TEST-THERM Sp. z o.o.

Pomiary wilgotności pelletów

Miernik zawartości wody w pellecie humimeter BP1

Instrukcja obsługi
Wersja 2.0

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2 Measuring procedure

Place the empty provided cup (0.5 litre) on the scale and turn the scale on. It shows 0,0 gram.

Fill up the cup with 280g sample material. (+/- 1,0g), make sure that the measuring chamber is completely empty. It is important that no material is left in the measuring chamber when you turn on the device.

Switch on the humimeter BP1 by pressing the power button (⏻) for 3 sec.

Next step: please do the self calibration. The word “calibrate” will show up on your display. Accept by pressing the ✓ button. Select the calibration curve „**280g wood pellets**“ using the buttons ▲ or ▼.

Fill up the measuring device with the sample pellets. The filling needs to be done slowly and constantly to ensure reproducible results. The display shows the measuring result.

To save the results in the memory menu press the 🖫 (▲button). The memory was successful when the number in front of the symbol 🖫 increased. To reach the memory menu please press (↪) until the 🖫 appears. To name the saved results press the✎ button.

Empty the humimeter and ensure that no pellets rests (e.g. dust, fines) are accumulated in the measuring chamber.

2.1 Measuring range:

If the measure value is blinking, the valid measuring range is exceeded (limits see table). In this case the accuracy will be decreasing.

3 Characteristic curves

Name of characteristic curve	Filling weight	Range limits
280 g wood pellets	280g	3 bis 20%
250 g special pellets 1	250g	3 bis 20%
250 g special pellets 2	250g	3 bis 20%
250 g special pellets 3	250g	3 bis 20%
reference	-------	-------

3.1 Explanation of the characteristic curves:

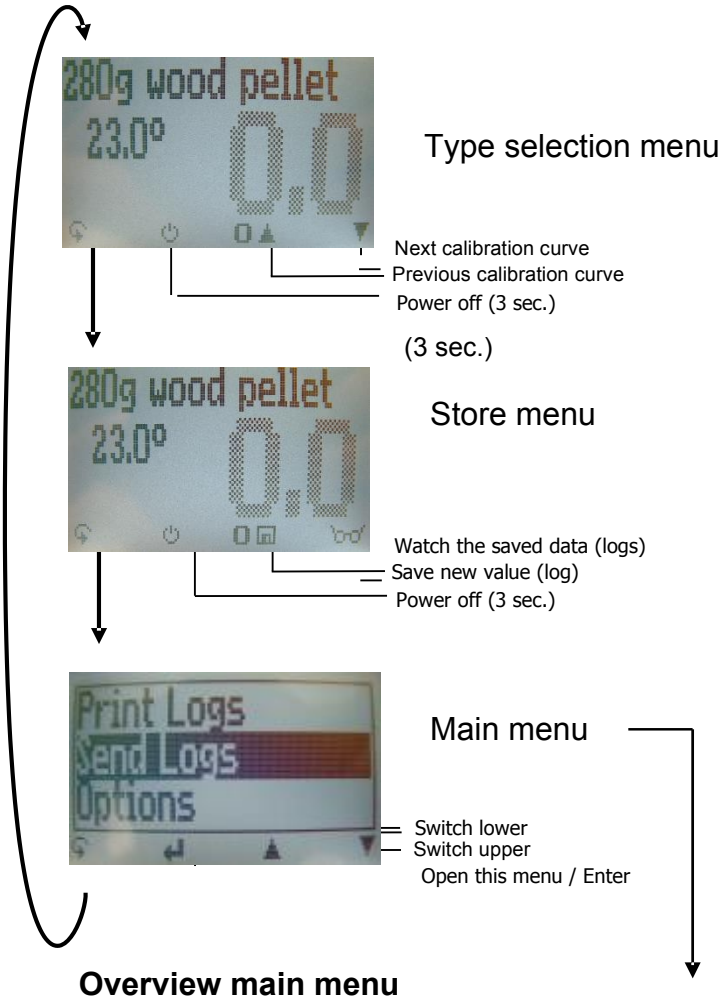
- 280 g wood pellets: To analyze the moisture of Ø6 and Ø8 mm wood pellets with a maximum length of 30mm. According to standard EN 14961

- If you do not want to measure wood pellets (or wood pellets with smaller bulk density), you have to determine the moisture according to EN 14774 once per type and assign these to a type calibration curve (special pellets 1 to 3). Fill up the BP1 and switch through all curves. The characteristic with the smallest deviation is the correct one for this type of pellets! (Filling weight 250 g)
- Reference: is only for testing the humimeter BP1. Do not use this characteristic curve for measuring the moisture.

3.2 List of characteristic curves

Press in the measuring window the ▲ or ▼key for at least 3 seconds and a list with all available types will appear. Select your type by pressing ▲ or ▼ and confirm it with the ↵key. The measurement will continue automatically.

4 Menu level overview



Overview main menu

Edit Logs Manuel Logs Clear Logs *Print Logs* Last Log All Logs Clear Logs *Send Logs* Manual Logs Clear Logs Options Status	*Options* Date / Time Log Time Language Unlock °C / °F o User Level BL On Time Auto Off Time o Online Send o Online Print Password Reset Materialcalib.

Keypad symbols

Measuring window:

↻	Rolling Menu
⏻	Power ON / OFF
▲	Switch upper
▼	Switch lower
💾	Save
H	Hold
	Watch the saved data
	Suppliers data can be added

Menu:

↵	Enter
	Switch upper
▼	Switch lower
	Exit
0..9	Enter numbers
A..Z	Enter letters
>	Next or right
<	Left
✓	Yes
x	No
⇧	Shift
OK	OK

5 Changing Batteries

Your new device is provided with batteries.

Change of batteries: Press with your finger onto the arrow of the battery cap und pull it back. Remove the empty batteries.

Put four new batteries 1,5 Volt AA in the device. Please note the position of the battery poles.

Press down the batteries and close the cap.

6 Determination of the material reference moisture

The principle is a comparison measurement with the dehydration method according to EN 14774. Take the measured sample and weigh it. Dry it in an oven and weigh it again.

$$\%F = \frac{Mn - Mt}{Mn} \times 100$$

M_n: Masse Mass with average moisture content
M_t : Mass of the dried sample
%F: Calculated moisture content

7 Disclaimer of warranty

For incorrect measurements and potentially resulting damages we refuse any liability.

This is a device for quick determination of moisture. The moisture depends on multiple conditions and multiple materials. Therefore we recommend a plausibility check of the measuring results. Each device includes a serial number and the guarantee stamp. If those are broken, no claims for guarantee can be made. In case of a faulty device, please send your device back to Schaller GmbH. Include a short description of the failure. Use a protected package for shipping. (www.humimeter.com)

8 Technical data

Resolution of the display	0,1% moisture content
	0,5°C temperature
Measuring range	3 up to 20 % moisture content
Operation temperature	0°C up to 40°C
Storage temperature	-20°C up to 60°C
Temperature compensation	Automatically
Power supply	4 pcs.1,5 Volt AA Alkaline
	batteries (ca. 1000 measurements)
Automatically turn off	After 6 minutes
Current consumption	55 mA (with light)
Display	128 x 64 matrix display, lighted
Dimensions	260 x 70 x 250 mm
Weight	ca. 1,3 kg (with batteries)
Degree of protection	IP 40
Scope of supply	Plastic case
	Digital scale 1000 g
	Measuring cup 0,5 litre
	4 x 1,5 Volt AA Alkaline batteries

9 Most common reasons for incorrect measurements

Product temperature out of application range: Pellets below 0°C resp. above 40°C (32 to 104 °F) may cause faulty measurements. The storage of cold pellets in a warm storage area usually creates condensed water which may lead to major measuring errors.

- Temperature difference between the humimeter and the pellets: Let your humimeter BP1 adjust to the surrounding temperature of the pellets for approx. half an hour. A very high temperature difference has a negative effect on the stability of the measurement results.

- Wrong characteristic curve: Before you measure your sample, doublecheck the correct selection of the characteristic curve.

- Wrong filling quantity: Fill in exactly 280 gram (± 1,0g) of wood pellets in the measuring chamber.

- Wet or mouldy material leads to wrong values

- Measuring frozen material leads to wrong values

10 Device maintenance instructions

To provide a long life of your device please do not expose it to strong mechanical loads or heat e.g. dropping it or direct sunlight exposure.

Clean your device using a dry cloth. The measuring chamber needs to be cleaned with a dry and soft brush. Any kind of wet cleaning damages the device. The instrument is not rainproof.

Keep it in dry areas.

If the battery symbol appears in the measuring window resp. if a critical charge of battery is shown in the status, the batteries have to be charged immediately. If you do not use your device for a longer period, do also remove the batteries. For eventual resulting damages we cannot provide any warranty.

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CE Konformitätserklärung

Hiermit erklären wir, die Schaller Messtechnik, dass das unten genannte Produkt aufgrund seiner Konzipierung und Bauart in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Anforderungen der EU-Richtlinien entspricht.
Bei einer nicht mit uns abgestimmten Änderung eines Produktes verliert diese Erklärung ihre Gültigkeit.

Produktbezeichnung: humimeter mit den Sensoren RHx, BPx, xLW, Wxx, C30 (LCx)

Die oben genannten Produkte stimmen mit den Vorschriften folgender europäischer Richtlinie überein:

EN 61326+A1+A2+A3: Elektrische Betriebsmittel für Leittechnik und Laboreinsatz – EMV – Anforderungen (April 1997, einschließlich Änderungen A1:1998, A2:2001 und A3:2003)

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