DFX Series

DFX™ Series – Dust Filtration Excellence Built for Industrial Demands

DFX-PTFE™ – PTFE (Teflon®) Coated Dust Bags Technical Overview

FiltraCore Asia's **DFX-PTFE™ Dust Filter Bags** are designed for the most demanding dust collection systems, where **ultra-low emissions, extreme chemical resistance, and superior dust release properties** are non-negotiable. Manufactured from **100% PTFE fibres** or as an **expanded PTFE (ePTFE) membrane laminated to a thermally stable base felt** such as P84®, PPS, or aramid (Nomex®), these bags provide **continuous operation up to 250–260 °C** while maintaining dimensional stability, flex resistance, and consistent pressure drop.

The **PTFE surface layer** acts as an inert barrier against sticky or submicron particulates, preventing blinding, enhancing cleanability, and extending service intervals. Optional treatments such as **graphite surface coating** further improve dust cake release and abrasion resistance, while **welded seam options** deliver the highest level of emission control for ultra-clean applications.

DFX-PTFE™ is specified in **hazardous and municipal waste incineration, pharmaceutical production, chemical synthesis, power utilities, and non-ferrous/ferrous smelting**, where other filter media fail. Its **chemical inertness** ensures resistance to virtually all acids, alkalis, oxidisers, and solvents, while its **robust mechanical integrity** withstands demanding pulse-jet, shaker, and reverse-air cleaning regimes.

Although PTFE carries a higher upfront cost than conventional fibres, it consistently delivers **superior lifecycle economics** by reducing changeouts, minimising maintenance, and ensuring compliance with the **strictest global emission standards**.

Designed as **OEM-equivalent replacements**, DFX-PTFE™ integrates seamlessly into housings from **Eaton®, GAF®, AAF®, Parker Hannifin®, Donaldson®, Filtration Group®, BWF® Envirotec, and others**, offering true drop-in compatibility without collector modification.

Engineered for Compliance. Built for Harsh Conditions. Proven for Emissions Control.

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Technical Specifications

- **Material:** 100% PTFE needlefelt or woven PTFE; also available as ePTFE membrane laminated to P84®, PPS, or aramid felt
- **Weight:** 750–900 g/m² (typical, depending on construction and finish)

- **Operating Temperature:** Continuous up to 250 °C; short-term peaks to 260 °C
- **Micron Ratings:** Typically 1–25 µm, application specific
- **Finish Options:** PTFE membrane lamination (standard); graphite coating; silicone or expanded PTFE treatments available
- **Construction:** Sewn with PTFE thread; welded seam options for ultra-clean applications
- **Seam Style:** Double or triple stitched, or welded for maximum emission control
- **Air Permeability:** 3–8 m³/m²/min (pre-conditioning, finish dependent)
- **Chemical Resistance:** Inert to virtually all acids, alkalis, oxidisers, and organic solvents
- **Hydrolysis Resistance:** Excellent; unaffected by moisture, condensation, or dew point cycling
- **Cage Compatibility:** Designed for use with standard round or oval cages; venturi options available
- **Compliance:** Suitable for installations requiring the strictest emission controls; food-contact compliant variants available (FDA 21 CFR; EU 1935/2004 & 10/2011)
- **Add-Ons:** Wear pads, anti-collapse rings, spark-resistant cuffs, grounding options

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Standard Dimensions

- **Lengths**: 1000 mm to 6000 mm (custom on request)
- **Diameter**: 120 mm to 160 mm typical (custom fit available)
- **Top Options**: Snap band, grounding flange, raw cuff, corded cuff
- **Bottom Options**: Disc, reinforced cuff, wear pad options

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

Application	Cleaning System	Recommended A/C Ratio (m/min)	System Type	Media Type	Notes
Waste Incineration	Pulse Jet	0.6 – 1.0	Baghouse	PTFE Needlefelt	Handles aggressive SOx, NOx, HCl; low A/C ratio extends service life.
Hazardous Waste Treatment	Pulse Jet	0.6 – 0.9	Baghouse	PTFE Needlefelt	Designed for highly corrosive gas streams; stable pressure drop.
Chemical Processing	Pulse Jet	0.7 – 1.0	Baghouse	PTFE Needlefelt	Resists acids, alkalis, solvents; suitable under condensation cycling.
Power Utilities (Coal/Biomass)	Pulse Jet	0.7 – 1.0	Baghouse	PTFE Needlefelt	Withstands fluctuating flue gas conditions and high humidity.
Metal Smelting & Refining	Reverse Air	0.5 – 0.8	Baghouse	PTFE Needlefelt	For corrosive, high-temperature fumes; low A/C ratios preserve bag life.

[1] *Recommended air-to-cloth (A/C) ratios are indicative and provided as general sizing guidelines. Actual performance depends on dust characteristics, system design, cleaning method, and media condition. For explosive dust environments or systems governed by ATEX (EU Directive 2014/34/EU), NEC Class II (U.S. NFPA 652/654), or IECEx standards, ratios should be validated against certified design parameters and reviewed by qualified safety professionals. Please consult FiltraCore Asia's technical team for application-specific guidance, custom modelling, or system retrofit planning.*

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