# *eXtend*ing peace of mind

To provide **the most effective** care

Medical teams should be able to use the same ventilator to meet the requirements of all patients and all clinical situations.

## Treating all types of patients

***eXtend***$^{XT}$ is specially designed to provide effective treatment to all categories of patients, whether adults, children or infants.

## Considering all treatment strategies

The many modes available, from the simplest to the most advanced, provide a response to all clinical situations and all treatment requirements: controlled ventilation, assisted ventilation, invasive or non-invasive ventilation.

***eXtending the optimization of purchasing and operating costs***

- **Optimizing the value for money**
- **Reducing training times** thanks to the extreme simplicity of the interface
- **Treatment effectiveness:** ***eXtend***$^{XT}$ provides all the tools required for the effectiveness and constant improvement of treatment and, as a result, could help to reduce the number of days of ventilation in intensive care
- **A ventilator for all patients and all treatment strategies:** ***eXtend***$^{XT}$ suits the changing ventilation requirements during treatment, for any type of patient
- **An open-ended ventilator:** ***eXtend***$^{XT}$'s original design can be updated for compatibility with future system upgrades, whilst guaranteeing the ergonomic qualities of its interface
- Consumables and accessories:
  - **no cost related to specific consumables**
  - accessories available for ***eXtend***$^{XT}$ integration in its environment

**Non-Invasive Ventilation**

***NIV using eXtend***$^{XT}$ ***provides exceptional ventilation capabilities, to avoid complications related to intubation.***

***eXtend***$^{XT}$ ***provides detection and automatic compensation of leakages and appropriate alarm management.***

AIR LIQUIDE
MEDICAL SYSTEMS

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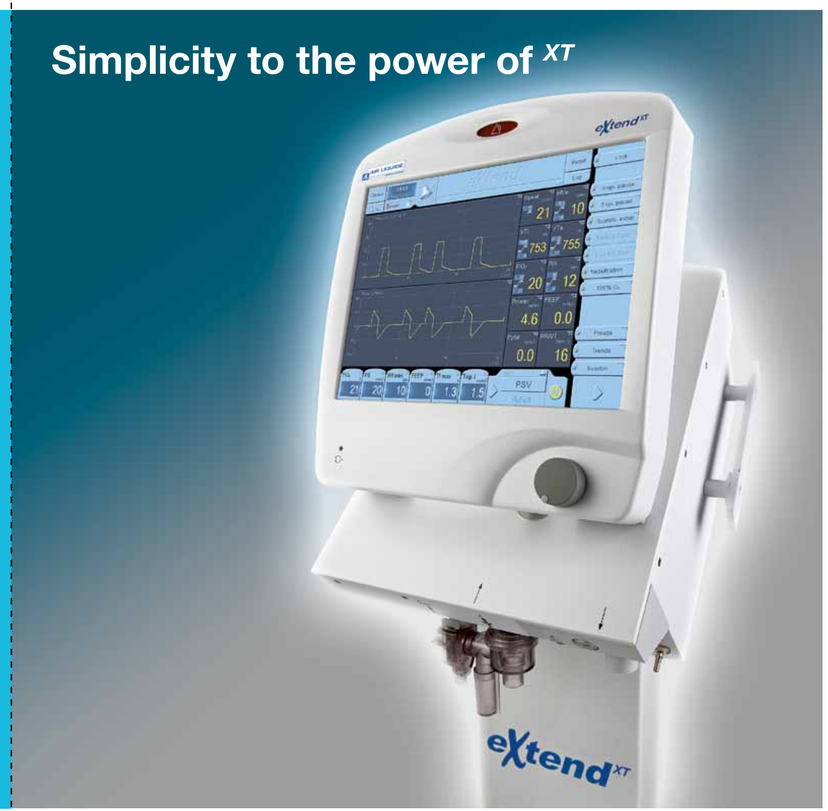
# EXTEND$^{XT}$

## Simplicity to the power of $^{XT}$

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AIR LIQUIDE

# *eXtend*ing simplicity

Ventilators are more and more performant and offer ever-more advanced functionalities, often making them more complicated to use.
To allow medical teams to make the most of the clinical performance and functionalities of a ventilator, Air Liquide Medical Systems has developed ***eXtend***$^{XT}$, an exclusive ergonomic layout, for outstanding user-friendliness.

## To reach simply the **best performance**

## Fast and easy to use

**INTUITIVE FAMILIARIZATION AND OPTIMISED TRAINING**

A single and intuitive principle of use with:
- an automatic using help window
- settings and parameters selecting markers

**FAST AND SIMPLE USE**

A single page with a 15 inch large touch-screen giving a highly structured layout with fully dedicated areas

**AUTOMATIC USE**

An appropriate page with information selected automatically according to the relevance of the context:
- KeyContext™ Menu
- an integrated and programmable nebulization

**KeyContext™ Menu**

***This menu, is unique in the field of ventilation.The user obtains the optimum configuration of the interface: pressing a chosen screen's block, displays the KeyContext™ Menu and automatically provides access to the pertinent information and functions.***

**Who are we?**

***Air Liquide Medical Systems, a subsidiary of the Air Liquide Group, is an expert in ventilation and respiratory medical equipments. Its 400 employees are committed to design, manufacture and sell innovative products and services in the fields of hospital and home ventilation, anesthesia ventilation, distribution and administration of medical gases and aerosol therapy.***

## Integration into intensive care unit

Because each patient represents a different clinical case and because medical teams have different requirements and work habits, ***eXtend***$^{XT}$ lets you personalize the interface at any time.

- Configuration of the curves and measurements displays
- Personalized configuration of the ventilation parameters: settings (TI/Ttot and I:E ratio, adjusting TI), alarms, etc.

## Patient safety

The quality and safety of ventilation must be ensured throughout treatment. Air Liquide Medical Systems develops effective systems that ensure the safety of the patient at every stage in the use of ***eXtend***$^{XT}$ and under the best possible conditions.

- Fully automated tests to eliminate the risk of error in initializing the machine
- Help window for settings
- A fully dedicated alarm zone, carefully designed for the management of gravity and priority levels of events

**eXtend$^{XT}$ High-end critical care VENTILATOR: Technical Specifications**

**Ventilation modes – Invasive Ventilation**
**Volume Controlled Ventilation (Assist./Cont.):** VCV
**Pressure Controlled Ventilation (Assist./Cont.):** PCV
**Synchronized Intermittent Mandatory Ventilation:** V-SIMV and P-SIMV
**Pressure Support Ventilation (PS-PEEP):** PSV
**Continuous Positive Airway Pressure:** CPAP
**Volume Assured Pressure Support:** VAPS
**Mandatory Rate Ventilation:** MRV (Patented feature)
**Airway Pressure Release Ventilation:** APRV
**Pressure Regulated Volume Control:** PRVC
**Intermitted Mandatory Pressure Release Ventilation:** IMPRV
**Duo Levels:** Bi-level pressure ventilation
**Inverse Ratio Ventilation:** IRV
**Ventilation modes – Non Invasive Ventilation**
Non Invasive Spontaneous Ventilation with pressure support and PEEP, CPAP, VCV-NIV, PCV-NIV, SIMV-NIV, PSIMV-NIV, PSV-NIV and PS-PEEP NIV
**Monitoring**
**Static compliance and resistance:** Automatic measurement in VCV
**Dynamic compliance and resistance:** Measurement is possible
**PEEP and AUTO (Intrinsic) PEEP:** Automatically measured
**Plateau Pressure:** Automatic measurement in VCV
**Curves:** Flow (t), Pressure (t), Volume (t) and $EtCO_2$ (t)
**Loops:** P/V, V/F, F/P and $FiO_2$
**Trends:** 13 days for 14 parameters
**Monitoring of $FiCO_2$ and $EtCO_2$**
**Events log (ventilation and alarms settings, pauses):** 10,000 events
**Rapid Shallow Breath Index (RR/VT)**
**P 0.1**
**Spontaneous expired minute volume (Pulse MVe)**
**Spontaneous respiratory rate (Pulse RR)**
**Automatic measurement of alveolar recruitment with LIP and UIP**

**Ventilation settings**
**Tidal Volume (VTI):** 20 to 2000 mL
**Inspiratory peak flow:** 0 to 200 L/min
**Maximum Inspiratory peak flow:** >200 L/min (depending on gas supply pressure)
**Respiratory rate (RR):** 5 to 100 bpm
**SIMV respiratory rate (RR SIMV):** 1 to 60 bpm
**Inspiratory plateau (Tplat):** 0 to 60% of TI
**Inspiratory Time (TI):** 0.2 s to 5 s
**Inverse Ratio (IRV):** up to 80% of Ttot
**Positive End Expiratory Pressure (PEEP):** 0 to 40 $cmH_2O$
**Pressure Support (PS):** 0 to 35 $cmH_2O$
**Inspiratory Pressure (PI):** 2 to 60 $cmH_2O$
**Peak Inspiratory Pressure:** 90 $cmH_2O$
**Pressure Slope (slope):** 50 to 150 $cmH_2O/s$
**Flow wave shape:** Constant, decelerating, sinusoidal
**$FiO_2$:** 21 to 100% (100% $FiO_2$ for suctioning is available)
**Inspiratory Trigger:**
Pressure – 0.1 to 5 $cmH_2O$
Flow – 1 to 20 L/min
**Expiratory Trigger:** 0 (OFF) to 70% of peak flow
**Inspiratory pause:** 0 to 5 s
**Expiratory pause:** 0 to 12 s
**Sustained exhalation:** 0 to 30 s
**Sigh rate:** OFF, 1/9 to 1/200 cycles
**Nebulization:** Programmable volume-compensated nebulizer with auto cut-off
**Communication interface:** Optional

**Built-in battery backup**

(Detailed datasheet is available on request)

# *eXtend*ing visibility

## To make the **best decisions**

## Advanced patient monitoring and data recording

The medical teams should have the information and data they need at all times. ***eXtend***$^{XT}$ has a complete, configurable monitoring system with many advanced monitoring capabilities.

**A MONITORING SYSTEM THAT CAN BE CONFIGURED ACCORDING TO THE PATIENT'S CLINICAL CONDITION**

- Display of 1 to 4 curves
- Display of 10 measurements, of which 4 are configurable

**A COMPLETE MONITORING SYSTEM**

- Real time waveforms: pressure, flow, volume, $CO_2$, etc.
- Loops and curves
- Availability of 100% measured data including leak percentage, $EtCO_2$, plateau pressure, etc.
- Superimposition of loops (referral loops)

**DATA RECORDING AND PATIENT EVOLUTION**

- Recorded real time waveforms: 2 days
- Continuous trends: 3 hours
- Saved trends: up to 13 days
- Saving of reference loop curves and superposition possibility
- ActiveX OTP: real-time export of patient data

## A diagnosis tool

Air Liquide Medical Systems has developed very advanced functionalities to provide analytical tools that are a guide to diagnosis and help to improve the clinical decision-making process.

**AN EASY TO USE DIAGNOSIS TOOL**

- Direct access to ventilation settings and the most advanced diagnostic aid functions
- Values calculation automatically shown in a dedicated window

**A PRECISE DIAGNOSIS TOOL**

- A precise and advanced functional exploration of the lung mechanics for each patient: direct acces to the "FREEZE CURVE" function with intuitive cursors, an automatic calculation and displays of measurements
- Tools to determine the most suitable ventilator settings for the respiratory characteristics of the patient:

- inspiratory and expiratory pauses
- resistance and compliance static measurement
- LIP and UIP
- insufflation and exsufflation flow
- Automatic measurement of alveolar recruitment with LIP and UIP