

FHLF String-Wound Filter Cartridge



The FHLF string-wound filter cartridge is a depth filtration element designed for low-viscosity liquids with low contaminant loads. It is manufactured by precisely winding textile fibers (such as polypropylene yarn or cotton yarn) onto a porous core made of polypropylene or stainless steel. The cartridge features a honeycomb structure with a coarse outer layer and a dense inner layer. Through gradient pore design (outer diamond-shaped pores: 20–100 μm , inner pores: 1–10 μm), it achieves step-by-step filtration, effectively removing suspended solids, particles, and rust.

Product Features

- ❖ Textile fiber yarns are tightly wound around the porous core, with controlled winding density and pore shape to achieve different filtration ratings.
- ❖ Capable of withstanding relatively high filtration pressures.
- ❖ Excellent chemical compatibility with a wide range of fluids.
- ❖ Available in multiple materials to suit various liquid filtration requirements.
- ❖ The "dense outer, loose inner" pore structure provides excellent deep-layer filtration performance.
- ❖ Effectively removes suspended solids and particles from liquids with low pressure drop and high dirt-holding capacity.

Product Parameters

Parameters	Specification		
Length(inch/mm)	50(1270)	60(1524)	70(1778)
Design Flow Rate (m ³ /h)	0.75-2	0.9-2.4	1.1-2.8
Specifications	String-Wound		
Connection	Top thread: M6, M8, M10; Bottom connection thread: M33×1.5, M33×2, G1, etc.		
Filtration Accuracy (μm)	1、 5、 10、 15、 20、 30、 50、 70、 100		
Diameter (mm)	Outer Diameter: 50–60 ; Inner Diameter: 25–28		
Operating Pressure (MPa)	0.3		
Maximum Temperature (°C)	85		

Applications



New Energy



Water Treatment



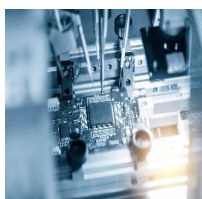
Iron and Steel
Metallurgy



Biomedicine



Food and Beverage



Precision Instruments



Equipment
Manufacturing



Daily Household Use



Farm Irrigation



Mining and Smelting

Precautions

Selection & Operation Guide

When selecting FHLF string-wound filter cartridges, consider the following:

Filtration Rating Selection

String-wound filter cartridges are available in ratings from 1 μm to 100 μm (e.g., 20 μm corresponds to a 15-channel structure, 10 μm corresponds to a 19-channel structure). Select based on the particle size of the medium:

- ❖ Coarse Filtration (20–100 μm): For removing sand, rust, and large suspended solids. Dirt-holding capacity > 5 kg/m².
- ❖ Fine Filtration (1–5 μm): For removing microorganisms and colloids. Must be used with pre-filtration.
- ❖ Note: Using a 1 μm cartridge to process water with high contaminant levels will clog the channels and shorten service life by up to 70%.

Material Selection

- ❖ PP Material: Suitable for pH 1–13 (weak acids/alkalis). However, prolonged exposure to strong acids (pH < 2) may cause degradation.
- ❖ Glass Fiber: Suitable for pH 0–14, ideal for concentrated sulfuric acid and sodium hydroxide solutions.

Temperature Resistance

- ❖ PP Core: $\leq 60^{\circ}\text{C}$ (continuous use).
- ❖ Stainless Steel Core + Glass Fiber: $\leq 120^{\circ}\text{C}$ (steam sterilizable).

Pressure Management



Product Data Sheet-High-Flow Filter Cartridges

Core Filtration, Clear Solutions

- ❖ PP Core: Maximum pressure resistance ≤ 0.3 MPa. Exceeding this limit may cause deformation (high-pressure systems require a booster pump).
- ❖ Stainless Steel Core: Maximum pressure resistance ≤ 0.5 MPa. High-pressure systems require a pressure reducing valve.
- ❖ Flow Rate Impact: At 0.2 MPa, the flow rate of PP cartridges decreases by 40%, while stainless steel cartridges decrease by only 15%.

Dust Residue & Cleaning

- ❖ Backflushing Parameters: 0.4–0.6 MPa pulse (interval: 2–5 seconds). This restores only 60% of the original flow capacity.
- ❖ Pre-Filtration Recommendation: In high-dust applications, install a 20–50 μm coarse filter upstream to extend cartridge life by up to 3 times.

Service Life Management

- ❖ Replacement Criteria: Replace when the pressure differential exceeds 0.3 MPa or when the flow rate drops by 30%.
- ❖ Testing Requirements: For terminal filtration applications, bubble point testing is required (hydrophilic membrane ≥ 0.08 MPa).

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