KOALA Incubator™
DEDICATED TO SAFE CARE OF INFANTS

- Safe neonatal imaging with MRI, CT and X-ray
- Lightweight and easy to transport
- 360-degree surveillance with transparent double walls
- Accessible at both ends and side with rotation, slide and tilt of the newborn
- Rapid and accurate regulation of Heat, $O_2$ and Humidity
- Use with any MRI receiver coil from Philips, Siemens and GE
- Redundant system with surface heating
- Powerful lightweight battery pack with run-time recharging function
NEONATAL INTENSIVE CARE

The care of the very-low birth weight infant (VLBW; i.e. babies with a birth weight below 1.5 kg) carries a lot of demands. Mandatory for the enormous success in the care of these tiny infants during the last two decades has been the development of better ventilator-treatments for respiratory distress, enhanced surveillance of the water/electrolyte balance, infection control and advances in parenteral nutrition.

In parallel to this development, an increasing awareness of the importance of good skills amongst the doctors and top quality nursing skills has become evident. All this means, that the care of VLBW-infants is a highly specialized task, necessitating transfers of babies born in community hospitals to tertiary referral centres (and back again ones they have stabilized). This means that the neonatologist nowadays, spends many hours in the ambulance/helicopter/fixed wing aircraft with a fragile baby under her/his care. To minimize the inherent risks in these transfers, he/she needs a reliable transport-incubator in which all kinds of life-support can be given, a stable temperature environment be provided and accurate visual contact with the baby is mandatory.

Albeit this positive development, the tiny VLBW babies are still prone to injuries and diseases that necessitates diagnostic examinations such as magnetic resonance imaging, diffusion and spectroscopy.

For the transport to these examination facilities, and for the surveillance during the examination there is also need for a superior technology transport incubator, preferably fully compatible with the MR-environment making it possible to, without the interruption of removing the infant, perform top-quality examinations.

MRI IN NEWBORNS

MRI in newborns is a time consuming procedure. Conventional T1- and T2-weighted spin echo images are the most useful for anatomical detail. Other available techniques showing physiology such as diffusion, perfusion and spectroscopy have recently been developed and are creating new possibilities. This makes a lengthy examination for a newborn child.

The Koala Incubator is MRI compatible and provides a safe imaging environment for the newborn.
KOALA INCUBATOR

MR imaging and diagnostics is more and more becoming the golden standard for examination of newborn infants. For transport to examination facilities and for the surveillance during the examination there is need for a superior technology transport incubator, fully compatible with the MR-environment making it possible to, without interruption of removing the new born infant, perform top quality examinations.

This MRI compatible transport incubator provides a safe and reliable environment for the newborn infant. To ensure a stable internal environment, the Koala Incubator is equipped with a double-wall construction and control temperature, oxygen and humidity.

OTHER PRODUCTS

The MRI compatible Koala Heating blanket keeps the stable newborn patient warm during examination and is a compliment to the Koala incubator. The temperature is regulated and displayed for monitoring purposes.

The Acoustic protection eliminates the risk of hearing loss in the sensitive newborn and reduces the motion artefacts in images. An additional 10-15 dB attenuation of acoustic noise for the entire body ensures extra protection on top of conventional earplugs and headphones. The product is currently used in research for premature fragile babies and fMRI experiments.
KOALA SYSTEMS AB

Since MRI has become available its value in diagnostics was obvious and the use of MRI in pediatrics have become of great interest. In 1995 the neuroradiologists, neonatologists, pediatricians and MR-physicists at the Karolinska University Hospital decided to build a MR-compatible temperature regulated incubator to make it possible to perform MR-imaging in neonatal patients.

The company was formed to build a new light-weight transport incubator designed to be MR-compatible. Physicians, engineers and medical physicists with leading skills in neonatal intensive care, MRI and product development formed a team with the aim to construct a safe method for imaging and transport of newborns.

The images to the left show our first three prototypes.

INTERESTED IN SAFE INFANT CARE?

We are dedicated to safe care of infants and our product line in the near future will include a transport incubator, a heating blanket and acoustic protection. Our products are MR Compatible and maintain top MRI quality. Infant care is becoming safer than ever before and we would like to invite you to become part of this exciting development. Please contact us to receive information about advances in neonatal care.

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