



Goniometer 410/410A

- four precision configurations
- two load configurations

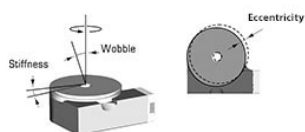
Application specific versions:

- vacuum suitable
- antimagnetic
- radiation resistant
- in black

Modularly individually configurable:

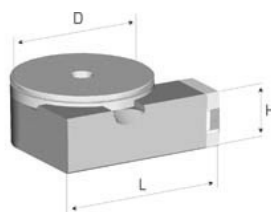
- from basic model to high-end system
- to multi-axis systems
- with individual transmission aperture
- with customer-specific hole pattern

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]:



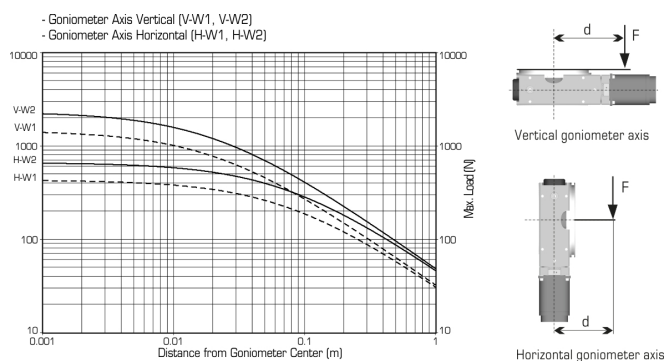
D:	L:	H:
138	171	67

Accessories:

Motors:	2-/3-/5-Ph. Servo/DC
Hand wheels:	0056
Gear boxes:	2056.05 2056.10 2056.20
Limit switches:	included
Zero-point control:	9100
Encoder XE :	incremental absolute
Control system:	9300

Load configurations:

	vertical gonio. axis	horizontal gonio. axis
Max. load [N] W1 :	1450	410
Max. load [N] W2 :	2300	650



- vertical goniometer axis (V- **W1** , V- **W2**)
- horizontal goniometer axis (H- **W1** , H- **W2**)

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 box 20:1)

Min. drive torque [Nm]:	0.10 / 0.13*
Max. output torque [Nm]:	3 / 5*
Stiffness [μ rad/Nm]:	3
Weight [kg]:	4
Flange size [mm]:	56
Transm. aperture [mm]:	20 (standard) - 82

* values concerning 1-Circle Goniometer 410A

** step motor, 1000 steps/revolution

