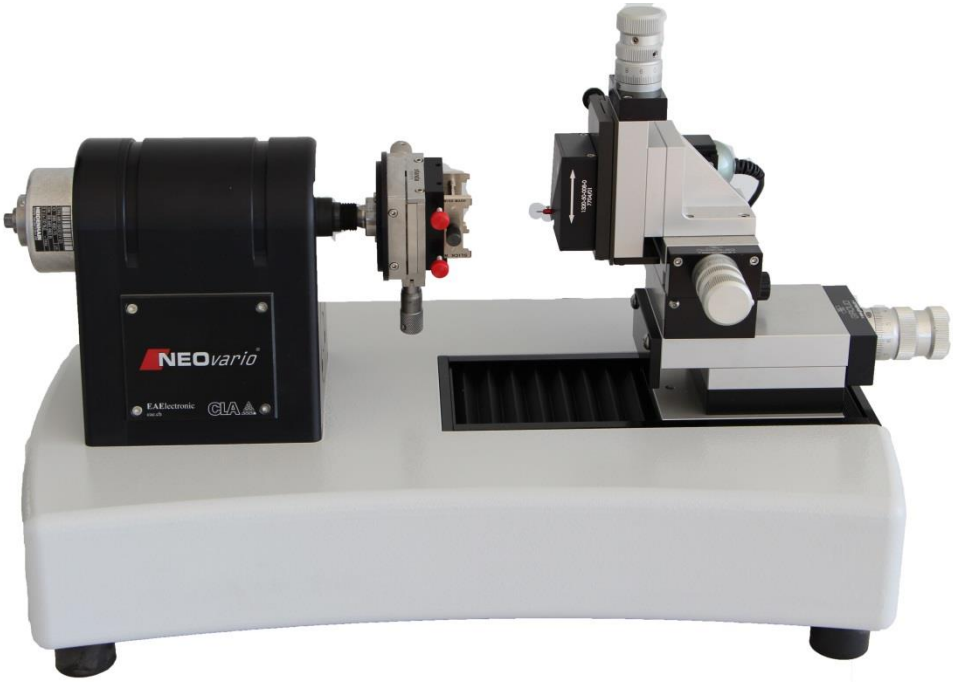
NEOvario®

Your metrology tool



Force and Torque Measuring Device

CLA
à la pointe de l'automation

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NEOvario®

The NEOvario is a state-of-the-art instrument geared for providing laboratory-precise measurements. Completely integrated and compact, this device will meet any and all your demanding needs in the field of force and torque measurements.

Principle of Measurement

The part to be measured is fixed on the central axis of the NEOvario by means of an intermediary support (grips, chucks, plate, mandrel, universal sample holder).
A magnification camera, located in the measurement axis, then centers the object and prepares it for evaluation. The sensor is precisely positioned with the help of a micrometer displacement table consisting of three axes of freedom: X, Y and Z.
The measurement is then carried out with the assistance of an arm, a needle or pulley attached to the axis of a force sensor, or a torque sensor fixed coaxially to the part being assessed. A servomotor with speeds from 0.01 to 60 rpm allows the operation to drive the instrument spindle with an angular resolution of 0.02°. During the force or torque measurement, the software displays the measuring curve as a function of time directly on the screen.

Some examples of applications

Energy Accumulator	Surges and slips Couple of barrel springs Number of turns and returns Wear
Counting and Transmission	Couples on gear train returns Frequency analysis Determination of residual couples Taking couples by various functions
Distribution and Regulation	Development of new exhausts Development of spinnakers Spring stiffness calculatoin
Display	Pavements, friction Couple caught by the date system Drive torque of the disc
Manual and Automatic Windings	Manual and automatic winding Winding movement by crown Quality of slippery flanges Friction measurement on bearings Couple Winding by the mass Static moment of the mass

Characteristics

- High angular resolution
- Extended speed range
- Connectivity simplified by USB 2.0
- Compact Environment
- Simplicity of implementation
- Intuitive user interface
- Overload protection and sensor tracking
- Built-in control electronics
- Centering via camera, computer assisted
- Movement control studied with EPFL

Sensors

The NEOvario is complemented by a wide range of torque or force transducers that measure torques of 1µNm up to 1 Nm. All these sensors are bidirectional, of inductive or resistive type, and allow for a good linearity with practically negligible hysteresis.

Our sensors are delievered with a certificate of calibration, and regular follow-up interaction guarantees you optimal precision.

Torque Sensors		
TSF-000	±100	µN.m
TSF-005	±500	µN.m
TSF-01	±1	mN.m
TSF-05	±5	mN.m
TSF-1	±10	mN.m
TSF-2	±20	mN.m
TSF-5	±50	mN.m
TSF-10	±100	mN.m
TSF-30	±300	mN.m
TSF-100	±1	N.m

Force Sensors		
SC-002	±20	mN
LC-01	±0.1	N
LC-1	±1	N
LC-5	±5	N
LC-10	±10	N

IN SHORT:

The NEOvario has a wide range of torque and force sensors allowing for measurements as low as 1µNm up to 1 Nm.

BENEFITS :

CLA also provides verification and certication of sensors and devices, as well as measurement services.