

# Factory calibration service

Version 1.2



**GANN MESS- U. REGELTECHNIK GMBH**

70839 GERLINGEN

SCHILLERSTRASSE 63

INTERNET: <http://www.gann.de>

Verkauf National: TELEFON 07156-4907-0  
Verkauf International TELEFON +49 7156-4907-0

TELEFAX 07156-4907-40  
TELEFAX +49 7156-4907-48

EMAIL [verkauf@gann.de](mailto:verkauf@gann.de)  
EMAIL [sales@gann.de](mailto:sales@gann.de)

## Short explanations of terms

### Official Verification – Calibration – Adjustment - What do the individual terms mean?

#### Official Verification

Official verification includes quality testing and labelling in accordance with official verification regulations, and is therefore a legally regulated area. Among other things, official verification is required for measuring equipment used for pricing (shop scales, petrol pumps) and for medical products such as clinical thermometers. Official verification is carried out by the verification offices and should not be confused with the term calibration.

#### Calibration

Calibration is the determination and documentation of the deviation of the display of a measuring device from the correct value of the measured variable. Calibration according to a standard assumes the traceability of the test standard.

The serial number of the tested device or sensor is mandatory for the documentation. The measurement uncertainty of the test standard and the date of its last check must also be included in the documentation. According to the standard, calibration must be repeated at regular intervals.

**Important: During calibration, only the deviations in the measurement results are recorded exactly. No intervention in the measuring device, e.g. to minimise the deviations, takes place during calibration.**

#### Adjustment

Adjustment is the process by which a measuring device is set or calibrated so that the measurement deviations from the target value are minimised and lie within the device specifications. Adjustment is a process that permanently changes the measuring device.

Adjustment is often very closely related to calibration. The aim of both processes is to recognise and document deviations. If the display of a measuring device is outside the permissible tolerances during calibration, the device can be adjusted until the measured values are within the permissible tolerances.



## Factory calibration at Gann

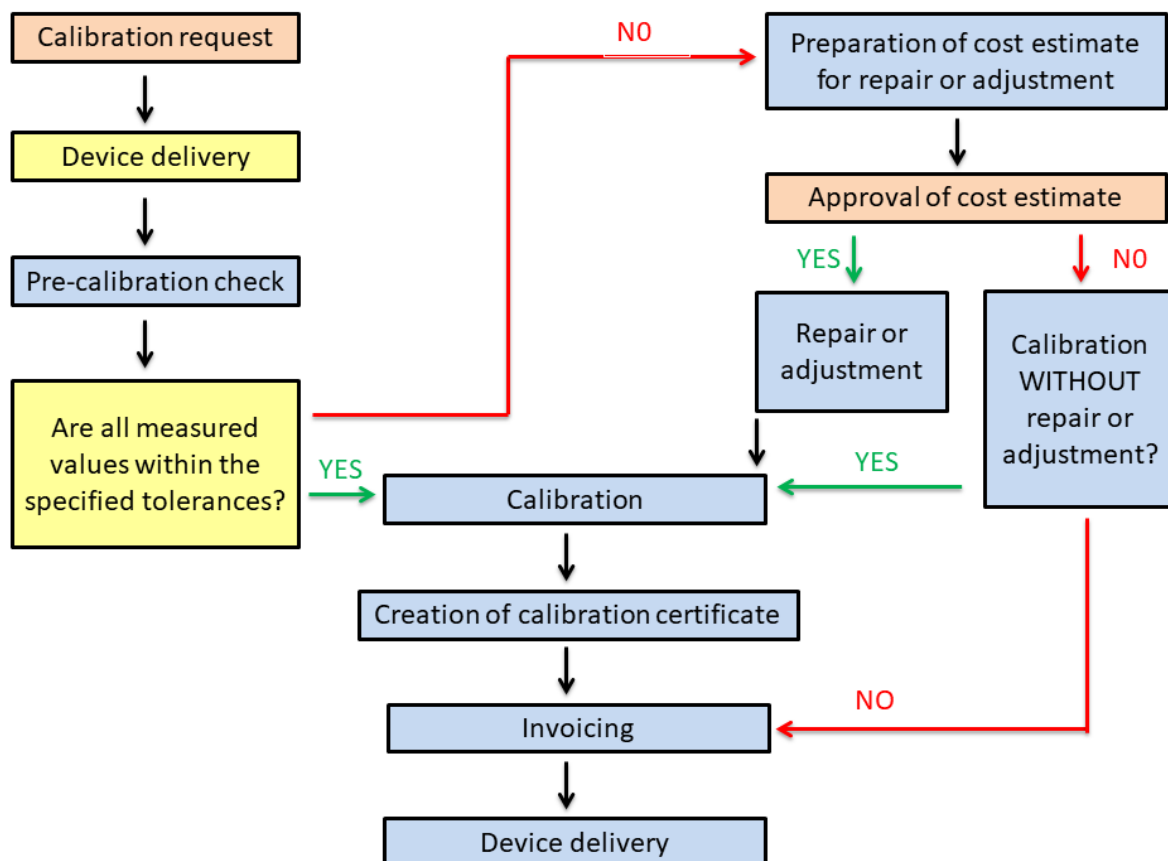
After delivery of your GANN Hydromette, the device is first subjected to a preliminary calibration check.

If there are no abnormalities on your device, it is immediately calibrated at the factory. If all measured values are within the specified tolerances, a factory calibration certificate with precise deviation details will be issued and you will receive your Hydromette back including a factory calibration certificate.

If the measured values are outside the tolerance specifications, you will receive a message and a cost estimate for repair or adjustment. Once the cost estimate has been approved, your device will first be repaired or adjusted and then undergo factory calibration.

If you decide not to approve the cost estimate for a repair or adjustment, you still have the option of a factory calibration including a factory calibration certificate.

If you decide against both a repair or adjustment and a calibration, you will only be charged for the costs of the preliminary calibration check and the cost estimate.



## Wood moisture (resistive)

The factory calibration of GANN Hydromettes® in the area of 'wood moisture' is carried out by comparing the display value for wood moisture (in % by weight) with the corresponding resistive reference point using internal reference devices. The comparative measurement runs through internal processes, which are carried out in accordance with ISO 9001.

The following measurement conditions are adhered to during factory calibration:

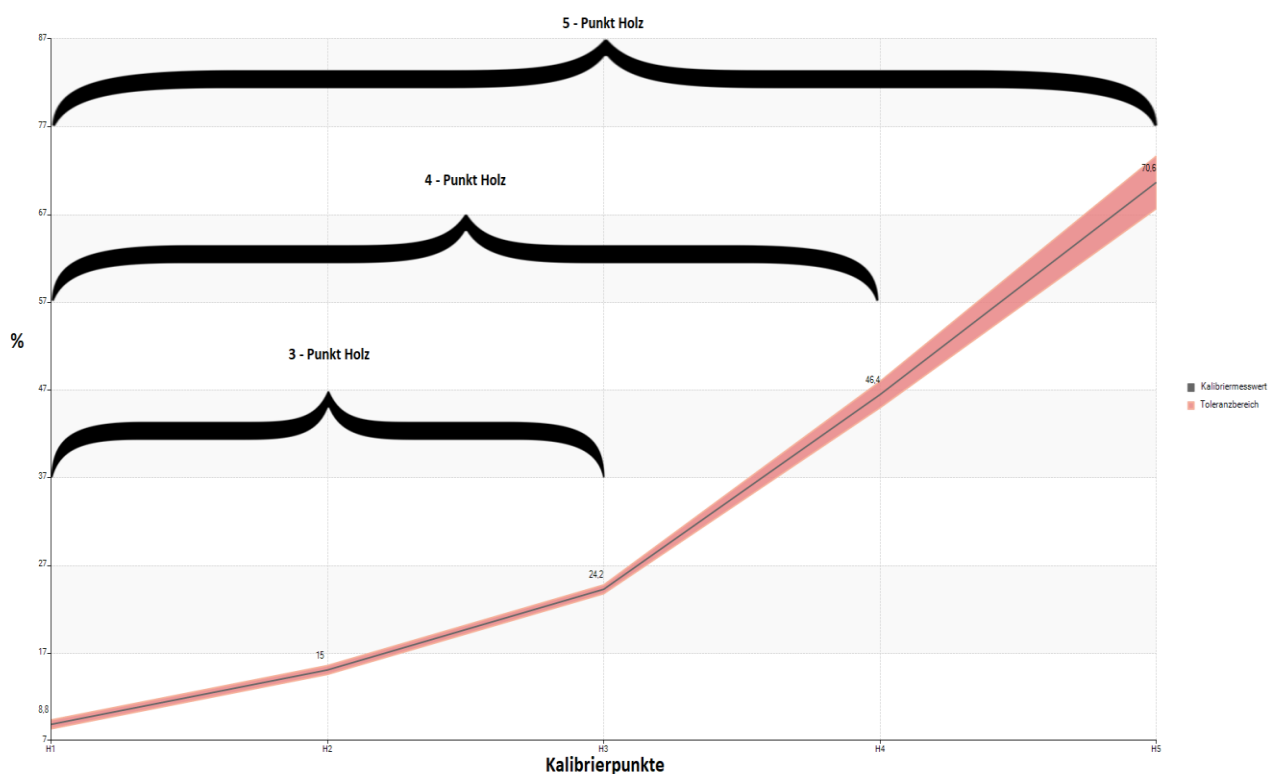
Measuring conditions	
Ambient temperature	20 °C (+/-1°C)
Rel. humidity	30 – 70 % r.H.

The measuring range to be calibrated is between 4 % and 100 % wood moisture.

We offer the following calibration types as standard:

- 3 - point wood moisture (covers the range 8.8 % - 24.2 % wood moisture) - standard measuring range
- 4 - point wood moisture (covers the range 8.8% - 46.4% wood moisture) - extended measuring range
- 5 - point wood moisture (covers the range 8.8% - 70.6% wood moisture) - complete measuring range

### Factory calibration points for wood moisture





## **Building moisture (resistive)**

The factory calibration of GANN Hydromettes® in the area of 'building moisture' is carried out by comparing the display value for building moisture (in digits) with the corresponding resistive reference point using internal reference devices. The comparative measurement runs through internal processes that are carried out in accordance with ISO 9001.

The following measurement conditions are adhered to during factory calibration:

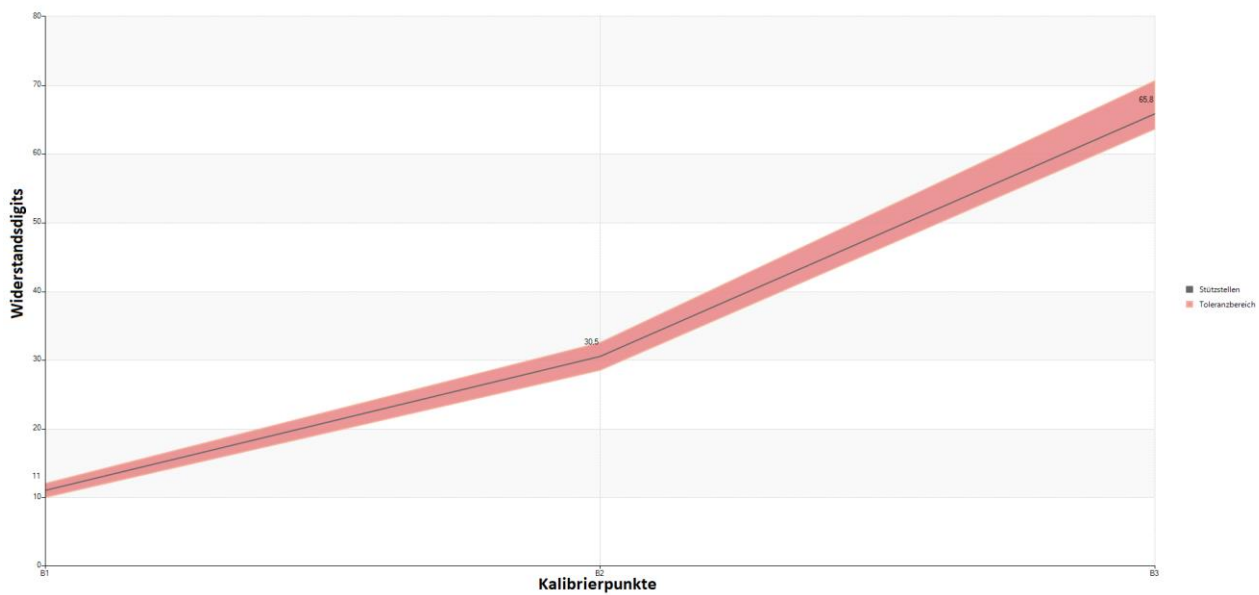
Measuring conditions	
Ambient temperature	20 °C (+-1°C)
Rel. humidity	30 – 70 % r.H.

The measuring range to be calibrated is between 2.3 and 87 resistance digits.

We offer the following calibration types as standard:

- 3 - point building moisture (covers the range 11.0 digits - 67.6 digits) - standard measuring range

### **Factory calibration points Building moisture**



## Calibration tables

### Wood moisture (resistive)

The following table shows which wood moisture calibrations can be carried out with the respective Hydromette:

<b>WOOD Moisture (wood setting 3, 20°C)</b>						
<b>Values: Tolerance:</b>	(8,8%) (+0,5%)	(15,0%) (+0,5%)	(24,2%) (+0,5%)	(46,4%) (+1,5%)	(70,6%) (+3%)	<b>Possible calibrations</b>
<b>H 35</b>	✓	✓	✓	✗	✗	3 points
<b>HT 65</b>	✓	✓	✓	✓	✗	3 points 4 points
<b>HT 85 T</b>	✓	✓	✓	✓	✓	3 points 4 points 5 points
<b>HB 30</b>	✓	✓	✓	✗	✗	3 points
<b>RTU 600</b>	✓	✓	✓	✓	✓	3 points 4 points 5 points
<b>M 2050</b>	✓	✓	✓	✗	✗	3 points
<b>M 4050</b>	✓	✓	✓	✗	✗	3 points
<b>BL H 40</b>	✓	✓	✓	✗	✗	3 points
<b>BL H 41</b>	✓	✓	✓	✗	✗	3 points
<b>BL HT 70</b>	✓	✓	✓	✓	✗	3 points 4 points
<b>BL A plus</b>	✓	✓	✓	✓	✗	3 points 4 points
<b>BL E</b>	✓	✓	✓	✗	✗	3 points
<b>CH 17</b>	✓	✓	✓	✓	✗	3 points 4 points



### **Building moisture (resistive)**

The following table shows which Hydromettes can be calibrated in the building moisture range:

<b>Building moisture (setting B or 0, resistance digits)</b>			
<b>Values: Tolerance:</b>	(11,0 digits) (+1 digits)	(30,5 digits) (+2 digits)	(67,6 digits) (+3 digits)
<b>HT 85 T</b>	✓	✓	✓
<b>HB 30</b>	✓	✓	✓
<b>Uni 2</b>	✓	✓	✓
<b>RTU 600</b>	✓	✓	✓
<b>M 4050</b>	✓	✓	✓
<b>BL E</b>	✓	✓	✓
<b>CH 17</b>	✓	✓	✓

## **Prices**

The prices are based on the maximum measuring range of a GANN Hydromette and on the number of accessories. For this reason, we have already prepared ready-made package prices (other combinations are possible on request, depending on the effort involved).

Standard package	1 Hydromette (except RTU 600 and M 4050); no active electrode; standard measuring range	79.-
Plus package	1 hydromette; 1 active electrode / TF stick, extended measuring range	139.-
Premium package	1 hydromette; 2 active electrodes / TF stick; complete measuring range	199.-
Premium plus package	1 Hydromette; 3 - 5 active electrodes / TF stick; complete measuring range	259.-

All prices in Euro net plus VAT

## About us



We are a family business founded in 1931 and located in the heart of Baden-Württemberg. For more than 70 years, we have been gathering expertise in the field of moisture measurement and making this knowledge available to our customers with various products. The first Hydromette was developed and produced at GANN back in 1948.

We are committed to our company philosophy 'Quality has a name'. That is why we develop and produce our products exclusively in Germany.

Our products include hand-held measuring devices for measuring tasks in the areas of wood moisture, building moisture, air humidity and temperature. Tailored to the needs of our customers, we offer different combinations of these application areas with our devices, from simple quick testers to customised professional solutions and complex all-rounders.



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Verkauf National: TELEFON 071 56-49 07-0 TELEFAX 071 56-49 07-40 E-MAIL: [verkauf@gann.de](mailto:verkauf@gann.de)  
Verkauf International: TELEFON +49-71 56-49 07-0 TELEFAX +49-71 56-49 07-48 E-MAIL: [sales@gann.de](mailto:sales@gann.de)