PCE-DLT 10 Temperature Test Stand User Manual

Contents

PCE Instruments

PCE-DLT 10 Temperature Test Stand

Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. Damage or injuries caused by non-observance of the manual are excluded from our liability and not covered by our warranty.

- The device must only be used as described in this instruction manual. If used otherwise, this can cause dangerous situations for the user and damage to the meter.
- The instrument may only be used if the environmental conditions (temperature, relative humidity, …) are within the ranges stated in the technical specifications. Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not expose the device to shocks or strong vibrations.
- The case should only be opened by qualified PCE Instruments personnel.
- Never use the instrument when your hands are wet.
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth. Use only pH-neutral cleaner, no abrasives or solvents.
- The device must only be used with accessories from PCE Instruments or equivalent.
- Before each use, inspect the case for visible damage. If any damage is visible, do not use the device.
- Do not use the instrument in explosive atmospheres.
- The measurement range as stated in the specifications must not be exceeded under any circumstances.
- Do not touch the heating element or put your hand into the water when the heating element is turned on. During operation, do not touch the tank. This can cause burns.
- When opening the door, hot and humid air leaks from the device.

- Do not place any electrical equipment in or on top of the cabinet.
- Make sure that the power plug is disconnected before cleaning the water tank or changing the water.
- Wait for the water to cool down before changing it.
- Mind possible consequences of the leaking water vapour. Condensed water might affect the safety or the functionality of other devices. It might also cause damage to walls, ceilings or floors over time. Wet floors also become slippery.
- Wear proper safety equipment when using the device, especially gloves.
- Make sure that the samples are fastened properly.
- Only open and close the door by using the handle.
- Place the cabinet on an even surface. Use the adjustable feet and a water level to level it properly.
- Place the cabinet in an area with as little draft as possible. Do not place it in high-traffic areas in order to minimize draft.
- Non-observance of the safety notes can cause damage to the device and injuries to the user.
- We do not assume liability for printing errors or any other mistakes in this manual.
- We expressly point to our general guarantee terms which can be found in our general terms of business.
- If you have any questions please contact PCE Instruments. The contact details can be found at the end of this manual.

Safety symbols

Safety-related instructions the non-observance of which can cause damage to the device or personal injury carry a safety symbol.

Warning: hot surface
Non-observance can cause burns.

Specifications

Technical specifications

Standard	Based on AMK.MB-005 standard (04/2015)
Temperature control	50 … 55 °C (automatic)
Heating power	3000 W
Temperature probe	PT 100 class A 4
Display	3.5“ TFT touch screen colour display (16 bit) 320 x 240 pixels
Memory	1.5 GB (>1 M Readings)
Sampling rate	Max. 10 Hz (adjustable)
Interfaces	USB (for USB sticks) Ethernet (optional)
Environmental conditions	0 … +60 °C
Power supply	230 V AC / 50 Hz
Dimensions	1130 x 720 x 690 mm
Weight	Approx. 36 kg

Delivery contents

- 1 x vapour resistance test chamber PCE-DLT 10 incl. display unit, heating element and temperature probe
- 4 x fastening rails
- 4 x holding clips
- 1 x water tank
- 1 x instruction manual

Optional accessories
cooling frame

System description

Device

1. Door
2. Display unit
3. Sample holding device
4. Temperature probe
5. Heating element
6. Water tank

Display

1. Temperature display
2. Timer display
3. Stop timer
4. Start timer
5. Reset timer
6. eating element key switch
7. Main switch

Getting started

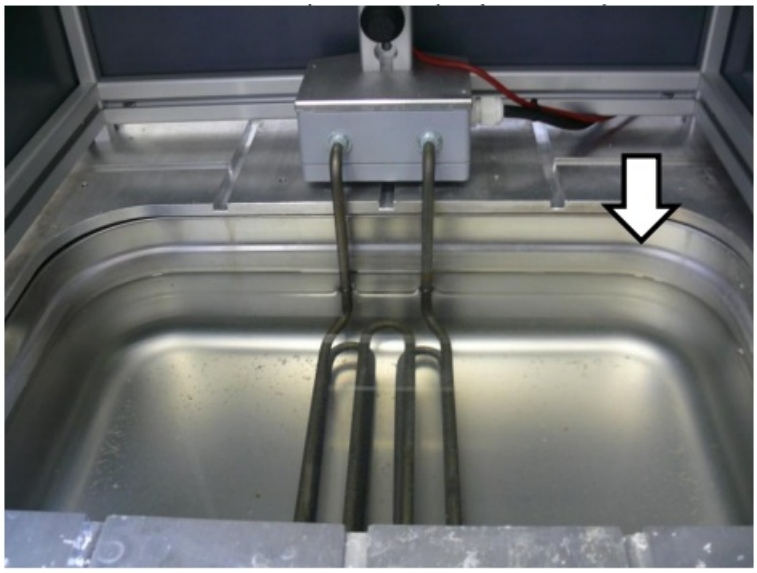
Levelling the device
Place the cabinet on an even surface and use the adjustable feet and a water level to level it properly.

ATTENTION: Make sure to place the cabinet in an area with as little draft as possible. Do not place it in high-traffic areas.

Preparation of the sample
Samples should have dimensions of 200 x 100 mm. Further information and requirements can be found in the relevant standards (such as AMK-MB-005 or DIN 68930).

Test preparation

1. Fill the water tank with water up to the mark (see picture below).



2. Close the door, plug in the power plug an turn on the device by using the main switch.
   Turn on the heating element by using the key switch below the display. Put the cover on the water tank to speed up the heating process.

   ATTENTION: Do not touch the heating element or put your hand into the water when the heating element is turned on. During operation, do not touch the tank. This can cause burns.

3. Use a fastening rail and two holding clips to fasten the sample. Use the screws on the gripping jaws to fasten the sample properly and to prevent it from getting out of place.
4. Wait for the temperature display to reach the test temperature (50 … 55 °C). The temperature display now turns green.
5. Take off the cover of the water tank. Use gloves due to the high temperatures. Attach the fastening rail to the holding device (see picture below).

ATTENTION: The distance between the bottom edge of the sample and the water surface should be approx. 500 mm. Use the yellow vertical adjustment screw to adjust the distance.

ATTENTION: Hot vapour leaks when opening the door.

ATTENTION: The cover of the water tank might get very hot. Wear gloves when removing it.

6. Adjust the position of the temperature probe so that its tip is approx. at the same height as the bottom edge of the sample.

Operation

Measurement
By using the vapour resistance test chamber, you can test the vapour resistance of samples based on the AMK-MB-005 standard.
To do so, you have to perform three 30-minute tests for each probe and let it rest for 30 minutes between the individual tests.

To perform a test, follow these steps

1. Wait for the temperature display to reach the test temperature (50 … 55 °C). The temperature display now turns green.
2. Press the “Start” button. The 30-minute timer starts and can be seen in the timer display. Press the “Stop” button to stop the timer. Press the “Reset” button to cancel it.
3. Wait for the timer to run out. Once the timer hits “0”, the device emits an audible signal and the timer display starts to flash.

Open the door and take out the fastening rail with the sample. Let it rest for 30 minutes. When performing a test, mind the following notes:

ATTENTION

- Do not touch the heating element or put your hand into the water when the heating element is turned on. During operation, do not touch the tank. This can cause burns.
- Hot vapour leaks when opening the door.
- Do not open the door during the test (e. g. to look inside) if the glass is fogged up. This causes a drastic drop in temperature. Wait for the timer to run out before opening the door.

After the measurement
When you have finished all tests, turn off the heating element by using the key switch. After that, turn off the device with the main switch and disconnect the power plug. Open the door to speed up the vapour release.
Once the heating element and the water have cooled down, you can remove the water tank and empty it. To do so, loosen the black vertical adjustment screw of the heating element and move the heating element upwards until it is outside the tank. Now you can pull out the water tank to the right side of the vapour resistance test chamber.

Data transfer
The display unit stores the temperature and the timer count on a regular basis. The data can be transferred via the USB interface.
To do so, use a USB pen drive with the following properties:

- The power consumption of the USB pen drive should not be higher than 100 mA. Pen drives with a high memory capacity might not be supported. If this is the case, you can use an USB hub with external power supply. However, we recommend using USB pen drives with a memory capacity of 2 GB.
- The USB pen drive must be formatted in FAT file system (not FAT32!!).

To transfer the data to the USB pen drive, follow these steps

1. Connect the USB pen drive to the USB interface of the display unit.
2. Touch the display and select “Menu”.
3. Select “File management”.
4. Select “Logging files”.
5. Below “File selection”, you can see the different measuring groups. If there are any readings stored in the measuring group, a “click to select” button is shown right next to it. Press the button to select the measuring group you wish to transfer.
6. A new screen appears where you can see all readings which are stored in the selected measuring group. You can select the readings you want to be transferred by selecting them manually or by using the buttons on the bottom left side which select or de-select all readings of the group. If a reading is selected, its checkbox is activated. To confirm the selection, press the check mark button on the bottom right.
7. Now you are back in the “Logging files” screen. Once you have selected the desired measuring groups and readings, press the “Export selected files” button to transfer the data to the USB stick.
8. If you want to delete the selected files, press the “Delete selected files” button.

Warranty

You can read our warranty terms in our General Business Terms which you can find here: **https://www.pce-instruments.com/english/terms**.

Disposal

- For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.
- In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.
- For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.
- If you have any questions, please contact PCE Instruments.

PCE Instruments contact information

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www.pce-instruments.com/english

User manuals in various languages
can be downloaded here: www.pce-instruments.com

Documents / Resources

	PCE PCE-DLT 10 Temperature Test Stand [pdf] User Manual PCE-DLT 10 Temperature Test Stand, PCE-DLT 10, Temperature Test Stand, Temperature Test , Test Stand

References

- France.fr : Actualités, destinations et infos du tourisme en France
- iberica.es
- instruments.cn
- Computer Instruments | Home
- Discover Italy: Official Tourism Website - Italia.it
- N.E.E.D.S., (Nutritional Ecological Environmental Delivery System) specializes in providing products, information, and education
- PCEï¼ˆåŒ—äº¬ï¼‰ç§‘æŠ€æœ‰é™å…¬å¸
- Industrial Measurement Products and Solutions | PCE Instruments
- Improtek LTDA Distribuidor oficial de PCE Instruments | PCE Instruments
- PCE Deutschland GmbH Prüfgeräte vom Hersteller | PCE Instruments
- PCE Brookhuis B.V. | PCE Instruments
- PCE Americas Inc. : Test Instruments | PCE Instruments
- PCE Iberica S.L. Instrumentación | PCE Instruments
- PCE Instruments France | PCE Instruments
- PCE Italia s.r.l. / Strumenti di Misura | PCE Instruments
- PCE Teknik Cihazlar Paz. Tic. Ltd.Şti. | PCE Instruments
- PCE Americas Inc. : Test Instruments | PCE Instruments
- PCE Deutschland GmbH Prüfgeräte vom Hersteller | PCE Instruments
- PCE Americas Inc. : Test Instruments | PCE Instruments