

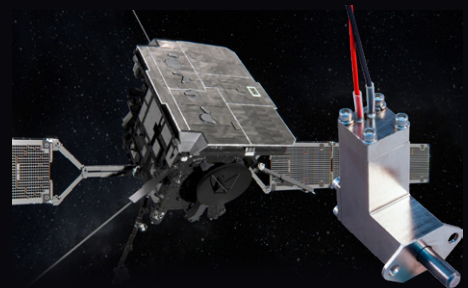
BEHIND-THE-SCENES AT GLENAIR SALEM

Space-Grade Electromechanical Device Manufacturing and Test

Glenair's space system business unit in Salem manufactures hold-down and release mechanisms (HDRM) as well as customer-bespoke electromechanical devices. All products are manufactured in-house in our fully-integrated precision machining and metal fabrication center. All devices are clean-room assembled and inspected in a 3D optical profilometer and built in accordance with ESA standard ECSS-E-ST-33-01C



HDRM housings are precision-machined in-house with tolerances to 1 micron



Space Mechanisms and HDRMs

Glenair Salem designs production and customer-bespoke space mechanisms: Glenair is pleased to offer both our European and North American customers access to our innovative design, engineering, and machining capabilities for space-grade interconnect and electromechanical technologies including hold-down release mechanisms. Glenair Salem is equipped with a fully-integrated machining operation with capabilities to produce both highly miniaturized as well as larger form-factor components and structures. Our European-made HDRMs with clean-room assembled actuators are designed for drop-in use in ESA and commercial European standard space applications.

SINGLE EVENT, REFURBISHABLE, NON-PYROTECHNIC, SCALABLE HDRM TECHNOLOGIES



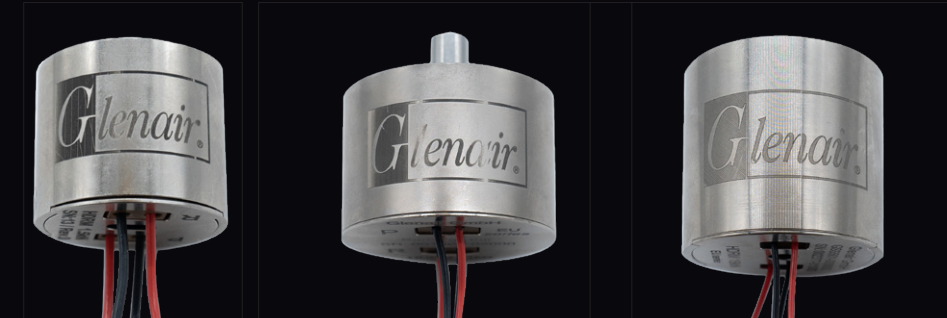
Redundant wired and Mechanical-Release HDRM designs



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. Devices are intended for single use events but may be easily refurbished on-site after test. Mechanical release versions are also available for test cycle use.

EU Series HDRMs manufactured at Glenair's space systems business unit in Salem are optimized to meet ESA standards and requirements. These devices utilize open-patent fuse wire technology and have been engineered for optimized SWaP, shock resistance, and internal torque containment.

- Delivery options include off-the-shelf catalog series products as well as custom configurations
- Compact, low-profile design
- Standard and non-standard mounting dimensions IAW local customer requirements
- Scalable designs with as little as 1.5 kN of release pre-load and as much as 145 kN (under development)
- Medium duty HDRM designs suitable for solar array deployment



Medium-Duty HDRM Redundant circuit, 1.5 kN release preload

Medium-Duty HDRM Redundant circuit, 11 kN release preload

Medium-Duty HDRM Redundant circuit, 18 kN release preload

COMPLETE VERTICAL INTEGRATION: FROM MACHINING TO CLEAN ROOM ASSEMBLY

