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OPERATING INSTRUCTIONS

TENSIOMETER TYPE TESTON
ZMK 2000N

Please read the operating instructions carefully before use and keep for further reference!

Technical Data

Dimensions of the case (lxwxh):	660x435x170mm
Material:	aluminum
Weight:	20kg
Grip:	clamp distance 30mm

The mechanism can be extracted from the clamp and all parts can be replaced when waste of the parts

Mains connection:	100VAC – 240VAC, 50 – 60 Hz
Mains fuse:	2.5A microfuse 5 x 20mm in the connecting plug with 1 pc. replacement fuse
Driving power:	2000N electronically limited
Tensionway:	280mm between the grips
Test speed:	from 10mm/min. – 80mm/min. freely selectable, fast speed 150mm/min.
Memory card:	2 GB CompactFlash cards in FAT Format, one tension test needs approx. 1KB memory capacity. Please only use branded cards (e. g. SanDisk, Transcend etc.) Cheap cards increase risk of data loss.
Printer:	ink ribbon Epson HX20, standard paper, Ø 50mm, width 58mm, 12mm Ø shaft

Operation

Place the tensiometer on an even surface and open the cover of the box.

Protect the tool from damp and wet.

Connect to the electric power supply with the provided mains cord.

It is permitted to connect the tool to mains voltage from 100V to 240VAC/50 – 60 Hz with no further arrangements.

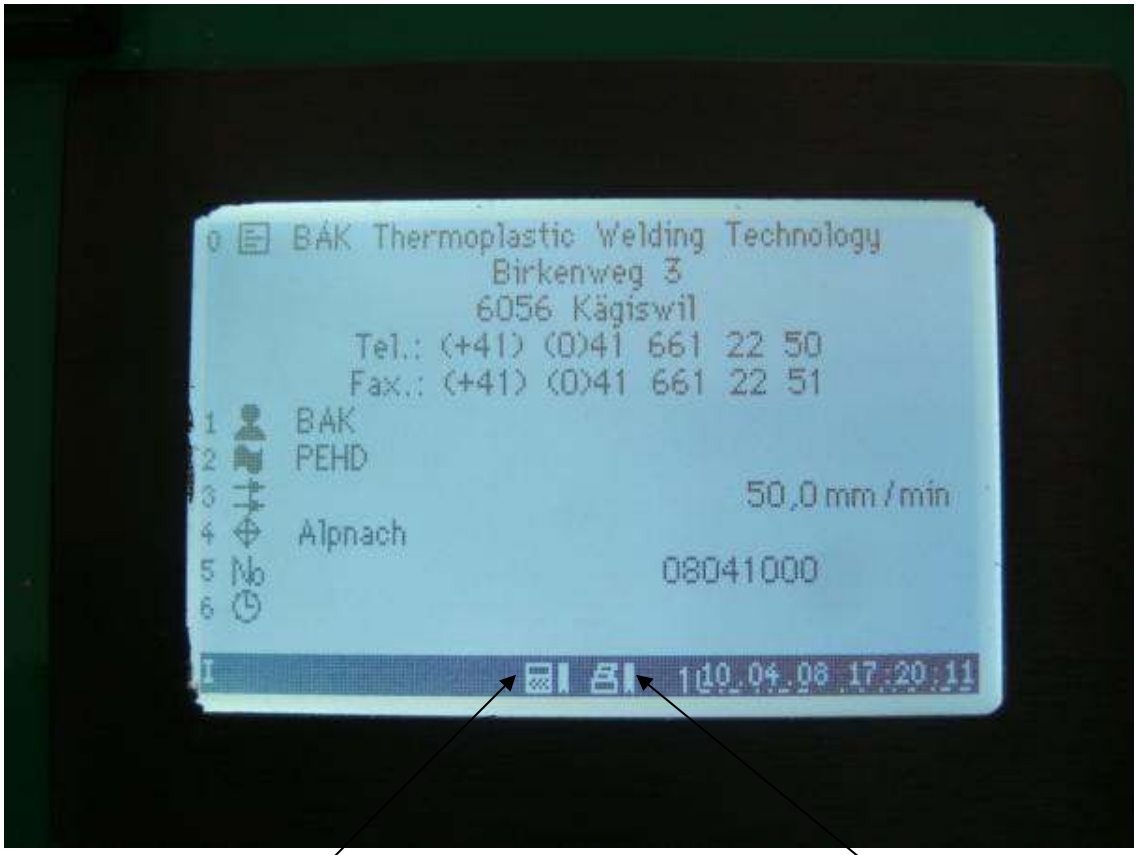
Push the red switch to activate the control.

The LCD-Display will initialize itself and the control conducts a self-test. (The printer switches on for a short time)

As soon as the serial number e.g. ZMK080310 appears at the bottom of the LCD-Display the test has finished.

Press Esc or Ent. The main menu appears with:

„0"	name of company
„1"	name of user
„2"	declaration of material
„3"	test speed
„4"	installation side
„5"	seam number
„6"	date and time



memory card ready for use

printer ready for use

In the lower part is a status bar with the details: memory card and printer available, date and time.

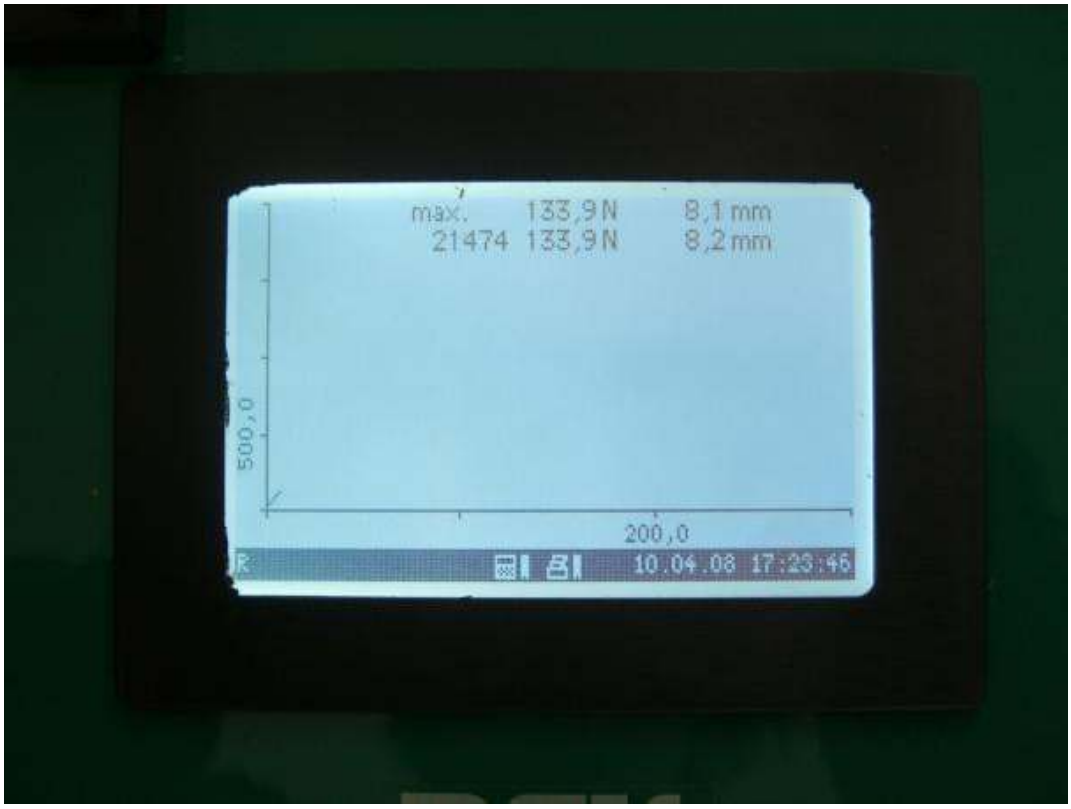
Clamp the probe into the device.

Fix the device in the tensiometer.

Bring the clamps into the right position.

With the arrow buttons the moving clamp with maximal speed will be brought into position. After placing the probe in the clamps, start with the tension test.

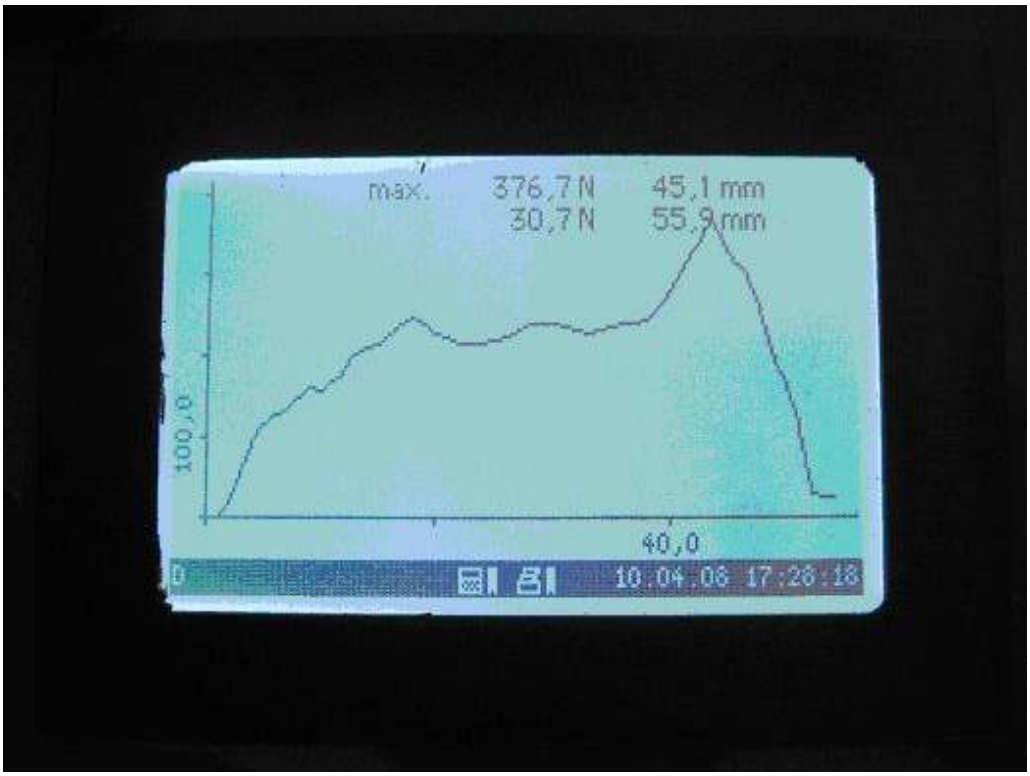
Push „S" to start.



On the LCD-Display the following dates are shown:

1. Row	Max. force	0000N	test way mm
2. Row	Force actual value	0000N	test way mm

At the end of the tension test, stop the motor by pushing „S" again.
On the display the scaled force – test way diagram will be shown.



CAUTION!!!

With pushing the Esc button it goes to the next tension test with no prints or recording of the measured dates.

The dates are deleted!!!

With pushing „P" the dates will be printed. Pushing „P" again the dates will be printed again.

With pushing „Ent" the dates will be saved onto the memory card and the tool changes to the start screen, printing is not possible any more.

Bring the moving clamp back into the start position.

To do this, press the arrow buttons.

Caution!!! Do not let the tensioning clamps together.

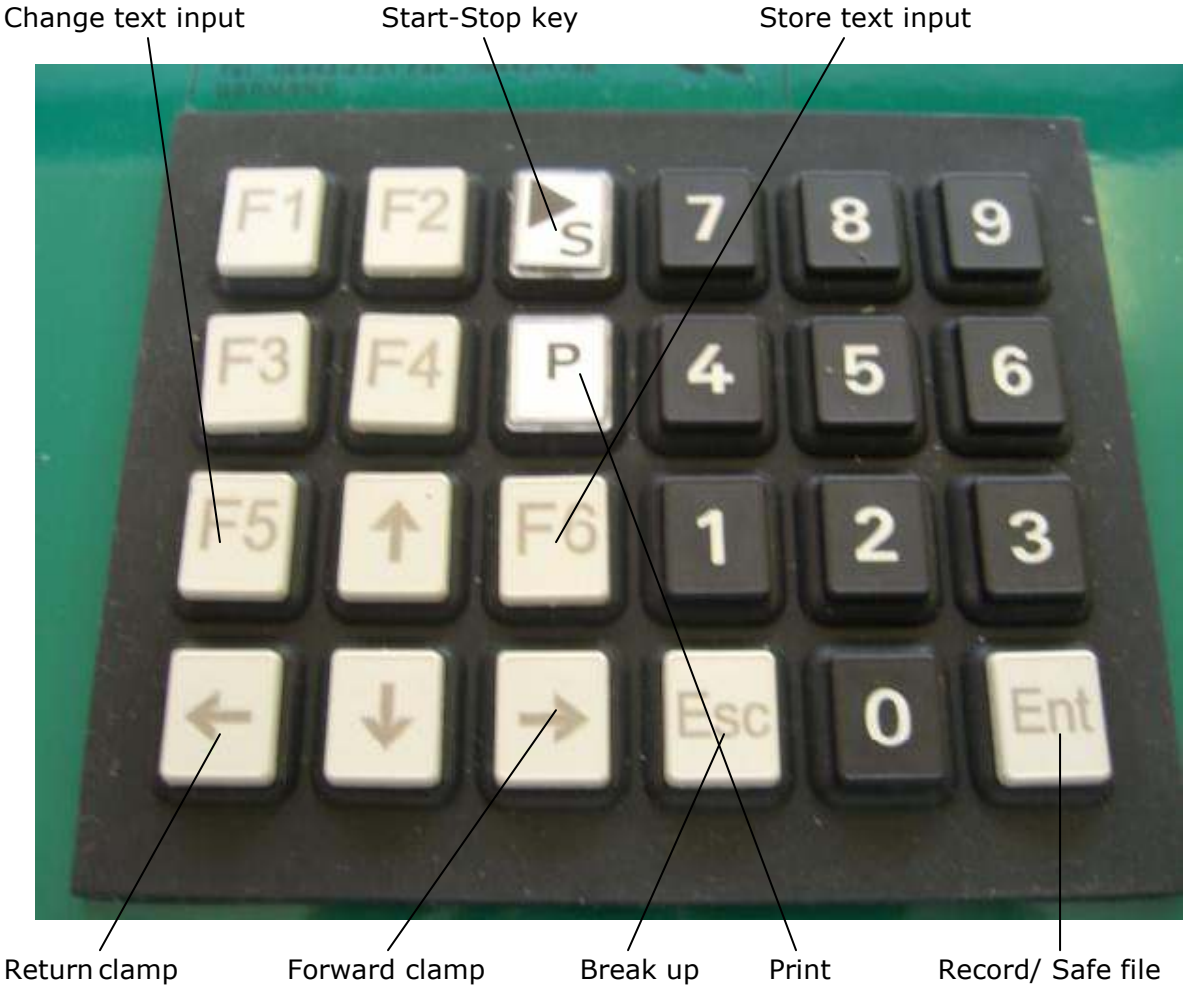
The return motion will stop by achieving -10N.

Remove the test sample from the clamps.

The tool is ready for a new measuring.

Switch off the tensiometer after use by pushing the red switch.

Used keys



Memory card

It is possible to use a memory card of the Compact Flash Series from 512 MB to 4GB.

Formatting in FAT Format.

Other formats cannot be read or written on.

Place the card carefully into the reader and writing implement as shown in the picture above. Import the card into the guiding ridge with light pressure. On the status bar the card will be shown.

On the memory card is a computer program (Tearlt.exe) for displaying the measure dates. Copy the dates from the memory card in a register on your computer.

When the dates have been saved onto the computer, the card can be formatted new (FAT Format) to get the disk space free.

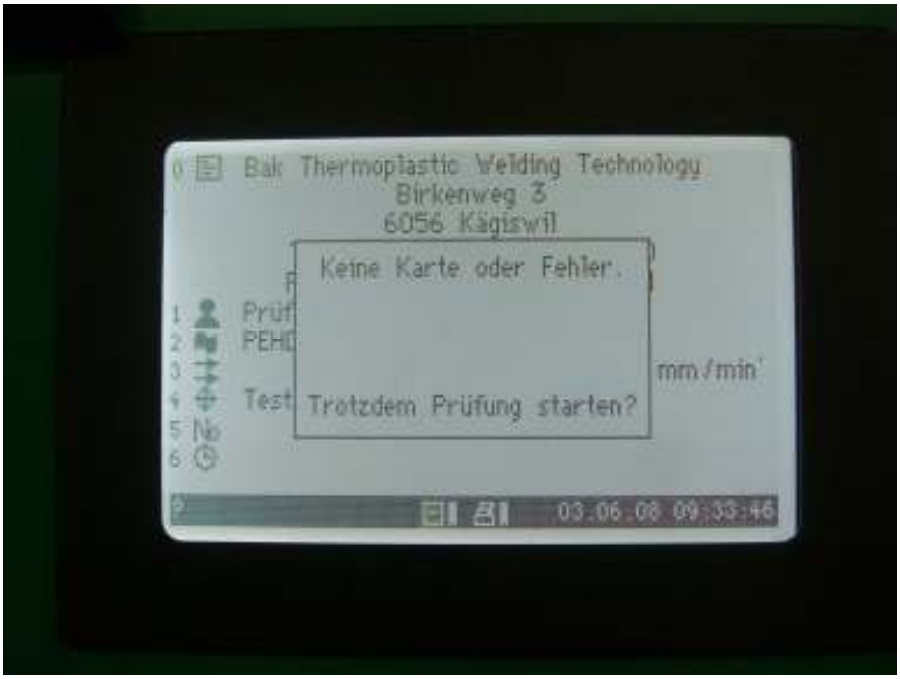
The card can be put into or out of the tool as long as no data handling is conducting.

After the tension test press Ent.

To make sure, that all the measured data are saved on the memory card, wait for 30 seconds before removing the card after pressing Ent.

Warning

In the status bar the memory card and the printer are shown. When the memory card is not in the implement the memory card symbol in the status bar is blinking. If you start a tension test now, the following warning is shown:



To abandon the tension test press Esc, to start the tension test press Ent. There is no possibility to save the data!!!

Adjustments with the keyboard

The tensiometer is switched off.
Press Ent and switch on the mains switch.
On the display the menu with the different languages is shown.

Use the arrow buttons to take a decision and confirm with Ent.
Press Esc to abandon the menu without making changes.

The control works after abandoning the menu like after a normal switch-on-process. The initialization occurs, it closes with the notification of the device number.

Change of company name by keyboard

To change the company name you find point „0” in the main menu.
Press F5 to change in the menu from the upper selection menu to the lower input area and back.
Choose the position or letter with the arrow keys to change them. Press F6 to conduct the changing.
Press Esc to abandon the operation without incurring the changes. Press Ent to incure the changes and to save the data.

Technical data are subject to change without prior notice.

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