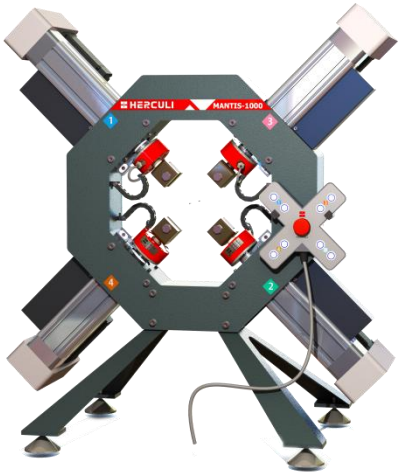
Mantis-Tabletop biaxial testing machine

The data acquisition frequency of the Mantis series testing machine reaches up to 5kHz. The full-scale load accuracy is within ±0.1% of the indicated value. It boasts extremely high precision and flexibility.



The Mantis series Tabletop biaxial testing machine has a load range of 1KN to 50KN. It features remarkable high precision and efficiency. It can precisely test various properties of materials under biaxial stress conditions, including key indicators such as strength, deformation, and failure, offering valuable experimental data for product development, structural optimization, and performance enhancement. It can provide powerful support for engineering design and scientific research in fields such as aerospace, rail transit, automobile manufacturing, and new energy.

Scope of application

Biaxial tensile, compression, creep, fatigue and other tests of materials such as plastics, rubber, metals, composite materials, resins, ceramics, and concrete.

The Mantis biaxial testing machine system integrates multi-channel coordinated loading control algorithms, displacement/load synchronization error software, an integrally cast frame, advanced alignment technology, a comprehensive set of integrated accessories, along with numerous optional characteristics and functions. which can effectively perform biaxial tests on various materials.

Type	Mantis-100	Mantis-200	Mantis-500	Mantis-1000
Load capacity (KN)*	1	2	5	10
Stroke (mm)*	40-100	50-100	50-100	50-100
Sensor accuracy (%)	0.1	0.1	0.1	0.1
Displacement accuracy (μm)	1.0	1.0	1.0	1.0
Maximum speed (mm/min)*	10	10	10	10

Note:The* parameters and frame size can be customized.

Product features

- Light weight and small floor area.
- The load, stroke, maximum speed, test machine dimensions, and frame can all be customized according to customer requirements.

- Can be used for tensile/compression and quasi-static or low-cycle fatigue tests of planar test samples.
- A variety of combined loadings such as tension-tension, tension-compression, and compression-compression can be performed.
- The fully digital measurement and control system ensures accurate and stable load/displacement proportional loading.
- The test machine frame and the sensors used have all undergone long-term creep resistance tests.
- High-precision four-axis synchronous displacement and load control can be achieved.
- Strain gauges and acquisition units can be added to realize variable ratio loading at specified locations.
- Can be matched with an optical strain measurement system.
- Can be matched with an environmental chamber for biaxial tests in extreme environments.
- It has low maintenance costs and a long service life.