

# 3100B adult and pediatric high-frequency oscillatory ventilator

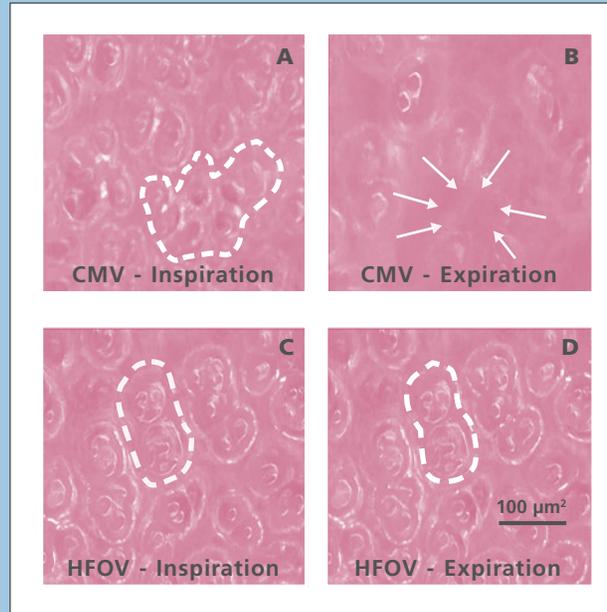
The 3100B ventilator goes beyond convention by empowering clinicians to deliver high-frequency oscillatory ventilation to your larger pediatric and adult patients.



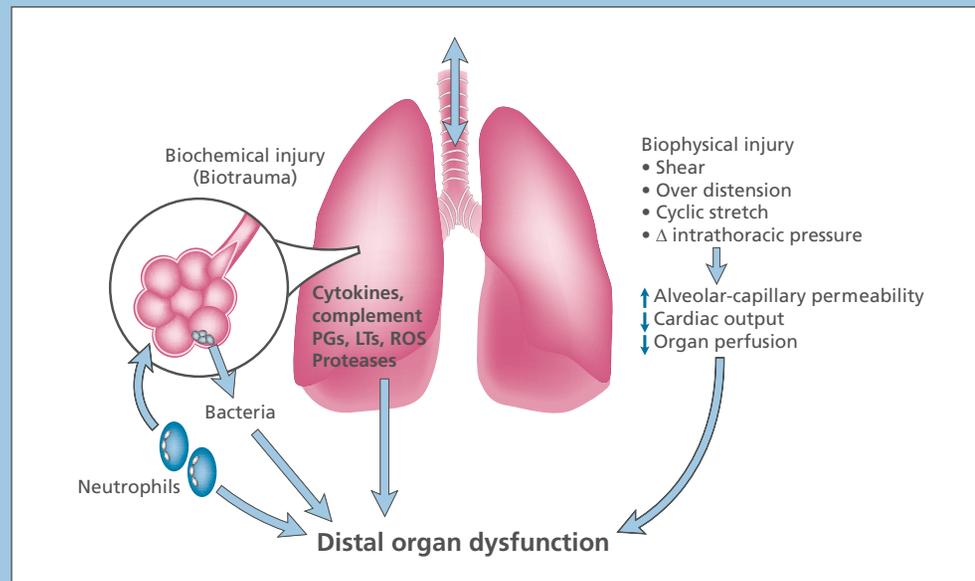
## Empowering clinicians with proven lung protection strategies

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 bloodstream.<sup>1</sup> The 3100B high-frequency oscillatory ventilator (HFOV) can decrease the risk of these complications by maintaining a constant distending pressure and normalizing the end expiratory lung volume.<sup>2</sup>

One randomized, controlled trial comparing HFOV and conventional ventilation in an adult patient population with severe acute respiratory distress syndrome (ARDS) demonstrated that HFOV is both safe and effective, and resulted in a 29% relative reduction in mortality.<sup>3</sup>



The repeated derecruitment and recruitment of alveoli caused by conventional ventilation can lead to lung injury. HFOV can decrease this risk by maintaining a constant distending pressure and normalizing the end expiratory lung volume.



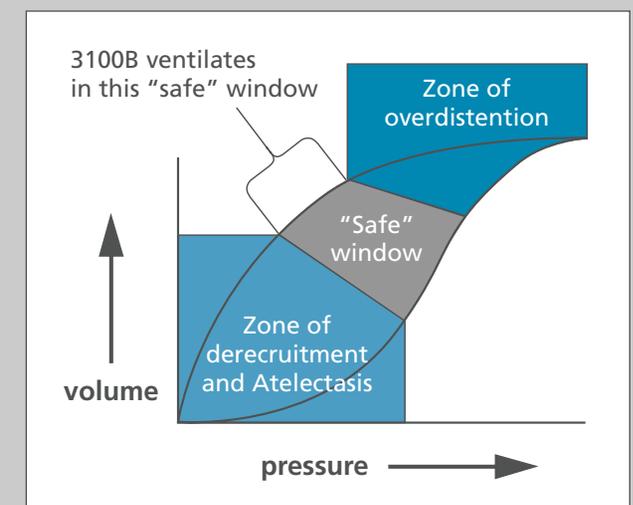
Ventilator induced lung injury leads to distal organ dysfunction.

## Advancing ventilation beyond convention

Based on the established technology of the 3100A ventilator, the 3100B HFOV adds the enhanced performance capabilities necessary for adult ventilation. It is approved for the treatment of acute respiratory failure in adults and children weighing more than 35 kilograms.

### The 3100B HFOV:

- Produces an active exhalation,<sup>4</sup> which is essential at high-frequency respiratory rates to prevent air trapping that may occur with passive exhalation
- Offers patented technology and a highly reliable, electromagnetically driven piston that distinguishes it from other high frequency ventilators
- Permits variable I:E ratios, which are desirable for managing ventilation



The 3100B HFOV safely ventilates patients.

## Connecting global evidence-based practitioners

The 3100B HFOV 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 optimal lung recruitment and gentle ventilation create a perfect balance.

- According to the ARDSnet protocol, pediatric and adult patients with ARDS should be ventilated with small tidal volumes<sup>5</sup>
- The 3100B HFOV makes low tidal volume management easier to achieve by utilizing less than dead space tidal volumes for the ultimate in low stretch lung protection<sup>6</sup>
- The 3100B HFOV allows the application of continuous distending pressures up to 55 cmH<sub>2</sub>O to recruit and normalize lung architecture

## Delivering superior training, support and warranty

CareFusion offers a full range of training and support with dedicated Clinical Application Specialists. Our training centers are located worldwide and include hands-on training and applications labs taught by experienced clinicians and engineers. Onsite training is also available.

CareFusion offers standard and extended warranties customized to fit your needs. You can 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 Specialists are available around-the-clock for your urgent clinical and technical questions.



#### References

1. Slutsky A, Tremblay L. Multiple System Organ Failure. ARCCM, 1998; 157: 1721–1725.
2. Imai Y, et al. Comparison of Lung Protective Strategies Using Conventional and High Frequency Oscillatory Ventilation. J Appl Physiol, 2001 91; 1836–1844.
3. Derkak S. High-frequency oscillatory ventilation for acute respiratory distress syndrome in adult patients. Crit Care Med, 2003; 31: S317–323.
4. Pillow J. High Frequency Oscillatory Ventilation: Mechanism of Gas Exchange and Lung Mechanics. Crit Care Med, 2005; Vol 33 No. 3; 135–141.
5. Brower R, et al. Ventilation with lower tidal volumes as compared with traditional tidal volumes for acute lung injury and acute respiratory distress syndrome. NEJM, 2000; Vol 342 No 18; 1301–1308.
6. Froese A, Kinsella J. High Frequency Oscillatory Ventilation: Lessons from the neonatal/pediatric experience. Crit Care Med, 2005; Vol 33 No 3; 115–121.

 **WARNING**—U.S. Federal Law restricts this device to sale by or on the order of a physician.

 **CareFusion**  
22745 Savi Ranch Parkway  
Yorba Linda, CA 92887  
800.231.2466 toll-free  
714.283.2228 tel  
714.283.8493 fax

 **CareFusion Germany 234 GmbH**  
Leibnizstrasse 7  
97204 Hoechberg  
Germany  
+49 931 4972-0 tel  
+49 931 4972-423 fax



CareFusion  
Yorba Linda, CA

[carefusion.com](http://carefusion.com)

