IntelliCuff®

Ensuring optimal cuff pressure and patient safety

The IntelliCuff® pressure controller continuously measures and automatically adjusts the cuff pressure during mechanical ventilation of adults, pediatrics, and neonates using a cuffed endotracheal tube or tracheostomy.

By ensuring an optimal cuff pressure, IntelliCuff helps to decrease the risk of ventilator associated pneumonia[1,2] (VAP) and tracheal injuries[3]. Your benefits:

- Increased patient safety
- Decreased workload
- Cost savings

Swiss Quality

HAMILTON MEDICAL

Intelligent Ventilation since 1983

Intelligent and safe – across the system

Continuously optimized and controlled cuff pressure supports ventilation therapy and protects your patients from VAP and tracheal injuries – whether you use IntelliCuff during air transport with quickly changing ambient pressure, or in the operating room for N2O narcosis or laparoscopic abdominal surgery.

Time-limited hold function

In critical situations, you can increase the cuff pressure for a user-defined period of time to secure the airway and avoid aspiration or unintended extubation; for example, in case of vomiting, repositioning of the tube, or changes in patient positioning[4].

Cuff pressure control and leakage detection

IntelliCuff permanently measures the set cuff pressure with two sensors working independently. In the event of a damaged cuff, the device generates an alarm while simultaneously attempting to maintain the desired cuff pressure.

Security valve and bacterial filter

The IntelliCuff disposable tubing developed by Hamilton Medical is designed to fit the Luer connector on a variety of cuffed tubes. The shut-off valve prevents loss of cuff pressure in case of an accidental disconnection between the device and the tubing.

Gentle and reliable – in critical care and anesthesia

IntelliCuff is designed for immediate use; no calibration is required. It operates in a wide but still safe range of desired cuff pressures for various cuffed endotracheal tubes to provide suitable solutions for various clinical situations. You just set the desired cuff pressure, which is then maintained automatically.

Comfortable user interface

A large-scale display and convenient interaction buttons make adjusting and verifying settings easy. All important data is visible at all times – operation is absolutely intuitive.

Alarm silence

IntelliCuff generates an alarm when a leaking cuff or disconnected tubing is detected, as well as in cases of excessive pressure, low battery, or a technical fault. When appropriate, you can also silence some alarms while you remedy the situation.

Automatic deflation

IntelliCuff deflates the cuff on command and supports safe extubation. As soon as the current and target pressures are at zero, the patient can be extubated.

Down-to-earth – even at 7,620 m above sea level

Thanks to its intuitive user interface and extra robustness, the IntelliCuff integrated and continuous cuff pressure control solution helps reduce your clinical staff's workload and secures airway management in intensive care units, operating rooms, and even during air transport. IntelliCuff is prepared for every situation.

Single-click mounting

Using a click mechanism on the included bracket you can quickly attach IntelliCuff to any standard handrail or infusion pole. Or detach it with one hand to change settings.

Maintenance free and easy to power

A small fact with big impact – the IntelliCuff is maintenance free and power is easy to come by. The device uses rechargeable standard AA batteries, which can be charged via USB interface or with the included power adapter.

[1]Seegobin, R. D., and G. L. Van Hasselt. "Endotracheal cuff pressure and tracheal mucosal blood flow: endoscopic study of effects of four large volume cuffs." British medical journal (Clinical research ed.) 288.6422 (1984): 965.

[2]Lorente L, Lecuona M, Jiménez A, Lorenzo L, Roca I, Cabrera J, Llanos C, Mora ML. "Continuous endotracheal tube cuff pressure control system protects against ventilatorassociated pneumonia." Critical Care. 2014 Apr 21;18(2):R77.

[3]Nseir, Saad, et al. "Continuous control of tracheal cuff pressure and microaspiration of gastric contents in critically ill patients." American journal of respiratory and critical care medicine 184.9 (2011): 1041-1047.

[4]Lizy C, Swinnen W, Labeau S, Poelaert J, Vogelaers D, Vandewoude K, Dulhunty J, Blot S. "Cuff pressure of endotracheal tubes after changes in body position in critically ill patients treated with mechanical ventilation." American Journal of Critical Care. 2014 Jan;23(1):e1-8.

For further clinical studies, check out the cuff pressure control bibliography on our website.

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