Eco Declaration

celitron

medical technologies

WE THINK GREEN!

Energy Saving

Cross-cutting issues such as efficient energy management and minimizing the environmental damageshavebecomenewdesirabledevelopment objectives and are no longer seen as just an obstacle to performance. Energy consumption can be reduced by up to 40% only by showing involvement. Thus, Celitron's sterilizers have been designed to reduce energy consumption, by two main means:

1. Energy efficient Design

Most small steam Sterilizers (~99%) are based on heaters which are external to the steam generating chamber (see drawing 1), since this enables the use of only one chamber, both for steam generation and for the sterilization process itself. This, of course, has a direct effect on the

production costs.

Celitron offers Sterilizers which are equipped with an integrated Steam Generator and not with external heaters (see drawing 2), as in the aforementioned Sterilizers. The design of a Sterilizer with heaters immersed in water, though involves higher costs, will enable energy efficiency of close to 98%. External heaters, which are not immersed in water, reduces the efficiency of the unit by 25%-30% and prolongs the cycle time significantly.

Moreover, the design of sterilizer with a cylindrical chamber enables maximal use of energy, since it uses the essential minimum amount of metal which requires heating (in comparison to square chamber sterilizers which are using twice the metal amount and are thus enhancing waste of energy).

Drawing 1



Drawing 2





2. Smart Operation

Celitron's Sterilizers use designated software for tracking the operation of the heaters, the generator and the chamber. This software analyzes the energy consumption and finds the optimal way to utilize it, according to the process needs. A smart operation of immersed heaters enables saving of around 10% of energy.

Since a sterilization cycle is rapidly changing in every stage (see drawing 3), the required parameters of temperature and pressure need not be kept at the maximum at all times. Therefore, the software finds the optimal required temperature in each stage according to the plan of the next stage. The steam generator which feeds the sterilization process is kept in the optimal temperature in compliance with the next stage it will go through, to avoid energy waste. Each cycle's required energy consumption is planned and reported, and in case a defined deviation from the average is found, indicating abnormality of consumption, the system will produce a warning, and thus prevent dissipation of energy.



The following graphs (Drawings 4-6) will demonstrate the differences in energy consumption between a sterilizer which uses external heaters, a sterilizer which uses a steam generator, and Celitron's sterilizers, which use a steam generator and also include the Energy Saving Software.

Drawing 4



Drawing 5



Drawing 6



In conclusion, Celitron's Sterilizers reduce power consumption to the minimum. The use of a **Steam Generator** enables energy saving of ~20%.

The **Energy Saving software** enables a drop of 12% more. Therefore, the Sterilizers are capable of reducing consumption by \sim 32%. When comparing to other Sterilizers on the market, Celitron's Sterilizers use 40% less energy.





Materials

Celitron Medical Technologies Kft. is committed to fulfilling its social and environmental responsibilities as a global citizen. The RoHS II (Directive 2011/65/EU) and WEEE (Directive 2012/19/EU) European Directives introduced new environmental responsibilities for electrical and electronics equipment manufactures. The RoHS (Restriction of use of certain Hazardous Substances) directive, part of the WEEE (Waste Electrical and Electronic Equipment) directive, has come into force on July 2014.

The RoHS directive effectively bans the use of certain materials, defined as:

- Lead (Pb)
- Cadmium (Cd)
- Mercury (Hg)
- Hexavalent Chromium (Cr VI)
- Polybrominated Biphenyl (PBB) flame retardant
- Polybrominated Diphenyl Ether (PBDE) flame retardant

Since Celitron Medical Technologies Kft. is using purchased components to produce its Steam Sterilizers, we are implementing a supply chain process to assure compliance to the directives. Therefore, we evaluate the compatibility of all purchased components used in the company's products by retaining manufacturers Declarations of Compliance. We are requiring our Suppliers to complete the material disclosure. In case of doubt, the suspected components are submitted to an authorized lab for testing. The requirements for components have to comply with both Directives, and are a routine part of any purchase order. Components containing hazardous material as described in both Directives are rejected.

During our production stages, Electrical and Electronic waste, as well as Lead, Cadmium and other hazardous substances are collected in a unique closed storage area and are adequately disposed.

Celitron Medical Technologies Kft. informs its distributors, in a signed contract, that they are responsible for the removal of the waste from the

European market. A distributor which does not have a signed contract with a representative for removal of Electrical and Electronic Waste will not be able to sell Celitron's products.

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The company informs its distributors that in case they are selling the devices in countries in Europe, they must verify that those countries have a formal representative which is in charge of removal of Electrical and Electronic Waste.

When you purchase Celitron's products from an authorized distributer, the equipment is marked with the above recycling symbol. It means that at the end of the life of the equipment you must dispose of it separately at an appropriate collection point and not place it in the normal domestic unsorted waste stream. This will benefit the environment for all.

Think Green

- celitron medical technologies WE THINK GREEN!
- **Mathebasic Sector** Reduce your Energy consumption
- Save money
- **Protect the environment**

