



# HAMILTON-T1

Intelligent transport ventilation for neonates



**HAMILTON**  
**MEDICAL**  
Intelligent Ventilation since 1983



## We live for ventilation technology

We live for ventilation 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 keeping patient safety and ease of use in focus.

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 black ink that reads "Bob Hamilton".

Bob Hamilton  
CEO  
Hamilton Medical, Inc.

## Meet the HAMILTON-T1 for neonatal ventilation

The HAMILTON-T1 is an intelligent transport ventilator that provides ventilation therapy for your smallest and most fragile patients during transport. Thanks to its unique properties, the HAMILTON-T1 performs during transport like a fully featured NICU ventilator at the bedside:

- ✓ Conventional and modern ventilation modes for neonates
- ✓ Noninvasive ventilation and integrated high flow oxygen therapy\*
- ✓ Wireless connectivity with Hamilton Connect Module
- ✓ CPR ventilation with integrated CO2 monitoring
- ✓ Tidal volumes as low as 2 ml
  
- ✓ Optimal synchronization using proximal flow sensor
- ✓ Specifically designed consumables for neonates, such as expiration valve and flow sensor
- ✓ Independence from compressed air supply due to the integrated high-performance turbine
- ✓ Up to 9 hours of battery operating time



\* Optional - not available in all markets



#### Tidal volumes as low as 2 ml

With the neonatal option, the HAMILTON-T1 provides tidal volumes as low as 2 ml for effective, safe, and lung-protective ventilation even for the smallest patients.<sup>1</sup> The proximal flow sensor specifically developed for neonates precisely measures the pressure, volume, and flow directly at the infant's airway opening, ensuring the required trigger sensitivity. This provides improved synchronization and less work of breathing.

#### Adaptive synchronization, even with uncuffed tubes

Leaks are one of the issues encountered in the ventilation of neonates as a result of using uncuffed tubes. The IntelliTrig leak compensation function automatically adjusts the inspiratory and expiratory trigger sensitivity to leaks. This enables adaptive synchronization with the neonate's breathing pattern.

<sup>1</sup> Volume-targeted versus pressure-limited ventilation in the neonate (Review), 2011 Morley CJ

## Neonatal expiratory valve

To meet the stringent requirements with respect to the pressure accuracy at minimum volumes, Hamilton Medical has developed a special expiratory valve for neonatal ventilation. This valve can compensate for even the most minute pressure differences and enables the neonate to breathe spontaneously in each phase of a controlled breath cycle.

## Integrated high flow oxygen therapy

The HAMILTON-T1 provides an optional high flow oxygen therapy. With this enhancement, the HAMILTON-T1 gives you a variety of therapy options in one device, including invasive and noninvasive ventilation, and high flow oxygen therapy. In just a few steps, you can change the interface and use the same device and breathing circuit to accommodate your patient's needs.



### 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 EN 13718-1 as well as RTCA/DO-160G for aircraft. It reliably accompanies your patients anywhere within or outside of the hospital, on the ground, at sea and in the air.

### Independent of compressed air

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

### 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 additional hot-swappable batteries.

### Lightweight, compact and sturdy

The compact design and light weight of the HAMILTON-T1 facilitate ventilator handling. The water-resistant housing offers impact protection and a shock-resistant, anti-reflective display. This makes the HAMILTON-T1 a sturdy and reliable companion.





#### nCPAP – Automatic adaption, fewer interventions

Patient interventions during transport are not always possible. The HAMILTON-T1's nCPAP mode is designed in such a way that you only need to set the desired CPAP pressure. The flow is subsequently adjusted automatically based on the patient condition and variation in leakage, which prevents unintended peak pressures and guarantees highly efficient leak compensation. Flow adjustment occurs with a minimum of delay due to the highly sensitive, proximal pressure measurement.

#### Free breathing in each ventilation phase

In addition to the standard nCPAP mode, the HAMILTON-T1 also features the biphasic nCPAP-PC (pressure controlled) mode. This mode allows you to set two pressure levels as well as the rate and inspiratory time. The flow is also adjusted as needed in this mode. The modern pneumatic concept of the HAMILTON-T1 additionally enables the patient to breathe freely at any time on both pressure levels.

Availability of consumables for neonatal ventilation on  
[www.hamilton-medical.com/e-catalog](http://www.hamilton-medical.com/e-catalog)



More information:  
[www.hamilton-t1.com](http://www.hamilton-t1.com)



# **HAMILTON** **MEDICAL**

Intelligent Ventilation since 1983

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