

Pall's SUPRAdisc II Zero DE (ZD) module series is a unique combination of Pall's SUPRAdisc II design for lenticular sheet based modules and a pure cellulose depth filter sheet media for food and beverage applications. The filter has been designed to give excellent filtration performance and lower filtration costs.

## Description

The SUPRAdisc II ZD Series combines a 100% cellulose depth filter sheet matrix and Pall's SUPRAdisc II design with its patented inside-outside Separator Technology that differentiates from classical stacked disc lenticulars in their filtration and handling characteristics. The SUPRAdisc II ZD filter media was developed to meet the need of the Food and Beverage industry for filter sheet media, based on 100% pure cellulose fiber matrix material, without any use of diatomaceous earth (DE) or Perlite. SUPRAdisc II ZD filter modules are available in multiple grades, suitable for microbial reduction, fine filtration and clarifying filtration in various Food & Beverage applications.

## Features and Benefits

Features	Benefits
100% pure cellulose depth filter media: no inorganic components	<ul style="list-style-type: none"> <li>• very low impact on color and flavor</li> <li>• very high purity, low extractables, low ion release</li> <li>• up to 50% less water consumption for conditioning and regeneration</li> </ul>
highly fibrillated cellulose fiber matrix	<ul style="list-style-type: none"> <li>• very strong filtration media</li> <li>• easy to regenerate</li> <li>• high hold up volume for long filtration cycles</li> <li>• very good particle and microbiological retention</li> </ul>
SUPRAdisc II design with Inside-Outsides Separator Technology	<ul style="list-style-type: none"> <li>• very rigid and compact module design</li> <li>• very high mechanical stability</li> <li>• no cell blinding, leading to 100% availability of filter area</li> <li>• regenerable; capability to use backflush-mode</li> <li>• up to 50% higher total throughput compared to classical single cell lenticulars</li> <li>• enabling enclosed and hygienic sheet filtration</li> </ul>

## SUPRAdisc™ II ZD Series Depth Filter Modules

For a Wide Range of Food and Beverage Applications



## Applications

Grade	Application
SUPRAdisc II ZDEK SUPRAdisc II ZD08	<ul style="list-style-type: none"> <li>• Microorganism reduction and yeast removal in wine, beer, juices and juice concentrates</li> <li>• Microorganism reduction in sugar syrups</li> <li>• Microorganism reduction in enzyme solutions</li> </ul>
SUPRAdisc II ZD10 SUPRAdisc II ZD25	<ul style="list-style-type: none"> <li>• Polishing filtration of wine and beer</li> <li>• Haze removal in beverages</li> <li>• Polishing filtration of olive oil with capability to adsorb water from oil</li> </ul>

## Materials of Construction

Sheet Media: 100% Cellulose

Inside/Outside Separators, Center core:

Talcum filled Polypropylene

## Conditioning

Prior to use, it is recommended to rinse the filter with clean water at ambient temperature with > 50 L/m<sup>2</sup>.

## Regeneration<sup>2</sup>

SUPRADisc II ZD filter modules may be rinsed with clean water (in forward or reverse direction) to increase total throughput optimizing economic efficiency. Optimal regeneration of SUPRADisc II ZD modules may be achieved with several rinses of cold water followed by warm water. An example protocol is shown below.

- Rinse with cold water (ambient temperature) for 5 min.
- Rinse with warm water (max. 60 °C / 140 °F) for 10 min.

Rinsing flow rate should be 1½ of the filtration flow rate with a counter pressure of 0.5-1 bar (7.2-14.5 psi).

<sup>2</sup>When rinsing in the reverse flow direction it is critical to control particulate and microbial levels of the rinsing water, so that the filtrate side of the sheet media is not contaminated. Water used for reverse flow flushes should be particle-free, and if the filter will not be sanitized prior to re-use the water should be free of microorganisms. The actual time required for optimal regeneration may vary as a function of the process conditions.

Please contact Pall for recommendations on your specific filtration process as results may vary by product, pre-filtration and filtration conditions.

## Available SUPRADisc II Formats

SUPRADisc II 12", Single layer, 1.8 m<sup>2</sup> filter area, flat gasket  
 SUPRADisc II 16", Single layer, 5.0 m<sup>2</sup> filter area, flat gasket

## Quality

SUPRADisc ZD Filters are manufactured according to ISO 9001:2008 certified Quality Management System.

## SUPRADisc II Ordering Key

200		ZDEK		C		440		S		P		W	
Code	Module Type	Code	Filter Module Type	Code	Adapter	Code	Module Dimension	Code	Gasket Material	Plastic Material	Regulatory		
200	SUPRADisc II	ZDEK	EK ZD	S	Double-O-Ring	232	12"/284 Ø / 32 Sheets/1.8 m <sup>2</sup>	S	= Silicone (white)	Polypropylene	Food Contact Compliant		
		ZD08	KS 80 ZD	C	Flat gasket	440	16"/410 Ø / 40 Sheets/5.0 m <sup>2</sup>		others upon request				
		ZD10	K 100 ZD										
		ZD25	K 250 ZD										

## Recommended Flow Rates and Differential Pressure

SUPRADisc II Grade	Application	Flow Rate Wine and other Beverages		Flow Rate Beer		Maximum Differential Pressure
		[L/Module/h] (gal/Module/h)	[L/Module/h] (gal/Module/h)	[L/Module/h] (gal/Module/h)	[L/Module/h] (gal/Module/h)	
		16"	12"	16"	12"	[bar] [psi]
200ZDEK	Fine filtration; Filtration prior to final membrane filter	2,625 (693)	945 (250)	600 (158)	216 (57)	1.5 (21.8)
200ZD08						
200ZD10	Polishing Filtration; Particle Filtration	4,250 (1,122)	1,530 (404)	750 (189)	270 (71)	2.5 (36.3)
200ZD25						

## Food Contact Compliance

Please refer to the Pall website [www.pall.com/foodandbev](http://www.pall.com/foodandbev) for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.

SAP Ordering Code	Material Description	Sheet Media	Size
7008378	SUPRADISC SDZD II EK 200ZDEK232SPW	EK-ZD	12"
7008379	SUPRADISC SDZD II 80 200ZD08C232SPW	KS 80 ZD	12"
7008380	SUPRADISC SDZD II 100 200ZD10C232SPW	K 100 ZD	12"
7008381	SUPRADISC SDZD II 250 200ZD25C232SPW	K 250 ZD	12"
7008382	SUPRADISC SDZD II EK 200ZDEK440SPW	EK-ZD	16"
7008383	SUPRADISC SDZD II 80 200ZD08C440SPW	KS 80 ZD	16"
7008384	SUPRADISC SDZD II 100 200ZD10C440SPW	K 100 ZD	16"
7008385	SUPRADISC SDZD II 250 200ZD25C440SPW	K 250 ZD	16"

**Example:** 200 ZDEK C 440 S P W

= SUPRADisc II, EK ZD media, flat gasket, 16" (5.0 m<sup>2</sup>), silicone seal, PP plastic material, food contact compliant



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Please contact Pall Corporation for product applicability to specific National legislation and/or Regional Regulatory requirements for water and food contact use.

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