



HAMILTON-T1

Intelligent transport ventilation



HAMILTON
MEDICAL
Intelligent Ventilation since 1983



We live for ventilation technology

We live for ventilation technology. Technology that helps caregivers improve the lives of their critically ill patients. We believe that innovation is essential to meet the demands of critical care. To us, innovation is about realizing visionary new ideas and continuously improving existing products, always maintaining the focus on safe, individualized ventilation, as well as ease of use.

We learn from our customers and from multi-disciplinary experts. And we invest in long-term research and development. We develop Intelligent Ventilation solutions: devices and consumables for the ventilation of all critically ill patients – from neonates to adults.

A handwritten signature in blue ink that reads "Jens Hallek".

Jens Hallek
CEO Hamilton Medical AG

A handwritten signature in blue ink that reads "Bob Hamilton".

Bob Hamilton
CEO Hamilton Medical, Inc.

Meet the HAMILTON-T1

The HAMILTON-T1 combines for the first time the functionality of a fully featured intensive care unit ventilator with the compactness and ruggedness required for transport. This combination enables you to provide optimal ventilation therapy to all patient groups during transport.

The HAMILTON-T1 offers:

- ✓ Approvals and certificates for use in ambulances, helicopters and airplanes
- ✓ Adult, pediatric, and neonatal ventilation
- ✓ Independence from gas cylinders or compressors
- ✓ More than 9 hours of battery operating time
- ✓ Noninvasive ventilation and integrated high flow oxygen therapy
- ✓ Advanced ventilation modes, including ASV® - Adaptive Support Ventilation



Unlimited mobility

Approved for all types of transport

The HAMILTON-T1 meets the transport standards EN 794-3 and ISO 10651-3 for emergency and transport ventilators, EN 1789 for ambulances, and both EN 13718-1 and RTCA/DO-160G for aircrafts. It reliably accompanies your patients in or outside the hospital, on the ground, at sea, or in the air.

Independent from compressed air

The integrated high-performance turbine enables the HAMILTON-T1 to be completely independent from compressed air. This reduces weight and saves space, since you need neither gas cylinders nor a compressor. This allows even patients ventilated noninvasively to be transported successfully across greater distances.

More than 9 hours of battery operating time

A battery operating time of more than 9 hours is provided by one integrated and one hot-swappable battery. The battery operating time can be extended as required with additional hot-swappable batteries.



Ease of use

In close cooperation with users and ventilation experts, our engineers have designed a user interface that is particularly intuitive. Switching between the HAMILTON-T1 and all other Hamilton Medical ventilators is easy because they are all operated according to the same principles.

The Ventilation Cockpit on the HAMILTON-T1 consolidates the monitoring data and displays it as intuitive graphics. These provide a quick overview of the patient's current ventilation status and provide a reliable basis for therapy decisions.

“

We use the HAMILTON-T1 for intrahospital transport and transfers to other hospitals. This ensures that the patient receives the same quality of ventilation during transport as at the bedside.

Dr. Ralf Huth, Senior Physician
Interdisciplinary Pediatric ICU
Center for Pediatrics and Adolescent Medicine
Mainz, Germany



The Ventilation Cockpit

1 Main monitoring parameters

All of the main monitoring parameters at a glance. The large characters allow you to see them even from a distance.

2 Dynamic Lung

One quick look shows you tidal volume, lung compliance, patient triggering, and resistance in real-time. The lungs expand and contract in synchrony with the actual breaths.

3 Customizable user interface

You can configure the display layout with different waveforms, loops, trends, or intelligent panel graphics to suit your institution's needs and protocols. Nurses and clinicians can have their own preferred layout.

4 Direct access to main controls

Access and adjust the most important controls for the current mode directly on the main display.



Lung-protective ventilation

The HAMILTON-T1 features the Intelligent Ventilation mode Adaptive Support Ventilation (ASV). In ASV mode, the ventilator continuously adjusts the respiratory rate, tidal volume, and inspiratory time depending on the patient's lung mechanics and effort. This means fewer user interactions are required¹ and fewer alarms are generated, giving you more time for your patients.

ASV automatically employs lung-protective strategies to minimize complications from AutoPEEP and volutrauma/barotrauma. It also prevents apnea, tachypnea, dead space ventilation, and excessively large breaths, as well as encouraging the patient to breathe spontaneously^{2,3}.

“

About 50% of our patients go onto ASV mode. It is specifically advantageous in trauma. You have so many other fires to put out, that it is nice to just set up the ventilator and allow ASV to manage the patient from a lung standpoint.

Kyle Driesse, Critical Care Flight Paramedic
Life Link III
Mainz, Germany





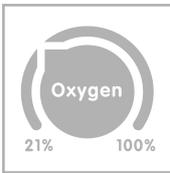
State-of-the-art ventilation modes

include conventional volume and pressure-controlled modes, modes for non-invasive ventilation, and the Intelligent Ventilation mode Adaptive Support Ventilation (ASV).



Quick startup

settings allow you to define and store specific mode and control settings for up to three selected patient types. This may help you save valuable time in emergencies.



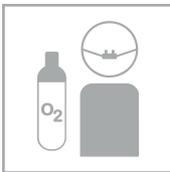
Oxygen adjustable from 21% to 100%

allows you to replicate the bedside settings one-to-one during transport. The adjustment to 21% even makes it possible to ventilate your patient with ambient air only.



High-performance noninvasive ventilation (NIV)

is enabled by the ventilator's integrated high-performance turbine and peak flow rate of up to 260 l/min. Optimal flow delivery is ensured even in the event of large leaks.



Integrated high flow oxygen therapy

can be applied using the same device and breathing circuit, simply by changing the patient interface. Active humidification is recommended for greater patient comfort. With the optional integrated high flow oxygen therapy, the ventilator offers you a range of ventilation and therapy options in one device.



Night vision goggles (NVG)

is an optional function enabling the HAMILTON-T1 transport ventilator to be used with night vision devices, without significantly affecting the pilot's vision.

Features and options



Adult, pediatric, and neonatal ventilation



nCPAP modes



High-performance turbine



Configurable loops and trends



Hot-swappable battery backup



Optimal alarm detection



IntelliTrig leak compensation for NIV and invasive ventilation



Dynamic Lung



Serial interface for connection to electronic patient data records and patient monitors



Fully synchronized integrated pneumatic nebulizer



Mainstream (volumetric) and sidestream capnography



Compatible with conventional speaking valves



Pulse oximetry (SpO₂ and pulse measurement)

From the ventilation specialist

E-learning

Hamilton Medical College provides free and open e-learning on mechanical ventilation and ventilators.

Join at: college.hamilton-medical.com.

Universal ventilator consumables

Our accessories and consumables are specially developed for the highest possible patient safety and ease of use. Choose between reusable and disposable parts according to your institutional policies.

Peripheral devices

Our ventilation portfolio includes an active humidifier, the HAMILTON-H900, as well as the automatic cuff pressure controller, IntelliCuff. Both devices may be used with all kinds of mechanical ventilators.





More information and free simulation software:
www.hamilton-t1.com



HAMILTON MEDICAL

Intelligent Ventilation since 1983

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1 Beijers AJ. Intensive Care Med. 2014 May; 40(5): 752-3 | 2 Chen CW. Respir Care. 2011 Jul;56(7):976-83 | 3 Kirakli C. Eur Respir J. 2011 Oct;38(4):774-80

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