

## Air-Shields® Isolette® TI500



**Infant Transport Incubator**

**Air-Shields®**  
A Dräger Medical Brand

# mobile intensive care unit

## Application

The Air-Shields® Isolette® TI500 Transport Incubator from Dräger Medical is a self contained, mobile, intensive care unit.

## Thermal Performance

Consistent air temperature is essential to the health of a premature infant. The Air-Shields® Isolette® TI500 Transport Incubator has a double wall design which reduces radiant heat loss from the infant during transport between departments or between hospitals.

## Integral Humidity

Humidity is extremely important, especially for babies less than 26 weeks in gestational age. An integral humidity pad helps minimize the infant's evaporative heat loss by providing 50 to 70 percent humidity in the patient hood for up to 12 hours.

## Command & Control

The controller features a display that is easy to read at any angle during transport. Displays for air and skin temperature help you maintain control and provide essential information about the infant's thermal support. Visual indicators for battery power status, power source and system alarm status are designed to keep the caregiver in command.

## Flexible Power Source

Regardless of whether it is an air or ground transport, power is the last thing you should worry about. The Air-Shields® Isolette® TI500 Transport Incubator from Dräger Medical operates on AC or DC power, using AC when available or switching to its internal battery when necessary. For extended length transports, the system can be configured with a second internal battery. And of course the Air-Shields® Isolette® TI500 Transport Incubator also operates on the external DC power found on board emergency transport vehicles.

## Access Made Easy

Access to the infant is quick and easy through the front access door, the head door, or through the Quiet Touch™ port access doors. The head door folds down and the mattress retracts out from the hood to provide access for emergency procedures. An iris port and six tubing ports offer ventilator tubing support and entry possibilities for sensors while keeping the temperature stable.

## Hood Options

You can choose either a standard hood or a high hood. While both have a low profile, the high hood offers two more inches of clearance through a larger front access door.

## Integrated Exam Light

An integrated exam light provides evenly distributed illumination to the mattress, assisting you in accurate patient assessment during transport.

## The Right Size and Weight

To make transport easy, the Air-Shields® Isolette® TI500 Transport Incubator is designed to fit into smaller spaces. System weight has also been reduced to enhance mobility and ease access in and out of emergency transport vehicles.



## Accessories

- Second Battery Option MU05598



- Accessory Shelf  
*Standard Hood*  
MU05619



*High Hood*  
MU05841

- IV Pole  
MU04500



- Conversion Kit to High Hood  
MU06094



## Technical specifications

	<b>TI500</b>	<b>TI500 with 147 stand</b>
Height	20 in (50.8 cm)	min- 32 in (81.3 cm) max- 44in (111.8 cm)
Width	20.8 in (52.7 cm)	22.3 in (56.5 cm)
Length	37.8 in (95.9 cm)	40.3 in (102 cm)
Weight <sup>(1)</sup>	108.5 lbs (49.2 kg)	159 lbs (72 kg)
Distance from vertical hood to mattress	Low Hood 8.25 in (21 cm)	High Hood 9.84 in (25 cm)
<b>Standard features</b>		
Double wall		
Skin temperature probe		
O2 inlet		
Examination lamp		
2 access doors		
2 disposable infant restraint straps		
1 Iris port		
2 Quiet Touch™ port doors		
6 tubing ports		
Locking power control receptacles		
DC cable		
2D or 2E size tank mounts	The tank mount permits mounting gas cylinders with a diameter of up to 4.5 in (11.6 cm) and up to 34 in (85 cm) in length	
Humidity Pad <sup>(2)</sup>		
<b>Optional features</b>		
Accessory shelf, IV pole, * High Hood, * Pressure Regulator and Flowmeter		
<b>General specifications</b>		
O <sup>2</sup> concentration range	21% to 58% minimum	
Humidity capacity	50% to 70%	
Noise level	<60 dBA <sup>(3)</sup>	
<b>Performance characteristics</b>		
Temperature set range	22.0° C - 38° C (71° F - 100° F)	
Temperature rise time	30 minutes	
Temperature variability	≤1.0° C	
Temperature overshoot	≤2.0° C	
Temperature uniformity	≤1.0° C	
Correlation of display temperature to set point at temperature equilibrium	≤ 2.0° C in 10-20° C ambients ≤1.5° C in 20-30° C ambients	
Humidity pad	Holds 400 ml.(14 oz) sterile distilled water with no significant spillage for up to 45° tilt in either direction.	
Air filter	Removes >99% of airborne particles greater than 0.5 micron diameter	
Relative humidity	50 to 70% for 10-12 hours using humidity pad	
Check calibration key	36.0° ± 0.1° C	
<b>Controller displays</b>		
On/standby	Illuminates when "On"	
Battery condition status	4 LED indication of battery charge condition 25-100%	
Power mode	Illuminates AC, DC, or external DC	
Heater power	4 LED indication of heater power; 25-100%	
Baby temperature ° C	Displays infant temperature	
Air temperature ° C	Displays incubator air temperature	
Set temperature	Illuminates when changing set temperature	
Alarm indicators	High temp, Power fail, Sensor fault, Heater temp, Air flow, Low DC	

# Technical specifications

## Battery specifications<sup>(4)</sup>

Incubator	1 battery standard (2nd optional)
Type	Vented rechargeable, 12 Vdc, 24 AH gel-type battery (lead acid)
Battery rating	Incubator maintains a differential of 25° C (77° F) between ambient and set point for 90 minutes on 1 battery or 180 min. on 2 batteries at full heater power
Life expectancy	200 complete charge/discharge cycles minimum
Charge time	10 hours per battery from full discharge

## Safety alarms

High temperature.	Actuates if incubator air temp. >39 ± 0.5° C
Sensor (temperature)	Actuates if sensor fails
Heater temperature	Actuates if heater temp >77° C (170° F)
Power fail	Actuates if AC fails and no DC power present, and activates if unit switches from AC to DC current
Air flow	Actuates for fan failure
Low DC	Actuates if DC < 10.5 Vdc, or external 28 Vdc falls below 25.5 Vdc nominal
Silence/reset	Silences the audible portion of alarms for 5 minutes, except Power fail. Resets Sensor & High Temp alarms after 100% conditions corrected. Resets intermittent power alert if unit switches from AC to DC current

## Environmental

Storage temperature	-40° C to 70° C ambient
Operating range	Sea level to 3 km (10,000 ft.) non-pressurized environment. Sea level to 12 km (40,000 ft.)-pressurized environment

## Relative humidity

Operating range	0% to 95% RH, non-condensing
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## Electrical

AC power requirements	110/120 V, 50/60/400 Hz - 220/240 V, 50/60/400 Hz
DC power requirements	11-13 V, 200 W (max) - 26-30 V, 200 W (max)
Observation lamp	35 footcandles - 4 inches above mattress 376 lux - 10 cm above mattress

(1) Weight includes one battery

(2) Humidity pad prevents spills

(3) In ambients of 50 dBA or less

(4) TI500 will maintain a differential of 25° C (77° F) between ambient and Set point for 90 minutes (one battery) or 3 hours (two batteries). At differentials <25° C (<77° F), the TI500 maintains temperatures for longer periods

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