

Polymer Pleated Filter

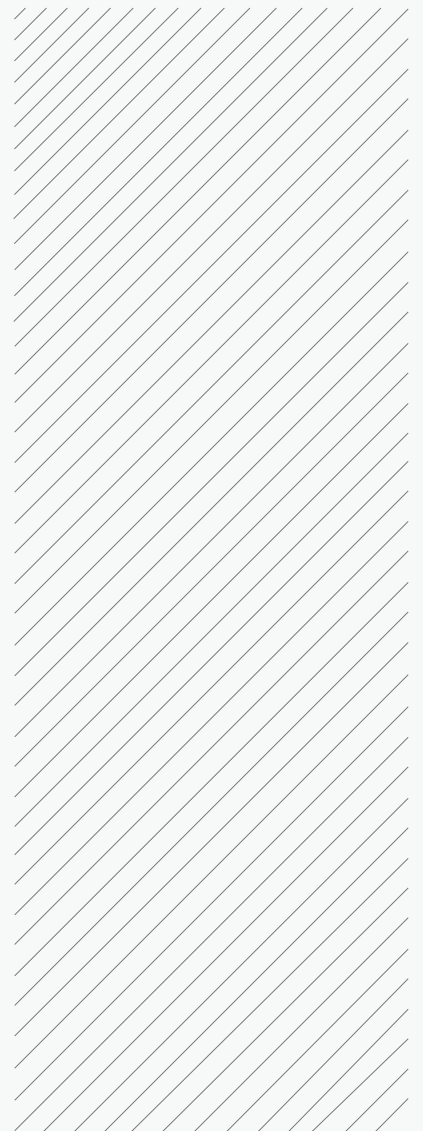
Weave Impossible to Possible



BOEDON Industech Limited

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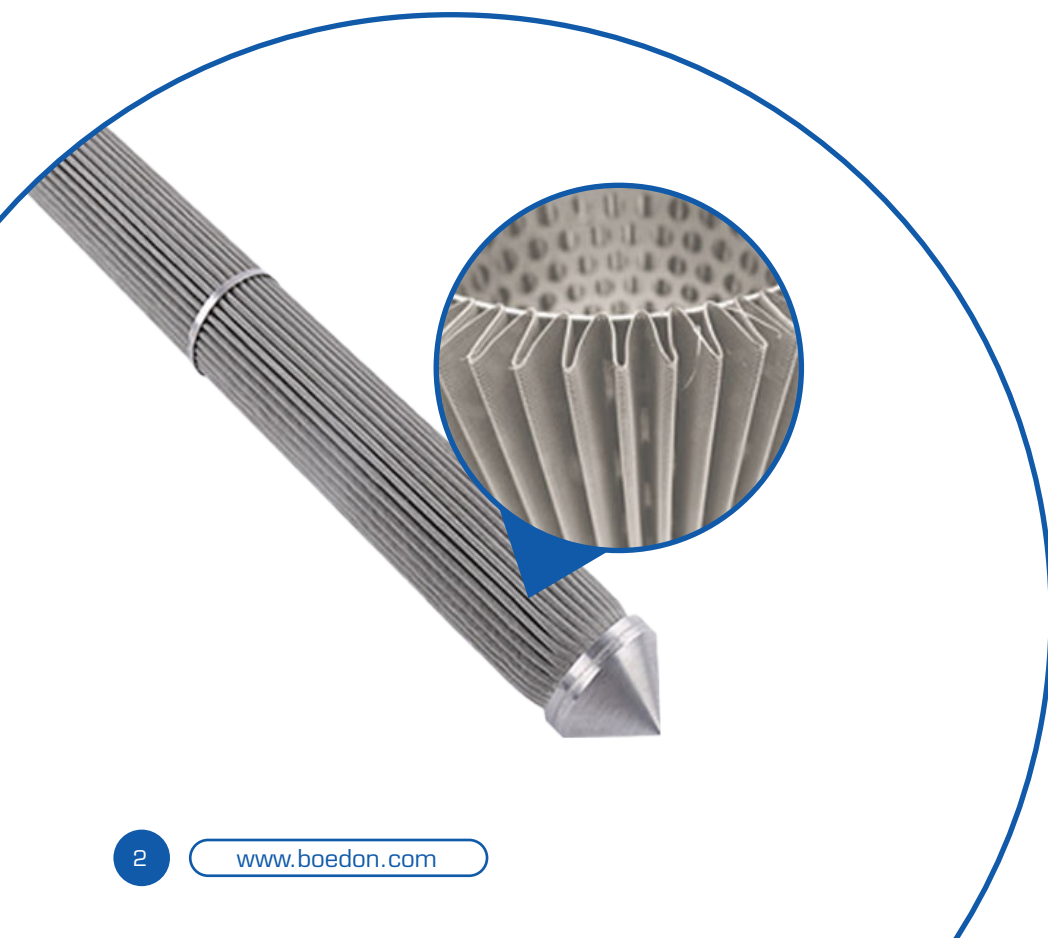
BOEDON Brochure



We offer high quality **polymer pleated filters** to meet your specific requirements of **polymer melt filtration applications.**

Polymer pleated filter is a kind of pleated wire mesh candle filter made of stainless steel (304, 316L) or other metal woven cloth after spot welding, pleating and pressing. Two ends of the pleats are welded to form a cylinder. The filter media consists of a protection layer, a filtration layer and a support layer. The protection layer protects the filtration layer from direct contact with melt polymer and the support layer provides strong support for the filtration layer.

Polymer pleated filter can effectively remove impurities such as gels and other solid permeates from polymer melts in chemical fibers, textile and plastic industries. In addition, we can also offer polymer pleated filter made of other alloy materials such as Hastelloy, Monel for you to choose from and meet different needs.

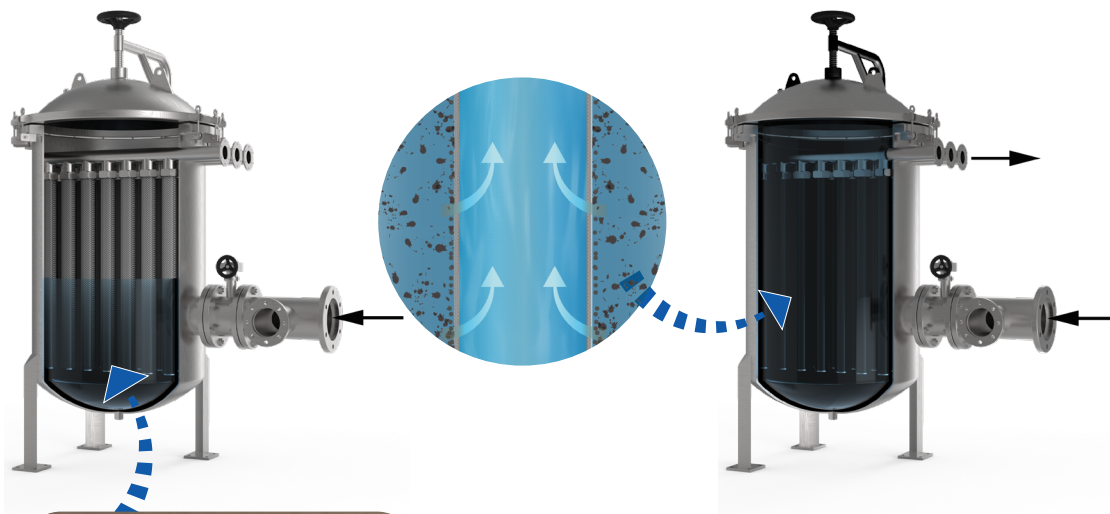


Polymer Pleated Filter

POLYMER PLEATED 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.


Welding Seam

Weld both ends of the pleats to form a cylinder.

Protection Layer

Protect the filtration layer from damage.

Filter Layer

Play a main role in filtration.

Support Layer

Support the filtration layer.

Inner Support

Support the whole filter structure.

Polymer pleated filter needs to work under high temperature conditions and is commonly connected by thread (M20, M30, BSPP, NPT, etc.), flange, snap coupling, rod connection, special customization, etc.



BSPP thread



Flange connection



BSPP thread

POLYMER PLEATED FILTER

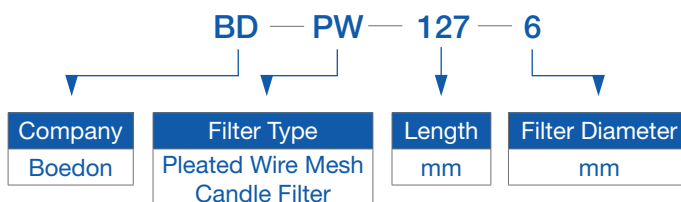
Specification

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

Working temperature: Max. 480 °C

Filter rating: 1–200 µm

Maximum differential pressure: 25 bar



Popular Specification of Polymer Pleated Filters

Model	Size				Filter Area	
	Length L		Diameter D		-	-
	inch	mm	inch	mm	ft ²	m ²
BD-PW-127-6	5	127	2.36	60	0.75	0.07
BD-PW-254-6	10	254	2.36	60	1.82	0.07
BP-PW-508-6	20	508	2.36	60	2.04	0.07
BD-PW-762-6	30	762	2.36	60	5.15	0.07
BD-PW-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.

Polymer Pleated Filter Filtration Performance

Nominal Filter Rating (µm)	Support Layer	Filtration Layer	Protection Layer	Air Permeability (L/min/cm ²)	Bubble Point Pressure (Pa)	Porosity %
1	64 × 12	400 × 3000	200	1.81	360–600	About 40%
2	64 × 12	325 × 2300	100	2.35	300–590	
5	64 × 12	200 × 1400	100	2.42	260–550	
10	64 × 12	165 × 1400	100	3	220–500	
15	64 × 12	165 × 1200	100	3.41	200–480	
20	64 × 12	165 × 800	100	4.5	170–450	
25	64 × 12	165 × 600	100	6.12	150–410	
30	64 × 12	400	100	6.86	120–390	
40	64 × 12	325	100	7.1	100–350	
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	

Notes: The number of filter media layers can be customized upon request.

POLYMER PLEATED FILTER

Features & Application

Features

- Precise pore size and shape
- Smooth surface, good backwash effect
- Stable filter rating
- Better mechanical properties
- Pleating offers increased filter area
- Good resistant to acids, alkali and high temperatures

Application



Chemical Fiber

- Polyester
- Spandex
- Nylon and other high-performance polymer fiber production



Plastic & Plastic Recycling

- Plastic bottle recycling
- Plastic bag recycling



Pharmaceutical

- Catalyst recovery
- Powder recovery, etc.



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