DFX Series

DFX™ Series – Dust Filtration Excellence Built for Industrial Demands

DFX-PES™ – Polyester Dust Filter Bags Technical Overview

FiltraCore Asia's **DFX-PES™ Polyester Dust Filter Bags** are constructed from **polyester needlefelt** with a basis weight typically between **500–550 g/m²**, supported on a woven scrim to maintain dimensional stability. Finishes such as **singeing, glazing, or calendering** are applied to control fibre migration, enhance dust cake release, and extend service life. Optional **PTFE membrane lamination** is available where fine particulate capture and low emissions are required.

Polyester is classified as a **standard-temperature filter media**, suitable for **continuous operation at 135 °C with peaks up to 150 °C**. It demonstrates **good resistance to abrasion, dry heat, and neutral dusts**, making it one of the most widely used and cost-effective baghouse materials. However, its limitations are significant: polyester has **poor hydrolysis resistance**, failing prematurely in environments with **moisture, acidic vapours, or alkaline particulates**. It is therefore best suited for **dry, stable gas conditions**.

DFX-PES™ bags are typically used in **woodworking, grain handling, cement grinding, steel fabrication, and general dust collection systems**, where they deliver consistent performance, low emissions, and economical service life.

These bags are manufactured in **OEM-equivalent constructions** to ensure compatibility with **Donaldson®, AAF®, Parker Hannifin®, BWF® Envirotec, Nederman MikroPul®, and other major OEMs**, across pulse-jet, shaker, and reverse-air cleaning systems.

Consistent. Cost-Effective. Ready for Industrial Duty.

DFX Series

Technical Specifications

- **Material:** Polyester needlefelt, basis weight 500–550 g/m²
- **Operating Temperature:** Continuous up to 135 °C; peaks up to 150 °C

- **Micron Ratings:** Typically 5–50 µm, depending on finish and application
- **Finish Options:** Singed, glazed, calendered, oil & water repellent, PTFE membrane laminated
- **Construction:** Sewn with high-strength polyester or aramid thread; double or triple stitched seams
- **Seam Style:** Standard double needle, with reinforced options for high-stress systems
- **Air Permeability:** 10–16 m³/m²/min (pre-conditioning, finish dependent)
- **Chemical Resistance:** Good resistance to abrasion and dry heat; poor resistance to acids, alkalis, and hydrolysis
- **Hydrolysis Resistance:** Limited — avoid moist, acidic, or alkaline environments
- **Cage Compatibility:** Designed for use with standard round or oval cages; venturis compatible
- **Compliance:** OEM-equivalent constructions; food-contact compliant variants available on request (FDA 21 CFR; EU 1935/2004 & 10/2011)
- **Add-Ons:** Wear pads, anti-collapse rings, top-load guides, spark-resistant cuffs
- **Pleated Option:** Available for space-constrained systems; increases surface area and extends service life

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Standard Dimensions

- **Lengths:** 1000 mm to 6000 mm (custom lengths available on request)
- **Diameter:** Standard diameters 120 mm, 125 mm, 130 mm, 150 mm, and 160 mm; other diameters available on request
- **Top Options:** Snap band, raw cuff, corded cuff, compression cuff, flange collar, or ring top
- **Bottom Options:** Sewn disc (standard); reinforced bottoms or wear pads for abrasive environments
- **Customization:** Sizes and constructions can be tailored to fit specific housing requirements or OEM specifications

Recommended Air-to-Cloth (A/C) Ratios[1] for DFX-PES™

Application	Cleaning System	Recommended A/C Ratio (m/min)	System Type	Media Type	Notes
Woodworking & Furniture	Pulse Jet	1.2 – 1.6	Baghouse	Polyester Needlefelt	Excellent for dry, fibrous dust; avoid high humidity.
Grain Handling & Milling	Pulse Jet	1.0 – 1.4	Baghouse	Polyester Needlefelt	Suitable for dry cereal dust; ensure non-explosive environments or use ANT.
Cement Grinding & Minerals	Pulse Jet	1.0 – 1.3	Baghouse	Polyester Needlefelt	Handles abrasive dust; ensure moderate temperature zones.
Steel Fabrication & Welding	Reverse Air	0.8 – 1.1	Baghouse	Polyester Needlefelt	Effective against fine metallic dust; limited resistance to oily fumes.
General Dust Collection	Pulse Jet	1.0 – 1.5	Baghouse	Polyester Needlefelt	Suitable for packaging, conveying, and general plant dust control.

[1] *Recommended air-to-cloth (A/C) ratios are indicative and provided as general sizing guidelines for polyester needlefelt media used in baghouse systems. Actual performance depends on dust characteristics, system design, cleaning method, and media condition. For systems handling combustible or hazardous dusts, A/C ratios must be validated against applicable safety codes such as ATEX (EU Directive 2014/34/EU), NEC Class II (NFPA 652/654), or IECEx, and reviewed by qualified engineers. Please consult FiltraCore Asia's technical team for application-specific recommendations.*

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