Dräger

Optimal microclimate and reliability you can depend on.

ISOLETTE® C2000

Dräger. Technology for Life®

MT-0584-2008

The Isolette® C2000 provides an ideal microenvironment for neonates to thrive.

At Dräger, we understand the challenges of caring for the world's smallest, most vulnerable patients. The Isolette C2000 has been designed to help you provide the optimal microenvironment for them. Engineered for advanced thermoregulation, it is ergonomically smart to work well in your NICU. The Isolette C2000 offers the kind of day-after-day dependability and quality Dräger is known for.

WE FOCUS ON:

ZERO-STRESS MANAGEMENT

We work to ensure Zero Stress through our advanced thermoregulation, and the integration of ventilation and jaundice management therapies.

TOTAL COMFORT CARE

Our intuitively designed ergonomic workplace helps you anticipate the needs of your patients while supporting developmental care and family involvement.

SYSTEM SYNERGY

A completely integrated workplace becomes a reality. The Isolette C2000 works seamlessly with Babylog Ventilation, Dräger Jaundice Management, monitoring, and architectural systems.

At Dräger, we strive to create optimal conditions where the baby, the caregiver, and the entire NICU can thrive. With its Smart Technology and easy accessibility the Isolette® C2000 helps you do just that.

The Isolette® C2000 and the importance of thermoregulation.

ZERO-STRESS MANAGEMENT

The path home for a preterm newborn starts in the stable microenvironment of the Isolette C2000, where temperature, humidity, and oxygen work together to wrap the baby in a safe zone of minimal stress.

THE ISOLETTE® C2000 IS ALL ABOUT KEEPING THE BABY IN THE OPTIMAL ZONE

The proprietary thermal-management (PID) algorithm of the Isolette C2000, combined with proven Dräger technologies, helps you to keep neonates thermally stable by regulating air temperature levels.

THE VITAL IMPORTANCE OF HUMIDIFICATION

In the first days of life, premature infants can suffer extremely high, insensible transepidermal water loss which contributes to evaporative heat loss. With its humidity-enriched warm air, the Isolette C2000 decreases this water loss and the cold stress associated with it. Now, even the smallest premature babies can stay within the Thermo-Neutral Zone.

DOUBLE-WALL DESIGN REDUCES IRRADIATIVE HEAT LOSS

The Isolette C2000 uses internally warmed front and rear double-walls to conserve heat. Acting as a thermal blanket, heated air circulates between the walls to reduce irradiative heat loss and decrease the tendency of condensation.

SLOW MOVING AIR HELPS TO CONTROL CONVECTIVE HEAT LOSS

Inside the Isolette C2000, very low velocity air currents create a calm zone around the neonate and help to reduce convective heat loss.

OUR PATENTED AIR CURTAINS KEEP AIR TEMPERATURES IN BALANCE

Employing an automatically activated dual air curtain when the access panel is opened, the Isolette C2000 prevents significant temperature drops by adding heater power and accelerating prewarmed air flow.

THERMOMONITORING GIVES YOU ADVANCE WARNING

The continuous measurement of both a central and a peripheral temperature is important in thermal monitoring of the newborn. A central peripheral temperature difference of around 1.0 °C is a propriate from day three of life. With sensors for central and peripheral temperatures, the Isolette C2000 alerts you to varying differentials. As soon as you know a temperature is too high or too low, you can react early and treat promptly.

DATA TRENDING IMPROVES PERSPECTIVES

The Isolette C2000 displays real-time and trend data for air temperature, two skin temperatures, oxygen, and humidity levels, weight, and heater power status. Trends for 2-, 4-, 8-, 12-, and 24-hour histories and up to 7 days for body weight, give you vital knowledge for newborn care.

The Thermo-Neutral Zone

Born with a central nervous system not fully developed, the premature neonate is unable to efficiently generate heat. In addition, its compensatory systems are immature and unable to prevent heat loss. Because they are so thermally vulnerable, maintenance of thermal stability can often dictate survival. That's why keeping the newborn within the narrow range of the Thermo-Neutral Zone is so vital. Environmental temperature fluctuation can result in considerable thermal stress. The neonate then diverts a significant portion of its energy to regulating body temperature, rather than development and growth. Cold stress and heat stress open the door for complications such as hypoxia, hypoglycemia, and dehydration.

Ergonomic design that anticipates your needs so you can meet theirs.

TOTAL COMFORT CARE

The Isolette C2000 just makes sense. Helping you stay ahead of the baby's needs with a design that's ergonomically smart. Intuitively simple. Perfectly accessible.

SPECIAL DESIGN KEEPS PATIENTS WITHIN REACH

The Isolette C2000 gives flexibility of movement around the newborn. A recessed cabinet stand allows for a closer, more comfortable sitting position for families and caregivers.

WIDE ACCESSIBILITY FOR PROCEDURES

Two side-hinged access panels let caregivers and clinicians work without difficulty during daily care or procedures.

SEE IT YOUR WAY

The Isolette C2000 has an easy-to-read, built-in LCD display ergonomically placed for intuitive use. You can change the brightness on the display to match your own comfort zone.

ISOLETTE® C2000 CABINETS PUT STORAGE WHERE YOU WANT IT

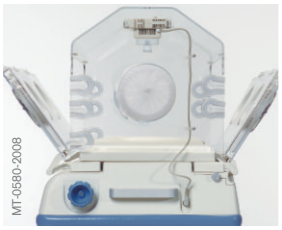
Built-in, large-capacity, storage compartments give new meaning to great organization. Two-level compartments allows you to store supplies where you need them.

HANDS-FREE OPENING AND WHISPER-QUIET CLOSING

Special long doors allow a hands-free opening of the cabinet. Right-height, ergonomic handles make doors easier to reach and open. With whisper-quiet buffered hinges, any stress regarding noise is minimized for the baby.

ACCESSIBLE RESERVOIR MAKES HUMIDIFICATION MORE CONVENIENT

A large, one-liter reservoir capacity enables you to run up to 85% relative humidity within 24 hours. Front-loading access makes the reservoir of the Isolette C2000 humidifier easy to refill. Its autoclavable design adds another layer of safety to your patient's care.



Two side-access panels put the newborn within reach for hands-on care.

Cabinet design offers hands-free opening and whisper-quiet closing.

Roomy supplies storage lets you use Isolette® C2000 anywhere you need it.

Recessed cabinet stand lets parents and caregivers sit comfortably.

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Bringing the components of care together.

SYSTEM SYNERGY

The Isolette C2000 interacts easily with all areas of the NICU. As part of a smart-NICU design, the Isolette C2000 works seamlessly with technologies you know and trust: Babylog ventilation systems, Dräger jaundice management, and Dräger monitoring devices.

The Isolette C2000 is part of the Dräger vision of an intelligent NICU. Our goal is to help you work more efficiently, provide well-rounded, sophisticated care and give the best conditions for a healthy outcome to those who need it the most – your tiny patients.

READY TO WORK HARD

The Isolette C2000, with its large cabinet storage, is selfcontained and well-organized. In the center of the incubator is the neonate, surrounded by vital life support – ventilator, vital sign monitoring, infusion systems as well as other critical support. Grommets and iris ports allow the interconnection between baby and ventilator and the monitoring system. Power supply and oxygen supply come from the architectural system right next to the incubator. With the Dräger architectural systems, everything can be embedded for greater flexibility and space benefit. In this environment, the Isolette C2000 means less cable clutter and supports a better workflow.

Inside and Out.

THE ISOLETTE® C2000

The modern ergonomic design of the Isolette C2000 works well in any NICU – even in the most space-challenged units. An impact-resistant bumper surrounds the Isolette C2000, protecting it during transport and shielding the controller and display from accidental damage. Overall, smooth, rounded surfaces and broad, flat doors and panels are easy to clean. Integrated storage for vital supplies, easy connections to hospital systems, and easy-steering casters let the Isolette C2000 go to work wherever you need it.

Attachable IV pole supports IV therapy (optional).

Integrated X-ray tray avoids additional stress on baby.

Intuitively designed user interface.

Built-in bright display enhances information flow and response time.

Recessed cabinet stand brings comfort to the family and closeness to the baby.

Two-level storage allows you to keep supplies where you need them.

Whisper-quiet cabinet doors diminish disturbance to baby.

Easy-steering casters make moving trouble-free.

Technology for Life

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At Dräger, our focus is on providing quality of care. Nowhere is this more challenging than in the world of the fragile newborn. The Dräger Isolette C2000, a high-performance incubator that combines excellent thermoregulation, ergonomic design, and Dräger dependability, is another example of our deep commitment to innovation and to achieving quality in all we do.

TECHNICAL SPECIFICATIONS DRÄGER ISOLETTE® C2000 INCUBATOR WITH CABINET STAND

Physical Attributes (without options/accessories)	
Height	140 cm (55 in)
Width	120.6 cm (47,5 in)
Depth	75 cm (29.5 in)
Weight	95.5 kg (210 lb)

Hood Specifications	
Standard hood includes:	– front and rear access panel – 4 access ports and 2 iris ports – 3 left and 3 right tubing grommets – front – 2 left and 2 right tubing grommets – rear
Access panel opening height	28.0 cm (11 in)
Mattress tray size	40.6 x 81 cm (16 x 32 in)
Mattress to hood height	41.2 cm (16.25 in)
Mattress size	38.1 cm x 73.66 cm (15 in x 29 in)
Mattress tilt	±12° (±1°), continuously variable

Cabinet Specification	
Casters	4 casters, 12.7 cm (5 in) and 2 casters with friction brake
Storage volume	Approx. 80 l
Recessed depth	15 cm recessed cabinet
Front loading cabinet doors	2
Door closing mechanism	Soft-stop hinges
Opening angle of the doors	> 90°
Cabinet stand accessories	Gas tank mount Shelf IV pole

Controller System	
Algorithm type of the Servo Control System	PID (Proportional Differential Integral) control algorithm
Controller with LCD	With brightness control
Selectable color combinations	White on blue background (default) or yellow on black background
RS-232 output	Yes
Keypad lock	Yes

Temperature Control Modes	
Temperature control modes	Skin and air temperature control mode
Air mode control temperature range	20.0 °C (68.0 °F) to 37.0 °C (98.6 °F)
Air mode control override temperature range	37.0 °C (98.6 °F) to 39.0 °C (102.2 °F)
Skin mode control temperature range	34.0 °C (93.2 °F) to 37.0 °C (98.6 °F)
Skin mode control override temperature range	37.0 °C (98.6 °F) to 38.0 °C (100.4 °F)
Dual-skin temperature monitoring	Yes

Trend Parameters	
24-hour trend	– Air temperature – Skin temperature (1 and 2) – Relative humidity – Oxygen concentration – Heater power
7-day trend	– Weight gain and loss

TECHNICAL SPECIFICATIONS DRÄGER ISOLETTE® C2000 INCUBATOR WITH CABINET STAND

Performance	
Air flow velocity across mattress	< 10 cm/sec
Temperature rise time at 22 °C (72 °F) ambient	< 35 min
Temperature variability	< 0.5 °C
Temperature overshoot	< 0.5 °C maximum
Temperature uniformity with a level mattress	< 0.8 °C
Correlation of the indicated air temperature to the actual incubator temperature (after the incubator temperature equilibrium is reached)	≤ 0.8 °C
Operating noise level in hood	< 47 dBA
Operating noise level in hood with	< 49 dBA
Servo Controlled Oxygen	
Carbon Dioxide (CO_2) level (per EN60601-2-19)	< 0.5%
Micro air intake filter	99.9% efficiency
Particle size removal	0.3 micron

Servo Humidity Option	
Humidity control range	30% to 95% in 1% increments
Humidity control operating time without refilling	24 hours maximum @ 85% RH and 36 °C, in Air Mode
Humidity control reservoir capacity	1,000 ml
Humidity display accuracy	± 6% RH (between 10% and 90% at 20 °C (68 °F) to 40 °C (104 °F))

Servo Oxygen Option	
Oxygen control range	21% to 65%
Oxygen control accuracy of full scale	± 2%
Oxygen display accuracy (100% calibration)	± 3%
Oxygen display accuracy (21% calibration)	± 5%
Oxygen display resolution	1%

Scale Option	
Weight range	0 to 7 kg
Weight display resolution	1 g or 1 oz (OIML = 10g or 1 oz)
Weight accuracy	2 g ± 1/2 digit up to 2 kg (OIML = 10 g) 5 g ± 1/2 digit over 2 kg

Device Classification	
Protection class	Class I, Type BF, continuous operation, not AP
Ingress of liquids	IPX0

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