



Breathing  
Like Nature



CE 0197

plus  
leoni  
Leoni Plus HFO  
Neonate & Paediatric Ventilation



plus  
**leoni**

## Innovative Ventilation Technology for our smallest patients

### Modular system at a glance:



#### HFOV (High Frequency Oscillatory ventilation)

The extremely powerful, integrated high-frequency module is of a diaphragm type. The frequency ranges between 5 Hz & 20 Hz



#### Precision Measurement

The hot-wire flow sensor at the patient's end allows automatic readjustment of trigger sensitivity relative to the patient's tidal volume (VT trigger adaptation)



#### Curves and loops

Simultaneous display of up to 3 curves and loops; graphic display of triggered spontaneous breaths; graphic trending; event log



#### Touch Screen Display

12 inch screen, colour detachable display with a control knob, ensures optimum ergonomic adaptation to space available in the NICU



#### Scientific Data Tool

Offers a solution for scientific data collection like Trends for 72 hours along with the event log that can be recorded breath by breath and can be transferred

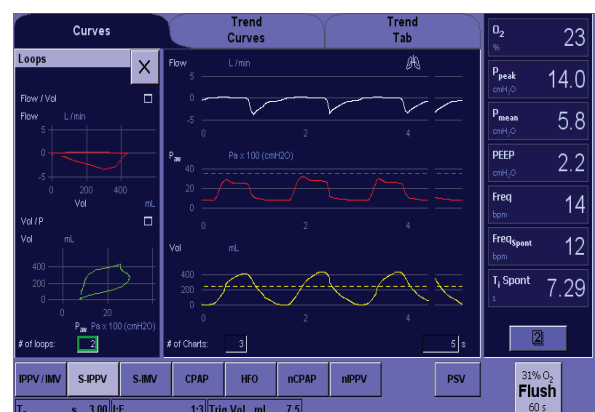


#### Battery Backup

Battery operation for up to 200 minutes in conventional ventilation modes and for up to 60 minutes in HFO ventilation mode

### Features & Benefits:

- Long-term ventilation for small premature infants, neonates and children weighing up to 30 kg.
- Essential settings, readings, alarm limits and graphic information, at a glance
- Assisted ventilation modes like "volume-controlled tidal volume guarantee" available.
- In addition "Volume Limit" function used to restrict tidal volume delivered.
- In HFO mode, amplitude control is regulated and compensates for any leaks or compliance changes.





## Overview of Ventilation modes

- ✓ CPAP / nCPAP
- ✓ IPPV / nIPPV
- ✓ SIPPV
- ✓ SIMV / SIMVsupport
- ✓ PSV SIPPV
- ✓ PSV SIMV
- ✓ HFO / nHFO
- ✓ HiFlow H+L
- ✓ Volume Guarantee
- ✓ Volume limit

## NeoJet™ System

The NeoJet™ system expands the application range of Leoni plus with non-invasive CPAP and nIPPV. Based on the Benveniste principle NeoJet provides an adjustable constant positive pressure in the patient's airway.

The application is carried out through short binasal masks and prongs, which allow individual adaptation to the small patient without reducing the airway. Pulmonary gas transport can be improved, and atelectasis prevented by nCPAP.

### NeoJet Generator

Disposable NeoJet generator  
Tidal volume  $0 > 20$  ml  
Generator with low noise level

### Nasal prong

Nasal prong for NeoJet - single, sterile packed  
Disposable  
5 sizes

### Neo mask

Neo mask - single, sterile packed  
Disposable, two sizes  
Anatomic design with 2 diaphragms for nutrition probe

### Bonnets

Bonnets to fix the NeoJet:  
from micro to XXXL, Disposable use on one patient  
Made from cotton and 5% Lycra





## TECHNICAL SPECIFICATIONS

Control	Control principle Trigger principle Trigger setting Trigger delay Flow sensor Dead space expansion	Timed, pressure-limited, tidal volume guarantee, tidal volume limit volume trigger, flow trigger automatic VT trigger adaptation approx. 30 msec hot-wire anemometer, close to patient on Y-piece 0.6 ml
Gas blender	Flow principle Gas mixture Inspiratory O <sub>2</sub> concentration Oxygen flush	constant flow, VIVE electronic gas mixer 21% –100% 23% –100% for maximum 2 min
Ventilation modes	CPAP IPPV and IMV (+VT limit) S-IPPV (+VT limit +VTG) SIMV (+ Psupport +VT limit +VTG) PSV-S-IPPV (+VT limit +VTG) PSV-SIMV (+ Psupport +VT limit +VTG) nCPAP nIPPV HFOV nHFO HiFlow	yes yes yes yes yes yes with NeoJet™ with NeoJet™ yes with NeoJet™ yes
Parameter	Peak inspiration pressure PEEP/CPAP Frequency Inspiration time Expiration time Inspiration flow Expiration flow	4 – 60 mbar 0 – 30 mbar 2-200 bpm 0.1 – 2 sec 0.2 – 30 sec 1 – 32 l/min 2 – 10 l/min
HFOV	Principle Oscillation setting range Mean pressure setting range Frequency setting range	Integrated membranes 5 - 100 mbar 0 - 40 mbar 5 - 20 Hz
Monitoring	Ventilation graphs Ventilation loops Lung function Alarms Logbook function O <sub>2</sub> measurement	Pressure, flow, volume flow/pressure, volume/pressure, flow/volume compliance, C20/C, resistance Plain text messages in 3 large alarm windows up to 4500 alarms 21% –100%
Electrical data	Power supply Battery-powered operation	100 – 240 V <sub>AC</sub> , 50/60 Hz 200 min conventional, 60 min HFOV
Sizes	Dimensions (WxHxD) Weight	30.5 x 38.5 x 39 cm 22 kg (including HFOV module)

\*Technical specification subject to change

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