Non-Pyrotechnic Hold Down and Release Mechanisms (HDRMs)

Customer-Refurbishable, Fused-Wire Based Technology

Hold down release mechanisms are used to secure and deploy satellites and satellite appendages including solar arrays, reflector antenna, booms, and masts. Historically, release devices of this type have included explosive release nuts, bolt cutters, separation nuts, as well as wire and pyro cable cutters. Glenair non-explosive HDRMs employ a fusible wire-actuated nut technology that solves many of the problems associated with explosive hold down and release devices, including easy on-site refurbishment after test. Glenair Space Systems designed and manufactured HDRMs are not subject to US ITAR or Commerce Department restrictions.

SCALABLE SOLUTIONS
- Packaging options include both cylindrical and rectangular housings
- Lightweight materials, unique shapes and profiles
- Standard and non-standard mounting dimensions IAW customer requirements
- Scalable designs with as little as 5 lbs (22 N) of release pre-load and as much as 20,000 lbs (9000 N)
- Separation nut designs as well as pin pullers and pin pushers

NORTH AMERICAN AND EUROPEAN HDRM SOLUTIONS

Glenair 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. Glenair 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 Glenair Space Systems in Salem, Germany. Consult factory for complete information.

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