



DEFENSE

GAS GENERATORS

Pyroalliance designs and produces a large portfolio of gas generators used in missile systems architectures. They correspond to a very large variety of use cases and therefore cover a wide spectrum of performance specifications.

More generally, Pyroalliance delivers complete pyrotechnic chains adapted to its customers' needs.

They are designed and manufactured under Pyroalliance design authority.

GAS GENERATORS

Operating mode

The function of a Gas Generator is to generate a gas during a specified time lapse with specific performances of expected flow rate, pressure, temperature. Based on those gas generation specifications, the design will lead to the best combination of:

- Choice of a pyrotechnic composition,
- Size of the loading,
- Mechanical housing design.

Benefits

- Pyroalliance covers the widest range of possible Gas Generators for missile applications, covering functioning times from a few milliseconds to several seconds and energetic masses up to several kilograms. This allows covering a very large range of applications as listed below.
- Thanks to its wide portfolio of qualified technologies, Pyroalliance is capable of adapting the closest already existing design to specific new application needs.

Applications

- Motorization of a pyro-mechanism (ram, piston, door opening actuator, etc.)
- Pyrotechnic ignition of a larger Gas Generator
- Ignition of a turbo-engine
- Acceleration of a turbofan
- Motorization of a dispersion system

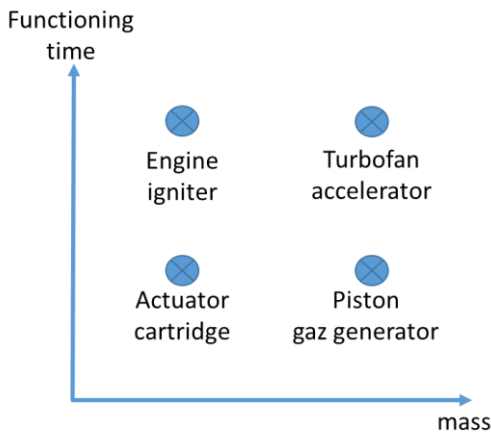


Illustration of the range of accessible functioning parameters

Typical performances and features

Functioning time	From few ms to several s
Reliability	Better than 0,9999 @90% CL
Pyro mass	From few grams to several kilograms
Total mass	From few tens of grams to several kilograms
Pressure within the chamber	Up to 150 bar
Exhaust flow rate	From few g/s to several kg/s
Exhaust temperature	From <1500K to >2000K
Initiation	1A/1W Standard STANAG
Firing current	5A – few ms
Non fire current	1A / 1W / 5min at 100°C
Supported temperatures	Adapted to typical airborne military climatic environment
Life Time	Adapted to the mission and life profile

Classification

- Pyro class according to version
- Not subject to any ITAR constraint

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