

XY25XS Micro Stage for micropositioning.

Thomas Maillard - François Barillot - CEDRAT TECHNOLOGIES.

The XY25XS stage is an original micro positioning mechanism developed, built and marketed by CEDRAT TECHNOLOGIES.

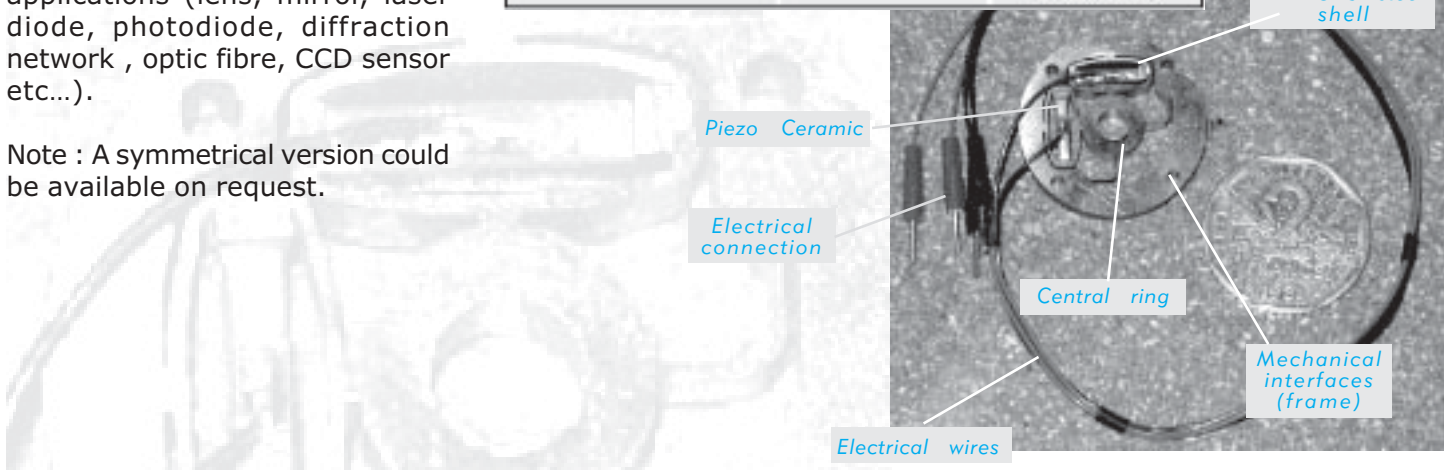
This mechanism relies on the Amplified Piezo Actuators (APA) technology patented by CEDRAT TECHNOLOGIES. Cut in a bulk steel (see figure 1), the mechanism is made of two orthogonal APA25XS shells integrated around a central ring. The two combined APAs' device allows a central ring motions up to 15 microns stroke in both X and Y directions. The small dimensions of the stage (29 mm diameter, 5 mm thickness, 20 g mass) make its integration into optronic devices easy. This stage is particularly relevant for micro positioning in optics and telecom applications (lens, mirror, laser diode, photodiode, diffraction network, optic fibre, CCD sensor etc...).

Note : A symmetrical version could be available on request.

References	Unit	XY25XS
Notes		-
Sensors option		3G
Max. No-load X Y displacement	µm	15
Max. Out of plane Z displacement	µm	0,50
Max. parasitic Z rotation	µrad	330
Max. parasitic X Y rotations	µrad	5
Voltage range	V	-20 ... 180
Stiffness	N/µm	1,50
Height	mm	5,0
Dimensions	mm	Ø 29
Resolution	nm	1,5
Mass	g	20
Unloaded resonance frequency (in the actuator's direction)	Hz	14000
Response time	ms	0,05
Capacitance (per electrical/port)	µF	0,25
Mechanical/interfaces (payload)		1 Ø 5 mm hole
Mechanical/interfaces (frame)		4 Ø 2 mm on Ø 18
Electrical/interfaces		4 PTFE insulated AWG30 wires 100 mm long

Data sheet of the XY25XS micro stage.

Figure 1: XY25XS micro stage, upper view.



Cedrat Recherche changes its name to... ... CEDRAT TECHNOLOGIES.

Thomas Maillard - CEDRAT TECHNOLOGIES.

For more than ten years, through many European technological research programs and international industrial projects, Cedrat Recherche has been developing and innovating in the field of electrical engineering and in active materials based mechanism. Thanks to that great experience, Cedrat Recherche patented a range of innovative products including piezoelectric actuators and motors with their related electronics.

These products find many applications in different industrial areas such as automotive, aerospace, medical, food, telecom, fluidic, energetic for instance. This supply of products and services improves the rise of and the accession to the piezoelectric technology for SMEs

and labs as well as Larger groups. Thus, staying fully innovative but to better reflect its new business focus and its evolution towards the high tech and industrial market, Cedrat Recherche changes its name to...

...CEDRAT TECHNOLOGIES.

