



## DEFENSE

### CABLE AND ROD CUTTERS

Pyroalliance designs and manufactures a wide range of pyrotechnic cutters involved in release or safety functions by instantly cutting a rod or a cable.

This family of products is particularly adapted to provide a fast and safe solution while facing an emergency situation. We can address a variety of cable shapes and materials (cords to hard metals).

More generally, Pyroalliance delivers complete pyrotechnic chains adapted to its customers' needs. They are designed and manufactured under Pyroalliance design authority.

# CABLE AND ROD CUTTER

## Operating mode

The general principle of a cable or rod cutter is that an electric current (typically 5A during at least 10ms) will fire a 1A/1W initiator under defined emergency circumstances. This initiator will light on a powder enclosed in a cartridge and generate a gas pressure that will produce sufficient energy inside a chamber to project, at high velocity, a high resistance steel blade onto an anvil and cut the cord or rod placed on the way.

## Benefits

- The functioning time of such equipment is extremely short
- While and even after functioning the equipment retains all gas generated by the pyrotechnic components and has no external outgassing
- Our cutters are designed to cut up to several millimeters of different kinds of metallic or composite hardware (steel, copper, etc.), in rods or in cables, those cables possibly combining different layers of different material (Kevlar, plastic, optical fiber, etc.)

## Typical performances and features

Operating time	Below 5ms
Reliability	Better than 0,9999 @90% CL
Size, Weight and Power (SWaP)	SWaP adapted to the mission
Initiation	1A/1W Standard STANAG
Firing current	5A – few ms
Non fire current	1A / 1W / 5min at 100°C
Temperatures	Adapted to typical airborne military climatic environment
Life time Current	Adapted to the mission and life profile
Pyro class	Out of class 1 certificate available

## Applications

- Flight Termination Systems of different families of missiles : the function of the cutter is then to cut the cables actuating the steering rudders of the missile
- Wing deployment actuation on a cruise missile: the function of the cutter is to cut a rod which then releases the mechanism which enables the wing deployment
- Emergency release of helicopter winches : in case of emergency the function of the cutter is then to release the payload pulled by a winch (for instance a sonar)

## Classification

- Out of pyro class for transportation
- Not subject to any ITAR constraint

## For more information

Contact us: [customer-info@pyroalliance.com](mailto:customer-info@pyroalliance.com)

### Les Mureaux Plant - Headquarters

139, Route de Verneuil - BP 2052  
78132 Les Mureaux cedex – France  
Tel. +33 (0)1 34 92 44 44

[www.pyroalliance.com](http://www.pyroalliance.com)

Follow us on [LinkedIn](#)

