

ACADEMICS

FIGHTING PANDEMICS

#NUSTontheFrontlines



Breathe Easy

As the pandemic outbreak of COVID-19 is wreaking havoc globally, there is a mounting concern vis-à-vis availability of ventilators to cater for critical patients battling with the disease. In Pakistan, the estimated figure for active ventilation devices falls around 2900 units, which is potentially low amidst soaring number of people contracting the virus. With a view to coping with this imminent threat, and to help our country to become self-sufficient in the development and manufacturing of ventilators, our team at NUST Medical Devices Development Centre (MDDC) is developing **N-Saviour** – a low cost ventilator that is in accordance with Acceptance Testing Procedure (ATP) issued by Pakistan Engineering Council (PEC), also followed by Drug Regulatory Authority of Pakistan (DRAP). **N-Saviour** provides the ultimate care for critical patients to breathe easy.

TECHNICAL & PERFORMANCE SPECIFICATIONS

- Volume Control Ventilation (VCV)
- Assist Control Ventilation- Volume Control (AC-VC)
- Pressure Support Ventilation (PSV)
- Synchronised Intermittent Mandatory Ventilation (SIMV)

Adjustable Parameters:

- Tidal Volume (TV)
- Breaths Per Minute (BPM)
- Inspiratory to Expiratory Ratio (I:E)
- Positive End Expiratory Control (PEEP)

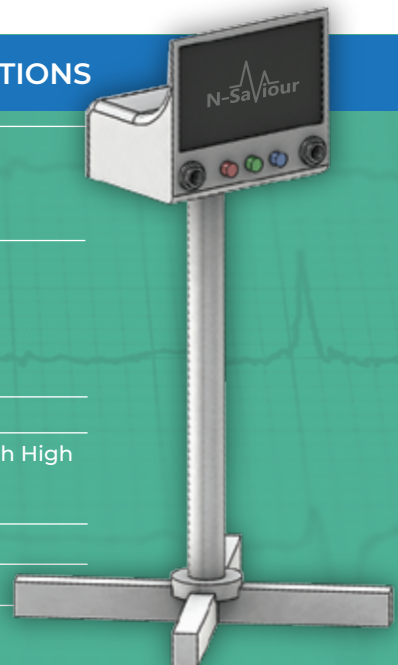
Microcontroller-based Ventilation Control System

Inspiration / Expiration Pressure & Air Flow Regulation with High Accuracy Sensors and High Speed Real-Time Feedback to Microcontroller

Display: Touch LCD Panel

Alarms regarding Electrical & Gas Supply Interruptions

Integrated Air & Oxygen Mixing System



KEY FEATURES

- User Interface: Real-time parameter feedback with touch-based parameter input
- Alarm System for indication of sensor errors, system failures and parameter fluctuation
- Bacterial / Viral Air Filter to prevent cross-contamination

A blue medical device with a large touchscreen display showing various vital signs and waveforms. The device is connected to several blue tubes. A white ECG line graphic is overlaid on the screen. The background is a light blue wall with a clock visible on the right.

N-Saviour

Contact

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