

PRESS RELEASE

Nimes, June 15, 2020

## **New MAUKA hexapod: High precision in a small diameter**



**SYMETRIE launches a new hexapod named MAUKA to meet precision positioning applications in research or industry needing a small footprint of 107 mm.**

Designed to position up to 5 kg payloads with a submicronic resolution, MAUKA hexapod offers travel ranges of 10 mm in X and Y, 20 mm in Z and 16° in the three rotations. Its diameter is 107 mm and it is 198 mm tall in mid position.

Its small footprint makes it ideal for applications such as telescopes or optical instrumentation needing a small occultation.

Benefiting from SYMETRIE's twenty years of experience in the development of high precision hexapods, MAUKA hexapod guarantees a resolution of 0.5  $\mu\text{m}$  in translation and 5  $\mu\text{rad}$  (0.0003 °) in rotation.

To minimize the diameter, we used a hexaglide geometry, where motors are mounted in line. Unlike a classic Stewart platform hexapod, MAUKA is not made up of variable length actuators but of six fixed length rods pushed by motorized slides.

MAUKA hexapod operates in any direction: vertically, horizontally or in any other angle.

Thanks to its absolute linear encoders, it is not necessary to carry out a homing command each time the controller is turned back on, the hexapod position is immediately known, without having to make any hexapod movement.

The hexapod comes with its controller and a control interface compatible with LabVIEW, EPICS, SPEC, TANGO or C. The ergonomic software allows to configure virtual centers of rotation and easily change coordinates systems.

SYMETRIE is an innovative company specializing in high precision positioning and motion hexapods of all sizes for nearly 20 years. A hexapod is a parallel kinematics robot with six actuators and two platforms: one fixed, one mobile.

SYMETRIE in a few words:

- 5 M€ turnover, an R&D department, 70% of engineers
- Major customers: Airbus Defence and Space, Leonardo, Naval Group, Rio Tinto, Safran, Thales, University of Hawaii, University of Western Australia...
- Large scale technological projects: Megajoule Laser; ground or space telescopes: DAG, DOT, JWST, NOEMA, OAJ and Pan STARRS 2; spacecrafts: BepiColombo, EnMAP, Euclid, Gaia, MPO, MTG, PLATO, Sentinel 5, synchrotrons: APS, the Australian Synchrotron, DLS, Elettra, ESRF, IHEP, LBL, LNLS, MAX-lab, PAL, PSI, RRCAT, SLAC, SOLEIL, SSRF...

**Contact us for more information!**

Anne Duget - Tel: +33 4 66 28 87 20 - Email: [anne.duget@symetrie.fr](mailto:anne.duget@symetrie.fr)