CALIBRATION **AT MANUFACTURER'S** QUALITY

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Calibration is calibration, right? Certainly not. Calibration performed by the manufacturer has many benefits compared to third-party calibration, and also provides a range of quality services to meet all needs.





Next step: **Technical evaluation** A calibration service should not end

with the initial calibration process The "incoming data" is a valuable source of information for interpreting the condition of the equipment and, if necessary, for initiating further steps. Understanding this information is a task for specialists. We as a manufacturer regard the calibration service not only as a means of imenting the "as found" state,

ut also as a way to prepare

the equipment

for the future.



There is much more to "calibration" than simply the actual meaning of the word. Explore the three steps of calibration here.



more accurate standards; ideally the calibration results and instrument specification are compared. The result is a deep insight into the performance of the instrument. Reaching that result can be challenging, depending on the instrument type and class. Not

> all specifications define all tolerances adequately.

> > Manufacturer

Calibration service provider

Normative and regulative requirements for metrological traceability

Calibration results from laboratories conforming to ISO 17025 provide metrological traceability. In other words, the calibrated paramaters must be in the scope of the accreditation, and the uncertainties should be sufficiently small to enable compliance decisions.



MANUFACTURER VS. 3RD PARTY

There are several disciplines which together determine the quality of a calibration service: compliance with relevant standards and the coverage of technical parameters. You chose your equipment for a reason - it is therefore necessary to ensure the full performance range as specified in the data sheet and to provide such calibrations under accreditation.

HOLISTIC QUALITY CALIBRATION PROCESS

The following graphic shows the calibration process of a manufacturer's calibration service. Most of the steps shown here cannot be provided by a third-party calibration service.



What does a calibration look like?

Measurement results are compared with e.g. data sheet specifications. Measurement results consist of measured values

Upper specification

Lower specification

Measured value

with their uncertainties.

Coverage of technical parameters

accreditation

SCREENING PROCESS & PREPARATION

Before an instrument is calibrated, an initial health check is performed. This includes functional checks, visual and mechanical checks as well as the malware scans.

Additional components of an R&S calibration service

- Preventive maintenance
- Firmware updates Virus and malware scan
- Adjustments

INCOMING CALIBRATION Comparing your equipment

with reference standards. Established with defined processes and state of the art uncertainties.

MANUFACTURER'S DIAGNOSTICS Specialists, who are fully

ADJUSTMENT/



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WHY MANUFACTURER'S CALIBRATION MATTERS. The path to high and sustainable quality

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HOW DO WE PROCEED WITH CALIBRATION?

- Initial screening
- ► Calibration
- Manufacturer's diagnostics and either a clear pass or
- Necessary adjustments to ensure full performance



HOW THE CUSTOMER BENEFITS?

- ► Reliable performance
- ► Instrument accuracy
- Minimizing callbacks
- Increasing calibration intervals
- Enabling shorter downtimes

WHY CHOOSE Rohde & Schwarz?

- Full, standards-compliant performance range as in device data sheet
- Performed under accreditation

WHAT IS HIGH-QUALITY CALIBRATION?

- Based on a true understanding of the condition of the device
- Guaranteeing "as new" performance