

FHMSS Metal Mesh Sintered Filter Cartridge



The FHMSS stainless steel sintered filter element features a pleated five-layer composite structure (outer/inner protective cages, primary filtration layer, inner support layer, and central core) centered on stainless steel fiber sintered felt. The stainless steel fiber sintered felt is manufactured from metal fibers, which are produced by bundling multi-strand metal wires, drawing them to usable fiber diameters, collecting them into tow of consistent weight and diameter, cutting, and forming into loose felt using appropriate methods. The sintered felt is then created by layering several different diameters of loose felt in sequence to achieve a stacked fiber structure of specific thickness, with fibers intersecting to form three-dimensional pores, followed by high-temperature vacuum sintering and calendaring to produce the finished sintered felt.

The sintered felt is uniformly laid in a three-dimensional labyrinthine pattern, forming well-distributed pore sizes with uniform dimensional distribution. The porosity can reach over 85%, which is more than twice that of conventional metal powder sintered filters. The stainless steel fiber sintered felt filter element employs a multi-layer pleated design to achieve greater filtration area, with the basic structure comprising an outer protective layer, inner protective layer, precision filtration layer, inner support layer, and inner support core.

Product Features

- ❖ **Binder-Free Construction:** Manufactured without the use of adhesives, offering broad chemical compatibility for filtration of solvents and high-temperature media.
- ❖ **High Flow & Low Pressure Drop:** The pleated design of the stainless steel precision filter element provides a large filtration area and high dirt-holding capacity, delivering high flow rates per element with low pressure drop—ideal for applications with stringent flow and differential pressure requirements.
- ❖ **Excellent 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)	0.19	0.38	0.57	0.76
Design Flow Rate (m ³ /h)	1.8-5.0			
Specifications	Media Material: 304/316/316L Stainless Steel			
Connection	Thread: M20,M30, M36; Plain End: 222, 226,D0			
Filtration Accuracy (μm)	1/3/5/10/20/50/100			
Diameter (mm)	65-110			
Maximum Operating Pressure (MPa)	0.86			
Maximum Temperature (°C)	480			

Applications



New Energy



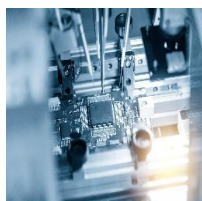
Water Treatment



Iron and Steel
Metallurgy



Biomedicine



Precision Instruments



Equipment
Manufacturing



Food and Beverage



Mining and Smelting

Precautions

Selection Guide

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

Filtration Rating

- ❖ Select pore size (1–100 μm) based on contaminant dimensions (e.g., 10 μm for industrial oils). Higher precision increases pressure drop—optimize for application needs.

Flow & Pressure

- ❖ For high-flow systems, choose high-pleat-density elements (e.g., 40-inch); verify operating pressure range (typically 0.1–30 MPa) aligns with system requirements. Always consult the manufacturer's flow–pressure drop curve.



Product Data Sheet-High-Flow Filter Cartridges

Core Filtration, Clear Solutions

Material Compatibility

- ❖ 304 SS for mild environments (water treatment); 316L for chloride-rich media (seawater, chemicals). Use titanium or nickel-based alloys in strong acid/alkali conditions.

Temperature Resistance

- ❖ Standard SS elements: -200°C to 480°C. Match seal material to temperature: FKM ($\leq 150^{\circ}\text{C}$), PTFE ($\leq 260^{\circ}\text{C}$).

Service Life

- ❖ Pleated design offers 3–5× higher dirt-holding capacity than flat filters. Backwash-compatible units extend service life. Replace high-precision elements every 3–6 months (adjust for contamination severity).

Installation

- ❖ Confirm end connections (222/226 bayonet, M30 thread, etc.) match housing. Specify non-standard lengths (e.g., 60-inch) or custom shapes (e.g., conical, bowl-type) during ordering.

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