



FILTALLOY TECHNOLOGY

# SINTERED FIBER FELT





# ABOUT US

## Fitalloy Technology Limited

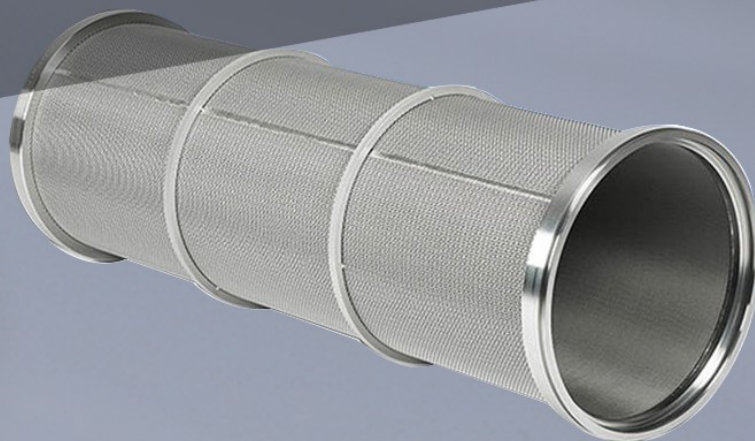
Fitalloy is an advanced metal filter elements manufacturer & supplier, with more than 20 years of experience. We have introduced the state of art machines and employed experienced technicians to supply high-performance, innovative materials, and solutions for applications in filtration and separation. Our products include:

- |                       |                         |                                  |
|-----------------------|-------------------------|----------------------------------|
| Sintered Mesh Filter  | Polymer Filter Elements | Asymmetric Sintered Metal Filter |
| Sintered Plate Filter | Polymer Leaf Disc       | Hot Gas Filtration Elements      |
| Pleated Metal Filter  | Polymer Extruder Screen | Filter Leaf                      |
| Sintered Fiber Felt   | Sintered Powder Filter  | SPL Filter                       |

Our products are widely used in numerous industries including aerospace, oil and gas, petrochemical, water, mine, polymer, food & beverage, automotive, and many other filtration and separation industries. With so many applications, we have built the R&D, design, machining, sales, and quality control departments. With the design and tailored solutions, we then translate them into high-level products. And our team has been learning about the forefront of filtration technology from industrial leading companies. Here customers could get high-quality products at an economic price!

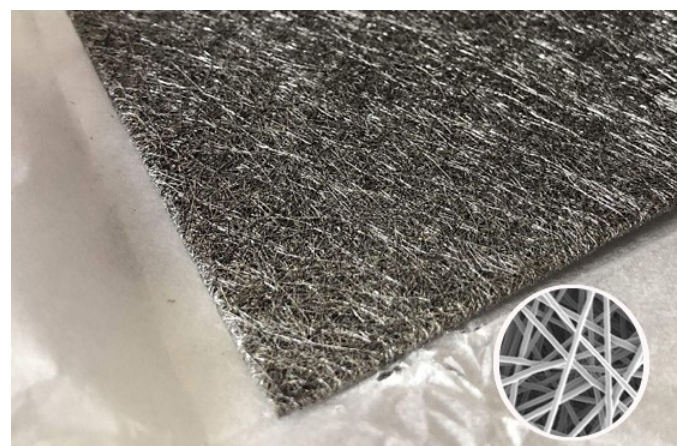


# SINTERED FIBER FELT



**Sintered metal fiber felt** is produced in a vacuum furnace, with metal fibers randomly laid. We select the fiber diameters and basis weight precisely, then control the pore diameter through thickness. It keeps a three-dimensional reticulated porous structure. The bigger particle could be captured at the outside surface, and small particles pass through the metallic fiber felt.

The metal fiber felt could be sintered together with metal wire mesh to enhance the strength and subsequent longer on-stream life.



**Sintered Metal Fiber Felt**

<b>MATERIAL</b>	Stainless steel 304, 316, FeCrAl, Hastelloy, Inconel, etc.
<b>FILTRATION</b>	2-100um
<b>WALL THICKNESS</b>	0.3-1.2mm
<b>POROSITY</b>	75%-85%
<b>WIDTH</b>	Max. 48"
<b>LENGTH</b>	Max. 48"
<b>OTHER DIMENSIONS COULD BE CUSTOMIZED</b>	



**Sintered Metal Fiber Felt  
With Woven Mesh As Protection Layer**

## Applications:

- ✓ Liquid and gaseous ammonia
- ✓ Steam filtration
- ✓ Electronic high-temperature gas dust removing
- ✓ Polymer filtration and polyester melt purifying
- ✓ Catalyst retention and recovery
- ✓ Gasification
- ✓ Pharmaceutical powder recovery
- ✓ Ultra filtration pre-filter, refining process
- ✓ Hydraulic filtering



**Package of Sintered Metal Fiber Felt**



**Pleated Stainless Steel Cylinder for gas filter**



**Pleated Metal Filter**

**Application: Fluidization Bed Steam Drying**



**Pleated Metal Filter Cylinder**

**Application for ammonia filtration**

**Specification of Metallic Sintered Fiber Felt (Without Mesh)**

Code	Efficiency ( $\mu\text{m}$ )	Thickness (mm)	Thickness (inch)	Porosity (%)	Bubble Point (Pa)	Bubble point (psi)	Permeability (L/dm <sup>2</sup> .min)
SFF-F3	3	0.37	0.0146	67	13000	1.89	13
SFF-F5	5	0.3	0.0118	75	6800	0.99	47
SFF-F7	7	0.36	0.0142	74	5050	0.73	60
SFF-F10	10	0.34	0.0134	78	3700	0.54	85
SFF-F15	15	0.38	0.0150	80	2470	0.36	170
SFF-F20	20	0.51	0.0201	82	1850	0.27	265
SFF-F25	25	0.62	0.0244	79	1480	0.21	325
SFF-F30	30	0.62	0.0244	79	1235	0.18	450
SFF-F40	40	0.63	0.0248	76	900	0.13	620
SFF-F60	60	0.57	0.0224	83	600	0.09	1350
SFF-F86	86	1.00	0.0394	84	480	0.07	1470
SFF-F80	80	1.00	0.0394	85	450	0.07	1510
SFF-F90	90	1.20	0.0472	88	410	0.06	1740
SFF-F100	100	1.30	0.0512	89	360	0.05	2000

**Note:** Bubble Point Test Standard: ARP901



# FILTER COMPARISON



**Sintered Metal Wire Mesh Filter**

It's combined with several layers of woven wire mesh, with the process of diffusion bonding. With self-supporting construction, it has robust strength to resist high pressure drop. And it's easy to clean or backwash.



**Pleated Metal Filter**

Multi layers of metal woven cloth are pleated together which increases filter area to capture more contaminants. If bigger pressure drop, we could add guard layer. It could be cleaned or back-flushed.



**Sintered Metal Fiber Filter**

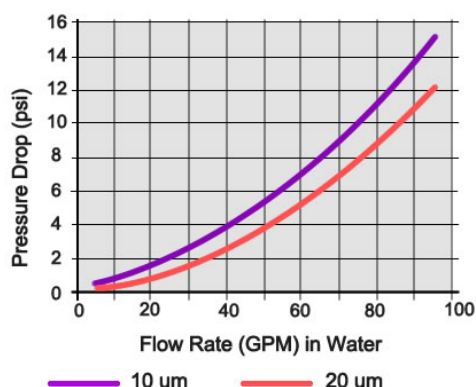
The metal fibers are random laid then sintered in vacuum furnace for diffusion bonding process. It has high dirt-holding capacity and permeability than pleated woven meshes.

**The Performance Comparison of 3 Kind Metal Filters**

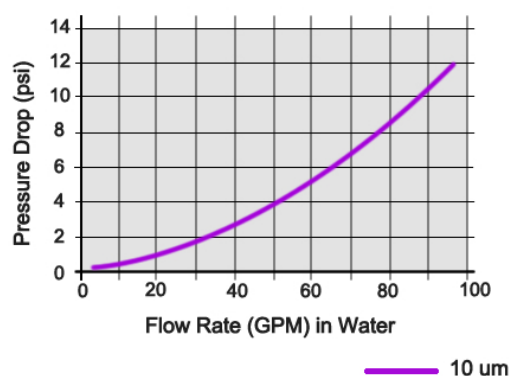
Filter Type	Sintered Metal Wire Mesh Filter	Pleated Metal Filter	Sintered Metal Fiber Filter
Max. Pressure Drop (bar)	8.62	17.24	17.24
Absolute Micron Rating (um)	9,20,40,70,400,150	9,20,40,70,100,150	3,5,10,20,40
Dirt Holding Capacity	Good	Very Good	Excellent
On-Stream Life	Good	Good	Excellent
Clean Ability	Excellent	Very Good	Good
Back-Flush Ability	Excellent	Very Good	Good

Take a example of 10micron rating of Sintered Metal Wire Mesh filter And Pleated Metal Filter:

**Sintered Metal Wire Mesh Filter**



**Pleated Metal Wire Mesh Filter**



# FILTALLOY



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