![Association of Veterinary Anaesthetists]

This article appeared in the January 2009 e-newsletter of the AVA

January 2009 Update

Tafonius: A new large animal anaesthesia machine– is it really different?

The question could more pertinently be: Is it the same as all the other large Animal ventilators? **The answer is an emphatic NO!**

Tafonius is not at all like a conventional large animal ventilator. A whole new approach to the problem of large animal ventilation has been used. For some this may seem a little scary since the capability of Tafonius is far removed from conventional ventilator control. The essence of the development of Tafonius is not that these new features are used, but rather that they CAN be.

What do we mean by this? To answer this question, an example might help illustrate the point. It will be possible with Tafonius to set a target expired (or inspired) agent concentration, with a set FiO2 and a minimum Minute Volume delivery together with a randomly varying Tidal Volume of +/- 25% of the set tidal volume (a form of "noisy" ventilation). To achieve this Tafonius will take complete control of the oxygen and air gas flows, the passage of gas through the vaporiser and the minute volume delivery to the patient. You, the user, would relinquish control of the gas flow meters, vaporiser

setting and respiratory rate/tidal volume settings. Now I am sure you agree, that does sound a little scary. The point, however, is that Tafonius **COULD** do this because of its inherent technology, not that this is how you **WILL** use Tafonius. In daily use the features that allow you to run the extreme example above give you smooth spontaneous breathing movements, precise control of tidal volume, PEEP/CPAP and reliable display of circuit oxygen, nitrous, carbon dioxide and inhalation agent, whilst still leaving you in control of Fresh Gas Flow, vaporiser setting and all ventilation parameters.

"In the development of Tafonius we have constructed the building blocks for complete versatility and control:"

- To allow informed control you must have information from your monitors and the ventilation system. Tafonius provides ECG, IBP, Pulse-Ox, CO2, O2, Nitrous, Agent, Temperature and Airway pressure in its monitoring system as either instantaneous data or trend data. In addition, tidal volumes, inspiratory times, respiratory rates, minute volumes and minimum/maximum airway pressures are recorded and displayed.

- To effect precise control you must have absolute control over all ventilation parameters. Tafonius allows this level of control with precise piston control and independent setting of ventilation parameters.

- With these building blocks you can perform any type of ventilation profile that you can conceive, be they recruitment manoeuvres, sighs, pressure-cycled breaths or even a new ventilation type.

Does it all sound complicated? Well, to ventilate your patient, here's what you actually need to do:

Connect the animal to Tafonius and let it breathe spontaneously. Set the Tidal Volume, Respiratory Rate and Inspiratory time. When you want to switch to IPPV, push the Ventilate button.

That's all there is to it.

Tafonius integrates all of the monitoring, anaesthetic circuit and ventilator into one manageable system. There is extensive data collection and data recording. Anaesthetic

Record charts can be produced automatically as well as viewing the entire procedure's data in a standard spreadsheet. With its Windows™ based control system Tafonius is packed with features that aid data visibility, save time in data recording and provide incontrovertible evidence of anaesthetic practice and control.

Tafonius. Radically different, yet comfortably familiar

For more information on the Tafonius go to:

http://www.vetronic.co.uk/products_detail.php?id=21

In Europe contact:
Mr Keith Simpson BVSc, MRCVS, MIET (Electronics), Vetronics LTD.,
Email: enquiries@vetronic.co.uk

or

http://hallowell.com/index.php?pr=z000A4630

In the America's contact:
W. Stetson Hallowell
Hallowell EMC
Email: stetson@hallowell.com