

Separation Nut PSM 3/8B

Low Shock Separation Nut for your mission success

The RUAG PSM 3/8B Separation Nut is the smallest member of our family of Low Shock Separation Nuts designed for interfacing small sized spacecraft with Launcher Vehicles. It has been developed to fit the OneWeb™ class of satellites, typical 100-200kg.

The PSM 3/8B 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.

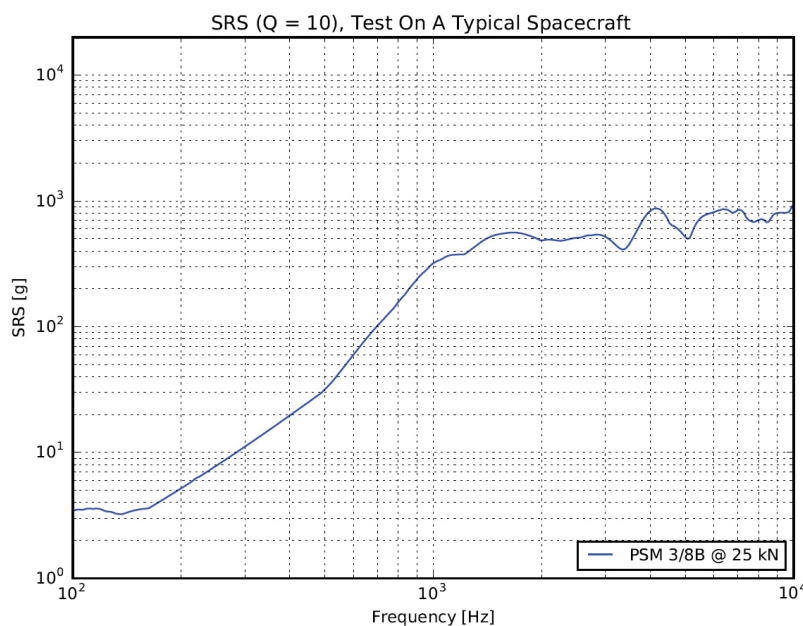


Proven Performance

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 internal lube
- no o-ring
- 150% external load

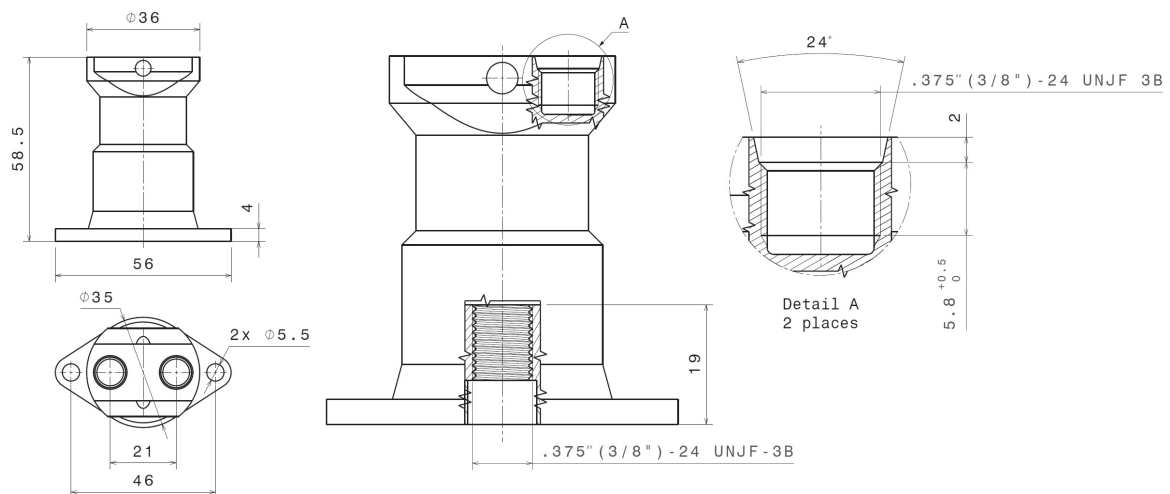


Shock Response Spectrum For A Typical Spacecraft



Main characteristics of PSM 3/8B Separation Nut

	Unit	Value
Bolt pretension (nominal)	kN	25
Mass	kg	0.23
Dimensions	Height	mm
		58.5
I/F	Separation Bolt	UNF/UNJF 3/8"-24 Class 3A with 19.5±0.5 mm engagement length
	Separation Nut	Two M5 bolts (or inch equivalent) placed 46 mm apart
	Initiator type	PC23 103377-191, -449, -500 PD22240024-09 2-8001140-1 852420-XX
Qualification temperature span	C°	-68 to +120
Overall random vibration levels(Qualification)	gRMS	50
Release time dispersion		Within 2.0ms on a 3 σ -level
Reliability		0.99995 at a 95% confidence level



Interface Dimensions