Application Actuator of MicroEffort AME 20 for mirror M1 LMJ

The AME 20 is an astatic actuator, it generates very high precision bidirectional forces.

- Its patented design by ISP System is based on the use of economical and reliable construction and control technologies.
- The drive is provided by a stepper type motorization.
- The design of the kinematic chain ensures great stability of the force applied excluding energy.
- The fixing interface allows an optimal distribution of the forces applied to the surface of the part.
- The floating head system accepts angular and radial misalignments without causing parasitic friction.
- Very low droop: the force generated is not very dependent on the stroke of the actuator.
- The actuator can be adapted to the customer's request.

Possible applications of the system

- Mirror deformation for wave surface correction
- Isostatic active support
- High precision force application
- Static cylinder with controlled loads

Data Sheet

Motorisation :

96 step/rev stepper motor (4-wire bipolar)	
Supply voltage	
Power part	20V
Logical part	5V
Consumption	
Power part	180mA
Logical part	10mA (nominal) 50mA (PO)

Performance:

Range of effort	± 20 N
Linearity (after calibration)	< 1%
Hysteresis	1%
Repeatability	10 mN RMS
Accuracy (after calibration)	20 mN RMS
working stroke	± 20 µm
droop	< 1%
Build resolution	1.5 mN/pas
Practical resolution	3 mN (2 pas)
Speed	1.2 N/s

Integrated detector : *1 original switch (PO)*

Electronics: *integrated, RS485 communication*

Software: *includes an application program responsible for communication, configuration, control and supervision of the actuator*

Actuator mass: *approximately 300g*

Floating head stiffness:

KZ: <12 N/mm (force application direction)

KX, KY: negligible (transverse)

Admissible radial misalignments on the head:

±70µm

Optimal temperature of use:

20 to 22°C, stabilized at 0.1°C

Duty factor:

According to application, contact us

Options :

• Packaging for use in a specific environment:

- Cleanliness class (CL ISO5, ISO6, ISO7)
- Empty

• Optical encoder on motor

ISP SYSTEM
Z.I. de la Herray
65500 VIC-EN-BIGORRE – France
+33 (0)5 62 33 44 44
contact@isp-system.fr
www.isp-system.fr

Capital de 1 000 000 € - SIRET : 410 675 078 00027 – APE : 71128 – TVA : FR 19 410 675 078