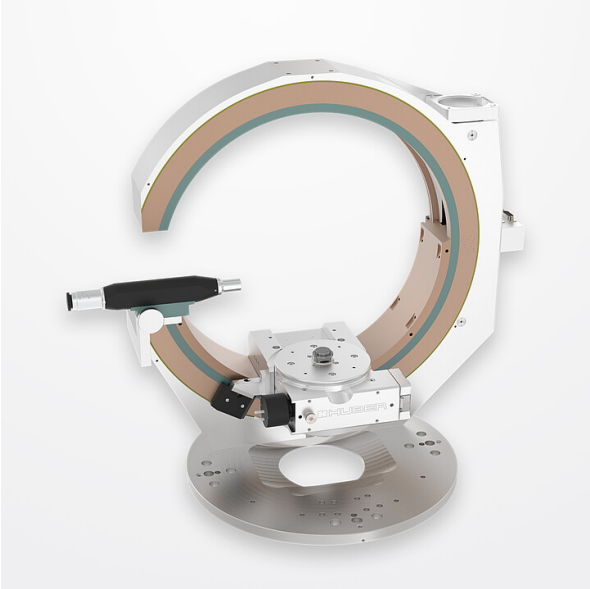


Eulerian Cradle 512.5

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.

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 the Phi-axis.

A manual Z-adjustment 5104.A05 is incorporated in the Phi-circle, enabling goniometer heads of the series 1000 to be mounted. Also available is a motorised Z-adjustment.

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.

Specifications:

Sphere of confusion [mm]:	0.04***
Parallelity (Chi-plane to Phi-axis) ["]:	<= +/- 20***
Weight [kg]:	60

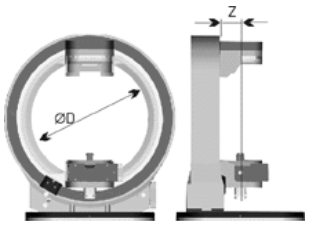
	Phi-circle	Chi-circle
Travel range [°]:	360	160
Gear ratio:	360:1 / 180:1**	360:1
Accuracy ["]:	30	30
Repeatability (unidir.) ["]:	<= 2	<= 3
Reversal error ["]:	<= 10	<= 15
Resolution [°]:	0.001* / 0.002* **	0.001*
Min. drive torque [Nm]:	0.10 / 0.13**	1.5
Flange size [mm]:	56	83

* step motor, 1000 steps/revolution

** using Goniometer 410A

*** with a load of 10kg

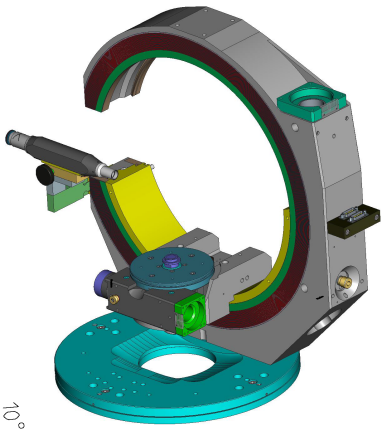
Dimensions [mm]:

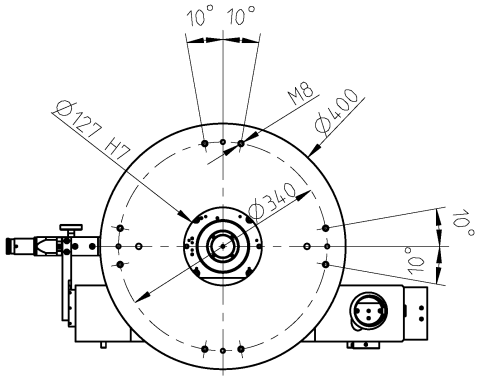


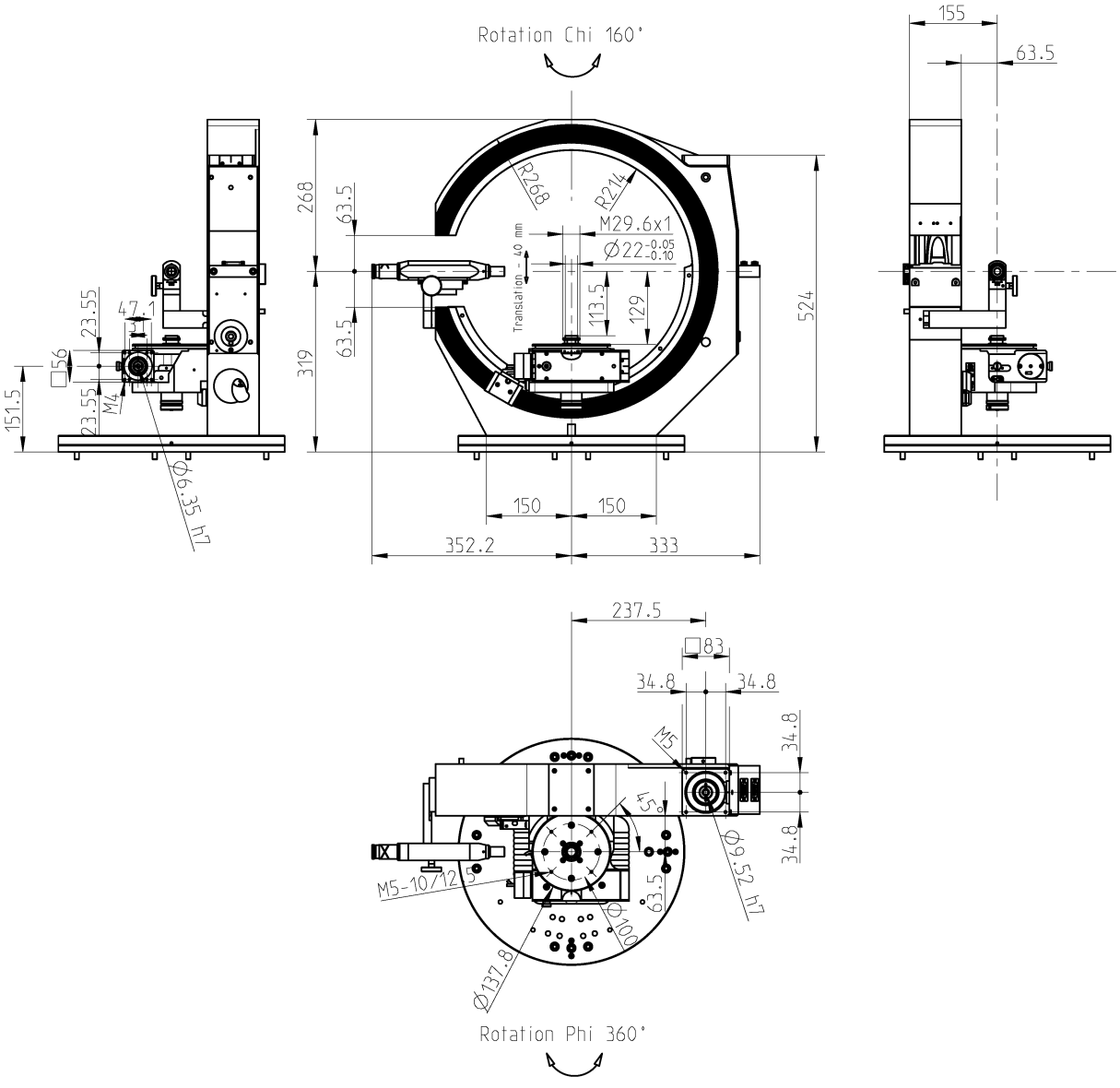
D:	Z:
400	63.5

Accessories:

Motors:	included
Limit switches:	included
Zero-point control:	included
Gear boxes:	2056.05 (Phi)
	2056.10 (Phi)
	2056.20 (Phi)
	2083.05 (Chi)
	2083.10 (Chi)
	2083.20 (Chi)
Encoder:	incremental
	absolute
Control system:	9300
CCD-camera:	MiniVID
Z-adjustment motorised:	5104.A05M
Goniometer heads:	Series 1000




10° 10°
M8
Ø400
Ø127 H7
Ø340
10°
10°


Rotation Chi 160°
155
63.5
268
63.5
319
63.5
524
R268
R214
M29.6x1
Ø22 -0.05 -0.10
Translation 40 mm
113.5
129
151.5
23.55
47
23.55
M4
□56
Ø6.35 H7
150
150
352.2
333
237.5
□83
34.8
34.8
34.8
34.8
M5
45°
M5-10/12
63.5
Ø100
Ø9.52 H7
Ø137.8
Rotation Phi 360°