



HAMILTON-H900

Intelligent humidification





Intelligent humidification



Our intention was to develop an advanced humidifier that is ergonomic and intuitive to use and increases the efficiency in ventilation care.

Humidification is an important part of respiratory care. As a manufacturer of ventilation solutions, our vision is to provide caregivers with technologies that allow them to focus on the important aspects of patient care. When we developed the HAMILTON-H900 humidifier, we talked to many clinicians to understand what they would improve in conventional humidification. Easier handling of circuits, cables and connections, improved user interfacing, reduction of rain-out, and increased safety were the most requested enhancements. With the HAMILTON-H900, we aim at improving humidification in exactly these areas.

Jens Hallek
Vice President and COO
HAMILTON MEDICAL





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Product overview

- ① Expiratory hose temperature control
- ② Auto mode
- ③ Manual temperature control
- ④ Invasive / noninvasive mode
- ⑤ Relative humidity control (temp. gradient)
- ⑥ All-in-one connector
- ⑦ Temperature display control
- ⑧ Tube connection indicator
- ⑨ Visual alarm indicator
- ⑩ Optical water level detection
- ⑪ Smooth-bore wall-heated circuit
- ⑫ Integrated temperature probe

Easy to handle

Pre-assembled and ready to use

An innovation of the HAMILTON-H900 is that it comprises only two components, which are delivered pre-assembled and ready to use: The pre-assembled wall-heated breathing set including all-in-one connectors, temperature probe, water refill tube, Y-piece, and water chamber, and the humidifier base with the user interface and the heating plate. This saves time, increases efficiency, and facilitates the handling of the humidifier, as well as reducing the risk of contamination.

One-hand operation

The unique combination of having all connections on a humidifier in one single breathing set provides the highest level of ergonomics. Operate the humidifier, change breathing circuits, and replace the water chamber with just one hand. With no need to worry about extra cables to connect or disconnect anymore, you only need to slide the water chamber into the humidifier and connect the breathing circuit to the patient.



One-hand operation and enhanced ergonomics



Humidifier station with breathing set including temperature probe, wall-heated breathing circuit, water refill tube, Y-piece, and water chamber

Intuitive to operate

Ergonomic and intuitive user interface

Due to the ergonomic design, the user interface can be easily seen and operated from a standing position, and provides all the information you need at a glance. All settings and related monitoring values are visible without searching through menus. A large LCD display, bright alarm lamp, and audible alarm alert you in the event of a required user interaction. The high-contrast LCD display provides excellent readability, even in direct sunlight.

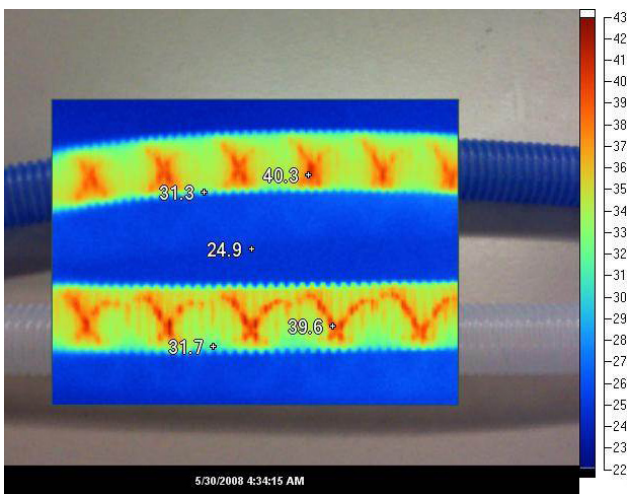


- 1 Current chamber exit temperature
- 2 Current temperature settings
- 3 Current relative humidity settings
- 4 COM connectivity symbol
- 5 Minimum possible temperature
- 6 Maximum possible temperature
- 7 Selected mode

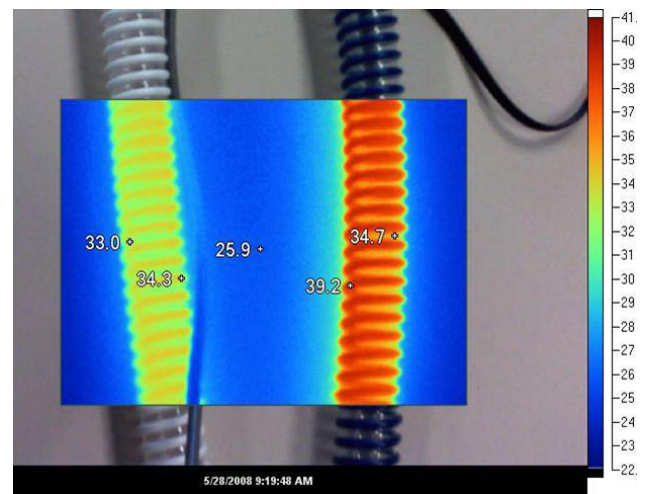
Optimal rain-out control

Wall-heated, all-in one breathing circuits

The advanced breathing circuits for the HAMILTON-H900 humidifier integrate the heater wires into the circuit wall. This eliminates the cold interface between heated breathing gas and ambient temperatures and leads to significantly reduced condensation and rain-out effects in the breathing circuit. Thereby ensuring the delivery of the set level of humidity to the patient.



Thermal image of conventional circuits with inlet heating coil



Thermal image of HAMILTON-H900 circuit

Adjustable temperature and humidity settings

As every patient is different and environmental conditions may require important modifications, the HAMILTON-H900 humidifier allows for manual adjustment of temperature and humidity settings (temperature gradient). This allows you to perfectly adapt the humidification therapy to the individual patient and environmental conditions. You can easily avoid having too much condensation in the tubing, flow sensor, or flex tube by adjusting the relative humidity level.

Increased safety



Less risk of cross contamination

By reducing the need to open the circuit to drain condensate, the HAMILTON-H900 minimizes the potential for the spread of pathogens associated with the development of ventilator-associated pneumonia (VAP).

Fewer connections, less trouble

With the HAMILTON-H900's advanced breathing circuits with integrated temperature probe, disconnected cables, losing temperature probes, and leaking temperature ports are now a thing of the past.

Automatic connection check

The HAMILTON-H900 automatically and individually checks the circuit connections and alerts you when a tube is not correctly connected. Arrows light up to indicate which tube needs to be reconnected. Chamber and circuit types are also automatically detected.



Color-coded circuit

To avoid errors in the circuit setup, the circuit tubes are color coded (blue inspiratory limb / white expiratory limb).

Intuitive alarm messages

The alarms are very visible using self-explanatory on-screen icons on the clear LCD display.

Automatic water level detection

The HAMILTON-H900 detects high and low water levels and alarms well ahead of time, before the chamber is empty. Preventing the patient from being ventilated without humidification optimally protects the functionality of mucociliary clearance.

An integrated solution

Remote control from the ventilator

The unique ventilator connectivity option allows control of the humidifier from any compatible ventilator. All controls, monitoring parameters, and alarms are available and can be controlled from the ventilator. Full integration of humidifier monitoring into patient data management systems is also provided. Together with a compatible ventilator, the humidifier can automatically select the humidification mode (invasive vs. noninvasive) based on the selected ventilation mode.



Save money

Reduced cost of ownership

Over the lifetime of a humidifier, the initial investments are relatively small. Cost-driving factors are circuits, cables, and temperature probes. With the HAMILTON-H900, expensive replacements for lost or broken temperature probes and cables are a thing of the past. Due to reduced risk of cross contamination, a long life span and high-quality materials, the HAMILTON-H900 single-use breathing set can be used for up to four weeks on a patient.



HAMILTON MEDICAL

Intelligent Ventilation since 1983

In 1983 HAMILTON MEDICAL was founded with a vision: To develop intelligent ventilation solutions that make life easier for patients in critical care and for the people who care for them. Today, HAMILTON MEDICAL is a leading manufacturer of critical care ventilation solutions for a variety of patient populations, applications, and environments.



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