

Suggested Engineering Specifications

Your Air Filtration & Dust Collection Specialists

Design Recommendations for HEPA Filters: Initial & Final Resistance Data & Curves For Various HEPA Filter Models IAS Bulletin No. 128-11-16



Design Resistance Rule of Thumb: Allow **doubling (2x Initial)** of the HEPA filter differential pressure (see Final Resistance Table below and HC-HEPA curve at bottom).

HEPA FILTER MODEL & CAPACITY	RECOMMENDED BY IAS	TYPICAL CAPACITY @ 1.00"WC	RECOM- MENDED MAXIMUM FACE VELOCITY	RECOMMENDED PRESSURE DROP		IEST ACCEPTANCE (EFFICIENCY)	
				INITIAL (CLEAN)	FINAL	ΜΙΝΙΜUΜ	IAS RECOMMENDATION
SC-HEPA, STANDARD CAPACITY	NO	1050CFM	260FPM	1.00"WC	2.00"WC	99.97%, TYPE "A"	99.99%, TYPE "C"
HC-HEPA, HIGH CAPACITY	YES (AS A MINIMUM)	1450CFM	375FPM	1.00"WC	2.00"WC	99.97%, TYPE "A"	99.99% <i>,</i> TYPE "C"
HV-HEPA, HIGH VOLUME (ULTRA- HIGH CAPACITY)	YES (FOR EXTENDED SERVICE LIFE)	2400CFM	600FPM	1.00"WC	2.00"WC	99.97%, TYPE "A"	99.99%, TYPE "C"

HEPA Filter Selection Table, courtesy of Industry Air Sales Ltd.



Resistance Curves, AAF Astrocel 99.97% HCX (HC-HEPA), courtesy of AAF Int'l

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Comparison Pressure Drop Curves, Clean Filter PD At Various Air Velocities For Various Models (chart courtesy of Filtration Group LLC)

IAS RECOMMENDATIONS:

- 1. EFFICIENCY: Use minimum **99.99% Efficiency** HEPA filters in BIBO filter systems to ensure optimum protection to building occupants (HEPA filters should meet minimum IEST Acceptance "C" in our opinion)
- 2. CAPACITY: Use **HC-HEPA (high-capacity) or HV-HEPA (Ultra high-capacity)** filters only in BIBO systems to optimize service life and minimize energy costs. Capital savings from reducing equipment size, along with extended service life (reduced filter cycling, labor and disposal costs) more than compensates for the higher up-front costs making HC-HEPA and HV-HEPA your optimum choice for BIBO filtration systems.