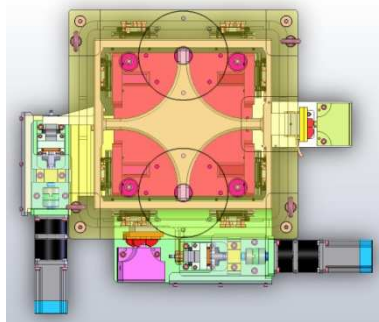
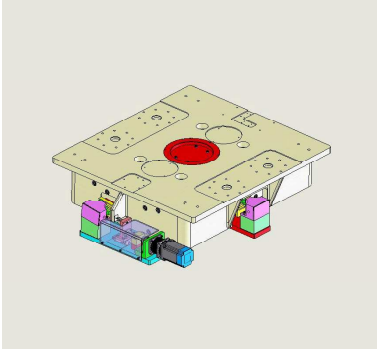


## DOUBLE AXIS GONIOMETER

REF. R400 and R600

### DESCRIPTION



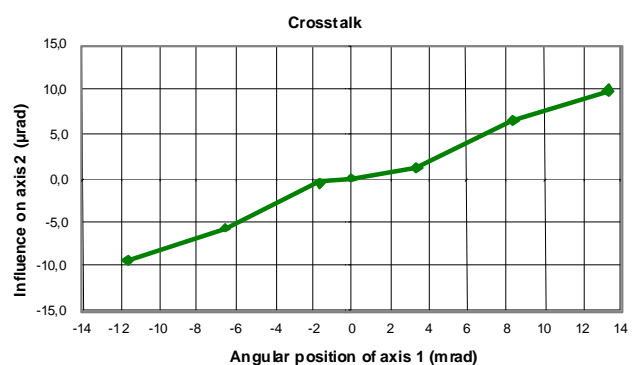
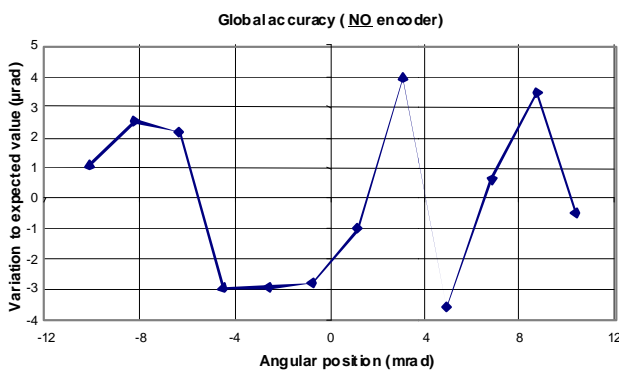
The double axis goniometer is a precision device designed for X-ray optics, which provides two independent angular degrees of freedom with common centre of rotation. It is fully compatible with UHV application.

The rotations are actuated in air through diaphragm bellows, using stepper motors.

The main advantages of this equipment are an easy tuning, a high rigidity, no inside vacuum motors or friction part and an in-air survey of mirror position.

### PERFORMANCES

Model	Strokes	Resolution (full step)	Accuracy	Repeatability	Crosstalks
<b>R400</b>	$\pm 17$ mrad	0.25 $\mu$ rad	3 $\mu$ rad	1.5 $\mu$ rad	$\pm 10$ $\mu$ rad
<b>R600</b>	$\pm 17$ mrad	0.16 $\mu$ rad	3 $\mu$ rad	1.5 $\mu$ rad	$\pm 10$ $\mu$ rad
<b>Option</b>	Incremental encoder Renishaw Tonic		Down to 0.25 $\mu$ rad		-



## DETAILED CHARACTERISTICS

### Actuator

Stepper motor	Supplier	SUPERIOR ELECTRIC
	Reference	KMT061F05
	Step / rev.	200
	Max. torque (N.m)	1.2
	Rated current (Amps – bipolar)	2.0
	Rated frequency (step/s)	2000
Gear box	Supplier	MIJNO
	Reference	MNA023 2T 1/100
	Gear ratio	1:100
	Max. torque (N.m)	7.0
Ball screw	Supplier	THK
	Reference	BNK10023RRGO

### Limit switches

Supplier	EUCHNER
Reference	SN03D12502
Operation point accuracy	± 2 µm
Plunger: type – number	Chisel - 3
Switching element	Potential free (NC) Snap-action contact

### Option encoder

Supplier	RENISHAW
Reference	Tonic
Type	Incremental
Resolution	Down to 0.1 µm

### Surveying

The upper cradle of the goniometer, which is a reliable representation of the optic useful area, is able to receive 4 interfaces for survey monument, easily adaptable to any surveying standard.