AFX Series

AFX™ Series – Air Filtration Excellence
Clean Air, Clean Performance

AFX-PKT™ – Pocket Filter Modules
Technical Overview

FiltraCore Asia's **AFX-PKT™ Pocket Filter Modules** are multi-pocket, extended-surface HVAC filters built for **predictable lifetime economics** across large portfolios. Designed for AHUs in commercial, healthcare, pharmaceutical, electronics, food & beverage, and data-centre environments, they pair **high dust-holding capacity** with a **stable pressure drop** to lengthen change-out intervals, **reduce energy spend**, and simplify stock planning. Configurations are available up to **MERV 15 / ISO 16890 ePM1-class** options (class depends on model), letting you align filter grade to site risk without over-specifying.

Available in three media constructions – **moisture-resistant synthetic (AFX-PKT-SF™)**, **microglass for higher efficiency classes (AFX-PKT-MG™)**, and an **activated-carbon composite for odour/VOC co-removal (AFX-PKT-AC™)** – the range allows standardisation on one family while tailoring performance to each site and duty.

For deployment and continuity, AFX-PKT™ is dimensioned for **industry-standard pocket frames** and engineered as a **drop-in replacement** when **nominal size, header thickness, pocket depth/count, and efficiency class** are matched. **Common Euro/US sizes** and **galvanised steel or polymer headers** are supported, with **upstream/downstream gasket options** to match existing rails. Cross-reference support and documentation are available to ease multi-site transitions; **food-contact-compliant variants are available on request** where required.

Engineered for Airflow. Built for Efficiency. Trusted in Demanding Systems.

Technical Specifications

- **Media & construction:** Progressive-density synthetic (AFX-PKT-SF™), microglass (AFX-PKT-MG™), or carbon-loaded composite (AFX-PKT-AC™). Stitched or ultrasonic pocket seams; internal spacers/loops where required to prevent pocket crowding. Headers: galvanised steel or polymer (ABS) with upstream/downstream gasket options

- **Efficiency classes (particulate):** Up to MERV 15 (ASHRAE 52.2). ISO 16890 ratings available across ePM10 / ePM2.5 / ePM1 classes (model-dependent
- **Molecular capability (AFX-PKT-AC™):** Activated-carbon layer for broad-spectrum VOC/odour reduction. Performance depends on contaminant species, concentration, residence time, and relative humidity. *ISO 10121-type molecular test data available on request*
- **Nominal sizes / depths:** Typical modules 592 × 592 / 592 × 490 / 592 × 287 mm with pocket depths around 300, 380, 560, 760 mm (other sizes on request)
- **Face velocity / rating points:** Industry reference points commonly ≈2.5 m/s for qualification; some ranges are published to ≈3.0–3.2 m/s depending on construction. Product performance is stated at the defined face velocity for each model
- **Initial differential pressure (clean):** Model- and grade-dependent. Representative pocket filters show clean Δp ≈ 50–110 Pa at ≈2.5–3.0 m/s for mid/high grades; carbon-loaded variants start higher. See product-specific Δp–velocity curves for sizing
- **Final resistance (Δp):** Typical reference ≈250 Pa; some series are validated to ≈375–450 Pa. Follow the site's change-out policy and the model's published limit
- **Operating limits:** Temperature up to ≈70 °C (header/media dependent). 0–100% RH, non-condensing for synthetic and many microglass designs. Activated-carbon adsorption decreases at high RH

- **Flow direction / mounting:** Standard front-entry, slide-in pocket orientation for side-access or built-up banks. Verify rail geometry, header thickness (often ≈25 mm nominal), gasket location, and pocket count/depth for drop-in retrofit. Selected series may be used without a prefilter where the design permits
- **Applications (summary):** General and clean-critical HVAC as pre- or final filters according to risk class; data centres (stable Δp, high dust-holding); healthcare/pharma (grade per design); food & beverage HVAC (documentation on request); make-up air in paint facilities (not for overspray arrest – use dedicated arrestor media)

Recommended vs. Maximum Airflow[1] – AFX-PKT-SF™ (Synthetic Fibre)

Pocket Depth	Filter Size (mm)	Recommended Airflow (m³/h)	Max Airflow (m³/h)
600 mm (24")	592 × 592	3,000 – 3,600	Up to 4,200
500 mm (20")	592 × 592	2,400 – 3,000	Up to 3,600
400 mm (16")	592 × 592	2,000 – 2,400	Up to 3,000
600 mm (24")	287 × 592	1,400 – 1,800	Up to 2,100

Recommended vs. Maximum Airflow[1] – AFX-PKT-MG™ (Microglass)

Pocket Depth	Filter Size (mm)	Recommended Airflow (m³/h)	Max Airflow (m³/h)
600 mm (24")	592 × 592	2,600 – 3,200	Up to 3,600
500 mm (20")	592 × 592	2,000 – 2,600	Up to 3,200
400 mm (16")	592 × 592	1,600 – 2,000	Up to 2,500
600 mm (24")	287 × 592	1,200 – 1,600	Up to 1,800

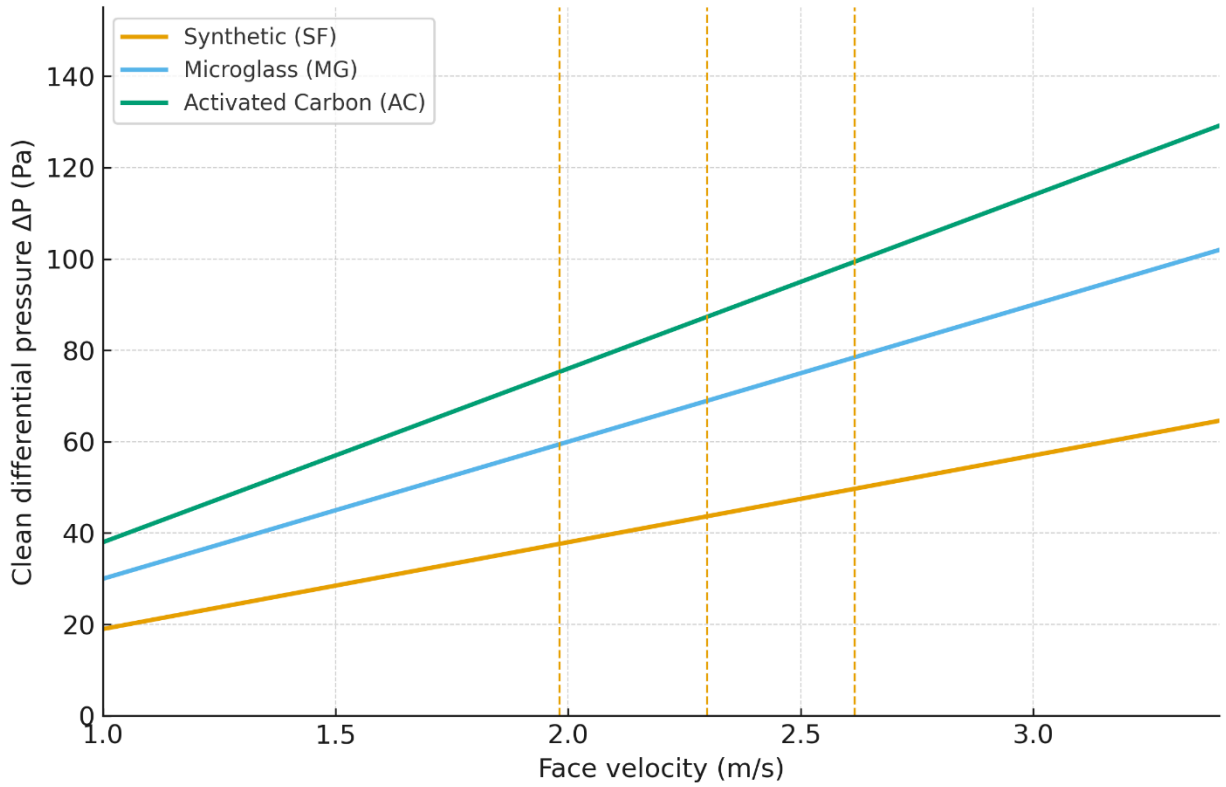
Recommended vs. Maximum Airflow[1] – AFX-PKT-AC™ (Activated Carbon)

Pocket Depth	Filter Size (mm)	Recommended Airflow (m³/h)	Max Airflow (m³/h)
600 mm (24")	592 × 592	2,200 – 2,800	Up to 3,200
500 mm (20")	592 × 592	1,800 – 2,200	Up to 2,600
400 mm (16")	592 × 592	1,500 – 1,800	Up to 2,200
600 mm (24")	287 × 592	1,000 – 1,400	Up to 1,600

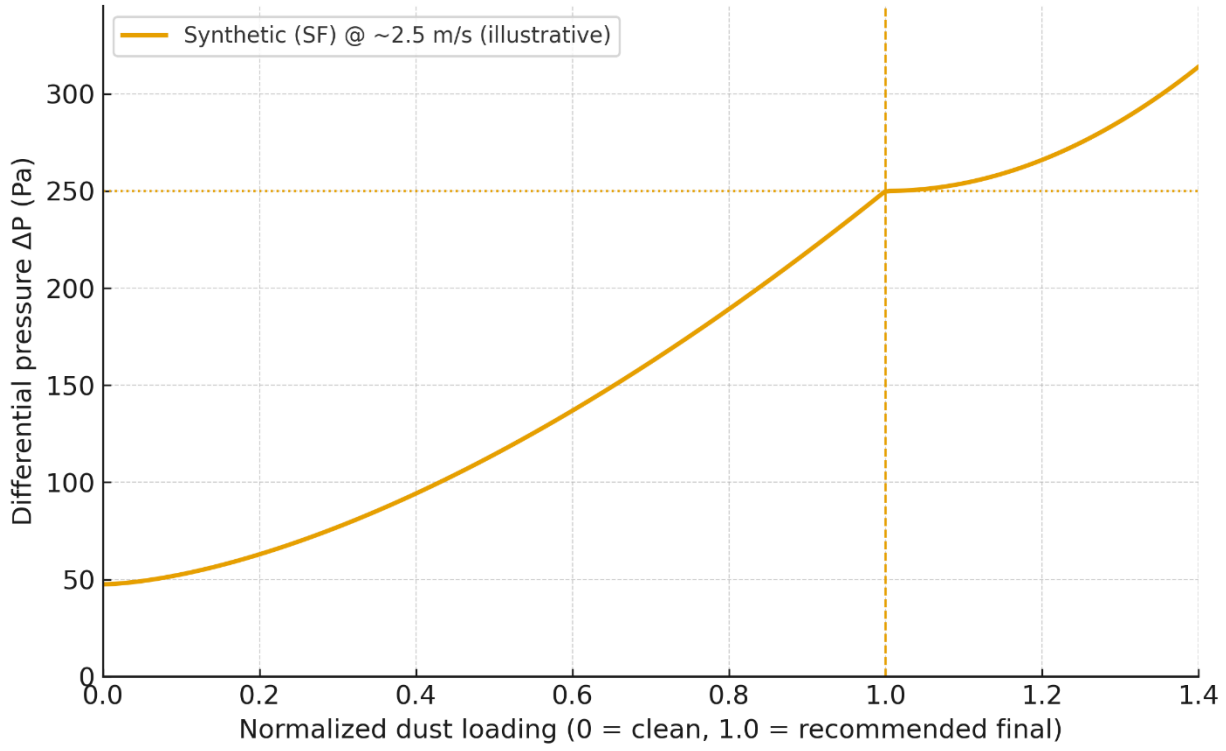
Initial Pressure Drop (Δp)[2] – AFX-PKT™ Pocket Filter Modules

Pocket Depth	Filter Size (mm)	Synthetic Δp (Pa)	Microglass Δp (Pa)	Activated Carbon Δp (Pa)
600 mm (24")	592 × 592	30 – 65 Pa	50 – 100 Pa	70 – 120 Pa
500 mm (20")	592 × 592	30 – 50 Pa	50 – 80 Pa	60 – 100 Pa
400 mm (16")	592 × 592	30 – 45 Pa	45 – 75 Pa	55 – 90 Pa
600 mm (24")	287 × 592	30 – 50 Pa	50 – 90 Pa	60 – 100 Pa

Initial Pressure Drop (Δp) vs Face Velocity[3] – AFX-PKT™ Pocket Filter Modules (592 × 592 mm; 600 mm Depth)



Pressure Drop (Δp) vs Normalised Dust Loading[4] – AFX-PKT™ Pocket Filter Modules (592 × 592 mm; 600 mm Depth; Illustrative)



[1] Ratings at ~20 °C air (≈ 1.2 kg/m³), clean filter, 6-pocket baseline, 25 mm header; frontal size as listed. "Recommended Airflow" = continuous design range; "Max Airflow" = short-duration limit (not a design point). For 592 × 592 mm, 3,000–3,600 m³/h ≈ 2.38–2.85 m/s; 4,200 m³/h ≈ 3.33 m/s (clean). For other sizes, scale by frontal area. For AFX-PKT-AC™, service life should also be set by VOC/odour breakthrough or IAQ metrics, not Δp alone

[2] Clean-filter values at ~20 °C air, 6-pocket baseline, 25 mm header; anchored around 2.5 m/s and scaling approximately with face velocity. Plan change-out near ~250 Pa final resistance (or per site/OEM policy). AFX-PKT-AC™ starts at a higher Δp and is humidity-sensitive for adsorption performance.

[3] Clean-filter curves at ~20 °C air (≈ 1.2 kg/m³), 6-pocket baseline, 25 mm header; 592 × 592 mm frontal area. Curves are anchored at 2.5 m/s using the mid-points of the published initial Δp ranges and assume Δp scales approximately with face velocity for clean media. Vertical dashed lines indicate mid-points of the recommended design velocity bands derived from the airflow tables; the dotted line marks a typical final resistance target (~250 Pa). Values are typical and not a specification. For other sizes, scale flow by frontal area. AFX-PKT-AC™ starts at a higher Δp and, for service life, should also be assessed by IAQ/VOC breakthrough (humidity dependent).

[4] Illustrative loading behaviour at a representative face velocity of ~2.5 m/s (clean Δp from the initial Δp table). Normalised loading = 1.0 corresponds to the recommended final resistance (~250 Pa). Operating significantly beyond this increases energy cost and bypass risk. Actual loading rate depends on dust profile, prefiltration, duty cycle, face-velocity distribution, and humidity; housing/piping losses are excluded. For AFX-PKT-AC™, service life must also be set by VOC/odour breakthrough or IAQ metrics, not Δp alone. Values are typical and not a specification.

Actual performance depends on fluid viscosity, contaminant load, pressure differential, and system configuration. Operating above recommended flow may shorten filter life or reduce filtration efficiency.

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