

FHPSS High-Flow Metal Powder Sintered Filter Cartridge



The FHPSS stainless steel powder sintered filter element is designed by using advanced cold isostatic pressing (CIP) and high-temperature vacuum sintering technology. Constructed from metal powders (e.g., stainless steel), it forms a rigid, three-dimensional porous matrix. This structure provides exceptional mechanical strength, corrosion resistance, and thermal stability (up to 300°C), with precise pore size control ranging from 1-100 μm . It is widely utilized in demanding industrial fluid filtration 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 graded density design allows for high flow rates while maintaining a minimal pressure differential, optimizing energy efficiency.
- ❖ **Exceptional Regenerability:** Supports multi-cycle restoration through chemical cleaning, thermal treatment, and ultrasonic processes. With proper maintenance, the service life can extend significantly, reducing total operational costs.

Product Parameters

Parameters	Specification			
Length(inch/mm)	10(254)	20(508)	30(762)	40(1016)
Specifications	Sintered Powder / 304 / 316 / 316L / Nickel / Titanium			
Connection	Thread: M20, M30, M36; Plain End: 222, 226			
Filtration Accuracy (μm)	1/3/5/10/20/40			
Diameter (mm)	65-110			
Filtering Area ($\text{m}^2/10''$)	≥ 0.5			
Design Pressure (MPa)	0.3			

Maximum Temperature (°C)	300
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Applications



New Energy



Water Treatment



Iron and Steel
Metallurgy



Biomedicine



Food and Beverage



Precision Instruments



Equipment
Manufacturing



Daily Household Use



Farm Irrigation



Mining and Smelting

Precautions

Selection & Operation Guide

- ❖ 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 (≤ 0.3 MPa). Avoid sudden pressure surges from rapid valve opening.
- ❖ Cleaning & Regeneration:
 - Backwashing: Initiate when pressure differential exceeds 0.15 MPa.
 - Procedure: Air pulse (1.2-1.5x working pressure) followed by liquid backwash.
 - Deep Cleaning: Acid wash (5% HNO_3) for inorganic scale; Alkaline wash (3-5% NaOH) for organics.
 - Post-Cleaning: Rinse with deionized water to neutral pH and dry with hot air ($\leq 120^\circ\text{C}$).
- ❖ Maintenance: Inspect for surface damage (scratches/cracks) after each cleaning. While each cycle restores performance, filtration accuracy may degrade over time.

Safety & Material Selection

- ❖ Corrosive Media: Use 316L or Titanium alloys for strong acids/bases.
- ❖ Temperature Limits: Ensure seal materials (FKM, PTFE) match the operating temperature.

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