



# HAMILTON-C1

Minimum size for maximum performance

**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-C1

Requiring only a minimum of space, the HAMILTON-C1 mechanical ventilator combines invasive and noninvasive modes as well as high flow oxygen therapy with maximum mobility. The integrated high-performance turbine enables the HAMILTON-C1 to be completely independent from compressed air. This makes it an ideal companion for all patient groups in the intensive care unit, emergency ward, recovery room or intermediate care as well as in long-term acute care facilities and during intrahospital transport.

- ✓ Adult, pediatric, and neonatal ventilation
- ✓ More than 4 hours of battery operating time
- ✓ Independence from gas cylinders or compressors
- ✓ Noninvasive ventilation and integrated high flow oxygen therapy
- ✓ Advanced ventilation modes, including ASV® - Adaptive Support Ventilation



## Compact and convenient for transport

The high-performance turbine enables the HAMILTON-C1 mechanical ventilator to be completely independent from compressed air, and its integrated high-capacity battery allows you to ventilate your patients during intrahospital transport without the need for an external power source. The compact design of the HAMILTON-C1 mechanical ventilator makes handling much easier.







## 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-C1 and all other Hamilton Medical ventilators is easy because they are all operated according to the same principles.

The Ventilation Cockpit on the HAMILTON-C1 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.

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Small but mighty! Despite its compact size, the HAMILTON-C1 is a fully featured ventilator for use in almost any environment.

Jesko Mertha, Group Leader, Clinic for Intensive  
Care Medicine  
Cantonal Hospital St. Gallen, St. Gallen,  
Switzerland





## For use in any situation

The HAMILTON-C1 combines invasive and noninvasive modes as well as high flow oxygen therapy with maximum mobility.

### Adaptive, lung-protective ventilation with ASV

- ✓ Supports the earliest possible spontaneous breathing by the patient<sup>1, 2</sup>
- ✓ Shortens the ventilation time in various patient groups<sup>1, 2</sup>

### High-performance noninvasive ventilation (NIV)

- ✓ Integrated high-performance turbine supplies a peak flow rate of up to 260 l/min
- ✓ Optimal performance is ensured even with large leaks

### Integrated high flow oxygen therapy

- ✓ Reduces the need for intubation<sup>3</sup>
- ✓ Lowers the risk of reintubation within 72 hours<sup>4</sup>

### Speaking valve

- ✓ Gives your patients a voice
- ✓ Can be used in pressure-controlled modes (PCV+, PSIMV+, SPONT)

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<sup>1</sup> Kirakli C. Eur Respir J. 2011 Oct;38(4):774-80

<sup>2</sup> Chen CW. Respir Care. 2011 Jul;56(7):976-83

<sup>3</sup> Frat JP. N Engl J Med. 2015 Jun 4;372(23):2185-96. doi: 10.1056/NEJMoa1503326. Epub 2015 May 17.

<sup>4</sup> Hernández G. JAMA. 2016 Mar 15. doi: 10.1001/jama.2016.2711. [Epub ahead of print].





### Adaptive Support Ventilation (ASV)

adjusts respiratory rate, tidal volume, and inspiratory time continuously, depending on the patient's lung mechanics and effort. ASV adapts ventilation breath-by-breath, 24 hours a day, and from intubation to extubation.



### 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.



### Speaking valve

is an optional feature enabling the use of conventional speaking valves in pressure-controlled modes (PCV+, PSIMV+, SPONT). Monitoring, triggering, and alarm management have been adjusted to allow their use.

## Features and options



State-of-the-art ventilation modes



IntelliTrig leak compensation for NIV and invasive ventilation



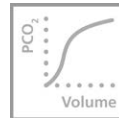
Integrated pneumatic and optional Aerogen<sup>S</sup> nebulizer



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



Adult, pediatric, and neonatal ventilation



Mainstream (volumetric) and sidestream capnography



High-performance turbine



Pulse oximetry (SpO<sub>2</sub> 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](https://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-c1.com](http://www.hamilton-c1.com)



Intelligent Ventilation since 1983

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