

The truth is, AAF leads the industry in gas turbine (H)EPA filtration.

Clearing the air regarding gas turbine filtration's biggest myths

AAF brings more than 90 years of experience to every installation and every solution. With over 50,000 (H)EPA filters installed around the world, nobody else can match our level of expertise, or our role as the global leader in gas turbine (H)EPA filtration.

This document traces the evolution of AAF's filtration expertise, showing our long history of technological innovation and the increasing levels of filtration performance we continue to offer to gas turbine operators around the world. It also seeks to dispel the two main misconceptions that persist in the world of gas turbine inlet filtration:

Myth #1: Gas turbines have always been protected by air filters

Looking back on AAF's GT installation list, we see the following milestones.

Year	GT Inlet Filtration Development
1962	AstroCel® III 4000 launched (not on GT)
1968	Dust Louvres, RoloMatic, Multi Duty
1972	M81 Pre-Filter
1973	Varicel Fine Filter
1975	RM90 Fine Filter (F7)
1976	DriPak® Pre-Filter
1977	First Intake w/o inertial separator (M80+RM90 Avon)
1980	Pulse Clean
1984	ASC
1991	Pulstar
1993	DuraVee™ DV95 (F8)
1997	AstroCel® III 4000 on GT
2005	DuraVee™ DV98 (F9)
2006	HydroCel® 95
2012	HydroShield™ (E12)



Inertial separators were the predominant solution from 1968 to 1977; up to this point, air filters on gas turbines were a rarity.

The first fine filter (F7 or MERV 13) was installed in 1975. Some 18 years later, F8/MERV 14 filters made an appearance on an AAF-protected gas turbine. The next evolution came 12 years later with the introduction of F9 (MERV 16).

As you can see, filter elements were not the original solution to gas turbine protection. Moreover, history has shown that substantial upgrades typically appear only after long intervals. Based on this progression, effective and reliable (H)EPA filters shouldn't make an appearance until some time around 2020. Which brings us to Myth #2.



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Myth #2: High-efficiency filtration (HEPA or EPA) is a new development

(H)EPA filters have been available since 1964. AAF first supplied AstroCel® HEPA filters on gas turbines in 1997—preceding F9 filters by eight years.

As a result, the total number of AstroCel® III 4000 filters installed on gas turbines now stands at over 36,000, and the total number of (H)EPA filters supplied to the gas turbine market totals over 56,000.

This combination of expertise, experience and history makes AAF the market leader in gas turbine inlet (H)EPA filtration, and the (H)EPA solution chosen by more gas turbine installations around the world.

F6 and F7 grade filters dominated the market until as recently as 2007, when 2008's introduction of F9 filters pushed out lower-efficiency filters. Contrary to Myth #2, (H)EPA filters have been installed since 1977, with a trend of increasing use from 2007 to 2012.

Based on the number of installations that have used AAF (H)EPA solutions, AAF (H)EPA filters have achieved an additional 7.8 MWh of extra output—and prevented 5.3 million tons of extra carbon dioxide from entering the atmosphere—when compared to the filters they've replaced.



Innovation and proven results

AAF offers a diverse and effective array of filtration solutions based on 90 years of expertise and research. Our commitment to superior performance is evident in products like HydroVee, with a superior depth-loading design that wards off water and hydrocarbons, and HydroShield™, providing advanced (H)EPA filtration even in conditions with heavy moisture and salt spray. Reclaim lost power and improve operational efficiency with the advanced gas turbine protection of a leader.



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