Taking neonatal noninvasive ventilation to the next level

Infant Flow® SiPAP system

- Clinically proven technology to target lung protection
- BiPhasic and nCPAP modes
- Intuitive operation
- Integrated safety alarms
- Integrated patient monitoring
- Apnea and low breath rate detection

CareFusion

Advancements in noninvasive therapy

The Infant Flow SiPAP system is clinically proven in successfully treating thousands of patients worldwide.[1] Combined with patented generator technology designed specifically for infants, the Infant Flow SiPAP system provides a complete solution for noninvasive ventilatory support.

The Infant Flow SiPAP system offers a comprehensive selection of modalities for your neonatal patients. These modalities present treatment options to protect fragile lungs.

Clinically proven technology helps:

- Reduce ventilator days and extubation failures[2]
- Improve oxygenation and ventilation in BiPhasic mode[2]
- Improve apnea of prematurity treatment[3]
- Maximize pressure stability at the lowest work of breathing[4]

Advanced noninvasive treatment options provide:

- CPAP, BiPhasic or BiPhasic trigger (tr)*
- Graseby capsule for apnea detection and patient synchronization in BiPhasic tr
- Apnea and low breath rate detection, and patient synchronization in BiPhasic tr

Safety and versatility is enabled through:

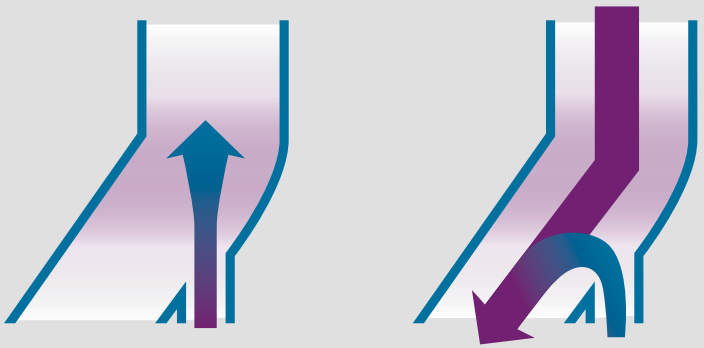
- Up to two hours of battery backup
- Simple Touch™ operation for ease of use
- Fully integrated patient monitoring for easy patient assessment
- Fully integrated alarm systems for patient safety

*Not available in the United States

Fragile lung protection

nCPAP

Nasal CPAP (nCPAP) is a constant, stable, single level of positive pressure to infant airways. nCPAP facilitates the restoration of functional residual capacity and the correction of hypoxemia. nCPAP is an established method for providing noninvasive respiratory support to a spontaneously breathing infant via a nasal mask or nasal prongs.



Inspiratory flow

Expiratory flow

Inspiratory flow

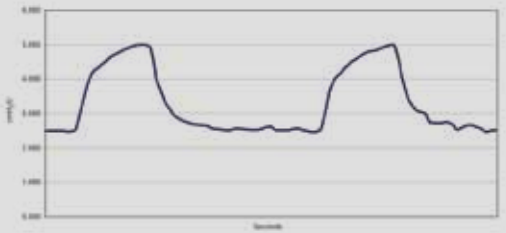
The flow provided by the Infant Flow SiPAP system is accelerated in the twin injector nozzles of the Infant Flow generator. When the patient makes a spontaneous inspiratory effort, the Infant Flow generator converts the kinetic energy of the flow to pressure, thereby reducing the work of breathing for the patient and maximizing pressure stability at the patient interface.

Expiratory flow

When the infant exhales, the forward velocity of the airflow decreases. This allows the gas flow to "flip" from the nasal prongs to the expiratory tube. The continuous gas flow provides residual gas pressure, which enables stable CPAP pressure delivery throughout the respiratory cycle. When expiratory effort stops, the flow instantly flips back to the inspiratory position.

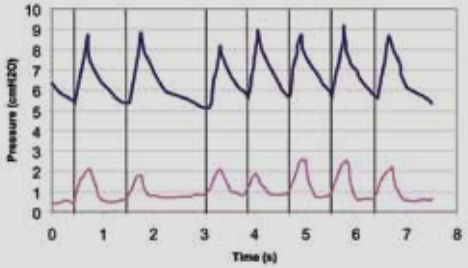
BiPhasic mode

BiPhasic mode is a timed pressure rise above baseline CPAP. Small incremental pressure increases of 2 to 3 cmH_2O augment functional residual capacity and can offload respiratory work of breathing. BiPhasic mode has been shown to improve oxygenation and ventilation[2] when compared to CPAP.



BiPhasic tr

BiPhasic tr is a noninvasive synchronized nasal intermittent positive pressure ventilatory (SNIPPV) support modality that allows clinicians to provide respiratory support without an endotracheal tube. SNIPPV decreases ventilator days by giving the clinician the ability to potentially prevent intubation or extubate early, therefore decreasing the risks associated with intubation.



Advanced monitoring

Monitoring screen

Graphical waveform screen

References

1 Migliori, C., Motta, M., Angeli, A., Chirico, G. Nasal bilevel vs. continuous positive airway pressure in preterm infants. *Pediatric Pulmonology.*, 2005, 40:426-430.

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3 Pantalitschka, T., Sievers, J., Urschitz, M., Herberts, T., Reher, C., Poets, C. Randomised crossover trial of four nasal respiratory support systems for apnoea of prematurity in very low birthweight infants. *Arch Dis Child Fetal Neonatal Ed*, July 2009, 94(4):F245-248.

4 Aghai, Z., Saslow, J., Nakhla, T., Milcarek, B., Hart, J., Lawrysh-Plunkett, R., Stahl, G., Habib, R., Pvon, K. Synchronized nasal intermittent positive pressure ventilation (SNIPPV) decreases work of breathing (WOB) in premature infants with respiratory distress syndrome (RDS) compared to nasal continuous positive airway pressure (nCPAP). *Pediatr Pulmonol*, September 2006, 41(9):875-881.

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

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