

Medtronic

Controlled humidity delivery for the right respiratory support

Inspired™* humidification system

Actively infuses warmth and true relative humidity to inspired gas

Invasive mechanical ventilation, administered through an artificial respiratory tract, bypasses the upper airway of a patient. This removes the natural mechanisms of filtration, humidification, and warming of inspired air.

Maintaining heat and humidity during gas intake is necessary to prevent hypothermia and disruption of the airway epithelium, which could cause bronchospasm, atelectasis, and airway obstruction.¹

When you need to hydrate the respiratory tract, count on the innovation of the Inspired™* humidification system, designed to actively infuse warmth and true relative humidity to inspired gas.



Inspired™* VHB20 heated humidifier

Condensation control

- Dual servo control for chamber and patient side temperatures
- Individual adjustment of heating in expiratory limb for better condensation control

Comprehensive clinical capability

- Meets your patients' needs, from infant to adult, for invasive and non-invasive ventilation
- Works with non-heated, single heated, and dual-limb heated breathing circuits

Built-in safety

- Clear alarm indicator helps guide quick clinical decisions

Delivering true relative humidity at >98% with constant relative humidity feedbacks.†



Inspired™* VHB20 heated humidifier

Product specifications

Temperature control setting

Invasive mode	Patient side 35 - 40°C, default 39°C
Non-invasive mode	Patient side 30 - 37°C, default 34°C
Temperature probe detection range	0-150°C
Accuracy	±0.5°C (in 20 - 45°C temperature range)

Performance

Recommended flow range	5 - 60 L/min for invasive mode
Humidity performance	5 - 120 L/min for noninvasive mode Invasive mode: > 33 mg/L; non-invasive mode: > 10 mg/L
Warm-up time	≤ 25 minutes

Physical dimensions

Dimensions	204 mm length x 150 mm width x 159 mm height
Weight	1.9 kg without humidification chamber
Display	2.8" high resolution LCD color screen display

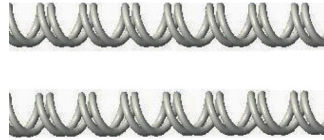
Electrical characteristics

Ratings	220 - 240 V, 50/60 Hz, 320 VA
Heater wire	24 VDC, 80 VA (Max)
Heater plate overheating cutoff temperature	118 ± 7°C

Inspired™ infinity circuit (IIC) dual limb heated breathing circuits

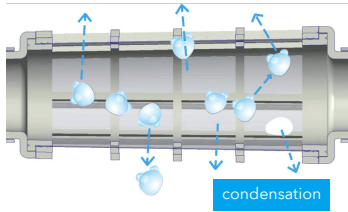
Advanced active humidification

Spiral heated wires run continuously in the dual limb breathing circuit, which help prevent gas temperature loss and surface cold spots, minimizing rainout.



Vent-X™ technology

Vent-X™ technology is a unique module in the expiratory limb, incorporating a proprietary moisture permeable membrane, which allows excessive water vapor to diffuse out of the circuit. This reduces condensation in the expiratory limb and filter and minimizes the need for circuit breaking.



Vent-X™ technology



Other technologies



Inspired™ dual limb heated breathing circuits



Inspired™ auto-feed, chamber, disposable

Product specifications

Leakage limit	70 ml/min @ (60 ± 3) cm H ₂ O
Flow resistance limit	0.06 cm H ₂ O /l/ min @ 30 l/min
Compliance limit	5m l/cm H ₂ O @ (60 ± 3) cm H ₂ O
Circuit length	1.6m
Duration of use	14 days, single-patient
Compatibility	Compatible with VHB20 and MR850

Advanced humidity delivery with minimal circuit break.



† Based on internal bench-top testing.

1. American Association for Respiratory Care, Restrepo RD, Walsh BK. Humidification during invasive and noninvasive mechanical ventilation: 2012. *Respir Care*. 2012;57(5):782-8.

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