

Infant radiant warmer for primary care

Country of origin | India

Health problem addressed

Nearly 2/3 of all newborn deaths (4 million annually) occur in 10 countries, India being largest contributor with 876,000. Lack of skilled personnel, infrastructure and affordability are big challenges to providing primary care. Hypothermia at birth is one of the most significant risk factors of neonatal mortality irrespective of birth weights and gestational ages. Urgent action is needed to address the issue of neonatal deaths and progress on MDG4, since 40% of under 5 deaths are in new-borns.

Product description

Infant radiant warmer with uniform heating: the warmer features a patented “J-profile” design that reflects heat uniformly to the bed for more thermal stability. Reduced heat loss: the heater is made with a cartridge (Calrod-like) technology that allows for rapid warming of cold surfaces, thus helping to reduce cold stress for the babies. Safe contact with the patient: All patient contact surfaces are made with biocompatible materials—chosen to be gentle on the baby’s delicate skin. Rugged: The warmer’s electrical system is engineered to operate without a voltage stabilizer and can withstand voltage fluctuations of upto 390V. Clear observation: With a LED-based observation lamp emitting a white light, the warmer allows for great patient observation.



Developer's claims of products benefits

Many cheap warmers available in the market are unreliable, break down frequently and do not deliver the desired level of clinical performance. There are others that are feature heavy and very highly priced and much beyond the buying capacity of primary care buyers. With Calrod technology for the best clinical outcomes, ruggedness and reliability (unique 5 years warranty) and at extremely affordable prices.

Suitability for low-resource settings

Designed for a low resource health facility with poor infrastructure (intermittent power, power fluctuations, no electricity), low-skilled nurses, lack of space, low purchasing power. Easy to use: the device is plug-in and use requires minimal training. Rugged & Reliable; can withstand voltage fluctuations up to 390V. Comes with 5 year maintenance warranty. The temperature probe is made of Kevlar (material used to make bullet proof vests) Affordable: Low purchase price, low maintenance & service costs. So far, the warmer has been installed in many challenging environments across India and ASEAN with poor room air temperature control, constant power outages, rugged environment and a limited availability of skilled clinicians. The rugged and reliable design was well suited to the challenging environment and usage conditions.

Operating steps

Plug in the assembled unit to a power source and switch on the device. The warmer performs a self test, then switch ON in the manual heating mode. Use this mode to pre-heat, if needed. Place the baby on the mattress in the bassinet and attach the skin probe to the baby. Toggle to the baby mode and set the control temperature for thermoregulation.

Regulatory status

CE certified (CE 01236). Biocompatible: All surfaces coming in contact with the patient are biocompatible (EN ISO 10993-1:2009/AC:2010). EN 60601 regulations - MedicalElectrical Equipment. The product conforms to RoHS requirements (residues of hazardous substances). Other: EN 62366 - Medical devices, EN 62304 - Medical Device software, EN ISO14971 - Application of risk management to medical devices, EN ISO 13485 - Quality Management Systems, EN 980 - Symbols for use in the labeling, EN 1041.

Future work and challenges

The product is low cost and meant for low resource settings. One of the obstacles is government specifications and tenders. The documents need to be updated with new technologies so that the product can reach the markets it is actually meant for.

Use and maintenance

User: Intended for use by a physician, nurse, or midwife

Training: Basic training manual (quick reference guide) provided and video available

Maintenance: No scheduled maintenance required

Environment of use

Setting: Designed for rural and urban indoor settings and in primary, secondary and tertiary level health care facilities.

Energy and Facility requirements: Requires a continuous power Supply of 230V and an environment within the range of 18-30 °C and 30-75%RH

Product specifications

Weight (kg): 37

Dimensions: 1500mm x 800mm x 800mm

Consumables: heat reflector skin patch

Lifetime: 7 years

Retail price (USD): 1 500

Other features: mobile

Year of commercialization: 2014

Currently sold in: India, Malaysia, Indonesia, Vietnam

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