

This motorized mount for tip-tilt is driven by two TMP29 stages. It has a very high stiffness providing an excellent stability.

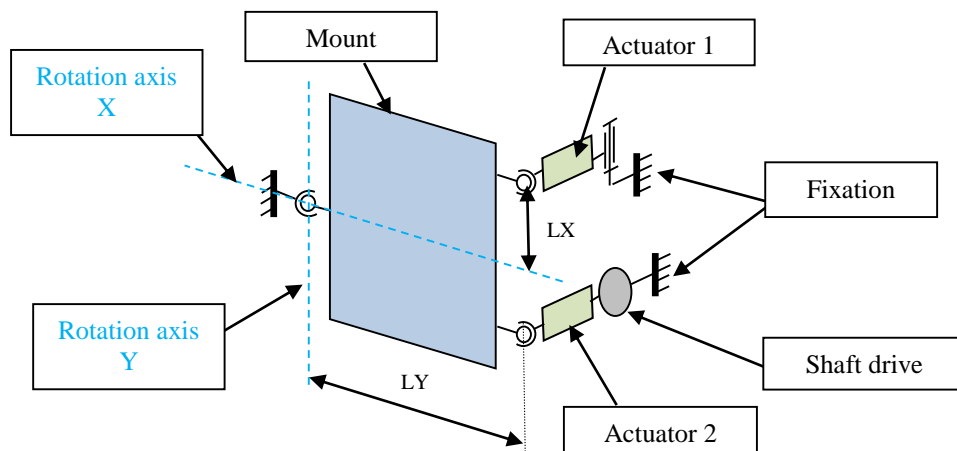
Thanks to its design, it can be adapted to various optics sizes.



Non contractual photo

The motorized mount allows the adjustment of tip-tilt for optics. The mount is fixed through 3 points (isostatic): 2 fixation points are equipped with actuators and the third point is a spherical bearing. Following movements are possible:

- X axis: actuators 1 and 2 work in opposite directions
- Y axis: actuators 1 and 2 work in same direction



Schematic diagram



MOTORIZED MOUNT

Tip-Tilt 3-0.03-1000

DATASHEET ISP 14D045FPI0002-D

Update : 2016/02/02

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1 - Technical Data

TIP-TILT MOUNT CHARACTERISTICS	VALUE
Load (frame + optics)	Up to 150 Kg
Locking device for transport	Yes

ACTUATOR CHARACTERISTICS	VALUE
Power supply voltage	24V
Power supply current	0,5 A / phase
Resistance	3,5 Ω /phase
Inductance	1,2 mH/ Phase
Frequency	4000Hz max
Stroke	+/- 14,5 mm
Resolution	0,0333 μ m / motor step
Recommended minimum command step	2 motor steps
Load capacity (axial, radial, transversal)	400 N
Accuracy	< 75nm + 5% of stroke
RMS error	\leq 75 nm
Hysteresis	< 5 μ m
Mass	1,7 Kg

POSITIONER CHARACTERISTICS	VALUE
Optical frame	805 mm x 600 mm
LX	273 mm
θ_x resolution	0,22 μ rad (2 steps on each actuator in opposite direction)
θ_x stroke	+/- 1,31°
LY	628,1 mm
θ_y resolution	0,1 μ rad (2 steps on each actuator in same direction)
θ_y stroke	+/- 3.04°

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- **Further characteristics :**

- Driven by stepper motors : 0,5 A/ phase (value to be adjusted according to the load)
Consult ISP for further information about electronic control units (OEM cardboard or complete rack)
- SUB D 9 male connectors
- Position stable even unpowered

- **Options**

- Compatibility with high vacuum
- Preparation for reinforced resistance to radiations / electromagnetic pulses

2 - Application

- Accurate and stable positioning and orientation of optics such as mirrors, gratings, KDP, ... for beam transport, frequency conversion, optical compressor ...
- Accurate and stable positioning of optics on machines (coating, metrology, optical bench, ...)

3 - Dimension (mm)

Example with optics 805 mm x 600 mm

