



# 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



Ventilator  
12.4 lb



Portable  
Oxygen  
Concentrator  
18.4 lb



Cough  
Assist  
9.4 lb



Nebulizer  
3.3 lb



Suction Unit  
11.4 lb

VS



55 lb

5 machines | Multiple circuits

18 lb

1 machine | 1 circuit

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



- Single Circuit for all Therapies
- Designed to Reduce Patient Disconnects
- Quick & Easy Training & Setup



device to learn  
device to clean  
alarm to silence  
device to transport  
device to charge  
power supply to carry  
circuit for all therapies  
touch to operate  
device to monitor

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



Hospital to Home



Pediatric to Adult



9 Hours of Battery Life



ISO Critical Care Ventilator



Reduced Footprint



6 L/min Oxygen Concentrator



Touch Button Therapy



Delivery in Seconds,  
Not Minutes



Record, Trend & Monitor



Easily Transportable



Fully Customizable

\*See technical specification for additional detail









AFTER VOCSN

**VOC SN CAN RAPIDLY EXPAND PATIENT OVERFLOW CAPACITY ANYWHERE.  
ALL THERAPIES AT THE TOUCH OF A BUTTON.**



# Challenges of Traditional Devices in a Pandemic

VOCSN addresses challenges of rapidly responding to a pandemic

1

## Difficult to expand capacity and limited portability

Rapidly establishing overflow rooms for COVID-19 patients is burdensome, including locating and moving the 55 pounds of equipment and numerous accessories, training all staff to use each therapy, and having enough power outlets and space in each room to support each medical device.

2

## Complex and time consuming to administer care

Administering patient care using five devices takes time, creates undue 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.

3

## 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% FiO<sub>2</sub>

- **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 FiO<sub>2</sub> monitor verifies accurate oxygen delivery





# Touch Button Cough

Best in class secretion management with Cough + Suction

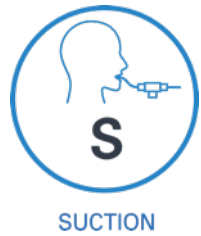


- **TOUCH BUTTON**  
Cough therapy at the touch of a button delivered in seconds rather than minutes
- **VENTEC ONE-CIRCUIT™**  
No more switching between devices using multiple circuits
- **BREATH SYNC**  
VOC SN monitors patient breathing and triggers a cough at a natural point in the breathing cycle



# 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**  
VOCESN 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

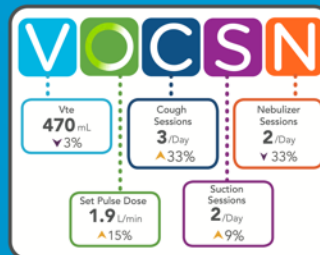
First comprehensive reporting solution for ventilator-dependent patients

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

# VOCESN

## Multi-View

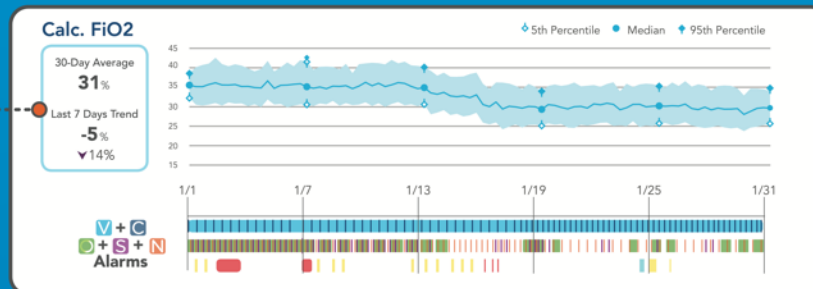
### 5-Therapy Actionable Reporting



### Compliance Calendar

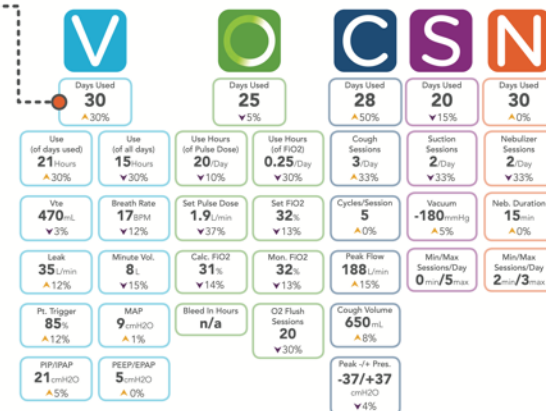


### Trending Insights



### Trending Summary

Values are a 30-day average with ▲ or ▼ trended based on the last 7 days.



### Compliance Calendar



View Monitoring Details



# Benefits of Integrated Care

VOCSN is Simple, Mobile, and Care Changing



## SIMPLE

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

**1** device to learn  
device to clean  
alarm to silence



## MOBILE

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

**1** device to transport  
device to charge  
power supply to carry



## CARE CHANGING

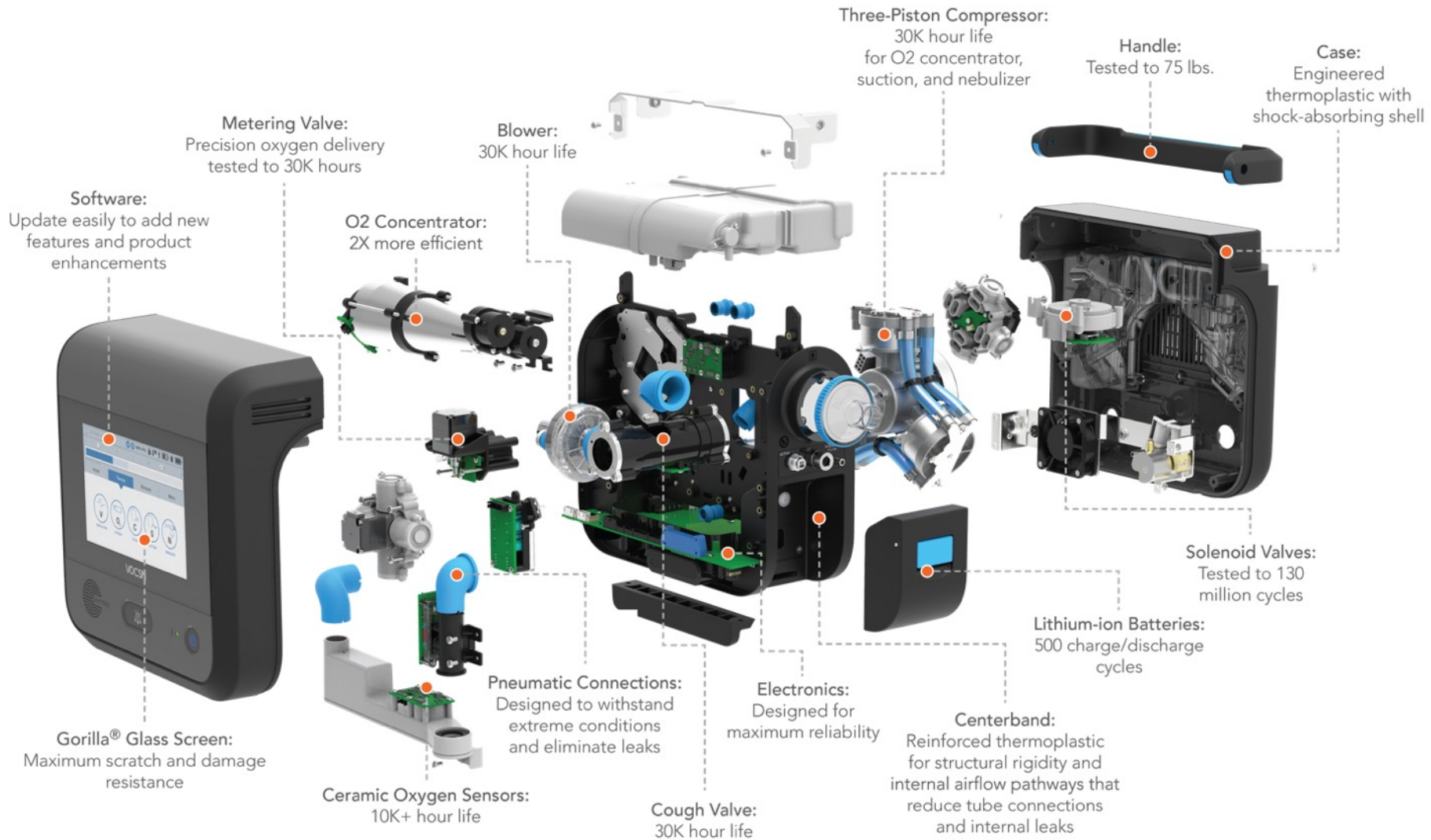
- Touch Button Cough™
- Uninterrupted ventilation between therapies
- Designed to reduce the risk of infection

**1** circuit for all therapies  
touch to operate  
device to monitor



# Engineered Tough

All VOCSN components are engineered to provide reliability





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