HAMILTON-C1

Minimum size for maximum performance
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.

Jens Hallek  
CEO  
Hamilton Medical AG

Bob Hamilton  
CEO  
Hamilton Medical, Inc.
The HAMILTON-C1 is a versatile and feature-rich ventilator packaged in a compact size. It is the ideal companion for all patient groups, including neonates. The HAMILTON-C1 adapts effortlessly to a variety of different settings, such as 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
- Noninvasive ventilation and integrated high flow oxygen therapy
- High-performance turbine and battery
- Adaptive, lung-protective ventilation modes ASV® and INTELLiVENT®-ASV
- CPR ventilation
- Digital solutions for respiratory care: Hamilton Connect Module and App
Compact and convenient for transport

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

In close cooperation with users and ventilation experts, our engineers have designed the user interface to be 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 advanced graphics. These provide a quick overview of the patient's current ventilation status and provide a reliable basis for therapy decisions.

With the Hamilton Connect App on your smartphone, you can take advantage of the Live View to keep an eye on all essential parameters and ventilation data, and review them even when you are not in front of the ventilator screen.

“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
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. Vent Status
   The Vent Status panel displays six parameters related to the patient’s dependence on the ventilator. When all values are in the weaning zone, the panel is framed in green, indicating that spontaneous breathing trials or extubation can be considered.

4. Direct access to main controls
   Access and adjust the most important controls for the current mode directly on the main display.
For use in any situation, from neonates to adults

In the intensive care unit
The HAMILTON-C1 offers the performance of a high-end ICU ventilator in a compact size:
✓ State-of-the-art and advanced ventilation modes, including ASV and INTELLiVENT-ASV
✓ Noninvasive ventilation and integrated high flow oxygen therapy
✓ Advanced lung-protective features and options

During intrahospital transport and for mobilization
The HAMILTON-C1 is a reliable companion for intrahospital transport and mobilization:
✓ High-performance turbine, battery operation, and compact size
✓ State-of-the-art ventilation modes appropriate for early mobilization of all patient populations
✓ Wireless connectivity with the Hamilton Connect Module

In the neonatal intensive care unit
The HAMILTON-C1 can provide continuity of care for neonatal patients by means of dedicated modes and features:
✓ Noninvasive ventilation modes and therapies developed especially for neonatal patients (synchronized noninvasive ventilation, demand-flow nCPAP modes, Volume Support mode, and high flow oxygen therapy)
✓ Invasive ventilation modes developed for neonatal patients
✓ Robust proximal sensor to provide accurate flow measurement
✓ Single-use consumables that may help in controlling infections

For long-term acute care
The HAMILTON-C1 can eliminate the need to use multiple ventilators for patients requiring long-term respiratory support:
✓ Portability, making it suitable for mobilization
✓ Different modes and therapies in one device (invasive ventilation modes including ASV and INTELLiVENT-ASV, NIV, and high flow oxygen therapy)
✓ The Speak Valve option gives tracheostomized patients a voice, and allows them to swallow even while receiving respiratory support from the ventilator
Adult, pediatric, and neonatal ventilation
is provided. For neonatal patients, a specially designed neonatal proximal flow sensor is used. The tidal volume range goes down to as low as 2 ml.

High-performance turbine
enables the HAMILTON-C1 to be completely independent from compressed air. This reduces weight and saves space.

INTELLiVENT-ASV, your bedside assistant
is an advanced ventilation mode, based on the ASV mode, to automatically regulate CO2 elimination and oxygenation for passive and active patients, using physiologic data and clinician-set targets and limits. Quick Wean supports the clinician in weaning patients from mechanical ventilation.

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. With the optional integrated high flow oxygen therapy, the ventilator offers you a range of ventilation and therapy options in one device.

Hamilton Connect Module
provides wireless and wired connectivity protected by state-of-the-art security. It also enables connection with the Hamilton Connect App.
## Features and options

<table>
<thead>
<tr>
<th>Feature</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated pneumatic and optional Aerogen® nebulizer</td>
<td>Pulse oximetry (SpO₂ and pulse measurement)</td>
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<tr>
<td>IntelliTrig leak compensation for NIV and invasive ventilation</td>
<td>Compatible with conventional speaking valves</td>
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<tr>
<td>CPR ventilation</td>
<td>nCPAP modes</td>
</tr>
<tr>
<td>Serial interface for connection to PDMS or patient monitors</td>
<td>Hamilton Connect App</td>
</tr>
<tr>
<td>Mainstream (volumetric) and sidestream capnography</td>
<td>Remote access to HAMILTON-H900 controls and status</td>
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</tbody>
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From the ventilation specialist

E-learning
Hamilton Medical College provides free and open e-learning on mechanical ventilation and ventilators. Join at: www.hamilton-medical.com/elearning.

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.