

Polymer Sintered Filter

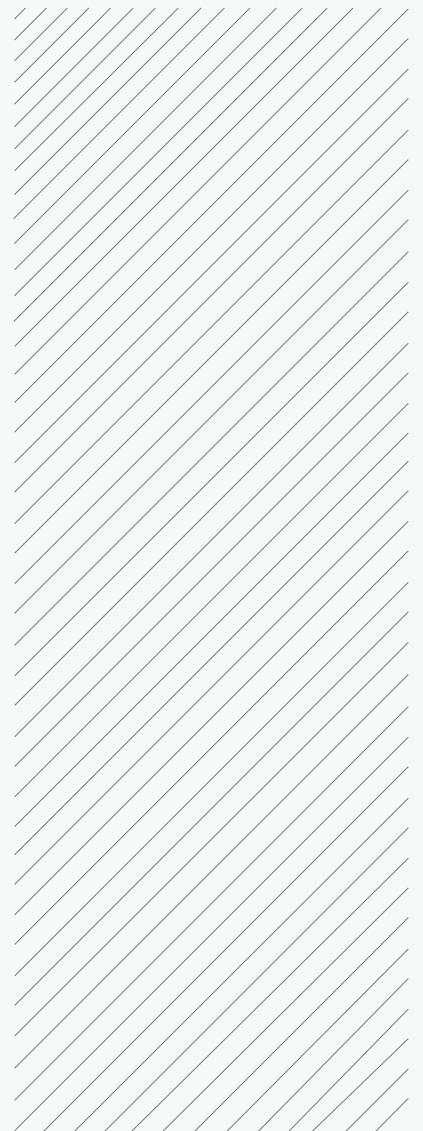
Weave Impossible to Possible



BOEDON Industech Limited

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BOEDON Brochure



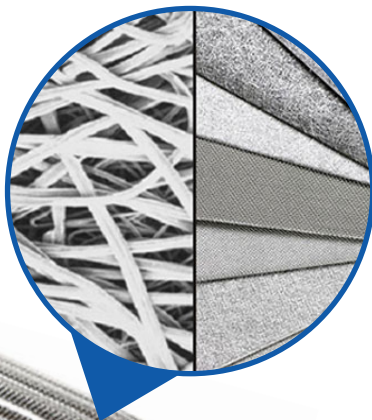
We supply high quality **polymer sintered filters** to meet your requirements of **polymer melt filtration applications.**

Polymer sintered filter is made of 316L stainless steel, iron, chromium, aluminum and other metal fibers with a diameter of micro rating by sintering in high temperature and welding after special non-woven laying and stacking. So, it can withstand the high temperature conditions required in polymer melt filtration process. The sintered filter media has high porosity and delivers low pressure drop, high permeability and great dirt holding capacity.

Polymer sintered filter consists of a protection layer, a filtration layer and a support layer. The protection layer and the support layer are made of stainless steel wire mesh to protect and support the filtration layer. The filtration layer is made of sintered felt and plays a major role in filtering. Sintered felt can be pleated to increase its filter area and enhance its dirt holding capacity, thus improving its filtration efficiency.

We can also offer polymer sintered filters made of Hastelloy, Monel and other alloys for you to choose from.

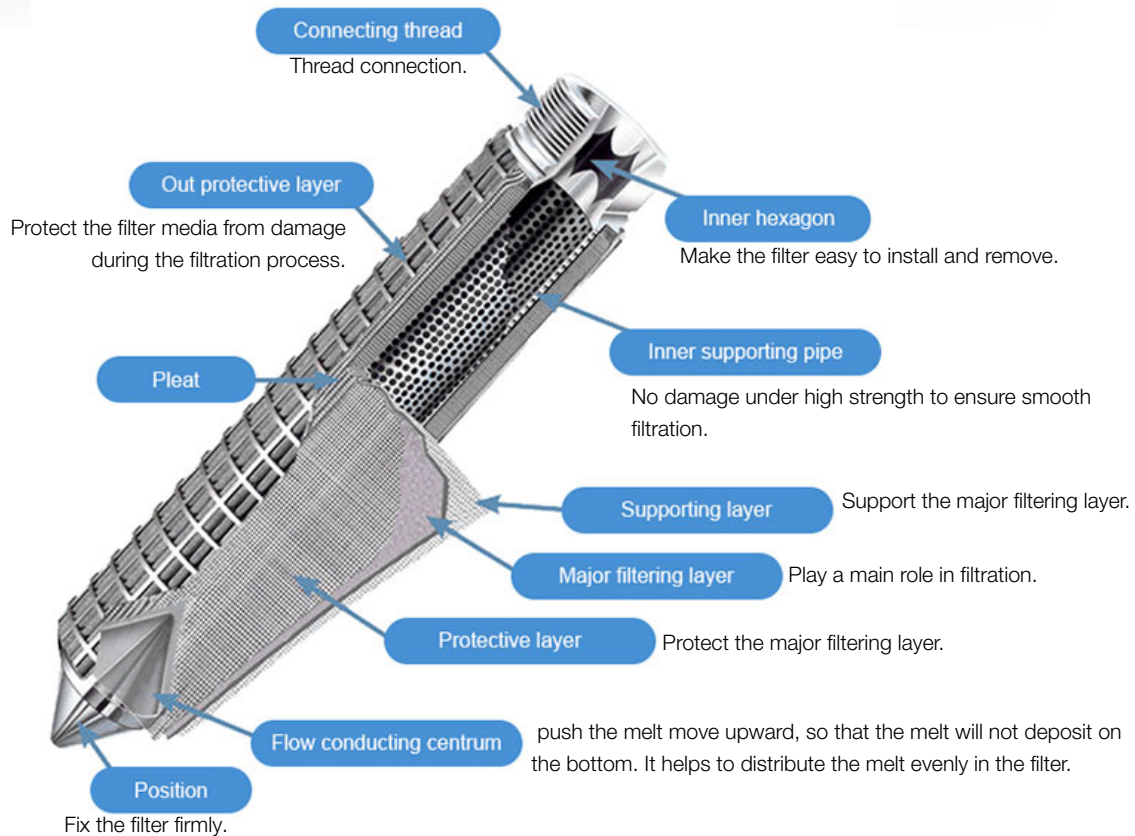
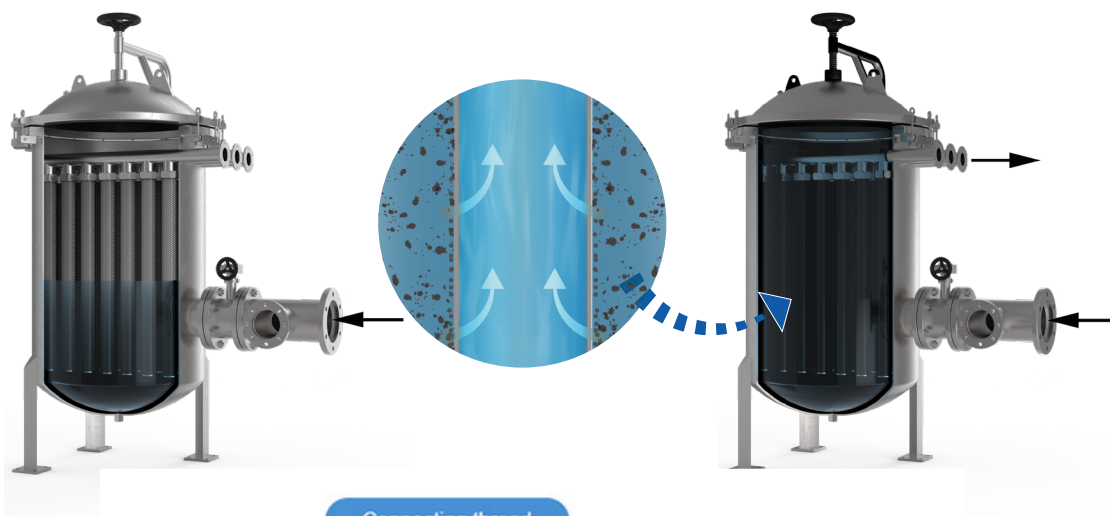
Polymer Sintered Filter



POLYMER SINTERED FILTER

Working Principle

The filtration system adopts one filter for filtering and one stand-by filter operation mode to achieve continuous, uninterrupted filtration process. First, the polymer melt enters into the filter from the bottom and flows from outside to inside. Impurities are trapped on the filter surface and clean melt flows from the filter inside to the clean melt pipeline at the top of the filter, and then flows out of the filter. When the differential pressure reaches the preset value, the filter filtration efficiency slows down, and the control system will convey the melt to another filter. At the same time, the filter for filtering is replaced and washed.



POLYMER SINTERED FILTER

Category



○ Polymer Candle Filter Cylinder Type (PCC series)

- Easy to clean
- Simple processing and cost saving when compared with pleated filter element
- Broad availability



○ Polymer Candle Filter Pleated Type (PCP series)

- It offers 3–5 times filter area than the cylinder type for longer runtime.
- Enhanced dirt holding capacity
- Increased surface area helps to reduce the pressure drop.
- Can be cleaned and reused up to 20 times.

POLYMER SINTERED FILTER

Connection Type

Polymer melt filter elements work under high temperature and high pressure conditions, therefore, they are mostly connected by thread (M20, M30, BSPP, NPT, etc.), flange, snap coupling, rod connection, etc.

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Specification

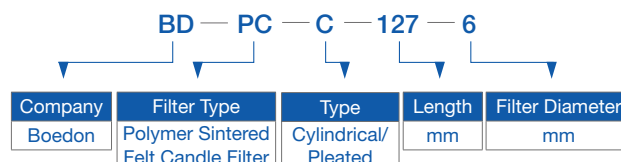
Material: Stainless steel (304, 316L, etc.), Hastelloy, Monel, etc.

Max. working temperature: 600 °C; FeCrAl: 1000 °C

Porosity: about 85%

Filter rating: 1– 60 μm

Maximum differential pressure: 25 bar



Popular Specification of Polymer Sintered Filters

| Model | Size | | | | Filter Area | |
|----------------|----------|------|------------|----|-----------------|----------------|
| | Length L | | Diameter D | | - | - |
| | inch | mm | inch | mm | ft ² | m ² |
| BD-PC-C-127-6 | 5 | 127 | 2.36 | 60 | 0.21 | 0.02 |
| BD-PC-P-127-6 | 5 | 127 | 2.36 | 60 | 0.75 | 0.07 |
| BD-PC-C-254-6 | 10 | 254 | 2.36 | 60 | 0.53 | 0.05 |
| BD-PC-P-254-6 | 10 | 254 | 2.36 | 60 | 1.82 | 0.17 |
| BD-PC-C-508-6 | 20 | 508 | 2.36 | 60 | 0.64 | 0.06 |
| BD-PC-P-508-6 | 20 | 508 | 2.36 | 60 | 2.04 | 0.19 |
| BD-PC-C-762-6 | 30 | 762 | 2.36 | 60 | 1.5 | 0.14 |
| BD-PC-P-762-6 | 30 | 762 | 2.36 | 60 | 5.15 | 0.48 |
| BD-PC-C-1016-6 | 40 | 1016 | 2.36 | 60 | 2.03 | 0.19 |
| BD-PC-P-1016-6 | 40 | 1016 | 2.36 | 60 | 6.97 | 0.65 |

Notes

- Diameter in other sizes such as 65 mm, 70 mm and 110 mm is also available;
- Length in other sizes is also available upon request.

Filtration Performance of Polymer Sintered Filter

| Filter Rating | Air Permeability (2L/dm ² *min) | Bubble Pressure Point (Pa) | Porosity (%) | Dirt Holding Capacity (mg/cm ²) | Thickness (mm) |
|---------------|--|----------------------------|--------------|---|----------------|
| 5 | 47 | 6600 | 75 | 5 | 0.54 |
| 7 | 63 | 5000 | 76 | 6 | 0.54 |
| 10 | 105 | 3700 | 77 | 6 | 0.54 |
| 15 | 140 | 2450 | 79 | 7 | 0.54 |
| 20 | 280 | 2000 | 80 | 13 | 0.54 |
| 25 | 360 | 1500 | 78 | 19 | 0.54 |
| 30 | 520 | 1230 | 79 | 34 | 0.54 |
| 40 | 670 | 960 | 79 | 34 | 0.54 |
| 60 | 1300 | 650 | 85 | 36 | 0.54 |
| 50 | 64 × 12 | 250 | 100 | 8.41 | 90–300 |
| 75 | 64 × 12 | 200 | 100 | 8.7 | 80–250 |
| 100 | 64 × 12 | 150 | 100 | 9.1 | 70–190 |

POLYMER SINTERED FILTER

Features & Application

Features

- Excellent dirt holding capacity
- High porosity, low pressure drop and high air permeability
- Pleating increases the filter area
- Operate under 600 °C conditions for a long time
- Good regeneration capacity and can be washed repeatedly
- High temperature resistance and corrosion resistance

Application



Rubber

- Tire production
- Rubber product production



Plastic & Plastic Recycling

- BOPP
- BOPA and other biaxially oriented plastics film production



Chemical

- Feed solution impurities removal and filtration
- Catalyst recovery, etc.



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