



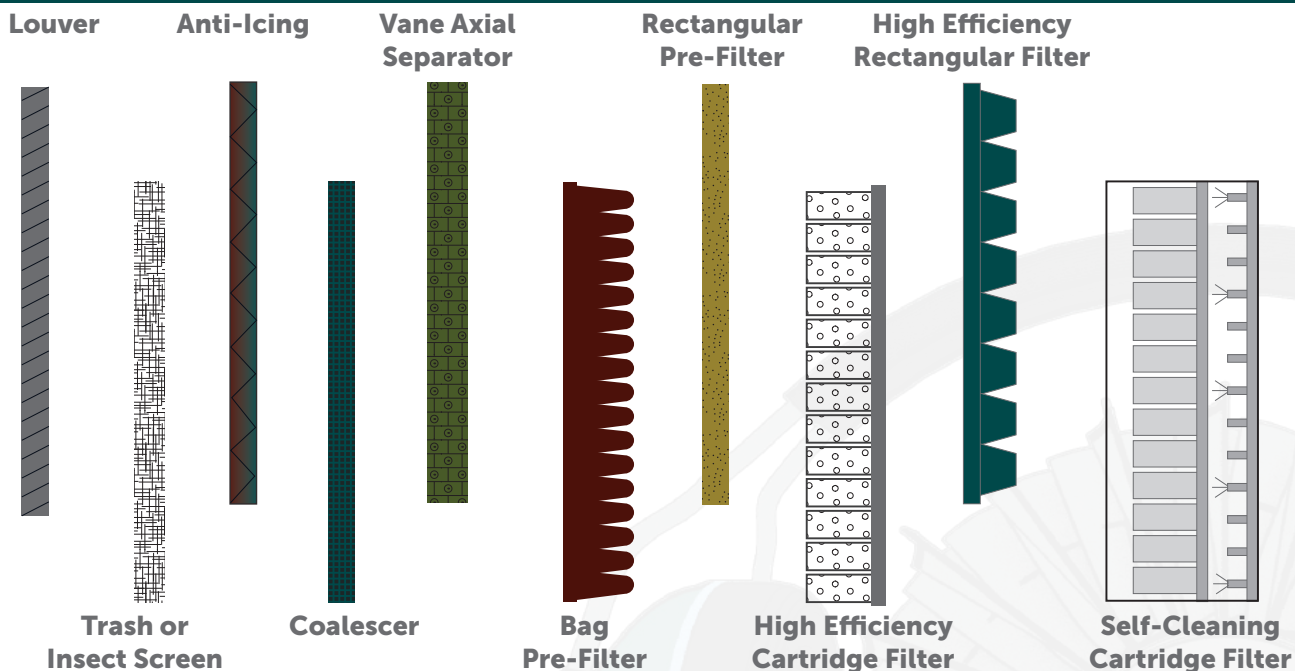
STAGES OF FILTRATION FOR GAS TURBINES

For a gas turbine, rarely is a single filter sufficient to reduce or eliminate particulates. Therefore, multiple stages of filtration are required. A filtration “stage” is simply a type of filter that is designed to remove either a specific contaminant or type of contaminant from the air or is designed to filter a specific particle size from the air to protect the next stage of filtration from being overwhelmed.

As an example of a multi-stage filtration system, a turbine may have:

- A Louver
- A trash screen
- Anti-icing
- A coalescer
- A vane axial separator
- A bag pre-filter
- A rectangular pre-filter
- A high-efficiency cartridge filter
- A high-efficiency Rectangular filter
- A self-cleaning cartridge filter

LEGEND



The stages of filtration required for a gas turbine depend heavily on the environment and the intended use of the turbine. The types of particles that need to be filtered, the allowance for moisture, the expected velocity of incoming particles, and other factors will need to be considered before proper stages can be chosen.

ENVIRONMENT AND FILTRATION STAGES FOR GAS TURBINE INLET FILTRATION SYSTEMS

Depending on the environment in which a gas turbine will operate, stages of filtration will differ. There are several different environments in which a turbine may operate, each of which has several different options depending on the individual needs of the project or the severity of the climate.

For Example:

- Arctic
- Industrial
- Desert
- Marine

Arctic		
	Louver, Insect Screen, Anti-icing, Rectangular Pre-filter, Rectangular High Efficiency Filter	Louver, Insect Screen, Anti-icing , Self-cleaning Cartridge, Filters, Rectangular High Efficiency Filter
Desert		
	Louver, Self-cleaning Cartridge Filters	<i>Location with Arctic Seasons:</i> Louver, Self-cleaning Cartridge Filter, Rectangular High Efficiency Filter
Industrial Location		
	<i>Warm Environment:</i> Louver, Trash Screen, Rectangular Pre-filter, Rectangular High Efficiency Filter	<i>Location with Arctic Seasons:</i> Louver, Anti-icing , Trash Screen, Bag Pre-filter, Rectangular High Efficiency Filter
Marine		
	Louver, Insect Screen, Vane Axial Separator, Coalescer, Rectangular Pre-filter, Rectangular High Efficiency Filter	Louver, Vane Axial Separator, Self-cleaning Cartridge Filter, Rectangular High Efficiency Filter