

# BARI*mètre*®

Your metrology tool



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Micro torque measuring device for the measurement of springs, friction and resistance



**For the measurement of micro torques in incoming inspection or in production, the BARImètre is a reference in watchmaking because it guarantees a reliable measurement without human influence.**

Fatigue test	Measurement of microcouples in laboratory and production	Friction torque and holding torque measurement	Barrel measurement
Data interconnection	Compact	Measurement report and parameterization by the BARImètre manager application	Mesure de 1µNm à 500mNm
Development and manufacture of tooling for a turnkey solution	Possible integration on a PLC		

The BARImètre measurement instrument was developed by CLA to meet its customers' watchmaking and microtechnology requirements. This metrology instrument is ideal for measuring torque both in the laboratory and during production. It runs on an embedded PC with Windows CE operating system, ensuring that the device has a high level of connectivity and autonomy in operation. This compact and user friendly device is driven by BARImètre Manager software designed by CLA's R&D department.

## BARREL MEASUREMENT

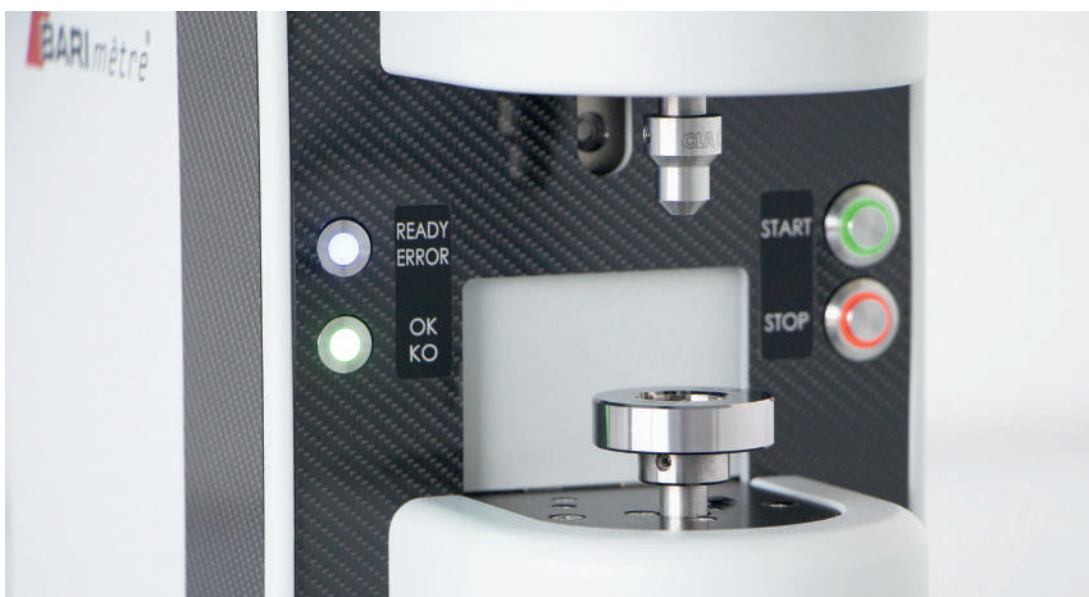
The BARImètre is used for inspecting manual and automatic barrels. Measuring torque involves recording the torque curve depending on how tightly the spring is wound. Parameters can be set by the user for a configuration suited to each part type. The BARImètre is also able to detect various characteristic values on these curves and calculate overall values, such as yield, that cannot be read directly from a graph. The point value for torque at any test point can also be read accurately from the graph. It also offers many different fatigue tests to carry out and determine barrel ageing and main-spring bridle behaviour in the case of a manual barrel.

## MEASURING STATIC AND DYNAMIC TORQUE

The BARImètre torque measurement instrument offers great flexibility for measuring microtechnology and watch parts. For instance, in the case of wheels or cannon pinions, frictional torque can be measured in both directions of rotation. Static tests are used to determine resistive torque, destructively or non-destructively. They can include resistance tests for riving/ drivingin, for example.

## TOOLS

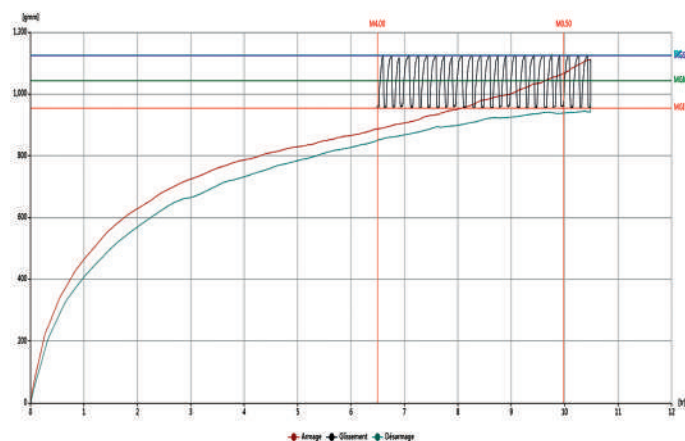
CLA can develop and manufacture customised tools as required for its customers' applications. These tools are easy to replace, ensuring optimum productivity when changing references.



Torque sensors :
± 0.1 mNm
± 0.5 mNm
± 1 mNm
± 5 mNm
± 10 mNm
± 25 mNm
± 50 mNm
± 150 mNm
± 300 mNm
± 500 mNm

## BARImètre MANAGER

Several BARImètre instruments can be managed with the BARImètre Manager application. It is used to set parameters for the measurement instruments, display test results directly and generate result reports. It is intuitive and accessible and allows test configurations to be recorded.



## CALIBRATION

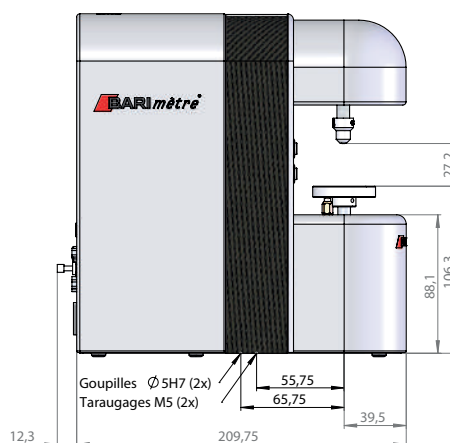
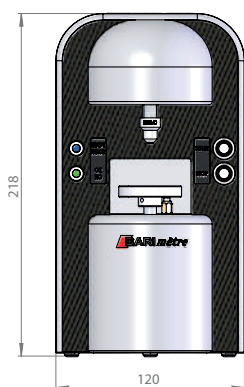
In order to guarantee the quality of the measurement, CLA recommends calibrations for its BARImètre instruments. The validity of the sensor calibration is one year or 1'000 test hours, whichever comes first.

## BARImètre AUTOMATE

The BARImètre is ready to be integrated into a programmable logic controller (PLC) to carry out your measurements in complete autonomy.

The BARImètre Automate offers you the possibility to integrate up to four BARImètre. The measurement channels are managed autonomously, which provides a high degree of flexibility. Therefore, you can measure several types of parts simultaneously.

The four loading drawers can be adapted to the different types of parts conditioning. The autonomy of the machine reaches, in standard configuration, 800 pieces depending on the type of conditioning.



For companies in the watchmaking, medical and micro engineering fields, CLA is a supplier of solutions for complex part assembly and advanced micro-couple measurement because it produces Swiss made, flexible, scalable and connected equipment that ensures complete traceability of production data.

More info on our website [www.cla.ch](http://www.cla.ch)

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