



**ventrain starts a
new era in ventilation**

›ventrain◀



ventrain

What is new?

- › full ventilation in a patient with a blocked upper airway
- › assisted expiration through a 2 mm catheter
- › more than 6 litres minute volume
- › connection for capnometry

ventrain star



completely

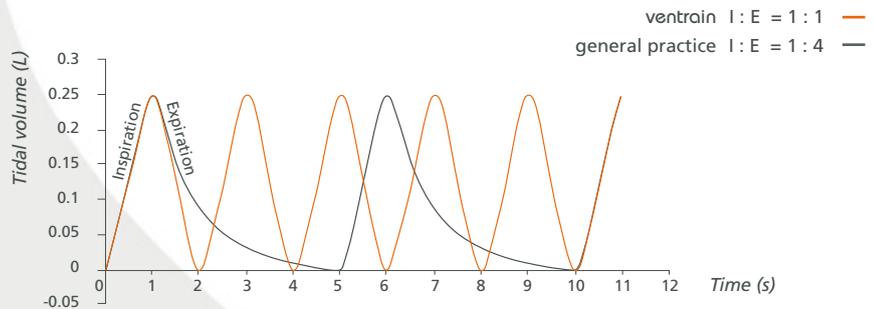
blocked

upper airway

Ventrain is the first transtracheal jet ventilation device that provides full ventilation in a patient with a completely blocked upper airway. With Ventrain, a product specifically designed for 'cannot ventilate, cannot intubate' situation, the practice of airway management will become much easier and safer.

Assisted expiration through a 2 mm catheter

Ventrain not only supplies oxygen in the inspiration phase, but also provides active removal of gas from the lungs in the expiration phase by suction, ensuring expiratory ventilation assistance (EVA).



Assisted expiration technology allows for more control over the ventilation procedure. This considerably reduces the chance of intrapulmonary pressure build-up, possibly resulting in barotrauma and circulatory collapse, which are well-known risks of conventional jet ventilation.



DOLPHYS



**easy
to use**

More than 6 litres minute volume

With a flow set at 15 l / min, Ventrain can obtain over 6 litres minute volume through a 2 mm catheter in a patient with a completely blocked upper airway. Currently available ventilators can only provide up to 4 l / min in this situation, while 6 l / min is needed for normoventilation of an adult. Such a high minute volume can be achieved because the patented design of Ventrain optimizes a balance between the Venturi effect and jet-entrainment. It is a process in which the turbulent incoming jet flow captures the expiratory gas.

Catheter with adjustable connection

The new transtracheal catheter is specifically developed for Ventrain and has an inner diameter of only 2 mm. The flange of the catheter can easily be adjusted to the anatomical characteristics of a patient. Following the standard procedure, the airway is accessed by inserting the needle through the cricoid membrane.



n ve ntilation

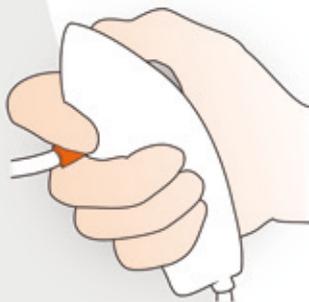


expiratory ventilation assistance

Possibility for capnometry

With conventional emergency jet ventilation devices, CO₂ elimination can only be monitored through blood gas measurement. Ventrain has an additional male Luer connector, that allows attachment of capnometry tubing to measure CO₂ in the actively exhaled gases. This eliminates the minutes of information delay common with blood gas measurement.

Simplicity in controlling



inspiration



assisted expiration

Ventrain is a registered trade mark.
The Community Design is registered.





D. van Asseldonk, CEO Dolphys and Dr. D. Enk, MD



The creators

The credit for the invention of Ventrain goes to Dr. D. Enk, MD., an anaesthesiologist at the Maastricht University Medical Center, who is specialised in airway management for more than ten years. Dr. Enk's initial idea has been further developed in close cooperation between Dolphys and Dr. Enk's clinical research group. This collaboration resulted in Ventrain and its catheter.

Ordering information

Ventrain emergency kit contains:

- Ventrain
- needle transtracheal catheter
- syringe

Specifications:

- single use
- sterile

Art. code: 2618300

Website Ventrain

www.ventrain.eu

Your distributor



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