

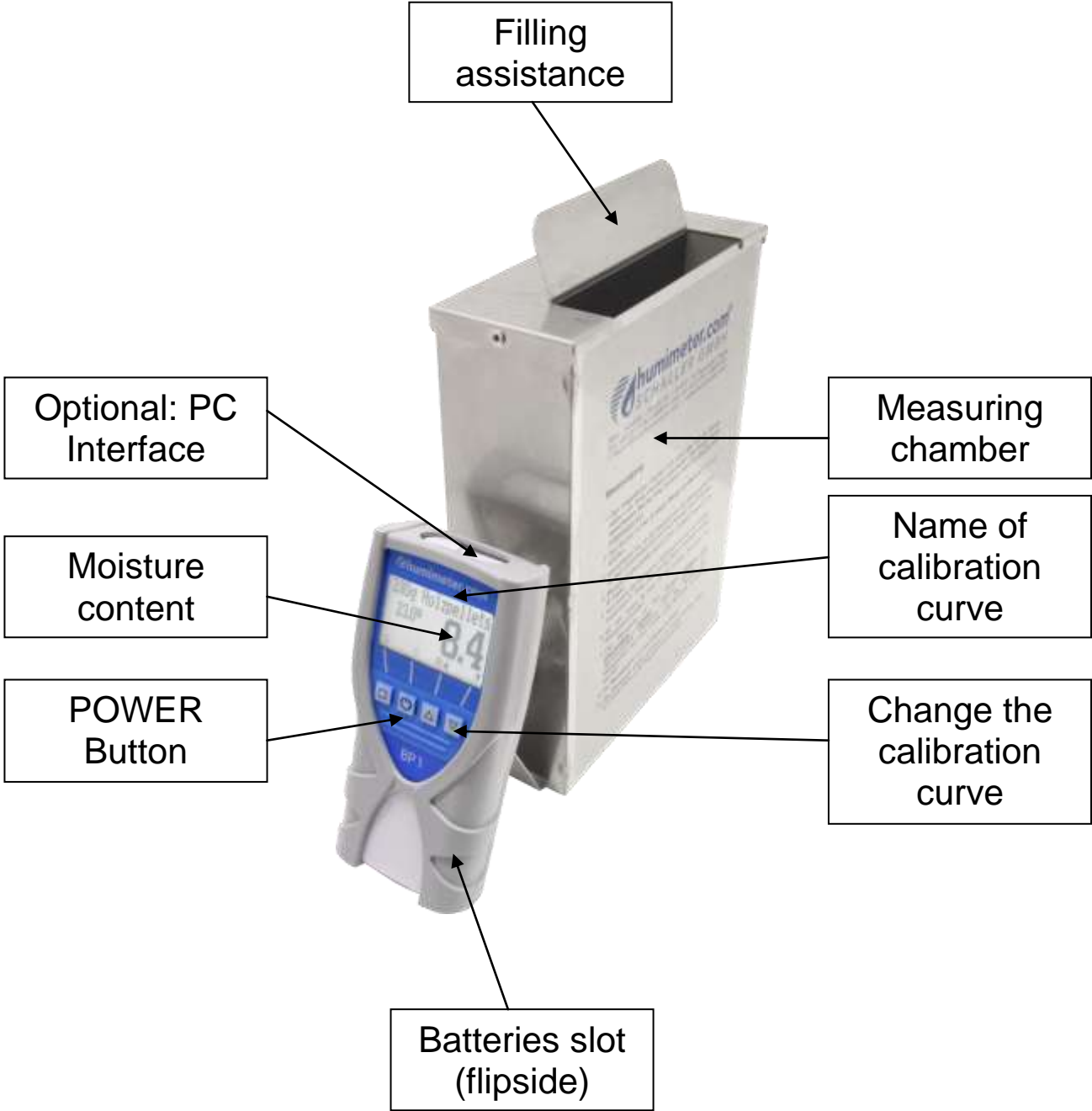
User manual



Pellets moisture meter

Moisture Analyser BP1

Design of the device



Measuring procedure


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




2. Fill up the cup with 280g sample material. (+/- 1,0g)

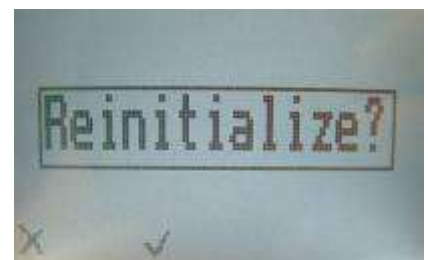




3. Make sure that the measuring chamber is completely empty. It is important that no material is left in the measuring chamber when you turn on the device.

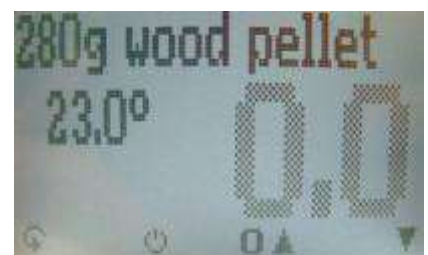
4. Switch on the moisture analyser BP1 by pressing the power button () for 3 sec.



5. As the next step, please do the self calibration. The word “calibrate” will show up on your display. Accept by pressing the  button.



6. Select the calibration curve „**280g wood pellets**“ using the buttons  or .







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




8. The display shows the measuring result.



9. To save the results in the storage menu press the  (▲ button). The storage was successful when the number in front of the symbol  increased. To reach the storage menu please press  until the  appears.



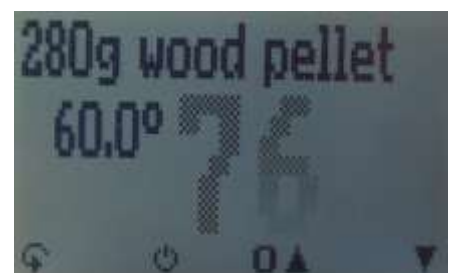
10. To name the saved results press the  button.



11. Empty the moisture analyser and ensure that no pellets rests are accumulated in the measuring chamber.

Measuring range:

If the measure value is blinking, the valid measuring range is exceeded (limits see list on page 5). In this case the accuracy will be decreasing.



Calibration curves

Name of calibration curve	Fill quantity	Measuring range
280g wood pellet	280g	3 up to 20%
250g spec.pell. 1	250g	3 up to 20%
250g spec.pell. 2	250g	3 up to 20%
250g spec.pell. 3	250g	3 up to 20%
reference	-----	-----

Explanation of the curves:

- 280g wood pellet: To analyze the moisture of Ø6 and Ø8 mm **wood pellets** with a **maximum** length of **30mm**.

According to norm CEN/TS 14961

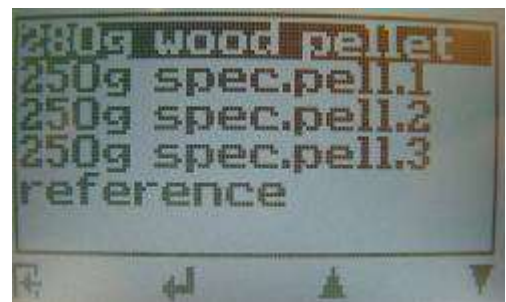
- If you do not want to measure wood pellets (or wood pellets with smaller bulk density), you have to determine the moisture according to CEN/TS 14774 once per sort and assign these to a sort calibration curve (special pellets 1 to 3). Fill up the BP1 and switch through all curves. The characteristic with the smallest deviation is the correct one for this sort of pellets!

Filling quantity 250g

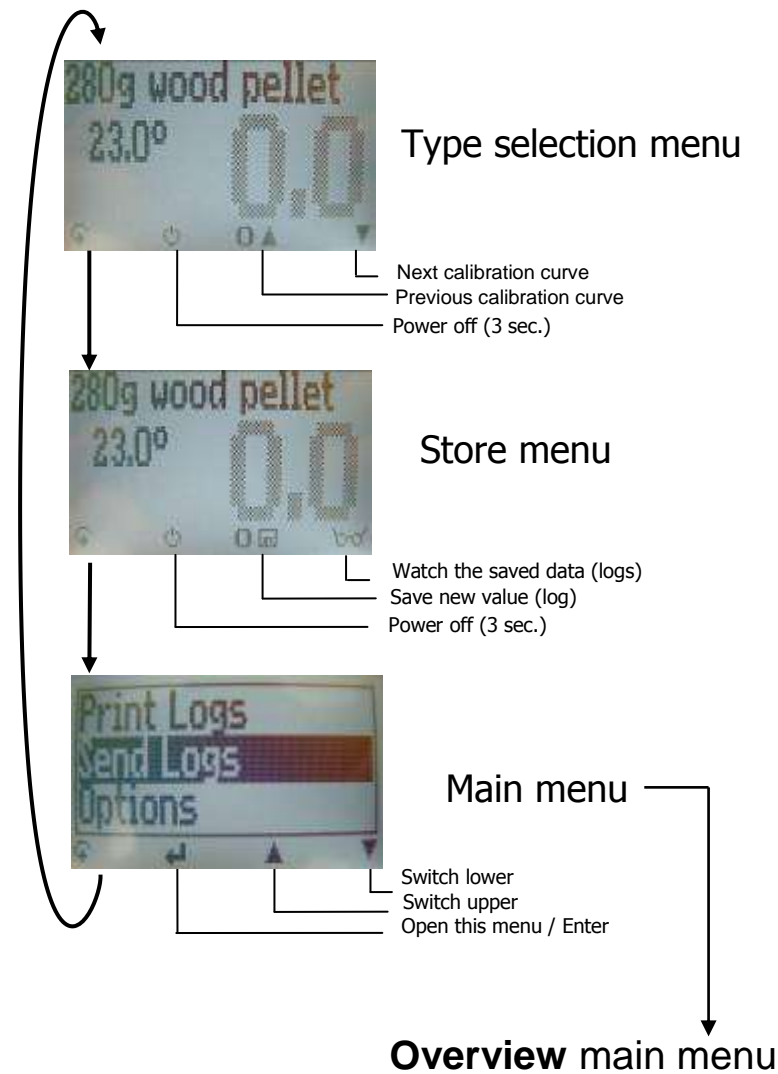
- Reference: To test the humimeter BP1. Do not use for measuring the moisture!

List of calibration curves

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



Menu level overview



<p><i>Edit Logs</i></p> <ul style="list-style-type: none"> Manual Logs Clear Logs <p><i>Print Logs</i></p> <ul style="list-style-type: none"> Last Log All Logs Clear Logs <p><i>Send Logs</i></p> <ul style="list-style-type: none"> Manual Logs Clear Logs <p>Options</p> <p>Status</p>	<p><i>Options</i></p> <ul style="list-style-type: none"> Date / Time Log Time Language Unlock °C / °F o Userlevel BL On Time Auto Off Time o Online Send o Online Print Password Reset
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Keypad symbols

Measuring window:

- Rolling Menu
- Power ON / OFF
- Switch upper
- Switch lower
- Save
- Hold
- Watch the saved data
- Suppliers data can be added

Menu:

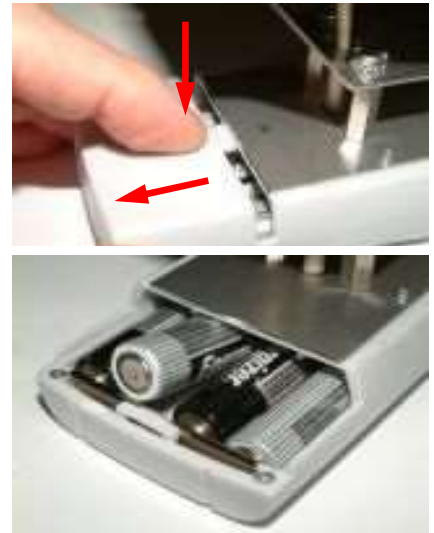
- Enter
- Switch upper
- Switch lower
- Exit
- Enter numbers
- Enter letters
- Next or right
- Left
- Yes
- No
- Shift
- OK

Changing batteries

Your new device is provided with batteries.

Change of batteries:

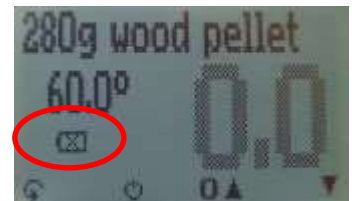
- 1.) Press with your finger onto the arrow of the battery cap und pull it back.
- 2.) Remove the empty batteries
- 3.) Put four new batteries in the device. Make sure the position of the battery poles is correct.
- 4.) Press down the batteries and close the cap.



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 changed IMMEDIATELY.



If you do not use your humimeter device for a longer period, remove the batteries. For eventual resulting damages we cannot provide any warranty.



Determination of the material reference moisture

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

$$\%F = \frac{M_n - M_t}{M_n} \times 100$$

M_n : Mass with average moisture content

M_t : Mass of the dried sample

%F: Calculated moisture content




Transfer saved data to the PC

To send your saved logs to the PC, connect the humimeter device to your PC using the USB cable that was delivered with your device. Carefully loose the protection cap on your humimeter and plug in the USB mini B connector. The bigger connector has to be connected to a USB slot on your PC.

Start the LogMemorizer software on your PC and switch on your humimeter.

The data transfer can be started on your humimeter or on the software.

Starting the data transfer on the humimeter:

Press the  key until you reach the menu (see image on the right). Then choose „Send Logs“ and confirm by pressing the  key. Now choose „Manual Logs“ and confirm with  again. All saved logs will be sent to your PC.

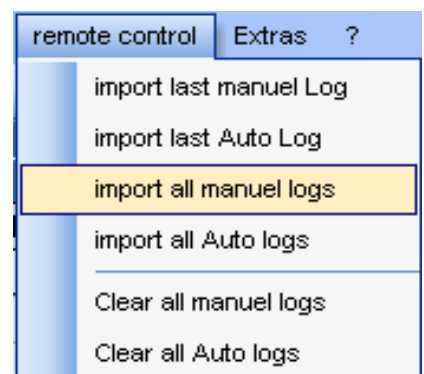
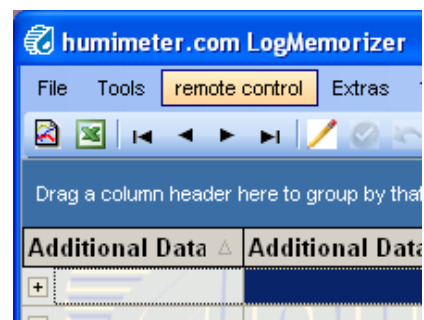
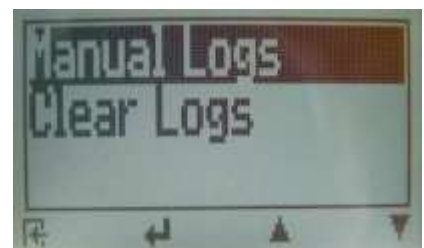
Starting the data transfer on your PC:

Press the button „remote control“ in the LogMemorizer software. A drop-down menu with several options opens (see image below).

For transferring the data you can select „Import last manual log“ (the last saved measuring series is transferred) or „Import all manual logs“ (all saved logs are transferred).


If you click on one of these menu items, the transfer starts immediately.



For the basic adjustments of the software please look through the instructions on the LogMemorizer CD.




Print saved data

To print your saved data, connect the device to the printer using the printer cable that was delivered with your device. Carefully loose the protection cap on the humimeter. At first plug in the side of the connector with the close plastic casing at the humimeter. Then switch on the device.

Not till then the other side of the cable has to be plugged in at the printer. Switch on the printer by pressing . Now the green LED is blinking. If it does not blink, please change the batteries and try again.


Press the  button at your humimeter until you reach the menu (see image on the right). Choose „Print Logs“ and confirm by pressing .

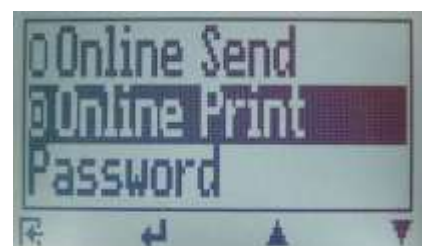
Now you can select if you want to print the last saved measuring series or all saved measuring series (logs).

Confirm by pressing  again. The selected logs are printed out now.

To save paper, please think of clearing the data storage regularly.

Online Print and Online Send

Your device supports the function “Online Print” and “Online Send”, this can be activated in the menu „Options“. If an option is active, every newly recorded log will immediately be printed or transferred to the PC after pressing  key.





Exemption from liability

For miss-readings and wrong measurements and of this 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 PCE or your dealer. Include a short description of the failure. Use a protected package for shipping.

Activation of the “super user” function

2 times  - *Options* – Unlock


Enter the 4-digit password by using the  button (standard is the 4-digit serial number) and confirm by pressing the  button.

Changing the Userlevel



Changing from advanced user to single user:


Make sure that you have activated the “super user” functions according to the instructions above. Afterwards change to the menu and choose „Options“.

In the submenu please select „o Userlevel“ (2 times  - *Options* – o *Userlevel*)

Confirm by pressing the  button. Now the single user is activated.

Changing from single user to advanced user:

Keep both the buttons  and  pressed directly after switching on the device. Your humimeter automatically starts the main menu. Activate the the “super user” functions according to the instructions above.

Navigate to “*Options* – o *Userlevel*” and confirm by pressing the  button.

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. 1,5Volt AA <u>Alkaline</u> batteries (900 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	app. 1,3 kg (with batteries)
Degree of protection	IP 40
Scope of supply	BP1 incl. plastic case digital scale (max.500g, 0,1g) measuring cup 0,5 liter 4 x 1,5Volt AA Alkaline batteries
Optionally accessories	USB interface for PC transfer USB cable Software LogMemorizer portable thermo printer

! IMPORTANT ! please read

Most common reasons for miss readings

- ***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.

- ***Not adjusted pellets***

Let your moisture analyser 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 calibration curve***

Before you measure your sample, doublecheck the correct selection of the calibration curve.

- ***Wrong filling quantity***

Fill in exactly 280 gram ($\pm 1,0g$) of wood pellets in the measuring chamber.

- ***Wet or mouldy material leads to wrong values!!***

- ***Measuring frozen material leads to wrong values!!***

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.

We recommend an interval ISO-conforming device check with the drying method.

PCE Instruments also provides a test with a calibration certificate for a fee.