VOCSN Multi-Function Ventilator
Unique Solution for COVID-19 Patients and Medical Professionals

Preparedness for Mass Casualty Respiratory Failure (MCRF)
Typical Respiratory Equipment for COVID-19

VOCSN is a unique solution for COVID-19 response

JAMA article studied 138 hospitalized COVID-19 patients

- 89% in ICU required ventilation
- 77% of all patients required supplemental oxygen
- 11% in ICU required high flow therapy
- ~100% in ICU required cough & suction secretion management
Simple, Streamlined Respiratory Care
Comprehensive care in an easy-to-use package

VOCSN is the first and only Multi-Function Ventilator that combines five traditional devices:

- **Ventilation**: ICU critical care ventilator + high flow therapy up to 60 L/min
- **Oxygen**: 6 L/min oxygen concentrator + blender for high pressure oxygen use
- **Cough**: Touch button cough assist using the same circuit to mitigate cross contamination
- **Suction**: Hospital grade suction with 40% more flows
- **Nebulizer**: High performance nebulizer

Invasive, non-invasive, and mouthpiece ventilation | Comprehensive set of modes and settings

Integration may provide better care for more patients and reduces the drain on critical space, staff, and supply resources
VOCSN Multi-Function Ventilator Key Features
One device across multiple environments and patient needs

- FDA Cleared 2017
- 9 Hours of Battery Life
- 6 L/min Oxygen Concentrator
- ISO Critical Care Ventilator
- Touch Button Therapy
- Delivery in Seconds, Not Minutes
- Hospital to Home
- Reduced Footprint
- Record, Trend & Monitor
- Easily Transportable
- Pediatric to Adult
- Fully Customizable

*See technical specification for additional detail
VOCSN CAN RAPIDLY EXPAND PATIENT OVERFLOW CAPACITY ANYWHERE. ALL THERAPIES AT THE TOUCH OF A BUTTON.

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Complex and time consuming to administer care

Administering patient care using five devices takes time, creates undo stress for caregivers, and increases the risk for mistakes and cross contamination. Consequently, caregivers waste valuable time managing equipment and less time interacting with patients and resting. Managing five therapies for COVID-19 patients overwhelms medical teams treating pandemic events.

Difficult to switch between therapies

Switching between five devices to provide therapies is time consuming and uncomfortable. For example, a patient with respiratory failure needing cough therapy must complete three steps. First, caregivers disconnect the patient from the life support ventilator. Second, the patient is connected to the cough assist device using a separate patient circuit. Third, once the therapy is complete, the patient must reconnect to the ventilator. Switching between devices may take up to 15 minutes, require as many as two caregivers to complete, and exposes the patient’s airway to the risk of infection. Additionally, this process exposes the medical staff to the risk of COVID-19 infection.
Critical Care Ventilator designed for an ICU
Invasive, Non-Invasive, Mouthpiece, and High Flow Capability

• CRITICAL CARE
VOCSN meets the rigorous ISO international standard for safety and accuracy for ICU-level ventilation

• COMPREHENSIVE
Combines best in class technology for invasive, non-invasive, and mouthpiece ventilation across a comprehensive set of modes and settings. High-flow therapy delivery up to 60 L/min.

• COMPENSATION
Powerful integrated leak compensation up to 175 L/min
6 L/min Internal Oxygen Concentrator
Up to 3x More Efficient High Pressure Oxygen Delivery +
Internal Oxygen Concentrator capable of up to 6 L/min

- **INTERNAL CONCENTRATOR**
  Internal oxygen concentrator capable of delivering the equivalent of 6 L/min of oxygen or up to 40% FiO2

- **OXYGEN SOURCES**
  3 sources of oxygen including: internal oxygen concentrator, external high-pressure, and low-pressure

- **OXYGEN DIRECT**
  The Oxygen Direct™ system is three times more energy efficient than existing concentrators. This technology can be used to extend battery life with the internal concentrator and to improve high pressure oxygen capacity by as much as 3x by more efficiently delivering high pressure oxygen to maximize oxygen capacity.

- **ONBOARD FIO2 MONITOR**
  The VOCSN onboard FiO2 monitor verifies accurate oxygen delivery
Touch Button Cough
Best in class secretion management with Cough + Suction

- **TOUCH BUTTON**
  Cough therapy at the touch of a button delivered in seconds rather than minutes

- **VENTEC ONE-CIRCUIT™**
  No more switching between devices using multiple circuits

- **BREATH SYNC**
  VOCSN monitors patient breathing and triggers a cough at a natural point in the breathing cycle
Hospital Grade Suction
Suction designed to mirror in-wall hospital suction capability

- **HIGH FLOWS**
  Hospital grade suction system that provides consistent high flows that are 40% higher than traditional portable suction equipment

- **QUIET**
  More than three times quieter than traditional suction machines.

- **VENTEC TRAVEL CANISTER**
  300mL detachable travel canister allows suction on the go. VOCSN can also connect to traditional 2000 mL suction canisters.
High Performance Nebulizer

- **FLOW COMPENSATION**
  VOCSN automatically compensates for the airflow from the nebulizer drive to ensure accurate ventilation and comfortable breathing

- **PROGRAMMABLE AUTO-OFF**
  Nebulizer automatically turns off when the therapy duration is complete

- **NOISE MUFFLER**
  Sound muffler technology makes the nebulizer drive two times quieter than traditional nebulizer systems
Therapy Tracking
Validating Use and Benefit

First comprehensive reporting solution for ventilator-dependent patients

- Therapy Compliance Reporting
- Therapy Use Trending
- Monitored Trends
- Alarm Summary
- Setting Summary
- Searchable Data for Customizable Reports
- Cloud Based Reports
- GPS Tracking
Benefits of Integrated Care

VOCSN is Simple, Mobile, and Care Changing

**SIMPLE**
- Ventec One-Circuit™
- Intuitive Touch Screen Operation
- Quick and easy setup

**MOBILE**
- Five therapies in one device
- 70% lighter and smaller than five devices
- Up to 9 hours of on-board battery

**CARE CHANGING**
- Touch Button Cough™
- Uninterrupted ventilation between therapies
- Designed to reduce the risk of infection

1 device to learn
1 device to transport
1 circuit for all therapies

device to clean
device to charge
touch to operate
alarm to silence
power supply to carry
device to monitor
Engineered Tough
All VOCSN components are engineered to provide reliability

- **Three-Piston Compressor:** 30K hour life for O2 concentrator, suction, and nebulizer
- **Handle:** Tested to 75 lbs.
- **Case:** Engineered thermoplastic with shock-absorbing shell
- **Solenoid Valves:** Tested to 130 million cycles
- **Lithium-ion Batteries:** 500 charge/discharge cycles
- **Electronics:** Designed for maximum reliability
- **Centerband:** Reinforced thermoplastic for structural rigidity and internal airflow pathways that reduce tube connections and internal leaks
- **Cough Valve:** 30K hour life
- **Pneumatic Connections:** Designed to withstand extreme conditions and eliminate leaks
- **Ceramic Oxygen Sensors:** 10K+ hour life
- **Gorilla® Glass Screen:** Maximum scratch and damage resistance
- **Blower:** 30K hour life
- **Metering Valve:** Precision oxygen delivery tested to 30K hours
- **Software:** Update easily to add new features and product enhancements

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Ventec Life Systems
22002 26th Ave SE
Bothell, Washington 98011

Chris Kiple, Chief Executive Officer
info@venteclife.com
VentecLife.com

Follow @myVOCSN