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Stainless Steel Pleated Cartridge Manufacturing

WIN YOUR TRUST WITH OUR BEST

Brief Introduction Of Enterprise

Contents

History

Sinft is located in Shijiazhuang City, Hebei Province, covering 26,658 m². We were established in 2007, now we have become an excellent manufacturer of brand-compatible spare parts in the industrial filtration with 16 years of experience accumulation and precipitation .

Product Category:

- High Pressure Filter Elements
- Low Pressure Filter Elements
- Hydraulic Filter Elements
- Replacement filter elements for over 200 brands
INDUFIL, PALL, HYDAC, HILCO,BOLL&KIRTCH, MOATTL, FILTREC,INTERNORMAN,PARKER, SF, STAUFF, HIFI, MP, VICKERS, DONALDSON, ARGO,REXROTH,HY-PRO,EATON,TAISEIKOGYO,EPE, etc.
- Stainless Steel Filter Elements
- Pipeline Basket Strainer (simplex&Duplex)
- Paint Filters

VISION & MISSION

SINFT vision: High-quality, future-proof products and solutions with customer service for any need at any time. Everything we do starts with a specific need which represents our true mission. It drives us to continuously improve and build trust with our customers.

PRODUCTION

SINFT produces high quality accessories and spare parts compatible with major brands in the world market with more competitive prices. We use advanced, professional, automated and precise equipment to escort the orders, and our professional quality department from the operator to the precise control system of the machine which all ensure the safety and reliability of the quality.

CERTIFICATION

SINFT certifications: ISO 9001:2015,CE, EPR and others.



Brief Introduction Of Enterprise	-----1
What's Stainless Steel Filter Element?	-----3
Stainless Steel Filter Element Structure	-----4
Structural Subdivision	-----5
Stainless Steel Wire Mesh	-----6
Dutch Woven Wire Mesh	-----7
Reverse Dutch Woven Wire Mesh	-----9
Five Heddle Weave Wire Mesh	-----9
Pleated Stainless Steel Filter Performance Attributes	-----10
Sintered Felt	-----11
Property Of Sintered Metal Fiber Felt	-----12
How To Clean Stainless Steel Filter Cartridges	-----13
Order Specification Code	-----14
How To Order From Us	-----15
What we're About	-----16



What's Stainless Steel Filter?

Stainless steel filter element is a component used in industrial filtration systems to remove contaminants, particles, and impurities from liquids or gases. It is typically made from high-quality stainless steel materials, known for their corrosion resistance and durability. The primary purpose is to ensure that the fluid or gas passing through it is clean, pure, and free from unwanted substances.

Filtration principle :

Surface Filtration: Larger particles are captured on the surface of the filter media. Over time, a layer of trapped particle forms on the media's surface, providing additional filtration.

Depth Filtration: Smaller particles are captured within the porous structure of the filter media. This mechanism allows for a higher capacity of particle retention before the filter element needs cleaning or replacement.

Benefits of SINFT stainless steel filter elements:

- 100% bubble point integrity tested
- 316L stainless steel construction
- Superior chemical compatibility
- Excellent mechanical strength
- Extended on-stream life
- High thermal tolerance
- Regenerable

Application:

Stainless steel filter elements are used in various industries such as chemicals, oil and gas, food and beverage, pharmaceuticals, and more. Their corrosion resistance, durability, and effective filtration capabilities make them essential components for maintaining product quality, protecting equipment, and ensuring process efficiency.



Stainless Steel Filter Element Structure

End Caps

End caps are available in a variety of types including double opening ends, single opening end, threaded caps, etc.

Out Protective Layer

Outer protective sleeve makes the cartridge have a better compressive strength. You may choose to install it or not as your needed.

Inner Supporting Pipe

Pleat

The pleated layer consists of a protective layer, a filtration layer and a support layer. The filtration layer is made of stainless steel woven mesh or stainless steel sintered felt. As the filtration layer has a poor strength, therefore, a protective layer at the top and a support layer at the bottom are provided to protect the filtration layer.

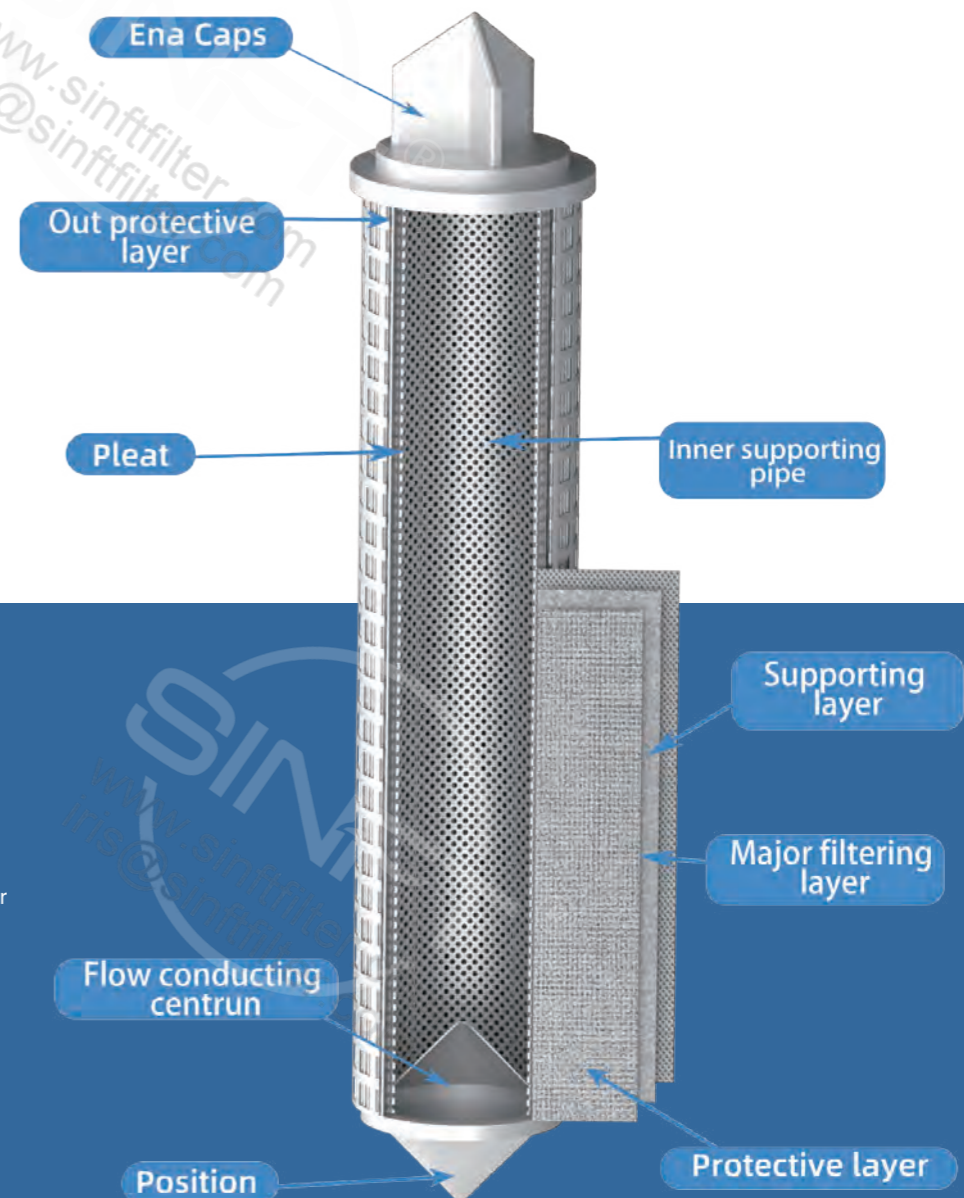
Supporting Layer

Major Filtering Layer

Protective Layer

Flow Conducting Centrum

Position



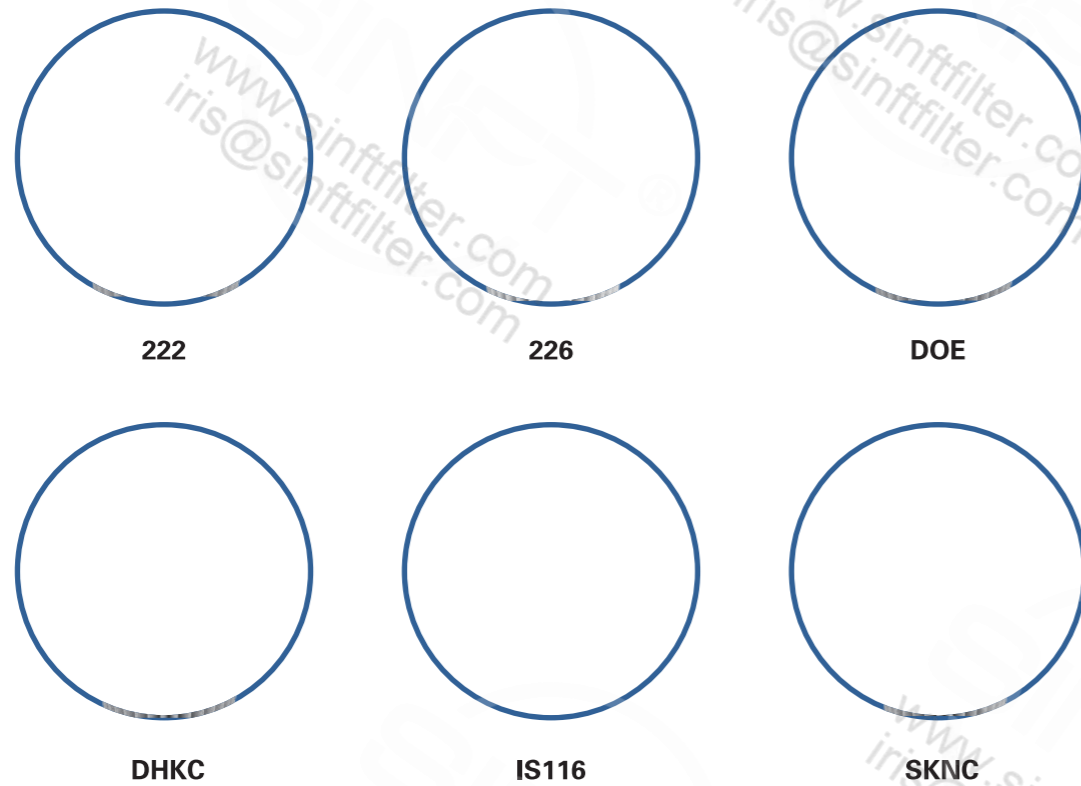
Stainless Steel Wire Mesh



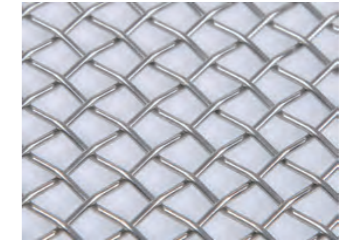
Structural Subdivision

End caps

End caps are available in a variety of types including double opening ends, single opening end, threaded caps, etc.



SINFT stainless steel wire mesh offers great acid, alkali, heat and wear resistance. It is widely used in the chemical, mining, aerospace, industrial and electronics industries.

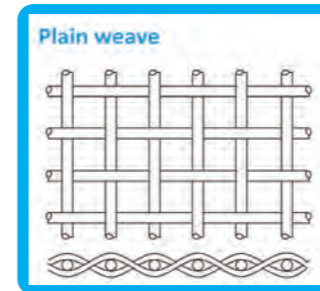


Materials: 302, 304, 304L, 316, 316L

Weave Types:

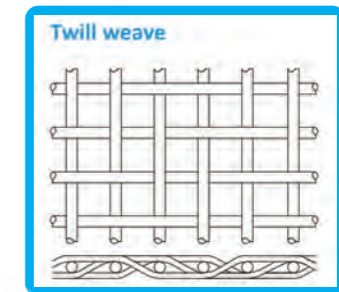
Plain

Plain is the most common weave. Matching diameter warp and shuttle wires are woven in a simple over / under pattern producing screens with the same mesh count in both directions. This creates a square opening screen.



- Twill

Each shuttle wire passes over / under 2 warp wires in twill weave. Higher diameter wires can be used for higher mechanical strength, density and corrosion resistance.



SPECIFICATIONS					
Mesh Count/Inch	Wire Gauge (SWG)	Aperture (mm)	Mesh Count/Inch	Wire Gauge (SWG)	Aperture (mm)
3x3	14	6.27	100 x 100	44	0.172
4x4	16	4.27	120 x 120	44	0.130
5x5	18	3.86	150 x 150	46	0.108
6x6	18	3.04	160 x 160	46	0.097
8x8	20	2.26	180 x 180	47	0.090
10 x 10	20	1.63	200 x 200	47	0.077
20 x 20	30	0.95	250 x 250	48	0.061
30 x 30	34	0.61	280 x 280	49	0.060
40 x 40	36	0.44	300 x 300	49	0.054
50 x 50	38	0.36	350 x 350	49	0.042
60 x 60	40	0.30	400 x 400	50	0.0385
80 x 80	42	0.21			

Dutch Woven Wire Mesh

SINFT dutch woven wire mesh offers great acid, alkali, heat and wear resistance and is commonly used for fine filtration due to high mechanical strength properties. It is widely used in the chemical, mining, medical, aerospace, industrial and electronics industries.

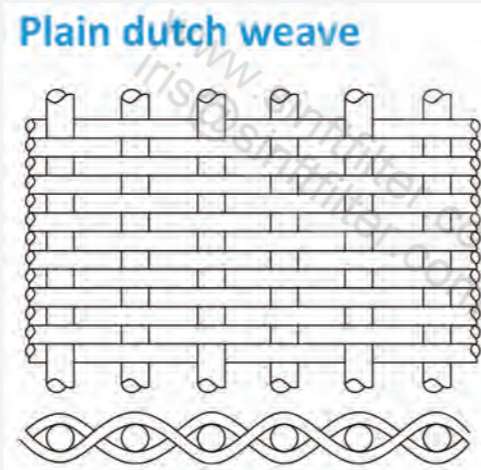
Materials

SS 302 、 SS 304 、 SS 304L 、 SS 316 、 SS 316L 、 Nickel 、 Brass 、 Low-Carbon Steel

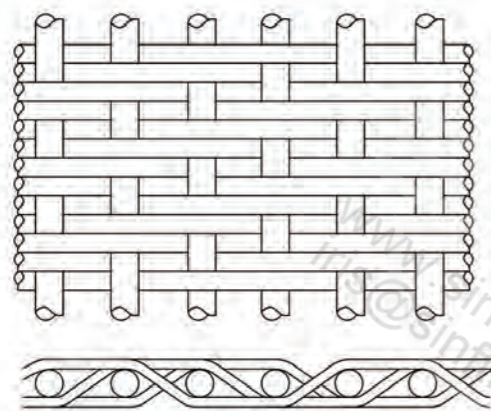
Weave Types:

Plain

- Plain Dutch Weave
- Woven with a standard over / under pattern with heavier warp wires. Causes shute wires to weave very close together, creating a high density mesh with low flow rates, high strength and high particle retention.



Twill dutch weave



Twilled Dutch Weave

- Twilled Dutch Weave
- Woven 2 over / 2 under with a smaller diameter shute wire, creating a tighter weave and higher particle retention than Plain Dutch Weave.

SPECIFICATIONS			
Mesh Count/Inch	Wire Gauge (SWG)	Wire Diameter (mm)	Aperture(microns)
8x62	32	0.63x0.45	300
10x79	40	0.50 x0.355	250
12 x64	48	0.58 x0.40	280
14x88	55	0.40 x0.30	180
19x 140	76	0.315 x 0.20	140
20 x300	80	0.35 x0.20	
24 x110	95	0.355x0.25	120
25x140	100	0.28x0.20	100
30x150	120	0.25 x0.18	80
35x 175	140	0.224 x0.16	71
40 x200	160	0.20 x0.14	60
45x250	180	0.16 x 0.112	56
50x 250	200	0.14 x0.11	53
55.5x 280	220	0.14 x 0.10	50
65x330	240	0.11 x0.08	36
70x350	280(1)	0.11 x 0.08	35
70x385	280(2)	0.11 x0.07	32
78x700	300	0.11 x0.08	30
80x400	315(1)	0.10 x 0.065	40
80 x600	315(2)	0.10 x0.06	
80 x 800	315(3)	0.15 x0.04	
81x780	320	0.10 x 0.07	30
90 x 550	354	0.12 x0.05	
91 x787	360	0.10 x 0.07	25
101 x 900	400	0.10 x0.063	20
120x400	472	0.10 x0.075	
127 x 1100	500	0.07 x 0.05	17
160 x 1500	630	0.063 x0.04	15
165x 400	650(1)	0.071 x0.06	
165 x 600	650 (2)	0.071 x 0.05	
165 x 800	650(3)	0.071 x0.05	25
165 x 1100	650 (4)	0.071 x 0.045	
165 x 1400	650 (5)	0.071 x0.04	16
174 x1700	685	0.063 x 0.032	13
200 x600	787(1)	0.071 x 0.06	
200 x 800	787(2)	0.071 x0.05	
200 x 1400	787(3)	0.071 x0.04	12
202 x 1760	795	0.05 x 0.032	10
216 x1860	850	0.045 x0.030	9
254 x2000	1000	0.04 x0.028	8
285x 2235	1125	0.036 x0.025	7
312x2100	1228	0.035 x 0.025	
318x2235	1250	0.036 x 0.025	
325x2300	1280	0.035 x0.025	5
400x3100	1575	0.035 x 0.019	3

Reverse Dutch Woven Wire Mesh

SINFT reverse dutch woven wire mesh is ideal for fine filtration and is highly durable. High mechanical strength promotes it to be widely used in the chemical, mining, industrial, medical and electronics industries.

Materials

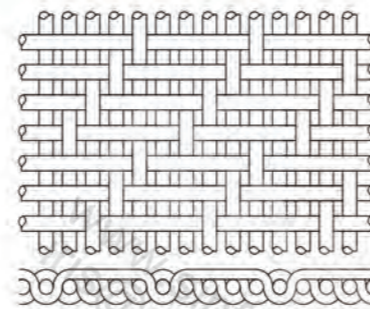
SS 302 – SS 316L 、 SS 304 – Bronze 、 SS 304L – Brass 、 SS 316 – Copper

SPECIFICATIONS		
Mesh Count/Inch	Wire Diameter (mm)	Absolute Filter Rating (microns)
63 x 18	0.40 x 0.60	220
107 x20	0.24 x 0.60	210
170x40	0.20 x 0.45	130
132 x32	0.20 x 0.40	105
171x46	0.15 x 0.30	85
290 x75	0.09 x 0.20	55
615 x102	0.04 x 0.16	42
615x130	0.04 x 0.13	22
720 x150	0.036 x 0.10	17
850 x 155	0.03 x 0.10	19

Five Heddle Weave Wire Mesh

SINFT five heddle weave wire mesh offers unique rectangular opening design with high flow rate and mechanical strength that can assist with increased drainage and flow properties. It is commonly used in waste water treatment processing, water filtration and mining.

Five-heddle weave



Materials

SS 304、 SS 316L 、 SS 304L 、 SS 310S 、 SS 316、 SS 321

SPECIFICATIONS			
Mesh Count/Inch	Wire Diameter (mm)	Aperture(mm)	Open Area %
108 x 59	0.160	0.075 x0.271	20
110x60	0.160	0.071x0.263	19
38 x38	0.150	0.518 x0.518	60

Pleated Stainless Steel Filter Performance Attributes

SPECIFICATIONS

Materials of Construction

Media: 316L Stainless Steel Support Layers: 316L
Stainless Steel Structure: 316L Stainless Steel

Maximum Differential Pressure

Forward:250psid (17bar) @ 700° F (371° C)
Reverse:50psid (3.4bar) @ 700° F (371° C)

Chemical Compatibility

Steel flow is compatible with all chemicals that may be processed using stainless steel.

Operating Temperature Range

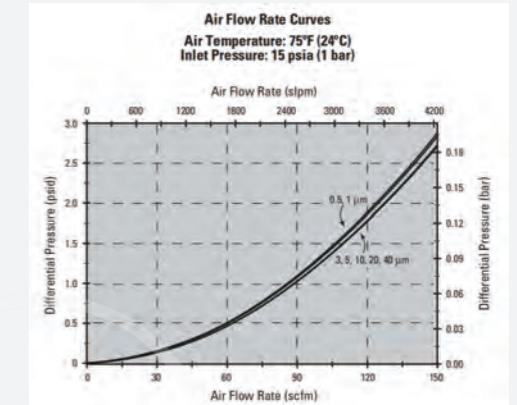
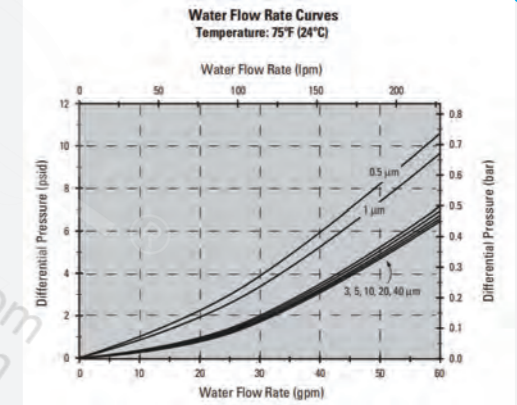
Maximum: +700° F (371° C)
Minimum: -450° F (-268° C)

Effective Filtration Area

1.8ft²(0.17m²)per nominal 10 inch (250mm) cartridge.

Regenerable

May be cleaned chemically,
mechanically or thermally.



Material detection of pleated stainless steel filter element



Passivation Test Kit

During the test formation of blue coloration indicates that the surface of the stainless steel does not yet pickled sufficiently . And if blue coloration does not appear which indicate surface has been satisfactorily pickled.

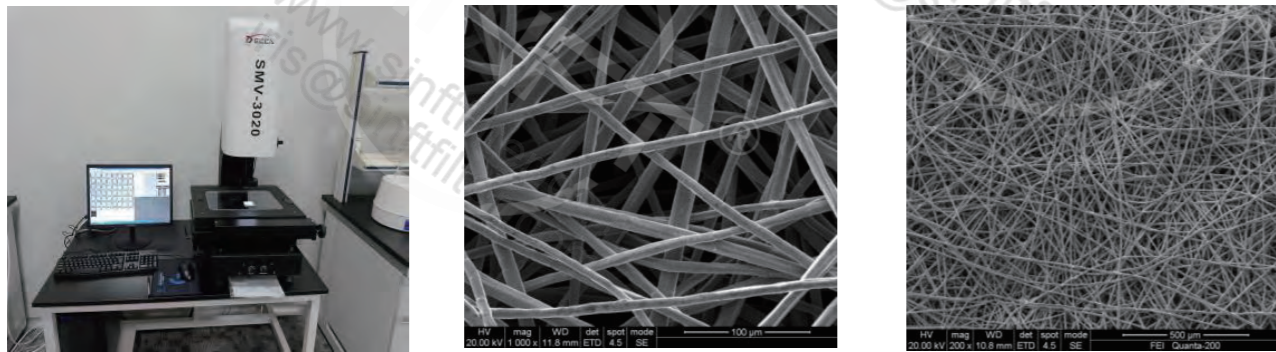


Sintered Felt

Sintered felt is made of stainless steel, FeCrAl, titanium, nickel and other metal fibers with a diameter of micro rating by sintering in high temperature and welding after special non-woven laying and laminating.

Multilayer sintered felt is composed of different pore size layers to form gradient and deliver higher porosity, permeability, filter rating and dirt holding capacity than single layer sintered felt. Sintered mesh often acts as the main filtration layer in filtration applications and works with woven mesh as the protection layer. It can be pleated to increase the filter area and improve the filtration efficiency.

Sintered felt can be fabricated into filter elements of various shapes, such as cylindrical, pleated or round shape. It plays an important role in the industries due to its precise filter rating and large porosity.



Features of sintered metal felt filter media

- 1. High heat and corrosion resistance: Work temperature resistance can reach 1000 ° C, and stainless steel or alloy for corrosive application, which non-metallic textile, ceramic or polymer product can not compete.
- 2. High porosity: It performs with up to 85% high porosity, long on-stream lifetime, high flow rates.
- 3. Low pressure drop: The high porosity allows a very low pressure drop, lower energy cost at the same time.
- 4. Depth filtration: It enables you to achieve high efficient result through surface filtration and its high dirt capacity offers depth particles capture.
- 5. Enhanced gel removal: Addition of metal fiber felt enhances gel removal property of sintered filter media and eliminates fiber breaks during spinning.
- 6. Longer life: Stainless steel fiber felt is added into sintered filter media, on stream life can be increased by a factor of two to three times that of conventional wire mesh media.

Property Of Sintered Metal Fiber Felt (standard pressure and high pressure)

Standard Metal Fiber Felt

Product Description:

SinftAL3 series are widely used, pleated filter materials, which can be widely used in the filtration of polymerization and textile processes, and are also suitable for the filtration of other liquids.

Specification - standard metal fiber felt					
Type	Bubble point pressure (Pa)	Filter rating (µm)	Thickness (mm)	Porosity (±5%)	Air permeability (200pa) L/dm2.min
3SinftAL3	12300	3	0.37	67	10
5SinftAL3	7600	5	0.35	80	34
7SinftAL3	5045	7	0.27	74	62
10SinftAL3	3700	10	0.32	78	108
15SinftAL3	2470	15	0.38	80	180
20SinftAL3	1850	20	0.51	82	265
25SinftAL3	1480	25	0.62	79	325
30SinftAL3	1235	30	0.62	79	450
40SinftAL3	925	40	0.62	76	620
60SinftAL3	630	60	0.65	86	1350
75SinftAL3	480	75	0.95	84	1470
80SinftAL3	450	80	1.00	85	1510
90SinftAL3	410	90	1.20	88	1740
100SinftAL3	360	100	1.30	89	2020

Note:
 1. Bubble point test according to ISO4003.
 2. Air permeability test according to ISO4022.
 3. Size can be customized.
 4. Maximum size: 1180 mm × 1500 mm.

High pressure type of fiber felt metal fiber felt

Product Description:

SinftBL3 series is specially designed for the filtration of fluids with low viscosity, low pressure drop and low impurity content (such as hydraulic oil, fuel, etc.).

Specification - High pressure type of fiber felt					
Type	Bubble point pressure (Pa)	Filter rating (µm)	Thickness (mm)	Porosity (±5%)	Air permeability (200pa) L/dm2.min
5SinftBL3	7000	5	0.18	79	45
10SinftBL3	3700	10	0.20	81	125
15SinftBL3	2470	15	0.17	78	250
20SinftBL3	1850	20	0.19	80	400
40SinftBL3	925	40	0.23	84	1100
60SinftBL3	530	60	0.15	74	1660

Note:
 1. Bubble point test according to ISO4003.
 2. Air permeability test according to ISO4022.
 3. Size can be customized.
 4. Maximum size: 1180 mm × 1500 mm.

How To Clean Stainless Steel Filter Cartridges

STAINLESS STEEL FILTER ELEMENTS DESIGNED FOR HARSH ENVIRONMENTS

Cleaning stainless steel filter cartridges is essential to maintain their efficiency and prolong their lifespan. The cleaning process depends on the type of metal filter cartridge and the type of impurities it has removed.

- 1.Remove the metal filter cartridge from the housing.
- 2.Rinse the filter cartridge with water to remove any loose debris.
- 3.Soak the filter cartridge in a cleaning solution, such as a mixture of water and detergent, for a few hours.
- 4.Rinse the filter cartridge thoroughly with water to remove any remaining cleaning solution.
- 5.Allow the filter cartridge to air dry completely before reinstalling it.

Cleaning methods and tips for the stainless steel filter cartridges

1.Backwash cleaning

The physical filtration of impurities in water is mainly carried out by using the stainless steel filter element. When one steering ball valve is closed and the other is opened normally, the retained substance adhering to the surface of the hydraulic filter element is peeled off and taken away by the backwash flow, so as to fully restore the ability of pollution interception, so as to achieve the purpose of cleaning. The backwash cycle is usually one to four days.

2.Pressure Washing

The cleaning liquid is acted on by longitudinal waves, which causes it to generate a certain number of small enough vacuum bubbles. These vacuum bubbles will burst when they cannot withstand the pressure, and the stainless steel filter element is washed away by the generated impact force.

3.Chemical Cleaning

Chemical cleaning involves using detergents,solvents,or alcohol to remove contaminant particles from the surface of the Stainless Steel Filter.This process is relatively manual and is the least effective in removing plugged particles.

Order Specification Code

Custom filter code **SINFT-S-1-40-3E-M**

Brand _____

Material:A-SS304,
S-SS316、 SL-SS316L

Filtration: 3-200µm _____

Length: _____
975-9.75" 、 10-10" 、 20-20"
30-30" 、 40-40"

Connection type _____
DOE-DOE
3-222/Flat
7-222/FIN
6-226/Flar
8-226/FIN
Other NPT/BSP Thread

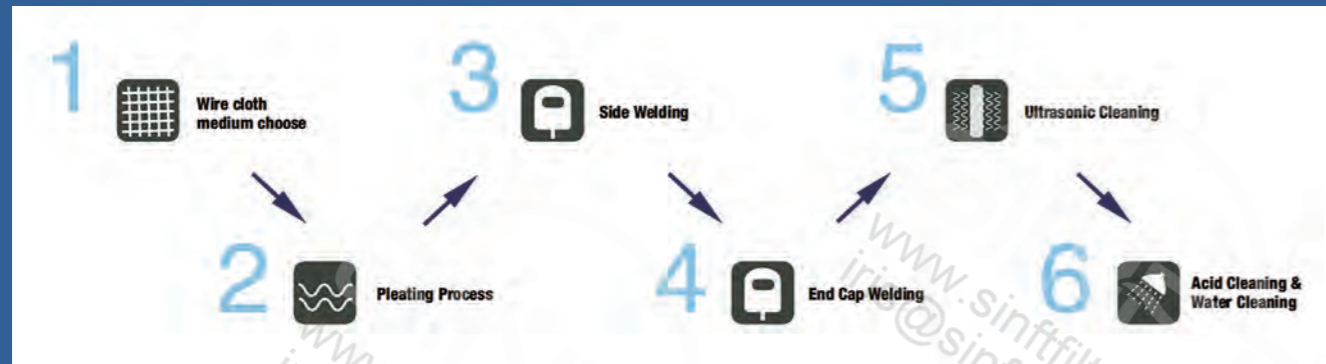
Seal Material: E-EPDM、 B-NBR、
V-VITON、 S-Silicone、 TV-TEV

Modification As Request _____

You can match your needs according to our coding,so that we can quote for you as soon as possible.

How To Order From Us

Production Process of Pleated Stainless Steel Wire Cloth Filter Cartridge



Send us an inquiry, we will respond with a quote

Whether its for filter housing, filter bags, cartridges, or customisable solutions, we'll respond with a quotation for your needs. We ensure the highest quality finishes and consistency in our products. Email us your requirements and we'll get in touch.

Purchase order & agreement, and production

Once a purchase order is made and our payment terms are agreed to, we'll begin production of your order. Depending on the order, our lead time would vary between one week to four weeks. We'll keep you updated on the progress and status.

Completion, delivery, and sea freight

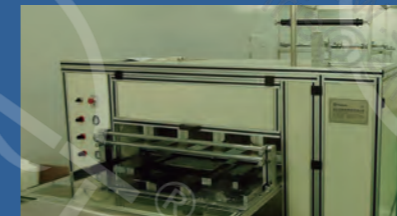
Once completed, we'll arrange a sea freight shipment to your specified location. We deliver internationally. Delivery by courier is also available. Clients can choose to arrange for self collection direct from our factories through a forwarder, if they would like to handle their own shipment.

What We're About

Production Process of Pleated Stainless Steel Wire Cloth Filter Cartridge

1、Clean production environment

The 100,000-class dust-free workshop perfectly meets the production conditions of filter elements and has become the best from the very beginning.



2、Advanced Media Technology

After being screened by high-quality suppliers, we use the most valuable filter media to serve every filter element and become a reliable factory.



3、The Highest Quality

Engineered, manufactured and tested in our state-of-the-art facilities. The same quality goes into SINFT filter elements, eliminating any contamination challenge imaginable to provide our customers with the incredible results and peace of mind they deserve.



4、Flexible Design & Manufacturing

We listen to your needs and work with you to provide filter elements that are right for your specific application.



5、Rapid Response

The flexibility in our manufacturing processes along with our extensive inventory of ready-to-ship filter elements allow us to respond to any situation with incredible speed. And in some cases like the event of any emergency or upset situation, we're even able to deliver your exact filter element in days to maximize your uptime and keep your plant running efficiently.



6、Excellent team

The knowledge and expertise of the Sinft team works alongside you to address your concerns.

