

Breathing for the most critical patients

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Monnal™ T60 Advanced is a class IIb air turbine medical device for the treatment of infants (from 3 kg), children and adults, intended for hospital use in intensive care, emergency and intra/extra-hospital transport - The acts carried out with Monnal™ T60 Advanced are covered by the health insurance bodies in certain situations.

Manufactured by Air Liquide Medical Systems - Conformity assessment: GMED 0459 - Commercial code: R.C.S. Nanterre 348 921 735 - Please read the user manual carefully.

Air Liquide Medical Systems is committed to an environmental approach with a quality-environment management system certified ISO 14001:2015. For more information, go and visit our website <https://www.device.airliquidehealthcare.com/our-commitments>



Y1074412 - May 2021 version - Non-contractual document - product may change at any time - Photos: ©ALMS, ©Anthony Guerin - Design: CHAM17TH



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Designed for the most critical patients



Monnal™ T60 Advanced is the solution designed to meet caregivers needs and most critical patient management.

Monnal™ T60 Advanced is designed to provide invasive or non-invasive ventilatory support to all patients with acute respiratory distress, and is adaptable to specific environments and situations.

Monnal™ T60 Advanced adapts to all **intra-hospital** environments (from bedside to patient transfers):

- in the intensive care, post-resuscitation and post-operative monitoring departments
- in emergency departments, in the emergency resuscitation room
- during Inter-hospital transfers

Monnal™ T60 Advanced is also suitable for **out-of-hospital transport**, meeting the requirements of emergency situations:

- in land and air mobile units, helicopters, airplanes, and long distance medical transport



Functions adapted to each department

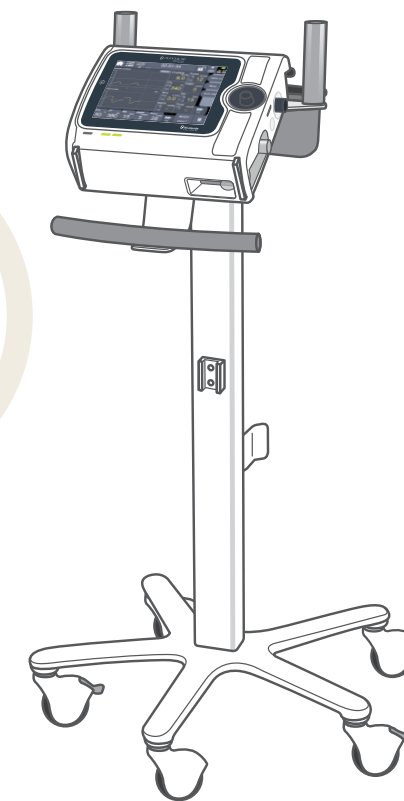
Integration of the APRV mode

Monnal™ T60 Advanced mode integrates the **APRV** (Airway Pressure Release Ventilation) mode, enabling invasive ventilation at two asynchronous pressure level

Allows the patient to breathe spontaneously in a pressure-controlled mode

Facilitates spontaneous ventilation of patients while reducing the use of curares¹

Prevents alveolar distension by spontaneous ventilation and adjustment of the two pressure levels¹



1. Habashi. Other approaches to open-lung ventilation: airway pressure release ventilation 10.1097/01.ccm.0000155920.11893.37

Advanced monitoring: the partner of secure ventilation

Monnal™ T60 Advanced provides **comprehensive and advanced monitoring**, which is crucial for monitoring and adapting the care of the most critical patients. Thanks to its monitoring functions, the **Monnal™ T60 Advanced** provides:

Protective ventilation monitoring

- **VT_e/PBW:** monitoring of tidal volume exhaled according to the patient's predicted weight (gender and height entered)
- **P_{plateau}:** measurement of plateau pressure with alarm thresholds
- **PEEP:** measurement of total PEEP, allowing the estimation of autoPEEP
- **Driving Pressure:** monitoring of the patient's elastic pressure (P_{plateau} – PEEP)
- **Static and dynamic compliances:** measurement of static compliance (C_{stat}) and estimation of dynamic compliance (DynC)

Monitoring of spontaneous ventilation

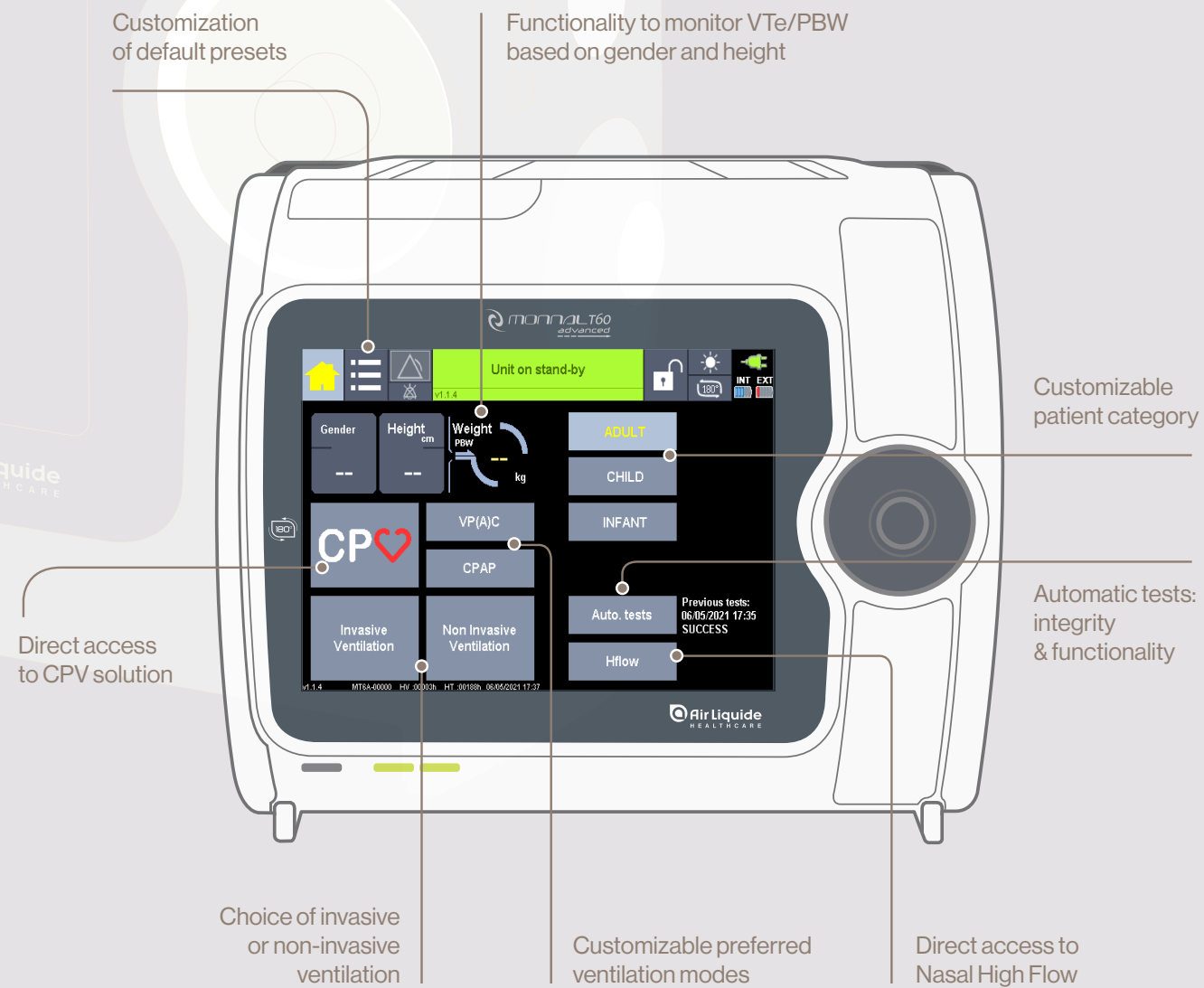
- **Expiratory minute volume (Spont MVE):** evaluation of the patient's spontaneous breathing level.
- **Spontaneous respiratory rate (Spont RR):** assessment of the patient's spontaneous breathing rate level

The companion of health care teams

⊙ A simple and intuitive interface

Monnal™ T60 Advanced is an **intuitive ventilator** that allows teams to quickly become familiar with the ventilator and focus on other aspects of patient management.

The **customizable interface** allows to adapt according to each department's protocols.



⊙ Integration of the CPV solution to manage cardiopulmonary arrest

The CPV solution offers technical innovations for each stage of cardiopulmonary resuscitation (CPR) that are specifically designed for rescuers². It is intended for mobile emergency units, intra- or inter-hospital transport, and specialized departments.



The CPV solution with EtCO₂ (optional) allows monitoring of the patient's capnography while deducing a prognostic factor of spontaneous return of circulation³.



⊙ ECLS environment

The ECLS (ExtraCorporeal Life Support) function is a **dedicated environment** that supports the clinician in changing ventilation procedures while setting up extracorporeal circulation.



2. D Perkins. European Resuscitation Council Guidelines for Resuscitation 2015 10.1016/j.resuscitation.2015.07.015
 3. Touma et al. The prognostic value of end tidal carbon dioxide during cardiac arrest 10.1016/j.resuscitation.2013.07.011



Mobile, autonomous and versatile

⊙ Easily transportable

- **Light and compact:** 4 kg
- **Self-powered:** 5 hours in total (internal battery + removable battery, in standard configuration on adult ventilation). The internal battery is only a backup power supply.
- **Built-in accessories:** fixing and protection systems for optimal patient configuration and movement: wall-mounted charging station, carrying bag, universal intra-hospital support, rolling stand

⊙ Self-contained air device

- **Turbine technology**
- **Peak flow:** 230 l/min for effective NIV breathing assistance
- **Rapid pressurization (max of 120 cmH₂O/s):** to best meet the patient's inspiratory demand
- **Quiet operation:** to preserve the noise environment (48 dBA at 1 m)

Health crisis and extreme situations

⊙ Beyond department walls

In a congested ICU situation, **Monnal™ T60 Advanced** extends allows ventilatory management beyond the ICU and recovery room alone.

Monnal™ T60 Advanced does not require a compressed air supply. Only (high or low pressure) oxygen, to enrich the mixture. Thanks to its electrical autonomy and turbine, ventilation is maintained in case of a loss of oxygen.

⊙ Nasal high flow oxygen therapy

Monnal™ T60 Advanced incorporates the Hflow function that allows caregivers to perform high flow nasal oxygen therapy.

The Hflow function is available for **all patient** categories directly on the **Monnal™ T60 Advanced** start screen.



Monnal™ T60 Advanced For the most critical patients, in extreme situations

For most critical ill patients
ARDS, COVID+, ECMO...

Specific environments
Medical evacuation
Inter-hospital transport
In land and air mobile units (train, airplane, helicopter)

Extreme situations
Emergencies
Health crisis

