



The Problem

Faulty insulation in Diathermy Instruments

All over the world, faulty insulation on endoscopic instruments regularly causes accidents which can lead to tissue damage and which can cause temporary or permanent injury to the patient. In the worst case scenario, fatalities may occur.

Studies^{1,2} in hospitals have shown that 18% of the endoscopic instruments used in the hospitals which participated in the trial had damaged insulation.

References/Bibliography

¹ Casseress YA, Albayrak A, Kijkoprates beeld. Tussenrapportage. (Endoscopic Surgery in Focus. Interim Report.) 5th March 2003 NVEC and TU Delft

² Prof. Dr. G. van der Wal, Risico's minimal invasieve chirurgie onderschat. (Risks of Minimally Invasive Surgery Underestimated.) November 2007

The Solution

Insulation Testing with DIATEG professional

In addition to standard safety procedures, a diathermy tester can eliminate any possible doubt regarding the integrity of the insulation layer on electro-surgical instruments. This device detects damage, porosity, hairline cracks, pinholes and gas pockets, which all affect the efficacy of the insulation and can lead to internal burns.

Testing of electro-surgical instruments has now become mandatory in the Netherlands. To minimize patient risk and limit the surgeon's responsibility for defective instruments, this guideline should also be used in all other European countries.



The Benefits

- + **Discovers the smallest defects in the instrument insulation**
- + **Testing reduces the risk of an accident during surgery**
- + **Display with audiovisual alarm**
- + **Touchscreen, simple and safe to operate**
- + **Testing of mono- and bipolar instruments**

Other Technical Features:

- **CE tested**
- **Non-destructive procedure**
- **Compact, light-weight and portable**
- **Microprocessor-controlled**
- **Operation by touchscreen and membrane switch**
- **Secure battery operation**
- **Easy to clean housing**
- **4 available test programs**

The Product

The DIATEG professional insulation tester is supplied with the following accessories:

- **Diathermy Tester with Touchscreen**
- **Mains adapter**
- **Testcables, 2 pcs.**
- **Universal clamp**
- **Operator manual**
- **Test certificate**

References

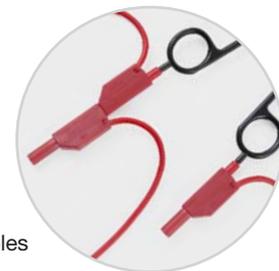
In almost all Dutch clinics and in a number of British hospitals, central sterilization departments have decided to use the Diathermy Tester.

Some of the convincing arguments underlying this decision are listed below:

- **An accurate, fast and non-destructive testing method for the detection of damage**
- **The device is compact, portable and easy to operate**
- **The device facilitates testing of diathermy testers with different diameters**
- **Fault display via audiovisual signals**
- **An attractive price/performance ratio**
- **Enhanced safety during surgery**



insulation tester DIATEG



Testcables



Universal clamp



DIN EN ISO 11607-2:2020

The new Entrhal sealers

Safe, compact and easy to operate!

Our sealers are produced to European safety guidelines. Depending on the configuration, the sealers give you the opportunity to fulfill all requirements of ISO11607-2. Every sealer is intensively tested and supplied with a manufacturer's certificate, user manual and service information.

All Entrhal heat sealers are very compact, so they only need a fractional amount of space on the worktable compared with other sealers.

Thanks to the unique and innovative SerVa-Box technology, the annual maintenance is done on site within less than 10 minutes! Simply order the exchange SerVa-Box, replace it and the maintenance is done. That's how easy it is!

No more unnecessary sending of devices back and forth, no need for a loaner (no loan fee), no high transport costs. Simply exchange it!

EM 20 KCS

The top device for (dental) doctor's practices, hospitals and clinics, with several special functions. Including computer documentation interfaces, RS232-RJ45 and USB. (Details see table)

Standard-compliant sealing technology according to DIN EN ISO 11607-2: 2020

Including the new SerVa-Box technology!

EM 20 NKN

The sealing device for (dental) doctor's practices and industry. Easy to use thanks to the uncomplicated menu navigation and the clear display.

*EM20KCS

***The newly developed SerVa-Box enables easy and costsaving maintenance & validation**



Service in less than 10 minutes!

"Just exchange the SerVa-Box, and service is done!"

Attractive design



Clear and easy to use display



New design

Technical data

| | EM 20 KCS | EM 20 NKN |
|---|-------------------|-------------------|
| Conformity with Standards | | |
| DIN EN ISO 11607-2 | O | - |
| DIN EN 868-5 | O | O |
| DIN 58953-7 | O | O |
| Temperature | | |
| Electronical temperature control | O | O |
| Temperature monitoring | O | O |
| Temperature tolerance | 1 % | 1 % |
| Temperature range | 0 - 200 °C | 0 - 200 °C |
| Force | | |
| Force monitoring | O | O |
| Seam and sealing speed | | |
| Sealing speed | 9 m/min | 9 m/min |
| Sealing speed monitoring | O | - |
| Distance of the seam to the edge of the pouch | 20 / 30 mm | 20 / 30 mm |
| Width of the seam | 12 mm | 12 mm |
| Packaging materials | | |
| Material as per EN868 | O | O |
| Tyvek | O | O |
| Electric data | | |
| Maximum power | 750 W | 750 W |
| Standby | 31 W | 31 W |
| Current | 230 / 115 V* | 230 / 115 V* |
| Frequency | 50 / 60 Hz | 50 / 60 Hz |
| Dimensions | | |
| Width | 465 mm | 465 mm |
| Height | 100 mm | 100 mm |
| Depth | 225 mm | 225 mm |
| Height of sealing level above table | 50 mm | 50 mm |
| Weight | 7 kg | 7 kg |
| Display and keyboard | | |
| Display | O | O |
| Keyboard | O | O |
| Integrated languages | D-GB-F-E | D-GB-F-E |
| Clock and calendar function | (via Internet) | - |
| Integrated service notification | O | O |
| Documentation and interfaces | | |
| Computer Interface | USB/RJ45/RS232 | RS485 |
| Connection to Doc. Systems | O | O |
| Service Interval Indicator | O | O |
| Specials | | |
| Motor auto start-off | O | O |
| Heating time only 1 min | O | O |
| Changable service unit (SerVa-Box) | O | - |

*option

Entrhal Medical reserves the right to amend specifications without prior notice.



The new Entrhal sealers

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All Entrhal heat sealers are very compact, so they need only a fractional amount of space compared with other sealers.

Thanks to the large touchscreen with clear and self-explanatory messages, the sealer is so easy to use, that it can be operated even by persons who do not use the machine frequently.

EM 24 KCS

The high tech sealer without built-in printer for smaller clinics, with several special functions incl. computer- and USB-Flash interface. (See table overleaf)

Includes the innovative SerVa-Box technology!!!

EM 40 KCS

The innovative sealer for hospitals and clinics, with a built-in printer for 3 to 4 line printing of text, graphics and barcodes, several connection possibilities, a new user-friendly touchscreen, and preinstalled sealing settings.

Includes the innovative SerVa-Box technology!!!

*EM20KCS

***The newly developed SerVa-Box enables easy and costsaving maintenance & validation**



Service in less than 10 minutes!

"Just exchange the SerVa-Box, and service is done!"

Attractive design

DIN EN ISO 11607-2 & Guideline DGSV 2015



Clear, touchscreen display



Standard Design:
Brushed Stainless Steel with orange side panels



Alternative Design option:
Stainless Steel Carbon Black with matching side panels

Technical data

| | EM 24 KCS | EM 40 KCS |
|---|------------------|---------------------|
| Conformity with Standards | | |
| DIN EN ISO 11607-2 | ✓ | ✓ |
| DIN EN 868-5 | ✓ | ✓ |
| DIN 58953-7 | ✓ | ✓ |
| Temperature | | |
| Electronical temperature control | ✓ | ✓ |
| Temperature monitoring | ✓ | ✓ |
| Temperature tolerance | 1 % | 1 % |
| Temperature range | 0 – 200 °C | 0 – 200 °C |
| Force | | |
| Force monitoring | ✓ | ✓ |
| Seam and sealing speed | | |
| Sealing speed | 10 m/min | 10 m/min |
| Distance of the seam to the edge of pouch | 5 - 30 mm | 5 - 30 mm |
| Sealing speed adjustable | ✓ | ✓ |
| Monitoring of sealing speed | ✓ | ✓ |
| Width of the seam | 12 mm | 12 mm |
| Packaging materials | | |
| Material as per EN 868 | ✓ | ✓ |
| Tyvek | ✓ | ✓ |
| Ultra | ✓ | ✓ |
| Electric data | | |
| Maximum power | 800 W | 800 W |
| Power consumption normal/standby | 31 / 12 W | 31 / 12 W |
| Current | 230 / 115 V | 230 / 115 V |
| Frequency | 50 / 60 Hz | 50 / 60 Hz |
| Dimensions | | |
| Width | 560 mm | 560 mm |
| Height | 110 mm | 110 mm |
| Depth | 280 mm | 280 mm |
| Height of sealing level above table | 50 mm | 50 mm |
| Weight | 11,5 kg | 11,5 kg |
| Printing | | |
| Printing unit | - | 3-4 zeilig/3-4 line |
| Printer switch off function | - | ✓ |
| Adjustable printing width | - | ✓ |
| actualisation of fabrication date | - | ✓ |
| autom. Actualization of expiry date | - | ✓ |
| Lot-Code (alpha -numeric) | - | ✓ |
| Symbols as per EN 980 | - | ✓ |
| CE -Sign | - | mit Folgetext |
| Printout of text | - | ✓ |
| Order of printing data selectable | - | ✓ |
| Printer cartridge changeable | - | ✓ |
| Display and keyboard | | |
| Display | 7" 800x400 Pixel | 7" 800x400 Pixel |
| Keyboard | - | - |
| Touchscreen | ✓ | ✓ |
| Integrated languages | ✓ | ✓ |
| Clock and calendar function | ✓ | ✓ |
| Adjustable production counter | ✓ | ✓ |
| Number of storable text entries | >10.000 | >10.000 |
| Password function | ✓ | ✓ |
| Documentation and interfaces | | |
| Computer interface | USB/LAN /RS232 | USB/LAN /RS232 |
| Connection to Doc. Systems | ✓ | ✓ |
| Service interval indicator | ✓ | ✓ |
| Standby function | ✓ | ✓ |
| Storage of parameters | ✓ | ✓ |
| Seal check printout | - | ✓ |
| USB -Flash interface | ✓ | ✓ |
| Specials | | |
| Motor auto start-off | ✓ | ✓ |
| Heating time only 1 min | ✓ | ✓ |
| 3 to 4 line print | - | ✓ |
| Graphic - and Barcode print | - | ✓ |
| Changable service unit | SerVa-Box | SerVa-Box |
| optional selectable design | ✓ | ✓ |

*option

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