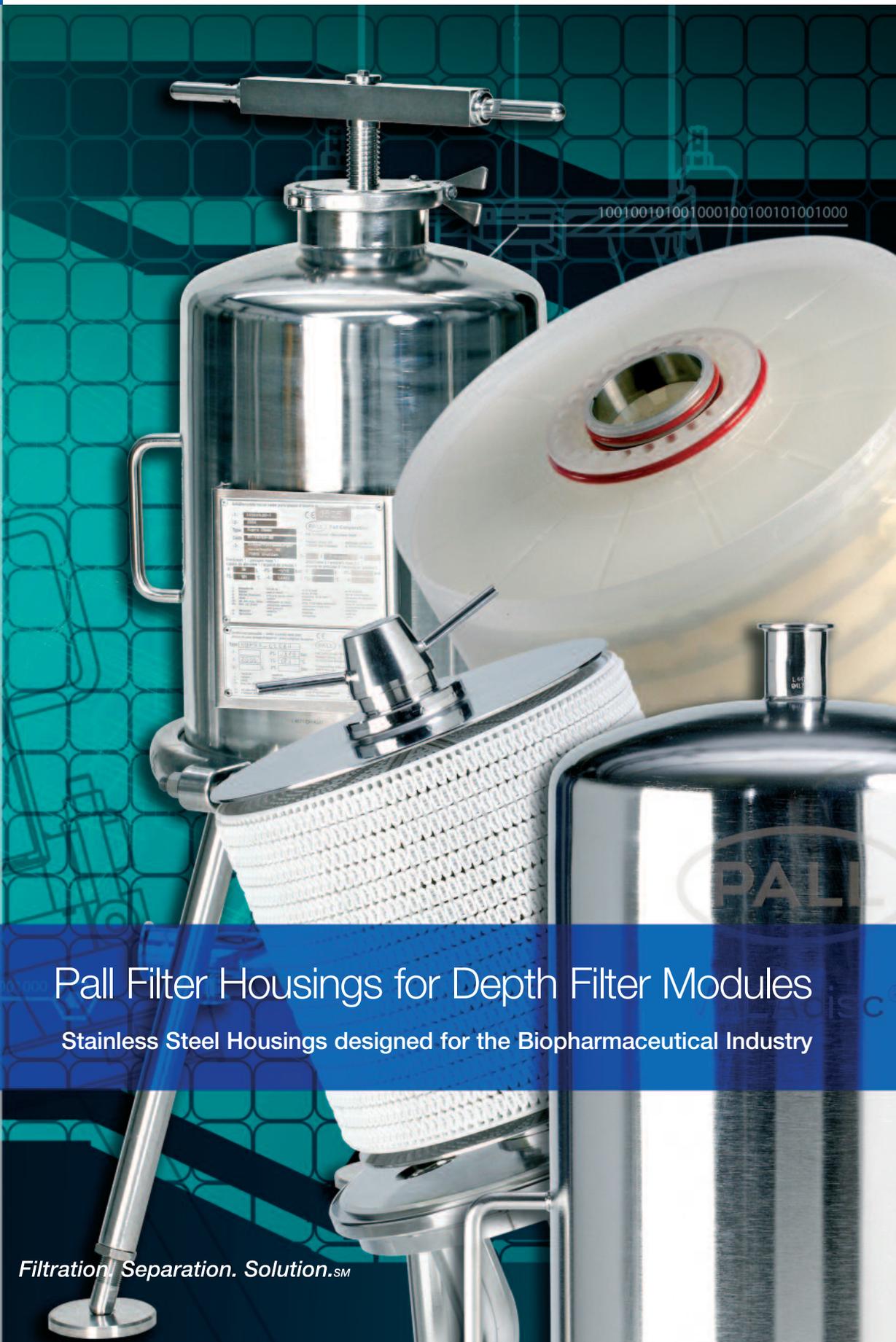




Life Sciences

USD 2452^(a)



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Pall Filter Housings for Depth Filter Modules

Stainless Steel Housings designed for the Biopharmaceutical Industry

Filtration. Separation. Solution.SM

Pall Filter Housings for Depth Filter Modules

Stainless Steel Housings designed for the Biopharmaceutical Industry



Pall Corporation has used design, cost, and industry expectation as the creative foundation of our depth filter technology. In combination with our stringent manufacturing standards, we have developed a comprehensive line of depth filter modules, housings, and capsules for all levels of biopharmaceutical processing. Our depth filter technology is ideal for the following applications:

- Filtration of fermenter broth
- Removal of activated carbon
- Serum filtration
- Filtration of toxic products
- Blood plasma fractionation
- Removal of filter aid and precipitates
- Separation of mammalian cells
- Removal of catalysts

Process Map for Depth Filtration



1. LAB SCALE

Conduct your filterability trials using our disposable SUPRAcap 60 capsule. It is 26 cm² in area and available in double-layer, carbon-impregnated, and pharmaceutical-series media. For more information see Pall publication USD 2208 SUPRAcap 60 Depth filters

2. PROCESS DEVELOPMENT

Pall SUPRAcap 100 capsules are ideal for process development and small scale production. The capsule is capable of being manifolded in a very small footprint that can process hundreds of liters of process solution. For more information see Pall publication USD 2463 SUPRAcap 100 Depth Filter Capsule



Veladisc PED Code Module Housings

Pall depth filter housings enhance the effective filtration of our modules by reducing differential pressure and hold-up volume, while minimizing cleaning costs. **Pall** applies advanced manufacturing techniques to reduce product contact surface area and minimize the possibility of bacterial retention.

Veladisc ASME Code Module Housings

Veladisc ASME Code Housings are non-customizable and low cost, designed in accordance with ASME Section VIII Division 1. The surface finish, material grade, and speed of manufacture meet or exceed biopharmaceutical industry standards. These housings are intended for process development, small scale, and commercial scale filtration. The ASME Veladisc housing is a standard inventory item for the Western Hemisphere. Please contact your local **Pall** representative for availability.

Pall Advanta™ Housings for SUPRAdisc™ Modules

Pall Advanta Housings for **SUPRAdisc** Modules were developed for integration into custom-built systems and uniquely large scale applications. The design is derived from a base model validated for clean-in-place, steam-in-place, and full drainability in accordance with ASME BPE-2005 and are updated to future addenda. Customized designs include split-dome, skid integration, and housing bowl lifting devices.

Pall Advanta Housings for SUPRAcap™ 200 Modules

This unique pressure vessel is designed specifically for the **SUPRAcap** 200 encapsulated module. This product utilizes the same filter media as standard **SUPRAdisc** and **SUPRAdisc II** modules, but is designed to protect operators from potentially dangerous fumes, catalysts, or activated carbon. The compartmentalized design of the pressure vessel minimizes product contact for easy cleaning.

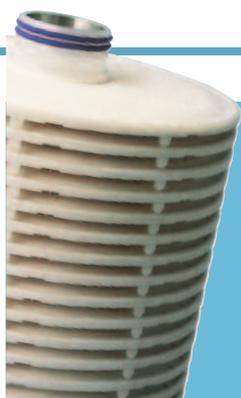
Additional Information about Depth Filter Modules

Pall depth filter modules combine the advantages of conventional depth filter sheets with enclosed filters. We offer a completely scalable product line:

- Small-scale **SUPRAcap** 60 Depth Filter capsule, 26 cm² (2.8 in.²)
- Process development **SUPRAcap** 100 capsules, 0.09 – 0.27 m² (0.9 – 2.9 ft²), capable of being manifolded to increase surface area
- **SUPRAdisc** modules capable of holding an industry maximum of 5.0 m² (53 ft²) per module.

Each module is capable of holding media designed to filter products at a retention of 0.1 – 70 µm with the lowest extractable concentrations in the industry.

Refer to **Pall** brochure reference USD 2462 **Pall** Filter Modules and Capsules with Seitz® Depth Filter Sheets for additional details on this technology.



3. CLINICAL MANUFACTURING

Pall Veladisc Filter Housings are low-cost housings that can be delivered quickly. They are capable of holding our SUPRAdisc I or II 12 in. & 16 in. depth filter modules.

4. PROCESS SCALE

Full scale manufacturing plants require customized depth filter housings. **Pall Advanta** Housings for SUPRAdisc Modules are capable of holding up to 100 m² within a single housing.



Veladisc PED Filter Housing

Cost-effective Stainless Steel Housings Optimized for Biopharmaceutical Applications



Veladisc PED-code Filter Housings are a low-cost depth filter solution for process development and optimization studies. The materials of construction and manufacturing techniques were selected to meet the requirements of PED 97/23/EC and the biopharmaceutical industry. Our housings have no product dead legs to avoid microbial contamination and maximize product recovery.

Features and Benefits

Each housing can be designed with the following optional features:

- Rathman bolting clamps or V-band clamp
- Peroxide-cured silicone or EPDM O-ring seals for complete chemical compatibility
- Flat gasket or double O-ring format to hold 284 mm (12 in.) or 410 mm (16 in.) filter modules
- Split-dome design for height sensitive areas
- High quality surface finish of internal sets, electropolished



Specifications – Table 1: Housing Design Details

Materials of Construction	
Contact Surfaces	AISI 316L Stainless Steel (DIN 1.4404) ⁽¹⁾
Non-product Contact Surfaces	AISI 304/304L Stainless Steel (DIN 1.4301/1.4306)
Internal Adapter Assembly	AISI 316L Stainless Steel (DIN 1.4404)
Design Specifications	
Surface Finish	Internal: typically Ra + 0.6 µm (24 µin.) electropolished External: Ra + 1.6 µm (63 µin.) electropolished
Pressure Rating ⁽²⁾	-1 to 8 barg (-14.5 to 116 psig) for bolting clamp closure -1 to 5 barg (-14.5 to 73 psig) for single V-band closure -1 to 4 barg (-14.5 to 58 psig) for double V-band closure
Temperature Rating	-10 to 150 °C

(1) Alternate materials available upon request

(2) Safety pressure release valve must be installed in upstream pipeline to protect vessel

Veladisc PED Filter Housing

Housing and Internal Assembly Dimensions and Weights

Table 2: Housing Dimensions and Weights — 284 mm (12 in.) Module

Number of Modules per Stack	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
1	No	958 (38.0)	558 (22.0)	318 (13.0)	420 (17.0)	38 (10)	18 (40)	72 (159)
2	No	1258 (50.0)	858 (33.8)	318 (13.0)	690 (27.0)	60 (16)	25 (55)	79 (174)
3	Yes	1558 (61.0)	1158 (45.6)	318 (13.0)	960 (38.0)	83 (22)	33 (73)	87 (192)
4	Yes	1858 (73.0)	1458 (57.4)	318 (13.0)	1230 (49.0)	105 (28)	40 (88)	94 (207)

Table 3: Internal Assembly Dimensions and Weights — 284 mm (12 in.) Module

Number of Modules per Stack	Dimensions E, mm (in.)		Weight, kg (lb)	
	Flat Gasket	Double O-ring	Flat Gasket	Double O-ring
1	367 (14.4)	344 (13.5)	6.0 (13.2)	4.5 (9.9)
2	636 (25.0)	647 (25.5)	7.0 (15.4)	6.0 (13.2)
3	905 (35.6)	905 (35.6)	8.0 (17.6)	7.5 (16.5)
4	1174 (46.2)	1174 (46.2)	9.0 (19.8)	9.0 (19.8)

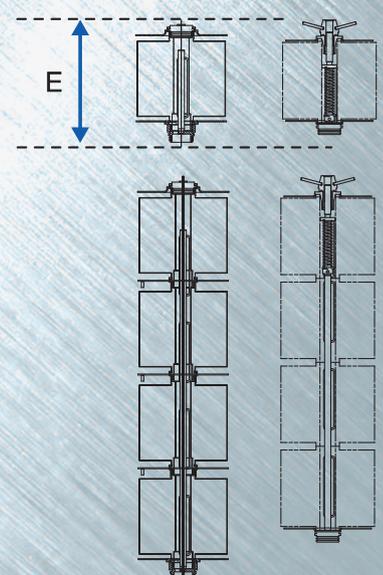
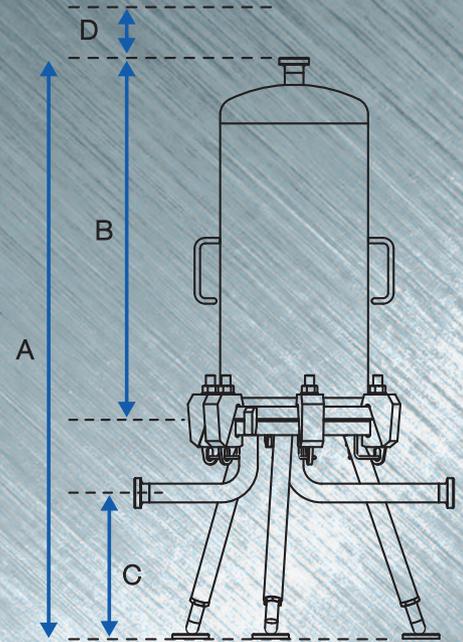
Table 4: Housing Dimensions and Weights — 410 mm (16 in.) Module

Number of Modules per Stack	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
1	No	987 (39.0)	572 (22.0)	318 (13.0)	420 (17.0)	66 (17)	27 (60)	113 (249)
2	No	1287 (51.0)	872 (34.0)	318 (13.0)	690 (27.0)	111 (29)	36 (79)	123 (271)
3	Yes	1587 (61.0)	1172 (46.0)	318 (13.0)	960 (38.0)	161 (42)	47 (104)	133 (293)
4	Yes	1887 (74.0)	1512 (59.0)	318 (13.0)	1230 (49.0)	211 (56)	57 (126)	143 (315)

Table 5: Internal Assembly Dimensions and Weights — 410 mm (16 in.) Module

Number of Modules per Stack	Dimensions E, mm (in.)		Weight, kg (lb)	
	Flat Gasket	Double O-ring	Flat Gasket	Double O-ring
1	367 (14.4)	344 (13.5)	9.7 (21.3)	8.5 (18.7)
2	636 (25.0)	647 (25.5)	10.7 (23.5)	11.7 (25.7)
3	905 (35.6)	905 (35.6)	11.7 (25.7)	14.9 (32.8)
4	1174 (46.2)	1174 (46.2)	12.7 (27.9)	18.1 (39.8)

Figure 1: PED Housing Dimensions (for illustrative purposes only)

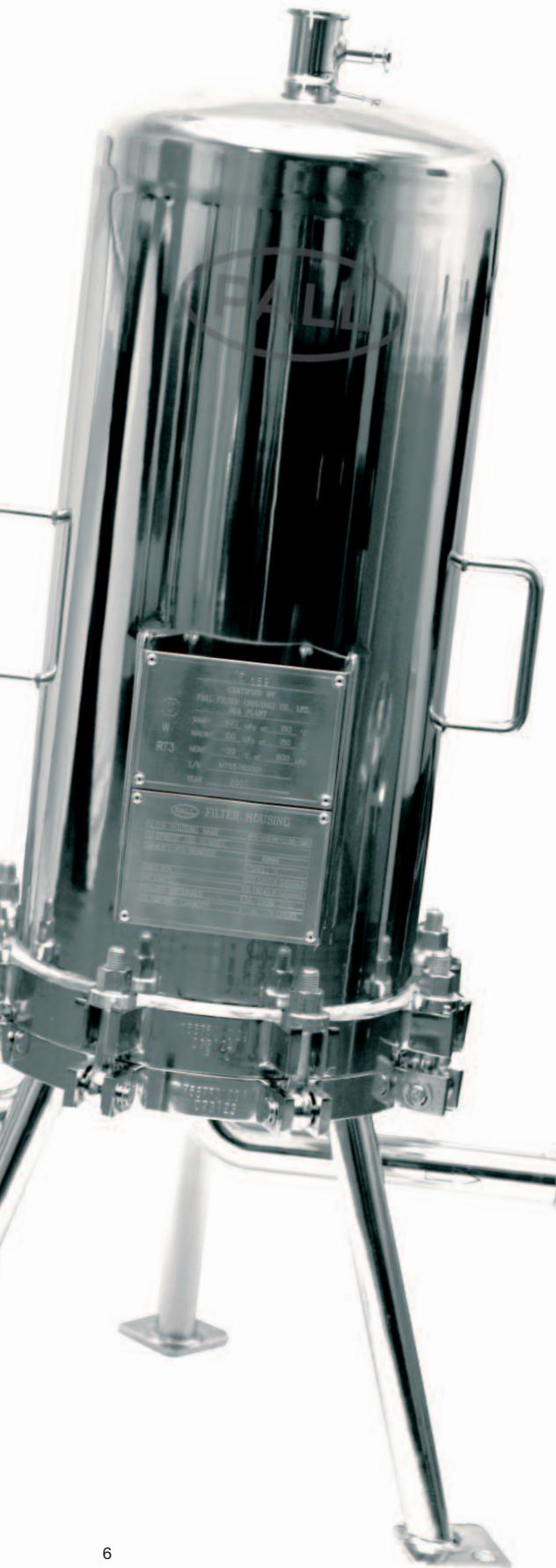


- A: Overall Height
- B: Housing Dome Height
- C: Housing Height from Centerline to Floor
- D: Housing Dome Removal
- E: Height of Double O-ring and Flat Gasket Internal Assembly

* Total weight does not include the weight of the internal set or modules designed to fit inside the housing

Veladisc ASME Code Module Housings

Cost-effective Stainless Steel Housings



Pall Veladisc ASME Code Module Housings are a low-cost depth filter housing designed for clinical and small scale manufacture. Standard versions of the Veladisc line include 1 to 4 high modules in 284 mm (12 in.) or 410 mm (16 in.) format for easy linear scale up of your operation. Our standard designs are available in exceptionally short lead times with a full documentation package.

For assistance in selecting a housing to meet your process needs, including details about code certification, please contact our technical services department.

Features and Benefits

- Split-dome design available for height-sensitive areas
- Peroxide-cured silicone or EPDM O-ring seals for complete chemical compatibility
- Flat gasket or double O-ring format to hold 284 mm (12 in.) or 410 mm (16 in.) modules
- High-quality internal surface finish of internal sets, electropolished



Specifications – Table 6: Housing Design Details

Materials of Construction	
Contact Surfaces	AISI 316L Stainless Steel (DIN 1.4404) ⁽¹⁾
Non-product Contact Surfaces	AISI 304/304L Stainless Steel (DIN 1.4301/1.4306)
Internal Adapter Assembly	AISI 316L Stainless Steel (DIN 1.4404)
Design Specifications	
Surface Finish	Internal: typically Ra + 0.6 µm (24 µin.) electropolished External: Ra + 1.6 µm (63 µin.) electropolished
Pressure Rating ⁽²⁾	-1 to 8 barg (-14.5 to 116 psig)
Temperature Rating	-10 to 150 °C

(1) Alternate materials available upon request

(2) Safety pressure release valve must be installed in upstream pipeline to protect vessel

Veladisc ASME Code Module Housings

Housing and Internal Assembly Dimensions and Weights

Table 7: Housing Dimensions and Weights — 284 mm (12 in.) Module

Number of Modules per Stack	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
½	No	599 (23.6)	226 (8.9)	270 (10.6)	120 (4.7)	15 (4.0)	18 (40)	56 (124)
1	Yes	859 (33.8)	486 (19.1)	270 (10.6)	320 (12.6)	35 (9.3)	28 (62)	72 (159)
2	Yes	1159 (45.6)	786 (30.9)	270 (10.6)	600 (23.6)	61 (16.1)	42 (93)	88 (194)
3	Yes	1459 (57.4)	1086 (42.8)	270 (10.6)	880 (34.6)	85 (22.5)	54 (119)	102 (225)
4	Yes	1759 (69.3)	1386 (54.6)	270 (10.6)	1167 (46.0)	111 (29.4)	67 (148)	112 (247)

Table 8: Internal Assembly Dimensions and Weights — 284 mm (12 in.) Module

Number of Modules per Stack	Dimensions E, mm (in.)		Weight, kg (lb)	
	Flat Gasket	Double O-ring	Flat Gasket	Double O-ring
1	367 (14.4)	344 (13.5)	6.0 (13.2)	4.5 (9.9)
2	636 (25.0)	647 (25.5)	7.0 (15.4)	6.0 (13.2)
3	905 (35.6)	905 (35.6)	8.0 (17.6)	7.5 (16.5)
4	1174 (46.2)	1174 (46.2)	9.0 (19.8)	9.0 (19.8)

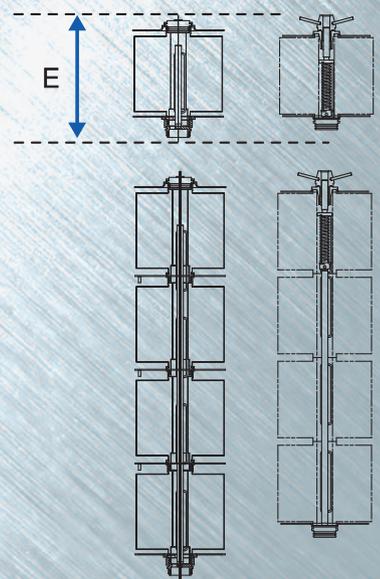
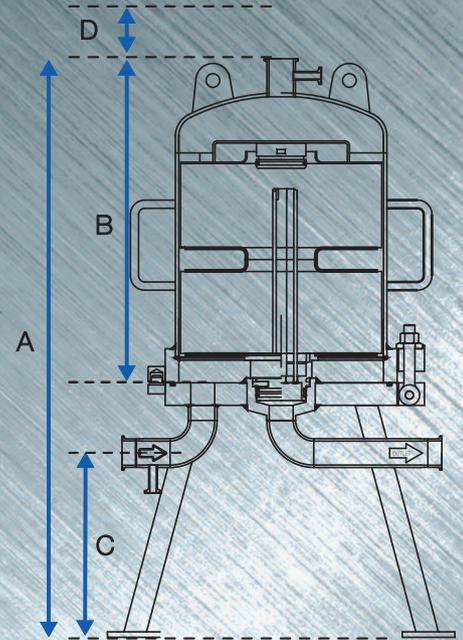
Table 9: Housing Dimensions and Weights — 410 mm (16 in.) Module

Number of Modules per Stack	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
1	Yes	903 (35.6)	518 (20.4)	270 (10.6)	320 (12.6)	70 (18.5)	51 (112)	110 (243)
2	Yes	1203 (47.4)	818 (32.2)	270 (10.6)	600 (23.6)	118 (31.2)	66 (145)	118 (260)
3	Yes	1503 (59.2)	1118 (44.0)	270 (10.6)	880 (34.6)	159 (42.0)	78 (172)	135 (298)
4	Yes	1803 (80.0)	1418 (55.8)	270 (10.6)	1144 (45.0)	214 (56.6)	92 (203)	145 (320)

Table 10: Internal Assembly Dimensions and Weights — 410 mm (16 in.) Module

Number of Modules per Stack	Dimensions E, mm (in.)		Weight, kg (lb)	
	Flat Gasket	Double O-ring	Flat Gasket	Double O-ring
1	367 (14.4)	344 (13.5)	9.7 (21.3)	8.5 (18.7)
2	636 (25.0)	647 (25.5)	10.7 (23.5)	11.7 (25.7)
3	905 (35.6)	905 (35.6)	11.7 (25.7)	14.9 (32.8)
4	1174 (46.2)	1174 (46.2)	12.7 (27.9)	18.1 (39.8)

Figure 2: ASME Housing Dimensions (for illustrative purposes only)



- A: Overall Height
- B: Housing Dome Height
- C: Housing Height from Centerline to Floor
- D: Housing Dome Removal
- E: Height of Double O-ring and Flat Gasket Internal Assembly

* Total weight does not include the weight of the internal set or modules designed to fit inside the housing

Pall Advanta Housings for SUPRAdisc Modules

Designed Performance with Options for Customization



The **Pall Advanta** for **SUPRAdisc** housing line is Pall's flagship housing technology for customized designed solutions. The manufacture of each housing begins with base engineering drawings modified to meet all your design and documentation requests.

Features and Benefits

Each housing can be designed with the following optional features:

- Validated for steam-in-place (SIP), cleaning-in-place (CIP)/riboflavin removal, and drainability per ASME BPE-2005
- Complete documentation package available on request, including Drainability certificate, Cleanability certificate, material certificates, vessel calculations, and quality plan
- Available in single and multi-round configurations
- All designs available with split dome for housing height restrictions
- Lifting devices available for both housing bowl and internal sets



Specifications – Table 11: Housing Design Details

Materials of Construction	
Contact Surfaces	AISI 316L Stainless Steel (DIN 1.4404) ⁽¹⁾
Non-product Contact Surfaces	AISI 304/304L Stainless Steel (DIN 1.4301/1.4306)
Internal Adaptor Assembly	AISI 316L Stainless Steel (DIN 1.4404), Nitronic 60
Design Specifications	
Surface Finish	Internal: Ra + 0.4 µm (15 µin.) electropolished External: Ra + 0.8 µm (32 µin.) electropolished
Pressure Rating ⁽²⁾	-14.5 to 150 psig (-1 to 10 barg)
Temperature Rating	-10 to 150 °C

(1) Alternate materials available upon request

(2) Safety pressure release valve must be installed in upstream pipeline to protect vessel

Pall Advanta Housing for SUPRAdisc Modules

Housing and Internal Assembly Dimensions and Weights

Table 12: Housing Dimensions and Weights — 284 mm (12 in.) Module

Number of Modules per stack	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
1	No	939 (37.0)	512 (20.2)	271 (10.7)	380 (15.0)	33 (8.8)	11.5 (25.3)	56 (123.2)
2	No	1269 (50.0)	842 (33.2)	271 (10.7)	710 (28.0)	60 (15.9)	19.5 (42.9)	64 (140.8)
3	No	1599 (63.0)	1172 (46.1)	271 (10.7)	1040 (40.95)	87.5 (23.1)	27.5 (60.5)	72 (158.4)
4	No	1929 (76.0)	1502 (59.1)	271 (10.7)	1380 (54.3)	114.5 (30.5)	35.5 (78.1)	80 (176)

Table 13: Internal Assembly Dimensions and Weights — 284 mm (12 in.) Module

Number of Modules per stack	Dimensions E, mm (in.)		Weight, kg (lb)	
	Flat Gasket	Double O-ring	Flat Gasket	Double O-ring
1	367 (14.4)	344 (13.5)	6.0 (13.2)	4.5 (9.9)
2	638 (25.1)	647 (25.5)	7.0 (15.4)	6.0 (13.2)
3	905 (35.6)	905 (35.6)	8.0 (17.6)	7.5 (16.5)
4	1174 (46.2)	1174 (46.2)	9.0 (19.8)	9.0 (19.8)

Table 14: Housing Dimensions and Weights — 410 mm (16 in.) Module

Number of Modules per Stack	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
1	No	951 (37.4)	512 (20.2)	257 (10.1)	380 (15.0)	61 (16.5)	38 (83.6)	116 (255.2)
2	No	1251 (49.3)	842 (33.1)	257 (10.1)	710 (28.0)	112 (29.5)	53 (116.6)	131 (288.2)
3	No	1611 (63.4)	1172 (46.1)	257 (10.1)	1040 (41.0)	163 (43)	68 (149.6)	146 (321.2)
4	No	1941 (76.4)	1502 (59.1)	257 (10.1)	1380 (54.3)	215 (57)	82 (180.4)	160 (352)

Table 15: Internal Assembly Dimensions and Weights — 410 mm (16 in.) Module

Number of Modules per Stack	Dimensions E, mm (in.)		Weight, kg (lb)	
	Flat Gasket	Double O-ring	Flat Gasket	Double O-ring
1	367 (14.4)	344 (13.5)	9.7 (21.3)	8.5 (18.7)
2	638 (25.1)	647 (25.5)	10.7 (23.5)	11.7 (25.7)
3	905 (35.6)	905 (35.6)	11.7 (25.7)	14.9 (32.8)
4	1174 (46.2)	1174 (46.2)	12.7 (27.9)	18.1 (39.8)

Table 16: Housing Dimensions and Weights – Three-round Module Housing

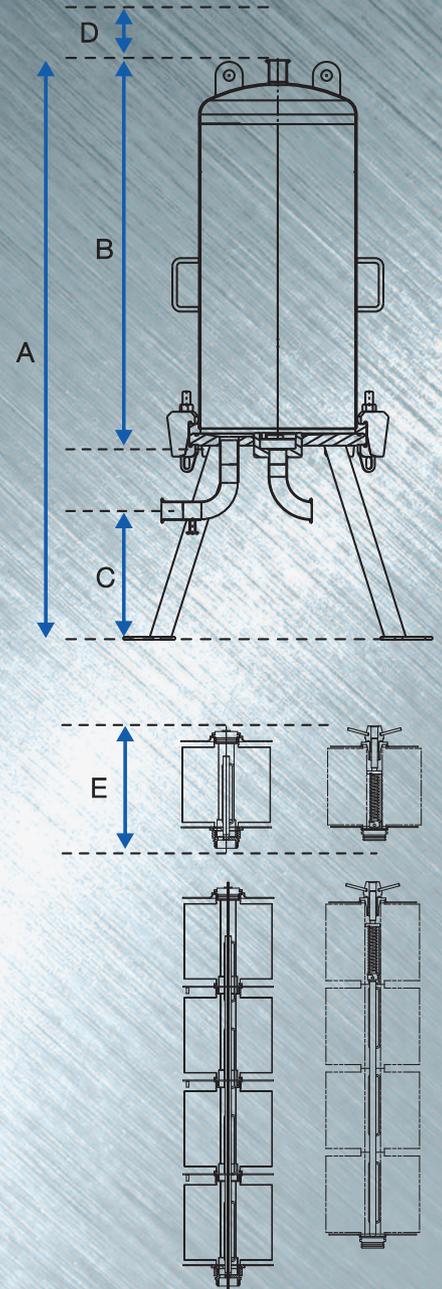
Number of Modules	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
2	No	1581 (62.2)	789 (31.1)	438 (17.2)	890 (35.0)	386 (102)	308 (677.6)	830 (1826)
3	No	1886 (74.3)	1094 (43.1)	438 (17.2)	1195 (47.1)	568 (150)	384 (844.8)	906 (1993.2)
4	No	2191 (86.3)	1399 (55.1)	438 (17.2)	1500 (59.1)	752 (199)	460 (1012)	982 (2160.4)

Table 17: Housing Dimensions and Weights – Four and Five-round Module Housings

Number of Modules	Internal Assembly	Dimensions				Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight (empty)* kg (lb)
		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			
2	No	1356 (53.4)	687 (27.0)	340 (13.4)	890 (35.0)	740 (195.5)	614 (1353.6)	1807 (3938.7)
3	No	1661 (65.4)	992 (39.1)	340 (13.4)	1195 (47.1)	1080 (285.3)	767 (1691.0)	1900 (4188.8)
4	No	1966 (77.4)	1297 (51.1)	340 (13.4)	1500 (59.1)	1420 (375.2)	800 (1763.6)	2000 (4409.2)

Figure 3: SUPRAdisc Module Housing Dimensions

(for illustrative purposes only)



- A: Overall Height
- B: Housing Dome Height
- C: Housing Height from Centerline to Floor
- D: Housing Dome Removal
- E: Height of Double O-ring and Flat Gasket Internal Assembly

* Total weight does not include the weight of the internal set or modules designed to fit inside the housing

Pall Advanta Housings for SUPRAcap 200 Modules

Unique Disposable Solution for Critical API and Biopharmaceutical Applications

Pall Advanta Housings for SUPRAcap 200 Modules are the only housings in the industry capable of holding encapsulated process scale modules with an identical flow path to traditional depth filter modules. Our encapsulated modules are offered in all of our media grades; therefore, selection of the appropriate filter area and media can be determined from previous filterability studies, without the need to revalidate a specific type or style of module.

Features and Benefits

- The combination of full encapsulation of the filter module and minimized contact with stainless steel surfaces yields significant reduction in cleaning costs
- Our capsule dramatically reduces void volume in comparison to traditional modules, and housing hold up volume is less than standard stainless steel housing
- No cross-contamination risks
- All components have material certification

Note: For additional information on SUPRAcap 200 Modules, please request Pall brochure USD 2295, SUPRAcap 200 Encapsulated Depth Filter Modules from your local Pall representative



Specifications – Table 18: Housing Design Details

Materials of Construction	
Contact Surfaces	AISI 316L Stainless Steel (DIN 1.4404) ⁽¹⁾
Non-product Contact Surfaces	AISI 316L Stainless Steel (DIN 1.4404)
Internal Adapter Assembly	Acetal Copolymer, 316L Stainless Steel or Hastelloy C22
Design Specifications	
Surface Finish	Internal (product-wetted parts): typically Ra + 0.4 µm (15 µin.) electropolished
	External: Ra + 0.8 µm (32 µin.) electropolished
Pressure Rating ⁽²⁾	-1 to 6 barg (-14.5 to 87 psig)
Temperature Rating	-10 to 150 °C

(1) Alternate materials available upon request

(2) Safety pressure release valve must be installed in upstream pipeline to protect vessel

Pall Advanta Housings for SUPRAcap 200 Modules

Housing and Internal Assembly Dimensions and Weights

Table 19: Housing Dimensions and Weights: PED Versions — 284 mm (12 in.) Module

Number of Modules per Stack	Dimensions			Housing Bowl Volume L (gal)	Housing Weight (empty)* kg (lb)
	A mm (in.)	B mm (in.)	C mm (in.)		
1	1175 (46.3)	482 (19.0)	-	28 (7.4)	70 (154.3)
2	1540 (60.6)	847 (33.3)	-	53 (14)	90 (198.4)
3	1905 (75.0)	482 (19.0)	745 (29.3)	79 (20.9)	115 (253.5)
4	2270 (89.4)	847 (33.3)	745 (29.3)	104 (27.5)	135 (297.6)

Table 20: Housing Dimensions and Weights: ASME Versions — 284 mm (12 in.) Module

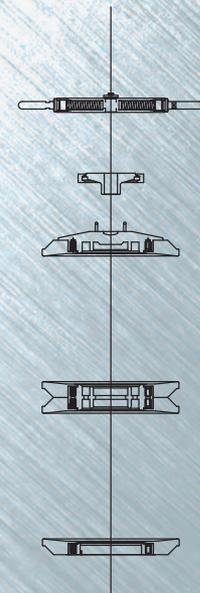
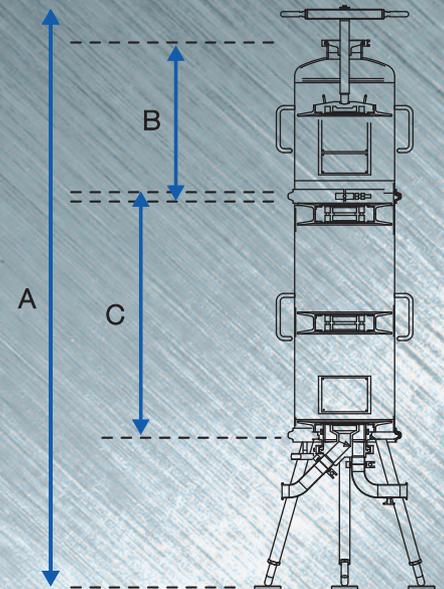
Number of Modules per Stack	Dimensions			Housing Bowl Volume L (gal)	Housing Weight (empty)* kg (lb)
	A mm (in.)	B mm (in.)	C mm (in.)		
1	1251 (49.3)	530 (20.9)	-	28 (7.4)	95 (209.4)
2	1543 (60.7)	832 (32.8)	-	53 (14)	115 (253.5)
3	1979 (77.9)	467 (18.3)	730 (28.7)	79 (20.9)	140 (308.6)
4	2344 (92.3)	832 (32.8)	730 (28.7)	104 (27.5)	160 (352.7)

* Total weight does not include the weight of the internal set or modules designed to fit inside the housing



Figure 4: SUPRAcap 200 Module Housing Dimensions

(for illustrative purposes only)



- A: Overall Height
- B: Housing Dome Height
- C: Extension Height

Ordering Information

Pall Part Number: Veladisc PED Depth Filter Housing

P											
Code	Module Diameter	Code	Number of Modules	Code	Closure Type	Code	Internal Adapter	Code	Inlet / Outlet		
284	284 mm (12 in.)	01	1	C	V-band	00	Flat Gasket	TC040 ⁽²⁾	DN40 Sanitary Clamp to DIN32676		
410	410 mm (16 in.)	02	2	H	Clamp Screws	88	Double O-ring	DN040 ⁽²⁾	DN40 Sanitary Clamp to DIN11851		
		03	3					TC050 ⁽²⁾	DN50 Sanitary Clamp to DIN32676		
		04	4					DN050 ⁽²⁾	DN50 Sanitary Clamp to DIN11851		

Sample Part Number: P284-01C88TC040

Pall Part Number: Veladisc ASME Depth Filter Housing

P								TC		-CMV	
Code	Module Diameter	Code	Number of Modules	Code	Closure Type	Code	Internal Adapter	Code	Inlet / Outlet		
12	284 mm (12 in.)	01	1	E	Swing Bolt Closure	00	Flat Gasket	1.5D	1 ½ in. Sanitary Clamp		
16	410 mm (16 in.)	02	2			88	Double O-ring				
		03	3								
		04	4								

Sample Part Number: P12-01E88TC1.5D-CMV

Pall Part Number: Pall Advanta Housing for SUPRADisc Modules

ADC											
Code	Design Basis	Code	Module Diameter	Code	Number of Modules	Code	Internal Adapter	Code	Inlet / Outlet Connections		
A	ASME VIII Div 1, U Stamp	12	284 mm (12 in.)	1	1	G	None	23L ⁽²⁾	1 ½ in. Sanitary Clamp		
D	PED 97/23/EC CAT III	16 ⁽¹⁾	410 mm (16 in.)	2	2	F	Flat Gasket	31 ⁽¹⁾	2 in. Sanitary Clamp		
				3	3	R	Double O-ring				
				4	4						

Code	Vent	Code	Drain	Code	Gasket Material
S	1 ½ in. gauge port with ½ in. side vent	D	½ in. Sanitary Clamp	H4	Peroxide cured silicone
N	None	N	None	J	Ethylene Propylene
				H31	Platinum cured silicone
				H1	FEP encapsulated Viton

Sample Part Number: ADCA121G23LSDH4

Pall Part Number: Pall Advanta Housing for SUPRAcap Modules

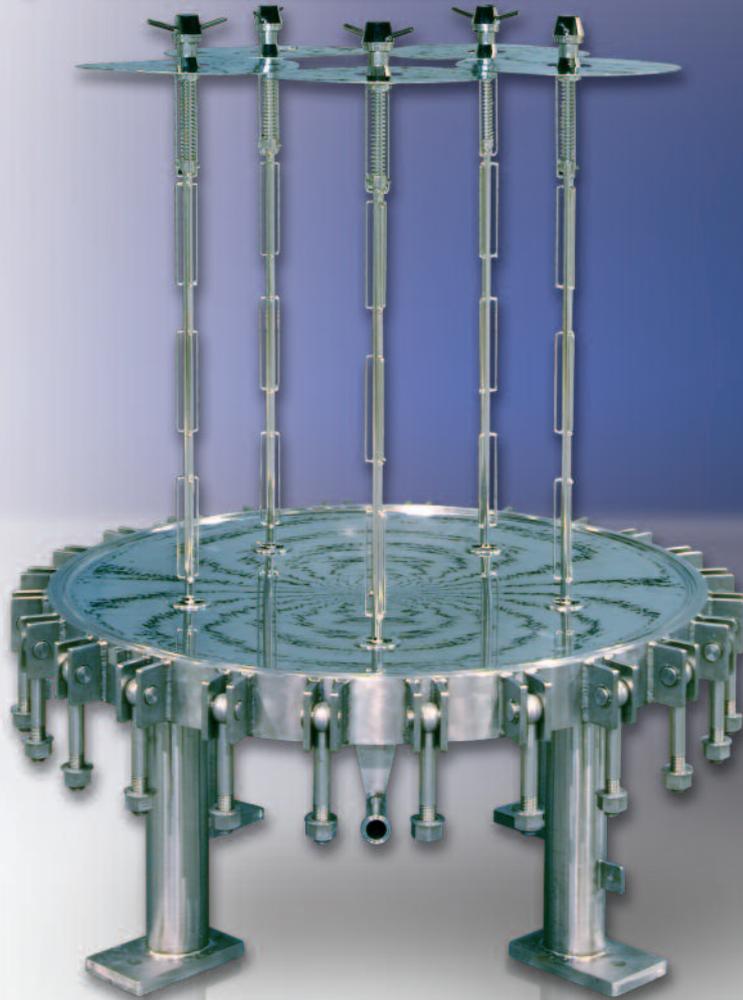
ACT		1		G		N			
Code	Module Diameter	Code	Number of Modules	Code	Inlet / Outlet	Code	Drain	Code	Gasket Material
A	ASME VIII Div 1, U Stamp	1	1	24T	DN40/ DIN 32676	D	½ in. Sanitary Clamp (ISO 2037/ BS4825)	H1	FEP encapsulated Viton
D	PED 97/23/EC CAT III	2	2	23L	1 ½ in. Sanitary Clamp (ISO 2037/ BS4825)	X	DN10 (DIN 32676)	H4	Peroxide cured silicone
		3	3			N	None		
		4	4						

Sample Part Number: ACTA11G23LNDH4

(1) 36 for 3-round, 46 for 4-round, 56 for 5-round. (2) for 284 mm (12 in.) modules only. (3) for 410 mm (16 in.) modules only. Note: Module height varies from 271.8 mm (10.7 in.) to 332.7 mm (13.1 in.) in height depending on adapter style and media type. Housing bowl height will not vary depending on module selected. Ordering information for multi-round vessels is available upon request. Please contact your Pall representative for details.



Pall Advanta Housing for
SUPRAdisc Module designed
to hold twenty, 16 in. Modules.





Life Sciences

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