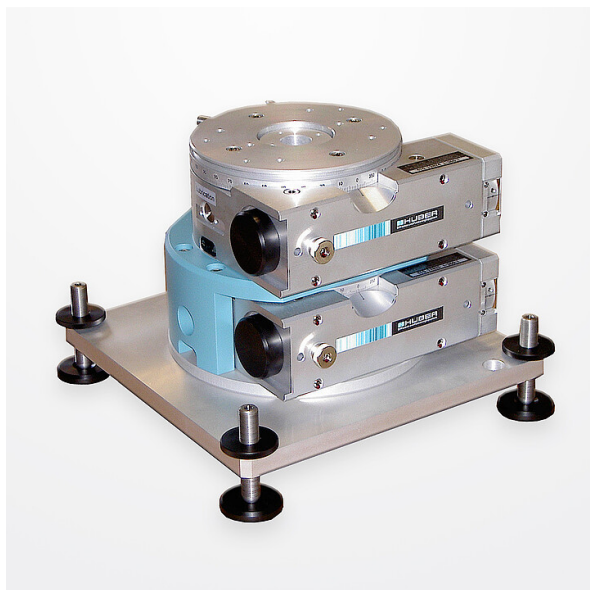




2-Circle Goniometer 414/414A

The 2-Circle Goniometer 414/414A basically consists of two Goniometers 410 mounted one on top of the other.

The rotational axis of the lower circle (Theta) is fed through the upper circle (2-Theta) by a drive shaft.

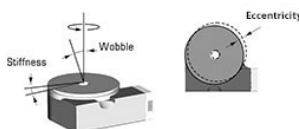
This system, when mounted on a detector arm, is ideal for application as an analyser in 4- and 6-Circle Diffractometers.

- four precision configurations
- two load configurations

Application specific versions:

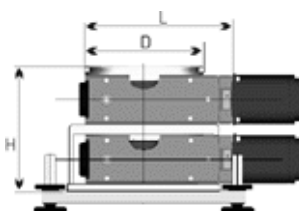
- vacuum suitable
- antimagnetic
- radiation resistant
- in black

Precision configurations:



	X1	X2	X3	XE
Accuracy ["]:	≤40	30	15	on request
Repeatability (unidir.) ["]:	≤4	2	2	on request
Reversal error ["]:	≤20	10	7	on request
Eccentricity [μm]:	≤5	3	2	2
Wobble ["]:	≤8	4	3	3

Dimensions [mm]:



D:	L:	H:
138	171	145

Accessories:

Motors:	2-/3-/5-Ph. Servo/DC
Hand wheels:	0056
Gear boxes:	2056.05 2056.10 2056.20
Limit switch 2-Theta-circle:	included
Zero-point control:	9100
Encoder XE :	incremental absolute
Control system:	9300
Goniometer head mounting:	1412, 1413
Arms:	analyser, counter weight
Counter weight:	optional
Base plate:	423.12 included

Maximum load Theta circle (vertical goniometer axis):

Max. load [N] W1 :	1450
Max. load [N] W2 :	2300

Maximum load 2-Theta circle:

- vertical goniometer axis (V- **W1** , V- **W2**)
- horizontal goniometer axis (H- **W1** , H- **W2**)
- The maximum load on the 2-Theta arm is depending on the distance (momentum).

Specifications:

Travel range [°]:	360
Material (housing/worm gear):	Aluminium/Bronze
Gear ratio:	360:1 / 180:1*
Resolution [°]:	0.001 / 0.002* ** 0.00005 / 0.0001* minimum (with gear ratio 20:1)

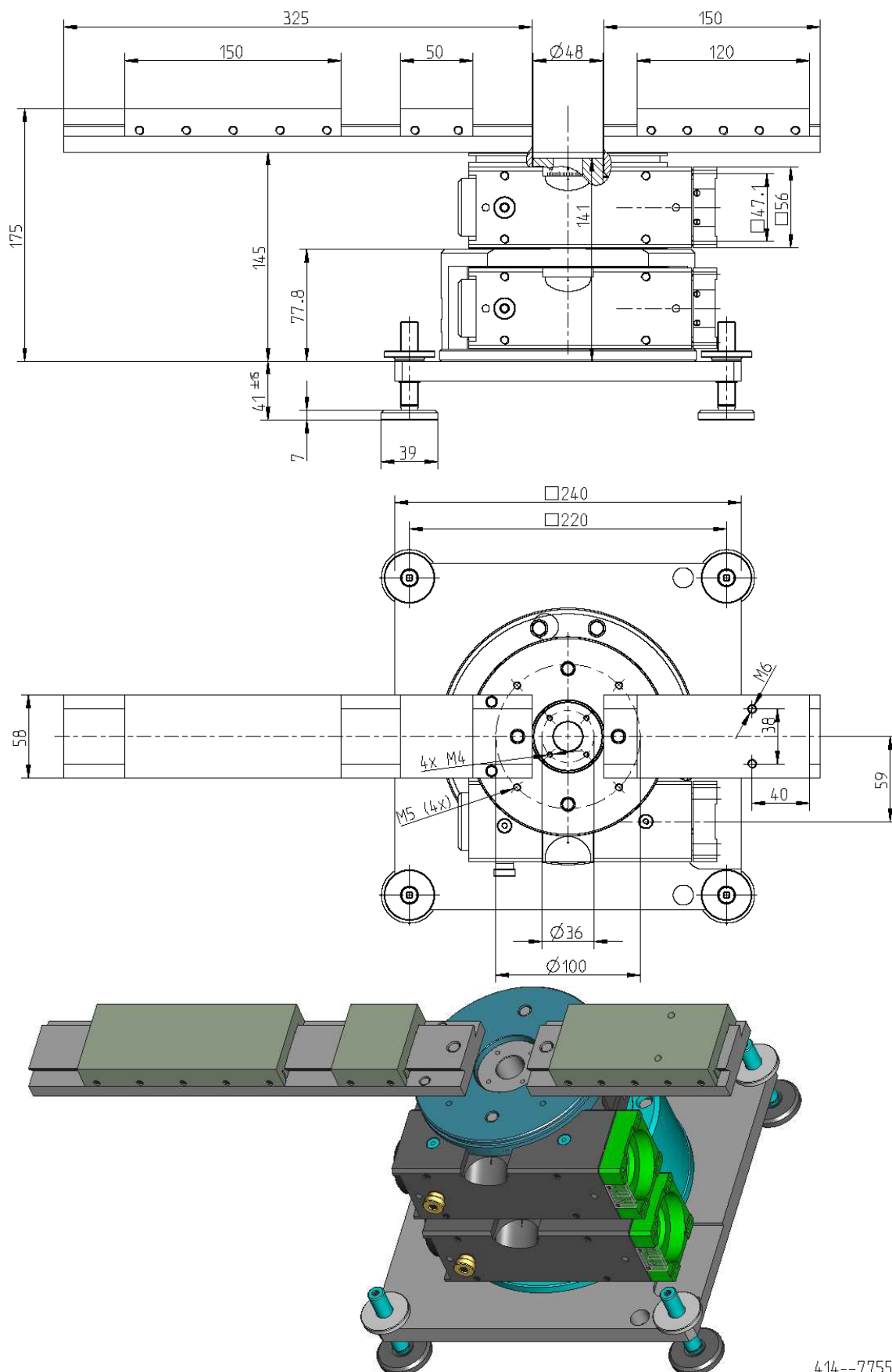
Min. drive torque [Nm]: 0.10 / 0.13*

Weight [kg]: 13

Flange size [mm]: 56

* values concerning 2-Circle Goniometer 414A

** step motor, 1000 steps/revolution



414--77551_194177