

## Description

The Pall SWD and SWF small capsules are space-saving and low pressure drop disposable filter assemblies. They are ideally suited for installing into single wafer cleaning systems at the point of use (POU).

The unique fluid flow path filter design combined with Pall material science membrane technology provides the reliable removal of critical nanometer size contaminants in fluids to prevent defects on wafers.

The SWD capsule contains Pall's proprietary Ultipleat® SP DR "HAPAS"<sup>1</sup> membrane filter. The HAPAS membrane is designed specifically for improved particle removal in critical surface preparation single wafer cleaning chemicals such as DHF, UPW, SC1, SC2, TMAH and many aqueous chemicals. 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 HAPAS membrane transitions uniformly from microporous to nanoporous throughout its depth. The result is an application-specific membrane morphology designed for high flow and superior retention of particles down to 2 nanometers.

The SWF capsule contains Pall's proprietary XpressKleen™ filter. The XpressKleen filter uses a new generation of surface modified and patent pending PTFE membrane designed for leading edge critical chemical processes. Applications include concentrated chemicals, IPA, DIO<sub>3</sub> and other solvents.

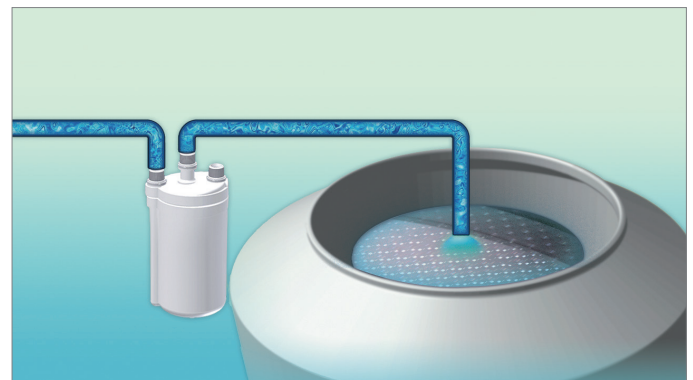
Pall's completely integrated and advanced filter manufacturing capability extends from the PTFE resin to the finished filter device. The resulting filter's reliability, purity, and ultra cleanliness speeds qualification and reduces process downtime following filter change.

<sup>1</sup> HAPAS - Highly Asymmetric PolyArylSulfone membrane



## Features & Benefits

- Hyperfine microporous membrane matrix
- High surface energy membrane for minimal microbubble formation
- Faster tool qualification for reduced cost of ownership
- 100% prewetted shipment with ultrapure water package
- Compact space-saver, small capsules



Ideal filter installation before chemical dispense

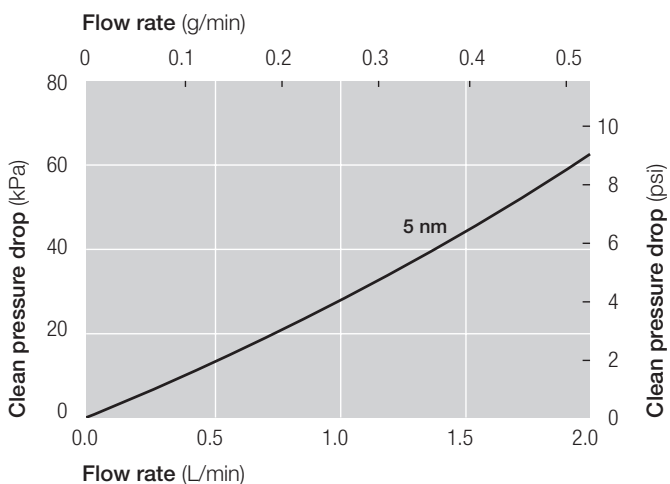
## Specifications

Product Name	XpressKleen SWF Capsules	Ultipleat SP DR SWD Capsules		
Membrane Materials	Surface modified PTFE	Highly Asymmetric PolyArylSulfone (HAPAS)		
Hardware (Supports, Capsule)	PFA	HDPE		
Removal Ratings	5 nm	10 nm	5 nm	2 nm
Filter Areas	0.3 m <sup>2</sup> / 3.2 ft <sup>2</sup>	0.25 m <sup>2</sup> / 2.7 ft <sup>2</sup>	0.2 m <sup>2</sup> / 2.2 ft <sup>2</sup>	
Configurations	U-flow	U-flow		
Connections (Inlet / Outlet, Vent)	1/4" Super Pillar <sup>2</sup> 300 P series (Nippon Pillar)			
Maximum Operating Temperature	130 °C / 266 °F	60 °C / 140 °F		
Maximum Operating Pressure	0.35 MPaG / 50 psig @ 40 °C / 104 °F	0.35 MPaG / 51 psig @ 38 °C / 100 °F		
	0.29 MPaG / 42 psig @ 60 °C / 140 °F	0.17 MPaG / 25 psig @ 60 °C / 140 °F		
	0.24 MPaG / 34 psig @ 80 °C / 176 °F			
	0.20 MPaG / 29 psig @ 95 °C / 203 °F			
	0.18 MPaG / 26 psig @ 110 °C / 230 °F			
Maximum Forward Differential Pressure	0.15 MPaG / 21 psig @ 130 °C / 266 °F			
	0.20 MPaG / 29 psig @ 95 °C / 203 °F	0.1 MPaG / 15 psig @ 60 °C / 140 °F		

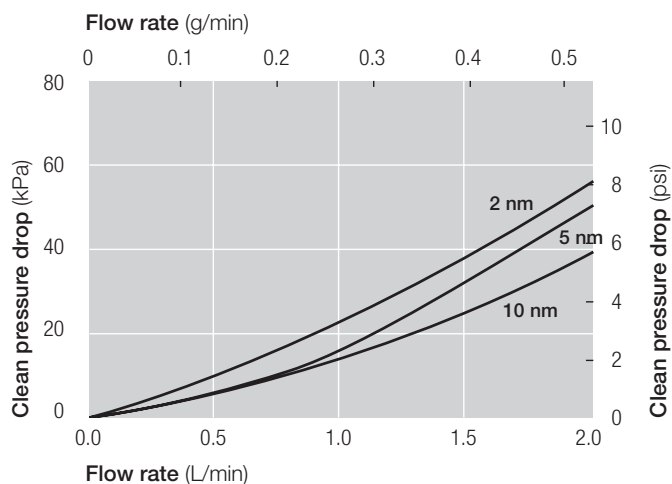
<sup>2</sup> Pillar is a trademark of Nippon Pillar Packing Co.

## Typical Flow Characteristics - 1cP fluid, 20 °C

### XpressKleen SWF Capsules

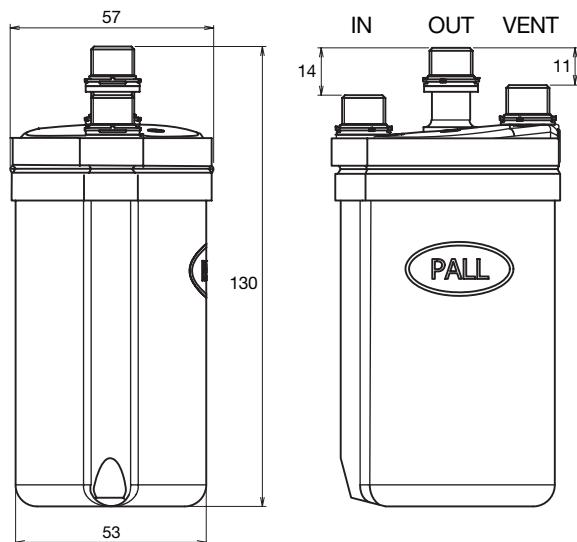


### Ultipleat SP DR SWD Capsules

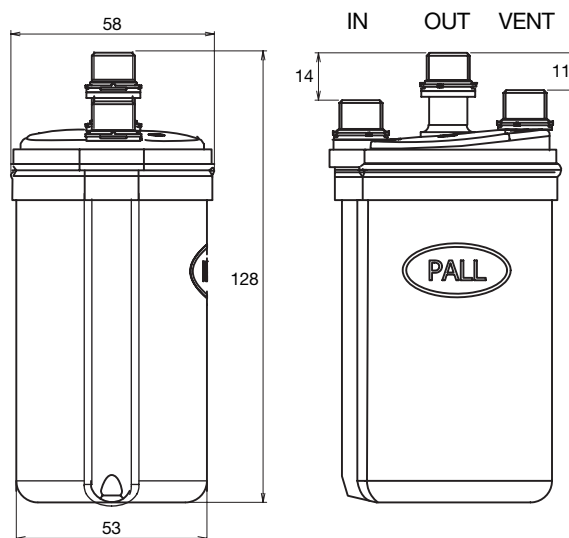


## Dimensions (nominal)

SWF Capsules  
Hardware : PFA



SWD Capsules  
Hardware : HDPE



## Part Numbers / Ordering Information

SW 1 03 2 4E71 3

**Table 1**

Code	Capsule Format	Capsule Materials
D	SWD	HDPE
F	SWF	PFA

**Table 2**

Code	Removal Ratings	Media Materials	Applicable Capsule
HSAH	2 nm	HAPAS	SWD
HSSH	5 nm	HAPAS	SWD
HSVH	10 nm	HAPAS	SWD
XP5	5 nm	PTFE	SWF

**Table 3**

Code	Prewet Option	Applicable Capsule	Note
None	Standard with low extractables	SWF	
-K18	Dry with low extractables	SWF	Nuts are not included in the box.
-K13C	Standard with low extractables	SWD	
-K13D	Standard with low extractables for 2 nm only	SWD	

Connections (Inlet/Outlet, Vent) : 1/4", Super Pillar 300 P series (Nippon Pillar)



**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)  
Contact us at [www.pall.com/contact](http://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](http://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 2022, Pall Corporation. Pall, , Kleen-Change and XpressKleen are trademarks of Pall Corporation. ® Indicates a trademark registered in the USA.