

# Neo ICU & IW

Specialist support surface  
designed for neonates



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healthcare

SPECIALIST PRODUCTS • UNIQUE SERVICES

Improving outcomes in the patient environment

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# The challenges of caring for neonates with vulnerable skin

Whilst there is a lot of focus on pressure ulcer prevention and treatment in adults, there are limited products available that have been tailored specifically for paediatric and neonatal patients, with few manufacturers acknowledging the clinical challenges around maintaining skin integrity in this vulnerable group of patients.

Neonates are at high risk of pressure damage due to the vulnerability of their skin. In circumstances when a neonate is critically unwell, viability of skin may not be the first priority.

## Additional challenges include:

### Decreased mobilisation

When a neonate is critically ill, their natural movements may be compromised due to required use of sedation and paralyzing agents. Frequent turning regimes may be contraindicated in unstable, critically ill patients, especially those receiving ECMO. This increases the risk of skin damage as the baby is exposed to prolonged periods of pressure due to non-movement.

### Vulnerable occiput

In children younger than 36 months, the head is marginally disproportionate to the rest of the body. This means the head has a greater proportion of the body weight, resulting in it being the main pressure point when the neonate is laying supine.

### Inappropriate products

Many products available for adult pressure ulcer prevention and treatment have a minimum weight that is too high for paediatric and neonatal patients. Many also have specific zones that a patient must lie on to achieve the optimum clinical performance. These 'zones' are often based on an adult profile whereas neonates and paediatrics have smaller torsos, meaning that often they are not able to be positioned in this zone, resulting in ineffective therapy.

In addition, neonates and paediatrics have extremely friable skin and can mark easily if they are on a surface that is too hard or inappropriate for their low weight. Medstrom are one of the few suppliers that can offer a tailored range of paediatric and neonatal surfaces.

# Introducing the Neo

The Neo is one of the only dynamic surfaces that has been designed specifically for neonates who are at very high risk of skin breakdown or have existing skin damage.

The intelligent system acknowledges weight, position and morphology, even for the smallest of babies, thereby providing appropriate and effective skin damage prevention and treatment.

The Neo is available in two different models; the ICU and the IW. The ICU is designed for use with all incubators such as Drager and Giraffe, whereas the IW is designed for use with infant warmers.

The Neo is also suitable for premature babies as the optional development ring simulates the environment of a womb, creating cradling and a sense of security.



## Key features include:

- Three active zones ensure accurate pressure redistribution for the head, body and heels
- Available with an optional development ring to simulate a womb environment or to allow easy positioning
- Intelligent, automatic adjustment providing effective pressure redistribution for even the smallest of babies
- Simple, intuitive controls appropriate for use in a busy ward environment
- Soft cover specifically designed for fragile neonatal skin, providing the highest level of comfort
- The control unit can be disconnected from the surface and will maintain low interface pressures for up to 12 hours, allowing the baby to be protected during transfer
- The Neo is suitable for babies undergoing treatment such as ECMO due to the stability of the non-alternating surface
- The Neo is suitable for babies who need to be cared for in a contained, humidified environment



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## Clinical Outcomes

One of the leading children's hospitals in the UK has been using the Neo since 2016 and it has become part of a protocol for those babies who are at high risk of skin breakdown. This includes babies who have:

- Complex treatment needs, such as receiving ECMO
- Limited repositioning regimes
- Undergone extensive surgery and are post-operative
- Experienced cardiac arrest
- Poor tissue perfusion

Clinical evaluation outcomes have been captured for ten babies with extremely complex conditions.

Seven out of ten babies who were nursed on the Neo maintained skin integrity, despite most receiving ECMO and being so unstable that they were unable to be repositioned.

Three babies acquired red marks, however notes stated they were extremely compromised. Despite red marks appearing, skin did not break down and at the end of placement the existing red marks had either remained static, improved or healed.



## Additional outcomes for the babies as per caregiver's opinion included:

- Three out of six babies had their objective for improvement in pain achieved
- All six babies had their objective for an improvement in sleep achieved
- Eight out of nine babies had their objective for improvement in comfort achieved
- Six out of eight babies were repositioned less frequently

## Technical Specification

### Mattress dimensions:

48cm (W) x 66cm (L) x 4cm (D)  
*Suitable for Giraffe incubators*

35cm (W) x 65cm (L) x 4cm (D)  
*Suitable for standard incubators*

47cm (W) x 75cm (L) x 4cm (D)  
*Suitable for Babytherms*

### Min patient weight:

0.4kg (0.8lbs)

### Max patient weight:

6kg (13lbs)

### Optional:

X-Ray Pocket on Neo ICU

**Available for purchase or can be rented. Contact us 24/7/365 using the details below and ask to speak to one of our RGN Clinical Advisors to discuss how the Neo can support your patients.**

### Ireland

Tel: 01 686 9487

Email: [sales@medstrom.ie](mailto:sales@medstrom.ie)

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