

TECHNICAL SPECIFICATIONS DRÄGER ISOLETTE® 8000 INCUBATOR WITH VARIABLE HEIGHT STAND

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	1600 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 (0 lb) to 7 kg (15.4 lb) 1%
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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**A refreshing advancement in
high-performance thermoregulation.**

Isolette® 8000

Manufacturer: Draeger Medical Systems, Inc., Telford, PA 18969, USA
The quality management system at Draeger Medical Systems, Inc. is certified according to ISO 13485 and Annex II.3 of Directive 93/42/EEC (Medical devices).

In the Zone

Specially developed to create an environment where everyone can thrive.

CRITICAL PERFORMANCE

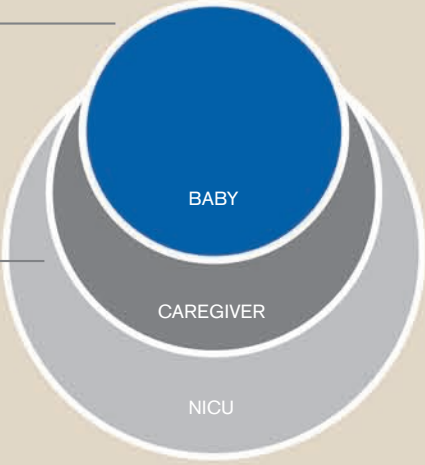
Our ability to reliably sustain a thermo-neutral microenvironment has made Dräger a trusted resource in thermoregulation. Now, innovations in humidification enhance infection control by supporting a more hygienic care setting as well.

LASTING COMFORT

The longer caregiver shifts run, the more they will come to appreciate the many ergonomic touches incorporated into the Isolette® 8000. Easy access to the neonate, convenient height adjustment of the incubator, and easy to reach controls make it a great incubator for any NICU.

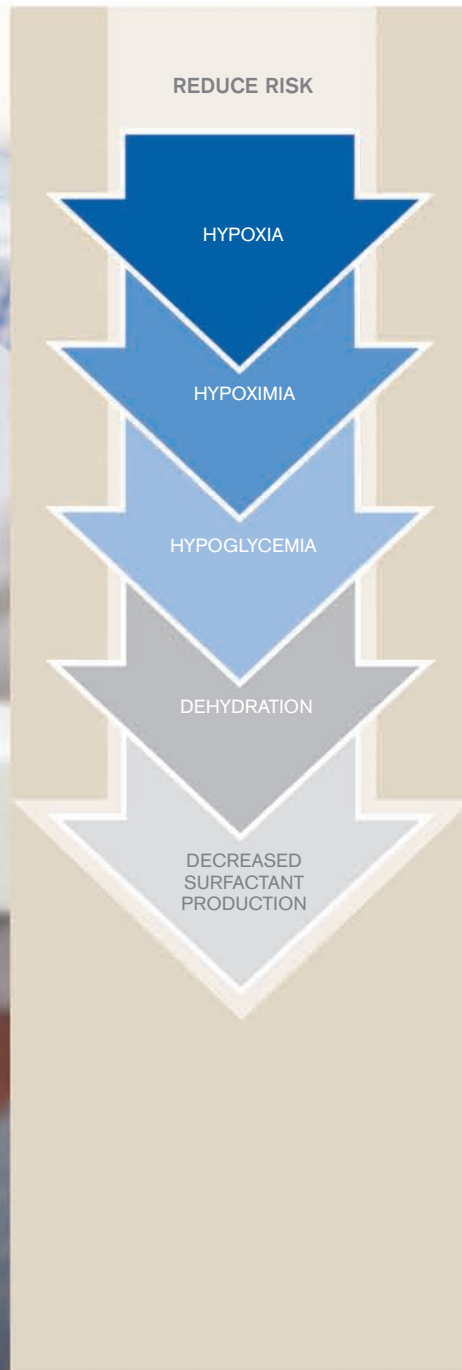
INTEGRATED EFFICIENCY

Dräger's extensive experience in neonatal care and commitment to a smart NICU means you can count on the Isolette® 8000 to work seamlessly within your environment. A compact design and a small footprint allow for better maneuverability, more flexibility, and greater access.



We bring to the NICU a legacy of proven concepts that ensure successful outcomes for all concerned. Dräger never stops searching for ways to better meet the needs of neonates, caregivers and the entire NICU team. The Isolette® 8000 is the latest result of these ongoing efforts to introduce advancements that genuinely make a difference.

Critical Performance



Safeguard development through precise thermoregulation.

HELP PREVENT THERMO-STRESS INDUCED PHYSICAL AND NEUROLOGICAL DAMAGE

The tinier your patient, the smaller your margin for error becomes. Temperature fluctuation can expose low birth weight infants to cold or heat stress that can lead to serious physical and neurological damage, or even create potentially life-threatening conditions.* Yet the Isolette® 8000 delivers the advanced thermoregulation features necessary to help keep neonates comfortably within that sliver-thin Thermo-Neutral Zone.

Low air velocity and our proprietary PID temperature control algorithm minimize convective heat loss. Warmed sloped panels and double-wall design reduce irradiative heat loss. Our patented air curtain even prevents significant temperature drops when the access panel is open.

MINIMIZE TRANSEPIDERMAL WATER LOSS

Increasing humidity levels in the microenvironment also has been shown to help reduce transepidermal water loss and related cold stress in extremely low birth weight infants.** When humidification is required, the Isolette® 8000 introduces a new level of precision that helps you effectively regulate the humidification process. The key is the compact design of the evaporator chamber, which ensures that only a very specific amount of water is boiled at any given time. This accuracy eliminates the need for a high humidity alarm, further reducing unwanted stimuli that can stress fragile neonates.



Dräger sets the standard for thermoregulation with a host of performance features designed to contribute to a stable, cocoon-like environment for the baby. To ensure that the Thermo-Neutral Zone is maintained, the Isolette® 8000 enables you to continuously monitor both central and peripheral body temperature. This dual temperature monitoring gives you the most accurate early indicator of cold or heat stress, or temperature instability.*

*Prof. Dr. Albert Okken and Dr. Jochim Koch: Thermoregulation of Sick and Low Birth Weight Neonates. Springer-Verlag New York, 1995, ASBN 0-387-60169-4
**Onno K. Helder, Paul G. H. Mulder, and Johannes B. van Goudoever: Computer-Generated Versus Nurse-Determined Strategy for Incubator Humidity and Time to Regain Birthweight JOGNN, 37, 255 - 261 ; 2008. DOI: 10.1111/j.1552-6909.2008.00237.x

Minimal Stress

Introducing a hygiene concept that's pure genius.

ISOLATING CONDENSATE KEY TO INFECTION CONTROL

For years, neonatologists have carefully weighed the value of humidification in neonatal care. On the one hand, many neonatologists have relied on humidification to successfully reduce transepidermal water loss in extremely low birth weight infants. Yet others feel the increased potential for introducing bacterial infections poses far too great a risk. Now, the Isolette® 8000 introduces an innovative Condensation Management System specifically designed to further address infection control practices.

This latest technology from Dräger is an advanced system that collects the condensate from the incubator compartment and isolate it from the clean water supply of the humidity system. Because the condensate and clean water supply never mix, you don't have to worry about introducing bacteria from the condensate into the humidified air. What's more, the entire humidity system can be easily removed for quick, convenient cleaning after every patient use to maintain the most hygienic environment possible.



Stress prevention can take many forms. For example the Isolette® 8000 features a SoftBed insulating mattress to help regulate body temperature, while cradling the baby to reduce the potential for decubitus. To ensure maximum peace and quiet, the sound level within the patient compartment is less than 47 decibels. In addition, an alarm light and ramping alarm system help caregivers tend to alerts while reducing unwanted patient stimulation.



The completely self-contained humidification system is specially designed to ensure the easiest possible cleaning. Simply pull out the water reservoir, push out the evaporator, to quickly and conveniently autoclave and sterilize the system.

Lasting Comfort

Designed to reduce stress at every turn, bend and twist.

Long shifts can seem endless if your equipment isn't cooperating. That's why Dräger paid such close attention to the ergonomic details on the Isolette® 8000. The way we see it, the very foundation of smart quality of care in the NICU is a fresh, productive care team.

EASY TO MANEUVER

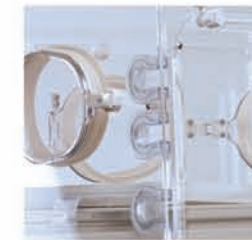
Lightweight, compact footprint, smooth trolley assembly and ergonomic foot-actuated brakes allow virtually effortless movement, even in congested NICU settings.

EASY ACCESS

Since you want to be able to visually assess your patient without disturbing them, the hood is specially designed and constructed to offer excellent visibility... and retain that clarity over time.

In addition, the baby is accessible from either side of unit, to facilitate care delivery while minimizing stress.

Generous storage space easily accommodates everything from X-rays to supplies to allow you to stay at the bedside and keep the NICU orderly.



EASY TO MAINTAIN WITH LESS DISRUPTION

Separate grommets for the ventilation tube, offer easy cleaning while helping hold the tube in place, reducing stress on the baby.

Check humidification system reservoir water levels at a glance, without even touching the unit.

A generous 1.6-liter water reservoir means less frequent refilling, while the convenient front-accessible reservoir enables refilling without disturbing the neonate.

Ergonomic knobs at either end of the unit enable smooth adjustment of the mattress, from zero to twelve degrees, facilitating Trendelenburg and reverse Trendelenburg positioning.

Super-smooth actuation of the Vertical Height Adjustment control delivers quiet, shock-free movement. It's one of the many ways the Dräger continues to set the standard for performance in Developmental Care.

Integrated Efficiency

When it all comes together, miraculous things happen.

Since neonates can't tell you what's wrong or when their condition is changing, it's essential to utilize technologies that can help you anticipate patient needs. Dräger's extensive experience in neonatal care and commitment to a smart NICU mean you can count on the Isolette® 8000 to work seamlessly within your care environment.

Its compact design makes efficient use of your care space while allowing convenient access from all sides. Its maneuverability helps you conveniently negotiate narrow pathways in an ever-changing care space. Plus care accessories, ranging from baskets, rails and IV poles, to skin probes, ventilation tubes and positioning aids for the baby work in harmony with our neonatal care solutions to help optimize care processes for maximum efficiency.

PATIENT MONITORING

We have created monitoring systems that sustain a healing environment for vulnerable neonates, while supporting family-centered care. Our goal is to provide the most relevant data moment-to-moment – at the bedside, remotely, and everywhere in between. From the moment the baby is born, through transport, and on to the NICU, our solutions support uncompromising care.



POINT-OF-CARE INFORMATION ACCESS

Thermomonitoring of both central and peripheral body temperature offers critical early insights into the baby's stability. The ability to access all vital signs, lab results and diagnostic images from a single bedside solution also speeds response time.

GENTLE RESPIRATORY SUPPORT

To protect the fragile state of the neonate's lungs, our neonatal ventilators help you stay on top of constant compliance changes. They help you avoid under or over inflation, helping protect developing lungs while assuring proper volume is delivered.

JAUNDICE MANAGEMENT

The ability to both easily screen and effectively treat jaundice is crucial to newborn health. Our focus on minimal stress therapies has led us to jaundice screening and therapeutic solutions that are non-invasive, simple-to-use, and highly effective.

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Physical Attributes (without options/accessories)

Height	132.6 cm to 152.7 cm (52.2 in to 60.1 in)
Width	104 cm (41 in)
Depth	75 cm (29.5 in)
Weight (without options /accessories)	93 kg (205 lb) ±3%

Hood Specifications

Standard hood includes:	<ul style="list-style-type: none"> – front and rear access panel – 6 access 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)
Soft bed mattress size	40 cm x 76 cm x 2.3 cm (15.7 in x 29.9 in x 0.9 in)
Mattress tilt	±12 ° (±1 °), continuously variable

Variable Height Specification

Casters	4 casters, 12.7 cm (5 in) all with friction brake
Storage volume	Approx. 80 l
Door closing mechanism	Soft-stop hinges
Opening angle of the doors	> 90 °
Variable height stand accessories	<ul style="list-style-type: none"> – 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	<ul style="list-style-type: none"> – Air temperature – Skin temperature (1 and 2) – Relative humidity – Oxygen concentration – Heater power
7-day trend	<ul style="list-style-type: none"> – Weight gain and loss

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 (without servo Oxygen Control)