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GMP certificate

EN ISO 13485:2003 + A/C 2009

NBR ISO 9001:2008









# LUFT NEO

# NEONATAL • PEDIATRIC

LUFT-NEO is among the most complete lung ventilators in the world market, offering a high ventilation quality adapted for each patient, with great ease of operation through an extremely intuitive panel design, which allows the operator to utilize all the parameters using few command keys, due to its intelligent graphical interface, making the work of the operator easier, allowing the operator to provide more attention to the patient.

Suitable for pediatric and neonatal patients, LUFT1-g is able to assume the most complete and rigorous therapies, effectively, reliable and accurate.

Based on an easy operative system, it is interactive with the operator, it has fast and safe interconnection system with the patient circuit, avoiding any possibility of error. Its starts with a default configuration, which ensure a safe and accurate ventilation, giving to the operator the control of the equipment and assuring sensitivity values that avoid self-cycling, allowing a better progress of the patient without interferences. Warning messages are very easy to understand which turns possible to take decisions respecting the alarms situation and critical parameters variation.

The final result is an ICU medical ventilator with a friendly interface, where its handling is very easy and intuitive. Ventilation modes menu is focused for pediatric and neonatal patients at the same time its configuration is simple and affective, so LUFT-NEO practicability and operator competence can walk together, so that the maximum of LUFT-NEO can be obtained: perfect and natural mechanical ventilation, delivering comfort and safety for adults and neonates.

# **VENTILATION MODE: PEDIATRIC**

#### **VOLUME (VCV)**

- Assisted/Controlled
- SIMV with support pressure with Backup
- SIMV with support pressure without Backup

## PRESSURE (PCV)

- Controlled
- Assisted/Controlled
- SIMV with support pressure with Backup
- SIMV with support pressure without Backup

## SUPPORT PRESSURE (PSV)

- PSV + CPAP
- Mandatory Minute Ventilation (MMV) + PSV
- PSV + Assured Tidal Volume
- Biphasic Pressure (APRV / BIPAP)

# **NIV (NON INVASIVE VENTILATION)**

With leakage compensation

#### **BACKUP VENTILATION (SUPPORT)**

- Assisted/controlled Volume
- Assisted/controlled Pressure

#### **VENTILATION MODE: NEONATAL**

- Assisted/controlled Pressure (PCV)
- Support pressure (PSV) / CPAP
- NASAL CPAP
- SIMV (PCV) + PSV
- Continuous flow, time cycled with adjustable pressure
- Backup ventilation (support) by assisted and controlled pressure

#### **CONTROLS**

- FiO2 21 to 100% (electronically adjusted on panel with graphic display
- Inspiratory Time: 0.1 to 10 s.
- I:E ratio: 5:1-1:99
- Ventilator frequency: 1 to 150 rpm
- Tidal volume: 10 to 1000 ml
- Apnea (with adjustable time) from 5 to 60 s.
- By pressure: -0.5 to -10.0 cmH20 (compensated PEEP)
- Controlled pressure (PCV):
- 2 to 70 cmH20 over PEEP (with adjustable rise time)
- Support pressure (PSV):
- 0 to 70 cmH20 over PEEP (with adjustable rise time)
- Inspiratory pressure: 2 to 120 cmH20

- Expiratory sensibility: Adjustable from 5 to 60% of initial flow
- PEEP/CPAP: 0 to 50 cmH20
- Nebulization: Synchronized with inspiration, from 1 to 20 min
- TGI: synchronized with expiration
- Inspiratory flow:
- In VCV: Automatic adjustment
- In PCV and PSV: up to 180 I/min
- Continuous flow in neonatal: 2 to 15 l/min
- Inspiratory flow in neonatal: 2 to 30 I/min
- Expiratory flow: 0 to 120 I/min
- Sigh (VCV mode):
- Cycles per hour
- Quantity
- Maximum tidal volume
- Inspiratory pause (VCV mode): 0 to 2.0 seconds
- Manual activation
- O2 100% (Oxygenation for aspiration with synchronized system by 5, 10 or 15min, returning after that the initial FiO2)
- Flow waveform:
- In VCV
- Rectangular
- Descendent - In PCV and PSV:
- Descendent
- Gas net automatic By-pass (O2-AIR) in case of failure of one of them, the equipment continues operating normally.
- Inpiratory pressure inner safety valve adjusted in 120 H20cm
- Stand By: To maintain the configuration without cycling
- Scales: for vertical and horizontal analysis with automatic adjustment
- Freeze: To analyze the graphs

### **OUTPUT PARAMETERS**

- Airway pressure: peak, plateau, mean, base (PEEP)
- Inspiratory time
- I:E ratio / spontaneous breathings
- Expired tidal volume
- Inspired flow peak
- Total frequency
- Graphic indicator of spontaneous and mechanical cycles
- FIO2 concentration

#### RESPIRATORY MECHANICS

Auto PFFP

#### **ALARMS**

- High inspiratory pressure
- Low inspiratory pressure
- Apnea
- Maximum respiratory frequency
- Maximum and minimum tidal volume
- Maximum and minimum minute volume

- Maximum and minimum PEEP and continuous pressure
- Gas supply source (air-02) Power Outage
- Low battery charge
- Microprocessor (technical failure)
- Interrupted cycles in pressure modes
- Inverted I:E ratio
- Alarms are triggered according to priority order with light, sound and screen message.

# **GRAPHICS**

- Pressure + Flow / Time

## **TENDENCY CURVES (LAST 6, 12, 18 HS)**

- Pressure
- Flow
- Tidal volume
- Minute volume Dynamic compliance
- Frequency

#### OTHER FUNCTIONS

- Alarms log with last 1000 alarms with date, hour and cause of alarm.
- Menu of indication of use hours and services provided
- Altitude adjustments for volume comper
- Language and time/date selection

#### SELF TESTS

- Patient circuit leakage
- Expiratory flow
- Patient circuit compliance values

#### **POWER SUPPLY**

- Universal input: 90 to 264 Vac 47 to 63Hz
- Rechargeable inner battery with at minimum 120 min autonomy



