

Calibration of the Electronic Scale

The Electronic Scale is shipped with a factory test report. Here is a description of the calibration process:

The Electronic Scale is placed on a flat surface and adjusted using a calibrated, high-precision chrome UNI glass scale. This, in turn, was previously adjusted using the chrome UNI glass scale with serial number 00006. Traceability is guaranteed by calibration certificate No. 111-22954 from the Swiss Federal Institute of Metrology (METAS) in 3003 Bern-Wabern, Switzerland.

If an Electronic Scale is not checked according to this principle, but rather—as is usually the case in certified calibration laboratories—using a laser interferometer or a tactile 3D measuring machine, deviations from our factory test report may occur.

With both the laser interferometer and the 3D measuring machine, the travel path of the magnifying lens or the housing is typically measured. However, since the guide rod of the Electronic Scale is never 100% straight, the measuring carriage performs small wobbling movements as it moves (and with it, the housing and the magnifying lens). This wobbling is also referred to as “yawing.” With this procedure, the amplitude of this wobble is directly incorporated into the measurement and is then reported as a (supposed) deviation.

Since this type of calibration does not correspond to the operating principle of the Electronic Scale, this measurement method is not the optimal approach in a calibration process for this length measuring instrument. The measurement method we use, however, corresponds to the operating principle and eliminates the influence of wobble, as the resulting deviations are taken into account.

Therefore, please note: If you are preparing a test report yourself or having one prepared externally, the correct procedure is to compare the results with a calibrated high-precision glass scale.