

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 steel construction	Excellent chemical compatibility
	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/dm ² ·min) ¹	Flow Rate ²
0045	0.45	30-50	5	0.12	0.16 m ³ /h (0.7 gpm)
0100	1.0		10	0.97	0.23 m ³ /h (1.0 gpm)
0300	3.0		17	1.60	0.31 m ³ /h (1.36 gpm)
0500	5.0		30	2.27	1.28 m ³ /h (5.63 gpm)
1000	10		50	5.50	3.8 m ³ /h (16.7 gpm)
2000	20		70	10.87	5.1 m ³ /h (22.5 gpm)
3000	30		90	15.10	5.8 m ³ /h (25.5 gpm)
5000	50		120	14.50	6.2 m ³ /h (27.3 gpm)
8000	80				
100H	100				
120H	120				

¹Testing performed according to GB/T5453; Testing DP is 200 Pa (0.03 psi). Testing medium is air.
²Testing 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)

LENGTH AND AREA

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

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

SSPS



-F

Removal Rating

0045 = 0.45 µm 3000 = 30 µm
 0100 = 1.0 µm 5000 = 50 µm
 0300 = 3.0 µm 8000 = 80 µm
 0500 = 5.0 µm 100H = 100 µm
 1000 = 10 µm 120H = 120 µm
 2000 = 20 µm

End Cap

DOE = Double open end
 TC = 222/Flat
 SC = 226/Flat
 1M = 1" MNPT/Flat
 1F = 1" FNPT/Flat
 15M = 1.5" MNPT/Flat
 15F = 1.5" FNPT/Flat

Nominal Length

05 = 5"
 10A = 9.8"
 10 = 10"
 19 = 19.5"
 20 = 20"
 29 = 29.25"
 30 = 30"
 40 = 40"

Diameter

D50 = 50 mm (1.97")
 D60 = 60 mm (2.4")
 D70 = 70 mm (2.76")
 D75 = 75 mm (2.95")
 D80 = 80 mm (3.15")
 D120 = 120 mm (4.72")

Seal Material

S = Silicone
 E = EPDM
 V = FKM
 P = E-FKM (FEP/PFA encapsulated FKM)
 F = PTFE

(additional specific lengths are available)



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