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GRAVITY COMPENSATOR - AME100

1 – Application

The AME100 actuator is based on the force generation actuator patented by ISP System and used for wave surface correction of mirrors for high power lasers.

2 - Description

Force generation concept :

- Imbalance of a system of nested springs: **4 static springs and 4 dynamic springs**
- Modification of the length of the dynamic springs by the action of a sliding rod driven by a screw-nut system and a stepper motor
- Depending on the direction of movement, a pushing or pulling force is obtained

Main characteristics:

- Low stiffness of the « floating head » which allows displacements and misalignments without noticeable modification of the force generated
- Low hysteresis
- Irreversibility of the screw-nut system and maintenance of the force without energy

Note : all our products can be customized according to your requirements

3 – Technical data

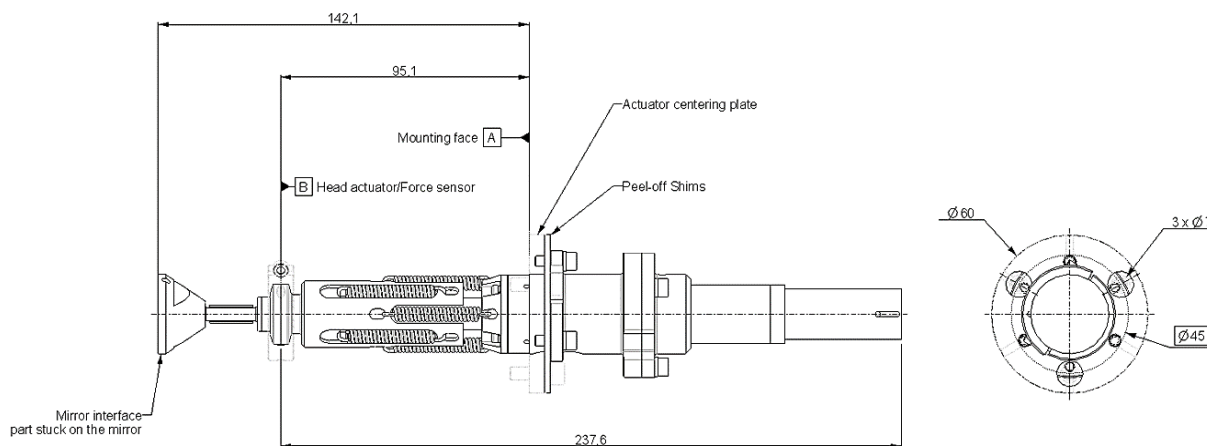
Driveline:

CHARACTERISTICS	PERFORMANCES
Range of effort	+/- 100N
Theoretical resolution (1 motor step)	1.3 mN
Specified resolution	50mN (environ 40 pas moteur)
Rod stroke	+/- 2.5mm
Rod displacement resolution	26nm / pas moteur (théorique)
Force application dynamics	environ 1 N/s
Game catch-up	500 pas moteur

Floating Head Stiffness Matrix:

	STIFFNESS
KX	7.N / mm
KY	7 N / mm
KZ (according to the force application axis)	110 N / mm
RX	0.55 N.m / ° (31.3 N.m / rad)
RY	0.55 N.m / ° (31.3 N.m / rad)
RZ	0.19 N.m / ° (10.8 N.m / rad)

4 – Dimensions



Mass: 800g

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