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## ***EASY-CHECK FE***

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## INTRODUCTION

Congratulation ! You really made a good choice to decide for

### **EASY-CHECK FE,**

because this device is not only designed and manufactured according to the latest level of technology, but also is extremely comfortable and easy to operate.

EASY-CHECK FE is especially designed for those users who need to measure only on ferromagnetic iron and steel and wish to do this job as simple as possible. Therefore we knowingly did not include a data memory .

We tried our best to write this manual as clear and short as possible. For any further information you may need, please contact our Service Department. Our technicians are always ready to help you.

### **What can you measure with the EASY-CHECK FE ?**

**All non-magnetic coatings, such as varnish, paint, plastics, enamel, rubber, ceramics and galvanization (except niquel) up to 5mm on iron and steel.**

EASY-CHECK FE is equipped with a new swinging measuring probe allowing to measure inside pipes and in other inaccessible places.

EASY-CHECK FE is provided with a serial interface making it possible to measure *online* for further data evaluation. You just need the Statistics Software STAT-6 and an interface cable.

**And this is really unique:**

- **EASY-CHECK FE can measure up to 80 hours with only one 1.5V Mignon battery.**
- **Worldwide the only device with a swinging measuring probe allowing to measure inside pipes and in other inaccessible places.**

**SHORT INSTRUCTIONS**

**To make it as easy as possible for you and to be able to start taking measurements immediately, we have already calibrated the device.**

**You receive the instrument ready for operation and do not need to perform any adjustments.**

**You just switch on the device with the red key. In the display appears <on>.**

**That's all and now you can start taking measurements.**

## FUNCTION MODES

Switch on the instrument until *<on>* is displayed. Now release the key !

While switching on and pressing the key for a longer time the software version and the status of the Lock Function for calibration (from software 13.1) are displayed.

Now press the key again for a longer time and the following functions will be displayed :

**un** = Change the unit of measurement ( $\mu\text{m}$  / mils )



**rES** = Switch over the resolution from 1.0  $\mu\text{m}$  to 0.1  $\mu\text{m}$

By pressing the key the mode selected is confirmed.

## OPERATION OF THE FUNCTION MODES

### **<Un> Switch over the unit of measurement ( $\mu\text{m}$ / mils)**

In its basic setting the instrument measures in  $\mu\text{m}$ .

To measure in “mils” (American unit of measurement) press the key until the symbol **<un>** is displayed. Release the key and wait until **<on  $\mu\text{m} is flashing. Press the key again to switch over to **<on mils>**.$**

When you switch on again the device it measures in “mils”.

To change over to “ $\mu\text{m}$ ” proceed in the same way.

### **<rES> Resolution**

From factory the device is adjusted to the resolution 1.0  $\mu\text{m}$ .

To switch over to the resolution 0.1  $\mu\text{m}$  press the key until **<rES>** is displayed. Release the key and wait until **<r 1 $\mu\text{m} is flashing. Press the key again to switch over to 0.1  $\mu\text{m}$ .$**

## CALIBRATION

You receive the device already calibrated. Nevertheless from time to time it is necessary to check or correct the calibration. This is especially recommended when you measure on small or curved objects or when the surface of the test object is rough.

**To calibrate the device you should always use the shim with the higher value (approx. 300  $\mu\text{m}$ ). The shim with the lower value (approx. 100  $\mu\text{m}$ ) is only supplied to verify the accuracy after calibration.**

**With the new software V.22 it is possible to calibrate the device at 1 mm to get even more precise readings in the upper range.**

- Switch on the device (**<on>**)
- Set the device with the probe on the base plate FE (blue) and press the key for about 2 sec until **<0.0>** is displayed stable. Then release the key and zero setting is performed and confirmed by a beep signal
- Take off the device, the foil value entered previously is flashing.
- To enter the value of the shim press the key as long as the value scrolls up. Pressing the key shortly the value goes down by 1, pressing it continuously the value scrolls up.

From > 320  $\mu\text{m}$  on the value jumps up to 950  $\mu\text{m}$  and increases by 10  $\mu\text{m}$  steps. This makes it possible to calibrate the device in the upper range with even more accuracy than the tolerance fixed. From > 1050  $\mu\text{m}$  on the value jumps down again to 280  $\mu\text{m}$ .

When measuring below 1000  $\mu\text{m}$  do not calibrate the device at 1000  $\mu\text{m}$  !!!

- Once the correct calibration value is set, place the shim on the base plate FE (blue) and set the device on the shim and wait until the beep sounds.

The device is calibrated.

To perform just a zero point adjustment (one-point calibration) wait until **<on>** appears while the calibration value is indicated.

## **GENERAL REMARKS**

- The probe should *not be drawn across the testing surface* but reset at different spots, i.e. *after each measurement hold the instrument in the air for about 1 sec*. In doing so the stored calibration is automatically checked and corrected if necessary.
- Make sure that the probe surface and the base plate are kept clean and polished at all times.
- When measuring on small or curved objects it is advisable to perform calibration on a bare test object with the same geometry of the object to be measured and not on the base plate supplied with the device.
- The device switches off automatically one minute after the last measurement. The instrument can also be switched off with the red key.
- Thickness of the base material: at least 300  $\mu\text{m}$

## EXCHANGE OF THE BATTERY

As soon as the symbol <BAT> is flashing the battery must be exchanged by a new one.

When the voltage of the battery is less than 0.8 V the device switches off by itself.

**Please insert only leak proved batteries !**

## CHARGE THE 1.2V RECHARGEABLE BATTERY WITH THE LINE-CHARGING UNIT

As soon as the symbol <BAT> is flashing the rechargeable 1.2V Mignon battery must be charged.

### ***Important:***

Before inserting the charging connector into the interface plug of EASY-CHECK FE the device must be switched off.

***The charger must not be connected when the 1.5V battery is inside the device. The battery may run out and destroy the device !***

With the device switched off the charging connector is inserted into the interface plug of EASY-CHECK FE. The device switches on by itself and a bar diagram with the battery symbol is displayed. With the charger connected you can go on taking measurements.

After approx. 20 sec the state of charge is displayed again provided no measurement is taken. When the charger is connected the automatic switch off is deactivated.

The rechargeable battery needs approx. 8 hours to be charged completely. A constant bar diagram is flashing together with the battery symbol and the charger can be removed.

## OPTIONAL ACCESSORIES

ONLINE Measurement: Graphic Statistics Software STAT-6  
Interface cable

Line-Charger with 1.2V Mignon battery

## TECHNICAL DATA

Measuring Technique:	Magnetic induction on iron and steel (ISO 2178)
Measuring Range:	0 - 5000 $\mu\text{m}$
Indication:	LCD 3½ digits with floating decimal point and guides for operation
Resolution:	selectable 1.0 $\mu\text{m}$ or 0.1 $\mu\text{m}$
Accuracy:	below 100 $\mu\text{m}$ : $\pm 1 \mu\text{m}$ 100 - 1000 $\mu\text{m}$ : $\pm 1 \%$ 1000 - 2000 $\mu\text{m}$ : $\pm 3 \%$ > 2000 $\mu\text{m}$ : $\pm 5 \%$
Power Supply:	1,5V Mignon battery (1.2V rechargeable battery with charger available)
Measuring Probe:	swinging by 90°
Dimensions:	108 x 48 x 38 mm
Weight:	approx. 100 g
Warranty:	Indication unit: 12 months Measuring probe: 3 months