

SUPRApak™ Plus PR Series Modules

For High Throughput Depth Filtration in Enclosed Systems

SUPRApak Plus PR depth filter module design is using the new layer to layer seal technology.

Description

Developed from traditional depth filtration technology, SUPRApak modules efficiently combine the filtration mechanisms of surface filtration, depth filtration and adsorption. Highly unique to their design is an entirely new flow configuration, based on the “edgeflow” principle.

Seitz® filter sheet material is wrapped around a central, permeable core. Feed and filtrate channels provide a fluid flow path resulting in maximum utilization of the sheet material, to provide highly efficient contaminant removal and a cost-effective enclosed system alternative to flat sheet filtration. New to the SUPRApak PR Series is an improved layer to layer sealing which offers the following features and benefits:

Features	Benefits
Flow configuration based on “edge flow” principle	- Up to 6 times higher throughput compared to classical sheet filtration, resulting in longer process uptimes¹ - Increased adsorption capability and excellent filtrate quality
Sealing line technology	- Higher mechanical stability - Modules can be steam sanitized - Higher dp stability and therefore higher total throughput
Enclosed filtration system	- Increased process safety and product quality - No drip losses - Minimal operator exposure to process fluids
Drainable, low hold-up volume assembly	Higher product yield; lower cleaning costs
High filtration capacity in compact design	Small footprint
Simple, quick installation and servicing	Reduced labor and maintenance costs

¹ Depending on application and product selection



SUPRApak PR Series Modules

Quality

• Manufactured according to ISO 9001 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.

Main Components²

Component	Description
Sheet material PR 5100	Cellulose Polyolefine fibers, Natural Diatomaceous Earth (DE, Kieselguhr) Perlites
Center core	Polypropylene (20% talc-filled)
Sealing line	Polypropylene

² For more information on materials of construction, please see the Declaration of Compliance at www.pall.com/foodandbev.

Technical Information

Operating Characteristics in Compatible Fluids³

Module Size	Grade	Max. Operating Temperature
SUPRApak S,M,L	PR 5100	80 °C (167 °F) / 8 hours ⁴

³ Compatible fluids are those which do not adversely affect the filter materials of construction.

⁴ Laboratory tests up to 8 hours exposure. Actual field experience shows substantially longer resistance to high temperatures. For continuous hot fluid applications over 40° C (104° F), a stainless steel support core is required. Please see SUPRApak housing data sheet for information.

Operating Guidelines

Field experience shows that maximum achievable differential pressures vary with the applications and product selection. They are determined by monitoring filtrate quality, and are influenced by several factors. Please contact Pall for details, and refer to SUPRApak module instructions for use.

Nominal Weight and Typical Ash Content

Module	Dry Weight	Wet Weight	Ash Content ⁵
SUPRApak PR 5100 L	11-12 kg (24.2-26.4 lbs)	25-30 kg (55-66 lbs)	40-54%
SUPRApak PR 5100 M	5.1-5.6 kg (11.2-12.3 lbs)	15.5-16.5 kg (34.1-36.3 lbs)	40-54%
SUPRApak PR 5100 S	1.6-1.8 kg (3.5-4 lbs)	3.5-4.5 kg (7.7-9.9 lbs)	40-54%

⁵ These figures are determined on typical finished articles. Values differ for individual PR grades. Ash values for the filter sheets in individual batches are available on request.

Sanitization⁶

Method	Temperature	Time/Cycles ⁶
Hot Water	85 °C (185 °F)	20 cycles @ 20 min each
Steam	125 °C (258 °F)	10 cycles @ 20 min each

⁶ The actual time required may vary as a function of the process conditions. Laboratory tests were carried out up to the stated cycle quantity. Actual field experience shows more cycles are achievable, coupled with proper filtrate quality monitoring.

Rinsing⁷

Module Size	Rising Volume/Module	Recommended Flow Rate
SUPRApak L	340 liters (90 US gal)	1.5 times filtration flow rate
SUPRApak M	140 liters (37 US gal)	1.5 times filtration flow rate
SUPRApak S	20 liters (5.3 US gal)	1.5 times filtration flow rate

⁷ Depending on the application, rinsing with cold or warm water in a forward flow direction is recommended prior to filtration.

Ordering Information

This information is a guide to the part number structure and possible options. For availability of specific options and housing details, please contact Pall.

Part number nomenclature:

SUPRApak PR ☐ ☐ W

Table 1 Table 2

Example part number: SUPRApak PR 5100 LW

See bold reference code in tables.

Table 1: Grade

Code

5100

Table 2: Nominal Dimensions

Code	Height	External Diameter
L	250 mm (9.8")	415 mm (16.3")
M	250 mm (9.8")	285 mm (11.2")
S	250 mm (9.8")	183 mm (7.5")



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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.

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