

Neonatal Incubator

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T E N D E [®]



NEONATAL INTENSIVE CARE INCUBATOR

Built-In Color TFT Touch Screen Display

Intensive care incubator is used with a 7 inch color TFT touch screen display. This feature allows easy monitoring and correct entry of operation commands to the incubator. Guiding explanations that pop-up over the screen and animations allow incubator to be used effectively in a short period of time.

Color TFT Touch Screen Side Display (Optional)

can be controlled and monitored over a 10.1 inch side display. The large side display allows user to see the intense data such as Masimo Rainbow SET pulse oximeter (SPO₂) and non-invasive blood pressure measurement (NIBP) more easily.

Temperature Mode

Clinicians can easily set desired temperature value by selecting air or skin mode on the touch screen display. In the event that set values are out of range, the system generates an audible and a visual warning. In addition to this if air temperature increases too much, the system warns clinicians by an audible and a visual alarm and automatically shuts off the heater down.

Patented Servo Humidity System

Humidity conditions which has vital importance for newborn can be maintained quickly, effectively and reliably by patented humidity system. Use of hot steam technology and complete removal and auto-clavable of the humidity system increases hygiene and overall safety of the incubator.

Trend Observation

Clinicians can observe all air and skin temperatures, humidity and oxygen levels, the weight of the baby, and the heater power of the incubator over both displays for 2 hours, 8 hours, 1 day and 7 days period. It is possible to see 1 day and 7 days trends with 1 minute resolution on side display.

Servo Oxygen System (Optional)

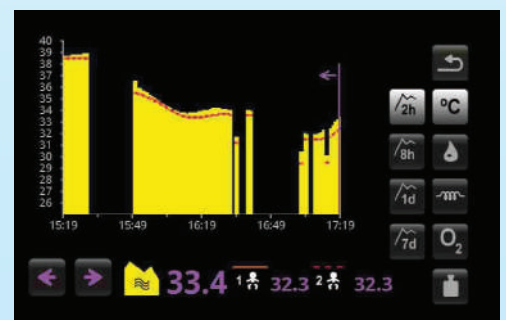
Silent operation, which increases sound level of the incubator. Monitoring continuously against oxygen leakage, even though there are no set values.

Integrated Digital Scale (Optional)

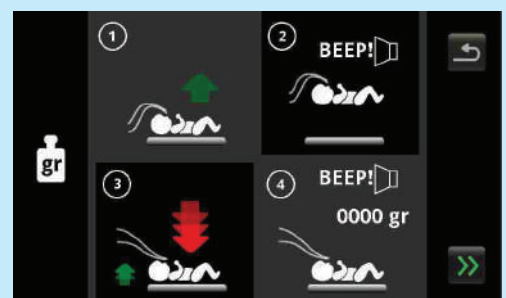
Weighing scale was designed considering safety and comfort of the baby. Just lifting the baby inside the canopy for a few seconds is enough to tare, then system performs weighing operations when baby lowered. Operation stages can be guided by animation from the screen with sound.



Ma ess Tilt



Trend



Digital Scale Instructions

Electronic Height Adjustment (Optional)

Clinician can adjust the height of incubator by using “lift” and “lower” pedals for a comfortable working height. Lifting and lowering operations can be made silently without vibration and without disturbing baby by means of motor. This operation can be implemented by foot pedals from front and rear side of the incubator.

Pulse-Oximeter (Optional)

Uses the most advanced Masimo Rainbow SET SpO technology. The advantage of this set is that it is also possible to measure perfusion index (PI) and pleth variability index (PVI), total hemoglobin (SpHb) methemoglobin (SpMet) carboxyhemoglobin (SpCO) values without taking blood samples from the newborn (Non-Invasive). This way the clinicians can reach accurate data by the help of TendeVAV which is the first implementer of Masimo Rainbow SET Technology in an incubator in the world.

NIBP (Non-Invasive Blood Pressure Measurement) (Optional)

Blood pressures and pulse values for baby can be measured with determined time intervals. Clinicians can determine set values and activate audible and visual alarms.

Mom’s Bosom Mode & Air Curtain

When baby should be taken out for breast feeding, skin temperature can be measured by selecting “Mom's Bosom Mode”. Air Curtain can be activated in order to keep the hot air in the incubator.

Rotatable Drawers

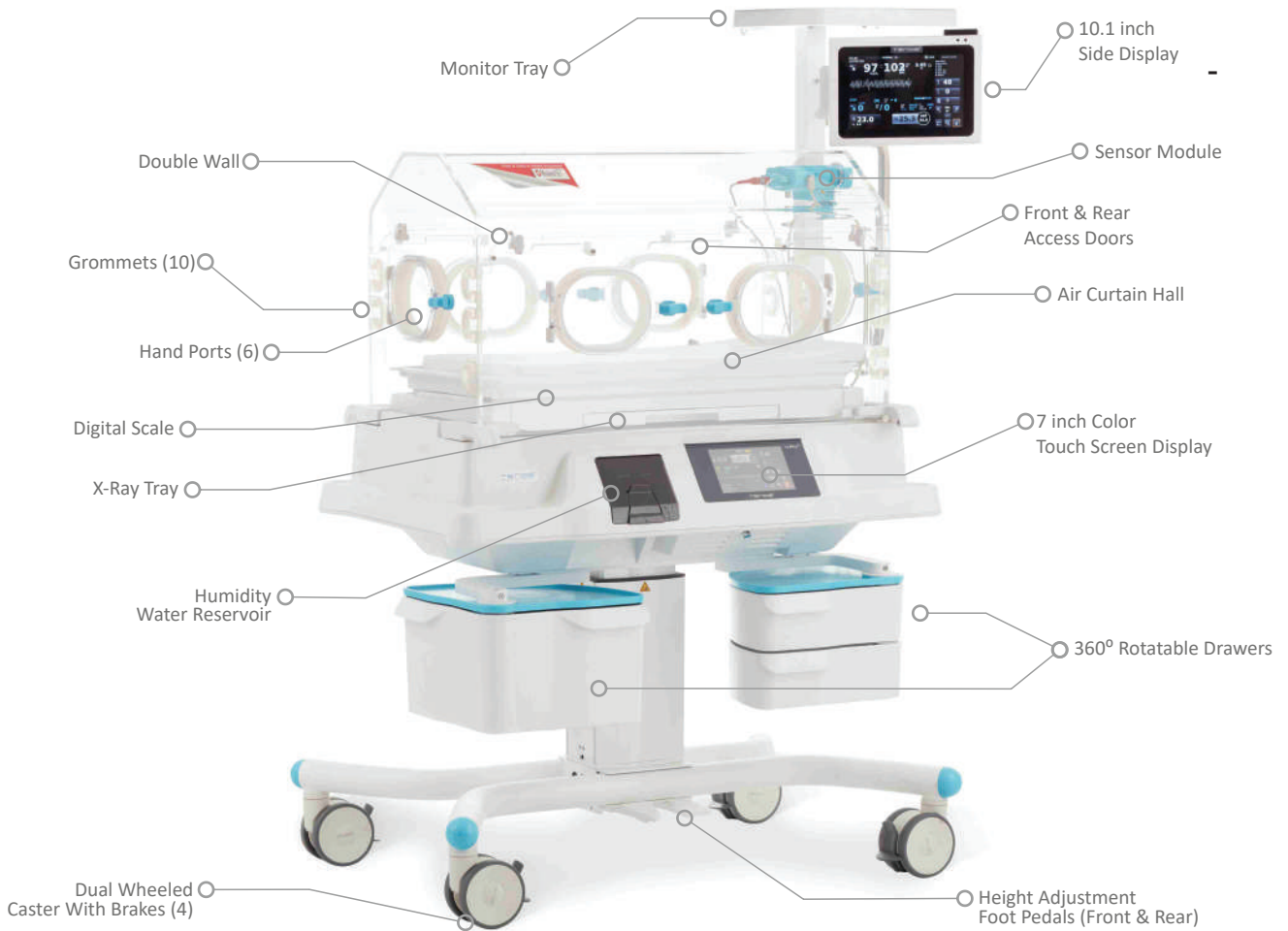
Has one big and two small 360° rotatable drawers that can be accessed from front and right or left side of the incubator. This feature makes the drawers silent and accessible from sides of the incubator easily even the front and door is open.



Sensor Module



Side Display



Technical Specifications

GENERAL SPECIFICATIONS

Built-in Display	7 inch Color TFT Touch Screen Display
Side Display (Optional)	10.1 inch Color TFT Touch Screen Side Display
Sizes	Height (Standard): 137.5 cm, Width: 108.5 cm, Depth: 73.5 cm Min. 134 cm Max. 153 cm
Electronic Height Adjustment (E-Base) (Optional)	Standard; 107.5 Kg, with Height Adjustment (E-Base) Option; 111.5 Kg
Weight	4 Dual Wheeled Casters with Friction Brake (Diameter: 125 mm)
Wheels	Minimum 1 Hour Monitorization After Power Failure
Monitorization Backup	Adjustable 4 Levels
Alarm Sound Level	220-240V ± %10, 50/60 Hz, Max 675 W
Power Requirement	

OPERATING CONDITIONS

Temperature	18°C to 30°C
Humidity	0% to 80% (Noncondensing Relative Humidity)

HOOD SPECIFICATIONS

Double Wall	Yes
Front and Rear Access Doors	Width; 85.5 cm x Height; 35.3 cm (Each Doors)
Mattress	Biocompatible, Cytotoxicity and Skin Irritation Free, Fire Retarded, Water Proof & Washable (ISO 10993-10 Sensitivity Reported, ISO 10993-5)
Mattress Size	Length; 74 cm x Width; 38 cm x Height; 3 cm
Mattress Tilt (Electronic Control)	± 12 Degrees, Continuously Variable with 1 Degree Resolution
Hand Ports	6 Pcs
Tubing Ports (Grommets)	10 Grommets
Opening Angle of the Doors/Ports	~180°
Operating Noise Level	< 45 dBA (When Servo Oxygen in Use Max 48 dBA)
Air Flow Velocity	< 10 cm/s
Air Filter	0.1 Micron, 99.9% Efficiency, Antibacterial, Easy replaceable
Air Curtain	Yes
CO ₂ Concentration	< 0.5%

TEMPERATURE

Temperature Control Modes	Air & Skin
Air Temperature Control	20°C to 39°C with 0.1°C Resolution (> 37° C with Approval)
Skin 1 Temperature Control	34°C to 38°C with 0.1°C Resolution (> 37.5° C with Approval)
Air & Skin 1 - Skin 2 Temperature Display Range	20°C to 42°C with 0.1°C Resolution
Temperature Rise Time	< 35 Minutes
Heater Output Indication	0% to 100% (in 5 levels)

SERVO HUMIDITY

Humidity Control Range	30% to 95% with 1% Resolution
Humidity Display Range	0% to 100% with 1% Resolution, Accuracy ±10%
Humidity Water Reservoir Capacity	2000 ml
Humidity Operating Time Without Refilling	24 Hours Max. 95% Humidity

SERVO OXYGEN (OPTIONAL)

Oxygen Control Range	21% to 65% with 1% Resolution
Oxygen Display Range	15% to 100% with 1% Resolution

INTEGRATED DIGITAL SCALE (OPTIONAL)

Weight Range	100 gr to 10 kg (10,000 gr)
Weight Accuracy	± 5gr
Weight Display Resolution	1 gr

SpO₂ & PULSE OPTION (Masimo Rainbow SET)

SpO ₂ Display Range	0-100% SpO ₂ with 1% Resolution
Pulse Rate Display Range	0 to 240 bpm with 1 bpm Resolution
PI, Arterial Pulse Signal Strength	Perfusion Index 0 to 20 Values
PVI, Pleth Variability Index	0 to 100 Values
SpMet, Methemoglobin Saturation	0% to 100%
SpCO, Carboxyhemoglobin Saturation	0% to 100%
SpHb, Total Hemoglobin Concentration in Arterial Blood	0% to 25% g/dL, 0% to 16% mmol/L

NIBP OPTION (Method of Measurement; Oscillometric)

Blood Pressure Range	Systolic 40-130 mmHg, MAP 26-110 mmHg, Diastolic 20-100mmHg
Cuff Pressure	Measurement Range; 0-300 mmHg, Accuracy; ± 3 mmHg (0-50 °C)
Cuff Deflate Rate	Deflation Step Size Varies with Heart Rate, Cuff Pressure and Cuff Volume
Initial Inflation Pressure	90 mmHg (Default), Variable from 60 to 140 mmHg
Self-Adjusting Inflation Pressure	Previous Systolic + 20 mmHg
Clinical Accuracy (Meets accuracy requirements of...)	ANSI/AAMI SP10:2002(R)2008, EN1060-4:2004 and ISO 81060-2:2009/2013
Startup Initialization Period	6 Seconds
Long Term Interval Periods	1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 240 Minutes

TREND PARAMETERS

2, 8, 24, 168 hours (7 Days) Trend Parameters for...	Air Temperature, Skin Temperature (Skin 1 and Skin 2), Relative Humidity Oxygen Concentration, Weight, Heater Power, NIBP
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ALARMS (Audible & Visual)

Air	High/Low Temp., Over Temp., Sensor Failure
Skin 1 (In Skin Mode)	High/Low Temp., Over Temp., Skin 1 Read Fault, Skin 1 Disconnected
Humidity	High/Low Humidity, Low Water Level, Place Water Case, Humidity Sensor Fault
Oxygen	High/Low Oxygen, Oxygen System Fault, Oxygen Sensor Fault Oxygen Leakage
SpO ₂ , Pulse Rate	High/Low Values, Related Security Alarms
Alarms Indicators (Audio & LED Lights)	LED; Yellow & Red Lights, Audio; Different Sounds for Different Alarms
Others	Motor Speed Fault, Heater Temp. Fault, Power, Low Battery, Motor Speed Fault, Sensor Module, Excess Weight, etc.



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