

Description

Pall AccuSep filter elements, which are available in a seamless, tubular format, are high performance, low cost inorganic microfiltration products. These sintered metal filter elements are produced by a proprietary process which creates a high void volume, strong and very uniform medium. This medium is relatively thin, resulting in a structure that is up to three times more permeable than that found in conventional pressed sintered metal tubes.

Available Sizes

Standard Nominal Outer Diameters:

1/2 inch/12.7 mm and 3/4 inch/19.05 mm

Standard Lengths: Up to 8 ft/2.43 m long

Medium Wall Thickness:

Tube Outer Diameter	Filter Area (Sq Ft)	Filter Area (Sq M)	Nominal Wall Thickness
inches/mm	per linear foot	per linear meter	inches/mm
0.47/11.8	0.12	0.037	0.018/0.46
0.72/18.2	0.19	0.057	0.025/0.63

Configurations

Examples of standard configurations are:

Configuration	Typical Use
Single tube, double open ended	Cross flow element OEM product Substrate for additional functional coatings
Single tube, single open ended, tube flare connection on the end	Backwashable filter element
Single or multi-tube assembly, single open ended, connected to blowback venturi on the open end	Blowback filter element Retrofits existing porous metal or polymeric bag house filters
Multi-tube or larger assembly, double open ended, gasket seals	Filter element
Multi-tube or larger assembly, single open ended, threaded open end	Filter element

Pall will provide custom configurations to meet your requirements.



AccuSep™ Filter Element

Available Metallurgy

316L Stainless Steel - standard
304L Stainless Steel
310SC Stainless Steel

The filter element hardware is dictated by the operating conditions of the application.

Operating Characteristics

Maximum Differential Pressure (psid/bard) at Temperature °F/°C Outside to Inside Flow

Nominal Element Size	Micron Rating	Operating Temperature °F/°C			
		70°F/21.1°C	250°F/121.1°C	500°F/260°C	750°F/398.9°C
¾ inch/18 mm	2 microns	90 psid/6.2 bard	79 psid/5.4 bard	67 psid/4.6 bard	61 psid/4.2 bard
½ inch/12 mm	2 microns	98 psid/6.8 bard	85 psid/5.9 bard	70 psid/4.8 bard	63 psid/4.3 bard
¾ inch/18 mm	5 microns	60 psid/4.1 bard	50 psid/3.4 bard	43 psid/3.0 bard	38 psid/2.6 bard
½ inch/12 mm	5 microns	82 psid/5.7 bard	70 psid/4.8 bard	58 psid/4.0 bard	52 psid/3.6 bard

Maximum Differential Pressure (psid/bard) at Temperature °F/°C Inside to Outside Flow

Nominal Element Size	Micron Rating	Operating Temperature °F/°C			
		70°F/21.1°C	250°F/121.1°C	500°F/260°C	750°F/398.9°C
¾ inch/18 mm	2 microns	330 psid/22.7 bard	270 psid/18.6 bard	210 psid/14.5 bard	190 psid/13.1 bard
½ inch/12 mm	2 microns	360 psid/24.8 bard	290 psid/20.0 bard	230 psid/15.8 bard	200 psid/13.8 bard
¾ inch/18 mm	5 microns	240 psid/16.5 bard	200 psid/13.8 bard	160 psid/11.3 bard	140 psid/9.6 bard
½ inch/12 mm	5 microns	260 psid/17.9 bard	210 psid/14.5 bard	170 psid/11.7 bard	150 psid/10.3 bard

Performance Data

Filter Grade	Removal Ratings		Clean Pressure Drop			
	Liquid Service	Gaseous Service	Liquid Service		Gaseous Service	
	Rating in Microns at Which % Removal by Count Equals ⁽¹⁾	Rating Based Upon Particle Count Data	Aqueous Pressure Drop (psi/gpm/sq ft)/ (mbard/lpm/sq m) ⁽²⁾		Air Pressure Drop (psi/acfm/sq ft)/ (mbar/cubic meter/min/sq meter) ⁽³⁾	
	99.98%	99.98%	0.5 inch/12 mm OD Tube	0.75 inch/18 mm OD Tube	0.5 inch/12 mm OD Tube	0.75 inch/18 mm OD Tube
C020	2.0	0.3	0.62/1.05	0.86/1.45	0.084/18.99	0.116/26.45
C050	5.0	0.5	0.21/0.35	0.29/0.49	0.023/5.20	0.033/7.23

(1) Liquid removal ratings are based upon a modified F2 test method and actual particle count data

(2) Pressure drop in PSID is obtained by multiplying value shown by the actual flow in gpm, viscosity of the fluid in centipoise and then dividing by the filter area deployed in sq ft.

(3) Pressure drop in PSID is obtained by multiplying value shown by the actual gaseous flow in acfm, multiplying by the viscosity of the gas in centipoise and then dividing by 0.018. Then divide this value by the filter area deployed in sq ft.

Applications

AccuSep microfiltration tubular elements can be deployed as either retrofit products to fit into your existing equipment or as part of a new filtration system provided by Pall Corporation.

Typical Applications Include

- Self Cleaning Jet Pulse or Reverse Flow Blowback Filters (Solids Removal From Gas)
- Self Cleaning Backwashable Filters (Solids Removal From Liquid)
- Cross Flow Microfiltration Elements
- Spargers
- High Temperature Gas Filter
- Liquid Filter Cartridge for High Temperature or Aggressive Service Applications

Features/Advantages/Benefits

Features	Advantages	Benefits
Seamless construction	Higher effective surface area	Lower filtration costs Smaller filter systems required
	Greater resistance to thermal and chemical stresses	Reliable and consistent product performance
Available in Up to 8 ft continuous lengths	Fewer seal points	Lower filtration costs
	Efficient manufacturing process	
Small diameter tubes	High packing (filter area per vessel volume) efficiency	Smaller, lower cost filtration system
Proprietary inorganic medium	Higher permeability than competitive ceramic or sintered metal products	Longer filter life Smaller filter systems required
	Highly uniform pore size distribution	Consistent operating flux when used as a backwashable, blowback or crossflow filter

Besides AccuSep filter medium, Pall Corporation offers sintered metal products made from meshes, fibers and powders as well as engineered composites. With our manufacturing capability, we can create almost limitless combinations to meet your specific requirements.

To learn more about AccuSep filter medium, Pall's other sintered metal or ceramic filter products or the complete microfiltration systems we supply that utilize these inorganic filter media, please contact Pall Corporation or your local Pall distributor.



Pall Corporation

Fuels and Chemicals


25 Harbor Park Drive
Port Washington, NY 11050
+1 516 484 3600 telephone
+1 888 873 7255 toll free US



Visit us on the Web at www.pall.com

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