

In-Air Experimental Station

Want to concentrate on your experiment? We'll take care of the rest.



Highlights

Multipurpose
Customized to your needs
Complete design flexibility
Prompt and cost-effective supply
Future upgrades possible
From terahertz/infrared to hard X-ray expertise

Applications

- Third generation light source beamlines
- Fourth generation light source beamlines
- Laser facilities
- Research laboratories
- Industry: Quality control labs

How Does It Work?

When you're looking for a new experimental station to perform your challenging experiment, choosing a skilful and reliable partner can make all the difference. Every member of the Elettra project team has the direct hands-on experience required to help guide you through the demanding process of decision making, design and execution. This is achieved by:

- Understanding your scientific needs.
- Sharing with you the unique experience we have gained during

the construction of several experimental stations as well as through our interactions with various beamtime users.

- Fine-tuning the requirements for your experimental station.
- Working closely with your team to design your experimental station.
- Building and commissioning the experimental station.
- Offering high levels of support from qualified staff throughout the life cycle of your experiment.

Reference

ELI Beamlines HELL User Station – The First Ever Experimental Station Built for a Laser Plasma Accelerator

The HELL user station was developed for ELI Beamlines, which is based in the Czech Republic. It comprises experimental station support, an in-air box, motorization stages and the diagnostics instruments required for characterizing samples irradiated by electron beams.

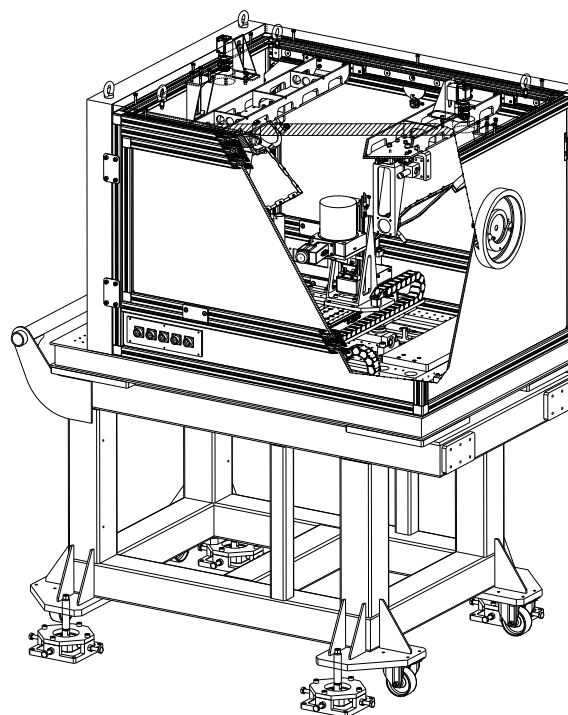
The HELL station's conceptual design was defined in close collaboration with the final user, taking into account their particular requirements and needs, which was then followed by detailed technical specifications which served as the basis for its final design.

The entire box can either be used in a laboratory or plugged in at the beamline (DN 160 flange equipped with an adjustable iris for light control).

The whole system is mounted on a vibration damping bread board and contains the following:

- a sample stage with four motorized axes (X , Y , Z , ω),
- two supports for Lanex screens, with three manual movements (X , Z , θ) each,
- two adaptable mirror systems for the best Lanex view, from both inside and outside the box,
- internal and external camera supports.

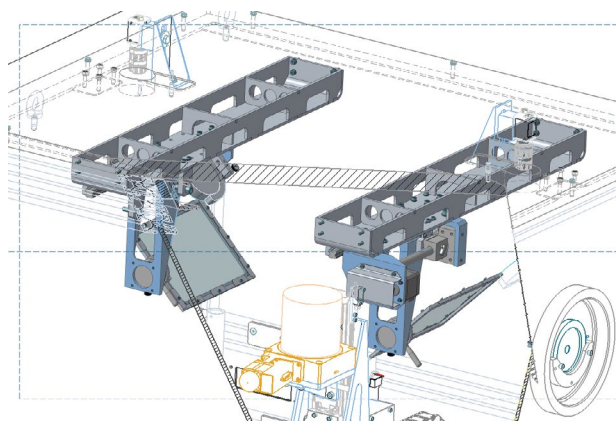
The design of the experimental station interior is extremely flexible and allows for extra devices to be mounted.



ELI Beamlines HELL User Station

Tick Your Option

- Consulting on the planned application
- Experimental station design
- Consulting during the evaluation of commercial off-the-shelf equipment
- Customization/fine-tuning of your existing instrumentation
- Instrumentation feasibility study
- Experimental technique feasibility study
- Experimental station supply and commissioning
- Staff training



View of the screen and mirror system with camera placed outside the box

