# Naps Solar Powered Sterilizer

Naps Solar Powered Sterilizer (NSPS) is designed for use in areas without electricity or a fuel supply enabling basic sterilizing needs of dental and surgery instruments in remote areas.

NSPS can be easily installed and it is small enough to fit on any table. For running NSPS requires: photovoltaic array, battery box with batteries, charge controller and AC inverter. All those components and necessary cables with plug-in connectors are provided by Naps as an easily installable kit.

NSPS functions with self-generated hot steam and is capable of fast, 6 min sterilization. There are two program options in use: the one with 134 °C steam for full sterilization according to the international norms, and the other one for disinfection at 105 °C.

The instrument is equipped with an instrument sterilization basket. Optionally one can have other instrument carriers, too. Because sterile storage is an essential link in the hygiene chain, we offer to have an optional component, sterilization bags, where sterilized items can be stored between removal from the sterilizer and their next use without contamination. They consist of a combination of paper and plastic film specially designed for steam sterilization. They are impervious to micro-organisms, highly resistant to tearing, and easily opened at their peel-open seam.

## System Components

A complete standard NSPS includes:

- Sterilizer
- 4.5 litre water container with inlet tube into the sterilizer
- 10 litre de-ionised water in a plastic container
- An instrument basket
- All cables with plugs

Other optional parts will be offered on request.

The Naps Solar Powered Sterilizer will be delivered as part of photovoltaic system supply, such as Naps Universal Power Pack.

## Performance Data

The Naps sterilizer's outside dimensions are: 46 cm deep x 19.5 cm wide x 38 cm high. The inside dimensions are: 16 cm high x 9 cm, and the weight is 17.5 kg. The peak power consumption is 1100 W at 230 V AC. The average consumption in 1 hr continuous use with four full loadings is ca. 400 Wh corresponding ca. 34 Ah per day.

NSPS has a short operating time: when the sterilizer starts from room ambient temperature, it is ready for the first sterilization batch in about 15 minutes. The sterilization time is ca. 6 minutes including drying, which is important to occur in sterile conditions.

The Naps sterilizer is of an autoclave type and operates according to the advanced principle of external steam generation. Thus, the use of distilled water is not necessary. Our system has a steam generator which runs with good quality demineralised (same as de-ionised) or distilled water. The instrument prevents of using condensed water from the washing dryer or using tap water. That ensures that the result of sterilization is 100 % proof. De-ionised battery water is well suited for NSPS, too.

The Naps sterilizer has a 4.5 litre water reservoir. That amount of water is enough for ca. 35 runs. De-ionised water is the only material and maintenance one needs to add to the system during its normal use.

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