



## SPACE

### M10 SEPARATION NUT P/N ME0038AC

Pyroalliance designs a wide range of separation nuts, used for the in orbit deployment of antenna reflectors and solar generators on satellites or used for the separation of satellites of a constellation, assembled on a dispenser.

With a recorded rate of in-flight success of 100% over more than 6000 separation nuts delivered until today to its customers, Pyroalliance provides with such separation nuts extremely reliable solutions of Hold down and release.

# Separation nut

## Operation mode

The separation nut is a pyro-mechanism which performs two functions: maintaining a pre-loaded assembly of two sets and releasing the assembly upon an electrical order.

The energy required to achieve the release is provided by gas pressure (pyrotechnic gas generated by the initiator).

## Benefits

### a) Reliability

High reliability of the product is granted by the implementation of redundant initiators and the systematic testing of the mechanical part which is 100% tested in-factory via cold gas actuation (instead of pyrotechnic gas) and reseted after test.

### b) Level of shock

The level of induced shock on the payload is minimized using a Pyroalliance proprietary shock reduction solution enabling to meet the current market needs while preserving the reliability of the product.

### c) Actuation time and synchronicity

By nature, pyrotechnic actuators are very responsive with a very low actuation time. In addition, the standard deviation associated to this parameter is such that extreme synchronicity is granted for several nuts activated simultaneously, as this is the case for holding satellites on dispensers.

## Applications

- Satellite release from a dispenser

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[Visit our website: www.pyroalliance.com](http://www.pyroalliance.com)



Set of Separation nuts ME0038AC for a constellation

## Key figures

Operation time (Typical values):	Few ms
Over all dimensions (Width/Depth/Height):	56mm / 36mm / 54mm
Bolt dimensions:	M10 x 1.25
Weight without initiators:	142.2 g
Operating temperature:	-60°C to +80°C
Operating bolt tension:	Up to 20kN
Initiators:	2 NSI**

\*Dimensions without initiators

\*\*NASA Standard Initiators

## Product Classification

- Number UN: UN0173
- Storage class: 1.4S
- Not restricted by ITAR regulation

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