LÖWENSTEIN
medical

NEONATOLOGY

Complete range for the smallest patients:

- Ventilators

- Nursing care, thermotherapy and phototherapy

- Accessories

VENTILATORS

LEONI PLUS

Leoni plus is suitable for the long-term ventilation of very small preemies, newborns and children up to a body weight of 30 kg. In addition to the basic ventilation modes CPAP, IPPV/IMV, SIPPV and SIMV, the device offers two PSV modes. Moreover, the administered tidal volume can be restricted via the volume limit function. The assisted ventilation modes feature a volume-controlled tidal volume guarantee.

The precise hot wire flow sensor, designed for placement near the patient, enables the automatic tracking of trigger sensitivity relative to the patient's tidal volume (VT trigger adaptation).

The extremely powerful, integrated Leoni HFO* high-frequency module uses the membrane principle; its frequency range between 5 and 20 Hz is suitable for use with patients weighing up to 12 kg. The managed amplitude control compensates leakages and compliance changes in the adjustment range.

The easy and intuitive operation of the device either relies on a 12-inch LCD colour touchscreen display or on a control knob. For optimal ergonomic organisation of the workspace in the ward, the display can be removed and attached to suit individual needs and working environments. All relevant settings, measuring values, alarm limits and graphic information such as curves and loops are featured in a single display. Users can freely configure the display according to their own requirements by choosing the number of curves and loops as well as the displayed measuring values.

Key product benefits at a glance:

- HFO* according to the membrane principle
- Volume-targeted ventilation
- PSV mode
- NIV (nCPAP, s-nCPAP, nIPPV, s-nIPPV, HiFlow, nHFO (with NeoJet))*
- VT trigger adaptation
- Simple operation – no sub-menus
- Curves and loops
- Battery operation for up to 200 minutes

ABDOMINAL SENSOR

In the first few months of life, diaphragmatic or abdominal breathing is predominant in our smallest patients. What could be more obvious than monitoring the breathing activity of children at the diaphragm and using the resulting signals as a trigger for inspiration and expiration?

The abdominal sensor by Löwenstein Medical allows for generating reliable trigger signals for non-invasive ventilation without direct intervention in the respiratory mechanics, adding weight to the patient interface or increasing the dead space.

Our neonatal ventilation device Leoni plus, together with the optional abdominal sensor, synchro-nises the non-invasive ventilation forms s-nIPPV and s-nCPAP, while providing apnoea monitoring in both ventilation modes.
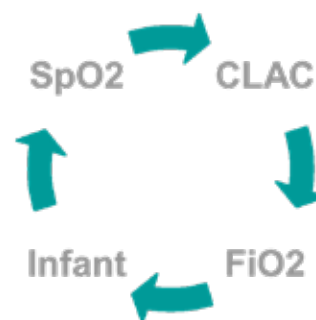
*optional

LEONI PLUS CLAC 2.0

CLAC 2.0 – the reliability you expect with optimised control algorithm

Löwenstein Medical has developed a unique algorithm for automatic oxygen control in premature and newborn babies (CLAC: Closed-Loop Automatic Oxygen Control), which is integrated into the Leoni plus model.

The ventilation device can be fully operated through the user interface, including visualisation of measuring data and alarm settings. Users can determine the current patient status at a glance from the graphic display.

CLAC assumes the task of routinely adapting the inspiratory oxygen in the breathing gas (FiO_2) by continuously monitoring the needs and condition of the patient and adjusting the device settings accordingly. This leaves clinicians free to focus on other tasks.

Of course, manual intervention is possible at all times.

SpO2 → CLAC → FiO2 → Infant → SpO2

*optional

VENTILATORS

LEONI PLUS TRANSPORT

Patient transport with HFO – not a problem with Leoni plus Transport.

Leoni plus Transport expands your treatment range, specifically in patient transport. Thanks to the integrated high-performance battery, off-grid use is feasible for up to 200 minutes in conventional ventilation modes and for up to 60 minutes in HFO. The free selection of the number of curves and loops and measuring values specifically adjusts the display to the user's requirements.

Leoni plus Transport features the comprehensive ventilation modes CPAP, IPPV/IMV, S-IPPV/SIMV and two PSV modes as well as NIV (nCPAP, nIPPV, HiFlow, nHFO (with NeoJet))* and HFO. Leoni plus Transport has full approval for on-the-ground, helicopter and aircraft transport.

- Simple and intuitive operation
- Uncompromising ventilation performance
- Transport approval
- Only transport ventilator to feature HFO flight approval

Approved for use in aircraft according to RTCA DO-160

Approved for use in aircraft according to RTCA DO-160

Approved for road transport (EN 1789)

Intended for in-hospital use

LM 2000

The LM 2000 is the new generation of active humidification systems which was developed for newborns, children and adults. The large touchscreen provides fast and convenient access to all required information and functions.

- Personalized, intuitive temperature setting
- Settable modes: Invasive, Non-invasive, Weaning
- Screen protector for night mode

- Automatic detection of water chamber
- Electronic water level monitoring
- Adjustable temperature and humidification settings

AIRCON GEN 2

The humidifier Aircon Gen 2 combines modern technology and innovative design in a single unit to fulfill medical needs and economic expectations of the market. The result is optimum physiologically conditioned air that protects the mechanically ventilated patient's mucous membranes from being dried out and prevents impairment of mucociliary clearance.

- Self-explanatory use provided by symbols and pictograms
- Stand-by function for required therapeutic applications
- Three (3) function modes (IV, NIV, FREE)
- „Overboost" function for expiratory hot wire sensor

- Suitable for use with all ventilators
- Distribution cable for hot wire sensors
- Intelligent alarm management
- Automatic water level monitoring
- Event and Alarm report

MR850

- Optimal temperature and humidity settings for adults, children and neonates selectable with a single button
- Quick set-up with easy-to-use controls and clearly structured displays
- Hospital-based alarm system
- Modern algorithms and airflow detection optimise the humidity supply and minimise unnecessary alarms
- Automatic stand-by in case of interrupted gas flow or low water levels

THERMOTHERAPY

Warming bed

The warming bed is optionally available without cover, with closed cover or with a two-sided flip-top cover; it can be upgraded with a large selection of accessories.

- Effective heat transfer thanks to surface heating
- Precise, electronic adjustment of the target temperature
- Display of the actual temperature
- Stepless electronic height adjustment (up to 30 cm) with foot switches on both sides*
- Gentle electrical tilting of the bed surface at the touch of a button (Trendelenburg and reverse Trendelenburg positioning)
- Hinged side panels
- Two-sided flip-top or single-piece cover available
- Gel mattress
- Standard rails for mounting accessories such as catheter quiver, storage trays or suctioning accessories*
- Optimally designed for easy cleaning

*optional

Resuscitation units

A family of resuscitation units with versatile options for optimal adjustment to the corresponding purpose, the needs of the infant, and the operating staff.

- Radiant warmer with integrated examination lamp
- Conductive heat provided by heated gel mattress[1]
- Quiet electric height adjustment, operation from both sides (up to 30 cm)*
- Gentle electrical tilting of the bed surface at the touch of a button (Trendelenburg and reverse Trendelenburg positioning)
- Hinged side panels available in different heights
- Skin temperature control and display (accuracy ± 0.1°C)**
- Two-sided flip-top or single-piece cover available for bed area*
- Sturdy rails for attaching trays and ventilator
- Standard rails for mounting accessories such as catheter quiver, storage trays or suctioning accessories*
- Easy cleaning thanks to optimal design

ISOTHERM radiant warmer

Universal warmer for thermotherapy, optionally equipped with height-adjustable mobile stand or for ceiling or wall mounting.

- Ceramic, scaling-free heating element with integrated halogen examination lamp (glare-free)
- The reduced surface temperature only has a moderate effect on the room temperature
- Controlled radiation intensity
- Even heat distribution
- Does not emit any visible infrared light (skin colour remains neutral)
- Available in mobile stand design or for wall or ceiling mounting

[1] Gel mattress in conjunction with heated bed surface only
*optional
** Lifetherm 2002 only

7

PHOTOTHERAPY

BILIBLUELIGHT

The new Bilibluelight bilirubin light by Löwenstein Medical is an effective, modern phototherapy system for reducing serum bilirubin levels.

The user-friendly Bilibluelight offers intuitive operation, high-quality design and low weight. It features powerful high-quality LEDs with a capacity of over 40,000 operating hours. The optimum wavelength ensures maximum bilirubin elimination.

The compact, lightweight Bilibluelight is perfectly suited for use in neonatal and paediatric wards. The light is available as a single-arm rod luminaire on a roll stand.

- High radiation intensity and optimum wavelength
- High-quality workmanship, made of sturdy aluminium and fibre-glass-reinforced high-performance plastic
- Optional trolley available

Sample applications with Lifetherm warming bed

EYEMAX2

Eyemax offers neonatal eye protection for UV phototherapy.

Eyemax is available in three different sizes:

- Micro: OFC 20 - 25 cm
- Preemie: OFC 26 - 32 cm
- Regular: OFC 33 - 38 cm

NEOJET™

nCPAP system for premature babies and infants

Neojet™ supports to spontaneous breathing of premature and fully developed babies. The set comprises Neojet, a set of adapter tubes, prongs, masks, a tape measure and bonnets.

Neojet™ is attached to the head of the patient with the help of the easy-to-use bonnets. Neojet™ is attached to the nose of the little patient using short nasal prongs or soft, gentle nasal masks.

- **Neojet™ active/variable flow-nCPAP generator**: This generator is designed to support the spontaneous breathing of newborns by creating an adjustable jet with constant positive pressure. Suitable for premature and fully developed newborns up to a tidal volume of 20 ml*
- **Neojet™ set of adapter tubes**: For Leoni plus and Leoni plus Transport. Individually packaged for single use.
- **Nasal masks**: Individually packaged for single use in combination with Neojet™. The nasal masks stand out for their ultrasoft silicone and anatomical shape.
- **Nasal prongs**: Individually packaged for single use in combination with an active Neojet. Available in different sizes.
- Low noise
- Pressure trigger and spontaneous breathing detection without additional sensor
- Flexible adapter for positioning prong and mask
- Patented flex tubes for easy application
- Based on the Benveniste valve with volume chamber

* The Neojet generator is also available in a reusable version. Please inquire about details.

ACCESSORIES

NEOJET™ ACCESSORIES

CPAPNose

Ideal nasal protection during CPAP ventilation of premature babies

- Directly applicable and self-adhesive
- Especially gentle on the skin thanks to hydrocolloid
- Hygienic individual packaging produced in clean room conditions
- Enlarged contact surface protects nasal and upper lip region
- Usable for up to 5 days, skin-friendly thanks to hydrocolloid
- Free of latex, phthalates, BPA and adhesives
- Individually packaged

FIXATION WEDGE

For better and more stable fixation of the generator on the bonnet.

TAPE MEASURE WITH TEMPLATE

To determine mask/prong size and head circumference for bonnets.

LM NEO TEST LUNG, DISPOSABLE

The easy-to-use test lung with standard connector for quick and simple function test of ventilators.

LM NEO TEST LUNG, REUSABLE

With the reusable LM Neo test lung, you can simulate the exact ventilation situation which may occur in very small premature babies, newborns or small children.

- Autoclavable up to 134 degrees Celsius
- 20 mL @ PEEP = 0 mbar; PInsp = 30 mbar
- 0.7 mL/mbar @ Vt 20 mL
- 45 mm × 150 mm

ACCESSORIES

LIGHTING SYSTEMS

VISIANO 20-2

Uncompromising lighting is essential wherever there are high demands for visibility. Whether in family medicine or dermatology, ENT or gynaecology or in particularly sensitive wards such as NICUs or intensive care, VISIANO 20-2 is a true all-rounder. Thanks to its unique design, state-of-the-art lighting technology and the highest lighting quality, it provides optimal examination conditions.

- LED technology
- High illuminance 60,000 lx/0.5 m, light field diameter 210 mm
- Precise colour rendering Ra >95, R9 >90
- 4-step illuminance dimming
- Antimicrobial hygiene function in key parts of the luminaire
- Maximum action radius (360° rotation of the head)

VISIANO 10-1

VISIANO 10-1 is an LED examination light that doesn't sacrifice any professional light quality. In daily use, VISIANO 10-1 stands out for its excellent illuminance and large field of light. The sturdy flexible arm ensures reliable positioning and a long service life. The closed design prevents contamination.
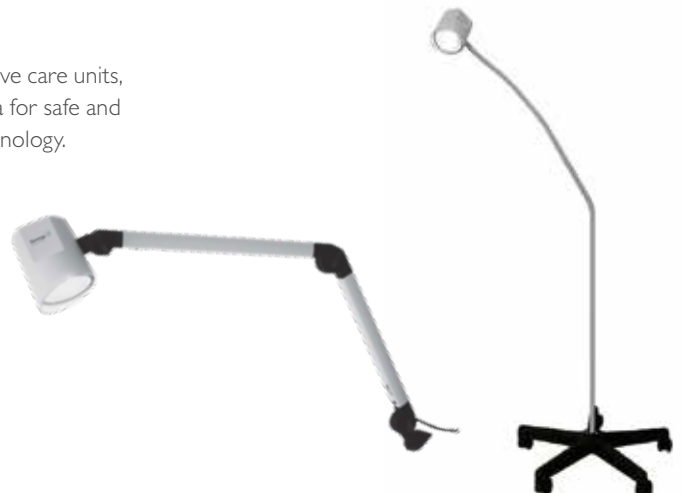
- LED technology
- High illuminance 50,000 lx/0.5 m, light field diameter 180 mm
- Precise colour rendering Ra >93
- Colour temperature 4400 K
- Professional light quality thanks to unique diamond optics and premium LEDs
- Lamp head can be rotated 280° with handle
- High-quality aluminium rods and durable friction joints

HX LED

The small and sturdy examination light HX LED is ideally suited for intensive care units, patient rooms and medical practices. The light meets all important criteria for safe and precise examinations and is particularly cost-effective thanks to LED technology.

- LED technology
- 15,000 lx / 0.5 m, light field diameter 300 mm
- Precise colour rendering Ra >95
- Colour temperature 4000 K
- Rocker switch (1/0) on the luminaire head
- Spring-mounted joint system or flexible arm
- Low heat emission of light
- Designed to match various mounting elements or roll stands

LM Blend

The new generation of high or low flow air-oxygen mixers

The compact, lightweight LM Blend permits personalized settings of oxygen concentration and flow without the use of additional accessories, such as a flowmeter. It is specially designed to function in any position and during transport. To measure oxygen concentration, the LM Blend is equipped with an optional port for connection to a oxygen measuring cell.

MAXBLEND 2

High-flow/low-flow air-oxygen blender

Maxblend 2 is an easy-to-use, low-maintenance blender with an integrated oxygen analyser. It features a variety of functions, including a backlit LCD and acrylic flow meter, intelligent alarms and an optional AC power supply. The modular flow meters can be added to the configuration. The whisper quiet operation enables bedside use without disturbing patient rest.

MAXVENTURI

High-flow air-oxygen blender

MaxVenturi was specifically developed as a high throughput interface, e.g. for air humidification systems. Using the proven Venturi principle, the device offers the option to mix ambient air with medical oxygen without the need for an air supply source.

MICROMAX

High-flow/low-flow air-oxygen blender

MicroMax offers the performance of a precise air-oxygen blend. In the high-flow variant, the total throughput range is 15-120 l/min, while the low-flow variant has a capacity of 3-20 l/min. MicroMax also includes a connection port for oxygen concentration measurement for continuous monitoring of the administered oxygen concentration with the optionally available oxygen analyser.

ACCESSORIES

PATIENT MONITORS

VITAGUARD® VG 3100

Vital signs monitor

VitaGuard® VG 3100 is the most versatile of all VitaGuard® monitors. It monitors key vital signs in children, adolescents and adults, providing reassurance for doctors, nursing staff and caregivers, both as an ambulatory monitor and in hospital environments.

- Monitoring: oxygen saturation, heart rate and respiration
- Operating time with (rechargeable) battery: at least 8 hours
- Displays: graphic LCD display, 5 LEDs
- Alarms: acoustic and visual
- Measuring functions: QRS amplitude indicator, basic impedance
- Memory types: event, long-term, trend, compliance
- Data transfer: USB
- Data analysis with VitaWin® evaluation software

VITAGUARD® VG 2100

The heart rate and apnoea monitor VitaGuard®-VG 2100 watches over the vital functions of respiration and heart rate in children, adolescents and adults, providing reassurance for doctors, nursing staff and caregivers, both as an ambulatory monitor and in hospital environments.

- Monitoring: heart rate and respiration
- Operating time with (rechargeable) battery: at least 24 hours
- Displays: graphic LCD display, 5 LEDs
- Alarms: acoustic and visual
- Memory types: event, long-term, trend, compliance
- Data transfer: USB
- Data analysis with VitaWin® evaluation software

VITAGUARD® VG 310

Pulse oximeter

The VitaGuard® VG 310 monitor watches over the key vital signs pulse rate and blood oxygen saturation (SpO_2), providing reassurance for doctors, nursing staff and caregivers, both as an ambulatory monitor and in hospital environments.

- Monitoring: oxygen saturation, pulse rate
- Operating time with (rechargeable) battery: at least 8 hours
- Displays: graphic LCD display, 4 LEDs
- Alarms: acoustic and visual
- Memory types: event, long-term, trend, compliance
- Data transfer: USB
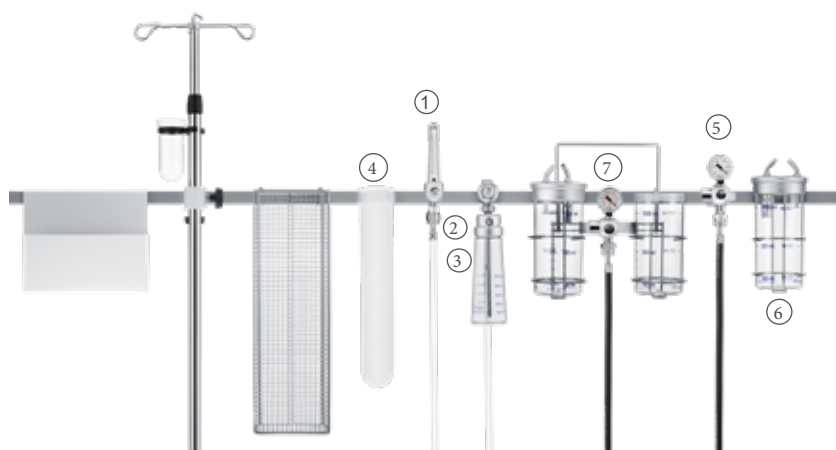- Data analysis with VitaWin® evaluation software

UNIFLEX rail system

The Uniflex rail system by Löwenstein Medical is an innovative, high-quality concept for all clinical application areas. The modular design of the Uniflex system enables maximum flexibility and a wide range of combination options. It is considered an indispensable standard in modern healthcare facilities, hospitals, clinics, nursing homes and medical practices.

Uniflex stands out for its full ground clearance as well as major utility, since all equipment needed for patient treatment is arranged at a convenient height and within easy reach. The wall space is optimally used for storing equipment and instruments.
Safe functionality and handling, optimal operation and use, versatile and flexible application. Humidification, suctioning, oxygen therapy, oxygen-air blender, equipment support, and much more.

1.   Flow meter
2./3. Bubble humidifier / aerosol humidifier
4.   Catheter quiver
5.   Compressed air injector
6.   Secretion suction receptacle
7.   Bronchial suction system

COMPRESSOR SMART 50

The SMART 50 medical compressor is a source of clean and dry compressed air. It is free of oil traces and therefore optimally suited for medical ventilators. It can be used as the primary air source or as an automatic stand-by source in case of a ventilator failure. It is easy to handle when set up on a cart.

Alarms:
- Temperature
- Pressure
- Power

Display:
- Working pressure
- Operating Hours
- Drying level*

LÖWENSTEIN medical

Sales and Service:

Löwenstein Medical
Arzbacher Straße 80,
56130 Bad Ems
Deutschland
T: +49 2603 9600-0
F: +49 2603 9600-50
info@hul.de
www.hul.de

p10321en2010

Images may depict optional accessories that can be ordered separately.

Follow us:

@loewensteinmedical

To the website: