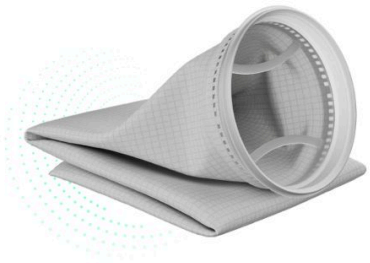
DUST BAG FILTERS

Antistatic Bag Filter

Dust filter made by integrating 2–5% conductive carbon or stainless steel fibre into the selected base felt medium. In systems with combustible and explosive dust, it conducts the static charge building up on the filter surface to the grounding system.



BASE FIBRE	SURFACE RESISTANCE	CONDUCTIVE FIBRE	GROUNDING
6 options	**10^3–10^9 Ω**	**2–5%**	**< 4 Ω**
PE, PAN, PPS, Nomex, P84, PTFE	Conductive and dissipative	Carbon or stainless steel	Terminal to cage

Technical specifications

Base fibre	Polyester (PE) · Acrylic (PAN) · PPS (Ryton) · Meta-aramid (Nomex) · P84 (polyimide) · PTFE
Fabric structure	Needle-punched felt
Conductive fibre type	Carbon fibre · Stainless steel micro-fibre
Conductive fibre ratio	2–5% (above 5% under special conditions)
Conductive fibre structure	Stripe · Square grid · Blending (homogeneous mix)
Surface resistance	Conductive 10^3–10^5 Ω · Static dissipative 10^6–10^9 Ω
Grounding	Resistance between grounding terminal and cage < 4 Ω
Standard	ATEX 137 · DIN 54345 Parts 1 and 5
Temperature limit	Approx. 130–260 °C, depending on base fibre
Surface treatments	Singeing · Calendering · Water and oil repellent (oleophobic) · ePTFE membrane
Collar types	PP ring · Snap ring · Drawstring · Flanged · Plain top · Snap band
Cleaning system	Pulse-jet · Reverse air · Shaker
Cage	Galvanised or stainless steel; painted cages are not used
Resistance monitoring	Monthly grounding resistance measurement and record

Conductive fibre types

FIBRE TYPE	RESISTANCE	PROPERTY	LIMITATION
Stainless steel	10^3–10^5 Ω	Lowest resistance; high chemical, mechanical and temperature resistance	Higher cost; corrosion in chloride environments
Carbon	10^5–10^7 Ω	Good conductivity; lightweight, flexible, general purpose	Breakage under pulse-jet, oxidation when hot; not for food/pharma

Distribution geometry

GEOMETRY	CONSTRUCTION	CONDUCTIVITY	APPLICATION
Stripe	Parallel vertical stripes	One direction; economical	Low–medium risk
Square grid	Intersecting horizontal and vertical stripes	Two directions; even	Medium–high risk
Blending	Even distribution throughout the media	Three-dimensional (isotropic)	High risk

Collar options

PP ring
Plastic PP flange ring.

Snap ring
Snap-in system with a steel ring.

Drawstring
Tied with a drawstring.

Flanged
Clamped by a top hold-down flange.

Plain top
For clamped connections.

Snap band
Seats with a steel strip band.

Use and maintenance

- After installation, measure the resistance between the grounding terminal and the cage; confirm the < 4 Ω threshold.
- Measure and record grounding resistance monthly; replace the bag when the threshold is exceeded.
- In oxygen-rich, high-temperature environments and in food/pharmaceutical applications, choose stainless steel fibre.
- Keep the pulse-jet pressure within the recommended range; excessive pressure can break the conductive fibre.
- Painted or deformed cages break grounding continuity; use galvanised or stainless steel cages.

Values in this data sheet are typical and for information only. Product selection should be made with our engineers based on process fluid, temperature, pressure and flow conditions. Proses T.İ.M. reserves the right to change product specifications without prior notice.

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