

# HAMILTON-T1

# Intelligent transport ventilation for armed forces

The HAMILTON-T1 is the first device to combine the functionality of a fully featured intensive care unit ventilator with the compactness and ruggedness required for tough conditions. This allows you to offer your patients optimal ventilation support during transport, even in challenging environments.

- ✓ Performance of a fully featured ICU ventilator
- For use in helicopters, airplanes, ambulances, hospital ships, combat support hospitals, and battalion aid stations
- ✓ Adaptive, lung-protective ventilation modes, including ASV<sup>®</sup> and INTELLiVENT<sup>®</sup>-ASV\*
- CPR ventilation\*
- ✓ Digital solutions for respiratory care: Hamilton Connect Module and App\*
- Noninvasive ventilation and integrated high flow oxygen therapy\*\*
- ✓ Independence from compressed air
- Up to 9 hours of battery operating time

\* Not available in all markets. \*\*Always use active humidification during HFOT



## A reliable companion in the field

# Flexible mounting and system integration options

Various system integration and mounting options allow you to tailor the HAMILTON-T1 to your needs and infrastructure.

# Independent from compressed air and high-pressure oxygen

The integrated high-performance turbine and the low-pressure oxygen inlet enable the HAMILTON-T1 to be completely independent from compressed air or high-pressure oxygen. This reduces weight, saves space, and enables you to use the HAMILTON-T1 with oxygen concentrators.

#### Up to 9 hours of battery operating time

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



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×2.004

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HAMILTON-T1

Tools

# Optimized for armed forces



#### Quick startup settings according to protocol

To comply with military standard operating procedures and clinical practice guidelines, standardized ventilator modes and settings can be stored in up to three quick startup settings. This function facilitates standardized ventilator care and simplifies ventilator management, potentially improving patient safety.



#### Compatible with night vision goggles

Thanks to the night vision option, the HAMILTON-T1 can be used with night vision devices without significantly affecting the pilot's visibility.



#### Usable with NBC filter

You can order the HAMILTON-T1 with an optional NBC filter adapter. It has a NATO standard thread, which is compliant with EN 148-1. With the adapter installed, you can attach a standard NBC filter canister.

![](_page_2_Picture_10.jpeg)

#### A range of communication and connectivity options

The HAMILTON-T1 offers different communication boards allowing connection to CO2 and SpO2 sensors, serial RS-232 interfaces for hospital monitors or patient data management systems, the HAMILTON-H900, or the nurse call function. In addition, the Hamilton Connect Module provides wireless and wired connectivity protected by state-of-the-art security. It also enables connection with the Hamilton Connect App.

![](_page_3_Picture_0.jpeg)

### For demanding environments

#### Lightweight, compact, and sturdy

The compact, lightweight design of the HAMILTON-T1 helps make handling of the ventilator easier. The water-resistant housing offers impact protection and incorporates a shock-resistant, anti-reflective display, making the HAMILTON-T1 a rugged and reliable companion.

#### Use in the toughest conditions

The HAMILTON-T1 was designed to withstand demanding environmental conditions. It can operate in temperatures ranging from -15°C up to +50°C, tolerate humidity levels from 5% to 95%, be used at altitudes of up to 25,000 ft, and withstand splashing water or pouring rain (IP54 ingress protection).

#### 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, EN 13718-1 and RTCA/DO-160G for aircraft, as well as IEC60601-1-12 for basic safety and essential performance. It reliably accompanies your patients to any destination either within or outside of the hospital, on the ground, at sea, and in the air.

### Easy to handle, simple to use

#### Ventilation for emergency situations

CPR\* ventilation adapts ventilation settings to situations where CPR is being performed. It supports the CPR workflow with quick access to preconfigurable settings, adequate alarm and trigger adjustment, and CPR-timer display. The main monitoring parameters and curves relevant to CPR ventilation are also displayed.

#### Adaptive, lung-protective ventilation

ASV<sup>®</sup> adapts ventilation breath-by-breath, 24 hours a day, from intubation to extubation. It continuously adjusts respiratory rate, tidal volume, and inspiratory pressure depending on the patient's lung mechanics and effort. ASV has been a well-established mode in critical care since 1998 and has become a standard ventilation mode in many units around the world.

#### Your bedside assistant INTELLiVENT-ASV

INTELLiVENT-ASV\* is an advanced ventilation mode based on ASV. The clinician defines the clinical goal for PetCO2 and SpO2. INTELLiVENT-ASV then adjusts CO2 elimination and oxygenation, and keeps the patient within the predefined ranges.

#### Designed for intuitive operation

The user interface of the HAMILTON-T1 is designed for easy, intuitive operation, and allows direct access to important settings.

#### Optimal use of human resources

Together with ASV, the HAMILTON-T1 can reduce the workload for staff by lowering the number of alarms and manual adjustments, while maintaining lung-protective ventilation. This frees up time for other aspects of patient care. The free e-learning offered by Hamilton Medical supports your education and training needs.

Kirakli C, Naz I, Ediboglu O, Tatar D, Budak A, Tellioglu E. Chest. 2015 Jun;147(6):1503-1509. doi: 10.1378/chest.14-2599 | Buiteman-Kruizinga LA, Mkadmi HE, Schultz MJ, Tangkau PL, van der Heiden PLJ. Crit Care Explor. 2021 Feb 15;3(2):e0335. doi: 10.1097/CCE.00000000000335 \* Not available in all markets

![](_page_4_Picture_12.jpeg)

![](_page_4_Picture_13.jpeg)

ASV has been very successfully used in clinical practice. Our crews who use ASV on a daily basis are very excited and report that the ventilator can be almost completely relied upon to do the job and the patient can be set up without rushing.

Dr. Olivier Seiler, Deputy Medical Director until 2014 Rega Air Ambulance, Zurich, Switzerland

### To make your life easier

![](_page_5_Picture_1.jpeg)

#### Convenient transport and storage solutions

The standardized transport and storage case for the HAMILTON-T1 is light in weight, but robust and watertight enough to protect the ventilator even in harsh environments.

![](_page_5_Picture_4.jpeg)

#### Easy procurement

The HAMILTON-T1 has been recognized by NATO countries as a standardized material item of supply (NATO Stock Number: 6515-33-211-4889). In the United States, the HAMILTON-T1 can also be ordered through the ECAT catalog.

![](_page_5_Picture_7.jpeg)

#### Advanced online user training

E-learning is an ideal solution for training a large number of users, regardless of time and place. Hamilton Medical's free e-learning platform offers modules specific to the HAMILTON-T1 with the option of getting certified. All you need is internet access and a computer or tablet PC.

![](_page_5_Picture_10.jpeg)

#### Flexible maintenance and support

The HAMILTON-T1 is field-upgradable so you have access to the latest ventilation technology and product enhancements even in remote locations. In safety-critical areas, your technical staff can be trained to complete maintenance and repairs themselves.

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The Hamilton Connect App is not intended to replace the real-time display of data on the ventilator. DO NOT USE the app to supplement or replace any part of the hospital's device monitoring. Specifications are subject to change without notice. Some features are options. Not all features are available in all markets. INTELLIVENT-ASV and CPR ventilation are not available in the US. For all proprietary trademarks and third-party trademarks used by Hamilton Medical AG see www.hamilton-medical.com/trademarks. ©2021 Hamilton Medical AG. All rights reserved.

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