



SPACE

CABLE/BOLT CUTTER P/N ML0041

Pyroalliance designs and manufactures a wide range of pyrotechnic cutters dedicated to provide a secure object release or safety function by instantly cutting a rod or a cable.

Cutters are mostly dedicated to provide a fast and safe solution. We can address a variety of cable shapes and materials (cords to hard metals).

For Space applications, Pyroalliance manufactures high reliability rod-cutters, dual initiated, such as P/N ML0041 which is designed to sever a titanium pin of up to 3 mm diameter.

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

ML0041 CUTTERS

Operating mode

Under defined circumstances, an electrical order will start initiation. Then, the generated gas pressure grows into the internal sealed pyrotechnic chamber behind a blade, until reaching the ballistic threshold. Thus, the kinetic energy is given to the blade during its stroke and this induces the rod severing against the anvil.

The cable/bolt cutter is composed of:

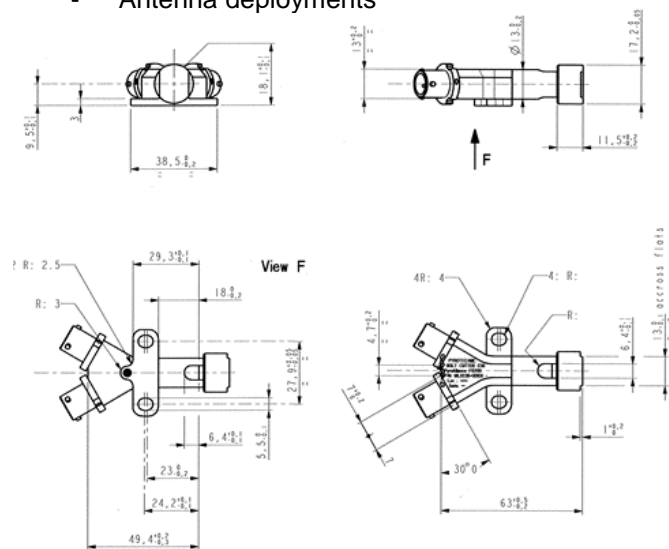
- an housing with a groove featuring the rod path and provisions for fixation,
- 2 redundant NSI equivalent, threaded into the housing,
- a blade in hardened steel,
- a shear pin for ballistic threshold purpose, binding the blade to the housing,
- an anvil, maintained by the cap to the housing,
- a cap, threaded into the housing.

Benefits

- Instantaneous event
- High cutting capacity compared to its foot print (weight & envelope)

Applications

- Solar array release
- Antenna deployments



Product Classification

- Number UN: UN0288
- Storage class: 1.4S
- Not restricted by ITAR regulations

For more information

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Typical performances and features

Main characteristics

Cutting size capability	Up to 3.5mm (with tension)
Titanium reference	Annealed TA6V (3.7164.1)
Recommended firing current	5A during 10ms
Leak rate	$\Delta P \leq 5\%$ after 60s, initial pressure 15bar
Redundancy	2 initiators
Weight (including initiators)	<120 g
Operating temperature	- 54 to + 80°C
Connector type	Receptacle mates with MS3116P8-2S connector in accordance with MIL-C-26482

Recommended storage conditions

Temperature	10°C < T < 30°C
Relative humidity	HR < 60%
Pressure	Atmospheric

Other conditions

Non-operating temperature	-110°C to +150°C
Pressure	Down to 10 ⁻⁸ Pa
Relative humidity	≤ 100%

