

# ICU INTENSIVE CARE UNIT

Specialised Solutions and Quality Systems



# INTENSIVE CARE UNIT



**Together, all the way.**



## ICU - Intensive Care Units by ACENDIS

The intensive care unit is a special department of a hospital or health care facility. It caters to patients with the most severe and life-threatening diseases and injuries such as trauma, organ failure or sepsis. Therefore an intensive care unit has to provide constant and close monitoring as well as support from special equipment and medication in order to maintain normal body functions of its patients.

The goal of ACENDIS is to guarantee the best environment and conditions for the treatment and further care of our customer's patients by providing the best equipment and latest technologies. By doing this, we ensure a safe treatment process and satisfied staff and patients.





## Bed Head Units

## **modulux IV 1054**

### **Bed head unit**

The ideal medical supply unit, specially designed for the recovery room and intensive care ward.

The media is fed in at the back, or on the front right or left or it is also possible from the top using a cable channel. Front profiles attached without screws ensure hygiene and prevent access by unauthorised persons.



## **modulux 2008**

### **Bed head unit**

A very compact and ergonomic medical supply unit with indirect illumination, reading and examination lighting as well as installation units for electricity, communications, data and medical gas technology.

A special characteristic of the series is the chosen inclined arrangement of the prismatic covering of the indirect lighting fixture. It prevents items being placed on it, e.g. bottles.



## **modulux pure**

### **Bed head unit**

The modulux pure is a medical supply unit, which despite its compact design displays a high degree of equipping potential for high voltage, data and communication technology installation components as well as tapping points for medical gases. Modulux pure can come in a length of up to six metres as a single or two-bed unit.



**modulux ambient light**  
Efficient LED lighting solutions

- Decorative lighting accents and indirect room, reading and examination lighting
- Offers plenty of space for all media for treatment
- Electrical installation elements are concealed



## Bed Head Units



## **modulux ambient**

**A supply unit combining aesthetics and functionality**

- Indirect room lighting, reading and examination lighting
- Functional, user-friendly and ergonomic aspects as well as real materials, like wood, in one product
- Electrical installation elements are hidden
- Wide range of possible variations



## ICU Beds

## **multicare** Intensive care bed

Multicare is a highly modern ICU bed of supreme quality, which not only meets these demands, but exceeds them by systematically taking the strain off the nursing staff. Furthermore, it can even actively contribute to the recovery process and offers unparalleled functionality: Lateralisation on the intensive care unit is a function that not only reduces strain in everyday nursing, but also speeds up the patient's recovery.

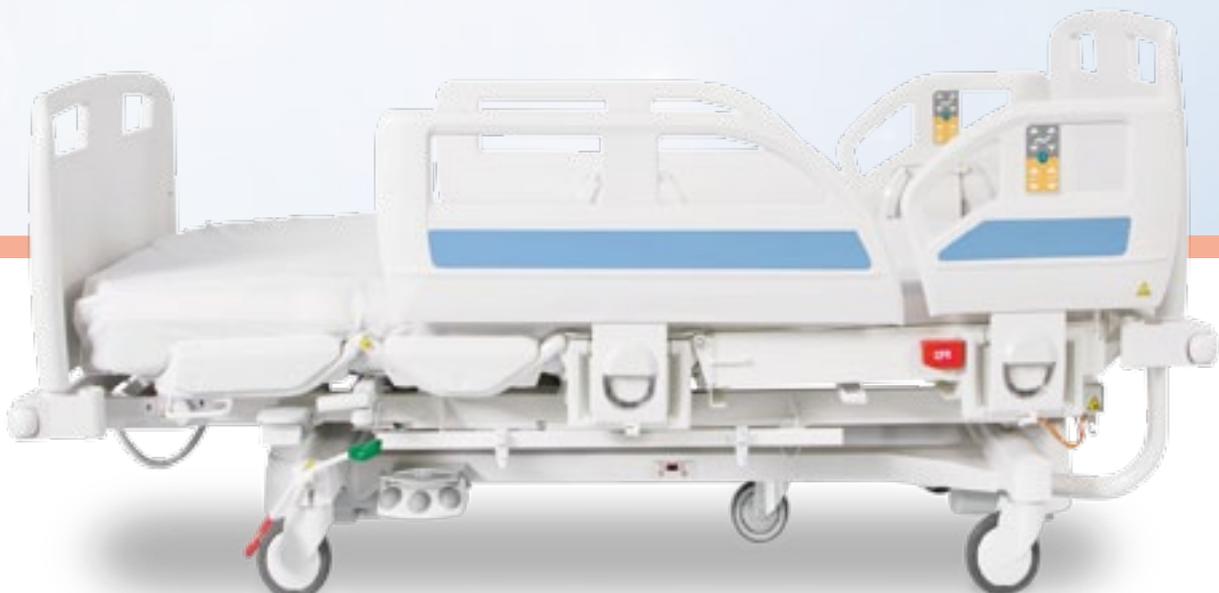


## **eleganza 3XC** Intensive care bed

The progressive features of the eleganza 3XC bed are designed to meet the high demands of intensive care. This modern bed, with its column construction, offers an integrated programme to assist caregivers in saving the lives of critical patients.

### **Selected Features**

- Maximised respiratory function
- Comprehensive falls prevention
- Safe gaps concept
- Integrated scales
- Automatic i-brake
- Pro-active recovery with Mobi-Lift
- Effective pressure area care with the Ergoframe®
- Effective ICU nursing using foot controls
- Easier transportation
- X-ray examination





## ICU Beds

## eleganza 2

### A smart acute bed

The Eleganza 2 pushes the boundaries of safety standards, quality of workmanship and design. It is the first bed of its kind, and so defines the genuinely modern bed. It contains all sophisticated functions, including “smart” properties and is also accessible for the broad spectrum of healthcare. The Eleganza 2 is a practical and beautiful bed. Thanks to its properties it meets all the needs of each hospital ward. The Eleganza 2 makes demanding day-to-day patient care easier, and thanks to its modern design it shifts the perception of the care provided to a far higher level.



#### Selected Features

- Pioneering mobilisation
- Unique Mobi-Lift
- Safe concept
- Indicator of safe position
- Plastic mattress platform
- Backlit angle gauge
- Universal box „Handy“
- Urine bag holder
- Fixed adaptors in corners
- Universal holder for handset and equipment
- Automatic halting of backrest at 30°



## Mistral-Air

### Warming Unit and Reflective Blankets

The Mistral-Air Plus warming unit is very powerful, silent and provides a constant temperature to your patient within only 60 seconds.

The Mistral-Air Reflective Blankets have a reflective top layer which reflects your patient’s radiant body heat and preserves body temperature. The reflective technology allows also passive use for the pre- and post-operative phases.

Also pre-operatively this blanket can protect your patient from getting hypothermic. And even without a warming unit connected to the blanket, the reflective layer will increase the warming capacity and will reflect the patient’s radiant body heat, preserving the body temperature.



elisa 800<sup>VIT</sup>



## Intensive Care Ventilators

Superior technology for precise breathing



## Elisa 800<sup>VIT</sup>

### Intensive care ventilator with fully Integrated Tomography (VIT)

Elisa 800 VIT is worldwide the first Intensive Care Ventilator with Integrated EIT System.

The non-invasive pulmonary monitoring of the Elisa 800 VIT visualizes for the first time ventilation-related complications and allows for direct therapy at the intensive care ventilator.

- Reduces intra-hospital transports of critically ill ventilated patients
- Objectivizes ventilation settings and allows for adjusting them under visual control
- Helps identify and reduce ventilation-related complications
- Allows for managing prone positioning therapy with pulmonary monitoring to optimize ventilation
- Provides data to analyze regional compliance
- Identifies and prevents pulmonary collapse associated with the respiratory cycle
- Helps detect overdistension, which can be counteracted by changing the ventilation settings
- Offers real-time adjustment options for optimal PEEP

As a result, ventilation becomes transparent as well as directly controllable. The introduction of this innovative technology marks a new chapter in intensive care ventilation.

The combination of measured values from the intensive care ventilator with the results of electrical impedance tomography:

## Elisa Universal intensive care ventilator

The Elisa is an intensive care ventilator for adults and children from the age of one year or a body weight of 5 kg.

It can be optionally used for ventilation of newborn patients with a body weight from 2 to 6 kg. Modern microprocessor technology, precise measurement techniques and efficient technologies assure an accurate ventilation therapy and individual ventilation strategies. Invasive and non-invasive ventilation - Elisa provides the clinical practice orientated combination of both invasive and non-invasive ventilation in a single device.

### Benefits of Elisa

- Dynamic BiLevel to avoid volutrauma
- Wide range of respiration forms from newborn to adult / from IPPV to BiLevel
- Innovative pre-oxygenation function to reduce oxygenation determined dystelectasis
- 12" TFT touchscreen with a swivel-mounted and colour display
- Automatic patient detection (APD)
- Reduced patient stress by intelligent alarm management
- Automated adaptation of inspiration pressure according to the type of ventilation
- Even the failure or inadvertent removal of the screen has no impact on continuous ventilation.

elisa

Elisa intensive care ventilator & medical air compressor A40





# Infusion Pumps

## ARGUS 717 / 718 V

### Flexible and safe in every way

ARGUS 717V / 718V volumetric infusion pump is suitable for administering large volumes of medication in general care and intensive care as well as neonatology and pediatrics. The latest technology and ultimate flexibility are the main features of this product. The supplementary medication database ARGUSmedDB supports the user in efficient and safe handling.

- Flexible application
- Intuitive to use
- Safe in every way
- Easily adaptable to therapeutic requirements



#### Modell A717V:

- for use with the infusion sets of all leading manufacturers

#### Modell A718V:

- for use only with the patented CODAN Anti-Free-Flow System

## **ARGUS 606 S** Syringe pump

- Ready for immediate use
- Flexible and versatile
- Easily adaptable to therapeutic requirements
- Automatic detection and display of syringe brands and sizes
- Compatible with ARGUSmedDB, the medication database for safe drug pre-settings



# **Syringe Pump**

## Docking Station

Compatible with ARGUS infusion and syringe pumps

Syringe and infusion pumps can be docked in different combinations and quickly and safely inserted and removed for greater safety and efficiency at the workplace. Data communication options allow connecting the system to PDMS (patient data management systems).



## Docking Station



# Feeding Pumps

## **SINO SN-600N/SN-600NR**

### **Enteral feeding pump for continuous application**

With its transparent pump door and the detachable cam for cleaning, the SN-600N is very convenient to use. It provides safety with its on top status light, calibratable flow rate and waterproof outlet. A compact and elegant streamline design is combined with a weight of only 1.3 kg. Intelligent - Bionic intermittent output, wireless communication, adjustable alarm sounds. Automatic calibration - This unique design can adjust the flow accuracy automatically for nutrition solution with different viscosity.

- DUAL-CPU monitoring function
- Adjust the flow accuracy by the way of volume calibration
- Detection of dripping number
- Key lock function
- Power supply status
- USB connector
- Waterproof design for the whole device
- Abundant optic and sound alarm
- The key tone can be set to mute
- System time setting
- 1500 history records
- Wireless communication (SN-600NR)
- Infusion status light can be on/off
- Infusion set flushing function



# PATIENT MONITORING



## Vital Signs Monitoring

## ACENDIS APM-30 mobile Handheld SpO<sub>2</sub> / EtCO<sub>2</sub> patient monitor

APM-30 mobile is a newly developed handheld patient monitor for continuous EtCO<sub>2</sub> and SpO<sub>2</sub> monitoring. It can be applied to both intubated and normal spontaneously breathing patients during all clinical situations.

- 3.5" high luminance color LCD touchscreen
- record of patient data in 7,200 hours
- VSDI (Vital Sign Data Integration) technology integrated
- dustproof, waterproof, shockproof
- Massimo SET® Pulse Oximetry (*Option*)



3.5"

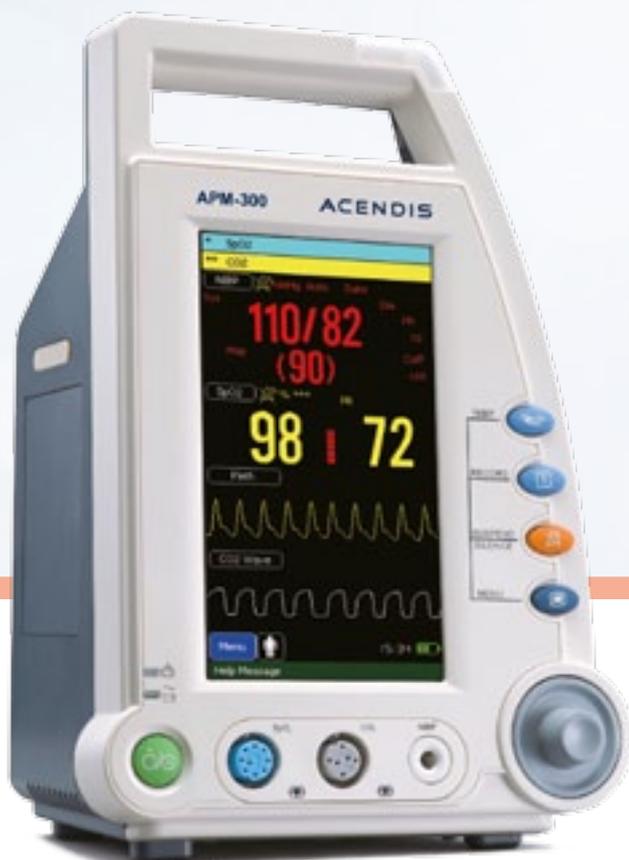


## ACENDIS APM-300 Louis I Portable Vital signs patient monitor

The APM-300 Louis is intended to be used for monitoring of SpO<sub>2</sub>, NIBP and CO<sub>2</sub> of patients. It can also display, review, save and print its monitoring information, and has a built-in rechargeable battery, ensuring continuous monitoring of patients in the course of operation. The monitor is intended for outpatient departments and emergency treatment rooms of hospitals. The monitor is suitable for monitoring of vital signs of adults, children and infants.



7"



- NIBP, Pulse Rate and SpO<sub>2</sub>
- 7" full color anti-glare TFT LCD display
- Lithium battery
- EtCO<sub>2</sub> (sidestream) (*Option*)
- Nellcor™ pulse oximetry SpO<sub>2</sub> (*Option*)
- Massimo SET® Pulse Oximetry (*Option*)
- Infra-Red Ear Thermometer (*Option*)



# Intensive Care Monitoring

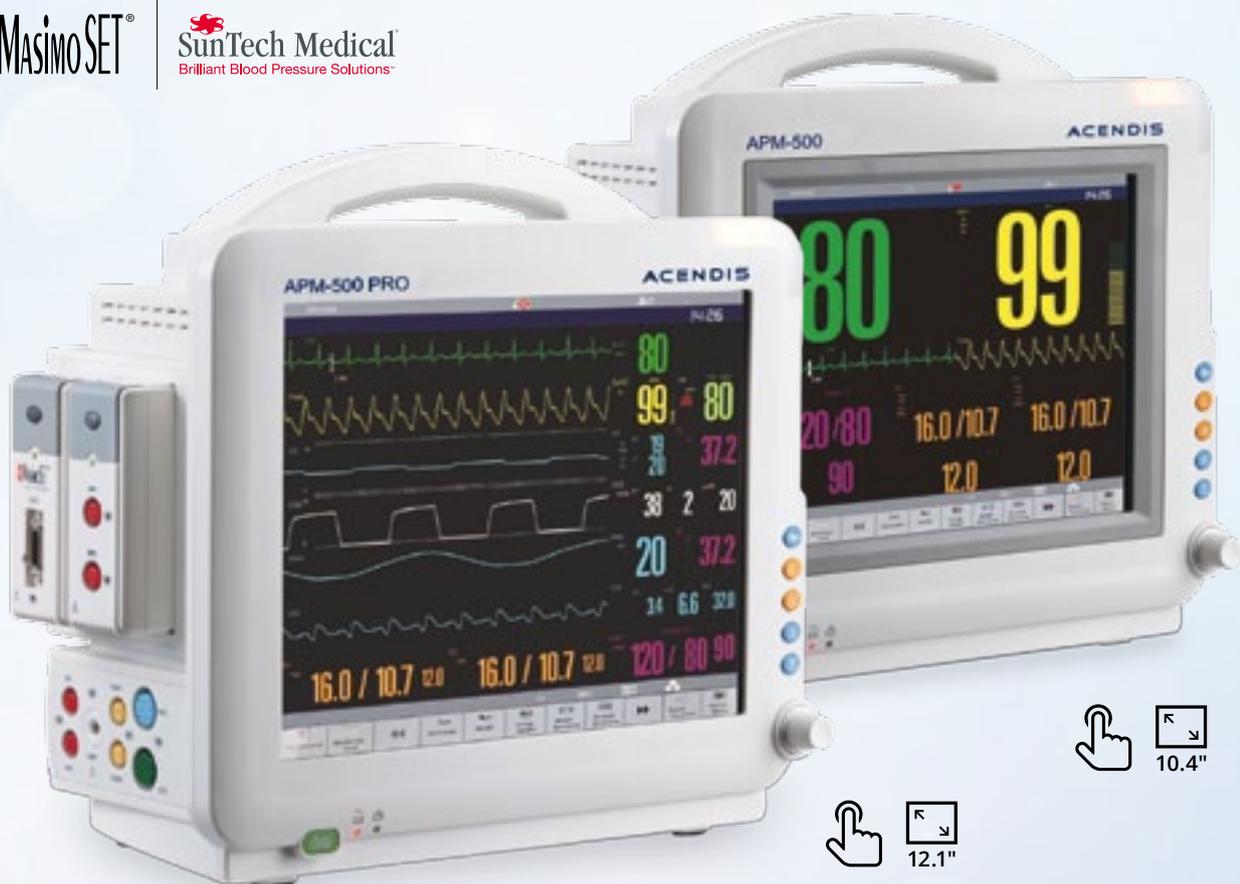
## ACENDIS APM-500 / APM-500 PRO Anaesthesia and ICU patient monitor

The ACENDIS APM-500 monitor series is designed to meet the requirements of various hospital environments. The optional modules also allow an upgrade for intensive acute monitoring.

The built-in recorder and an automatic event recording function ensure the integrity of monitoring data. The intuitive operation via touchscreen makes it easy to set

up and the large font allows an error-free reading of the data. A user-friendly operation of APM-500 / APM-500 PRO is ensured by the operating concept of touchscreen, rotary knob and the function shortcut keys. So you operate the monitor at any time quickly and safely.

The APM-500 / 500 PRO is perfect for use in the fields of emergency, station, OR, ICU.



- Special design for acute care
- 2 standard module slots for easy upgrades
- 10.4" / 12.1" (PRO) high resolution LCD display
- Touchscreen for intuitive operation
- Good readability in any environment
- Safe operation thanks to illuminated buttons

- Lithium battery
- 3 / 5 lead ECG, NIBP, SpO<sub>2</sub>, Temp
- Reliable data for well-founded diagnostics
- Massimo SET® Pulse Oximetry (*Option*)
- SunTech Advantage neonatal NIBP technology (*Option*)
- Nellcor™ pulse oximetry (*Option*)



## Intensive Care Monitoring

### ACENDIS EMS

A special feature of the ACENDIS APM-700 (XL) is to connect with our Emergency Mobile Server (EMS) all-in-one parameter module, which includes the following parameters: ECG (3 or 5 lead), SpO<sub>2</sub>, NIBP, Pulse Rate, Temp, Invasive BP (x2), together or in different combinations. Additionally a 12 lead ECG and Nellcor™ or Masimo SET® SpO<sub>2</sub>.

The EMS also features a 3.5" color display and backup battery. When the module is disconnected from the docking port on the APM-700 (XL), the patient can continue to be monitored while being transported.



## ACENDIS APM-700 / APM-700 XL Modular anaesthesia and ICU monitor

The APM-700 (XL) modular ICU monitor series is capable of being utilised in all clinical areas. The large display allows clear observation in long distance, especially suitable for easy ICU room checking and monitoring during night. The APM-700 (XL) is assembled with numerous parameters of various modules as per need with easy upgrade at economical replacement cost.



- 17" (12.1" APM-700) full color anti-glare TFT LCD display
- Convenient interface control via prompt knob or touchscreen control (*Option*)
- 2 GB SD Card, effective storage for historical patient data
- 4 Module Slots
- Additional module rack slot: 1 (for EMS module)
- 6 (4 APM-700) USB ports (peripheral devices interface)
- Long life detachable rechargeable lithium battery
- Multi-screen, multi-interface display
- Particularly backlight button for night operation
- Fanless intelligent, quiet cooling system
- ECG, Resp, NIBP, IBP, SpO<sub>2</sub>, Temp, AG, CO<sub>2</sub>, and ICG possible
- Anaesthesia Gas module, measures concentration of Fi and ET, CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>O and ISO, ENF, DES, SEV, HAL
- Arrhythmia / ST segment analysis
- Massimo SET® Pulse Oximetry (*Option*)
- SunTech Advantage neonatal NIBP technology (*Option*)
- Nellcor™ pulse oximetry SpO<sub>2</sub> (*Option*)
- 3-channel thermal recorder (*Option*)



### Alarm Indicators

Separate indicator lights for technical and physiological alarms.



## Central Monitoring System

The intelligent Central Monitoring System connects all ACENDIS monitors via cable or WiFi and allows to view real-time patient status and data. It can monitor up to 64 patients for safety and reliable decision-making.



A U R I O N



# Emergency Trolley



## ACENDIS APM-400 Multi-Parameter Patient Monitor

The flexible and intuitive ACENDIS APM-400 is suitable for adult, pediatric and neonate patients. This patient monitor shows all relevant physical parameters, such as ECG, NIBP, SpO<sub>2</sub>, resp and temp.

The patient monitor can display a maximum of 8 waveforms and show all parameter information monitored on the same screen.



- 8" high resolution color TFT LCD display
- 10 minutes one important lead's ECG waveform reviewing
- Realtime recording
- Sound and light alarming
- 72 hours of trend data storage and reviewing
- 750 groups NIBP measurements
- 1000 groups alarm events reviewing
- Support for nurse call, built-in recorder (*Option*), wireless or wired networking

- Replaceable battery
- Massimo SET® Pulse Oximetry (*Option*)
- SunTech Advantage neonatal NIBP technology (*Option*)
- Nellcor™ pulse oximetry (*Option*)

## AURION Compact Trolley Multifunctional Emergency Trolley

AURION build a multifunctional and revolutionary line of carts with innovative design, superior quality and complete accessories. The body is made of a single rounded piece of Baydur polyurethane material manufactured by Bayer AG. It can be washed and disinfected. It does not react with diluted acids, alkali and solvents. It is self-extinguishing according to class UL VO. All carts are Latex free. For safety, handles are moulded into the body. All around bumper protection is included to avoid any damage to the personnel, cart and medical devices. The cart is easily moved and turned around with a fingertip.





## **Emergency Respiratory Care**



### **CAREvent® ALS+ CPAP Transport ventilator**

The CAREvent® ALS+ CPAP automatic transport ventilator provides trained individuals with safe and effective means of providing controlled ventilation during respiratory and cardiac arrest. Packaged in lightweight, portable, and extremely durable control-module-style cases, this simple-to-use ventilator is designed for the demands of emergency, rescue, resuscitation and critical patient transport. The unit is self-contained and only requires attachment to a regulated oxygen supply and the attachment of a transport ventilator circuit for immediate use. No batteries or electrical supply are required.

### **CAREvent® MRI Transport ventilator**

The CAREvent® MRI Automatic transport ventilator is lightweight, portable, durable and simple to use. It is completely pneumatic (no batteries required) and delivers breath by breath consistency in delivered tidal volume, frequency, inspiratory / expiratory times and flow rates. The range of pneumatic alarms provided warn the operator of incorrect operation or gas supply problems. The CAREvent® MRI contains no ferrous metals and is suitable for use in a 3 tesla MRI environment.



# NEONATOLOGY



## Neonatal Intensive Care Unit

## ACENDIS APM-3000 Multi parameter patient monitor

The flexible and intuitive ACENDIS APM-3000 is suitable for adult, pediatric and neonate patients. This patient monitor shows all relevant physical parameters, such as ECG, NIBP, SpO<sub>2</sub>, RESP and TEMP.

The patient monitor can display a maximum of 8 waveforms and show all parameter information monitored on the same screen.

- 7" high resolution color TFT display, 5-channel waveform display
- Standard parameters: ECG, RESP, SpO<sub>2</sub>, NIBP, 2-TEMP, PR
- Arrhythmia analysis and ST segment analysis
- Up to 12,000 groups parameter data & 72-hour ECG waveform storage and recall
- 1000-hour graphic and tabular trends for all parameters
- 7-channel ECG waveforms display simultaneously
- Protection against interference from defibrillators, electrosurgical knives
- Adult / Pediatric / Neonatal measurement modes
- Visual and audible alarms; networking capability
- Built-in rechargeable battery
- Nellcor™ pulse oximetry SpO<sub>2</sub> (Option)
- Massimo SET® Pulse Oximetry (Option)





## Phototherapy and Incubator

## ARDO Amelie / Amelie star Intensive care incubator

The development of our new generation of intensive care incubators is based on many years of experience and close cooperation with clinical experts.

- Integrated skin and air temperature control
- Active humidity control
- Integrated oxygen control via display (Amelie star)
- Maximum safety through 'SENSOcontrol' monitoring- and regulation system



## ACENDIS BT-400 Azura LED Phototherapy lamp

The ultimate solution for Neonatal Jaundice treatment. ACENDIS BT-400 Azura LED has blue LED lamp so that it is much more curable and effective than ultraviolet light lamp phototherapy such as fluorescent or halogen one.

- 20,000 hours operating time
- less side-effect of heat
- display for treatment and total using time
- Light weight and compact size
- Flexible neck for easy use





# Pediatric Intensive Care Ventilators

Innovative technology for our little patients

made  
in  
Germany



leoni<sub>2</sub>

**Leoni 2**  
Neonate and child intensive care ventilator

- Compact and light weight unit
- Ventilation of premature infants, neonates and children up to 30 kg
- Two flow sensors available, one for premature infants and neonates and one children's sensor
- Stand alone setting of the inspirational and basic flow
- Easy preparation of the expiration valve
- Volume-limited ventilation
- PSV
- nCPAP and nIPPV
- VT trigger adaptation
- LCD graphic display
- Waves and loops
- Battery for up to 2.5 hours



leoni<sup>plus</sup>  
incl. HFO

**Leoni plus**  
Suitable for long-term ventilation

- HFO according to the membrane principle
- Volume-controlled ventilation and PSV ventilation
- Separate nCPAP and nIPPV modes for non-invasive breathing support with premature and full-term infants
- VT trigger adaptation (10 sensitivity levels)
- 12" colour display
- Even the failure or inadvertent removal of the screen has no impact on continuous ventilation.

**Fisher & Paykal**  
**MR850 Heated Humidifier**

- One button selects optimal temperature and humidity levels for adult, pediatric and neonatal patients
- Easy set up with simple controls and an easy to read display
- Clinically based alarm system
- Advanced algorithms and the ability to sense flow optimises humidification delivery and minimises nuisance alarms
- Automatic standby during periods of gas flow interruption or water out





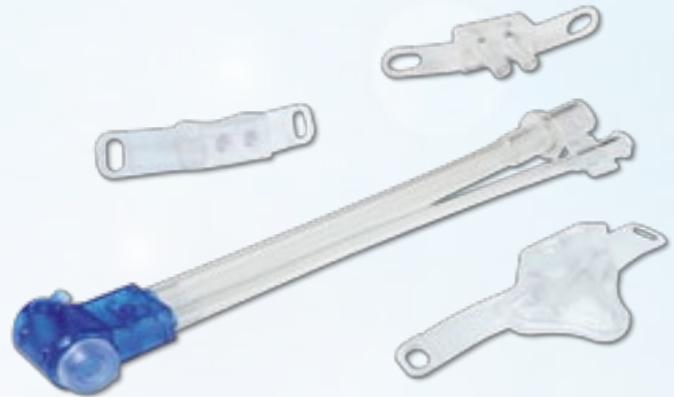
# **Pediatric Intensive Care Ventilators**

**Innovative technology for our little patients**

## NeoJet™ – nCPAP-system For premature infants and babies

The NeoJet System expands the application range of Heinen + Löwenstein ventilators Leoni 2 and Leoni plus by an optional non-invasive CPAP. When nasal prongs or nasal masks are used, NeoJet works almost non-invasive without reducing the airway holes.

Five prong sizes and two different masks can individually be adapted to the little patient. At the ventilator, the required pressure can be directly adjusted, monitored and even kept constant in case of varying leakages.



NeoJet™ System

## Sindi – nCPAP Driver Generator for supportive respiration

Therapeutic enrichment of the respiratory gas mixture with oxygen for neonates and premature babies. Sindi is a generator for supportive respiration with a constant positive airway pressure.

- Display of nCPAP pressure in analogue curve and digital form
- oxygen concentration in bargraph and digital form
- spontaneous breathing frequency in blinking and digital form
- flexible setting upper and lower alarm for nCPAP pressure
- Reset for alarms - mute 2 minutes or quit
- Disconnection alarm for nCPAP (if pressure is too low)
- Integrated service software
- Battery operating for about 6 hrs. with charging control

Sindi





## **Neonatal Warming Systems Open Care**

## Lifetherm 2000

### Heat bed – warming cradle

Warming cradle with effective thermo-transmission through optimised and focused radiation, precise electronically adjustable desired temperature, display of actual temperature, infinitely variable height adjustment with foot or hand switch, prone position, infinitely adjustable.

## Lifetherm



## Lifetherm 2002 / 2003

### Heat bed – resuscitation unit.

Two basic versions available with a wide variety of options for optimum adaptation to the intended use and needs of the infant and the operating staff.

## Lifetherm



### Features

- Effective heat transfer due to panel heater
- Precision electronic adjustment of set temperature
- Display of current temperature
- Infinite electronic height adjustment
- Gentle electric bed tilting at the press of a button
- Front and side panels are prepared to turn down
- Gel mattress

### Features

- Swiveling, fast-response radiant heater with integrated examination lamp
- Conductive heat by a heated gel mattress
- Quiet, electric height adjustment (up to 30 cm)
- Gentle electric bed tilting by button pressing
- Fold-down side panels available in various heights
- Skin temperature control and display
- Trays which allows attaching of control panels and ventilator



## Heat Therapy Lamp

made  
in  
Germany



## Isotherm



### Isotherm Infant radiant warmer

The Isotherm heating lamp is specially designed for the warming of infant diaper changing tables and maintaining a baby's body temperature. It is equipped with a ceramic heating element and an integrated halogen examination lamp.

- Generated invisible infrared radiation (the infant's skin colour is not altered)
- Four power settings (factory settings of 25, 50, 75 and 99 %)
- Heating power can be set as desired depending on ambient and infant body temperature
- Heating power of the four levels 1-4 can be set individually
- Integrated Ceramic lamp, scale-free filament with integrated halogen examination lamp (glare-free)
- Thermal convection – caused by considerable differences between skin and ambient temperature
- Controlled dosage of radiation intensity
- Available with a mobile stand, different wall- or ceiling mountings



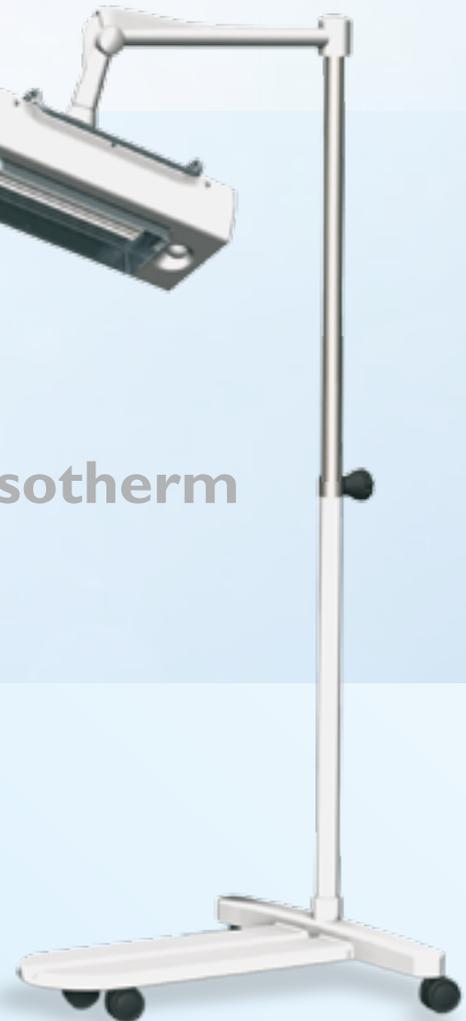
### Sterithermolux Diaper-changing table lamp

The Sterithermolux is a diaper-changing table lamp designed to stabilise the body temperature of newborns and for use in delivery rooms or in wards for premature and newborn infants.

Sterithermolux limits the immediate heating area via an adjustable radiant reflector which can be focused on the infant without causing any change in the room temperature. The threefold heating effect allows for radiated heat to be dosed as required.



## Isotherm



# SHOWROOM

## ACENDIS SHOWROOM GERMANY





## ACENDIS SHOWROOM Hannover, Germany

Get a first look at our range in our showroom in Hannover, Germany. Our specialised personnel will answer your questions and help you to find the right products for your project.

Visit our showrooms and those of our partners in Germany and Europe. We coordinate your appointments and accompany you to provide the ultimate in service, consulting and comfort.

Experience innovative highlights at our showroom:



S-CAPE® medical multiconsole



S-CAPE

medifa  
the medical factory





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