

Training and Support

VIASYS® offers a full range of training and support with dedicated clinical application specialists. Our training centers are located worldwide and include hands-on training, clinical applications and labs taught by experienced clinicians and engineers. We offer extensive courses at premiere medical centers with skilled, published users. On-site training is also available.



Superior Performance and Warranty

Performance

The SensorMedics 3100A has a long-standing reputation for high quality, performance and reliability. Thousands of our ventilators are used worldwide and exemplify superior performance with a rugged and simple design.

Warranty

VIASYS offers standard and extended warranties customized to fit your needs. You may be assured that your devices are covered and that we have a full-service customer support department available whenever you require assistance. Our technical support technicians are available around-the-clock for your urgent clinical and technical questions.



VIASYS Healthcare seeks to improve patient care by delivering innovative, high quality respiratory products and services to patients and clinicians worldwide. VIASYS exceeds the expectations of customers by providing the highest standards in customer care. VIASYS shapes the future of medical technology through collaborative investigation and development of advanced technologies, providing continued support for clinical research and education.

Product Areas

-  Ventilation
-  Pulmonary Diagnostics
-  Sleep Medicine
-  Spirometry
-  CPET/Nutritional Assessment

References

1. HIFO Study Group. Randomized study of high-frequency oscillatory ventilation in infants with severe respiratory distress syndrome. *J Pediatr* 1993; 122(4):609-19.
2. Clark RH, Gerstmann DR, Null DM, deLemos RA. Prospective randomized comparison of high-frequency oscillatory and conventional ventilation in respiratory distress syndrome. *Pediatrics* 1992; 89(1):5-12.
3. Gerstmann DR, Minton SD, Stoddard RA, Meredith KS, Bertrand JM, et al. The Provo multicenter early high-frequency oscillatory ventilation trial: improved pulmonary and clinical outcome in respiratory distress syndrome. *Pediatrics* 1996; 98:1044-1057.
4. Ramanathan R, Ruiz I, Tantivit P, Cayabyab R, deLemos R. High frequency oscillatory ventilation compared to conventional mechanical ventilation in preterm infants with respiratory distress syndrome. *Pediatr Res* 1995; 37:347A (abstract).
5. Clark RH, Yoder BA, Sell MS. Prospective, randomized comparison of high-frequency oscillation and conventional ventilation in candidates for extracorporeal membrane oxygenation. *J Pediatr* 1994; 124(3):447-54.
6. Arnold JH, et al. Prospective, randomized comparison of high-frequency oscillatory ventilation and conventional mechanical ventilation in pediatric respiratory failure. *Crit Care Med* 1994; 22:1530-1539.
7. Plavka R, et al. A prospective randomized comparison of conventional mechanical ventilation and very early high frequency oscillatory ventilation in extremely premature newborns with respiratory distress syndrome. *Int Care Med* 1999; 25:68-75.
8. Courtney SE, Durand DJ, et al. Early high-frequency oscillatory ventilation versus synchronized intermittent mandatory ventilation in very low birth weight infants: a pilot study of two ventilation protocols. *J Perinatology* 2001; 21:221-9.
9. Courtney SE, Durand DJ, et al. HFOV versus conventional mechanical ventilation for very-low-birth-weight infants. *N Engl J Med*.
10. Slutsky A, Trembley L. Multiple System Organ Failure ARCCM 1998;157: 1721-1725.
11. Gerstman DR, et al. Childhood Outcome After Early HFOV for Neonatal Respiratory Distress Syndrome. *Pediatrics* 2001, Vol 108 No. 3; 618-623.
12. Bachman T, Lassen G. HFV: Applied Technology, Saving Both Lives and Costs Neonatal Intensive Care 1993, 34-38.
13. Pillow J. High Frequency Oscillatory Ventilation: Mechanism of Gas Exchange and Lung Mechanics. *Crit Care Med* 2005; Vol 33 No. 3; 135 - 141.
14. Imai Y, et al. Comparison of Lung Protective Strategies Using Conventional and High Frequency Oscillatory Ventilation. *J Appl Physiol* 2001 91; 1836 - 1844.
15. Carney D, DiRocco J, Nieman G. Dynamic Alveolar Mechanics and Ventilator Induced Lung Injury. *Crit Care Med* 2005; Vol 33 No. 3; 122 - 128.
16. Hobard L. Evaluation of Neonatal Intensive Care Technologies. From The Future of Children. A Publication of the David and Lucille Packard Foundation. 1995; Vol 5 No 1

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VIASYS[®]
HEALTHCARE
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L2838-101 Rev A

VENTILATION

SensorMedics®

3100A HFOV

neonate • pediatric

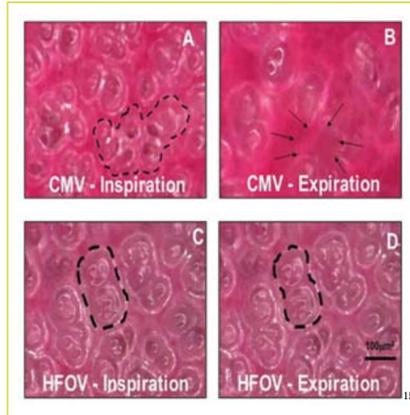
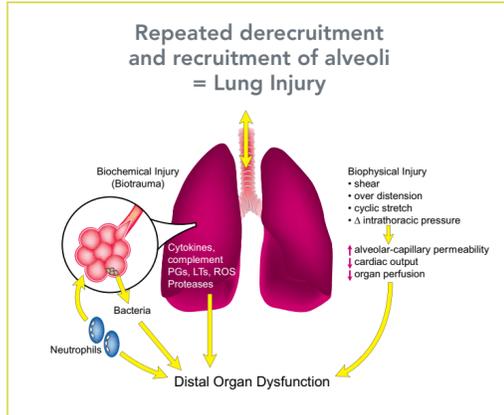
Ventilation Requires Perfect Balance



VIASYS[®]
HEALTHCARE

The Science Says It All

In nine randomized controlled trials with more than 1100 newborns and children, the SensorMedics 3100A has been proven to improve oxygenation and significantly reduce the chronic lung disease normally associated with prematurity or mechanical ventilation.**



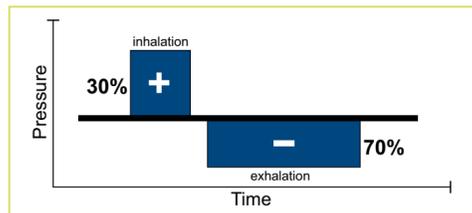
When the lung is damaged by conventional ventilation, it may lead to chronic changes. Other organs may be compromised by harmful cytokines and proteins released into the bloodstream¹⁰. The SensorMedics 3100A can decrease the risk of these complications by maintaining a constant distending pressure and normalizing the end expiratory lung volume.¹⁴

Different from Other High Frequency Ventilators

In contrast to other high frequency devices that only supplement a second conventional ventilator, the SensorMedics 3100A is capable of complete, stand-alone* ventilation of your patient.

Unique Technology

- SensorMedics 3100A produces an active exhalation.¹³ This is essential at high frequency respiratory rates to prevent air trapping that may occur with high frequency ventilators that utilize passive exhalation.
- Patented technology is distinguished from other high frequency ventilators by its highly-reliable electromagnetically driven piston.
- Design permits variable I:E ratios, which are desirable for managing ventilation.



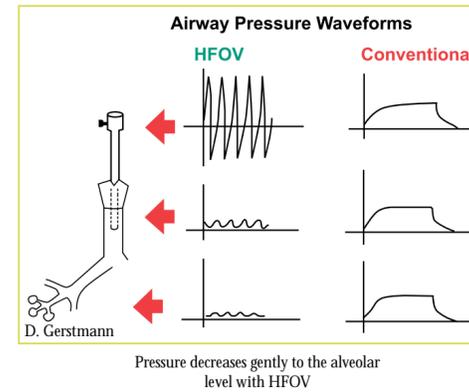
3100A offers adjustable inspiratory time: 30 - 50%

*United States

** See the back cover for a complete listing.

Ventilation Requires Perfect Balance

The SensorMedics® 3100 series goes beyond convention. As the gold standard in high frequency oscillatory ventilation, the SensorMedics 3100A has changed the way clinicians around the world ventilate by setting the benchmark for open lung, low stretch, lung protective strategies. This unique technology was built upon the understanding that gentle lung recruitment and optimal ventilation require perfect balance.



Clinically Proven Safe and Effective

The SensorMedics 3100A works by gently inflating the lungs with a continuous distending pressure and superimposing very small pressure and volume oscillations.

The SensorMedics 3100A remains the only high frequency ventilator that is FDA approved to be sold for early intervention in the treatment of neonates in respiratory failure.

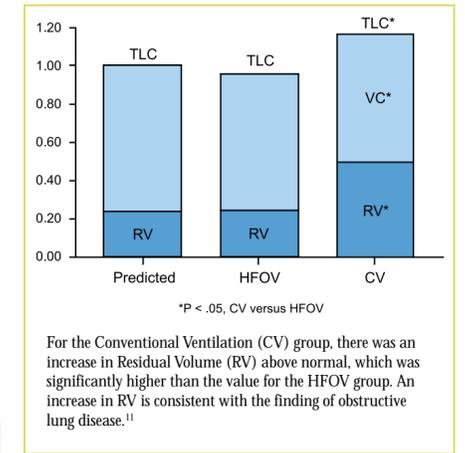
The SensorMedics 3100A is used in more than 90% of the Level III nurseries¹⁶ and pediatric intensive care units in the United States. Premiere centers worldwide prefer the SensorMedics 3100A — no other high frequency device can compare.



The True Meaning of Lung Protective Ventilation

Proven Safe for Fragile Lungs and Safe for Fragile Brains

The gentle approaches of the SensorMedics® 3100A to recruit and ventilate extend beyond short-term benefits reflected at 36 weeks post-conceptual age. Even at 6 to 8 years old, children who were managed with the SensorMedics 3100A had significantly better lung function than trial patients managed using conventional ventilation methods in randomized controlled trials.¹¹ Randomized controlled trials of the SensorMedics 3100A have also shown that it is as safe as CMV when examining its effects on intracranial hemorrhage and periventricular leukomalacia.⁹



For the Conventional Ventilation (CV) group, there was an increase in Residual Volume (RV) above normal, which was significantly higher than the value for the HFOV group. An increase in RV is consistent with the finding of obstructive lung disease.¹¹

HFOV for Pediatrics

Beyond Small Neonates

With the largest volume delivery capability, use of the SensorMedics 3100A is not limited to neonates. While it can gently deliver 1 to 3 mL to ventilate the most premature infant, it can also deliver up to 180 mL to support the ventilation of pediatric patients.

