

XpressKleen™ G2 filters

XpressKleen™ G2 KC Assemblies



Data Sheet MEXKG2ENE

Description

The XpressKleen G2 filter advances PTFE membrane filtration to enable semiconductor makers to meet the critical chemical filtration requirements of leading edge device manufacturing processes. The XpressKleen filter provides control of critical size particles as well as maintaining critical fluid purity with a guarantee of less than 3 ppb of total metal ion extractables per single length filter^{1,2}. The XpressKleen filter's surface cleanliness includes removal of organic contamination and surface particles. This makes the filter suitable for use from the point of supply (POS) to point of process (POP) to help define a contamination control system that delivers the required fluid purity to the wafer.

This is accomplished by Pall's completely integrated manufacturing capability that extends from the PTFE resin to the finished filter device. Pall's advanced manufacturing process (AMP), incorporates the latest clean room manufacturing and state-of-the-art proprietary cleaning steps with improved statistical process control to ensure reliability and performance. The XpressKleen G2 filter medium is made using Pall's proprietary Molecular Surface Tailoring (MST) technology.

The nondewetting XpressKleen G2 filter is qualified for use in aggressive high temperature cleaning chemistries, including aqueous chemistries such as SC1 and SC2.



KleenChange (KC)
(downstream venting)



Cartridge

Features & Benefits

- Low extractables < 3 ppb total of 13 elements
< 0.1 ppb (Ni), < 0.2 ppb (Cu)
- > 40 nm particle rinse up control in UPW
- TOC control
- 100% prewetted shipment with ultrapure water package
- High flow rates
- G2 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

¹ Total metal concentrations in 13 elements: Li, Na, Mg, Al, K, Ca, Cr, Mn, Fe, Ni, Cu, Zn, Pb. Consult factory for details.

² XP10 nm has ≤1ppb of total metal ion concentration per single length filter.

Specifications

Materials of Construction³

Parts	Material
Filter Medium	Surface-modified PTFE
Media Support	PTFE / PFA
Core, cage and end caps	PFA
Housing	PFA
O-ring options ⁴	FEP-encapsulated fluoroelastomer FFKM

³ All fluoropolymer materials made without PFOA.

⁴ Consult factory for other options.

Removal Ratings and Operating Conditions

Kleen-Change® (KC)

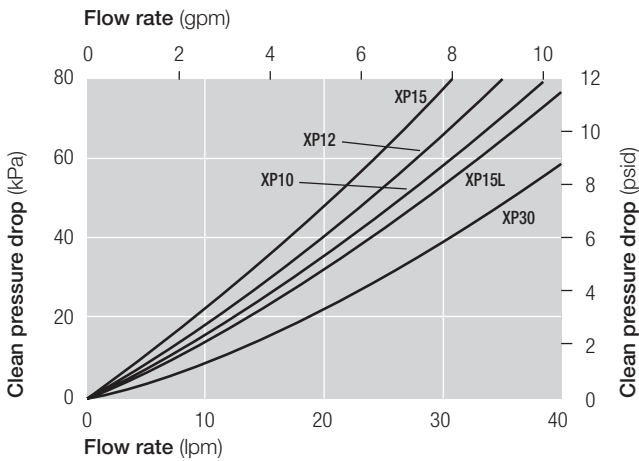
Removal Ratings	10 nm	12 nm	15 nm		30 nm
Media Code	XP10	XP12	XP15	XP15L	XP30
Filter Area	2.8 m ²	2.2 m ²	1.9 m ²	3 m ²	1.9 m ²
Flow	Inline, L-flow, T-flow				
Maximum Operating Temperature	185 °C / 365 °F				
Maximum Operating Pressure	0.49 MPaG (71 psig) @ 25 °C (77 °F) 0.39 MPaG (56.6 psig) @ 60 °C (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) @ 185 °C (365 °F)				

Cartridge

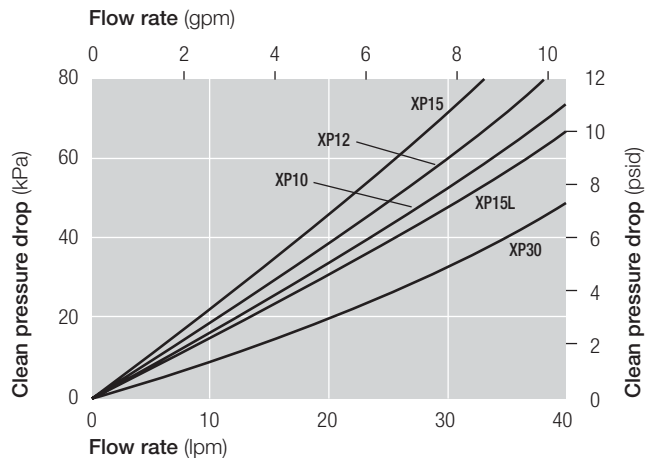
Removal Ratings	10 nm	12 nm	15 nm		30 nm
Media Code	XP10	XP12	XP15	XP15L	XP30
Filter Area	2.8 m ²	2.2 m ²	1.9 m ²	3 m ²	1.9 m ²
Filter Area	ABFG1	2.8 m ²	2.2 m ²	1.9 m ²	3 m ²
	ABFG2	5.6 m ²	4.4 m ²	3.8 m ²	6 m ²
Maximum Operating Temperature	185 °C / 365 °F				
Maximum Differential Pressure	0.59 MPaG (85.6 psig) @ 50 °C (120 °F)				

Typical Flow Characteristics - 1cP fluid, 20 °C

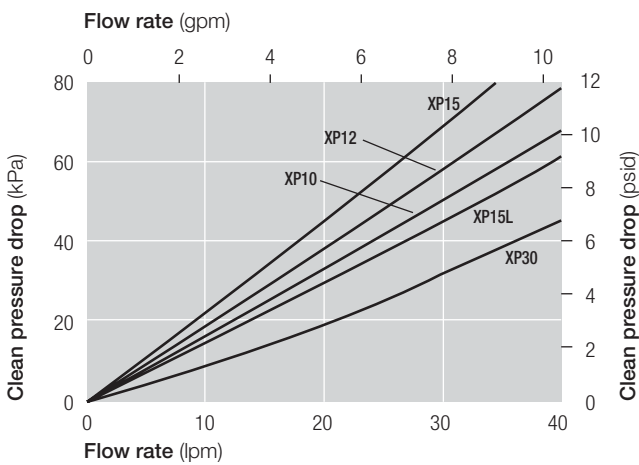
¾ KC (L-flow, T-flow)



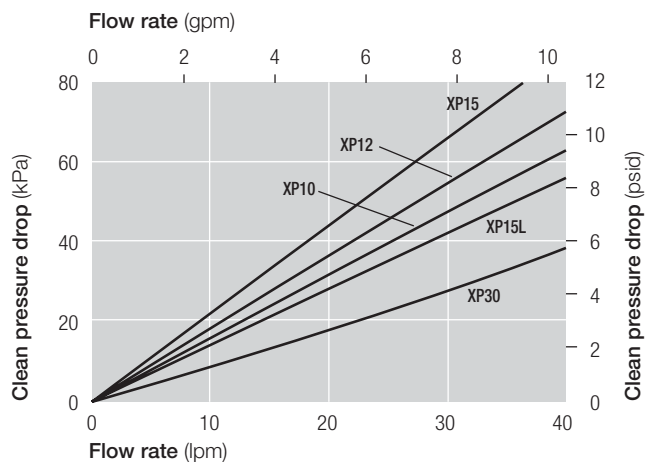
¾ KC (In-line)



1" KC (In-line, T-flow)



10" cartridge



Part Numbers / Ordering Information

XpressKleen G2 KC Assemblies

LDF 1 2 1XP 3 4 E 5

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 Rating
10	10 nm
12	12 nm
15	15 nm
15L	15 nm
30	30 nm

Table 4

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

DV : Downstream Venting

Table 5⁵

Code	Connections
1	20 series Flowell ⁶
2	Super Pillar type ⁷
51	Flare style
6	FinalLock ⁸
71	Super Pillar 300 P series
72	Super Pillar 300 P series L type
8	60 series Flowell
9	11CR series Flowell

⁵ Disposable capsules are not available with every option. (Refer to codes for options.) Contact your local Pall representative for option availability.

⁶ Flowell is a trademark of Flowell Corporation.

⁷ Super Pillar is a trademark of Nippon Pillar Packing Co., Ltd.

⁸ FinalLock is a trademark of Kurabo Industries Ltd.

XpressKleen G2 Filter

ABFG 1 XP 2 3E 3

Table 1

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

Table 2

Code	Removal Rating
10	10 nm
12	12 nm
15	15 nm
15L	15 nm
30	30 nm

Table 3

Code	O-ring material
H1	FEP-encapsulated fluoroelastomer
H35	Perfrez ⁹
H38	FFKM

⁹ Perfrez is a trademark of Applied Seals North Americas



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
Contact us at www.pall.com/contact

Pall Corporation has offices and plants throughout the world. To locate the Pall office or distributor nearest you, visit www.pall.com/contact.

The information provided in this literature was reviewed for accuracy at the time of publication. Product data may be subject to change without notice. For current information consult your local Pall distributor or contact Pall directly.

IF APPLICABLE Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.

© Copyright 2024, Pall Corporation. Pall,  and XpressKleen are trademarks of Pall Corporation. ® Indicates a trademark registered in the USA.