PureFlow

DUST COLLECTOR FILTER BAG

Filtering every trace of dust,
safeguarding every breath of health.

High-Efficiency Filtration

Various Filter Media

Flexible Customization

PRODUCTS

CATALOGUE

01

Dust Collector Filter Bag

We rigorously select high-quality fiber raw materials and employ advanced needle punching processes, thermal pressing, membrane coating, antistatic, and oil- and water-repellent technologies to manufacture dust collector filter bags with excellent filtration precision, superior air permeability, and outstanding durability, fully meeting dust control requirements under a wide range of complex operating conditions.

We provide not only standard specification products, but also flexible customization services tailored to customer requirements, ensuring reliable support for enterprises to achieve environmental compliance and efficient equipment operation.

High-Efficiency Filtration

Dust collection efficiency ≥ 99.5%, dust emission concentration ≤ 5 mg/m^3.

Various Filter Media

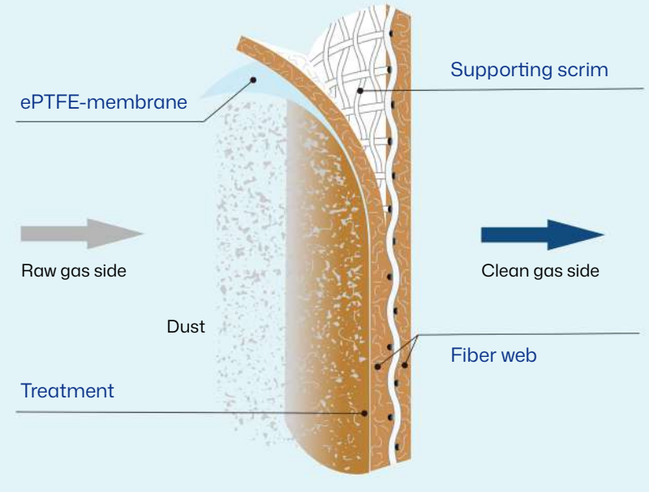
Suitable for ambient temperature, high temperature, acidic and alkaline, humidity and other complex operating conditions.

Flexible Customization

Supports customization by dimensions, filter media, coating, interface, and other parameters.

3D Structure of needle felt Filter Media

Fibre web – Base fabric – Fibre web – Post-processing process



02

Filter Media Selection

Filter Media	Material	Basis Weight g/m^2	Continuous Operating Temperature °C (°F)	Instantaneous Operating Temperature °C (°F)	Tensile Strength N/5×20 cm		Abrasion Resistance	Acid Resistance	Alkali Resistance	Hydrolysis Resistance
Polyester needle felt	Polyester	500	120(248)	150(302)	Warp: ≥ 1104	Weft: ≥ 1229	Excellent	Good	Fair	Poor
Acrylic needle felt	Polyacrylonitrile	500	135(266)	150(302)	Warp: ≥ 1150	Weft: ≥ 1200	Middle	Good	Good	Good
PPS needle felt	Polyphenylene sulfide	550	190(374)	200(392)	Warp: ≥ 1130	Weft: ≥ 1250	Good	Good	Good	Excellent
Aramid needle felt	Aromatic polyamide	550	204(399)	230(446)	Warp: ≥ 1120	Weft: ≥ 1230	Good	Good	Good	Middle
Polyimide needle felt	Polyimide	550	260(500)	280(536)	Warp: ≥ 1125	Weft: ≥ 1400	Good	Excellent	Excellent	Middle
PTFE needle felt	Polytetrafluoroethylene	780	260(500)	280(536)	Warp: ≥ 1100	Weft: ≥ 1450	Good	Excellent	Excellent	Excellent
Composite needle felt	Glass fiber and other fibers	900	230(446)	280(536)	Warp: ≥ 961	Weft: ≥ 1155	Good	Good	Good	Good

Filter
Every Wisp of Dust

Protect
Every Bit of Health

03

Post-processing Process

The post-processing process for dust collector filter bags refers to a series of physical or chemical treatments applied after the filter media is needle-punched and formed, aimed at improving filtration performance, mechanical strength, thermal stability, and surface properties. These processes can be applied individually or in combination according to specific operating requirements, thereby effectively enhancing the performance of the filter media and enabling targeted functional design of the filter bag.

Singeing

By singeing the surface of the filter bag with a flame, fiber fuzz is removed, resulting in a smoother surface and reduced dust adhesion.

Calendering

The filter media is calendered under high temperature and pressure to achieve a smooth, dense structure and enhanced dimensional stability.

Membrane Coating

An ePTFE membrane is thermally laminated onto the surface of the filter media, forming a microporous filtration layer to increase filtration precision.

Heat Setting

The filter bag is heated at a specific temperature to stabilize the fiber molecular structure, extend its service life, and improve dimensional stability.

Water & Oil Repellency

Filter media impregnated with fluorocarbon resin or PTFE emulsion forms a water and oil repellent coating, making it suitable for humid and oily flue gas environments.

Antistatic

Conductive fibers are incorporated into the filter media to prevent static electricity accumulation and reduce the risk of explosion in flammable and explosive dust environments.

NOT JUST A DUST COLLECTOR FILTER BAG,
BUT YOUR TRUSTED PARTNER IN INDUSTRIAL AIR POLLUTION CONTROL!

04

Polyester Filter Bag

Polyester (PET) filter bags are manufactured primarily from polyester fibers using a needle-punched nonwoven process. They offer abrasion resistance as well as acid and alkali resistance, making them suitable for dust filtration under medium and low temperature conditions. At present, they are the most widely used filter bag products in industrial dust collection applications.

Features

- **Excellent temperature resistance.** Its continuous operating temperature up to 120 °C, with a peak operating temperature of up to 150 °C.
- **Outstanding abrasion resistance.** polyester fiber offers superior abrasion resistance, making it suitable for environments containing abrasive dust.
- **Acid and alkali resistance.** It is capable of withstanding general weak acid and weak alkali environments; not suitable for strong acid or strong alkali gases.
- **High cost-effectiveness.** Compared to high-temperature or specialty fiber filter bags, these are more economical and suitable for large-scale applications.

Specifications

Product model		PFB-PET
Product name		Polyester filter bag
Fiber		Polyester
Basis weight (g/m^2)		500
Thickness (mm)		1.8–2.1
Air permeability ($L/m^2 \cdot s$)		200–300
Tensile strength (N/5 × 20 cm)	Warp	≥ 1104
	Weft	≥ 1229
Elongation at break (%)	Warp	< 35
	Weft	< 50
Operating temperature (°C)	Continuous	120
	Instantaneous	150
Post-processing process		Singeing, calendering, membrane coating, water and oil repellency, antistatic, etc.

05

Acrylic Filter Bag

Acrylic filter bags are manufactured primarily from acrylic fibers using a needle punching process. They offer excellent acid resistance and hydrolysis resistance, making them suitable for dust collection in humid and corrosive medium-temperature environments.

Features

- **Temperature resistance.** It is capable of stable operation at 135 °C – 150 °C.
- **Corrosion resistance.** It demonstrates good resistance to weak acids, weak alkalis, and organic solvents.
- **Hydrolysis resistance.** It exhibits excellent hydrolysis resistance, suitable for use in humid operating conditions.
- **Durability.** It provides good abrasion resistance and mechanical strength, ensuring a long service life.
- **Lower cost.** Compared to other high-performance filtration media, acrylic filter bags are more cost-effective.

Specifications

Product model		PFB-PAN
Product name		Acrylic filter bag
Fiber		Acrylic
Basis weight (g/m^2)		500
Thickness (mm)		1.8
Air permeability (L/m^2·s)		200–300
Tensile strength (N/5 × 20 cm)	Warp	≥ 1150
	Weft	≥ 1200
Elongation at break (%)	Warp	< 35
	Weft	< 45
Operating temperature (°C)	Continuous	135
	Instantaneous	150
Post-processing process		Singeing, calendering, membrane coating, water and oil repellency, antistatic, etc.

06

PPS Filter Bag

The PPS filter bag is manufactured from polyphenylene sulfide fibers using a nonwoven needle punching process. It offers hydrolysis resistance, high temperature resistance, and corrosion resistance, making it suitable for dust collection in industries such as asphalt, cement, and power generation.

Features

- **High temperature resistance.** It is capable of continuous operation at 190 °C, with a peak operating temperature of up to 200 °C.
- **Acid and alkali resistance.** It demonstrates strong resistance to most acids and alkalis, and is corrosion resistant.
- **Hydrolysis resistance.** It is not prone to hydrolysis, suitable for environments with high humidity or steam-containing gases.
- **Flame retardancy.** It exhibits excellent inherent flame retardant properties, with a limiting oxygen index of 34–35.

Specifications

Product model		PFB-PPS
Product name		PPS filter bag
Fiber		Polyphenylene sulfide
Basis weight (g/m^2)		550
Thickness (mm)		1.8
Air permeability (L/m^2·s)		200–300
Tensile strength (N/5 × 20 cm)	Warp	≥ 1130
	Weft	≥ 1256
Elongation at break (%)	Warp	< 40
	Weft	< 60
Operating temperature (°C)	Continuous	190
	Instantaneous	200
Post-processing process		Singeing, calendering, membrane coating, water and oil repellency, antistatic, etc.

07

Aramid Filter Bag

Aramid filter bags are manufactured through needle-punching process using acrylic fiber as the primary material. These high-temperature filter bags offer high temperature resistance, flame retardancy, and corrosion resistance, and are widely applied in industrial high-temperature flue gas dust collection.

Features

- **High temperature resistance.** It is capable of continuous operation at 204 °C, with a peak operating temperature of up to 230 °C.
- **Wear resistance.** It is suitable for high-intensity reverse air cleaning conditions, extending the filter bag replacement interval.
- **Corrosion resistance.** It provides resistance to neutral and mildly acidic or alkaline environments.
- **Flame retardancy.** Limiting oxygen index of 30–34, it does not self-ignite or support combustion.

Specifications

Product model		PFB-AR
Product name		Aramid dust collector filter bag
Fiber		Aromatic polyamide
Basis weight (g/m^2)		550
Thickness (mm)		1.8
Air permeability (L/m^2·s)		200–300
Tensile strength (N/5 × 20 cm)	Warp	≥ 1120
	Weft	≥ 1230
Elongation at break (%)	Warp	< 50
	Weft	< 55
Operating temperature (°C)	Continuous	204
	Instantaneous	230
Post-processing process		Singeing, calendering, membrane coating, water and oil repellency, antistatic, etc.

08

Polyimide Filter Bag

Polyimide (PI) dust collector filter bags are manufactured from polyimide fibers using a needle punching process. These high-temperature dust collector filter bags exhibit excellent heat resistance, chemical stability, and structural integrity. They are one of premium filter media capable of long-term stable operation under extreme high-temperature conditions in baghouse dust collection systems.

Features

- **High temperature resistance.** It is capable of continuous operation at 260 °C, with instantaneous operating temperatures up to 280 °C.
- **Oxidation resistance.** It maintains structural stability in oxygen-rich environments, making it suitable for high-temperature oxidation conditions.
- **Acid and alkali resistance.** It demonstrates excellent tolerance to a variety of acidic and alkaline gases, suitable for complex chemical environments.
- **High strength.** It exhibits high tensile strength, making it suitable for high-frequency reverse air cleaning applications; however, hydrolysis resistance is moderate to low.

Specifications

Product model		PFB-PI
Product name		Polyimide filter bag
Fiber		Polyimide
Basis weight (g/m^2)		550
Thickness (mm)		1.8
Air permeability (L/m^2·s)		200–300
Tensile strength (N/5 × 20 cm)	Warp	≥ 1125
	Weft	≥ 1400
Elongation at break (%)	Warp	< 40
	Weft	< 60
Operating temperature (°C)	Continuous	260
	Instantaneous	280
Post-processing process		Singeing, calendering, membrane coating, water and oil repellency, antistatic, etc.

09

PTFE Filter Bag

The PTFE filter bag is a high-performance filter bag manufactured primarily from polytetrafluoroethylene fibers. PTFE, known as the 'King of Plastics' for its exceptional high temperature resistance, chemical inertness, and self-lubricating properties, is used to produce filter bags with excellent chemical stability and extended filtration life. These filter bags are particularly well-suited for dust filtration in extremely demanding operating environments.

Features

- **High temperature resistance.** It is capable of continuous operation at 260 °C, with instantaneous operating temperatures up to 280 °C.
- **Chemical corrosion resistance.** It effectively withstands virtually all strong acids, strong alkalis, organic solvents, and oxidizing gases.
- **Hydrolysis resistance.** It is unaffected by moisture or steam, making it suitable for high-temperature and high-humidity gas streams.
- **Smooth surface.** It facilitates easy dust release, resulting in low filter bag resistance and excellent cleaning performance.

Specifications

Product model		PFB-PT
Product name		PTFE filter bag
Fiber		Polytetrafluoroethylene
Basis weight (g/m^2)		780
Thickness (mm)		1.6
Air permeability (L/m^2·s)		30–80
Tensile strength (N/5 × 20 cm)	Warp	≥ 1350
	Weft	≥ 1450
Elongation at break (%)	Warp	< 40
	Weft	< 60
Operating temperature (°C)	Continuous	260
	Instantaneous	280
Post-processing process		Singeing, calendering, membrane coating, water and oil repellency, antistatic, etc.

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Composite Filter Bag

Composite filter bags are filter bags manufactured by blending two or more fibers with distinct properties. By utilizing the complementary characteristics of different fibers, the overall performance of the filter media is significantly enhanced, achieving synergistic improvements in temperature resistance, chemical resistance, and mechanical strength. This enables the filter bags to meet diverse performance requirements under complex operating conditions and overcomes the application limitations of single-fiber materials.

Features

- **Performance customization.** The fiber blend ratio can be adjusted based on dust characteristics such as temperature, corrosiveness, and particle size.
- **Comprehensive performance enhancement.** The combination of different fibers enables synergistic optimization, significantly improving the performance of the filter media.
- **Adaptable to complex operating conditions.** It is capable of simultaneously withstanding high temperatures, high humidity, strong acids and alkalis, and oxidizing flue gases.

Specifications

Product model		PFB-FM
Product name		Composite filter bag
Fiber		Glass fiber / PPS / PI / PTFE, etc.
Basis weight (g/m^2)		900
Thickness (mm)		2.4
Air permeability (L/m^2·s)		200–300
Tensile strength (N/5 × 20 cm)	Warp	≥ 961
	Weft	≥ 1155
Elongation at break (%)	Warp	< 30
	Weft	< 45
Operating temperature (°C)	Continuous	230
	Instantaneous	280
Post-processing process		Singeing, calendering, membrane coating, water and oil repellency, antistatic, etc.

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But Your Trusted Partner In Industrial Air Pollution Control!

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