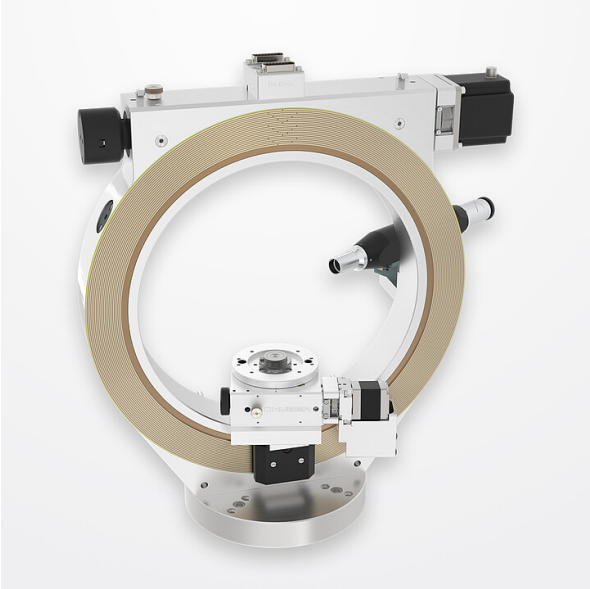


Eulerian Cradle 511

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.

In order to reduce the absolute angular deviation, it is possible to replace the standard goniometer 408 with the version 410. Due to its larger dimensions, however, the area in shadow is increased.

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:

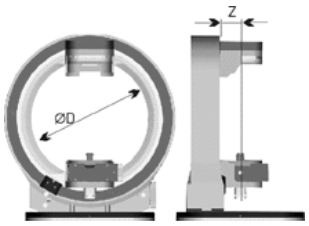
Sphere of confusion [mm]:	0.02**
Parallelity (Chi-plane to Phi-axis) ["]:	<= +/- 5
Weight [kg]:	17

	Phi-Circle	Chi-Circle
Travel range [°]:	360	360
Gear ratio:	180:1	360:1
Accuracy ["]:	30	30
Repeatability (unidir.) ["]:	<= 2	<= 2
Reversal error ["]:	<= 20	<= 15
Resolution [°]:	0.002*	0.001*
Min. drive torque [Nm]:	0.05	0.8
Flange size [mm]:	32	56

* step motor, 1000 steps/revolution

** with a load of 3kg

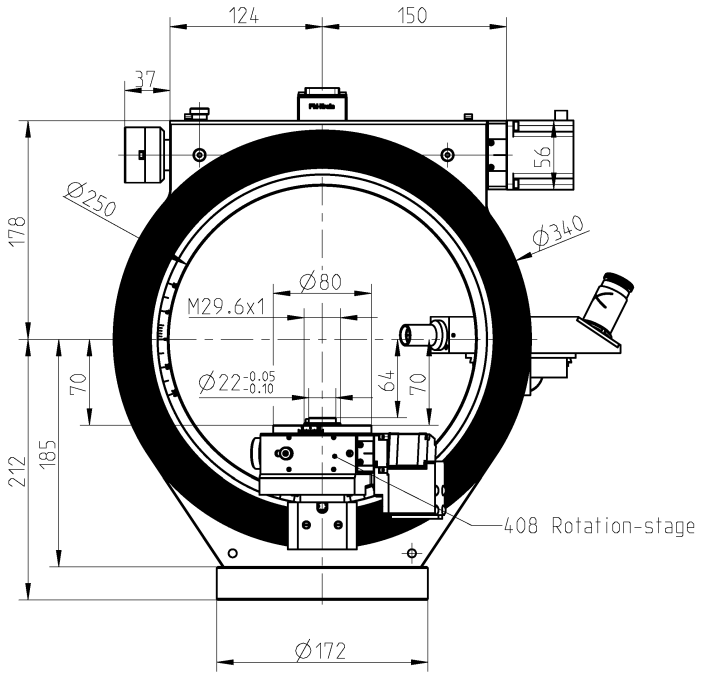
Dimensions [mm]:

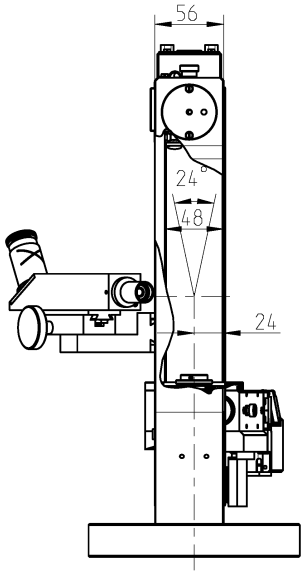


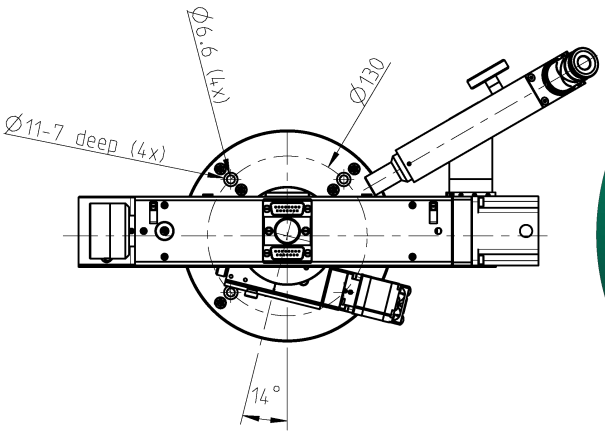
D:	Z:
250	-

Accessories:

Motors:	included
Gear boxes:	2056.05 (Chi)
	2056.10 (Chi)
	2056.20 (Chi)
Limit switches:	included (Chi)
Zero-point control:	included
Encoder:	incremental (Chi)
	absolute (Chi)
Control system:	9300
CCD-camera:	MiniVID
Goniometer heads:	1001
	1002
	1004
	1007


124
150
37
56
Ø250
Ø340
178
Ø80
M29.6x1
Ø22 -0.05 -0.10
64
70
70
212
185
408 Rotation-stage
Ø172


56
24°
48
24


Ø6.9 (4x)
Ø130
Ø11-7 deep (4x)
14°