Adjustment

The standard DIN 1319-1 clearly defines the term “adjustment.” According to this, it means: “Setting or aligning a measuring device to eliminate systematic measurement deviations to the extent necessary for the intended application.”

It is important to note that adjustment requires an intervention that permanently alters the measuring device.

During adjustment, a measuring device’s measured value is set to a known reference value. This is done, for example, by comparison with a standard. For precise measurement, it is crucial that the measuring device operates under prescribed conditions. These reference conditions include factors such as temperature, position, and other external influences.

Readjustment is necessary when a minor or shortened adjustment is required. This can be the case, for example, with a temperature change in the measuring system. Misadjusted devices display incorrect values because the measurement deviations are outside the permissible limits. These devices must be professionally readjusted to function correctly again.

While adjustment represents a physical alteration of the measuring device, calibration is a measurement process that occurs without intervention. For measuring instruments legally required for monitoring, a verification is necessary after adjustment. This verification documents whether the measuring device meets the requirements. During calibration, it is also determined to what extent the measuring device complies with legal regulations – this is referred to as legal metrological verification.