



# LUFT3

Lung Ventilator for ICU  
Neonatal, Pediatric & 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!



[www.leistungbrasil.com](http://www.leistungbrasil.com)  
+55 47 3371 2741

# LUFT3

TECNOLOGY allied  
to QUALITY OF LIFE.





# LUFT3

## Lung Ventilator for ICU

Adult | Pediatric | Neonatal

The lung ventilator for Intense Care Units (ICU) LUFT3, counts with integrated 17" touch screen technology and offers a complete range of ventilation modes which allows the monitoring of the patient's condition.

### VENTILATION MODES

#### ADULT/PEDIATRIC

- VCV assisted/controlled
- PCV assisted/controlled
- PSV/CPAP
- PRVC assisted/controlled
- SIMV (VCV) + PSV
- SIMV (PCV) + PSV
- MMV + PSV
- PSV + assured VT
- Biphasic pressure (APRV + PSV)
- NIV
- HFNC

#### NEONATAL

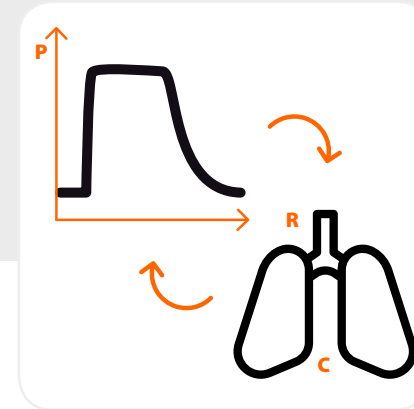
- VCV assisted/controlled
- PCV assisted/controlled
- PSV/CPAP
- SIMV (PCV) + PSV
- Continuous flow assisted/controlled
- Nasal CPAP
- HFNC

## FUNCTIONALITY AND PERFORMANCE



### STRESS INDEX

The stress index is performed with minimal interference in the ventilatory cycle and results in a numerical value of easy interpretation, promoting a practical, safe and effective analysis of the patient ventilation. It is a measure of respiratory the stress caused in the alveoli either by collapse or hyperdistension.



### PRVC

It combines the best of conventional controlled ventilation modes of volume and pressure, providing the volume adjusted by the operator with as little pressure as possible.

The function uses free flow waveform formation, control with feedback of the compliance and resistance of the patient.



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Lung Ventilator for ICU

**SPECIAL FEATURES**

- 100 % oxygen up to 20 min. with automatic alarm silence;
- Adaptation of the patient's interface or change of the circuit with recalibration without having to turn off the equipment and keeping track of the patient's log;
- Automatic theoretical weight calculation and interface selection according to the patient;
- Altitude compensation;
- Configuration of the monitored variables;
- Flow curve 50 % descending;
- Intuitive Interface;
- Gas measurement with BTPS correction;
- Smart ventilator, records the user preference after 10 uses.
- LCD Screen tilt angle adjustment
- Log for 1000 alarms and events with date and time



Adjustment of the **ALARM VOLUME**



**6 HOURS** battery life



Intuitive Interface with Adjustment of the **MONITORED VARIABLES**



Timed **NEBULIZER** with Inspiration flow and FiO<sub>2</sub> compensation

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## GRAPHICAL INTERFACE



### INITIAL SCREEN SETUP

- Patient selection
- Gender
- Height
- Weight
- Automatic theoretical weight calculation
- Ventilation level per mL/kg
- Type of artificial airway
- Type of humidification
- Line test
- Circuit compliance measurement
- Last patient function

### OPERATIONAL VISUALIZATION

- Graphical pressure bar
- Indicator of spontaneous/controlled cycles
- Battery charge level
- Programation of the ventilatory variables

#### ADULT AND PEDIATRIC

Customizable selection  
of up to

# 5

- Pressure/Time
- Flow/Time
- Volume/Time
- Volume/Pressure
- Flow/Volume
- Pressure/Flow

### SIMULTANEOUS GRAPHICS

#### NEONATAL

Customizable selection  
of up to

# 3

- Pressure/Time
- Flow/Time
- Volume/Time

### SIMULTANEOUS GRAPHICS

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## LUNG MECHANICS

- AutoPEEP
- Slow vital capacity
- Dynamic compliance
- Static compliance
- PV curve with low flow
- Stress Index
- Tobin Index
- P0.1 - Airway obstruction pressure
- Expiratory resistance
- Inspiratory resistance
- Work of breathing





**PARAMETERS****CONTROLS**

FiO <sub>2</sub>	21 to 100 %
Inspiratory time	0.1 to 30 s
I:E Ratio	5:1 - 1:99
Ventilator Frequency	1 - 180 r.p.m.
Tidal Volume	2.0 to 2500 mL
Minute Volume	0.01 to 25.0 L
Sensibility	By Flow: 0.2 to 15 L/min.   By Pressure: -0.2 to -15.0 cmH <sub>2</sub> O (PEEP compensated)
Controlled Pressure (PCV)	1 to 80 cmH <sub>2</sub> O (over PEEP)
Support Pressure (PSV)	0 to 80 cmH <sub>2</sub> O (over PEEP)
Inspiratory Pressure	-10 to 120 cmH <sub>2</sub> O
Rise Time	6 levels
Expiratory Sensibility	5 to 80 %
Apnea Time	5 to 60 s
PEEP/CPAP	0 to 50 cmH <sub>2</sub> O
Nebulization	1 to 20 min. synchronized with automatic compensation of the inspired volume and FiO <sub>2</sub>
Inspiratory Flow	0 to 200 L/min.
Base Flow	Off up to 50 L/min.
Expiratory Flow	Up to 200 L/min.
Automatic Inspiratory Pause (VCV mode):	0.1 - 2.0 s with plateau pressure value
Manual Inspiratory and Expiratory Pause	Up to 30 s
O <sub>2</sub> 100%	1 to 20 min.
Flow Waveform	Square/Descending 100 %/Descending 50 %/Sinusoidal/Ascending
Inspiratory Pressure Inner Safety Valve	Adjusted in 120 cmH <sub>2</sub> O
Pressure Regulating Valve for Air and O <sub>2</sub> Input	Built into the equipment
RS232 Signal Connector	For external communication with the software and signals input
USB Signal Connector	For equipment's service and software update
TGI	Synchronized with the exhalation phase
Sigh (VCV mode)	Cycles per hour, quantity, maximum tidal volume
Automatics Scales	Automatic for amplitude and adjustable per time
Graphics Freeze	With grid for easy interpretation of the values
Standby	Keep the ventilator in standby mode without changing the setup
Backup Ventilation	Available in all ventilatory modes
Altitude Compensation	0 to 6000 masl
Alarm Sound Level	20 to 100 %

**PARAMETERS****MONITORIZATION**

Airway Pressure: Peak	0 to 120 cmH <sub>2</sub> O
Airway Pressure: Plateau	0 to 120 cmH <sub>2</sub> O
Airway Pressure: Mean	0 to 120 cmH <sub>2</sub> O
Airway Pressure: Base (PEEP)	0 to 50 cmH <sub>2</sub> O
Inspiratory Time	0 to 30 s
Expiratory Time	0 to 30 s
I:E Ratio	49:1 to 1:99
Inspiratory Pause	0 to 30 s
Inspired/Expired Tidal Volume (Distal and Proximal)	0 to 2.5 L
Peak Inspiratory Flow (Distal and Proximal)	999 L/min.
Peak Expiratory Flow (Distal and Proximal)	999 L/min.
Dynamic Compliance	999 mL/cmH <sub>2</sub> O
Total and Spontaneous Frequency	250 r.p.m.
Graphical Indicator of Spontaneous and Mechanical Cycles	Symbols and graphs
Minute Volume (Distal and Proximal) total and spontaneous	0 to 25 L/min.
FiO <sub>2</sub> Concentration	21 to 100%
Constant of inspiratory and expiratory time	9.99 s
Compressible Volume	399 mL
Ti/Ttot Ratio	0.98
Total Leakage	50 L/min.
Ventilation Level (mL/kg)	99.0 mL/kg
Battery Charge Level	0 to 100%
Patient Circuit's Compliance	4.0 mL/cmH <sub>2</sub> O

## GENERAL

### SPECIAL CHARACTERISTICS

- Current time and date
- Time and date when the equipment was turned on
- Touch screen function lock
- Graphical indicator of external power supply and battery
- Proportional indicator of battery charge level
- Indicator bar of the parameters adjustment range
- Graphical bar of the ventilatory pressure with indicator of the alarms level
- FiO<sub>2</sub> reading through Galvanic Cell or Pneumotachograph
- Standby symbol
- Alarms log symbol
- Automatic compensation of the breathing circuit's compliance
- Internal, permanent and non-consumable sensor

### PROGRAMMABLE ALARMS

- Maximum pressure
- Minimum pressure
- Maximum tidal volume
- Minimum tidal volume
- Maximum minute volume
- Minimum minute volume
- Maximum frequency
- Minimum frequency
- FiO<sub>2</sub>
- PEEP
- Apnea

### COMPLEMENTARY MESSAGES

- Without exhalation sensor
- Without proximal sensor
- Active oxygen cell
- Estimated patient weight

### AUTOMATIC ALARMS

- Power failure
- Interrupted cycle
- Air/O<sub>2</sub> input pressure (low and high)
- Low Battery (inoperative battery)
- Microprocessor (inoperative ventilator)
- Inverted I:E Ratio
- Patient disconnection
- Proximal sensor disconnection

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**PARAMETERS****GRAPHICAL TENDENCIES**

Tidal Volume
Minute Volume
Frequency
Dynamic Compliance
Peak and Base Pressure
Flow
Graphical tendencies up to 72 hours with the aid of grids for analysis

**NUMERICAL TENDENCIES**

AutoPEEP
Dynamic compliance
Static compliance
Inspiratory resistance
Expiratory resistance
Stress Index

**INTERNAL POWER SUPPLY**

Nominal voltage	10.8 V – 11.1 V
Nominal capacity	13.2 Ah
Type	Lithium Battery (Li+)
Battery	360 min. autonomy

**GENERALITIES**

Medical Product Classification	Class III
Operation Mode	Continuous Operation
Classification Against Electric Shock (Isolation)	Class I - Internally Energized Equipment
Classification of Protection Against Electric Shock	Type B
Protection Level Against Nocive Penetration of Water	IP22

**PNEUMATIC INPUT**

Oxygen	DISS 9/16" – 18 Input
Air	DISS 3/4" – 16 Input
Pressure	250 – 700 kPa (2.5 - 7 bar)
Maximum Flow Consumption	Up to 180 L/min.

**PHYSICAL CHARACTERISTICS**

Height	1473 mm
Width	550 mm
Depth	530 mm
Equipment's Weight	28.0 kg
Case's Weight	10.0 kg
Monitor's Weight	5.4 kg
Trolley's Weight	12.6 kg
Touch Screen	17 inches
LCD LED Monitor	With angulation adjustment
Trolley	Anticorrosive plastic material
Castors	4, being 2 with brakes

**POWER SUPPLY**

Voltage - Current	100 V – 240 V – 0.6 A – 0.29 A
Frequency	47 to 63 Hz
Commutation to Battery	Voltages Lower than 90 Vac.



# LEISTUNG



**Leistung Equipamentos Ltda.**

202, João Ropelatto St.  
Nereu Ramos - 89265-520  
Jaraguá do Sul - SC - Brazil

**Phone: +55 47 3371 2741**

**E-mail: [leistung@leistungbrasil.com](mailto:leistung@leistungbrasil.com)**

**Site: [www.leistungbrasil.com](http://www.leistungbrasil.com)**



**Technical Support**  
**0800 645 1534**

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