fabian HFOi
Our 4-in-1 device

ACUTRONIC

FG / nCPA P

Exp

Prox

Insp

Ventilation Beyond Limits

When It Comes to Life, There Is No Compromise

Distributing worldwide

ACUTRONIC is a privately held company that develops, manufactures, and distributes high-tech ventilation and monitoring solutions for neonatal, pediatric and adult ICUs and intensive care transportation in over 90 countries. When it comes to the most critical areas of respiratory care, we are the leading partner for hospitals in neonatology, pediatrics, jet ventilation, and difficult airway management.

Forward thinking

It is our aspiration to develop innovative solutions that simplify the busy clinical routine for caregivers and increase patient safety. With over 30 years of experience our global network of clinical experts, we are quickly able to translate new developments into real innovations – and keep challenging ourselves to improve and set new benchmark.

Exploring where others stop

ACUTRONIC products have an excellent reputation for precision, quality, and service in the industry.
We strive every day to provide the best solutions for the most challenging groups of patients. We continue to explore where others stop.

ACUTRONIC – Ventilation Beyond Limits

fabian HFOi
Our 4-in-1 device

From the delivery room to the NICU: the fabian HFOi offers the best-in-class ventilation modalities in a single device.

Ease of Use

The fabian HFOi is designed to optimize clinicians' and nurses' work flow within a single device, reducing the time needed to manage ventilator controls, configurations or different devices, resulting in more time and focused care for the baby.

Modularity

Future-oriented: in addition to the pre-integrated conventional and triggered ventilation modes, software and hardware modules that may be required in the future are easily integrated and can be configured according to your needs.

Developmental Care

Particularly silent, the fabian HFOi, creates a low-stress and low-noise environment for the undisturbed handling, bonding and kangaroo care of the baby during its development.

Mobility

Designed for mobility: thanks to its compact size, the fabian HFOi allows for transport within the hospital from delivery room to NICU and easy access to the baby at all times at the bedside.

Patient Safety

The fabian HFOi is designed to keep babies safe and protected whenever they are ventilated. This includes the reduced risk of volutrauma in HFO with VG, the reduced risk of contamination with the HFO pulse generated from the inspiratory side and reduced risks of user errors with a user-friendly interface.
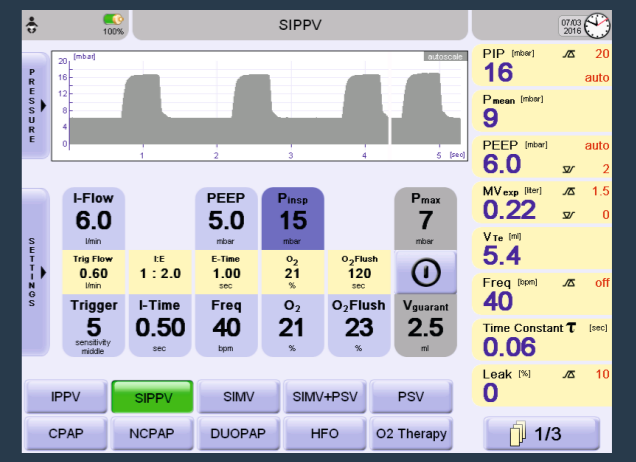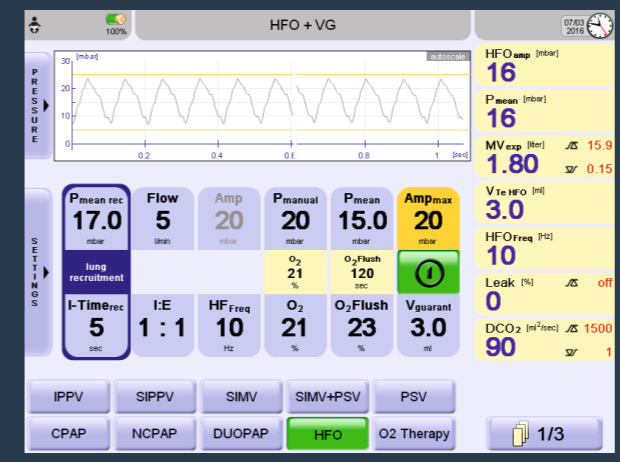
Compatibility & Interface

This flexible system is compatible with all conventional breathing circuits currently available on the market. In addition, the fabian HFOi is equipped with several communication interfaces (Acutronic AcuLink, Philips VueLink and CapsuleTech) for compatibility to hospital data management systems.

Ease of Use

A clear, bright touch-screen TFT with intuitive commands reduces human error and puts the focus back on the baby.

Graphics
See waveforms, numeric data, loops, ventilator status, and more. Clearly displayed and represented.

One-touch principle
All operation procedures are carried out using a direct, time-saving and easy-to-understand one-touch principle.
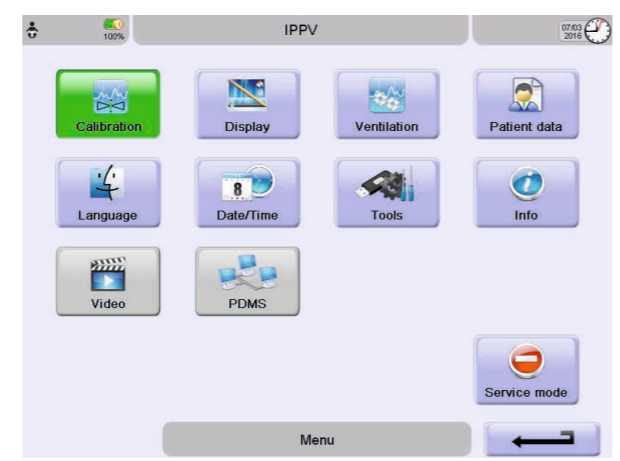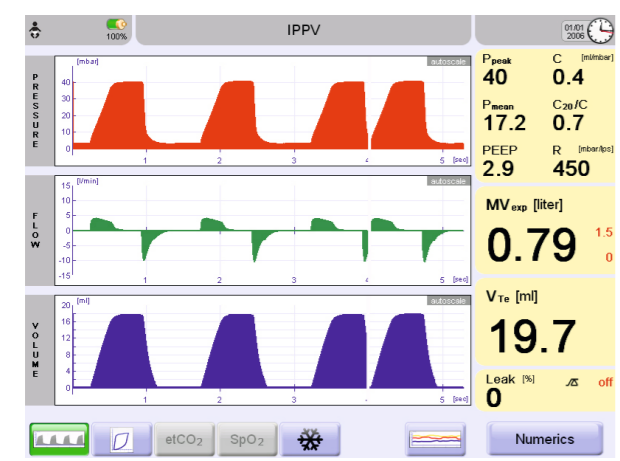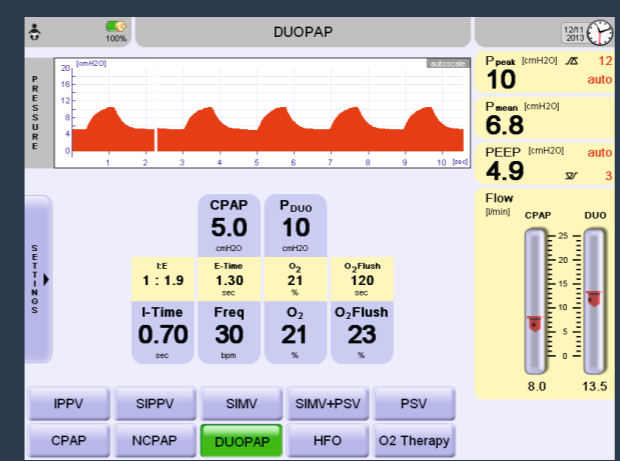
Modularity

A true modular system with a variety of ventilation modes for the ventilator configuration you need – more can be added and enabled whenever desired.

4-in-1
All these features and even more in just one device:
all neonatal and pediatric conventional ventilation modes (Volume Guarantee included), Non-Invasive Ventilation modes (NIV), O_2 therapy with High Flow Nasal Cannula (HFNC) and unique High Frequency Oscillation (HFO) with Lung Recruitment Maneuver and Volume Guarantee.

Future-oriented
Neonatal and pediatric ventilation modes (IPPV, SIPPV, SIMV, PSV and SIMV+PSV) with independent adjustment of inspiratory and expiratory flow reduces the work of breathing and inadvertent PEEP.

Ventilation Beyond Limits
nCPAP and DuoPAP modes, for nasal and mask ventilation, with automatic leak compensation, featuring two-level CPAP mode to improve CO_2 removal.

New Features & Cooperations

› Option for in-line etCO$_2$ mainstream for pediatric and sidestream Microstream® for neonatal patients.

› Option for real-time SpO$_2$ monitoring with adjustable Perfusion Index (PI) alarm.

New lung function monitoring parameters and graphics for decision-maker. Loops both in conventional and HFO modes. Rapid Shallow Breathing Index (RSBI), C20/C (overdistension index), resistance, compliance, time constant, minute volume and many others, available at a glance in the configurable numeric blocks.

Developmental Care

Premature babies are fragile. One of their special needs is quiet time for normal growth and development. The fabian HFO is equipped with an electromagnetic expiratory valve, highly precise electronic flow meters and a uniquely designed HFO module, making the fabian HFOi the most silent HFO ventilator in the world today – without using silencers.

Patient Safety

On the receiving end of our ventilators are the tiniest and most fragile patients imaginable. Keeping them safe and protected whenever they are ventilated is our first priority of all our thoughts.

› **Integrated lock function** to prevent inadvertent settings.
› **Easy maintenance** with few parts for disinfection and sterilization without any risk of infection inside the ventilator – even during HFO ventilation.
› **No bacterial filters** and therefore no risk of increased resistance during humidified ventilatory therapies.
› **Optimal support** with reduced Work Of Breathing (iWOB).
› **Reduced error risk** thanks to the self-training ACUTRONIC concept inside.
› **Built-in backup battery** pack for up to 2.5 hours of self-powered operation.

Designed for Mobility

Medical technology should simplify the work flow of clinicians. Interfaces should be familiar and intuitive. They should be consistent across different workstations, thus reducing the potential for error. Data should be entered just once and be available across multiple platforms to support decision-making.

Ultimately, innovations in ventilator design and clinical information management can improve both patient safety and outcomes, while supporting maximum flexibility.

Comprehensive device

Allowing easy access to the baby at all times. No disturbances at the bedside in NICU/PICU from device reshuffles.
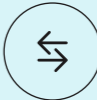
Lightweight unit

Designed for safe, practical transportation with integrated electronic gas blender and built-in battery.

Compatibility & Interface

Service mode

Service mode with advanced diagnostics via USB port, standard Ethernet connection.

Flexible & scalable

The system is flexible and can be used with all conventional breathing circuits currently available on the market.

Communication interface

Digital interface with hospital information systems, download settings and monitoring data.

fabian HFO

Our range of high-end neonatal ventilators, fabian HFO, will allow you to get the best performance for your NICU in every situation.

fabian HFOi

The latest edition of fabian HFO comes with the HFO fully integrated into the inspiratory port. No additional tubing for HFO needed. Furthermore, the fresh gas port allows for easier use of NO systems. The fresh gas port also function as the nCPAP port, making it even easier to switch modalities.

(HFNC) (NIV) (CV) (HFO)

fabian HFO classic

This one device offers all options: advanced conventional and non-invasive therapy, High Frequency Oscillation (HFO) and oxygen therapy (HFNC) for neonatal and pediatric patients.

(HFNC) (NIV) (CV) (HFO)

fabian HFO light

the fabian HFO "light" is the ideal NICU companion when large screen, high-performance monitoring is needed in Conventional Ventional and nCPAP, HFNC at a competitive price.

(HFNC) (NIV) (CV)

Finding your Device

Non-invasive, conventional or sophisticated high frequency ventilation. No matter which product you choose, you're getting a device that features the latest technology and is ready to ventilate beyond limits.

	fabian HFO light	fabian HFO classic	fabian HFOi
MAIN FEATURES			
O₂ Monitor (FiO₂)	●	●	●
Electronic Gas Blender	●	●	●
Inspiratory and Expiratory Flow (Bias)	●	●	●
Leak Compensation	●	●	●
Integrated Battery	●	●	●
Color TFT Display	●	●	●
Touch-screen Display	●	●	●
Volume Trigger/Flow Trigger	●	●	●
Curves: Pressure/Volume/Flow	●	●	●
Loops: F/P, P/V	●	●	●
Advanced Monitoring	●	●	●
CO₂ Module (Side or Main-stream)	○	○	○
SpO₂ Module (Masimo)	○	○	○
Internal HFO connection	-	-	●
Bias Flow connection	-	-	●
Seperate nCPAP connection	-	-	●
VENTILATION MODES			
CPAP	●	●	●
IPPV-IMV	●	●	●
SIPPV (A/C)	●	●	●
SIMV	●	●	●
SIMV + PSV	●	●	●
NIV (nCPAP, duoPAP)	●	○	○
HFO	-	●	●
Volume Limit	○	○	○
Volume Guarantee	○	○	○
O₂ High Flow Therapy	○	○	○
O₂ Flush	●	●	●
Manual Breath	●	●	●

● = standard   ○ = optional

Technical Specifications

Functionality

The fabian HFO is intended for premature infants, newborns as well as children weighing up to 30 kg.

Intended Use

› The fabian HFO is intended for "in-patient use" in hospitals, medically-used rooms and intra-hospital patient transport.
› The fabian HFO is an electronically, microprocessor controlled ventilator.
› The fabian HFO ventilates with excess pressure based on the continuous-flow principle. (Time-cycled, pressure-/volume-limited)
› Oxygen is metered by the integrated air/O_2 blender.
› The oxygen concentration is measured internally with a galvanic oxygen sensor.

Ventilation modes

› HFO (HFO/Sigh)
  High Frequency Oscillation (membrane principle) optional
  internal HFO connection optional
› IPPV
  Intermittent Positive Pressure Ventilation
› SIMV
  Synchronized Intermittent Mandatory Ventilation
› SIPPV
  Synchronized Intermittent Positive Pressure Ventilation
› CPAP (Spn-CPAP/PS)
  Continuous Positive Airway Pressure
› PSV
  Pressure Support Ventilation
› SIMV + PSV
  Synchronized Intermittent Mandatory Ventilation combined with PSV
› Non-Invasive Ventilation (NIV)
  nCPAP/duoPAP with variable flow generators
  (Infant Flow®, Infant Flow LP®, Inspire™, Medijet®) optional
› HFNC O_2 Therapy
  High and Low flow oxygen therapy optional

Enhancements

› Apnea ventilation
› Backup ventilation
› Combined SIMV + PSV ventilation
› Flow trigger
› Volume trigger
› Adjustable PSV termination criteria
› NIV with leak compensation
› Volume Guarantee
› Volume Limit
› Demand flow in CPAP

Special procedures

› Manual inspiration/hold
  (Sustained Lung Inflation)
› Lung recruitment (sigh) in HFO mode
  optional
› O_2 flush

Dimension

› (W x H x D) 30 cm x 37 cm x 40 cm
› Weight approx. 20 kg with HFO module
› Approx. 14 kg without HFO module
› Diagonal screen size 10.4″
› TFT color touch-screen with LED backlight
› Keypad with 10 buttons

Input and output ports

› 1 USB port (for SW updates)
› 1 RS 232 (9 pin) port for PDMS/HIS
› 1 RJ 45 Ethernet port for PDMS/HIS
› 1 CO_2 sensor connection
› 1 Video In connector
› 1 nurse call connector

Designed in Switzerland

The fabian HFOi is the result of more than 30 years of experience in design, development and craftsmanship. Powerful components such as long-lasting battery packs, innovative modules like a one-piece expiratory valve and a cleverly reduced assembling concept with easily accessible parts make this device user-friendly.

Together with a customized service program, fabian helps to minimize the cost of ownership.

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