



### Life Sciences

USD 2452

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# Pall Filter Housings for Depth Filter Modules

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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 cm<sup>2</sup> in area and available in double-layer, carbon-impregnated, and pharmaceutical-series media. For more information see Pall publication USD 2208 SUPRAcap 60 Depth filtrers

#### 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 Capusle

#### 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<sup>™</sup> Housings for SUPRAdisc<sup>™</sup> 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 cm<sup>2</sup> (2.8 in.<sup>2</sup>)
- Process development SUPRAcap 100 capsules, 0.09 – 0.27 m<sup>2</sup> (0.9 – 2.9 ft<sup>2</sup>), capable of being manifolded to increase surface area
- **SUPRAdisc** modules capable of holding an industry maximum of 5.0 m<sup>2</sup> (53 ft<sup>2</sup>) per module.

Each module is capable of holding media designed to filter products at a retention of  $0.1 - 70 \ \mu m$  with the lowest extractable concentrations in the industry.

Refer to **Pall** brochure reference USD 2462 **Pall** Filter Modules and Capsules with Seitz<sup>®</sup> 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 m<sup>2</sup> 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 $\leq$ 0.6 µm (24 µin.) electropolished
	External: Ra $\leq$ 1.6 µm (63 µin.) electropolished
Pressure Rating <sup>(2)</sup>	-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

### Veladisc PED Filter Housing

### Housing and Internal Assembly Dimensions and Weights

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

Internal		Dimensions			Housing	Dome	Total Weight
per Stack Assembly	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	L (gal)	kg (lb)	kg (lb)
No	958 (38.0)	558 (22.0)	318 (13.0)	420 (17.0)	38 (10)	18 (40)	72 (159)
No	1258 (50.0)	858 (33.8)	318 (13.0)	690 (27.0)	60 (16)	25 (55)	79 (174)
Yes	1558 (61.0)	1158 (45.6)	318 (13.0)	960 (38.0)	83 (22)	33 (73)	87 (192)
Yes	1858 (73.0)	1458 (57.4)	318 (13.0)	1230 (49.0)	105 (28)	40 (88)	94 (207)
	Internal   Assembly   No   No   Yes   Yes	Internal Assembly     A mm (in.)       No     958 (38.0)       No     1258 (50.0)       Yes     1558 (61.0)	Internal Assembly     A mm (in.)     B mm (in.)       No     958 (38.0)     558 (22.0)       No     1258 (50.0)     858 (33.8)       Yes     1558 (61.0)     1158 (45.6)       Yes     1858 (73.0)     1458 (57.4)	Internal Assembly     Image: Communication of the communi	Internal Assembly     Image: Complexity of the c	Internal Assembly     Image: Dimensions     Housing Volume L (gal)       No     958 (38.0)     558 (22.0)     318 (13.0)     D mm (in.)     38 (10)       No     958 (36.0)     558 (22.0)     318 (13.0)     420 (17.0)     38 (10)       No     1258 (50.0)     858 (33.8)     318 (13.0)     690 (27.0)     60 (16)       Yes     1558 (61.0)     1158 (45.6)     318 (13.0)     960 (38.0)     83 (22)       Yes     1858 (73.0)     1458 (57.4)     318 (13.0)     1230 (49.0)     105 (28)	Internal Assembly     Image:

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

Number of Modules per Stack	Dimensions	s 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 Internal per Stack Assembly			Dimensions			Housing	Dome	Total Weight
	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	L (gal)	kg (lb)	kg (lb)	
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)	

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

## Figure 1: PED Housing Dimensions

(for illustrative purposes only)





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

### 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 $\leq$ 0.6 µm (24 µin.) electropolished
	External: Ra $\leq$ 1.6 µm (63 µin.) electropolished
Pressure Rating <sup>(2)</sup>	-1 to 8 barg (-14.5 to 116 psig)
Temperature Rating	-10 to 150 °C

(1) Alternate materials available upon request

### Veladisc ASME Code Module Housings Housing and Internal Assembly Dimensions and Weights

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

Number	Number of Modules Internal per Stack Assembly		Dimensions				Dome	Total Weight
per Stack		A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	L (gal)	kg (lb)	(empty)* kg (lb)
1/2	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	s 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

Numberof Modulesper StackAssembly			Dimer	nsions	Housing Volume L (gal)	Dome Weight kg (lb)	Total Weight	
	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)			kg (lb)	
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	s 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)	

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

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





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

## 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.

Certificate of

Certificate

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#### 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



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 $\leq$ 0.4 µm (15 µin.) electropolished
	External: Ra $\leq$ 0.8 µm (32 µin.) electropolished
Pressure Rating <sup>(2)</sup>	-14.5 to 150 psig (-1 to 10 barg)
Temperature Rating	-10 to 150 °C

(1) Alternate materials available upon request

### 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 Internal per stack Assembly	Internal		Dimer	nsions	Housing	Dome	Total Weight	
	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	L (gal)	kg (lb)	kg (lb)	
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	s 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	Internal		Dimensions			Housing	Dome	Total Weight
per Stack	Assembly	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	L (gal)	kg (lb)	kg (lb)
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	s 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	Internal	Dimensions				Housing	Dome	Total Weight
of Modules	Assembly	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	L (gal)	kg (lb)	kg (lb)
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	Internal	Dimensions			Housing	Dome	Total Weight	
of Modules	Assembly	A mm (in.)	B mm (in.)	C mm (in.)	D mm (in.)	L (gal)	kg (lb)	kg (lb)
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 (3130.6)	2000 (4409.2)

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

#### Figure 3: **SUPRAdisc Module** Housing Dimensions





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

### 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 $\leq$ 0.4 $\mu$ m (15 $\mu$ in.) electropolished
	External: Ra $\leq$ 0.8 µm (32 µin.) electropolished
Pressure Rating <sup>(2)</sup>	-1 to 8 barg (-14.5 to 116 psig)
Temperature Rating	-10 to 150 °C

(1) Alternate materials available upon request

### 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		Dimensions	Hausian David		
of Modules per Stack	A mm (in.)	B mm (in.)	C mm (in.)	Volume L (gal)	(empty)* kg (lb)
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		Dimensions	Housing Roud	Hereine Meinht	
Stack	A mm (in.)	B mm (in.)	C mm (in.)	Volume L (gal)	(empty)* kg (lb)
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 or





A: Overall HeightB: Housing Dome HeightC: Extension Height



### Ordering Information

#### Pall Part Number: Veladisc PED Depth Filter Housing Р Module Number of Modules Internal Code Diameter Code Code Closure Type Code Adapter Code Inlet / Outlet 01 С DN40 Sanitary 284 284 mm 1 V-band 00 Flat Gasket TC040<sup>(2)</sup> (12 in.) Clamp to DIN32676 02 2 н Clamp Screws 88 Double O-ring 410 410 mm 3 03 DN40 Sanitary DN040<sup>(2)</sup> (16 in.) Clamp to DIN11851 04 4 DN50 Sanitary TC050<sup>(3)</sup> Clamp to DIN32676 DN50 Sanitary DN050<sup>(3)</sup> Clamp to DIN11851 Sample Part Number: P284-01C88TC040 Pall Part Number: Veladisc ASME Depth Filter Housing Ρ тс -CMV Number of Modules Module Internal

Code

Е

**Closure Type** 

Swing Bolt Closure

Code

00

88

Adapter

Flat Gasket

Double O-ring

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

Diameter

284 mm

(12 in.)

410 mm

(16 in.)

Code

12

16



Code

01

02

03

04

1

2

3

4





Sample Part Number: ADCA121G23LSDH4

Pall Part Number: Pall Advanta Housing for SUPRAcap Modules



#### 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.

Inlet / Outlet

1 ½ in. Sanitary Clamp

Code

1.5D



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