

GINEVRI
quality for life

GINEVRI

Creates advanced
medical solutions
for neonatal care



NEONATAL CARE

PRODUCT CATALOGUE

ABOUT GINEVRI

Advancing Neonatal Care Since 1954

At GINEVRI, we're dedicated to improving neonatal care with innovative medical equipment. With our 70 years of experience, we continue to lead by integrating cutting-edge technologies into our solutions. Explore our products and join us in our mission to provide the best care for newborns.

Certification

At GINEVRI, we're committed to quality and innovation. Our dedication to research and development has earned us accreditation to ISO 9001:2015 and EN ISO 13485:2016 quality standards. Our products proudly carry the CE marking in compliance with European Medical Directives.

Our Location

Located just 20 km from Rome in the industrial area of Albano Laziale, GINEVRI's headquarters and state-of-the-art manufacturing facility are designed for efficiency and precision. Our in-house production, including advanced CNC machining centers, ensures that we meet the highest international quality standards. From assembly and testing to logistics and after-sales service, we operate in a modern environment.



OGB POLYTREND

Neonatal incubator



OGB POLYTREND



OGB POLYTREND

Technical Specifications

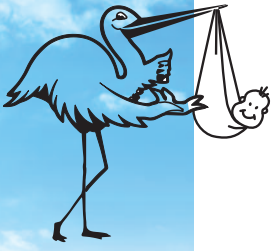
MODEL	OGB POLYTREND
CE MARK	Yes
MOBILE OR TRANSPORT	Mobile
TEMPERATURE CONTROL	
Air:	Servo control
Range (increments):	20-37°C override 39°C (0.1°C)
Skin:	Servo control
Range (increments):	25-37°C override 39°C (0.1°C)
TEMPERATURE DISPLAY	LCD
Air temp.:	Range: 12 - 45 °C
Skin temp.:	Range: 12 - 45 °C
Peripheric skin temp.:	Range: 12 - 45 °C
TRENDS VISUALIZATION	Air Temp., Skin Temp., Peripheral Skin Temp., Relative Humidity, Oxygen Concentration(opt), Weight(opt), SpO2 (opt), Heart rate (opt)
RELATIVE HUMIDITY DISPLAY	LCD
	Range: 10 - 99 %
RELATIVE HUMIDITY CONTROL	Optional
	Range: 15 - 95 %
OXYGEN CONCENTRATION DISPLAY	LCD
	Range: 21 - 99 %
OXYGEN CONCENTRATION CONTROL	
O ₂ inlet ports/ controllers:	2/ maximum 31% and 52%
Servo control (OPTIONAL):	Range: 21 - 65 % in incubator hood Range: 21 - 100 % in oxygen hood
ALARMS - VISIBLE AND ACOUSTIC	
Low heart rate	Optional
High heart rate	Optional
Low SpO ₂	Optional
High SpO ₂	Optional
High air temperature	Yes
Low air temperature	Yes
High skin temperature	Yes
Low skin temperature	Yes
Fan failure	Yes
Air probe failure	Yes
Skin probe failure	Yes
Probe disconnection	Yes
Max temperature	Yes
Power failure	Yes
High oxygen concentration	Optional
Low oxygen concentration	Optional
High humidity	Optional
Low humidity	Optional
SpO ₂ - Heart rate	Optional
BACKUP THERMOSTAT	Yes
HEATER POWER INDICATOR	Vertical bar, 10% increments
HAND PORTS	2 main doors, 6 port holes
TUBING PORTS	2 respiratory, 7 accessory
PHOTOTHERAPY	Optional
INTERNAL NOISE	42 dB
LINE POWER	230Vac 50/60 Hz
INTERNAL BATTERY	4.8 V backup for power failure alarm
DOUBLE WALL	Optional
BABY SCALE	Optional
DIMENSIONS	
Incubator, W x D x H	83 x 64 x 69 cm
Fixed height Trolley, W x D x H	86 x 70 x 70 cm
Height adjustable Trolley, W x D x H	86 x 70 x (63 - 83) cm
Vertical hood to mattress distance	45 cm
Mattress, W x D	62 x 35 cm
Castors diameter	10 cm
WEIGHT	
Incubator	37 kg
Fixed height Trolley	41 kg
Height adjustable Trolley	55 kg

BABY SHUTTLE

Transport incubator

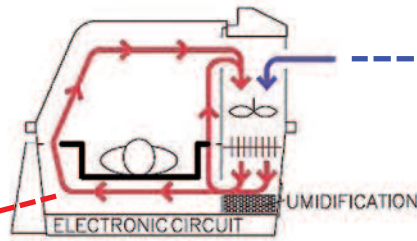


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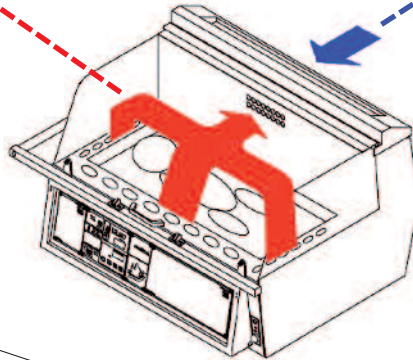


Baby Shuttle

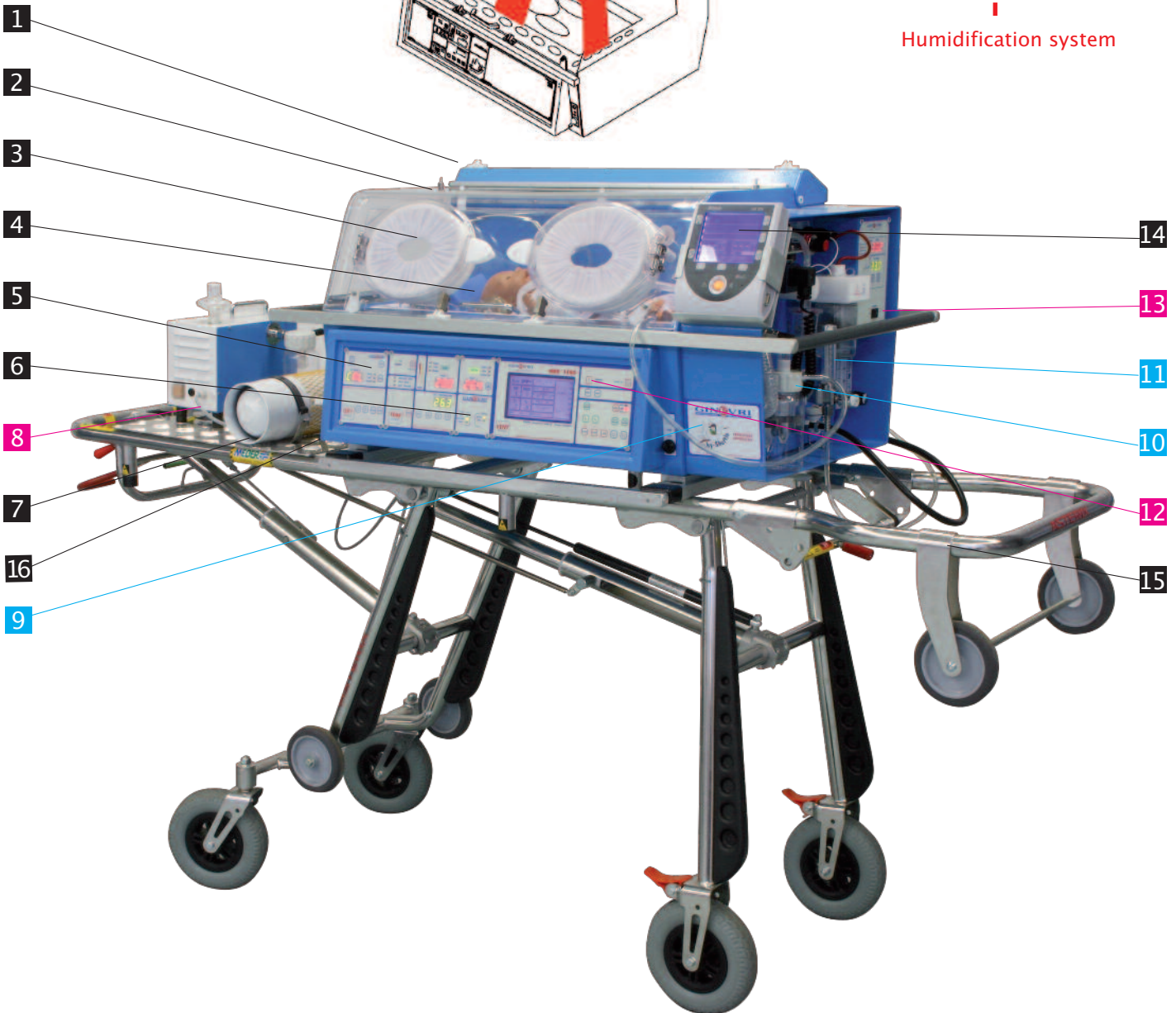
Circulation of the microclimate inside the hood



External air inlet with filter

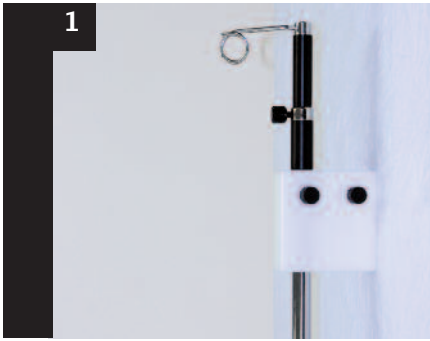


Humidification system

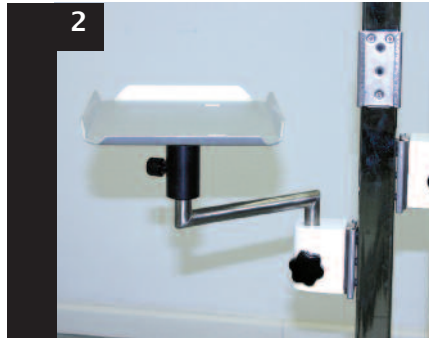


The quantity and type of modules that can be integrated depends on the base module.
 The NORMAL CARE can mount all the accessories for this model (indicated by black colour).
 On the SPECIAL CARE all the NORMAL CARE modules are applicable along with some additional specific modules for a more complete care of the patient (marked by blue colour).
 Last, the INTENSIVE CARE can mount all the possible modules for the more difficult and intensive care transports (black, blue and fuchsia).

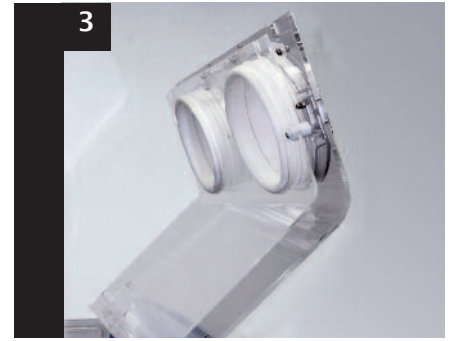
■ “Baby Shuttle Normal Care”



1
IV Pole.
(PN 4389A70).



2
Pivoting Shelf.
(PN 10638A70).



3
Double Hood. (PN 6842A70).
Grants maximum thermal isolation.



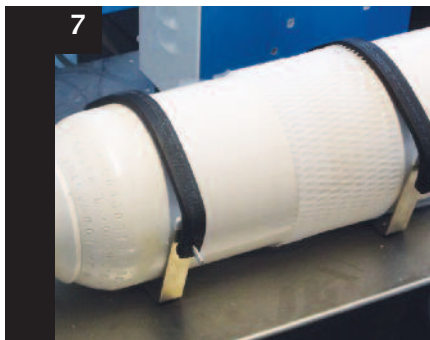
4
Head Immobilizer.
(PN 7749).



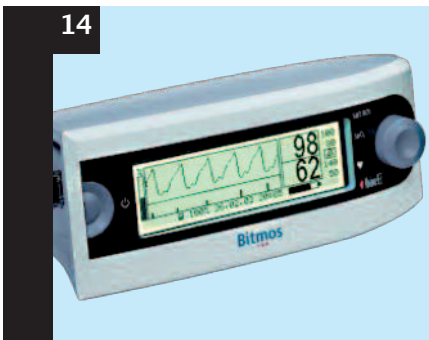
5
O₂ Module. (PN 10396A70).
Monitors the O₂ concentration inside
the hood and in the ventilator patient
circuit.



6
Skin Module.
(PN 7632). Thermoregulation of the
patient skin temperature.



7
Cylinder Support. (PN 10365A70, 5L)
(PN 5367, 3L).



14
Pulsoximeter SAT 805. (PN 8100).



15
Standard Trolley. (PN 2422).



15
Self Loading Trolley FROG PLUS.
(PN 13084A70). Other models:
on request.

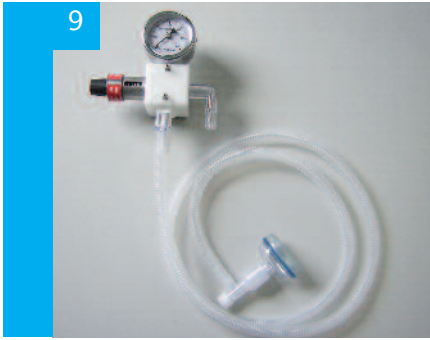


15
Trolley for Helicopter. (PN 7425).

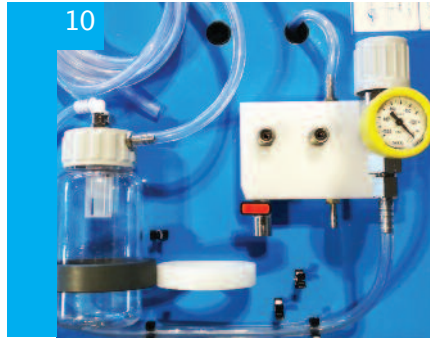


16
Electric Wire for Ambulance – 12 V.
(PN 10432A70).

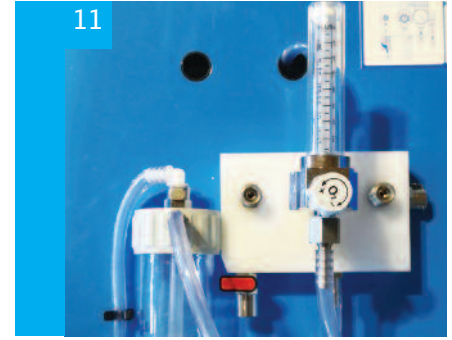
“Baby Shuttle Special care”



9
Baby Start.
(PN 12079A70) (PN 11396A70).
Neonatal manual resuscitator.
Reanimation is done at positive pressure by mask or endotracheal tube with manual control and free expiration. PIP and PEEP are adjustable separately and indicated on the manometer.



10
Suction Unit.
(PN 6004A) (PN 11366A70).
This unit controls suction operation and has a vacuummeter that allows to regulates the flow.



11
Oxygen Therapy.
(PN 7737)
(PN 422).

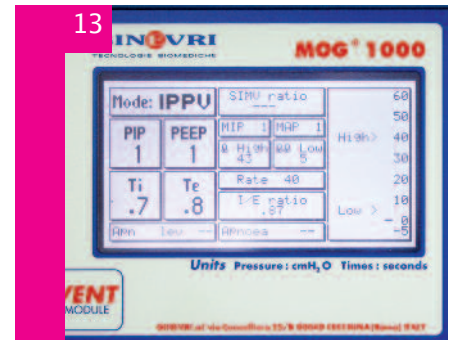
“Baby Shuttle Intensive care”



8
Compressor.
(PN 10437A70).
Aspirator.
(PN 10733A70).
Compressor/Aspirator.
(PN 10437C70).



12
Humidifier.
(PN 11392A70).
This unit allows to control the humidification of gases used by the ventilator.



13
MOG1000.
(PN 11391A70). Continuous flow neonatal emergency respirator.
Ventilation Modes: CPAP, IPPV, SIMV with trigger.

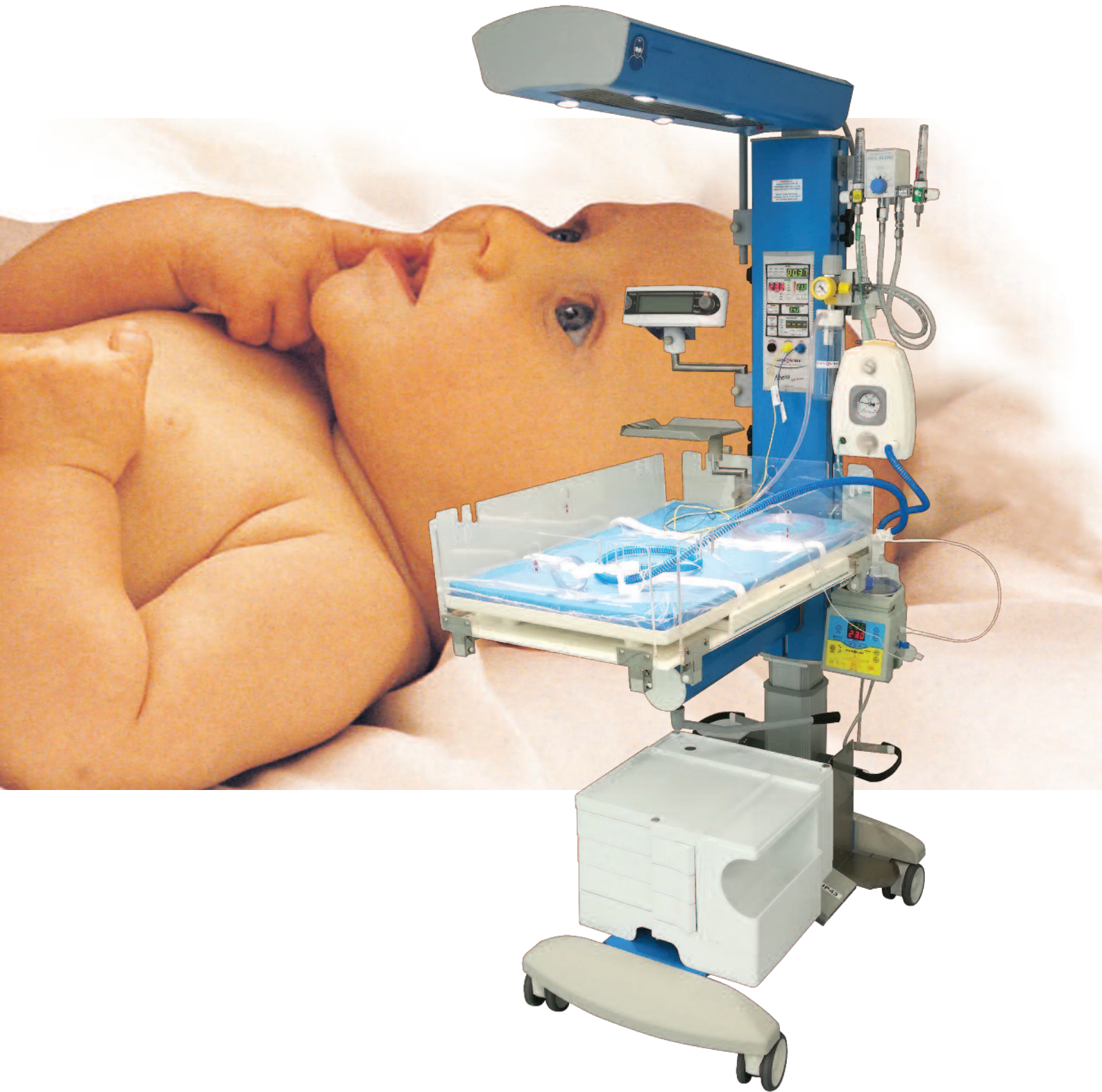
Technical Specifications

Transport incubator Baby Shuttle is manufactured following the CEI EN 60601-1 and CEI EN 60601-2-20 regulations and the Medical Devices Directive 93/42/CEE and following updates and is approved by the Italian Airplane Register (RAI) for Airway transport.

MICROPROCESSOR	Yes
Temperature Control	
Air:	Servo control
Range:	20-37°C override 38°C (0.1°C steps)
Skin:	Servo control (optional)
Range:	25-37°C override 38°C (0.1°C steps)
Battery Autonomy	90 min
Alarms	High and low Temperature, Max Temperature, Fan Failure, Main Failure, Low Battery
Tilting Bed	+ 7°
Noise	< 50 dB
Max CO ₂	< 0.5%
Doors	1 Main, 2 portholes, 1 Side
Material	Body in Aluminum, Hood in Plexiglass
Max Load	10 Kg
Dimensions	100x54x49 cm
Weight	50Kg (depending on model)
Power Supply	100-240 Vac 50/60 Hz, 12/24 Vdc 22 Amp EX, Internal Battery 36Ah
Power	490W (Normal), 530W (Special), 580W (Intensive)
Safety Class	I BF

ALHENA





Infant Warmer





ALHENA

Technical details

-  Blue Power Led
-  Daylight Led
-  Halogen Lamps
-  Heating element



MODEL	Alhena	Alhena Plus
CE Mark (Medical Device)	Yes	Yes
Type	Infant Warmer	Infant Warmer
Heating	Quartz heating tube 1 x 450W	Quartz heating tube 1 x 450W
Temperature Controls	Automatic, Manual, Pre-heating	Automatic, Manual, Pre-heating
Set Temperature	Digital, 23–38	Digital, 23–38
Indicator, °C		
Indicator of Temperature taken from the patient, °C	Digital, 18–45	Digital, 18–45
Type of Phototherapy	–	Power Leds
Radiation for bilirubin from 420 to 480 nm, $\mu\text{W}/\text{cm}^2/\text{nm}$ at 80cm	–	32
Phototherapy Lamp	NO	6 Blue Power Leds
Power LED use lifetime (hours)	–	20.000
Therapy Time Counter	YES (electronic)	YES (electronic)
Area of Phototherapy illumination, cm^2 (in^2) at 80cm	70x40 (27x16)	70x40 (27x16)
Illumination Lamp	4 Halogen lamps, each 20W	4 Daylight White LEDs
Cooling Fan	YES	YES
Electronic Control Panel	YES	YES
Overhead Fixture, L x W x H, cm (in)	82 x 28 x 11 (32 x 11 x 4,3)	82 x 28 x 11 (32 x 11 x 4,3)
Height from the ground of the Overhead Fixture, cm (in)	177–197 (69–78)	177–197 (69–78)
Footprint, m^2 (ft^2)	0.4 (4.3)	0.4 (4.3)
Wheel Diameter, cm (in)	10 (3.9) with brakes	10 (3.9) with brakes
Bed Dimensions, cm (in)	70x47 (27x18.5)	70x47 (27x18.5)
Heat Controlled Mattress	Optional	Optional
Bed height from Overhead fixture, cm (in)	80 (31.5)	80 (31.5)
Bed height from the ground, cm (in) (Fix model)	104 (40.9)	104 (40.9)
Bed height from the ground, cm (in) (Height-Adjustable)	100–120 (39–47)	100–120 (39–47)
Max Dimension, cm (in) (Fix model)	58x112x193 (22.5x44x76)	58x112x193 (22.5x44x76)
(Height-Adjustable model)	58x112x208 (22.5x44x81.7)	58x112x208 (22.5x44x81.7)
Bed Inclination	15° on 360°	15° on 360°
Height of folding side walls, cm (in)	20 (7.9)	20 (7.9)
Weight, kg (lb)	60 (132)	60 (132)
Alarms	Acoustic and visual	Acoustic and visual
Power Supply	230 Vac, 50–60 Hz	230 Vac, 50–60 Hz
Power Consumption	850W	850W

AQUATHERM

Heating mattress

NIDO

Baby comfort program



Aquatherm

A soft and warm nest for the little patient to make him feel like in the maternal womb...

When the baby is born, also the premature one, it requires different treatments destined to facilitate the growth phase and especially to avoid trauma that could affect the physical state of the baby.

At this stage it is very helpful to use "Aquatherm" because it provides an additional beneficial source of heat to the little patient.

In addition, the Baby Bundle, flexible and easily shapable, is a gentle and effective aid to the newborn to find his natural position.

The "Aquatherm" system is portable, lightweight and easily positionable:

The Control Unit is equipped with feet that make it stable on any flat surface as well as a support to place it on vertical surfaces.

The Mattress can be placed on a bench care (baby changing table) as well as inside an incubator or wherever you need a heated flat surface. The "Aquatherm" system, by virtue of its property to store heat, can be used with the baby crib "Nido" during the transport between different wards within the hospital.



Control Unit

Unit that proportionally servo-controls the rate of heat supplied to the mattress in order to reach and maintain the temperature set by the operator. It is provided with controls and alarms to ensure at the same time easiness of use and maximum reliability of the system.



Heating mattress

The mattress is the result of a new technology "Aqualgel", that offers all the advantages of a soft and impressed surface around the newborn. It is effective in minimizing the vibration and heat loss towards the surface and able to store the heat even when the control unit is not powered or in case of internal transport between wards.



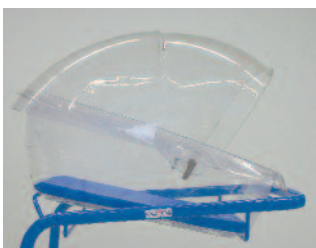
Nido



The baby crib “Nido” has been studied especially for the comfort and the safety of the newborn and to offer the most practical and functional solution to the health operator. The trolley carrying the baby crib has a solid and safe structure and is made of epoxy painted steel. The baby crib “Nido” has been designed to allow the mother to stay near his child allowing her to remain comfortably relaxed in bed. The rounded shape of the hood aims to guarantee the safety of the newborn and of the nurse while its non-toxic material grants an easy cleaning.

The exclusive cover system guarantees an advanced comfort and the best protection also during transports within the hospital. The standard “Nido” includes a trolley equipped with four castors (two of which are with brakes), a mattress made of fire retardant material and a plastic bassinet that can be disinfected. More than a baby crib, “Nido” has been created to be a real neonatal care system, offering a wide range of accessories.

The bassinet can be placed in Trendelenburg and Fowler position in the simplest way while the handles of the baby crib hood blocking system, positioned at the baby crib’s sides, allow a free and complete rotation of the hood permitting a complete access to the newborn. The structure in transparent plastic material also allows the newborn to receive phototherapy treatment without the need of being moved. The complete freedom of movement is granted by the innovative handle in the frontal position that allows the observation of the patient during transports.



Nido & Aquatherm

Aquatherm

Technical Specifications

Power Supply	230 Vac, 50–60Hz
Maximum Power	140 VA
Safety Class	I B
Total weight	4.2 Kg
Dimensions	
Control Unit	19 x 15 x 19 cm
Heating Mattress	35 x 61 x 3 cm

Nido

Technical Specifications

Tilting (Trendelemburg and Fowler)	+/- 12°
Max. Load	10 Kg
Dimensions	80 x 50 x 92 cm
WEIGHT	
trolley + cradle	12 kg
hood	3 kg
Castors:	4
Diameter:	8 cm
Number of breaks:	2



NAOS AND NAOS PLUS

Phototherapy lamp





Naos and Naos Plus

The new NAOS Lamps are the product and result of recent studies carried out on the efficiency of the new Power LEDs for the treatment of hyperbilirubin in newborns. The research in this field has permitted the creation of a new line of GINEVRI phototherapy lamps.

The new lamps are equipped with 6 Power Blue LEDs for treatment of jaundiced newborns which emit light energy in wavelengths centred around 455nm. The resulting power, 5 or 6 times more than the normal fluorescent lamps, greatly increases the treatment's efficiency with a total irradiance max > 1.500 µw/cm² and an area of phototherapy illumination at 80 cm of 70x40 cm² (27x16 in²). Illumination is provided by 4 Day-light White LEDs which make a clear and accurate observation of the newborn possible. The new line of phototherapy lamps is presented in two versions the NAOS and NAOS PLUS.

The NAOS PLUS has an electronic module which

controls all the phototherapy and illumination functions and makes it possible to manage multiple therapy cycles. The control panel displays:

- The time set for the current therapy cycle;
- The time remaining of the therapy cycle;
- The total therapy time;
- The lamp life;

The NAOS, a more simple model, is equipped with an ON/OFF switch and a mechanical time counter to check the life of the LEDs and of the therapy hours carried out.

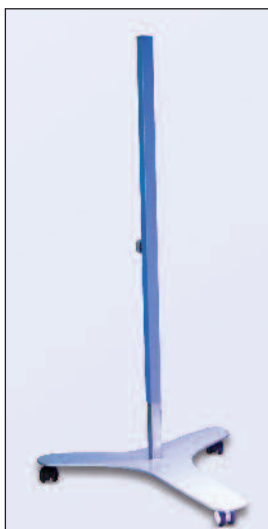
Both of these lamps can be positioned on the incubators or mounted on a dedicated height adjustable stand (optional) with a Y base which makes it more manoeuvrable also in very crowded crèches and simplifies the positioning of the lamp above the incubators.

Technical Specifications

MODEL	NAOS PLUS	NAOS
Power LED Useful Lifetime in hours	over 20000	over 20000
Electronic Control Panel	YES	NO
Weight, kg (lb)	6 (13)	6 (13)
Dimension, cm	58X29X11	58X29X11
Power Supply	230Vac, 50-60 Hz	230Vac, 50-60 Hz
Power Consumption	75 W	75 W



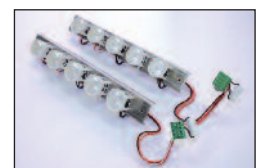
Accessories and Consumables



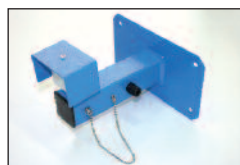
12129A70
Stand (135-180 cm)



1645
Mask for Phototherapy
(50 pcs)



12172A73
Optical Unit
Phototherapy
and Illumination Leds
(2 pcs)



12423A70
Wall Support



1749
Radiometer RM400

8068BCB rev.01



MIZAR

Double phototherapy
lamp and radiant heating



Mizar

Double phototherapy lamp and radiant heating

The MIZAR phototherapy lamp is a dedicated equipment for treatment of hyperbilirubinemia, newborn hypothermia and thermal condition control. One of its kind, the apparatus consists of two overhead lights distributing energy from above to below enabling a double phototherapy effect and radiant heating. MIZAR is indeed suited for first aid applications due to the great deal of therapeutic energy released in a short time onto the young patient for hyperbilirubinemia treatment according to the intensive phototherapy* American Academy of Pediatrics (AAP) guidelines, in addition to an effective servo-controlled heating.

MIZAR consists of:

- an over-head light;
- a lower-head light;
- a transparent round-shaped PET plastic cradle
- dedicated trolley with different cradle positions (Trendelenburg & Fowler) and four pivoting wheels (two of which braked);
- optional AQUAGEL heat storage mattress; permeable to phototherapy rays.

Over-head light includes:

- control panel;
- 6 blue power phototherapy LEDs: total max. patient irradiance > 1.000uw/cm²;

- 4 white power illumination LEDs;
- led optical units lifetime > 20.000 hrs;
- n° 1 quartz tube for heating 450 W radiant;
- patient temperature probe.

Lower-head light includes:

- 6 blue power phototherapy LEDs: total max. patient irradiance > 2.500uw/cm²;
- led optical units lifetime > 20.000 hrs;
- 1 transparent plastic cover built to safety standards.

A simple and user-friendly microprocessor control panel is located at the front of the overhead light having the following functions:

- servo-controlled skin temperature setting;
- thermal radiation power setting (%) in manual thermoregulation mode;
- preheating mode with thermal power set at 30% according to patient temperature;
- phototherapy time mode setting;
- electronic counter indicating remaining/total patient therapy application and optical group total life;
- white light illumination switch;
- active acoustic/visual alarms;
- "Set" key to define settings and avoid unintentional changes.

Technical Specifications

Power Supply	230Vac, 50-60 Hz
Power	550W
Weight	46 Kg
Dimensions	50 x 105 x 180 cm

Upper ceiling light

Lower ceiling light



Accessories and consumables



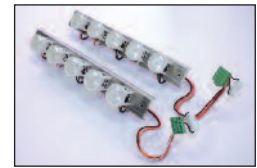
11895A70 Basket



1645 Phototherapy Mask (50 pcs)



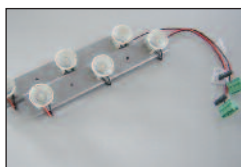
11730A73 Skin Probes Blue (6 pcs)



12172A73 Optical Unit Phototherapy and Illumination Leds (2 pcs) Upper ceiling



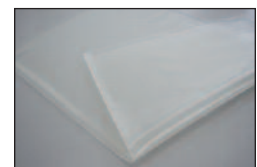
565 Sensor probe fixer Gel Reflect Ø38 (24 pcs)
11814A73 Sensor probe fixer Gel Reflect Ø26 (24 pcs)



12172B73 Optical Unit Phototherapy Leds (2 pcs) Lower ceiling



1176 Decubitus sheet 66x35 cm (100 pcs)



11282A73 Gel mattress 60x34x0,5 cm (1 pcs)

8089BCB rev.04

*American Academy of Pediatrics, guidelines for clinical practice, the Subcommittee on hyperbilirubinemia: Management of hyperbilirubinemia in the newborn infant 35 or more weeks of gestation, 2004; 297-316

MIRA

Phototherapy Lamp





Mira

The challenge of an advanced technology

The phototherapy lamp MIRA, uses last generation POWER LED technology to produce therapeutic blue light (425–475nm) and fiber optics to dose the therapy on infant babies with jaundice. It has a light and compact design with a “soft touch” control panel where are present warnings, alarms and a wide display indicating therapy times, visible up to a 7m distance. The therapeutic radiation, produced by a HIGH POWER LED, is transferred, through a flexible fiber optic cable, to a small dimension pad that must be positioned in contact with the patient’s skin. The compact design makes possible to perform the therapy directly in the baby bed as well as for home care. If necessary it can be used combined to a standard phototherapy lamp granting maximum efficiency and greater reduction of patient therapy exposure. The phototherapy lamp MIRA is portable and can be placed on a shelf or a trolley.

MEETS THE AAP GUIDELINES

One of the features of this product is to have the possibility to chose between conventional therapy and “intensive phototherapy” (AAP 2004*).

- Intensity: 28 $\mu\text{W}/\text{cm}^2/\text{nm}$ (NORMAL MODE)
45 $\mu\text{W}/\text{cm}^2/\text{nm}$ (INTENSIVE MODE)
- Spectrum: 425 – 475 nm spectrum, matching the peak absorption wavelength at which bilirubin is broken down (458 nm)**
- Coverage Area: Delivers phototherapy over a larger effective treatment area than other fiber optic devices.
- Distance: In contact with infant’s skin, eliminating distance deficiencies entirely.

EFFICIENCY AND EASE OF USE

LED technology reduces costly and time-consuming bulb replacements by providing over 20,000 hours of use at high intensity. The Control Panel, easy and intuitive, allows controlling all the parameters of the therapy. The compact design allows transport to different locations and the pad fits easily within existing patient enclosures, such as cribs, bassinets, radiant warmers and incubator.

In accordance with ISO 10993-1 on Biological biocompatibility use the Pad with the protective Cover (code 13010A20)

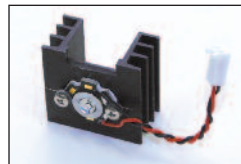
Consumables



1645
Eye Mask (Pack of 50 pcs)



13010A20
Pad cover (Sterile, Order multiple: 10 pcs)



12879A73
Optic Group (1 pc)

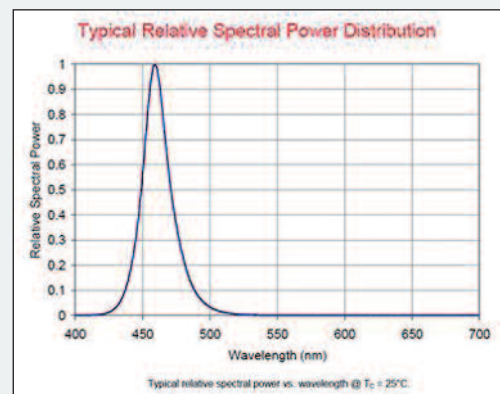


7291A72
Pad with Cover (1 pc)

Technical Specifications

Power Supply	230 Vac, 50–60 Hz
Power	40 VA
Dimensions (WxHxD)	15x20x25 cm
Weight	3kg
Noise	< 40dB(A) at 100cm
LED Source	Led 10W Blu 460nm
Pad	Cable length 1,5m Surface area(WxH) 130x200mm Effective surface(WxH) 110x160mm
INTENSIVE mode:	2250 $\mu\text{W}/\text{cm}^2$ (45 $\mu\text{W}/\text{cm}^2/\text{nm}$)
NORMAL mode:	1400 $\mu\text{W}/\text{cm}^2$ (28 $\mu\text{W}/\text{cm}^2/\text{nm}$)
Warnings and alarms:	Main Failure, Therapy End, Broken LED and Pad Disconnection.

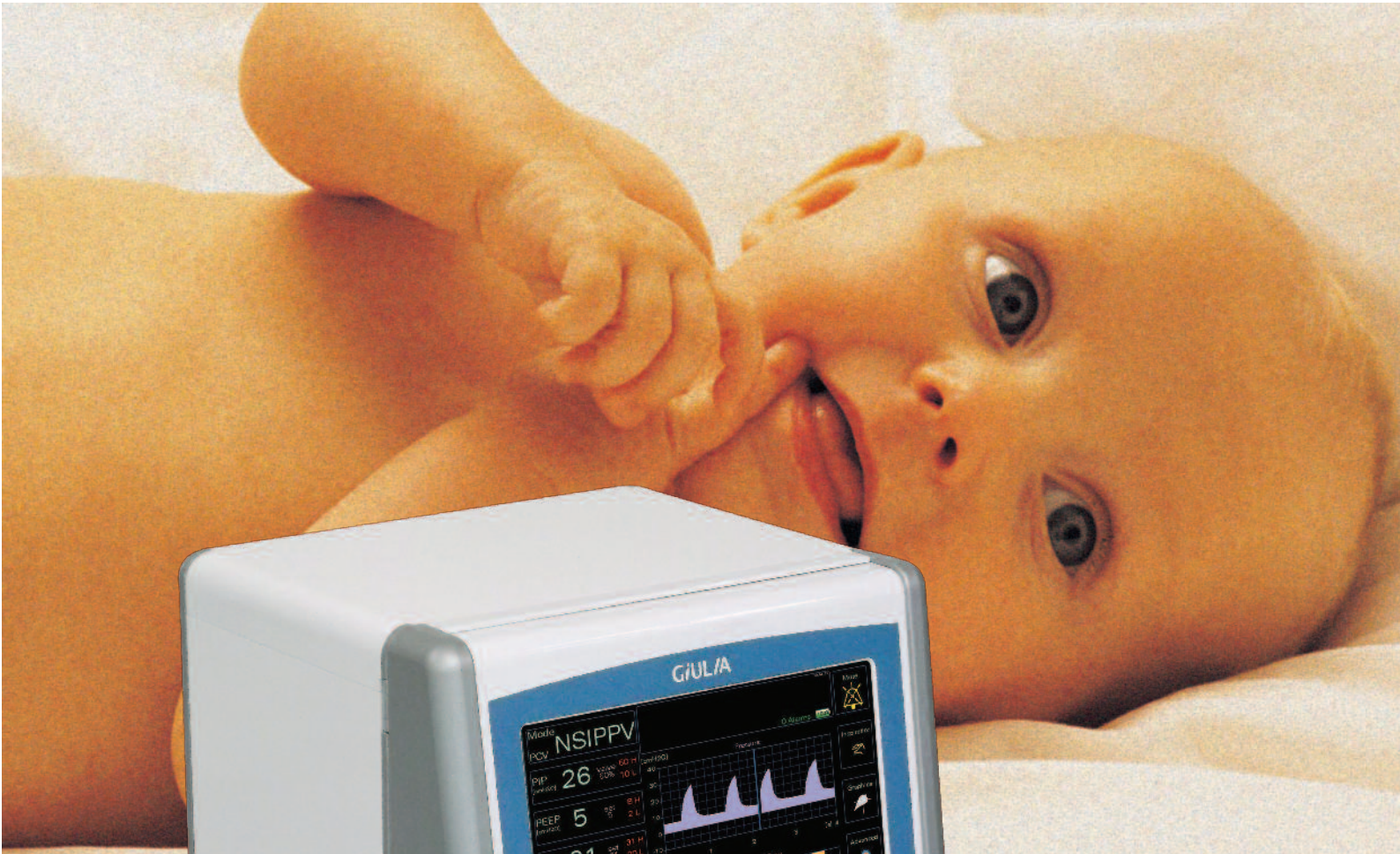
Optical Characteristics @ T _c = 25°C			
Parameter	Symbol	Typical	Unit
Dominant Wavelength ^①	λ_D	460	nm



*American Academy of Pediatrics, guide lines for the clinical practice, under commission for Jaundice: Management of Jaundice in the newborn infant 35 or more weeks of gestation, 2004; 297–316. ** Light emitting diodes: a novel light source for phototherapy. Pediatric Research. 1998; 44(5):804–80

GIULIA

Neonatal Ventilator



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neo-tech for life

A multipurpose ventilator

Giulia Ventilator is a next-generation ventilator designed to give the best respiratory support at every step of the clinical treatment of the respiratory diseases of premature infants and newborns. With Giulia it is possible to shift rapidly from the most effective and safest mode of conventional triggered invasive ventilation, the Volume Targeted Ventilation (VTV), to non-invasive techniques as the unique Flow-Synchronized Nasal Intermittent Positive Pressure Ventilation (Flow-SNIPPV) or the simpler Heated High Flow Nasal Cannula (HHFNC)

Flow-SNIPPV – a new challenge in neonatal respiratory care

In the multifactorial pathogenesis of Broncho-Pulmonary Dysplasia (BPD), ventilator induced lung-injury (VILI) is considered to be a significant factor. This prompted the development of new non-invasive respiratory techniques, which would be more effective than nasal CPAP, for the treatment of the newborn with RDS. Nasal intermittent positive pressure ventilation is a non-invasive mode of ventilation that combines nasal CPAP with some intermittent mandatory breaths. It may be non-synchronized (NIPPV), or synchronized (NSIPPV) with the infant's breathing efforts. At GINEVRI we have developed a revolutionary flow-sensor to carry out NSIPPV. Figure 1 shows this flow sensor being used for the treatment of a baby of 650 grams. The device is very reliable, comfortable and easy to fit.

Several clinical trials favor NSIPPV, probably because delivering the inspiratory pressure immediately after the start of a respiratory effort, when the glottis is open, allows pressure to be transmitted effectively to the lungs. Figures 2 and 3 show the different ways that NIPPV and flow-NSIPPV interact with the spontaneous breathing of a VLBW infant (1).



Fig 1. The GIULIA Flow-sensor

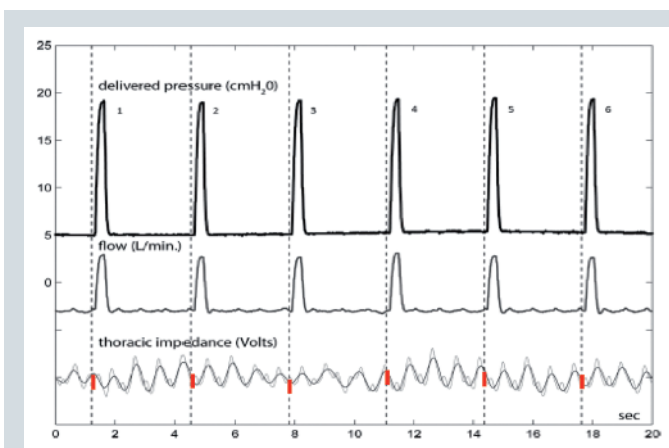


Fig 2. Reading from the top, this recording shows the delivered pressure, flow and thoracic impedance of a VLBW infant treated with NIPPV. Note the interactions of NIPPV mandatory cycles (back-up rate of 20 breaths/min) with the spontaneous respiratory rhythm of the patient. The infant is not entrained with the ventilator and the mechanical cycles start (red lines) at different stages of the spontaneous breathing cycle: 1 peak of breath, 2 mid-expiration, 3 late expiration, 4 peak of breath, 5 early expiration, 6 mid-expiration.

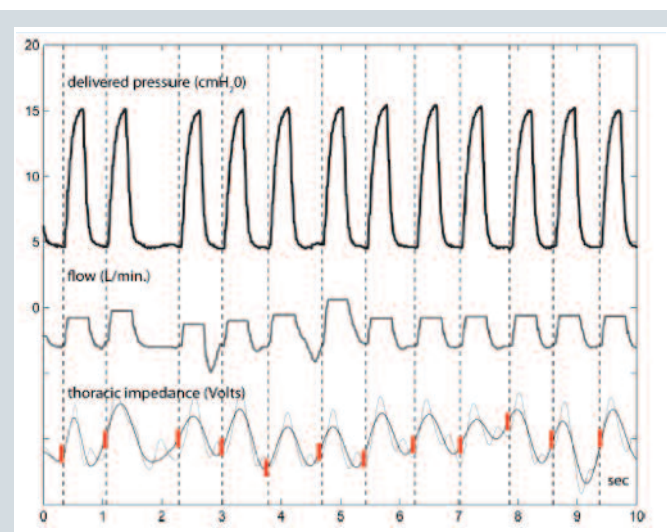


Fig 3. This recording shows the interactions of flow-NSIPPV with spontaneous breathing of the newborn. The infant is now well entrained with the ventilator and mechanical breaths start (red lines) immediately after the beginning of the patient's spontaneous ones.

Asynchronous mechanical breaths may induce laryngeal closure, alter spontaneous respiratory rhythm, increase WOB, increase abdominal distention, cause volutrauma and pneumothorax and have harmful effects on BP and CBF (2, 3). Synchronous mechanical breaths may reduce inspiratory effort, increase ventilation, reduce breathing frequency, reduce thoraco-abdominal asynchrony and decrease WOB (3-8). A common objection to the use of a flow sensor for non-invasive ventilation is that its reliability can be affected by the continuous flow passing through it due to the variable leaks from the infant's nostrils and mouth. To show that this objection is not valid, we used a simulated neonatal model to demonstrate both the reliability of our flow-sensor with different measured

leaks through it and the performance of the GIULIA ventilator (9-11). The GIULIA flow-sensor detected 100% of the simulated spontaneous breaths in presence of any tested amount of leak from the prongs. The mean response time, measured from the beginning of inspiration to the beginning of the inspiratory pressure rise in the circuit, was $64 \pm (SD) 7$ ms (range 46-77 ms). These data prove that the GIULIA flow-sensor can detect very small inspiratory volumes and flows, and that its performance is not influenced by the amount of leakage. Another potential disadvantage of this device is the increase of dead volume, but this is only a theoretical problem since expiratory flow vents mainly from the patient's mouth.

GIULIA

Evidence from clinical trials indicates NSIPPV is more effective than NCPAP:

- in improving the success rate of extubation (8, 12, 13)
- in reducing the need for intubation in the acute phase of RDS after surfactant (8, 14, 15)
- in infants with apnoea (1)

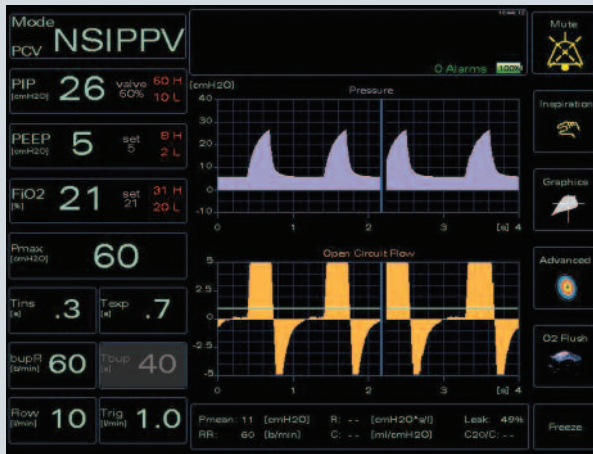


Fig 4. The GIULIA ventilator with its color touch-screen.



CHARACTERISTICS

- Invasive and non-invasive ventilation modes
- Dedicated invasive and non-invasive high-performance flow-sensors
- Two different models of patient interfaces for non-invasive ventilation
- Treatment of patients up to 5 kg of weight
- Encoder and color 10.4" Touch-Screen Digital Settings
- Manual and Automatic Alarms
- Pressure, Flow, Volume and Loop Graphical Trends
- Measurements of Compliance and Resistance
- Acoustic Signal of Trigger Activation
- Standby Mode
- O₂ Flush
- Data export

CONVENTIONAL INVASIVE AND NON-INVASIVE VENTILATION MODES

- CPAP – NCPAP
- SIMV – NSIMV
- IPPV – NIPPV
- SIPPV – NSIPPV
- VTV (invasive only)
- HHFNC (non-invasive only)

FLOW SENSOR FOR INVASIVE VENTILATION

The flow sensor for invasive ventilation is a differential pressure transducer without any electrical components, which guarantees a response time of less than 80 ms. It is autoclavable and reusable.

FLOW SENSORS AND KIT FOR NON-INVASIVE VENTILATION

Non-invasive ventilation can be performed with two different single-use sets:

- “Sync Flow Cannula, the new interface, is most comfortable for the patient and easiest to use for nurses.

- “Smart-Flow Kit NIV”, the classic interface, with nasal prongs and bonnets.

Both these devices have a dedicated flow-sensor, a very simple and light differential pressure transducer that guarantees a response time of less than 80 ms, and prongs of different sizes.

NASAL CANNULA FOR HHFNC

The single-use “High-Flow Nasal Cannula” for High-Flow therapy with heated and humidified gas are available in three different sizes.

ALARM SYSTEM

The GIULIA ventilator has all the alarms for correct and safe management of invasive and non-invasive respiratory care. The alarms are both visual and acoustic and are color-coded for priority.

HUMIDIFIER

The GIULIA ventilator is compatible with all commercial humidifiers, however GINEVRI strongly recommends using it with the new WETTY humidifier, which ensures a high level of humidity in the respiratory circuit with a very low quantity of moisture.

O₂ FLUSH

The O₂ flush delivers a preset oxygen concentration for a predetermined time.

Accessories



WETTY

WETTY is a humidifier for heating and humidifying the gas in the patient's respiratory circuit. The gas temperature and the humidity are regulated by a servo-controlled system. The humidity can be set at five different levels. Code number 8049.



TROLLEY

The trolley is designed to make GiULIA easy to use and move around. Code number 11472A70

OPTIONAL TROLLEY EXTRAS:



DRAWERS

Code number 11401A70



EXTRACTABLE SHELF

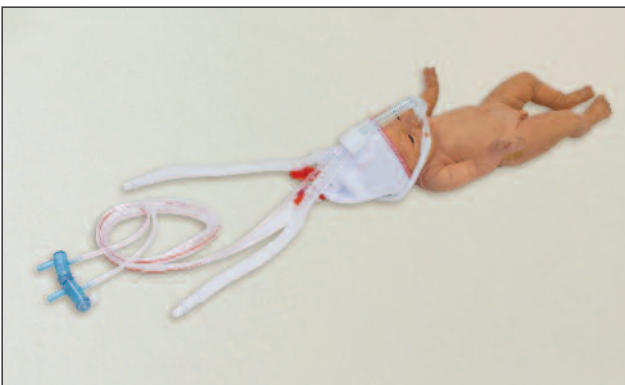
Code number 11405A70



IV POLE

Code number 6922

Consumables



SMART FLOW KIT NIV

(Disposable) Four different sizes, color coded:

RED KIT EXTRA-SMALL: Nasal prongs Ø 2 mm, length 8 mm + Flow-sensor, Ø 2.5 mm + Bonnet 25 cm.

Code number 12898A08

GREEN KIT SMALL: Nasal prongs Ø 2 mm, length 10 mm + Flow-sensor, Ø 2.5 mm + Bonnet 25 cm.

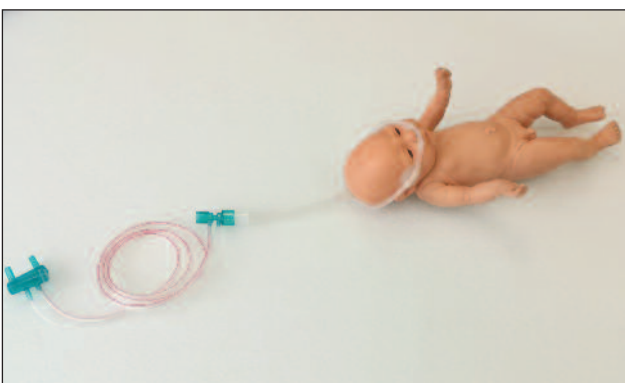
Code number 12898B08

WHITE KIT MEDIUM: Nasal prongs Ø 3 mm, length 12 mm + Flow-sensor, Ø 2.5 mm + Bonnet 30 cm.

Code number 12898C08

BLUE KIT LARGE: Nasal prongs Ø 4 mm, length 14 mm + Flow-sensor, Ø 3.5 mm + Bonnet 35 cm.

Code number 12898D08



SYNC-FLOW NASAL CANNULA

(Disposable)

XXS: Øe 2,2 mm, Interaxis 4,2 mm, length 8 mm.

Code number 13226A73

XS: Øe 2,5 mm, Interaxis 5,5 mm, length 9 mm.

Code number 13226B73

S: Øe 3 mm, Interaxis 7 mm, length 10 mm.

Code number 13226C73

M: Øe 3,5 mm, Interaxis 8,5 mm, length 11 mm.

Code number 13226D73

Consumables



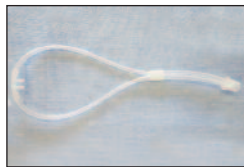
NASAL PRONGS

(Disposable)
EXTRA-SMALL: Ø 2 mm, length 8 mm.
Code number 12251A08
SMALL: Ø 2 mm, length 10 mm.
Code number 6968A08
MEDIUM: Ø 3 mm, length 12 mm.
Code number 6969A08
LARGE: Ø 4 mm, length 14 mm.
Code number 12205A08



BONNETS

(Disposable)
RED EXTRA-SMALL: 25 cm.
Code number 11659A08
GREEN SMALL: 25 cm.
Code number 11659B08
WHITE MEDIUM: 30 cm.
Code number 11659C08
BLUE LARGE: 35 cm.
Code number 11659D08



HEATED HIGH-FLOW NASAL CANNULA

(Disposable)
PEDIATRIC
Code number AEC030013
INFANT
Code number AEC030014
NEONATE
Code number AEC030015



PATIENT CIRCUIT

(Disposable) Heated inspiratory pipes, with humidification chamber and water trap.
Code number 13213A73



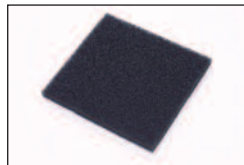
TRACHEAL TEST-LUNG

Code number 11574A70



NASAL PRONGS TEST-LUNG

Code number 11953A70



DUST FILTER

Code number 12340A73



O₂ SENSOR

Code number 10267A73



EXPIRATORY VALVE MEMBRANE

Code number 11654A08



TRACHEAL FLOW-SENSOR

(Autoclavable)
Code number S103561300



CONNECTION CIRCUIT FOR TRACHEAL FLOW-SENSOR

(Disposable)
Code number 12936A08

Patent invention No:

USA US 7,814,906 B2;
India 264045;
Cina 200610077819.3;
Europe EP 1719536.

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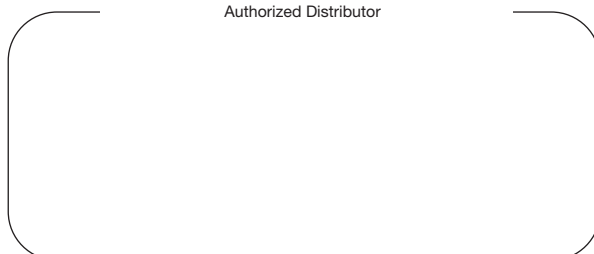
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