DFX Series

DFX™ Series – Dust Filtration Excellence Built for Industrial Demands

DFX-FG™ – Fiberglass Filter Bags Technical Overview

FiltraCore Asia's **DFX-FG™ Fiberglass Dust Filter Bags** are designed for **continuous operation in high-temperature and chemically aggressive environments**, providing reliable service in baghouses where synthetic fibres degrade prematurely. Constructed from **woven or needled fibreglass felt** supported by a woven scrim, the media offers **thermal stability up to 260 °C**, withstanding **short-term excursions to 280–300 °C** without loss of structural integrity.

To extend service life under severe conditions, **surface treatments such as PTFE, silicone, or graphite coatings** can be applied. These finishes reduce **flex fatigue**, improve **resistance to acidic gases and condensation cycles**, and promote **clean dust cake release**, thereby stabilising pressure drop and minimising emissions.

The fibreglass medium exhibits **low elongation, high dimensional stability, and good resistance to most acidic environments**, though it has only **limited tolerance to alkaline dust streams**. It is therefore recommended primarily for **cement kilns, waste incineration, foundries, power generation, and glass production** where acidic vapours and sustained heat are dominant.

Pleated fibreglass elements are also available for retrofit applications, typically combining fibreglass felt with an ePTFE membrane. Designed for **pulse-jet collectors** as a replacement for the traditional bag-and-cage assembly, pleated elements can provide **2–3× the surface area**, lower effective air-to-cloth ratios, and improved pressure drop stability. Their use is most effective in **high-dust-load or retrofit situations**, and selection should always be validated against cleaning intensity and baghouse design.

DFX-FG™ bags are suitable for **pulse-jet, shaker, and reverse-air cleaning systems**. They are supplied in **OEM-equivalent constructions** to fit baghouse housings from **Donaldson®, AAF®, Parker Hannifin®, BWF® Envirotec, FLSmidth®, Nederman MikroPul®, Sly Inc.®**, and other leading system providers, with standard and custom sizes available to support retrofit or new-build installations.

Engineered for Heat. Coated for Protection. Trusted in Extreme Conditions.

DFX Series

Technical Specifications

- **Material:** Woven or needled fibreglass felt, typically supported with woven scrim
- **Operating Temperature:** Continuous up to 260 °C; short-term excursions up to 280–300 °C
- **Weight:** Typically 450–550 gsm (depending on construction and finish)
- **Micron Ratings:** Generally 10–50 µm; finer control achievable with PTFE membrane lamination
- **Surface Treatments:** PTFE, graphite, or silicone coatings to reduce flex fatigue, enhance chemical resistance, and improve cake release
- **Construction:** Sewn with high-temperature resistant thread; double or triple-stitched seams
- **Seam Style:** Standard double needle or reinforced seams for high-stress applications
- **Air Permeability:** Approx. 8–12 $m^3/m^2/min$ (pre-conditioning; varies with coating and membrane options)
- **Chemical Resistance:** Excellent against acidic gases (SOx, NOx, HCl); limited tolerance to alkaline particulates
- **Hydrolysis Resistance:** Limited; fibreglass is susceptible to moisture cycling unless surface-treated
- **Cage Compatibility:** Designed for standard round or oval support cages
- **Compliance:** Supplied for general industrial high-temperature service; ATEX/IECEx suitability must be confirmed at system level

- **Add-Ons:** Anti-collapse rings, wear pads, top load guides, spark-resistant cuffs
- **Pleated Option:** Available with fibreglass felt and ePTFE membrane for pulse-jet systems; provides
  2–3× surface area, reduced A/C ratio, and extended service life in retrofit applications

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 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 protection
- **Customisation:** Dimensions and configurations can be tailored to match specific OEM housing requirements, including pleated retrofits for pulse-jet systems

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

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 Needlefelt	Handles high dust loading and elevated temps; coatings advised for abrasion and chemical resistance.
Waste Incineration	Pulse Jet / Reverse Air	0.6 – 1.0	Baghouse	Fibreglass with PTFE	Recommended downstream of quench/conditioning to manage acid gases and temperature peaks.
Foundries & Smelters	Pulse Jet	0.8 – 1.2	Baghouse	Fibreglass Needlefelt	Withstands thermal spikes and metallic dust; graphite or silicone finish improves cake release.
Coal / Biomass Boilers	Pulse Jet / Reverse Air	0.9 – 1.3	Baghouse	Fibreglass Needlefelt	Suitable for corrosive ash; PTFE coating reduces risk of hydrolysis and dust blinding.
Glass & Ceramics	Pulse Jet	1.0 – 1.5	Baghouse	Fibreglass Felt	For fine abrasive dust at sustained heat; ensure stable cage design to limit flex fatigue

[1] *Recommended air-to-cloth (A/C) ratios are indicative values provided for general baghouse sizing and selection. Actual performance depends on dust characteristics, filter geometry, air velocity, cleaning intensity, and system design. For high-temperature or chemically aggressive environments, consultation with FiltraCore Asia's technical team is advised to validate A/C ratios and ensure compliance with plant-specific requirements.*

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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