



The original ISOTEST® Service

You need safe and reliable equipment and expect professional service?
Or are you happy with just a coloured label on your device? "As long as it sparks and crackles"!

The original ISOTEST® Service is based on technical expertise, on our experience of more than sixty years and on measuring instruments that are specially designed for high-voltage testing.

There are many reasons for the professional check-up of your ISOTEST® – done by the manufacturer!

What exactly does the Original ISOTEST® Service offer you?

You can also find the following features – in brief – in your work certificate.
And what is it all about?



In the course of the ISOTEST® Service routine the following features of the **electronic control** are checked:

1. The **power consumption in idle** – is an important feature for the correct functioning of the device.
Verification – Is the maximum value of the necessary energy for a trouble-free operation of the device maintained? The excess of the maximum value indicates an operational fault.*

2. The term **impulse frequency** describes the number of test impulses per second.
 Reliable test results can only be guaranteed with an adequate number of test impulses at maximum testing speed of approx. 30 cm/s.*

3. Does the **electronic readjustment of the load** function properly – is the tension stable in any test situation?
 Comparable to the load of a car (passengers, luggage) the ISOTEST® device is “loaded” to a different degree while testing with smaller or larger test electrodes or testing dry or damp surfaces.
Verification – The functional electronic readjustment of the load ensures, that even high or suddenly occurring changes of the load (soiling, dampness, contingent conductivity of the material) are reliably compensated in fractions of a second and the set test voltage is kept stable.*

4. The so-called **deep discharge protection** – is a safety circuit with warning function, that protects both the battery and the electronics from damage.
Verification – Is there an alarm signal, when the supply voltage during longer operation periods and decreasing capacity of the battery falls under the critical minimum value?
 In this case stop operating the device immediately, as there is the risk of destroying the battery or damaging the test device.

5. **Filter settings** – The sensitivity filter allows the adjustment of the settings to different test situations. (see also point 3.)
Verification – Is the filter set the best possible way (> maximum range of operation of the ISOTEST®) and are defects or flaws in all filter settings detected and indicated?*

6. The **indication of defects** ensures that detected pores etc. are indicated by acoustic and optical signal.
Verification – Are all (!) defects indicated (alarm signal, LED, display, pores counter)?*

7. The **“capacity” of the battery** is its ability to store energy.
Verification – What percentage of the indicated (max.) energy is the battery still able to store?
 Due to ageing, number of recharging cycles, etc. the capacity of the battery slowly decreases!
 When the capacity has decreased below 50%, ELMED recommends a replacement of the battery as the time of operation of the ISOTEST® decreases correspondingly.



As part of the ISOTEST® Service the **generation of high voltage** is also carefully examined:

8. **The spheres of the spark gap** – These components of the ISOTEST® determine significantly a long-term accurate test voltage. Depending on the frequency and duration of use the spheres wear out to a certain degree. Normally this wearout is compensated by the automatic calibration process when the device is switched on. In exceptional cases soiling of the ambient air can lead to deposits, that must be removed.
9. **Calibration of the spark gap** – The spherical spark gap is the core piece of the ISOTEST®. In order to ensure the required accuracy of the generated test voltage, this part of the high voltage generation is calibrated within the frame of any maintenance check-up according to a measuring spark gap. This measuring spark gap is continuously reviewed by the DKD (National Authority for Calibration, Germany).

General visual control – with a trained eye:

With over sixty years of service experience and thousands of repairs the following components are checked for damages, repaired or replaced.

During visual inspections the safety of the tester and the reliability of the test are in particular at stake as far as the high voltage cables (10.) and the grounding accessories (13.) are concerned.

10. **High voltage cables and handles**
11. **Sealing caps**
12. **Equipment bags**
13. **Earth cables and/or trailing ground**

* If necessary, the revision of the relevant settings or repairs will be carried out by experienced and skilled ELMED specialists. They exclusively dispose of the necessary technical documentation, the manufacturer's know-how and measuring instruments that are especially designed for the revision of pulse-type high voltages.

Play it safe: the original ISOTEST® service – i.e. maintenance (calibration) and/or repair in accordance with the ELMED specification - is only available from the manufacturer or from an officially authorized service partner.

You have opted for the professional manufacturer's service:

Please send your testing device for the **original ISOTEST® service** together with your order (maintenance / repair / additional accessories ...) to

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