

AMB (Appareil de Mesure des Barillets) – Test system for barrels of mechanical watches



Field of application

- The AMB measuring system is ideally suited for testing barrels with automated and manual left or right winding
- It is mostly used in the lab and for quality control in watch manufacturing
- The recording of the moments of force is instantaneous and several records can be superimposed
- The results, statistics and parameters can be displayed, stored and printed
- In addition, the test system can be equipped with up to four independent channels

witschi

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AMB (APPAREIL DE MESURE DES BARILLETS)

Use of the equipment

The equipment (AMB), manufactured by Witschi Electronic Ltd, is used for measuring and examining complete barrels. It is used both for examining in production as well as for analyses in the laboratory.

Short description of the examined barrels

For the AMB a barrel is nothing different than, in a housing included, a spring which for wind up and relaxing is accessible from the outside. To examine a barrel with the AMB essentially means to trace the curve in the connection of the tension degree of the spring.

One for the AMB adapted *piece holder* as well as a *key* to drive the spring is sufficient for testing a barrel type with the AMB. As such piece holders and keys are manufactured "as per specifications", there are very few barrel types those can not be tested with the AMB.

Curves and values

Depending upon user desire and type of construction of the barrels, the recording of the torque curve on three different kinds can take place:

- While wind up the spring around the barrel-arbor - is called torque while *winding up*
- While relaxing the spring - is called torque while *relaxing*
- While continuous turning after the spring is complete winded up (for watch movements with automatic wind up) - is called torque while *sliding* and barrels with this feature - *automatic barrels*

The measurement principle remains in each case the same.

The AMB can emphasize different characteristic values of these curves, as well as the calculation of certain global values, those on which the traced torque curve is not directly evident (e.g. efficiency, loss etc.).

On the diagram also the punctual value of the torque can be read out from any measuring point.