



# PENDULUM UPPER HEAD DRILLING & FASTENING SOLUTION

- **Ascent Aerospace** is a leading provider of tooling systems, factory automation and integration services for the aerospace, defense and space industries.

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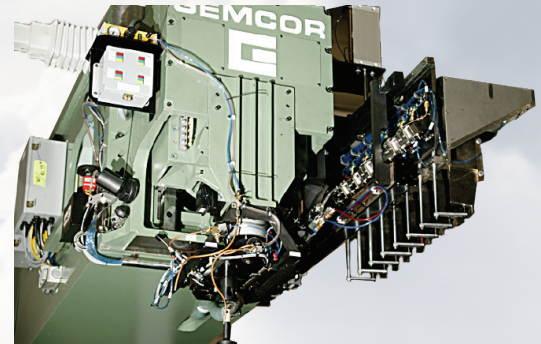
## PENDULUM UPPER HEAD: DRILLING & FASTENING SOLUTION

### FEATURES

- **Clearance:**  
Up to 3" upper tooling clearance
- **Clamp Force:** 100 to 1,000 lbs.  
(programmable)
- **Spindle speed range:**  
3,000 RPM – 18,000 RPM
- **Upset Force:** 20,000 Lbs.  
maximum upset force
- **Tool Holder:** Collet interface
- **Materials:**  
CFRP & Metallic capable
- **Fastener Capabilities:**  
Solid rivets and 2 piece fastening

### BENEFITS

- **Current & Future Aero-structures Ready** - Dual sided applications for both metallic & composite structures
- **Cost** - Simple, low-cost platform for a multitude of different applications
- **Higher productivity for airframers:**
  - High quality installed fasteners
  - Quick fastening rates
  - Unmatched reliability
- **Unique upper head design with high-speed drill spindle**
  - optional straight down sealant or camera positions
- **Fasteners** - Variety of fasteners, including interference-fit pins
- **Configuration** - 2- or 3- positions on upper head (depending on application needs)



MOUNTING CONFIGURATION

C-FRAME