

# UltiKleen™ G2 Excellar ER Filters

## UltiKleen™ G2Excellar ER KC Assemblies



Data Sheet MEUKG2EXERENC

### Description

The enhanced retention (ER) and improved non-dewetting properties of the UltiKleen G2 Excellar ER filter has enabled semiconductor makers to meet the critical chemical process filtration requirements beyond the 45 nm manufacturing node. Designed for critical single-pass point-of-use filtration, the filter's high flow rate makes it additionally suitable for recirculation bath applications.

The UltiKleen G2 Excellar ER filter media made using Pall's proprietary Molecular Surface Tailoring (MST) technology, imparts non-dewetting properties to the PTFE membrane without adding a chemical layer to the media surface. Inside the membrane, a hyperfine pore matrix provides significantly improved retention of particles down to 15 nanometers in size. The result is a robust, reliable, and chemically clean filter suitable for use in aggressive high temperature cleaning chemistries including aqueous chemistries such as hot SPM, SC-1 and SC-2.



UltiKleen G2 Excellar ER Filters



UltiKleen G2 Excellar ER KC Assemblies

### Features

- Enhanced retention (ER) of particles
- Robust non-dewetting PTFE medium
- High flow rates
- Hyperfine porous media matrix design
- All ultra high purity fluoropolymer construction
- Low extractables (Single digit ppb<sup>1</sup> total in a 5% HCl extraction of 1.5 liters for 24 hours)
- Provided prewet with Full-fill<sup>2</sup> UPW package as standard
- 100% integrity tested

### Specifications

#### Materials of Construction

Components	Materials
Filter Medium	Surface-modified PTFE
Media Support	PFA / PTFE
Inner Core	PFA
Outer Cage	PFA
End Caps	PFA
Housing	PFA
O-ring options	FEP-encapsulated fluoroelastomer

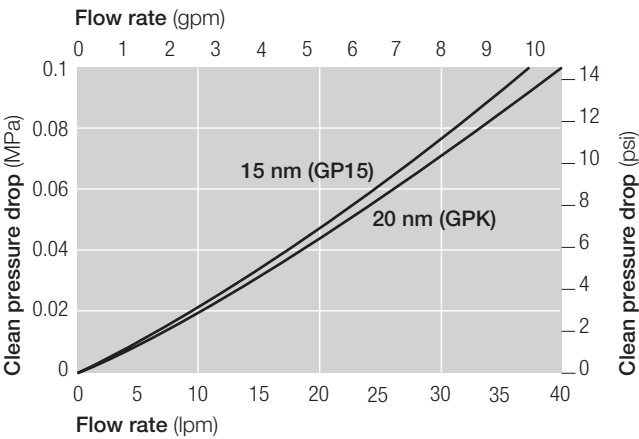
<sup>1</sup> Total metal concentrations in 13 elements: Li, Na, Mg, Al, K, Ca, Cr, Mn, Fe, Ni, Cu, Zn, Pb.

<sup>2</sup> Package is completely filled with ultrapure water.

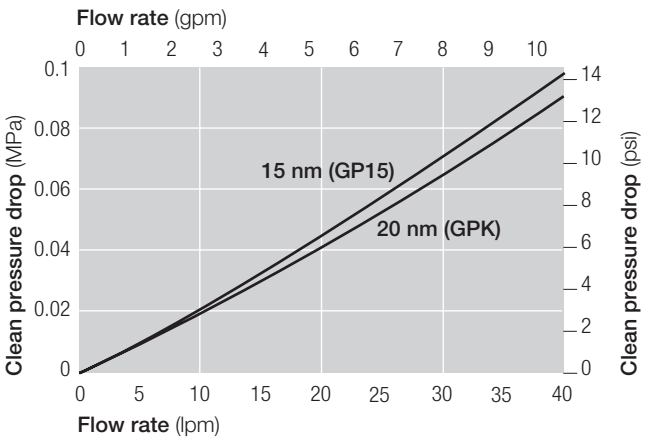
Product Name	UltiKleen G2 Excellar ER Filters			UltiKleen G2 Excellar ER KC Assemblies
Removal Ratings	15 nm, 20 nm			15 nm, 20 nm
Configurations	ABFG1	ABFG2	ABFG3	T-flow, In-line, L-flow (10 in)
Filter Area	1.9 m <sup>2</sup> / 20.5 ft <sup>2</sup>	3.8 m <sup>2</sup> / 41.0 ft <sup>2</sup>	5.4 m <sup>2</sup> / 61.5 ft <sup>2</sup>	1.9 m <sup>2</sup> / 20.5 ft <sup>2</sup>
Maximum Operating Temperature	170 °C / 338 °F			170 °C / 338 °F
Maximum Operating Pressure	0.59 MPaG (85.6 psig) @ 50 °C / 120 °F			0.5 MPaG (73 psig) @ 25 °C ( 77 °F) 0.4 MPaG (58 psig) @ 60 °C (140 °F) 0.35 MPaG (51 psig) @ 90 °C (194 °F) 0.20 MPaG (29 psig) @ 120 °C (248 °F) 0.15 MPaG (22 psig) @ 150 °C (302 °F) 0.12 MPaG (17 psig) @ 170 °C (338 °F)

Typical Flow Characteristics - 1cP fluid, 20 °C

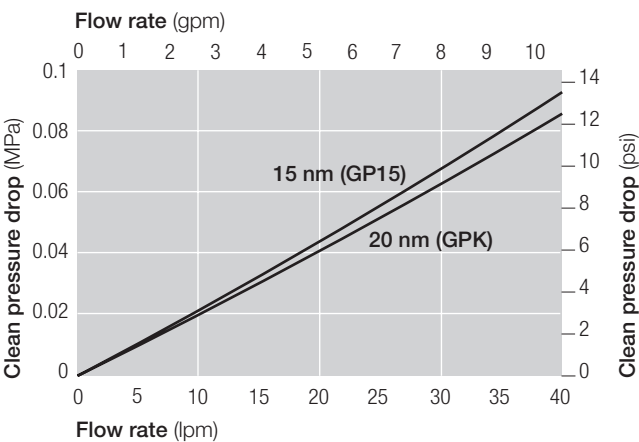
T Flow, L Flow (19 mm / 3/4 in.)



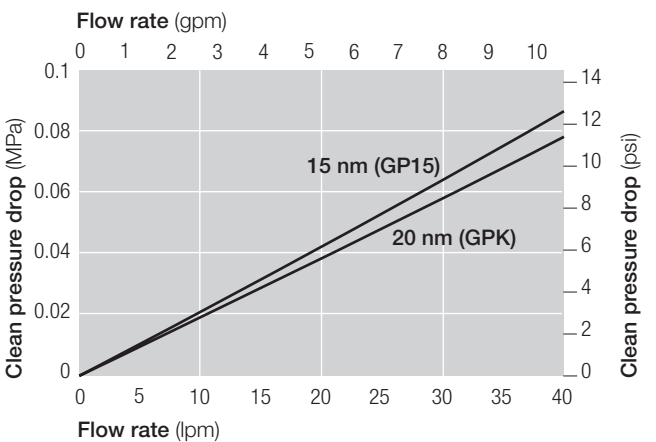
In-line (19 mm / 3/4 in.)



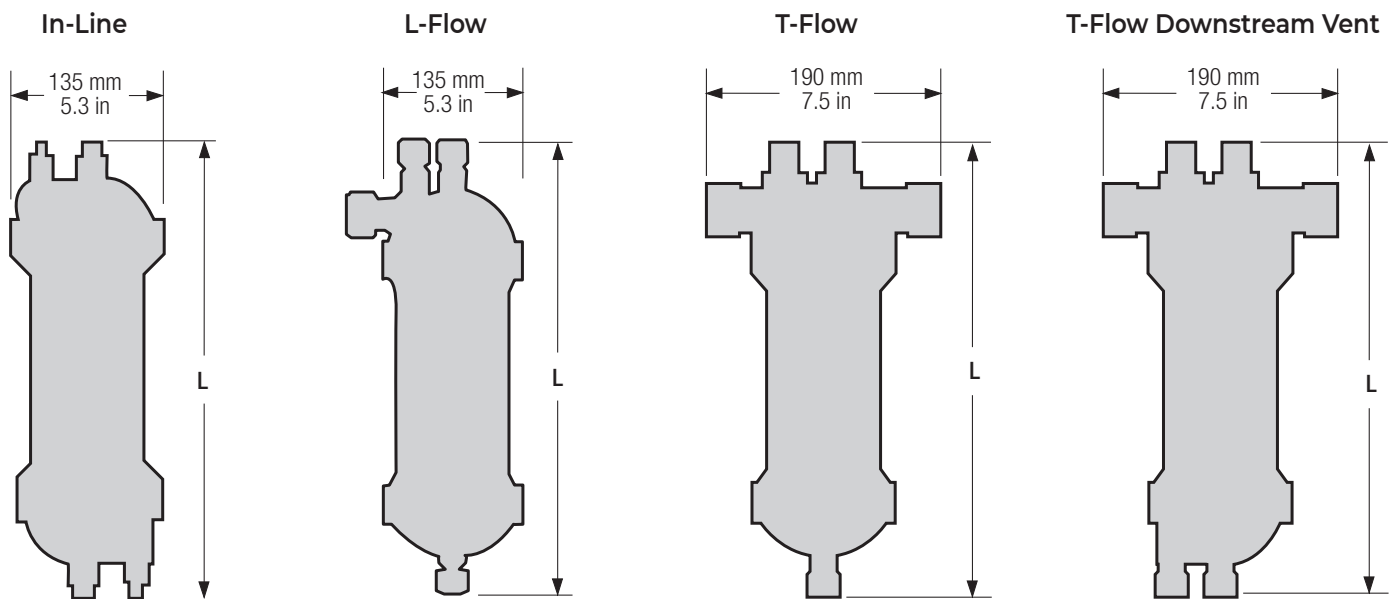
T Flow, In-line (25 mm / 1 in.)



G2 cartridges (254 mm / 10 in.)



Dimensions (nominal)



## UltiKleen G2 Excellar ER Filters

### Part Numbers / Ordering Information

ABFG 1 GP 2 3EH1 3

**Table 1**

Code	Nominal length (mm / in)
1	244 / 10
2	478 / 20
3	726 / 30

**Table 2**

Code	Removal Rating
15	15 nm
20	20 nm

**Table 3**

Code	Prewet option
-K3	Prewet filter (packaged in DI water)
-K7	Prewet filter (packaged in DI water), low metal extractables <sup>3</sup>

## UltiKleen G2 Excellar ER KC Assemblies

### Part Numbers / Ordering Information

LDF 1 2 1GP 3 4 E 5 6

**Table 1**

Code	Downstream venting
G	N / A
V	Available

**Table 2**

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

**Table 3**

Code	Removal Rating
15	15 nm
20	20 nm

**Table 4<sup>4</sup>**

Code	Inlet / Outlet	Vent / drain		Memo
		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" female	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	No connection
1	20 Series (Flowell)
2	Super Pillar Type (Nippon Pillar) <sup>5</sup>
51	Flare style
6	FinalLock <sup>6</sup>
71	Super Pillar 300 P Series (Nippon Pillar)
72	Super Pillar 300 P Series L Type (Nippon Pillar)
8	60 Series (Flowell)
9	11CR Series (Flowell)

**Table 6**

Code	Prewet option
-K3	Prewet filter (packaged in DI water)
-K7	Prewet filter (packaged in DI water), low metal extractables <sup>3</sup>

<sup>3</sup> Please contact Pall for the extractable conditions.

<sup>4</sup> Part numbers in combination with all codes are not always available. Please contact Pall for the part number availability.

<sup>5</sup> Pillar is a trademark of Nippon Pillar Packing Co.

<sup>6</sup> FinalLock is a trademark of Kurabo Industries Ltd.

## Dimensions by Configuration

### UltiKleen G2 Excellar ER KC Assembly (LDFG/LDFV)

In-Line	Nominal Length (L) (mm / in)	T-style	Nominal Length (L) (mm / in)	VT-style	Nominal Length (L) (mm / in)
12E2	396.5 / 15.6	12E2	408 / 16.1	12E2	377 / 14.8
12E51	412 / 16.2	12E71	403 / 15.9	128E2	385 / 15.2
124E51	412 / 16.2	13E0	495 / 19.5	12E71 / 72	377 / 14.8
16E8	428 / 16.9	13E1	432 / 17	128E71 / 72	402 / 15.8
16E51	436 / 17.2	13E2	442 / 17.4	13E1	445 / 17.5
17E0	448 / 17.6	13E6	416 / 16.4	13E51	444 / 17.4
17E1	445 / 17.7	13E9	433 / 17.1	168E71 / 72	403 / 15.9
17E51	442 / 17.4	13E51	473 / 18.6		
17E71	462 / 18.2	13E71	444 / 17.5		
		<b>L-style</b>		<b>VL-style</b>	
		12E2	408 / 16.1	12E2	440 / 17.35



#### Microelectronics

25 Harbor Park Drive  
Port Washington, NY 11050  
+1 516 484 3600 telephone  
+1 800 360 7255 toll free US

#### Nihon Pall Ltd.

6-5-1, Nishishinjuku,  
Shinjuku-ku  
Tokyo 163-1325 Japan  
+81 3 6901 5700 telephone  
+81 3 5322 2109 fax

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