



Artist concept of NASA's Juno spacecraft, exploring Jupiter. Credit NASA/JPL-Caltech



# NON-PYROTECHNIC Hold Down and Release Mechanisms

High-reliability, non-explosive (split-spool) HDRMs, separation nuts, and pin pushers/pushers for dependable preload retention and release of deployable space systems



Glenair pyrotechnic-free release mechanisms offer near-simultaneous release time, low shock performance, with relatively low initiation power input.

HDRM Series includes separation nuts, pin pushers, and pin pullers—direct wired or connectorized—with a broad range of preload carrying capacity.

- Pyrotechnic-free alternative (low-shock fuse-wire) for single-event release of deployable space systems
- Configurable electrical initiation with no (amperage) upper limit
- Near-simultaneous release dependent on temperature and power
- User-serviceable and refurbishable units
- Redundant or non-redundant actuation circuit
- Not susceptible to transient and noise (EMI/EMP/ESD/RFI) inputs
- Extended temperature ranges: -150°C to +150°C



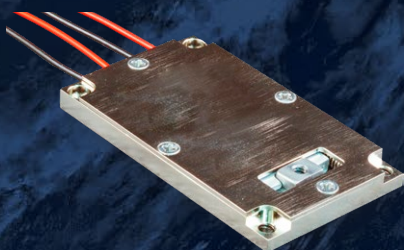
NON-PYROTECHNIC

# Hold Down and Release Mechanisms

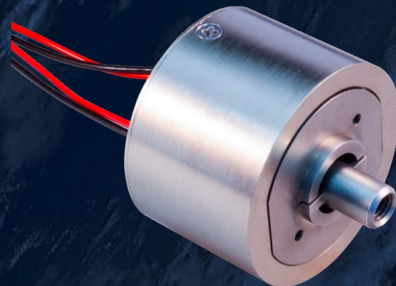
Separation nut, pin puller, and pin pusher configurations with flight heritage



## HDRM DUTY CLASSES



Light-Duty HDRM  
Redundant circuit,  
5 – 75 lb release preload

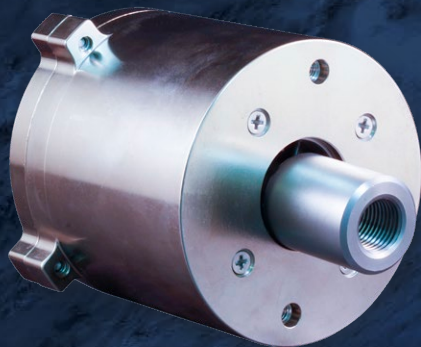


Medium-Duty HDRM  
Redundant circuit,  
300 – 4000 lb release preload



Heavy-Duty HDRM  
Redundant circuit,  
5000 – 20,000 lb release preload

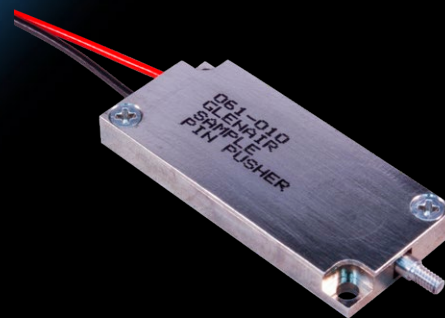
## HDRM RELEASE TYPES



Separation nut



Pin puller



Pin pusher

## NORTH AMERICAN AND EUROPEAN HDRM SOLUTIONS



SPACE SYSTEMS

Glennair is pleased to offer both our North American and European customers access to our innovative hold-down release mechanism technologies. These non-pyrotechnic space mechanisms are ideally suited for satellite, payload fairing, antenna array, solar array, and boom and mast deployment. Glennair medium-duty HDRMs and pin pullers can ship to most customers without an export license, although light- and heavy-duty HDRMs do typically require one. Certain designs may be manufactured by Glennair Space Systems in Salem, Germany. Consult factory for complete information.

