

# Neonatal sleeping bag warmer

Country of origin | United States of America

## Health problem addressed

Over 20 million low birthweight infants are born around the world every year, and more than 95% of these are in developing countries. 4 million of these babies die every year, and those babies who survive often develop chronic health conditions, including early onset of diabetes, heart disease, and low IQ. Other issues include lack of access to healthcare facilities (travel time and costs) and intermittent electricity in the developing world.

## Product description

The infant warmer consists of three parts - a sleeping bag to place the baby, a pouch of phase change material and an electric heater. The pouch is heated for 30 mins in the heater and then placed in the sleeping bag. It maintains the WHO recommended temperature of 37 deg C for 4-6 hours, after which it can be reheated.



## Product functionality

This infant warmer is an innovative device that works without a constant supply of electricity. It has no moving parts and is portable, which enables newborns to be kept warm during transport.

## Developer's claims of product benefits

In low resource areas in developing countries, common infant warming methods include blankets, hot water bottles and light bulbs. All these methods are ineffective and unsafe, often causing burns on babies. This infant warmer can be used to support care of hypothermia in neonates, it is easy to use and has very low operating costs.

## Operating steps

Sanitize sleeping bag, pouch of phase change material, and electric heater. Insert pouch into heater, and heat for 25 minutes until the alarm rings and green light turns on. Remove pouch only when needed. Check if indicator on pouch says OK and place in sleeping bag. Wrap newborn and tighten straps and monitor its temperature hourly for 4-6 hours. When indicator says TOO COLD, remove newborn. Remove pouch and reheat.

## Development stage

The product has undergone a series of clinical studies and trials with 100% positive results. One RCT that was conducted over 160 babies across 3 facilities showed that the device is non-inferior to the SOC (including radiant warmers). Internal processes are ISO13485 certified. CE certification is being filed in June 2012. The device is available in 4 Indian states and is helping babies in India, China, and Somalia.

## User and environment

**User:** Physician, nurse

**Training:** No intensive training required. Basic instructions included with device in pictorial form.

**Maintenance:** None

## Environment of use

**Settings:** Rural settings, primary (health post, health center), secondary (general hospital), tertiary (specialists hospital)

**Requirements:** Intermittent supply of electricity for recharging.

## Product specifications

**Dimensions (mm):** 440 x 290 x 70

**Weight (kg):** 4.1

**Life time:** 1 year

**Retail Price (USD):** 220

**List price (USD):** 220

**Other features:** Portable (hand-held), reusable

**Year of commercialization:** 2011

**Currently sold in:** India