mm / in)
12E2	396.5 / 15.6	12E2	408 / 16.1	12E2	377 / 14.8	12E2	408 / 16.1	12E2	440 / 17.35
12E51	412 / 16.2	12E71	403 / 15.9	128E2	385 / 15.2				
124E51	412 / 16.2	13E0	495 / 19.5	12E71	377 / 14.8				
16E8	428 / 16.9	13E1	432 / 17	12E72	377 / 14.8				
16E51	436 / 17.2	13E2	442 / 17.4	128E71	402 / 15.8				
17E0	448 / 17.6	13E6	416 / 16.4	128E72	402 / 15.8				
17E1	445 / 17.7	13E9	433 / 17.1	13E1	445 / 17.5				
17E51	442 / 17.4	13E51	473 / 18.6	13E51	444 / 17.4				
17E71	462 / 18.2	13E71	444 / 17.5	168E71	403 / 15.9				
				168E72	403 / 15.9				

Part Numbers / Ordering Information

UltiKleen G2 Excellar Filter

ABFG **1** GP **2** L3EH1 **3**

Table 1

Code	Length (Nominal) mm / in
1	225 / 10
2	468 / 20
3	707 / 30

Table 2

Code	Removal Ratings
D	0.05 µm

Table 3

Code	Prewet Option
-K3	Prewet filter (packaged in DI water)
-K7	Prewet filter (packaged in DI water), low metal extractables ³

³ Contact your local Pall representative for information about extractables.

UltiKleen G2 Excellar KC Assemblies⁴

LDF 1 2 1GP 3 L 4 E 5 6

Table 1

Code	Downstream Vent
G	N / A
V	Available

Table 2

Code	Flow
T	T-flow
N	In-line
L	L-flow

Table 3

Code	Removal Ratings
D	0.05 µm

Table 4

Code	Inlet / Outlet	Vent / Drain		Type
		Head End	Bowl End	
12	3/4" male	1/2" male	1/2" male	T-flow / L-flow
12	3/4" male	1/2" male	1/2" female	Downstream venting type
12	3/4" male	3/8" male	3/8" male	In-line
124	3/4" male	1/4" male	1/4" male	In-line
128	3/4" male	1/2" male	1/2" male	Downstream venting type
13	3/4" male	1/2" female	1/2" female	T-flow
16	1" male	1/2" male	1/2" male	T-flow
16	1" male	1/2" male	1/2" female	Downstream venting type
16	1" male	3/8" male	3/8" male	In-line
164	1" male	1/4" male	1/4" male	In-line
168	1" male	1/2" male	1/2" male	Downstream venting type
17	1" female	1/2" female	1/2" female	In-line

Table 5

Code	Connections
0	NONE
1	20 series Flowell ⁵
2	Super Pillar ⁶ type
51	Flare style
6	FinalLock ⁷
71	Super Pillar 300 P series
72	Super Pillar 300 P series L type
8	60 series Flowell
9	11CR series Flowell

Table 5

Code	Prewet Option
-K3	Prewet filter (packaged in DI water)
-K7	Prewet filter (packaged in DI water) low metal extractables ⁵

⁴ Disposable capsules are not available with every option. (Refer to codes for options.) Contact your local Pall representative for option availability.

⁵ Flowell is a trademark of Flowell Corporation.

⁶ Super Pillar is a trademark of Nippon Pillar Packing Co., Ltd.

⁷ FinalLock is a trademark of Kurabo Industries Ltd.



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