XpressKleen™ G3 KC Assemblies

Data Sheet MEXKG3KCENf

Description

The XpressKleen™ G3 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 total metal ion extractables per single length filter. 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-theart proprietary cleaning steps with improved statistical process control to ensure reliability and performance.

The XpressKleen G3 KC assembly has a slightly larger diameter while maintaining the same face-to-face sealing distance as the XpressKleen G2 KC (T-flow) assembly. The increased diameter accommodates a larger format XpressKleen filter with significantly increased filter area for increased flow rates and longer service life.

The XpressKleen G3 filter medium is made using Pall's proprietary Molecular Surface Tailoring (MST) technology. The nondewetting XpressKleen G3 filter is qualified for use in aggressive high temperature cleaning chemistries, including aqueous chemistries such as SC1 and SC2.

T-flow Kleen-Change (KC)
(downstream venting)

Features

- Low extractables
- > 40 nm particle rinse up control in UPW[1]
- TOC control
- 100 % prewetted shipment with ultrapure water package
- High flow rates
- T-flow G3 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] > 20 nm particle rinse up control in UPW for 5 nm grade

Specifications

Materials of Construction

Components	Materials[2]
Filter Medium	Surface-modified PTFE
Media Support	PFA
Core, Cage and End Caps	PFA
Housing	PFA

[2] All fluoropolymer materials made without PFOA.

Removal Ratings and Operating Conditions

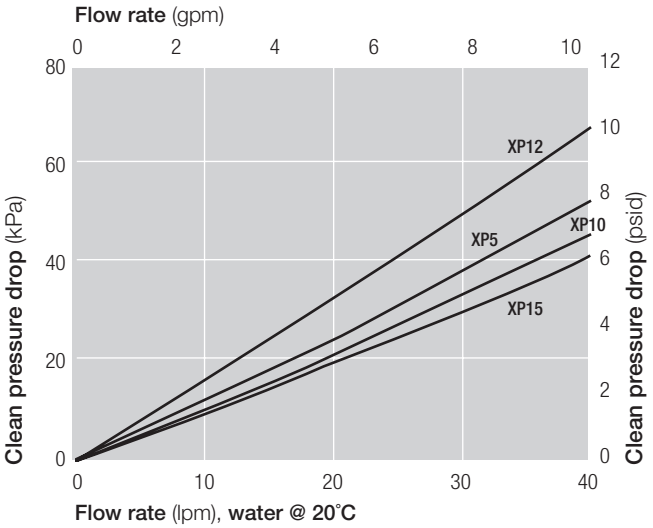
Removal Ratings	5 nm	10 nm	12 nm	15 nm
Filter Area	4.3 m² / 46.3 ft²	4.3 m² / 46.3 ft²	3.3 m² / 35.5 ft²	4.4 m² / 47.4 ft²
Metal Extractables	< 0.75 ppb[4]	< 1 ppb[3]	< 3 ppb[3]	
Flow	T-flow, In-line			
Maximum Operating Temperature	185 °C / 365 °F			
Maximum Operating Pressure	0.49 MPaG @ (71 psig) @ 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 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)			

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

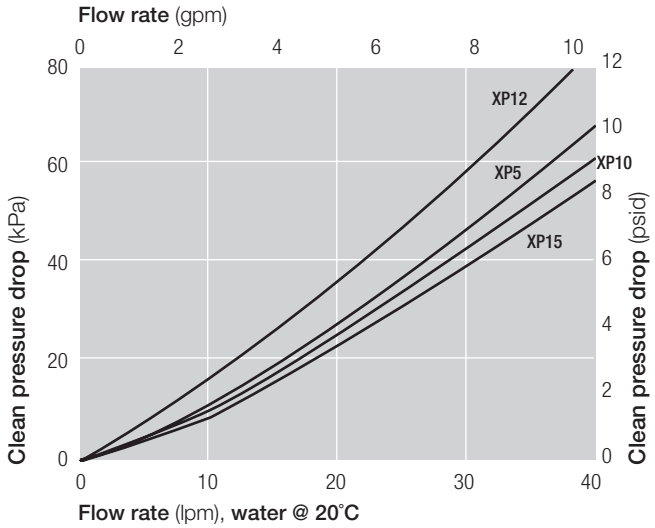
[4] Total metal concentrations in 19 elements: Al, Ba, B, K, Na, Fe, Li, Mg, Mn, Pb, Sn, Ti, Zn, Ni, Cu, Cr, Co, Ca, Ag.

Typical Flow Charcteristics – 1 cP fluid, 20 °C

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

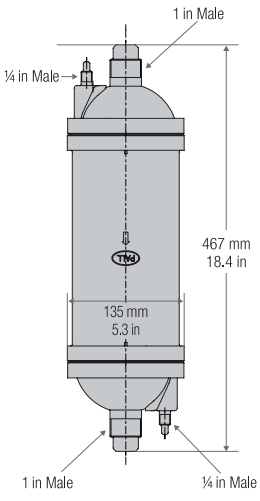


¾ inch KC (T-flow)

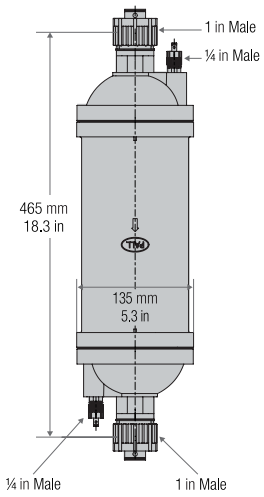


Nominal Dimensions

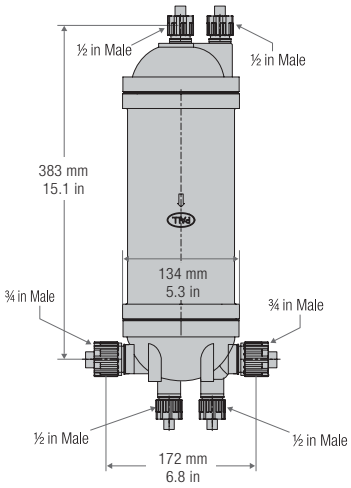
1 inch In-Line
Flare Style
LDFHN1_164E51



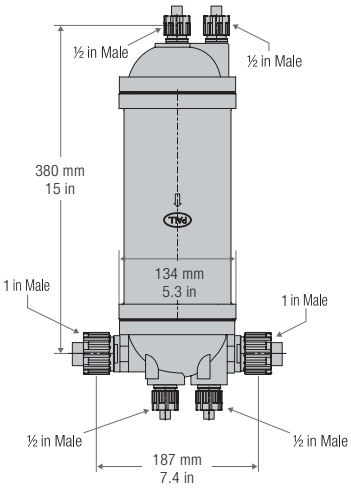
1 inch In-Line
Super Pillar[5] 300P Series
LDFHN1_164E71



¾ inch T-Flow
Super Pillar 300P Series
LDFHT1_128E71/72



1 inch T-Flow
Super Pillar 300P Series
LDFHT1_168E71/72



[5] Pillar is a trademark of Nippon Pillar Packing Co.

Part Numbers / Ordering Information[6]

LDFH [1] 1XP [2] [3] E [4]

Table 1

Code	Flow
T	T-flow
N	In-line

Table 2

Code	Removal ratings
5	5 nm
10	10 nm
12	12 nm
15	15 nm

Table 3

Code	Inlet / Outlet	Vent / Drain		Type
		Head end	Bowl end	
12	3/4" male	1/2" male	1/2" female	T-flow
128	3/4" male	1/2" male	1/2" male	T-flow
16	1" male	1/2" male	1/2" female	T-flow
164	1" male	1/4" male	1/4" male	In-line
168	1" male	1/2" male	1/2" male	T-flow In-line

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

Table 4

Code	Connections
2	Super Pillar Type
51	Flare style
71	Super Pillar 300 P Series
72	Super Pillar 300 P Series L Type

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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.