

Discovering



OnkoDisruptor



Electroporator

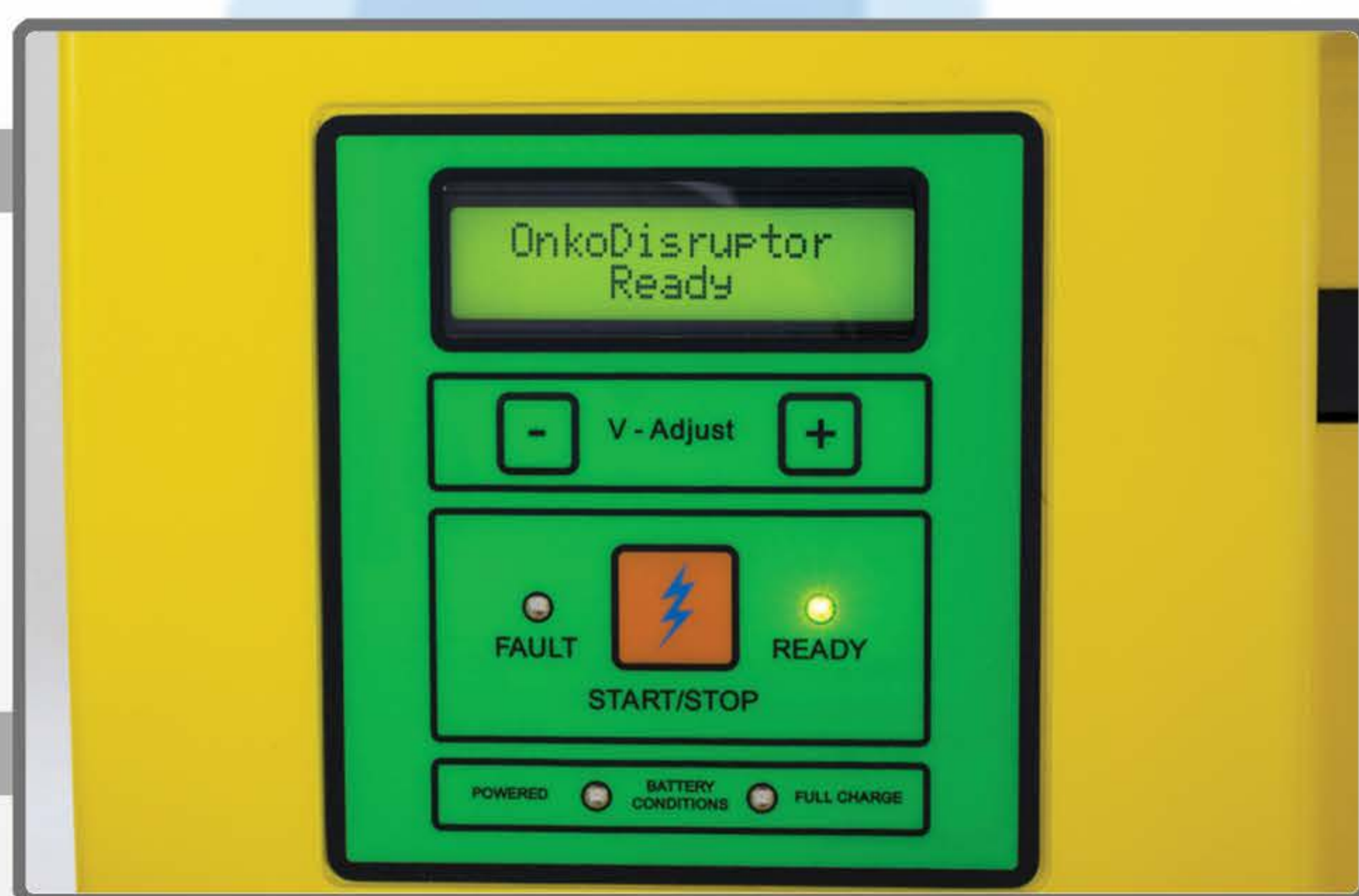
the Evolution...

Overview

The electroporator, designated as Onkodisruptor®, is a state of the art of the electrochemotherapy apparatus which is the evolution of the electroporators successfully used by our group over the past ten years. The characteristics of the train of permeabilizing waveforms, as well as the configuration of the novel electrodes specifically developed for this equipment, make the Onkodisruptor® a unique product. Regarding the unique features of our product we state that the novel pulses are 2 times faster than the previously developed electroporation systems and cause 2 times less discomfort to the animal.



There are no other electroporators on the market with the same characteristics and Scientific Results.



Mechanism of action

The electroporator generates trains of permeabilizing electric pulses which induce transient perturbations of the cytoplasmic membrane of tumor cells, enhancing the uptake of antitumor molecules (non vesicant chemotherapy drugs, plasmids, oligonucleotides etc.). The increased uptake of such molecules results in an increased therapy efficacy through the mechanism of apoptotic death. This technique allows the use of lesser amounts of drugs - with fewer side effects while enhancing local control.

Chemotherapy drugs can be administered locally or systemically according to the current scientific literature. Electrical parameters are pre-set and the operator must only choose the appropriate electrical voltage. It is mandatory to follow the current health legislation on the use of chemotherapy drugs in pets and laboratory animals. All the electrochemotherapy/electrogenotherapy sessions must be performed on previously anaesthetized animals and possibly adding an additional loco-regional anesthesia for highly sensitive areas.

Protocol

The treatment can be repeated at 1 - 2 week intervals until the therapeutic goal has been achieved. The operator must treat the tumor (or tumor bed in case of adjuvant therapy) and in case of local therapy 1 - 2 cm margins can also be treated depending on the histotype.





Onkodisruptor® Electroporator is made up of the following parts:

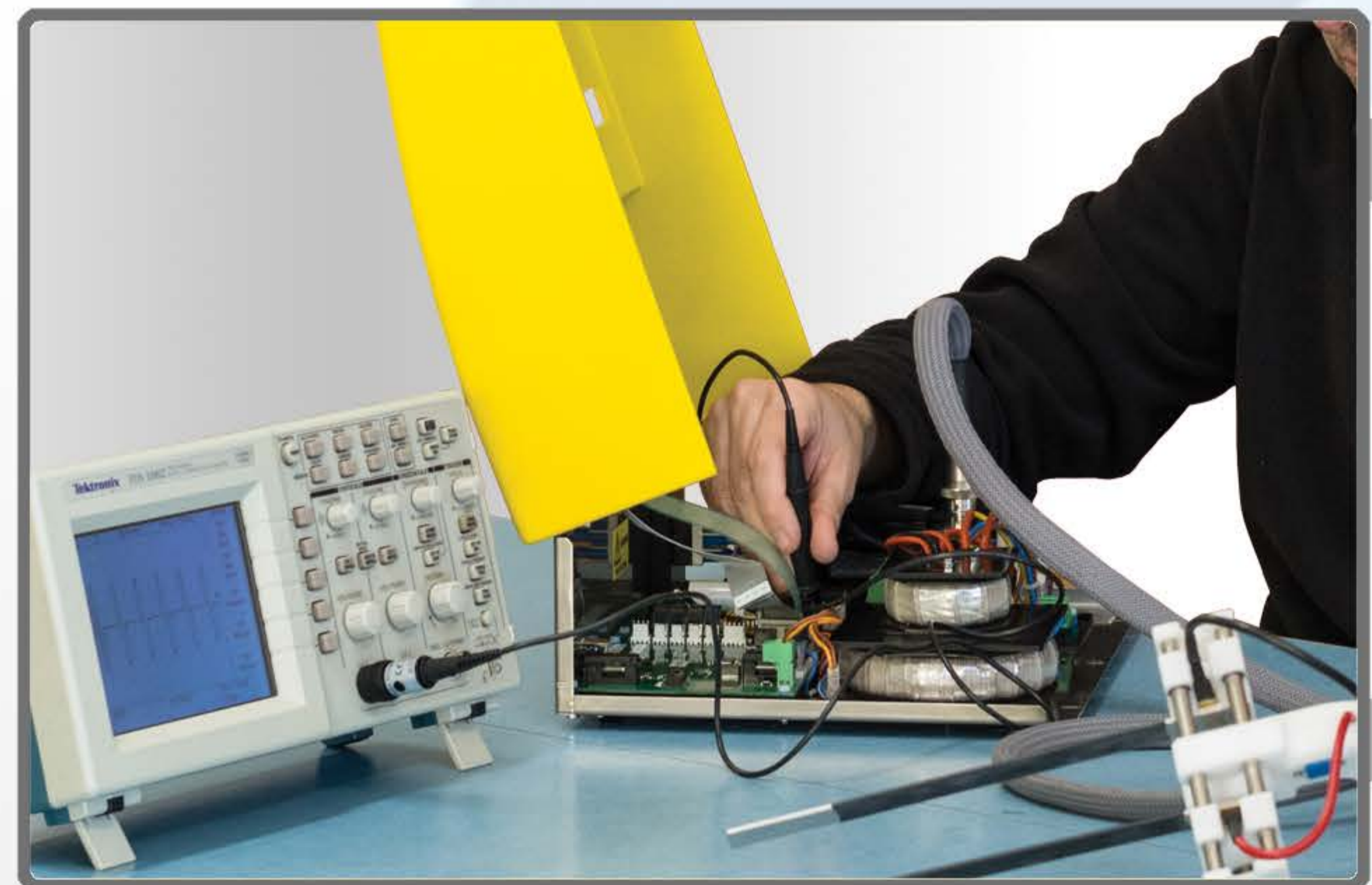
- Bench Pulse Generators for cell permeabilisation with User Interface System where User can select best voltage required from a selection of predefined electrical parameters.
- Re-usable and removable clamp electrodes.
- Re-usable and removable needle electrodes.

We assist our clients step by step providing technical and scientific support 24/7.

Our equipments are manufactured with the highest quality standards.

Our partner and manufacturer DAS is a certified company UNIEN ISO 9001 and UNIEN ISO 13485. DAS srl, manufacturer of the ONKODISRUPTOR® complies with the European Directive 2006/42/CEE Quality Management System (ISO 9001): Working Procedures and Instructions for

- Design process control;
- Manufacturing process control;
- Tests and Checks.



The instrument conforms to the following EU Directives:

Directive 2006/95/EC regarding low voltage safety and related standard:

- EN 60950

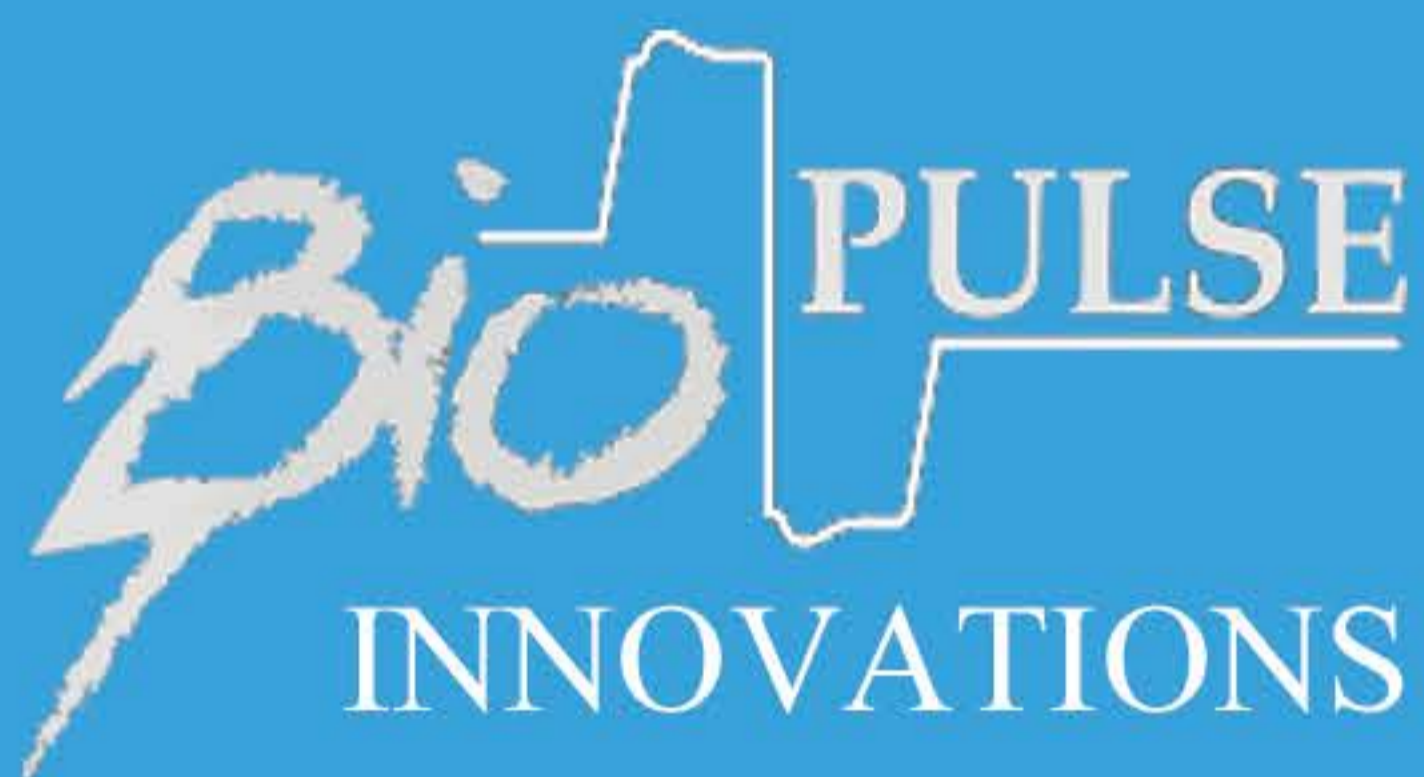
Directive 2004/108/CE regarding electromagnetic compatibility and related standards:

- EN 55011
- EN 61000-6-1
- EN 61000-6-3



TECHNICAL SPECIFICATIONS

- LCD Display : 16 column by 2 rows.
- Control Panel : 3 keys
- Indicator Lights : Instrument Ready – Error – Battery Charging – Fully Charged Battery
- Pulse Train Voltage : from 300 to 1500 V
- Maximum current : 5 A
- Battery Life : minimum 100 x 1500V pulses
- Time to fully recharge empty battery : 12 hours
- Battery Charger : INPUT 100-240 V AC 60/50Hz 300mA
OUTPUT 24 V DC 500mA 12VA
- PC connection : USB port
- Instrument Weight : 5.5 kgs
- Instrument Size : 34 x 27 x 12 height cms
- Accessories : Variable span re-usable and removable clamp electrodes Re-usable and removable needle electrodes.



Biopulse s.r.l is an Italian company mainly engaged in the medical transnational research sector.

Biopulse operates in the Biotechnology sector, and his main mission is the invention, the design, the manufacture and the marketing of innovative electromedical and electrotherapeutic instruments

The founders of the company, Dr. Enrico Pierluigi Spugnini and Dr. Alfonso Baldi, are internationally considered to be among the leading experts in veterinary electrochemotherapy, and have widely published in international medical and veterinarian journals.

Our partner and manufacturer Das.
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