UNIVERSITY OF MINNESOTA
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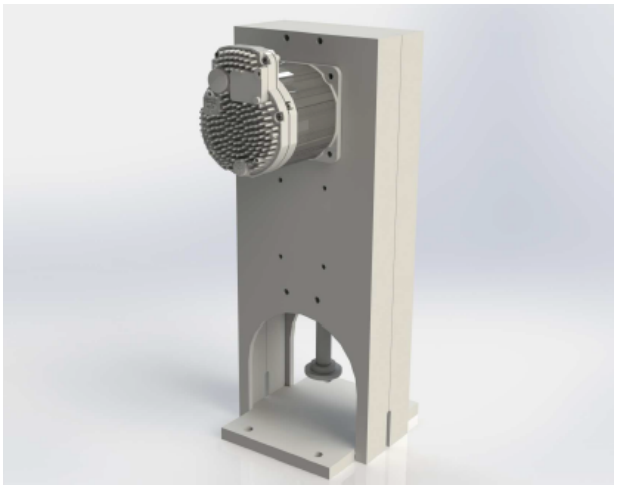
Coventor Emergency Ventilator - Adult Manual Resuscitator Compressor

A design package for an emergency, rapid-deployment ventilator system.



Applications

- Mechanical ventilation or assisted ventilation

Overview

Researchers at the University of Minnesota have designed Coventor - a simple, low-cost mechanical ventilator system that can potentially be used to solve ventilator shortages in hospitals and make-shift clinics. Coventor is a device that repurposes the Bag Valve Mask manual resuscitator ("Ambu bags"), which are commonly used by paramedics and emergency medicine specialists in ICUs and ambulances. This mechanical ventilator consists of a mechanism that can continuously compress and release a reservoir bag, and a control system to adjust the respiratory rate and limit the pressure of air pushed into patients.

Designed by an anesthesiologist and engineers, this design represents a realistic approach to rapidly build life-sustaining mechanical ventilation to patients in need. The design specifications package of this is now available for download at no cost.

Key Benefits & Differentiators

- Simple parts and manufacturing process; the frame can be metal-stamped or injection molded
- Although most patients will require oxygen, the device itself does not require pressurized oxygen or air supply to function; uses available manual resuscitator bags
- Compact tabletop (or desktop) size; ideal for make-shift clinics
- Easy to use for ICU-trained medical professionals
- Low cost and scalable design

Technology ID

2020-295

Category

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COVID-19

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Phase of Development

- **FDA Emergency Use Authorization received April 14, 2020**.
- Design files ready for distribution.

Please visit Coventor website for more information.

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