DFX Series

DFX™ Series – Dust Filtration Excellence Built for Industrial Demands

DFX-FMS™ – Fiberglass Blend Dust Filter Bags Technical Overview

FiltraCore Asia's **DFX-FMS™ Fiberglass Blend Dust Filter Bags** are engineered for **continuous operation in high-temperature and chemically aggressive environments**, where conventional synthetic felts fail. Constructed from **fibreglass-reinforced needlefelt blended with performance fibres such as PPS, PTFE, or aramid**, this media combines the **thermal stability of fibreglass** with the **flexibility, abrasion resistance, and chemical durability of polymer fibres**.

The blend allows for **continuous service above 200 °C**, with short-term excursions tolerated to **240–260 °C**, depending on blend ratio and treatment. Compared to pure fibreglass, FMS exhibits **superior flex life and resistance to mechanical damage**, significantly reducing the risk of bag breakage under pulsed cleaning cycles.

Chemically, FMS shows **excellent resistance to acidic gases including SOx, NOx, and HCl**, while maintaining **enhanced tolerance to alkaline and oxidising environments** compared to fibreglass alone. PTFE or graphite surface treatments may be applied to improve **resistance to hydrolysis, reduce fibre migration, and stabilise pressure drop behaviour** in systems prone to condensation cycles.

The construction provides **dimensional stability, low shrinkage, and predictable emission control**, making DFX-FMS™ a reliable solution for **cement kilns, incineration plants, smelters, and steelworks** operating under harsh combined thermal and chemical stress.

DFX-FMS™ bags are designed for **pulse-jet, shaker, and reverse-air cleaning systems**, and are supplied in **OEM-equivalent constructions** for housings from **BWF® Envirotec, Parker Hannifin®, Donaldson®, Nederman MikroPul®, Clarcor®, Sly Inc.®, and others**.

Built for Heat. Reinforced for Longevity. Optimized for Tough Dust Environments.

DFX Series

Technical Specifications

- **Material:** Fibreglass-reinforced needlefelt blended with PPS, PTFE, or aramid fibres
- **Operating Temperature:** Continuous up to 200–220 °C; short-term excursions to 240–260 °C (depending on blend ratio and finish)
- **Weight:** Typically 500–600 gsm (varies by fibre composition and coating)
- **Micron Ratings:** Generally 5–50 µm; finer ratings achievable with PTFE membrane lamination
- **Surface Treatments:** PTFE coating, graphite impregnation, or silicone finish for enhanced chemical resistance, flex life, and cake release
- **Construction:** Sewn with high-temperature resistant thread; double or triple-stitched seams for durability under pulsed cleaning
- **Seam Style:** Standard double needle or triple-reinforced for high-stress applications
- **Air Permeability:** Approx. 8–12 $m^3/m^2/min$ (pre-conditioning; varies with blend and finish)
- **Chemical Resistance:** Excellent against acidic gases (SOx, NOx, HCl); improved tolerance to alkaline and oxidising dust compared with pure fibreglass
- **Hydrolysis Resistance:** Moderate to good, depending on blend composition; superior to fibreglass-only media
- **Cage Compatibility:** Designed for use with standard round or oval support cages
- **Compliance:** Designed for high-temperature and chemically aggressive environments; food-contact compliant variants available (FDA 21 CFR; EU 1935/2004 & 10/2011)
- **Add-Ons:** Anti-collapse rings, wear pads, top-load guides, spark-resistant cuffs

Standard Dimensions

- **Lengths:** 1000 mm to 6000 mm (custom lengths available on request)
- **Diameters:** Standard 120 mm, 125 mm, 130 mm, 150 mm, and 160 mm; other diameters available upon request
- **Top Options:** Snap band, raw cuff, corded cuff, compression cuff, flange collar, or ring top
- **Bottom Options:** Sewn disc (standard); optional wear pads or reinforced bottoms for abrasion resistance
- **Customisation:** Dimensions and construction can be tailored to match specific OEM housings and system requirements

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

Application	Cleaning System	Recommended A/C Ratio (m/min)	System Type	Media Type	Notes
Cement Kilns & Coolers	Pulse Jet	0.8 – 1.2	Baghouse	Fibreglass Blend Needlefelt	Blend improves flex life over pure FG; PTFE finish advised for acid gases and condensation.
Waste Incineration	Pulse Jet / Reverse Air	0.8 – 1.0	Baghouse	FMS (Fibreglass + PPS/PTFE)	Suited for SOx, NOx, HCl-rich gases; graphite/PTFE finishes reduce chemical attack.
Steelworks & Smelters	Pulse Jet	0.7 – 1.0	Baghouse	Fibreglass Blend Needlefelt	High thermal peaks; aramid blend improves mechanical durability under stress.
Chemical Processing	Pulse Jet	0.8 – 1.2	Baghouse	Fibreglass/PTFE Blends	Handles acidic and alkaline vapours; use with cooling/conditioning if >220 °C.
Boilers (Coal/Biomass)	Pulse Jet / Reverse Air	0.9 – 1.3	Baghouse	Fibreglass Blend Needlefelt	Tolerates corrosive ash; PTFE coating improves hydrolysis and reduces plugging.

[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 high-temperature or corrosive dust environments, A/C ratios should be validated against system specifications and reviewed by filtration engineers. Please consult FiltraCore Asia's technical team for application-specific modelling or retrofit advice.*

Pleated variants of this media are sometimes promoted but are not considered commercially reliable due to fibre and service-life limitations. FiltraCore Asia supplies only proven bag constructions in line with global OEM standards.

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