AIRDOG COMMERCIAL

TECHNOLOGY COMPARISON BRIEF

B2B Specification Sheet
TPA® vs. HEPA

EXECUTIVE SUMMARY

Traditional HEPA filters rely on passive fiber barriers that clog, degrade CADR over time, and accumulate live pathogens. Airdog's patented **TPA® (Two-Pole Technology)** utilizes an active 20,000V electrostatic field to destroy 99.99% of bio-contaminants while capturing fine particles down to 0.0146 µm onto **100% washable, zero-cost collector plates**.

SPECIFICATION / FEATURE	AIRDOG TPA® TECHNOLOGY	COMMERCIAL HEPA (H13/H14)
Purification Method	**Active High-Voltage Electrostatic Field**	Passive Mechanical Mesh Filtration
Particle Filtration Size	**Down to 0.0146 µm**	Down to 0.3 µm (99.97%)
Bio-hazard Destruction	**Destroys 99.99% of viruses & bacteria**	Traps pathogens alive on filter surface
Consumable / Filter Cost	**$0 (Reusable / Washable Plates)**	$100 - $500+ per unit annually
Airflow & CADR Stability	**Constant CADR; no pressure drop**	CADR degrades as filter clogs
Environmental Waste	**Zero landfill filter waste (LEED support)**	Non-biodegradable synthetic waste

Total Cost of Ownership (TCO)

High ROI

Zero Consumable Expenses: Reusable metal collector plates eliminate periodic filter replacements, reducing 5-year operating overhead dramatically.

Stable Energy Consumption: Free airflow across electrostatic plates prevents fan strain, keeping HVAC and unit energy draw constant.

Biological Safety & Safety Standards

Active Shield

Cellular Destruction: High-voltage ionization destroys pathogen cell walls rather than letting mold and viruses grow inside dense media.

Ozone Certified: Fully compliant with CARB, US OSHA, and international safety limits with built-in ozone catalyst layer.

Commercial Purchaser FAQ

Q: How does TPA® technology impact long-term facility maintenance?

A: Facilities eliminate filter procurement cycles, replacement labor, and storage costs. Collector plates simply require periodic washing (hand or dishwasher) when notified by automatic sensors.

Q: How does switching to TPA® support corporate ESG and LEED goals?

A: Commercial HEPA units generate tons of hazardous, non-biodegradable waste annually. TPA® creates zero consumable waste, directly aligning with green building certifications and ESG metrics.