

'Three-Sixteen L'



Coded Stainless Steel Filter Housings 178mm diameter – PAS, PMS and PRS style

The 'Pall' multistack 'Three-Sixteen L' high performance 316L stainless steel P-series housings are designed and manufactured in accordance with A.D. Merkblatter. Pall's wide experience in housing manufacture and filtration technology offers the user of the PAS, PMS and PRS range of housings many benefits: crevice-free construction, easy-to-use closures, quick cartridge change, and 10 bar gauge working pressure at temperatures up to 185°C. With a choice of vessel/cartridge styles and seal material, the housings provide exceptional versatility for a wide range of applications, including:–

Steam	Surface Coatings	Printing Inks
Power Generation	Plating	Plastics
Water Treatment	Photochemicals	Magnetic Coatings
Oil Petrochemical	Chemicals	

All of the PAS, PMS and PRS housings are designed and manufactured by Pall to quality standards which are approved to ISO 9001 (BS 5750 part 1).

Features and benefits of 'Pall' PAS, PMS and PRS style housings:

- Coded to A.D. Merkblatter.
- Large vent connection for rapid venting.
- All fluid contact surfaces manufactured from 316L stainless steel.
- Glass beaded and passivated surface finish provides maximum resistance to corrosion and good cosmetic appearance.
- High security, quick action cartridge changeout.
- Hydrodynamically designed inlet and outlet connections ensure excellent flow characteristics.
- Large drain located upstream to minimise fluid hold-up volume.
- Quality Assurance systems to ISO 9001.

<i>Materials of construction:</i>	All 316L stainless steel except:	
	Rathmann clamps:	Veralit nickel plated carbon steel
	Clamp mounting ring:	304 stainless steel
	Legs:	304 stainless steel
	Footpads:	304 stainless steel

Vessel closure: Rathmann clamps

Surface finish: Glass beaded and passivated

Inlet/outlet connections: 50mm BS4504 T16 flange

Vent connections: ½" BSPT male

Drain connections: ½" BSPT male

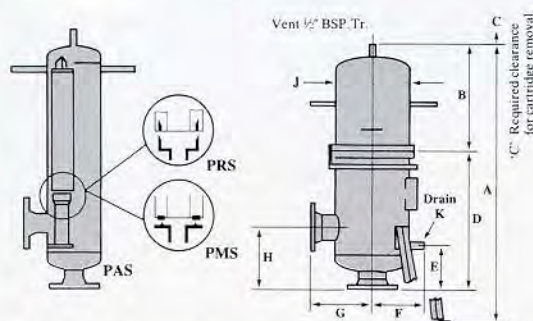
Design code: A.D. Merkblatter

Filtration of gases, steam and for sterilisation purposes:

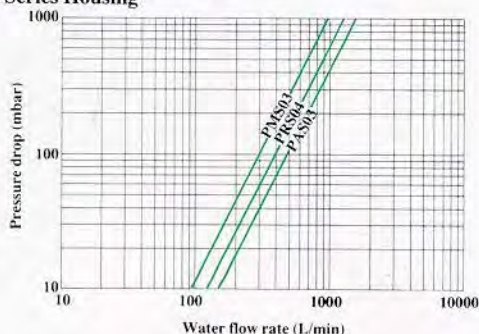
These housings may be used at temperatures up to 150°C if ethylene propylene seals are fitted or up to 185°C if Viton or FEP encapsulated Viton seals are fitted.



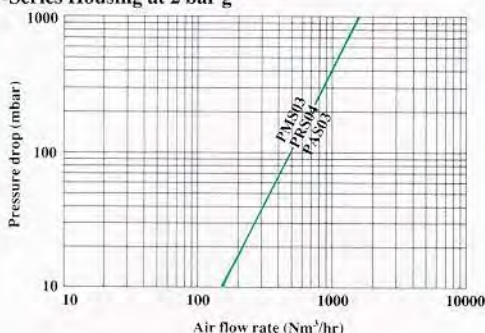
Technical Data



Water Flow/Pressure Drop for 178mm Diameter P-Series Housing



Air Flow/Pressure Drop for 178mm Diameter P-Series Housing at 2 bar g



Pressure Drop

The liquid flow/pressure drop characteristics refer to the empty housing only for water at 20°C. For other liquids, multiply pressure drop by the specific gravity.

The air flow/pressure drop characteristics refer to the empty housing only for air at 20°C. Flow rates relate to air (Nm³/hr) at 2 bar gauge pressure (3 bar absolute). Pressure drops for other pressures may be obtained by multiplying the pressure drop at 2 bar g by the factor shown in the following table:

Working pressure (bar g)	1	2	3	4	5	6	7	8	9	10
Factor to apply	1.50	1.00	0.75	0.60	0.50	0.42	0.37	0.33	0.30	0.27

To obtain the pressure drop of a complete filter assembly, the cartridge pressure drop must be added. Please refer to the relevant filter cartridge literature or contact Pall.

Part Number	Dimensions (mm)										Weight (Kg)	Capacity (Litres)	
	A	B	C	D	E	F	G	H	J	Drain K			
PMS01G54	1094	213	80									58	13
PMS02G54	1344	463	375	506	151	144	165	215	178	1/2"	BSPT male	62	19
PMS03G54	1594	713	595									66	25
PMS04G54	1844	963	850									71	31

Seal Material	Maximum Operating Pressure	Operating Temperature Range
Ethylene propylene	10 bar g	-10° to 150°C
FDA approved Viton	10 bar g	-10° to 185°C
General purpose Viton	10 bar g	-10° to 185°C
FEP encapsulated fluorocarbon	10 bar g	-10° to 185°C

Ordering Reference: P S G 5 4

Code	Cartridge Style	Code	Cartridge Quantity and Type	Code	Seal Material
A	AB Code 7 AB Code 9	031	3 x AB1	J	Ethylene propylene
		032	3 x AB2	H	FDA approved Viton
		033	3 x AB3	HB	General purpose Viton
		034	3 x AB4	H1	FEP encapsulated fluorocarbon
M	1000 Style	031	3 x 1001	Housings are supplied without cartridges	
		032	3 x 1002		
		033	3 x 1003		
		034	3 x 1004		
R	RF Style	041	4 x R1F	Housings are supplied without cartridges	
		042	4 x R2F		
		043	4 x R3F		
		044	4 x R4F		

The H1 seal option selects both the FEP encapsulated fluorocarbon seal and also a higher standard of surface finish and flatness within the vessel closure seal grooves. Therefore FEP encapsulated fluorocarbon seals can only be used with housings carrying the H1 specification.

Accessories

Description	Ordering Reference	Description	Ordering Reference
1/2" BSPT male to 1/2" flange (BS4504) adaptor	ACS0080GA	Diaphragm pressure gauge 0-10 bar 1/4" BSPT male	SAN2PG04
1/2" BSPT male/hosetail adaptor	FFK1PT08	Blanking cap 1/2" BSPT female	ACS0001AA
T-Piece: 1/2" BSPT female	ACS0186GA	Ball valve 1/2" BSPT female/1/2" BSPT female	ACS0083CA
1/4" BSPT female		Ball valve 1/4" BSPT male/hosetail	SAN1DV04H2
1/4" BSPT female			

Replacement Parts

Description	Ordering Reference
Seal nut for 1000 style cartridges	ACS0058JS
Seal nut for RF style cartridges	ACS0059JS
Rathmann Clamp: Nickel coated carbon steel	ACS0006DA
Housing closure gasket Kit: Ethylene propylene	ACS0003EX
FDA approved Viton	ACS0007EH
General purpose Viton	ACS0305EE
FEP encapsulated fluorocarbon	ACS0266EC

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Pall Process Filtration

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