

Separation Nut PSM 1/2B

The Beyond Gravity PSM 1/2B Separation Nut is the medium member of our family of Low Shock Separation Nuts designed for interfacing medium sized spacecraft with Launcher Vehicles. It has been developed to fit constellation class satellites, typical 500-1000kg.

Low Shock Separation Nut for your mission succes

The Beyond Gravity PSM 1/2B introduces an internal mechanical leverage minimizing the required pressure spike generated by the initiators. Hence the shock is significantly reduced without sacrifice of reliability compared with heritage separation nuts.

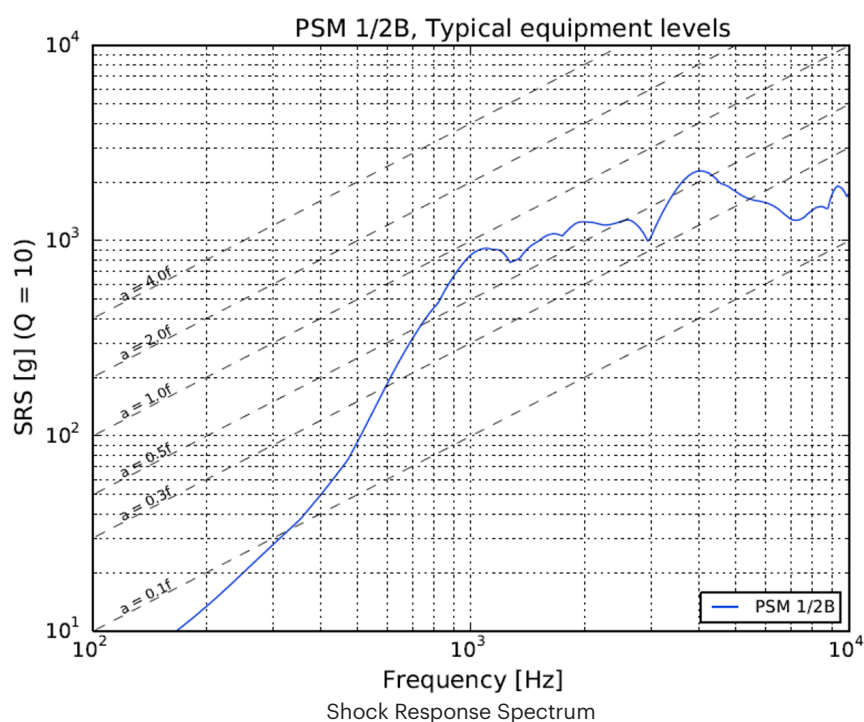
The separation nut avoids metals with different thermal expansion coefficients to achieve a wide thermal operation range. It has been designed as a direct drop in replacement for many of the classical higher shock separation nuts.

Proven performance

Qualified per AIAA S-113-2005 (former DOD-E-83578A). Initiated by dual NSI equivalent initiators (PC23, 103377-191, -449, -500, PD222400024-009, 2-8001140-1, 852420-XX).

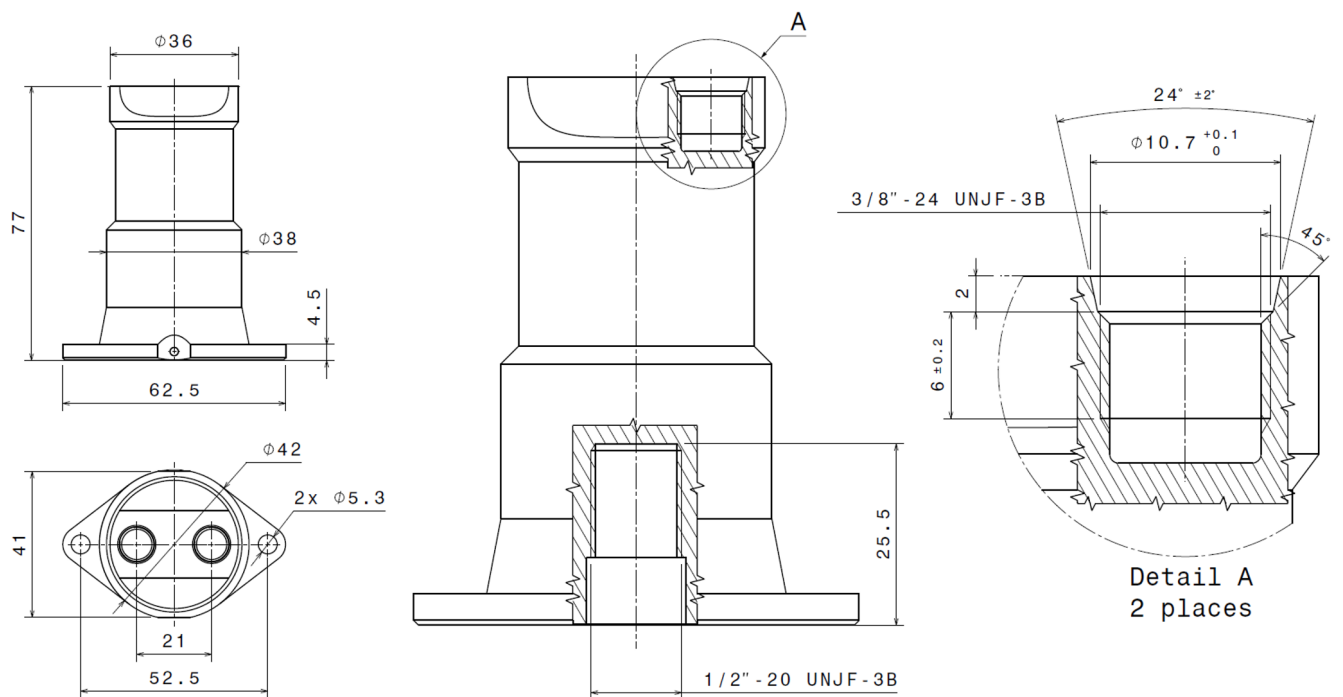
Tested worst case scenarios with 100% success:

- single 80% initiator
- cold case
- no o-ring
- 150% external load



Main characteristics of PSM 1/2B Separation Nut

		Unit	Value
Bolt pretension (nominal)		kN	50
Mass		kg	0.43
Dimensions	Height	mm	77
I/F	Separation Bolt	UNF/UNJF 1/2"-20 Class 3A with 25.5 mm engagement length	
	Separation Nut	Two M5 bolts (or imperial equivalent) placed 52.5 mm apart	
	Initiator type	PC23 103377-191, -449, -500 PD22240024-09 2-8001140-1 852420-XX (NSI equivalent)	
Qualification temperature span		°C	-68 to +120
Overall random vibration levels (qualification)		gRMS	50
Release time dispersion		ms	Within 2.0 ms on a 3 σ -level
Reliability			0.99995 at a 95% confidence level



Interface Dimensions