Fact sheet

No quantitative data – no quality assurance

Accurate measuring is probably the most effective way of avoiding costly repairs or even claims for damages. This applies in particular in the context of international standards for quality management systems (e.g. ISO 9000 ff., HACCP), and also with regard to claims based on product liability legislation.

Calibration and adjustment

A measurement error is the difference between a measured value of quantity and its true value. Such errors tend to become more frequent the longer a device is in operation. At some time, the deviations might be so great that they are no longer within the specifications, which means that quality is no longer assured.

By calibrating the device, the measurement error can be determined and documented. If the measurements are outside the permissible range, the device needs to be adjusted. In this process, the measuring instrument is reconfigured so that measurement errors are minimised and deviations from the setpoint value are within the device specifications.

Considering the costs arising from legal action for damages that might be filed against you, the expenses for proper calibration and adjustment are minor in comparison. Companies who take their responsibility seriously and wish to establish long-term business relationships therefore need to calibrate their equipment regularly.

One-point or multiple-point calibration?

One-point calibration is sufficient for quality assurance under static operating conditions. Compressed air systems are however generally ran under constantly changing, dynamic ambient and operating conditions. This can cause the quality of the compressed air to fluctuate within the measuring range and between the system-defined limits (such as those of the compressed air quality classes according to ISO 8573.1).

To accurately capture the values across the entire operating range, multiple-point calibration is therefore simply a must, although it is a much more time-consuming and costly task.

Messpunkt ***Measuring point***	**Sollwert** ***Required value***	**Istwert** ***Actual value***	**Abweichung** ***Deviation***	**Ergebnis** ***Result***
Nr. / No.	**°C td**	**°C td**	**K**	
1	-50,5	-50,5	0	I.O / OK
2	-43,5	-43,9	0,4	I.O / OK
3	-23,9	-22,9	1	I.O / OK
4	-11,1	-10,4	0,7	I.O / OK
5	2,7	3	0,3	I.O / OK

Five-point calibration as manufacturer standard

BEKO TECHNOLOGIES takes its slogan "Better through Responsibility" seriously and therefore has adopted five-point calibration as the standard method for its measuring devices and sensors. Furthermore, all adjustments that are required based on the calibration results are covered by the calibration flat charge. Whilst five-point calibration is more time-consuming and expensive, it has proven the most effective approach to protect compressed air system operators against costly claims for damages. All calibration procedures are performed on a standardised test bench and customers obtain a detailed report of the five-point factory calibration results.