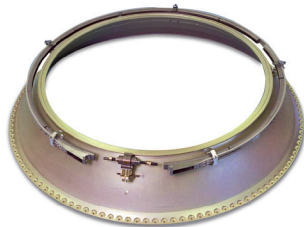


# Payload Adapter Systems for EELV

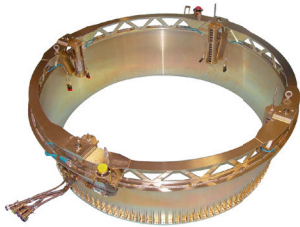
RUAG has developed a family of adapters and separation systems compatible with the Evolved Expendable Launch Vehicles (EELV) developed by Boeing and by Lockheed Martin.



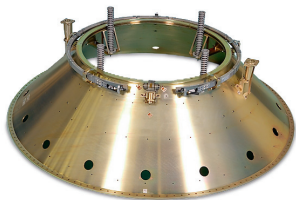
PAS 66VS



PAS 47VS



PAS 702



PAS 37S

The Payload Adapter Systems (PAS) are compatible with industry standard forward interfaces of 937 mm, 1194 mm and 1666 mm diameter (circular ring section) and with the BSS702 four (4) bolt interface at a 65 inch diameter. The aft interface of all the systems is the EELV standard 1575 mm (62 inch). All systems are delivered with adapter, release mechanism, clamp band and retention devices, separation spring set, electrical umbilical hardware, and required wiring harness. The adapter structures are designed and manufactured from aluminium ring forgings and CFRP shell structures using the experience gained in previous space programs and in Saab Aerospace programs.

## High load capability

The EELV family of Payload Adapter Systems has exceptionally high load carrying capability, to cover anticipated market needs while substantially reducing interface shock levels.

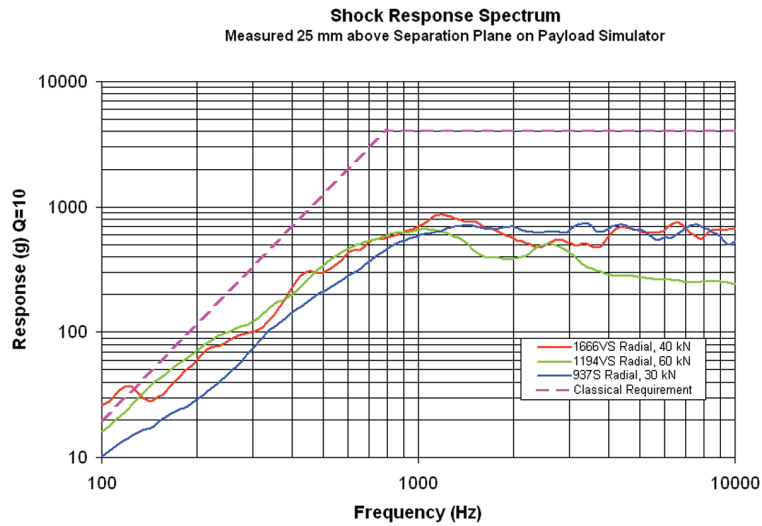
## Low shock at separation

The PAS 37S, PAS 47S and PAS 66VS systems are qualified with the low shock Clamp Band Opening Device (CBOD) release mechanism from Starsys Research that greatly reduces the interface shock environment relative to classical bolt cutter designs. Spacecraft manufacturers and their customers appreciate the reduced risk for shock impact to components mounted close to the interface.

## Heritage and reliability

The EELV systems have the RUAG space heritage and experience in separation systems dating back to 1970. RUAG Space separation systems ensure high reliability and optimum performance at low cost. More than 460 in-orbit separations have been carried out, all with 100% success. Today the company offers a wide variety of systems for space applications, used in the Ariane, Atlas, Delta, Proton, Sea Launch, Taurus and other programs.

## Typical SRS of CBOD low shock separation



## Main characteristics of the Payload Adapter Systems

Payload Adapter System	Material	Separation system	Upper dim. [mm]	Lower dim.[inch]	Typical total weight [kg]	Typical shock output [g]	Load capability on EELV
PAS 66VS	Aluminium	Low Shock-Clamp Band	1666	62"-EELV	40	1000	6000 kg @ 1.9 m
PAS 702	Aluminium	3/4" Bolts	1663	62"-EELV	70	3000	6000 kg @ 1.75 m
PAS 47VS	Aluminium	Low Shock-Clamp Band	1194	62"-EELV	40	1000	8000 kg @ 2.2 m
PAS 37S	Aluminium or CFRP	Low Shock Clamp Band	937	62"-EELV	70	1000	4700 kg @ 1.5 m