



# Sintered Mesh Candle Filter

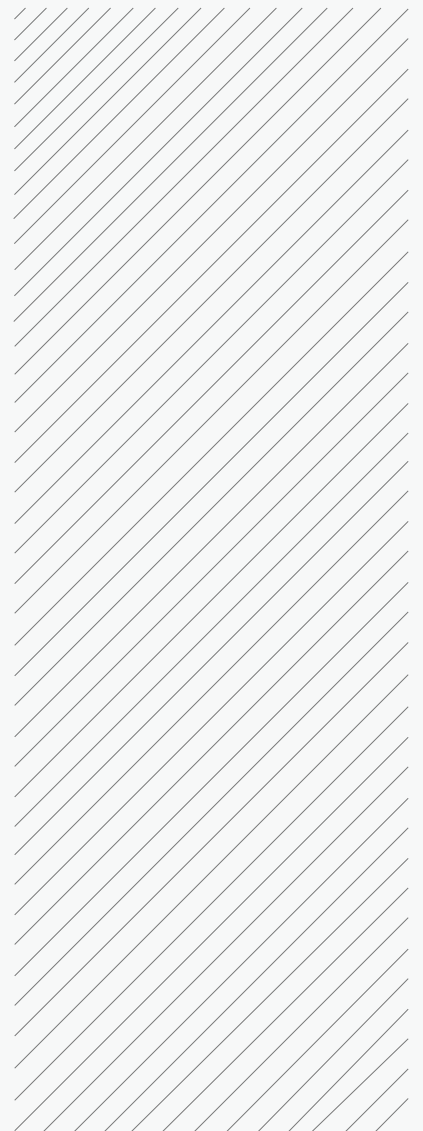
Weave Impossible to Possible



**BOEDON** Industech Limited

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# BOEDON Brochure



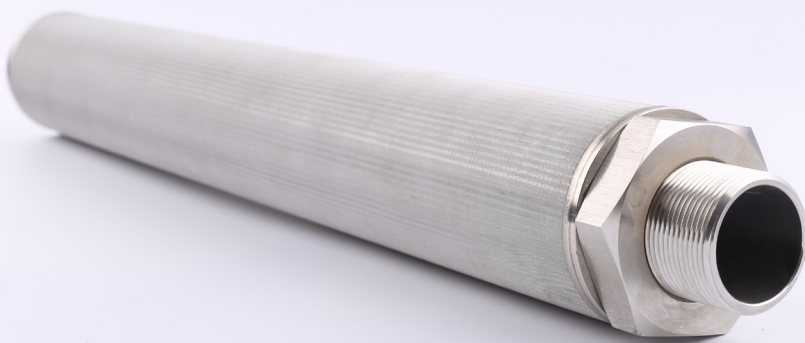
## **Our anti-corrosion sintered mesh candle filters can meet your filtration requirements of various chemical processes.**

Sintered mesh candle filter is generally made of 5-layer 304 or 316L stainless steel woven mesh after special laminating or vacuum sintering. This filter not only has excellent corrosion and high temperature resistance, but also offers high mechanical strength and overall rigidity after laminating and sintering. The mesh opening is not easy to deform and delivers stable filter rating and easy cleaning property during filtration.

The excellent corrosion resistance of the sintered mesh candle filter not only helps to filter out corrosive solids or liquid impurities, but also protects the process equipment and the inner surface of pipeline, thus improving the chemical industrial process and reducing the frequency of regular maintenance operations.

We can offer sintered mesh candle filters made of Hastelloy, Monel and other alloys to meet the various requirements of customers.

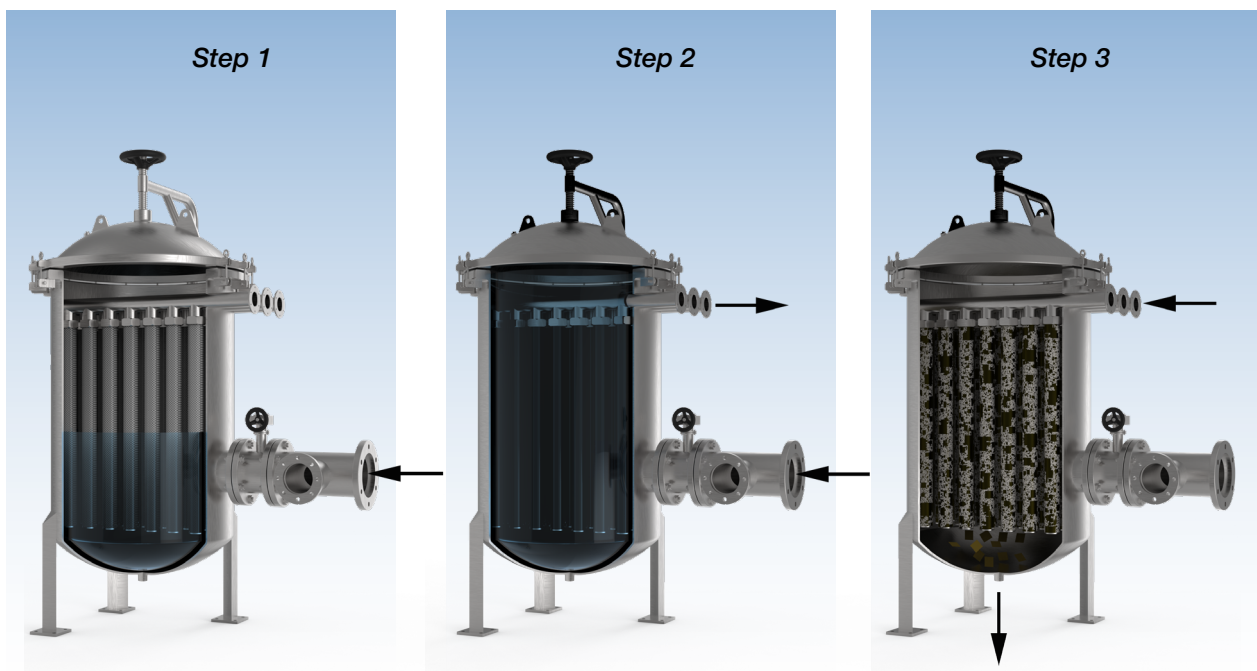
# Sintered Mesh Candle Filter



## SINTERED MESH CANDLE FILTER

# Working Principle

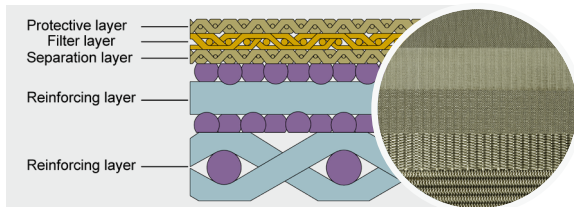
The filtrate enters at the bottom of the filter and moves upward, which helps to keep the solids in suspension so that they are evenly deposited on the surface of the filter elements. Impurities are retained on the surface of filter elements, and clean filtrate is discharged from the filter through the register. When the filter reaches the set pressure value, the control system stops feeding and the residue liquid in the filter is drained out. The backblowing begins. When the backblowing is finished, the dry cake is discharged from residue discharge nozzle. Close the residue discharge nozzle when the dry cake discharging is finished. The surface of the filter elements is clean and ready for the next round of filtration.



SINTERED MESH CANDLE FILTER

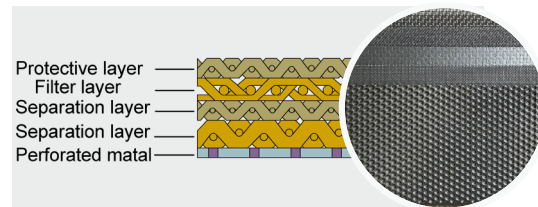
# Sintered Mesh Type

## Standard 5-Layer Sintered Mesh



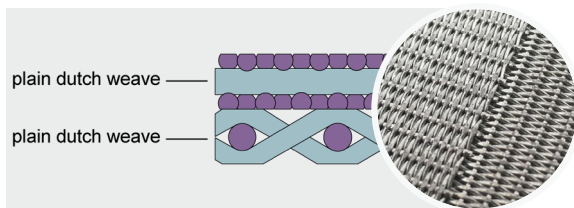
A standard and the most widely used sintered mesh. It is a combination of 5 layers of wire mesh with different openings and mesh counts after laminating and vacuum sintering. Standard 5-layer sintered mesh has higher strength than stainless steel fiber felt, and better air permeability than sintered porous products. We can also offer 6-layer sintered mesh that adds another layer of square weave mesh on the 5-layer sintered mesh to offer higher mechanical strength and compression strength.

## Perforated Metal Sintered Mesh



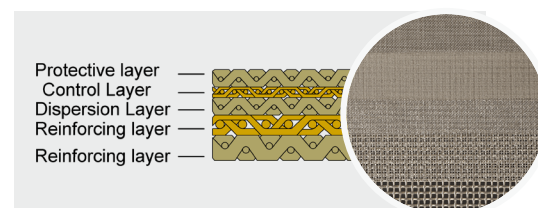
It is fabricated by sintering multiple layers of square weave mesh (or Dutch weave mesh) and stainless steel perforated metal (round or square pattern) together. As a result, it combines the good permeability of woven mesh and the excellent mechanical strength of perforated mesh. In addition, it features great backwashing effect and low pressure lose.

## All Dutch Weave Sintered Mesh



It is constructed of two or three layers of plain Dutch weave wire mesh after laminating and sintering. It features uniform opening distribution and stable permeability.

## All Square Weave Sintered Mesh



It is made of multiple layers of square plain weave wire mesh after sintering. Square weave wire mesh has square hole opening and high open area rate, so this sintered mesh has excellent permeability, low resistance, high flow rate, etc.

## SINTERED MESH CANDLE FILTER

# Connection Type

Compared with polymer melt filtration, chemical filtration requires low temperature and low pressure. So, sintered mesh candle filter has a diversity of connection types. Connection types are customized upon request.

- ▶ Standard connection (such as, 222, 226, etc.)
- ▶ Quick opening connection
- ▶ DOE
- ▶ Thread connection (M20, M30, internal thread)
- ▶ Customized connection



226 connector



Quick opening connector



M20 connector



Internal thread



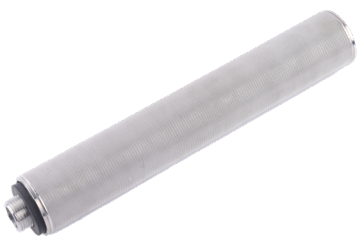
DOE connector



Customized connector

## SINTERED MESH CANDLE FILTER

# Shape Type



## Cylindrical Sintered Mesh Candle Filter (C series)

- The finished products do not need additional outer protection layer or inner support layer
- Easy to clean
- Compared with pleated candle filter, it features simple processing and low costs.
- Broad availability

## Pleated Sintered Mesh Candle Filter (P series)

- It typically offers 3 times the filter area of a cylindrical candle filter for longer runtime.
- Enhanced dirt holding capacity.
- Increased surface area helps to reduce pressure drop.
- Can be cleaned and reused up to 20 times



SINTERED MESH CANDLE FILTER

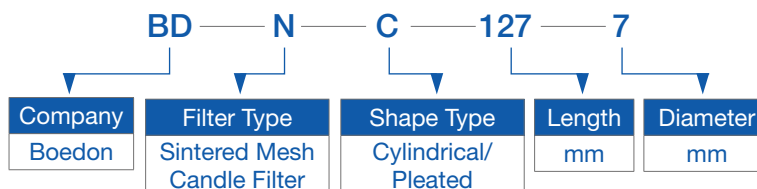
# Specification

**Material:**

stainless steel (304, 316L, etc.), Hastelloy, Monel, etc.

**Filter rating:** 480 °C

**Filter rating:** 1–200 µm



### Popular Specifications of Sintered Mesh Candle Filter

Model	Size				Filter Area	
	Length		Diameter		ft <sup>2</sup>	m <sup>2</sup>
	inch	mm	inch	mm		
BD-N-C-127-7	5	127	2.76	70	0.32	0.03
BD-N-P-127-7	5	127	2.76	70	1.10	0.10
BD-N-C-254-7	10	254	2.76	70	0.64	0.06
BD-N-P-254-7	10	254	2.76	70	2.14	0.20
BD-N-C-508-7	20	508	2.76	70	1.17	0.11
BD-N-P-508-7	20	508	2.76	70	3.84	0.36
BD-N-C-762-7	30	762	2.76	70	1.82	0.17
BD-N-P-762-7	30	762	2.76	70	5.98	0.56
BD-N-C-1016-7	40	1016	2.76	70	2.35	0.22
BD-N-P-1016-7	40	1016	2.76	70	7.80	0.73

**Notes:**

- 65 mm, 80 mm, 110 mm and other diameter sizes are available upon request;
- Length can also be customized upon request.

### Sintered Mesh Candle Filter Filtration Performance

Nominal Filter Rating (µm)	Support Layer	Reinforcing Layer	Separation Layer	Filter Layer	Protective Layer	Thickness (mm)	Air Permeability (L/min/cm <sup>2</sup> )	Bubble Point Pressure (Pa)	Weight (kg/m <sup>2</sup> )	Porosity (%)
1	64 × 12	12 × 64	100	400 × 3000	100	1.7	1.81	360–600	5-layer sintered mesh (8.4); 6-layer sintered mesh (14.4)	
2	64 × 12	12 × 64	100	325 × 2300	100	1.7	2.35	300–590		
5	64 × 12	12 × 64	100	200 × 1400	100	1.7	2.42	260–550		
10	64 × 12	12 × 64	100	165 × 1400	100	1.7	3.00	220–500		
15	64 × 12	12 × 64	100	165 × 1200	100	1.7	3.41	200–480		
20	64 × 12	12 × 64	100	165 × 800	100	1.7	4.50	170–450		
25	64 × 12	12 × 64	100	165 × 600	100	1.7	6.12	150–410		
30	64 × 12	12 × 64	100	400	100	1.7	6.86	120–390		
40	64 × 12	12 × 64	100	325	100	1.7	7.10	100–350		
50	64 × 12	12 × 64	100	250	100	1.7	8.41	90–300		
75	64 × 12	12 × 64	100	200	100	1.7	8.70	80–250		
100	64 × 12	12 × 64	100	150	100	1.7	9.10	70–190		

**Notes:** A 12 mesh woven mesh is added on the 5-layer sintered mesh to form a 6-layer sintered mesh with a thickness of 3.5 mm and better compression resistance.



SINTERED MESH CANDLE FILTER

# Features & Application

## Features

- Better mechanical strength
- Reliable quality, large particle filtration
- Good cleaning property
- Stable opening size
- Stable filter rating
- Excellent resistant to acids, alkalis and high temperatures

## Application



### Chemical

- High temperature filtration
- Corrosive liquid filtration
- Catalytic gas filtration



### Pharmaceutical

- Material impurities removal and filtration
- Material washing & drying
- Acid gas dry dedusting



### Plastic & Plastic Recycling

- Plastic waste recycling
- Impurities removal during plastic film production
- Polymer melt filtration at high temperatures



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