



Food and Beverage

SUPRApak M Series Filter Housings

SUPRApak™ Filtration
For Medium Batch Depth Filtration



SUPRApak M Series-WA Filter Housings Technical Information

SUPRApak M Series-WA filter housings are designed for use with SUPRApak M filter modules, to handle medium batch sizes in wine, distilled spirits, sweeteners, gelatin, enzymes, and other food and beverage applications.

Features	Benefits
Closed filtration system	<ul style="list-style-type: none"> Increased process safety and product quality; no drip losses; minimum operator exposure to process fluids
Compact design with high filtration area	<ul style="list-style-type: none"> High throughput filtration for medium batch production, resulting in low investment cost
Drainable, low hold-up volume assembly	<ul style="list-style-type: none"> Higher product yield; minimized cleaning costs
High quality internal surface finish, sanitary and crevice-free design	<ul style="list-style-type: none"> Enhanced cleanability
Quick release V-band housing closure	<ul style="list-style-type: none"> Ease of handling during filter changeout and cleaning
Modular construction available	<ul style="list-style-type: none"> Enables flexibility and matching of production volumes to equipment capacity
External tensioning device with preset torque limit	<ul style="list-style-type: none"> Provides secure operation without bypass
Simple, quick installation and servicing	<ul style="list-style-type: none"> Reduced labor and maintenance costs; reduced process downtime
Filter module lifting device available on request	<ul style="list-style-type: none"> Eases filter installation and removal
ATEX (94/9/EC) Group II, Category 2 by special order	<ul style="list-style-type: none"> Suitable for use in potentially explosive environments

Description

SUPRApak M filtration units provide a closed system approach to high capacity depth filtration, maximizing product protection and minimizing product losses. They are a cost-effective alternative to traditional sheet filtration and lenticular module filtration.

SUPRApak M Series-WA units hold from one to four SUPRApak M modules, representing up to approximately 11 m² (116.6 ft²) of filtration area in a very compact and low hold-up volume design. They are available either in single dome or modular design.

Specifications

Minimum / Maximum Design Pressure ^{1,2}	-1 to 8 barg (-14.5 to 116 psig)	
Minimum / Maximum Design Temperature ¹	-10 to 150 °C (14 to 302 °F)	
Materials of Construction	Wetted parts 1.4404 (AISI 316L stainless steel)	
Sealing Materials ³	EPDM elastomer	
Internal Surface Finish	≤ 0.8 micron Ra (≤ 32 Ra microinches), electropolished	
Internal Welds	Dressed and blended to provide uniform ripple- and crevice-free surface to ≤ 0.8 micron Ra (≤ 32 Ra microinches), electropolished	
Connections	Inlet/Outlet	DN 40 (DIN 11851) 1.5 inch sanitary clamp coupling (ISO 2852)
	Filtrate Vent (optional)	DN 6 (8 mm / 0.31 inch) hose tail
Filter Module Compatibility ⁴	SUPRApak M series modules	

¹ Maximum design pressure and temperature ratings are vessel ratings only. Safe operation will also depend on filter module and housing gasket use. EPDM assembly seals restrict continuous operating temperature to 130 °C (266 °F). For details on filter module temperature limitations, please refer to SUPRApak module literature.

² Design satisfies EC Pressure Equipment Directive (PED) 97/23/EC (Fluid Group 2, Category II, Module A1). Pressure rating is for liquid or gas. The PED category and fluid group classification indicates suitability of housing use on distilled spirits less than 70% by weight absolute alcohol. For such applications, the maximum allowable temperature must be below the flash point. For 70% by weight absolute alcohol the flashpoint is 21 °C (69.8 °F).

³ Seal materials meet requirements for food contact use as detailed in FDA 21 CFR Section 177.2600, and EC Regulation 1935/2004, including BfR XV and XXI. Please contact Pall for additional options.

⁴ Refer to Pall Food and Beverage SUPRApak module literature for additional guidelines on use.

SUPRApak M Series-WA Filter Housings

Technical Information

SUPRApak M Series-WA housings are supplied without accessories.

Nominal Dimensions in mm (inches) —
for specific dimensions, please contact Pall⁵

	M-100	M-200 M-210	M-300 M-311 M-320	M-400 M-421
A	1052 (41.4)	1305 (51.4)	1558 (61.3)	1811 (71.3)
B ⁶	416 (16.4)	416 (16.4)	416 (16.4)	416 (16.4)
C ⁶	283 (11.1)	283 (11.1)	283 (11.1)	283 (11.1)
D ⁶	133 (5.2)	133 (5.2)	133 (5.2)	133 (5.2)
E	359 (14.1)	359 (14.1)	359 (14.1)	359 (14.1)
F	324 (12.8)	324 (12.8)	324 (12.8)	324 (12.8)

⁵ Pall Corporation reserves the right to make dimensional modifications at any time, maintaining the same fit, form, and function. Please request a general arrangement drawing if exact dimensions are required.

⁶ Indicated dimension is for DIN 11851 connection. Dimensions for clamp coupling connection are B: 407.2 (16.0), C: 278.6 (11.0) and D: 128.6 (5.1).

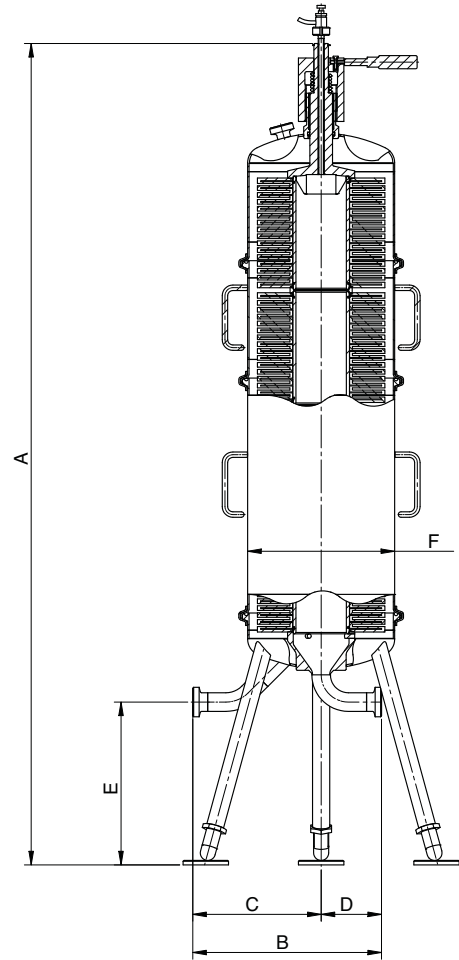


Figure 1: Dimensional information

Volume and Weight

	M-100	M-200	M-210	M-300	M-311	M-320	M-400	M-421
Volume L (US gal)	27 (7.1)	47 (12.4)	47 (12.4)	68 (18)	68 (18)	68 (18)	88 (23.2)	88 (23.2)
Weight kg (lb)	39.6 (87.3)	45.7 (100.8)	55.5 (111.4)	51.8 (114.2)	61.4 (135.4)	56.7 (125.0)	58 (127.9)	67.6 (149.1)

Standard Documentation⁷

- Declaration of Conformity for CE marking
- Certificate of Conformity to PED
- Material Traceability and Conformity Certificates
- Certificate of surface finish
- Installation / Operating Manual (IOM)
- ATEX Certificate (if selected)

⁷ Additional documentation can be provided on request. Such documentation can include X-ray plans and reports, weld plan, welder qualification, and wall thickness protocol. The supply of any of these documents will require a special quotation.

This is a guide to the part numbering structure and possible options only. For availability of specific options, please contact Pall.

Part Number: **SPM WA**
 Table 1 Table 2 Table 3 Table 4

Example Part Number: SPMWA400TW23LA

Note: See bold reference codes in the tables.

Table 1

Code	Bowl Height and Configuration	Number of SUPRApak Modules
100	1-High Bowl	1
200	2-High Bowl	2
210	2-High Split Bowl	1 or 2
300	3-High Bowl	3
311	3-High Split Bowl	1, 2, or 3
320	3-High Split Bowl	1 or 3
400	4-High Bowl	4
421	4-High Split Bowl	1, 2, 3, or 4

Table 2

Code	Filtrate Vent Option
TW	No Vent
TV	With Vent (DN 6 Hose Tail)

Table 3

Code	Inlet/Outlet Connection Type
NW40	DN 40 DIN 11851
23L	1.5" Clamp Coupling

Table 4

Code	ATEX Documentation
A	ATEX (94/9/EC) Classification: Group II, Category 2, (Zones 1/21 and 2/22) Documentation
N	No ATEX Documentation

Optional Accessories

Part No.	Description	Details
25590-0226 ⁸	Hot Fluid Core	316L SS
25590-0226-01	Hot Fluid Core Extension Z1	316L SS
25590-0226-02	Hot Fluid Core Extension Z2	316L SS
ACS1018AS	Blind Cap	DN 25
ACS1019AS	Blind Cap	Clamp Coupling 1 inch
066001-010-02	Hook Spanner	DN 10-20
066001-025-02	Hook Spanner	DN 25-65
20040118-12	1-2 High Lifting Device	Supplied with Spacer
20040118-34	3-4 High Lifting Device	Supplied with Spacer

⁸ For hot fluid filtration (>40 °C/ >104 °F) select Hot Fluid Core for the top module in the stack and add Hot Fluid Core Extension Z1 (1-high section) and/or Hot Fluid Core Extension Z2 (2-high section) as required. A 1-high housing will only require the Hot Fluid Core.



Figure 2: Stainless steel core for hot fluid filtration



Figure 3: Optional filtrate vent



Figure 4: Hooks grab the bottom of the SUPRApak module stack for easy handling.

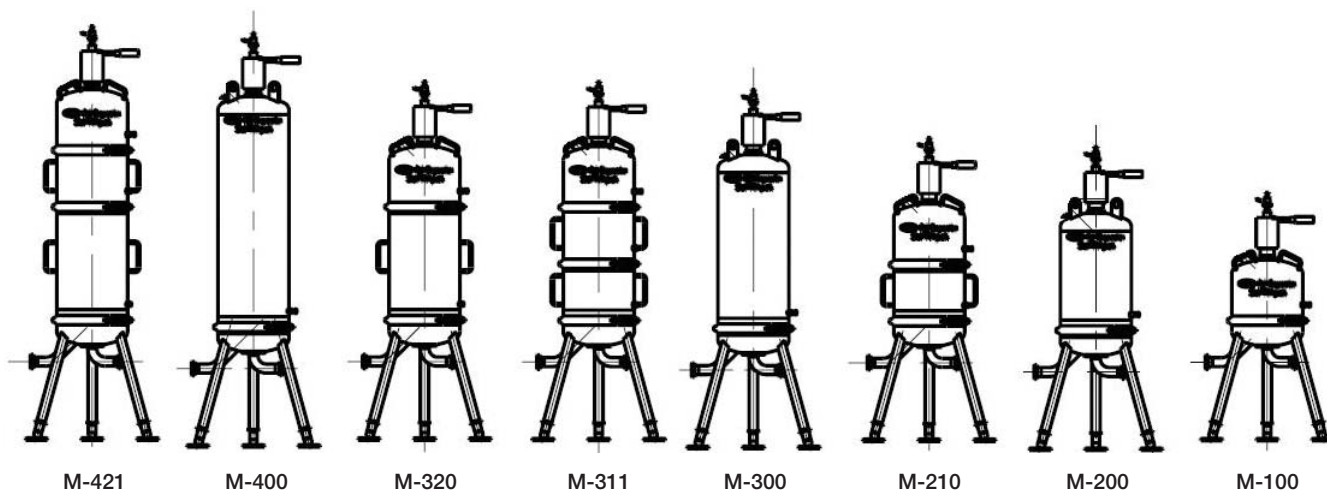


Figure 5: Single and split bowl designs offer flexibility.

Spare Parts

Part No.	Description	Details
ACS1004AM ⁹	Housing Z1 Extension Kit	Extension piece, V-Band, O-Ring
ACS1005AM ⁹	Housing Z2 Extension Kit	Extension piece, V-Band, O-Ring
ACS1006AM	Housing V-Band	304 SS
ACS1007EM	Housing O-Ring	EPDM
20031660-S	Torque Unit	
20031632-S	Torque Unit Rod Seal	
20037514-S	Torque Wrench	
EA00144	Vent Tap Spindle Assembly (Torque Unit)	
20031634-S	Torque Unit Guide Bush	
20031636-S	Torque Unit Clamp Nut	

⁹ Adding new intermediate segments to the housing after original supply will require pressure rating reapproval by a local Notified Body.



Figure 6: The torque unit is an external tensioning device with preset torque limit, which provides reliable and secure operation without bypass.



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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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