

Pall's SUPRApak Zero DE (ZD) module series is a unique combination of Pall's SUPRApak design for 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 SUPRApak ZD Series combines a 100% cellulose depth filter sheet matrix and Pall's SUPRApak design with the unique "edge flow" principle. The SUPRApak 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 content of diatomateous earth (DE) or Perlite. SUPRApak ZD filter modules are available in multiple grades, suitable for microbial reduction, fine filtration and clarifying filtration in various food and beverage applications.

Features and Benefits

Features	Benefits		
100% pure cellulose depth filter media: no inorganic components	 very low impact on color and flavor very high purity, low extractables, low ion release up to 50% less water consumption for conditioning and regeneration 		
highly fibrillated cellulose fiber matrix	 very strong filtration media easy to regenerate high hold up volume for long filtration cycles very good particle and microbiological retention 		
SUPRApak design "edge flow" Technology	 optimized use of depth filter matrix very high filtration area per module compact module design enabling enclosed, more hygienic sheet filtration 		

SUPRApak™ ZD Series Depth Filter Modules

For a Wide Range of Food and Beverage Applications



Applications

Grade	Application		
SUPRApak ZD 5200 SUPRApak ZD 5300	 Reduction of fine particles and yeasts Filtration of beverages and liquid food that require very high clarity and very high particle removal capacity 		
SUPRApak ZD 5500 SUPRApak ZD 5900	 Polishing filtration of beverages such as wine, beer, fruit juices and liquid food Filtration / de-watering of high quality olive oil 		

Materials of Construction

Sheet Media: Resin-bonded cellulose

Center Core: Polypropylene Straps: Polyester

Conditioning

Prior to use, it is recommended to rinse the filter with clean water at ambient temperature with $> 50 \text{ L/m}^2$.

Regeneration²

SUPRApak ZD filter modules may be rinsed with clean water **only in forward direction** to optimize total throughput and economic efficiency. Optimal regeneration may be achieved with several rinses of cold water followed by warm water. An example protocol is shown below.

- a. Rinse with cold water (ambient temperature) for 5 min.
- b. Rinse with warm water (max. 60 $^{\circ}\text{C}$ / 140 $^{\circ}\text{F})$ for 10 min.

Rinsing flow rate should be max. 1 $\frac{1}{2}$ of the filtration flow rate with a counter pressure of 0.5-1 bar (7.2-14.5 psi).

Recommended Flow Rates and Differential Pressure

SUPRApak	Application	Flow Velocity Wine and Other Beverages		Flow Velocity Beer		Maximum Differential Pressure
Grade		[L/Module/h] (gal/Module/h)		[L/Module/h] (gal/Module/h)		[bar] [psi]
		L (16")	M (12")	L (16")	M (12")	[boi]
ZD 5200	Fine filtration; Filtration prior	3,500	1,417	1,580	528	1.5
ZD 5300	to final membrane filter	(930)	(375)	(412)	(140)	(21.8)
ZD 5500	Polishing Filtration; Particle Filtration	5,695 (1,504)	2,295 (606)	2,000 (528)	660 (158)	1.0 (14.5)
ZD 5900						

Available SUPRApak Formats

SUPRApak M size 12" SUPRApak L size 16"

Quality

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

Food Contact Compliance

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

SUPRApak Ordering Key

ZD	5200	L	W
Sheet Media Range	Media Type	Size (Diameter)	Regulatory
ZD	5200	L = 16"	Food Contact Compliance
	5300	M = 12"	
	5500		
	5900		

Example: ZD 5200 L W

= Zero DE range, 5200 media, 16" diameter. Material is food contact compliant ("W")

SAP Ordering Code	Material Description
5302798	SUPRApak ZD 5200 LW
5302804	SUPRApak ZD 5300 LW
5302805	SUPRApak ZD 5500 LW
5302806	SUPRApak ZD 5900 LW
5302798/M	SUPRApak ZD 5200 MW
5302804/M	SUPRApak ZD 5300 MW
5302805/M	SUPRApak ZD 5500 MW
5302806/M	SUPRApak ZD 5900 MW



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Pall Corporation has offices and plants throughout the world. For Pall representatives in your area, please go to www.pall.com/corporate_contact.asp

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

Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit www.pall.com to verify that this information remains valid.

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² Avoid any backpressure as it destroys the module. Water used for forward flow flushing should be particle-free, and if the filter will not be sterilized prior to re-use the water should be free of microorganisms. The actual time required 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.