

CosyTherm[™]

Neonatal Warming System

Innovative technology for simpler neonatal care



INDITHERM plc

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Innovative, patented technology is now leading warming practice for neonatal patient care.

Clinical considerations

- Management of body temperature in neonates is often challenging.
- The tendency for hypothermia is well documented, with serious implications.
- Active warming of pre-term and low birth-weight babies can reduce complications and improve outcomes.
- The use of an incubator for warming only can unnecessarily tie up valuable resources, hinder nursing access and create undue anxiety for new parents.
- Neonates are often prone to hypothermia outside the NICU. Active warming avoids the need for more intensive intervention, benefitting the baby's early development.
- Warming babies in an open cot is better for developmental care practice and facilitates kangaroo care.
- Long term warming of babies using infra-red warming leads to dehydration and all the attendant consequences.
- Ease of cleaning.



Warming technology

Traditionally, active warming has been achieved using an incubator or radiant warmer.

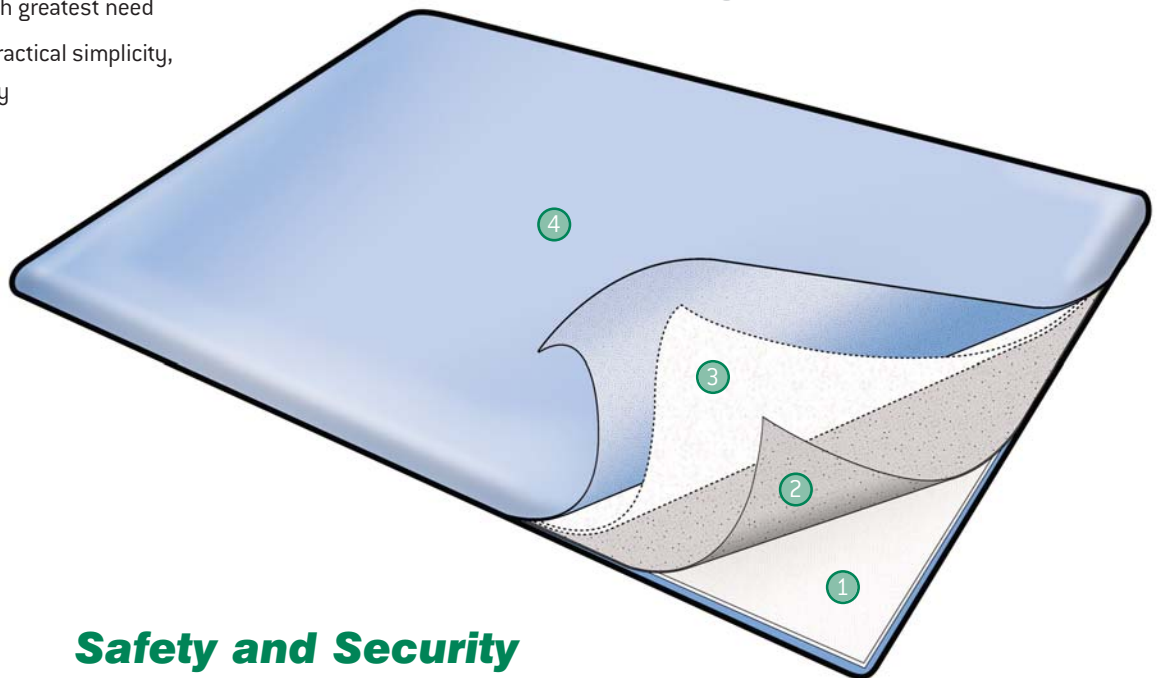
Inditherm have revolutionized the technology for warming and produced a system that offers major advantages.

Inditherm's patented flexible carbon polymer technology combines effective thermal transfer with simplicity of use, providing a warming system that is superior to other methods.

Convenience and Simplicity

- Conductive heating under the patient
- High warming performance
- Nursing access is unhindered.
- Simple to operate.
- Temperature setting is easily adjusted over a wide range to meet all clinical needs.
- Designed to suit all types of bassinet.
- Mattresses fully sealed and easy to clean
- Frees up complex and expensive incubator resource for patients with greatest need
- Minimal maintenance, practical simplicity, straightforward reliability

- ① Pressure Relief Pad
- ② Flexible Polymer Heating Surface
- ③ Polyester Comfort Layer
- ④ Sealed Outer Cover



Safety and Security

CosyTherm mattresses have a soft, durable, latex-free cover, for comfort and long life. The in-built pressure redistribution foam helps ensure tissue viability is not compromised.

- Avoids the infection risks associated with water systems.
- Low voltage operation and uniform warming surface ensure safety of patients and staff.
- Independent thermal cut-out prevents overheating under any circumstances.
- Fully approved and widely proven in clinical practice.

Product Range

CosyTherm mattresses are available in a range of sizes to fit all standard bassinets. Warming blankets are also available for situations where it is more practical to warm over the baby. Products can be customized to suit any special applications or needs.

A choice of control units:

The CosyTherm^{NT} control unit has a range of options

- **Mains only**, three temperature ranges, lightweight, compact and easy to operate
- **Mains and battery**, three temperature ranges, compact and easy to clean, with integral rechargeable battery for greater flexibility and patient transfer situations
- **Mains, battery and DC**, with all of the features and benefits of the mains and battery unit, plus DC power that will run from any supply between 12Vdc and 28Vdc.
- All with or without patient temperature monitor

The fully integrated battery will power a standard CosyTherm mattress for 4 hours and is automatically re-charged when the unit is connected to mains power. Versatile clamp can attach to most types of vertical or horizontal pole or bar.

The simple CosyTherm control unit offers a low cost option where battery and DC power are not needed and has an in-built clamp to attach to a vertical pole or bar.

Applications

Intensive Care

- Ideally suited for use in neonatal and pediatric intensive care departments.
- Can be used instead of an incubator, where only the warming function is needed.
- Ideal "step-down" facility following incubator nursing.

Nursery / Post Natal Floor

- Significant benefits in a normal maternity setting to prevent the onset of hypothermia in vulnerable neonates, improving early development and avoiding the need for more intensive treatment later.
- Supports kangaroo care by providing warmth when Mom can't.



A range of mattresses and blankets are available with the CosyTherm system



The CosyTherm^{NT} control unit with battery option



Delivery Suite

- Effective and affordable solution to the risk of hypothermia in the delivery suite.
- Easily fitted to existing resuscitaire or equivalent to give warming from above and below.
- Helps reduce incidence of cold babies arriving in NICU.

Transport

- Compact, lightweight design
- Battery operation and DC power input.

Features and Benefits

Unique patented carbon polymer technology provides a neonatal warming system that is practical, convenient and highly effective. Key features & benefits include:

Exceptional performance

- High thermal transfer characteristics.
- Ultra fast warm-up time.
- Latest patented technology.
- Pressure relief built in.
- Choice of temperature ranges.

Practical & convenient

- Unhindered access to the baby.
- Simple to use.
- Easy to clean.
- Unobtrusive and silent.
- Fits all standard bassinets.
- Battery option for transfers.

Significant cost savings

- Reduces need for incubator nursing.
- No requirement to buy new bassinets.
- Eliminates maintenance costs.
- Reduces demand for intensive care.

Safe & robust

- Durable, latex-free cover.
- No circulating air.
- No water.
- Low voltage operation.
- Fully sealed with welded seams.
- Fully approved to medical device standards.





Developmental Care

NIDCAP and other types of Developmental Care are made easier if the infant can be nursed in an open cot, rather than in an incubator. For babies requiring assistance with thermal regulation open nursing with CosyTherm can help:

- provide and support family-centred Developmental Care, and optimize kangaroo care.
- protect the infant's sleep pattern.
- facilitate the assessment and management of the infant's pain and stress.
- create a healing environment that is developmentally-appropriate.

Warming Performance

- Based on proven patented flexible polymer technology.
- Heat produced by a uniform sheet of soft conductive material for even warming across the entire surface.
- Conductive warming under the infant ensures performance is not affected by open access.
- Staff can select required temperature and system warms up in less than five minutes.
- Significantly higher performance than traditional neonatal warming mattresses.
- Effective prevention of hypothermia even in an open nursing environment.

Technical Specifications

Mattress Construction:					
Inditherm® flexible polymer heating sheet, with 18mm foam pressure relief pad under and 305 g.m ⁻² expanded polyester comfort lining over.					
Encapsulated in a nylon fabric cover, with non-microporous polyurethane coating.					
In-built temperature sensor and over-temperature thermal cut-out.					
Temperature Output Range:					
User-selected ranges within the band: 90°F to 104°F [32°C to 40°C] in steps of 1°F [0.5°C]					
Over-temperature safety cut-out at 109°F [43°C]					
Power:					
CosyTherm Control Unit:	100 Vac or 110 Vac or 230 Vac (±6%), 50Hz/60Hz, 75W				
CosyTherm^{MT} Control Unit:	100 Vac to 240 Vac (±6%), 50Hz/60Hz (auto-ranging), 100W				
Battery Input (Optional):	Integrated battery module				
Capacity:	4 hours for standard mattress (NCM1) from full charge				
Charging:	Automatic charging when mains power applied 18 hour charge time from complete discharge to fully charged				
D.C. Input (Optional):	12Vdc to 28Vdc (±10%)				
Mattresses and Blankets:	24V to 26V (nom.) 20 W to 45 W, depending on size.				
Dimensions:	Type:	Size:	Weight:		
CosyTherm Control Unit:	CCU1	6" x 9.5" x 9"	160 x 240 x 230mm	9lbs	4.1kg
CosyTherm^{MT} Control Unit:					
Mains Power:	CCU200	11" x 6" x 5"	285 x 150 x 125mm	4.4lbs	2.0kg
Mains and Battery:	CCU201	11" x 6" x 5"	285 x 150 x 125mm	7.0lbs	3.2kg
Mains, Battery and D.C. Input:	CCU202	11" x 6" x 5"	285 x 150 x 125mm	8.8lbs	4.0kg
Mattresses & Blankets:					
	NCM1	24" x 13.5"	610 x 340mm	1.3lbs	0.6kg
	NCM2	29" x 23"	730 x 580mm	2.4lbs	1.1kg
	NCM3	24" x 17"	610 x 410mm	2.0lbs	0.9kg
	NCM4	28" x 11"	705 x 285mm	1.5lbs	0.7kg
	NCM5	26" x 14"	670 x 290mm	2.0lbs	0.9kg
	NCM6	26" x 24"	670 x 610mm	2.4lbs	1.1kg
	NCB1	18" x 20"	450 x 500mm	0.9lbs	0.4kg
	Other dimensions available on request.				
Compliance:					
EN60601-1, Class IIb, Type BF					
EN60601-2-35					
EN60601-1-2					
93/42/EEC, EEC Medical Devices Directive					
73/23/EEC, EEC Low Voltage Devices Directive					
FDA 510(k)					
Environmental :					
Ambient (Operating):	50°F to 104°F [10°C to 40°C]				
Ambient (Storage):	14°F to 131°F [-10°C to 55°C]				
Relative Humidity:	30% to 75%				

Due to continuous product development the company reserves the right to change these details without notice.
Caution: United States Federal Law restricts this device to sale by or on the order of a physician.

References

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