

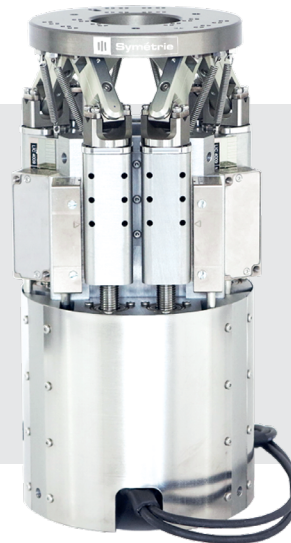
# MAUKA hexapod

High resolution hexapod medium size



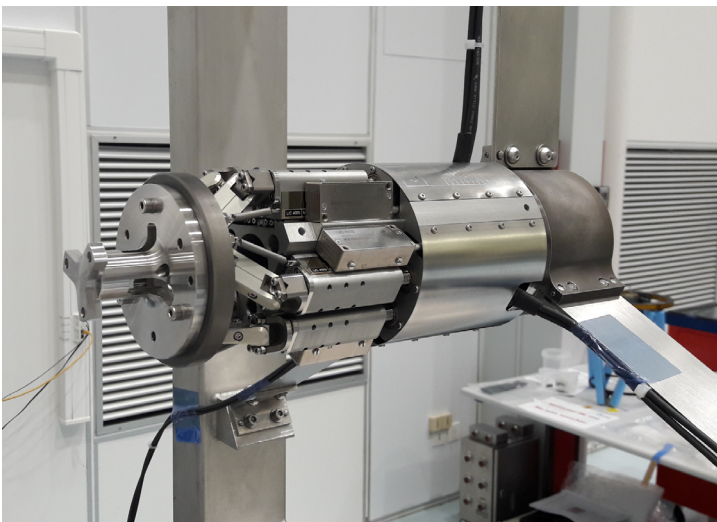
## KEY FEATURES

- Small diameter of 107 mm
- Payload capacity up to 5 kg
- Angular travel range  $\pm 8^\circ$
- Absolute encoders
- Resolution Tx, Ty: 0.5  $\mu\text{m}$



## APPLICATIONS

- Optics
- Synchrotrons
- Space
- Astronomy



MAUKA hexapod with the interface to the glue box that will fix a mirror on a space telescope.



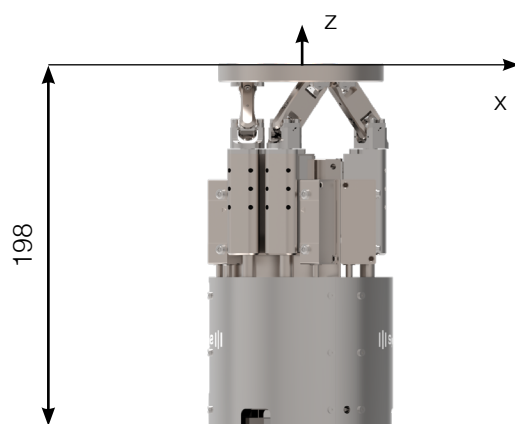
MAUKA hexapod has a very small diameter of 107 mm.



|                                                                          | MAUKA                                                                      |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Motion and positioning</b>                                            |                                                                            |
| Travel range Tx, Ty (mm)                                                 | ± 5                                                                        |
| Travel range Tz (mm)                                                     | ± 10                                                                       |
| Travel range Rx, Ry (deg)                                                | ± 8                                                                        |
| Travel range Rz (deg)                                                    | ± 8                                                                        |
| Resolution Tx, Ty, Tz (µm)                                               | 0.5                                                                        |
| Resolution Rx, Ry, Rz (µrad)                                             | 5                                                                          |
| Repeatability Tx, Ty, Tz (µm)                                            | ± 0.5                                                                      |
| Repeatability Rx, Ry, Rz (µrad)                                          | ± 5                                                                        |
| Speed Tx, Ty (mm/s)                                                      | 1.6                                                                        |
| Speed Tz (mm/s)                                                          | 1                                                                          |
| Speed (deg/s)                                                            | 2                                                                          |
| <b>Mechanical properties</b>                                             |                                                                            |
| Stiffness X, Y (N/µm)                                                    | 0.7                                                                        |
| Stiffness Z (N/µm)                                                       | 4                                                                          |
| Payload capacity (kg)<br>(vertical orientation / horizontal orientation) | 5 / 2.5                                                                    |
| Motor type                                                               | DC motor, gearhead                                                         |
| Encoder type                                                             | Absolute linear encoder                                                    |
| <b>Miscellaneous</b>                                                     |                                                                            |
| Operating temperature range (°C)                                         | 0 to + 50                                                                  |
| Materials                                                                | Aluminum, steel, stainless steel                                           |
| Mobile platform size (mm)                                                | Ø 90                                                                       |
| Fixed platform size (mm)                                                 | Ø 100                                                                      |
| Central aperture (mm)                                                    | Ø 38 for mobile platform ; Ø 30 for fixed platform                         |
| Height in middle position (mm)                                           | 198                                                                        |
| Footprint (mm)                                                           | Ø 107                                                                      |
| Mass (kg)                                                                | 3                                                                          |
| Cable length (m)                                                         | 3                                                                          |
| Options                                                                  | Clean room compatibility<br>Vacuum compatibility<br>Hand-held control unit |
| <b>Controller</b>                                                        |                                                                            |
| Controller type                                                          | SIGMA                                                                      |
| Interface                                                                | Ethernet                                                                   |
| Power supply                                                             | 110-240 VAC / 50-60 Hz                                                     |

Datasheet subject to change without notice. All data are superseded by any new release. R250909

*The performances are specified for single axis motions, with all other axes at midrange and for a rotation center in the middle of the mobile platform.*



Hexapod in middle position

