LEISTUNG

PR4-g

Lung Ventilator for Transport and Emergency Care
Neonatal, Pediatric and Adult

Our Commitment
to life

Leistung is more than a manufacturer of lung ventilators for ICU and Emergency. Leistung's lung ventilators, besides being products of technological excellence and performance, they also carry the values of all the professionals involved in the process, from its conception to its commercialization, who are aware about the importance of a life-supporting device.

Therefore, we are proud to say that, while we are an industry, our essence lies in the trust that professionals and patients place in us. It is our commitment to life that makes us go further!

LEISTUNG

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PR4-g

VERSATILITY with EXCELLENCE
and TECHNOLOGY.

PR4-g

Lung Ventilator for Transport and Emergency

Adult | Pediatric | Neonatal

The portable Lung Ventilator PR4-G was developed with advanced technology for use in intra and extra hospital transportations, aeromedical rescue or emergency rooms, caring for adult, pediatric and neonatal patients.

With volumetric and pressumetric controls, it presents in real time, through its LCD graphic display, the visualization of all reading parameters, digital manometer and graphic of pressure by time. It has adjustments of controls and alarms in its panel, of easy operation, facilitating the control of the parameters to the operator.

VENTILATION MODES

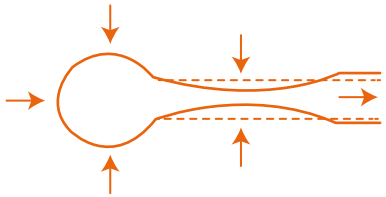
ADULT / PEDIATRIC

- VCV assisted / controlled
- PCV assisted / controlled
- PSV/CPAP
- SIMV(VCV) + PSV
- SIMV(PCV) + PSV

NEONATAL

- Continuous flow assisted / controlled
- Nasal CPAP

PR4-g
Lung Ventilator for Transport and Emergency



AUTOPEEP

With the AutoPEEP Ventilatory Mechanic, PR4-G evaluates the persistance of a positive alveolar pressure at the end of the expiration, due to a final expiratory pulmonary volume higher than the foreseen functional residual capacity. The AutoPEEP occurs as consequence of the exhalation time being insufficient for the complete exhalation of the patient.

VCV
CONTINUOS FLOW
SIMV
PCV PSV
CPAP NASAL

INTERFACE AND VENTILATION MODES

With an LCD display of 7”, PR4-G holds a friendly and intuitive graphical interface, which allows the visualizaton of the ventilatory parameters and the curve of pressure by time. It is also composed of a large range of assisted and controlled ventilatory modes capable of serving all patients, in an agile and easy to understand way.

NEONATAL MODE

The PR4-G is one of the most versatile transport ventilators in the market and may ventilate all patients, including newborns from 300g. With ventilatory modes such as continuous flow and nasal CPAP, and safety tools specific for the little ones, the PR4-G guarantees a proper ventilation for Neonatal

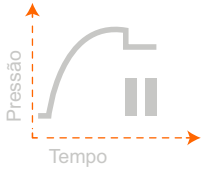
PR4-g
Lung Ventilator for Transport and Emergency

SPECIAL CONFIGURATIONS

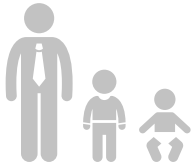
Lithium Battery (Li+) with
15 HOURS
duration

AUTOMATIC
Altitude
Compensation

ALARMS
LOG



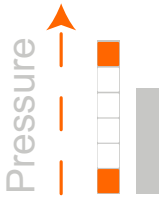
Inspiratory Pause
with **PLEATEU**
PRESSURE



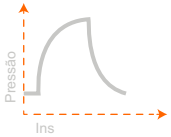
ADULT, PEDIATRIC
AND NEONATAL
Patients

INTUITIVE
Interface

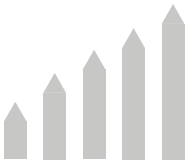
GRAPHICAL INDICATOR
of Spontaneous and
Controlled cycles



Graphical
PRESSURE BAR



PRESSURE/ TIME
Graphic



RISE TIME
with 6 levels

Graphics
FREEZE

LCD LED SCREEN

PR4-g
Lung Ventilator for Transport and Emergency

APPLICATIONS

PR4-g is a portable microprocessed lung ventilator which attends adult, pediatric and neonatal patients. The device is proper for versatile uses in intra and extra hospital mobile units, aeromedical rescue or emergency care.

AMBULANCE

HELICOPTER

EMERGENCY CARE

INTRA-HOSPITAL TRANSPORT

PR4-g
Lung Ventilator for Transport and Emergency

GENERAL

SPECIAL CHARACTERISTICS

- Current time and date
- Safety for parameters configuration
- Symbol for silenced alarm
- Graphical indicator of external power supply and battery
- Indicator of the battery charge level
- Indicator of FiO_2 in 50% or 100%.
- Symbol for Standby
- Symbol for alarms log

PROGRAMMABLE ALARMS

- Maximum pressure
- Minimum pressure
- Maximum tidal volume
- Minimum tidal volume
- Maximum frequency
- PEEP
- Apnea

GRAPHICS

- Pressure – time
- Log of alarms or events with date, time and alarm
- Automatic scale for amplitude

ADDITIONAL FUNCTIONS

- Indication menu of hours of use and services performed
- Possibility to change the language
- Initial self-tests
- Automatic altitude compensation
- Capture of atmospheric pressure
- Verification of the hours of use
- Calibration of the sensors
- Warning of the need of servicing per hours of use
- Battery charge indicator

AUTOMATIC ALARMS

- Power failure
- Interrupted Cycle
- O_2 failure
- Low battery charge
- Microprocessor (inoperative ventilator)
- Inverted I:E Ratio
- Patient disconnection

PR4-g
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GENERAL

MONITORING

Airway pressure: peak	0 to 120 cmH_2O
Airway pressure: plateau	0 to 120 cmH_2O
Airway pressure: base (PEEP)	0 to 50 cmH_2O
Inspiratory time	0 to 30s
I:E Ratio and spontaneous breathings	49:1 to 1:99
Inspiratory pause	0 to 2s
Total frequency	250 rpm
Graphical indicator of spontaneous and mechanical cycles	Symbols and graphics
Indirect minute volume	0 to 25 l/min.
FiO_2 concentration	50 or 100%
Battery charge level	Proportional bar
Indicator of battery or external power supply	Symbol

LUNG MECHANICS

AutoPEEP
Inspiratory pause

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PARAMETERS

CONTROLS	
FiO_2	50 or 100%
Inspiratory Time	0.1 to 30s + 2s of inspiratory pause
I:E Ratio	5:1 - 1:99
Ventilator Frequency	1 - 150 rpm
Tidal Volume	5,0 to 2.500 ml
Minute Volume (Indirectly Controlled)	0.05 to 25.0 l (frequency x tidal volume)
Sensibility	By pressure: -0.5 to -10.0 cmH_2O (compensated PEEP)
Pressure controlled (PCV)	1 to 80 cmH_2O over PEEP
Pressure support (PSV)	0 to 80 cmH_2O over PEEP
Inspiratory pressure	-10 to 120 cmH_2O
Rise time	6 automatic levels
Expiratory sensibility	25%
Apnea time	5 to 60s
PEEP / CPAP	0 to 50 cm H_2O
Inspiratory Flow	0 to 120 l/min.
Base Flow	Off up to 50 l/min
Automatic Inspiratory Pause (VCV mode)	0.1 – 2.0s with plateau pressure value
Flow waveform	Square
Inspiratory pressure internal safety valve	Adjusted in 120 cmH_2O
O_2 input pressure regulating valve	Internally incorporated into the equipment
Graphics freeze	With grids for easy interpretation of the values
Standby	Keeps the ventilator in standby without changing the programation
Backup ventilation	Available in all ventilatory modes
Altitude compensation	Automatic altitude compensation

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PARAMETERS

EXTERNAL CONVERTER (ADAPTER DC/DC, OPTIONAL)

Output voltage	15 V
Maximum output current	2,33 A
Power	35,0 W (Max.)
Input power	9-36 V

EXTERNAL POWER SUPPLY (AC/DC ADAPTER, OPTIONAL)

Voltage – Current	100V – 240 V ~ 0,6 A – 0,29 A
Rated power	63 VA
Power factor	0,7
Output voltage	15 V
Maximum output current	4,2 A

INTERNAL POWER SUPPLY

Rated power	12 V
Rated capacity	13,2 Ah
Type	Lithium (Li+) Battery
Battery	900 min. autonomy

PNEUMATIC INPUT

Oxygen (O_2)	DISS 9/16" – 18 input
Pressure	250 – 700 kPa (2,5 - 7 bar)
Maximum consumption flow	Up to 160 l/min.

PHYSICAL CHARACTERISTICS

Height	150 mm
Width	270 mm
Depth	230 mm
Equipment's weight	4,9 Kg
Screen	7 inches

POWER SUPPLY

Voltage	15 V (-20%)
Rated current	2,33 A
Rated power	35,0 W (Max.)
Fuse	3,0 A / 250 V 20 mm SB (retarded)

GENERALITIES

Medical product classification	Class III
Operation mode	Continuous operation
Classification against electric shock (insulation	Class II – equipment internally energized
Classification of protection against electrical shock	Type B
Protection level against harmful water penetration	IP24

LEISTUNG

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Certification GMP ANVISA RDC 16

MADE IN
BRAZIL

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