



DFX™ Series – Dust Filtration Excellence Built for Industrial Demands

DFX-P84™ – P84® Polyimide Dust Bags Technical Overview

Filtracore Asia's **DFX-P84™ Polyimide (P84®) Dust Filter Bags** are constructed from **100% polyimide felt (P84®)** with a typical basis weight of **500–600 g/m²**, supported on a woven scrim for dimensional stability. The **tri-lobal fibre cross-section** of P84® creates a larger surface area compared to round fibres, resulting in **enhanced dust collection efficiency, low emissions, and stable pressure drop performance**.

P84® is classified as a **high-temperature filtration material**, designed for **continuous**



operation at 240 °C and **short-term excursions up to 260 °C**. It exhibits **excellent resistance to acidic gases** including SO_x, NO_x, and HCl, making it highly suitable for incineration and cement kiln applications. However, its **alkali resistance is poor**, and the media is vulnerable to hydrolysis in high-moisture or dew point conditions.

In operation, **DFX-P84™ provides extended bag life and emission stability** in baghouses for **waste incinerators, cement kilns, coal-fired utilities, and biomass boilers**. The media's fine dust capture

capabilities make it especially effective for meeting stringent emission standards.

DFX-P84™ bags are manufactured in **OEM-equivalent constructions** and are compatible with baghouse systems from **Donaldson®, AAF®, Parker Hannifin®, BWF® Envirotec, FLSmidth®, and other global suppliers**.

Engineered for Chemistry. Structured for Flow. Reliable under Pressure.

Technical Specifications

- **Material:** 100% Polyimide Felt (P84®), basis weight 500–600 g/m²
- **Operating Temperature:** Continuous up to 240 °C; peaks up to 260 °C
- **Micron Ratings:** Typically 5–30 µm, depending on finish and application
- **Finish Options:** PTFE membrane laminated, graphite coating, silicone coating, oil & water repellent
- **Construction:** Sewn with high-temperature thread (PTFE or aramid); double or triple stitched seams
- **Seam Style:** Standard double needle or reinforced stitching for high-stress systems
- **Air Permeability:** 6–10 m³/m²/min (pre-conditioning, finish dependent)
- **Chemical Resistance:** Excellent resistance to acidic gases (SO_x, NO_x, HCl); poor resistance to alkalis
- **Hydrolysis Resistance:** Limited
 - avoid high moisture or dew point operation
- **Cage Compatibility:** Designed for use with round or oval cages; venturis compatible
- **Compliance:** OEM-equivalent designs; 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



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 available for abrasive environments
- **Customisation:** Sizes and constructions can be tailored to meet specific housing requirements or OEM specifications

Recommended Air-to-Cloth (A/C) Ratios¹ for DFX-P84™

Application	Cleaning System	Recommended A/C Ratio (m/min)	System Type	Media Type	Notes
Waste Incineration	Pulse Jet	0.8 – 1.2	Baghouse	Polyimide (P84®) Felt	Fine particulate capture; excellent acid resistance; avoid high humidity.
Cement Kilns & Coolers	Pulse Jet	1.0 – 1.3	Baghouse	Polyimide (P84®) Felt	Stable under high temp and acid gas; not suited to alkali-rich zones.
Coal-Fired Boilers	Reverse Air	0.6 – 1.0	Baghouse	Polyimide (P84®) Felt	Strong acid resistance; must operate above dew point to prevent damage.
Biomass & RDF Boilers	Pulse Jet	0.9 – 1.2	Baghouse	Polyimide (P84®) Felt	Effective against acidic by-products; limited hydrolysis resistance.

¹Recommended 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.

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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