



### SSPS® SINTERED POWDER FILTER CARTRIDGES

High mechanical strength and temperature-resistant filters ideally suited for prefiltration and final filtration of gas and liquids

# SSPS® SINTERED POWDER FILTER CARTRIDGES

## HIGH-STRENGTH, TEMPERATURE-RESISTANT FILTERS IDEALLY SUITED FOR PRE AND FINAL GAS AND LIQUID FILTRATION

SSPS® Sintered Powder Filter Cartridges are constructed with stainless steel powder. First shaped with pressure and then sintered under high temperature by applying unique technology and a strict manufacturing production process. Features include high mechanical strength, high temperature resistance, even pore distribution, and cleanable/reusable filters.

FEATURE	BENEFIT	
100% stainless	Excellent chemical compatibility	
steel construction	High temperature resistance	
Even-sintered construction	Superior strength and corrosion and thermal resistance	
	Non-fiber releasing	
	Narrow pore distribution with high separation efficiency	
	Controlled shape to withstand high reverse-flow	
Homogenous pore sizes; Absolute graded pore size rated media	Precision particulate retention ratings	

#### **SPECIFICATIONS**

Filter medium	316L Stainless Steel		
End cap	316L Stainless Steel		
Seal material	Silicone, EPDM, FKM, E-FKM (FEP/PFA encapsulated FKM), PTFE		
Construction method	Welded (no adhesives)		
Recommended continuous operating temperate range	-75°C to +200°C Note: Temperature dependant on o-ring compound		
Max. operating pressure	0.6 MPa (6.0 bar, 87 psi) at 21°C		
Max. fwd differential pressure	0.4 MPa (4.0 bar, 58 psi) at 21°C		



#### **APPLICATIONS**

- · Food & Beverage
- · Water Treatment
- Bulk Filtration
- High Temperature Processes
- High Pressure Processes

#### **CLEANING METHODS**

Physical Cleaning Methods: Reverse-Flow by Clean Water; Reverse-Blow by Clear Air and Ultrasonic Bath Chemical Cleaning Methods: Use Cleaning Agent Such As Diluted Acid, Diluted Alkalis, Oxidizer, and Surfactant

Contaminants	Methods		
Decarburization	Use gas reverse-blow and liquid reverse-flow used more frequently; ultrasonic bath cleaning when necessary		
Non -Water Soluble Salts and Oxides	Soak in 5% Concentration of Nitric Acid Solution		
Original Liquid Filtration	Choose the correct cleaning methods as per the chemical properties of the contamination material; addition cleaning with ultrasonic bath may be necessary		
Chemical Cleaning Methods	Detailed Procedures		
Alkaline Cleaning	Soak filter in 3-5% Concentration of NaOH Solution for 30-60 minutes at a solution temperature of 40°C. Flush the soaked filter inside, out with DI water or WFI water until the flushed solution turns clear, and then test its conductivity. Dry with clean air at 0.4 Mpa (58 psi)		
Acid Cleaning	Soak in 5% concentration of Nitric Acid Solution for at least 8 hours at a solution temperature of 40°C. Flush the soaked filter inside, out with DI water or WFI water until the flushed solution turns clear, and then test its conductivity. Dry with clean air at 0.4 Mpa (58 psi)		
Original Liquid Filtration	Clean filter with surfactant caused by contamination with organic substance ( high concentration of Citric Acid recommended for Food and Beverage Applications)		

#### **PARAMETERS**

Filter Code	Removal Rating (µm)	Porosity	Absolute Removal Rating (µm)	Average Air Permeability (L/dm²min) <sup>1</sup>	Flow Rate <sup>2</sup>
0045	0.45		5	0.12	0.16 m <sup>3</sup> /h (0.7 gpm)
0100	1.0		10	0.97	0.23 m <sup>3</sup> /h (1.0 gpm)
0300	3.0	30-50	17	1.60	0.31 m <sup>3</sup> /h (1.36 gpm)
0500	5.0		30	2.27	1.28 m <sup>3</sup> /h (5.63 gpm)
1000	10		50	5.50	3.8 m³/h (16.7 gpm)
2000	20		70	10.87	5.1 m <sup>3</sup> /h (22.5 gpm)
3000	30		90	15.10	5.8 m <sup>3</sup> /h (25.5 gpm)
5000	50		120	14.50	6.2 m <sup>3</sup> /h (27.3 gpm)
8000	80	<sup>1</sup> Testing performed according to GB/T5453; Testing DP is			
100H	100		200 Pa (0.03 psi). Testing medium is air.  2 Testing liquid viscosity is 1 cP. Filter tested with 60 mm (2.4") diameter and 300 mm (11.8") length; Testing pressure is 1.5 bar (21.8 psi)		
120H	120				

#### **LENGTH AND AREA**

Length	Area
5 in. (127 mm)	0.024 m² (0.25 ft²)
10 in. (254 mm)	0.047 m <sup>2</sup> (0.5 ft <sup>2</sup> )
20 in. (508 mm)	0.094 m² (0.9 ft²)
30 in. (762 mm)	0.141 m <sup>2</sup> (1.5 ft <sup>2</sup> )
40 in. (1016 mm)	0.1888 m² (2.0 ft²)

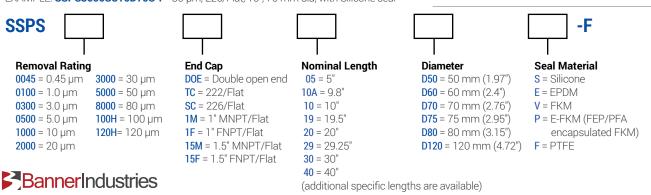
#### **FILTER USE NOTES**

- Avoid artificial damages such as scratches, bumps, and smashes during the cleaning, disassembling, and assembling processes. Please DO NOT exert force on the filter cartridge surface.
- Process filtration direction is from outside, in. Reverse filtration IS NOT recommended.
- Increase pressure to the required operating pressure slowly while filtering. Please DO NOT increase pressure instantly.
- Operating pressure SHOULD NOT exceed 0.6 Mpa (87 psi). Flush in place-reverse flow with clean liquid or blow in place reversely with clean air. Pressure of reverse blow SHOULD NOT exceed 0.75 Mpa (108 psi).

**Reverse-flush and Reverse-blow Procedures**: First reverse-blow with clean air under pressure that is 1.2-1.5 times greater than operating pressure. Reverse-blow lasts for 3-5 seconds. Repeat 4-6 times. Finally, reverse-flush with clean liquid for 3-5 minutes and repeat 2-3 times.

#### ORDERING INFORMATION

EXAMPLE: **SSPS3000SC10D70S-F** 30 μm, 226/Flat, 10", 70 mm dia, with Silicone seal



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