



SPACE 1/2 Inch SEPARATION NUT*

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 the 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) 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

- Release of probe
- Antenna or solar panels release
- Release of satellites from dispensers

For more information please contact us.
Visit our website: www.pyroalliance.com



*Pyroalliance's equipment on board Cassini-Huygens –
Airbus Defense & Space*

Key figures*

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| Operation time (Typical values): | Few ms |
| Over all dimensions** (Width/Depth/Height): | 61mm / 41mm / 47mm |
| Bolt dimensions: | ½ Inch |
| Operating temperature: | -60°C to +80°C |
| Operating bolt tension: | Up to 50kN |
| Initiators: | 2 NSI*** |

**Product under development
**Dimensions without initiators
***NASA Standard Initiators*

Product Classification

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

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Produced by the Communication Department of Pyroalliance

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