

FHPSS Metal Powder Sintered Filter Cartridge



The FHPSS stainless steel powder sintered filter element is a high-performance porous filtration component manufactured through powder metallurgy technology. Using metal powders (e.g., stainless steel) as raw materials, it is produced through processes including cold isostatic pressing (CIP) and high-temperature vacuum sintering. The resulting internal pore structure is uniform and controllable, combining high mechanical strength, corrosion resistance, and high-temperature resistance. It is widely used in industrial filtration and separation applications.

Product Features

- ❖ **Binder-Free Full-Metal Construction:** Eliminates the risk of chemical contamination from binders, ensuring full compatibility with aggressive media, including strong acids, bases, and organic solvents.
- ❖ **High Flow & Low Pressure Drop:** The large filtration area and high dirt-holding capacity of the stainless steel precision filter element deliver high flow rates per element while maintaining a minimal pressure differential, making it ideal for applications with stringent flow and differential pressure requirements.
- ❖ **Exceptional Regenerability:** Featuring all-stainless steel construction, these filter elements offer outstanding regenerability. They can be repeatedly restored to near-original performance through chemical cleaning, high-temperature treatment, and ultrasonic cleaning, substantially extending service life and reducing operational costs.

Product Parameters

Parameters	Specification			
Length(inch/mm)	10(254)	20(508)	30(762)	40(1016)
Filtration area(m ²)	0.048	0.096	0.14	0.19
Design Flow Rate (m ³ /h)	0.2-5.7			
Specifications	Sintered Powder / 304 / 316 / 316L / Nickel / Titanium			
Connection	Thread: M20, M30, M36; Plain End: 222, 226,D0			

Filtration Accuracy (μm)	1/3/5/10/20/40
Diameter (mm)	60-110
Operating Pressure (MPa)	0.4
Maximum Temperature (°C)	480

Applications



New Energy



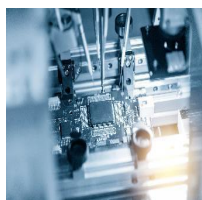
Water Treatment



Iron and Steel
Metallurgy



Biomedicine



Precision Instruments



Equipment
Manufacturing



Food and Beverage



Mining and Smelting

Precautions

Selection & Operation Guide

When selecting FHPSS stainless steel sintered filter cartridges, consider the following:

Installation & Operation

- ❖ Flow Direction: Strictly adhere to outside-in flow direction. Reverse flow operation is prohibited as it may damage the structure.
- ❖ Pressure Control: Gradually increase system pressure to the operating level (≤ 3 MPa). Avoid sudden pressure surges from rapid valve opening.

Cleaning & Regeneration

- ❖ In-Situ Cleaning: When filtration efficiency drops below 50% or differential pressure increases, first back-blow with air (pressure: 1.2–1.5 times working pressure, 3–5 seconds per pulse, repeat 4–6 times), then backwash with clean liquid for 3–5 minutes.
- ❖ Deep Cleaning: Based on contaminant type, perform acid washing (5% nitric acid), alkaline washing (3–5% sodium hydroxide), or ultrasonic cleaning. After cleaning, rinse with deionized water to neutral pH and dry.

Maintenance & Service Life

- ❖ Regularly monitor differential pressure and inspect the cartridge surface for scratches or mechanical damage.
- ❖ Performance can be restored to over 90% after backwashing; however, repeated cleaning may reduce filtration



Product Data Sheet-High-Flow Filter Cartridges

Core Filtration, Clear Solutions

accuracy over time, and periodic replacement is recommended.

Safety & Material Selection

- ❖ For strong acid/alkali environments, select corrosion-resistant materials such as 316L or titanium alloys. For sulfur-containing gases, 316L is preferred.
- ❖ In high-temperature environments ($\leq 500^{\circ}\text{C}$), ensure that seal materials (e.g., PTFE up to 260°C) meet the operating temperature requirements.

Custom Configurations

- ❖ For non-standard dimensions or connections (e.g., bayonet, thread), please confirm compatibility with the housing in advance.

*For specialized applications or customized solutions, please contact FFM Inc. directly.