



**Łukasiewicz**  
Institute  
of Aviation



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were designed and manufactured  
as part of the ILR-33 AMBER 2K  
rocket project

**PYROCARTRIDGES**  
**EGG1U**

# CHARACTERISTICS

The EGGIU pyrocartridges were designed, tested and manufactured as a part of the ILR-33 AMBER 2K rocket project.

The need for having repeatable, available within short lead time, reliable and easily adjustable to wide pressure ranges were the reasons for the in-house development.

# DESIGN

The body of the pyrocartridges is a metal casing with an external thread M12x1. Inside there is an electric fusehead with a no-fire current of 1 A and a main charge.

The EGGIU pyrocartridges act as gas generators pyrotechnic devices whose initiation produces a hot gas at a given pressure within a given time. The resulting products of combustion can be used to perform work such as: opening/closing a valve, movement of a piston in an actuator, release of a mechanism lock, in parachute release systems, movement of a pyrotechnic cutter knife and many others.



# TECHNICAL INFORMATION

Parameter	Value
Operating temperature range	-40 °C ÷ + 85 °C
No-fire current	≤ 1 A / 5 min
All-fire current	≥ 5 A / 50 ms
Thread	M12x1
Overall length	34 to 44 mm [depending on required pressure]
Mass	approx. 20 g
Range of pressures that can be generated	3 ÷ 12 MPa in the case of a (10 cm <sup>3</sup> chamber)

# BENEFITS

- The possibility of pressure adjustment without the need to interfere with the structure of the pyrocartridge.
- Flexibility of the technology – application in many industries – space, armament or aerospace.
- Price-competitive.
- Lack of primary explosives making it easier to transport as part of the transport of hazardous materials (ADR).
- Manufacturing in Poland (EU).



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