HUBER
Diffraction and Positioning Equipment

Eulerian Cradle 511.4

The Eulerian cradle is a full-circle cradle with an assymetrical design. The Phi- and Chi-circle planes are at right angles to one another.

The motor and signal currents are transmitted via slip rings. This enables an unrestricted rotation around both axes.

This model is predominantly used for texture analyses. It comes equipped with a texture module 511.301 (rot-trans) for both reflection and transmission beam geometries (oscillation range: 12mm). Optional: texture module 511.302 (trans-rot).

For sample adjustment an optical microscope or an optional CCD-camera is integrated (see Accessories MiniVID).

Both circles are equipped with zero-point controls and step motors. A range of different motor types and specifications is available according to customer requirements.

General Information:

The Eulerian cradles of the series 500 can be combined with the goniometers of the series 400 to create multi-circle diffractometers. These can be used for analytical investigations in the fields of X-ray and neutron diffraction.

Specifications:

Sphere of confusion [mm]:	0.02
Parallelity (Chi-plane to Phi-axis) ["]:	<= +/- 5
Weight [kg]:	18

	Phi-Circle	Chi-Circle
Travel range [°]:	360	360
Gear ratio:	360:1	360:1
Accuracy ["]:	50	50
Repeatability (unidir.) ["]:	<= 5	<= 2
Reversal error ["]:	<= 30	<= 15
Resolution [°]:	0.001*	0.001*
Min. drive torque [Nm]:	0.5	0.8
Flange size [mm]:	56	56

* step motor, 1000 steps/revolution

Maximum load:

The weight of the samples is limited to about 100g.

Dimensions [mm]:
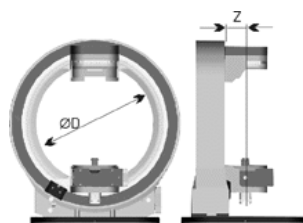
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250

Accessories:

Motors:	included
Limit switches:	included (Chi)
Zero-point control:	included (Chi)
Gear boxes:	2056.05 (Chi)
	2056.10 (Chi)
	2056.20 (Chi)
Encoder:	incremental (Chi)
	absolute (Chi)
Control system:	9300
CCD-camera:	MiniVID
Texture attachm.:	511.301
	511.302

SCALE