

The intelligent solution for the mobile ICU



# Supporting you in saving lives!

The HAMILTON-T1 ventilator features a compact, powerful design that increases the availability of appropriate modes of therapy for ventilated intensive care patients outside the hospital. Small enough to fit into any mobile ICU environment, the HAMILTON-T1 covers the full range of clinical requirements: invasive ventilation, automated ventilation with Adaptive Support Ventilation (ASV®), and non-invasive ventilation (NIV).

## **Optimum care for every patient**

The HAMILTON-T1 delivers a cost-effective ICU ventilation solution that's appropriate for all patients – from pediatric to adult. In mobile ICU ambulances, in helicopters, in long-distance ambulance jets, in intra-hospital transport, in emergency departments, and in ICU, the HAMILTON-T1's fast setup and easy management ensure the most appropriate treatment for every patient.

### Reliability and performance

The HAMILTON-T1 combines reliability and high performance with advanced lung protective strategies and patient-adaptive modes. The HAMILTON-T1 is the ideal choice for extreme environments, where ICU ventilation is a must. When transporting ventilated intensive care patients, superior technical performance is only one important quality. Ventilators must also deliver reliable data and easy-to-follow user guidance for better clinical decisions and improved patient outcomes, together with low operating costs throughout the working life of the investment.







In short, the most effective ventilator system ensures:

- Ease of use
- Improved patient outcome
- Efficiency through innovation





Ease of use



Improved patient outcome



**Efficiency through innovation** 



# Ease of use

### Proven bedside technology

Making advanced bedside ventilation technology available for mobile use has been a major challenge. HAMILTON MEDICAL has led the way in realizing a light-weight, compact, and highly rugged ventilator with exceptional performance in the HAMILTON-T1, a pioneering mechanical ventilator designed from the ground up for ease of use in the mobile patient care environment.

#### The HAMILTON-T1

- is one ventilator for all patients, from pediatric to adult teams require training on only one ventilator;
- incorporates all modes of ventilation a patient may need, from volume or pressure controlled to NIV;
- all important patient information is available at a glance with the innovative Ventilation Cockpit.

### The HAMILTON-T1 integrates solutions for

- mechanical mounts,
- worldwide electrical supplies,
- multiple gas supplies,
- on airway CO<sub>2</sub> monitoring.









Mounts to the stretcher The integrated handle allows the HAMILTON-T1 to be mounted on a variety of stretchers, making it easy to follow the patient with the ventilator safely secured and properly positioned.











# Improved patient outcome

## Worldwide availability of ICU ventilation

The HAMILTON-T1 is specifically designed to cover the needs of rescue personnel, health care teams, and their patients. It is the ideal choice for air ambulance teams as it can ventilate all patients, can run from any power source (AC or DC), is independent from compressed gas, and is approved for the flight environment. The HAMILTON-T1 offers a choice of sturdy mounting solutions to fit a broad variety of needs.

### High reliability and user-friendliness

Reliable operation in stressful environments was the primary focus in developing the HAMILTON-T1. Reliable operation is based on technical quality and usability of the ventilator, which safeguards against misuse. The HAMILTON-T1's unique Ventilation Cockpit plays a crucial role in simplifying the operation of the ventilator and interpretation of monitored data.

### Integrated capnography

Moving a patient increases the patient's risk, including the possibility of unintentional extubation. The integrated CO<sub>2</sub> monitoring of the HAMILTON-T1 allows for immediate identification of such a major event, increasing the patient's safety.









Broad range of use
Both AC and DC power;
oxygen high and low inlets;
hot-swappable battery;
optional CO<sub>2</sub> and COM1 interface available – worldwide.



Various mounting options
Easy integration with different
interfaces. Approved and
tested according to EN 13718-1
and RTCA-DO-160F for air
transport.









Rega



# **Efficiency through innovation**

## ICU performance on the move

The HAMILTON-T1 allows the full range of ventilation, be it volume or pressure control or true closed-loop ventilation ASV®. High-end performance with NIV and IntelliTrig, a peak flow of >210 l/min or a minimal tidal volume of 20 ml, and more provides the HAMILTON-T1 ICU ventilator functionality during transfer situations. The turbine with variable speed allows highly accurate and independent ventilation without a compressed gas source. The wide range of fraction of inspired oxygen – FiO<sub>2</sub> of 21 % to 100 % – makes the HAMILTON-T1 the best in its class.

## **Specific accessories**

Rough and dirty environments require appropriate safety measures and reliable products. The HAMILTON-T1 ventilation hose cover protects the breathing circuits, including the flow sensor and  ${\rm CO_2}$  monitoring cable. The 90° angulated ventilation connectors allow a compact application of the breathing circuits. The HAMILTON-T1 proximal flow sensor completes a full-featured ventilator for patient transfer and emergency situations.









The HAMILTON-T1 includes a 360° visible alarm light.











# More than you expect

In addition to its unique features, the HAMILTON-T1 includes everything you expect from a high-performance ICU transport ventilator:

- a choice of ventilation modes for invasive and optionally non-invasive ventilation,
- an extensive monitoring package,
- the ability to ventilate both pediatric and adult patients,
- hot swappable batteries,
- automatic compensation of changes in barometric pres-
- IPX4 protection against heavy rain,
- optional night vision goggle compatibility.

This brochure is intended to provide an introduction to the HAMILTON-T1. Find more detailed information on features and functionality and to download a simulation, visit: www.hamilton-medical.com/T1

We provide the same ICU ventilator performance and unique user interfacing in other members of the HAMILTON MEDICAL compact ventilator family:

The HAMILTON-MR1 is designed to ventilate the adult or pediatric ICU patient within the vicinity of an MRI.

The HAMILTON-C1 is designed to ventilate the adult or pediatric ICU patient and offers maximum flexibility in various environments.

### HAMILTON-MR1

### **HAMILTON·C1**



Option: Enhanced ventilation packages. Add DuoPAP/APRV and/or NIV/NIV-ST capabilities to your ventilator.



Option: Enhanced monitoring package. Add trend and loop information to your ventilator.













**Configurable quick start-up settings** Individual modes, mode control settings, alarm settings, ventilation status settings and Vt/IBW can be stored in a specific quick start-up (e.g. CPR, ASV and NIV).

# **HAMILTON-T1**



#### Touchscreen and single knob operation

The HAMILTON-T1 can be operated with the touchscreen or with a single knob. Hard keys give direct access to the most important functions.

#### Alarm lamp

From a distance or in helicopters and aircrafts with a high noise level, an alarming ventilator is easily identified by the top-mounted alarm lamp.

Interface for PDMS, patient monitor, and nurse call The optional interfaces provide ports for connection to hospital monitors, Patient Data Management Systems (PDMS), and nurse call systems.

#### **High-performance turbine**

The turbine delivers up to 210 l/min flow. This assures best performance for high-demand patients on NIV modes of ventilation.









For further information about the HAMILTON-T1, please contact:

www.hamilton-medical.com







