Cartridge Actuated Devices

EXPLOSIVE NUTS/BOLTS
PSEMCS has a long history of manufacturing high quality, low cost explosive bolts, separation bolts, propulsive bolts, and separation nuts.

CUTTERS/GUILLOTINES
PSEMCS cutters and guillotines include bolt cutters, wire cutters, harness and cable cutters that offer a wide variety of configurations as well as target materials.

PISTON ACTUATORS
PSEMCS's products include pin pullers, piston actuators, fin lock devices, and burst disk cutters.

We offer an array of Cartridge Actuated Devices (CADs) including pin pullers, separator systems, cutters, piston actuators, explosive bolts, frangible nuts, and wing actuators. Whatever your requirement for CADs, PSEMCS has expertise to make those requirements into production deliveries.

A wide variety of components fall within PSEMCS category of CADs. PSEMCS has a vast amount of experience in the design, development, qualification and production of CDS and can provide a component or tailor an existing design to meet your specific requirements.

PSEMCS's Drogue Parachute Ballistic Mortar Systems
This system ejects parachutes from ballistic mortars to allow for safe module recovery.

Explosive Operated Electrical Switches
The Explosive Operated Electrical Switches are pyrotechnically actuated single pole double throw electrical switches with 3 or 4 separate circuits and can be provided with pigtail wiring or integral connector.

Interconnect Assemblies
Interconnect Assemblies consist of Shielded Mild Detonating Cord (SMDC) initiated donor assembly mounted on the fixed aircraft ejection seat rail bulkhead and the acceptor assembly mounted on the movable canopy assembly. When the aircraft canopy is locked into position the donor and acceptor assemblies are aligned to transmit energy across the air gap for activation of the canopy fracture system. When the canopy is moved away the canopy fracture system is automatically safed.
Pin Puller and Pushers
Pin Puller and Pushers are available in a variety of configurations to meet the application demands of the most modern aircraft, spacecraft and tactical missiles. They can be designed to operate either electrically or non-electrically. An energy attenuating snubber is used to stop the pin and lock it in position once the unit has been functioned.

Seat Retraction Thrusters
Seat Retractoin Thrusters are complex ordnance device that move attached ejection seat from any adjustable position to the required egress position. The B-1B Seat Retraction Thruster for example, moves individual ACES-II escape seats forward to the full aft position for ejection through the escape clearance envelope of a disabled aircraft. The Thruster has the ability to manually cycle through complete extension for flight seat adjustments and in an emergency, gas generators initiate a retraction stroke and controls velocity to reposition the escape seat for safe crew member egress.

Through Bulkhead Initiator (TBI) Bolt Cutters
TBI Bolt Cutters are self-contained non-electric devices which incorporate a Shielded Mild Detonating Cord (SMDC) actuated TBI, cutter body and guillotine with fixed anvil assembly for severing high strength bolts.

Thrusters
Thrusters can be electrically or non-electrically actuated and are dependent upon the customer's specification requirements. When activated Thrusters produce an internal captive stroke to drive door linkage and displace connecting rods such as those found in helicopter door panels.