

To: Newport HT50 Ventilator Users

SUBJECT: Newport HT50 Ventilator Comes Out On Top in Performance Comparison of 15 Transport Ventilators

Recently, a prestigious group of investigators at Massachusetts General Hospital studied 15 currently-available transport ventilators with regard to their physical characteristics, gas consumption, battery life, ease of use, need for compressed gas, ability to deliver set ventilation parameters to a test lung under 3 test conditions, and ability to maintain ventilation and oxygenation in normal and lung-injured sheep. This article was published in the June 2007 issue of Respiratory Care¹.

The Newport HT50 Ventilator was one of only two ventilators that met all of the trial targets in all of the bench and animal tests!

Here are some key points identified by this research team:

- Transport ventilators must be appropriately designed to be of use for ventilatory support in inter-hospital transport, ambulance, forward military and healthcare system back up applications.

Transport Ventilator Design Requirements	Newport HT50 Meets this requirement
The ventilator must be able to ventilate healthy, acutely ill or chronically injured lungs	✓
The ventilator must be portable and easy to operate	✓
The ventilator must be able to deliver a high F _I O ₂	✓
In forward military positions, the ventilator must be able to operate on internal battery for a long period, and without compressed gas.	✓
The ventilator should be able to provide both assisted and controlled ventilation.	✓
The ventilator must incorporate alarms that identify catastrophic conditions.	✓

- Only a few of the ventilators could be set to meet the PaCO₂ or pH targets in the lung injured sheep. *Newport HT50 met these targets.*
- Gas consumption (E cylinder use time) ranged from 32 minutes to 52 minutes amongst the sophisticated ventilators when tested at their high level test conditions. *HT50 ran for 46 minutes.*
- Only 4 of the ventilators could operate without a compressed gas source and their battery life differed considerably. HT50 provided 8 hours and 10 minutes (at the special test settings), which was far longer than the other three ventilators which ran for 4 hours, 90 minutes and 75 minutes respectively.
- **Newport HT50 was one of only two ventilators considered most suitable for use in front-line rescue situations where oxygen may not be available.**

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¹ Chipman DW, Caramaz MP, Miyoshi E, Kratochvil JP, Kacmarek RM. Performance comparison of 15 transport ventilators. Respir Care. 2007 Jun;52(6):740-51.

