

SPECIFICATIONS

- **NON-MAGNETIC**

Non-magnetic materials; Stainless Steel AISI304, Aluminium, Polymers

- **MODULARITY**

Flexibility to add other (customer) equipment and (sub)systems, thanks to several threaded inserts and profiled slots.

Designed and built in segments, several lay-outs for interface between frame, cryostat and customers-specific (laboratory) situation.

- **STIFFNESS**

Maximum stiffness-weight ratio is achieved by the tubular design which also leads to a high eigenfrequency of the frame.

- **ERGONOMICS**

Full access at the bottom of the cryostat for removal of vacuum- and thermal radiation shields.
360° field of view of the cryostats inside.

- **VIBRATION CONTROL**

A vibration isolation system can be integrated on the cryostat-frame interface. (optional)

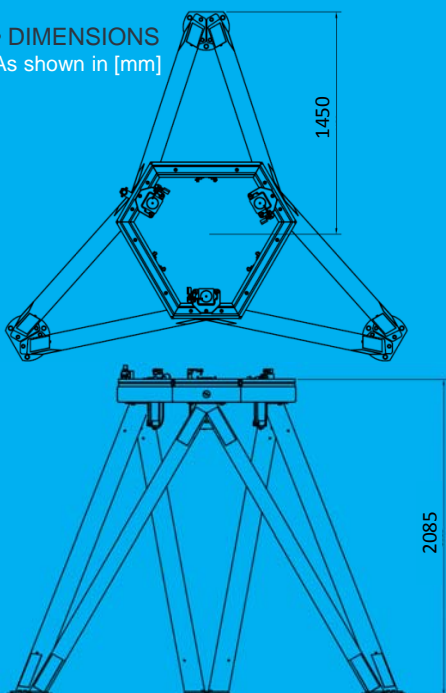
Extra damping of the frame itself can be achieved by filling the tubular frame sections with a damping material. (optional)

- **WEIGHT**

310 [kg] or 685 [lbs]

- **DIMENSIONS**

As shown in [mm]



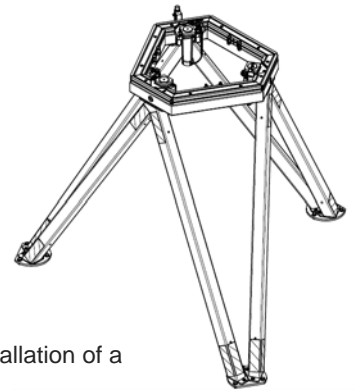
HCF - Hexapod Cryostat Frame

LSI B.V. has developed a special frame for the installation of a (dilution) refrigerator from Leiden Cryogenics B.V.

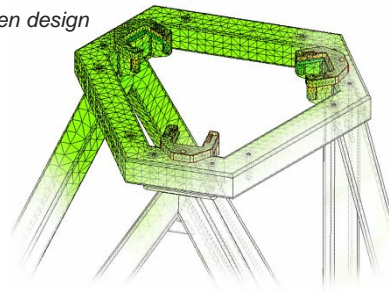
The added value of this 'Hexapod Cryostat Frame' is the high stiffness-weight ratio of the frame and the cryostats Top-Plate. These features, combined with the possibility of a strategically positioned vibration isolation system, eliminate the (floor) vibrations coming from the surrounding environment (lab and/or building) and avoid disruption of the experiments inside the cryostat.

Each dry cryostat model from Leiden Cryogenics (CF-200-1400 and CF-CS81 series) can be installed into the Hexapod Vibration Isolation Frame.

The whole design process of the Hexapod Cryostat Frame has been driven by Finite Element Analysis (FEA) with several validation steps to verify if the developed design meets the requirements and to optimize for the best results.



FEA-driven design



One of the three Vibration Isolators

Included:

- vibration damping (polymer pads) on cryostat-frame interface
- Aluminium slotted profiles and threaded inserts at several places of the frame, to mount customers applications
- made from Non-magnetic materials, no distortion of magnetic fields inside the cryostat (if a magnet is installed)

Options:

- Vibration Isolation System (High performance pneumatic isolators) that reduces transmitted vertical and horizontal vibrations by 85% or more after 5Hz and more than 95% after 10Hz. The isolators incorporate hybrid chamber design, laminar flow damping and horizontal pendulum isolation to provide a quiet and stable isolation platform

- tubular frame sections filled with a damping material

A dry CF-CS81 3K cryostat from Leiden Cryogenics B.V. installed into the Hexapod Vibration Isolation Frame from LSI B.V.

