

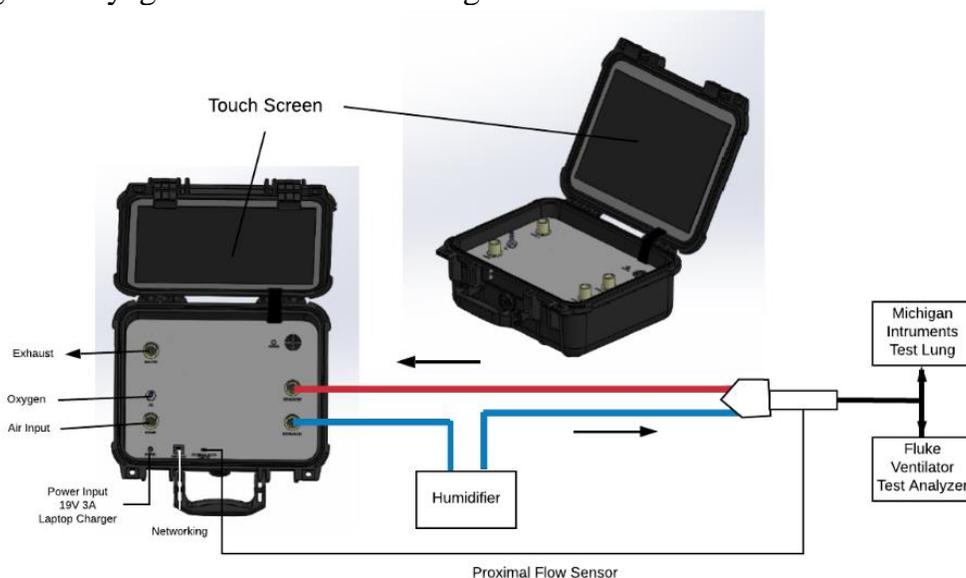
# The Voyager SDV™ Software Defined Ventilator

*The Voyager SDV is the world's first Software Defined Ventilator (SDV).  
The patent- pending, groundbreaking fully featured C19 ARDS protocol  
ventilator design is inexpensive and immediately scalable.*

In response to the Covid-19 crisis, we assembled a team of engineers, physicists and scientists who transitioned from developing high-end laser systems and other pursuits to design affordable, highly scalable, fully functioning ventilators. Medical professionals and technology entrepreneurs joined the team to form the Re-Inventorator Group.

In a few short weeks we created the patent-pending Voyager SDV, the world's first Software Defined Ventilator (SDV). This was achieved by repurposing components from the millions of available CPAP and BiPAP machines into fully functioning ventilators with the necessary features to successfully treat ARDS-compromised Covid-19 patients. CPAP (Continuous Positive Airway Pressure) and BiPAP (BiLevel Positive Airway Pressure) are means of providing pressurized air to a patient's lungs like a ventilator. Today's ventilators not only provide controlled air, but they are also sophisticated diagnostic systems. Through their measurements of a patient's lung function, they guide the physician to plan the best treatment for the patient.

**“Reinventing the Ventilator.”** Instead of duplicating the existing complex purpose-built ventilators, we started with the patients' breath profile needs and reversed engineered the technology to create a direct digital control system for a ventilator's components and inputs. The Voyager SDV will be the most compact, lowest cost and simplest to manufacture full feature ventilator with a large stock of available component parts, the ability to deploy in large numbers, with a minimal amount of training. Deploying the Voyager SDV will make a significant difference to this crisis.



# The Voyager SDV<sup>™</sup>

## Software Defined Ventilator

### The RE-Inventilator SDV Advantages

#### Fully Featured

- Performs ARDS ventilator protocol - pressure, volume, breath rate, PEEP, I/E etc. control
- Includes inspirational hold; a best-in-class diagnostic tool necessary for effective treatment
- Industry standard user interface; little training required.

#### Invasive (Trachea Tube)

- Trachea tube protects the lung from contamination from gastric contents and nasopharyngeal matter such as blood and mucus. Face masks can't do this.
- Face masks produce atomized virus-laden moisture posing a health hazard to health care workers.

#### Short Term Rapid Scalability Utilizing (3) Sources

- Upgrade existing CPAP/BiPAP/older ventilator machines to full featured state-of-the-art ventilators.
- Repurpose motors and blowers from used CPAP, BiPAP, older ventilators.
- Utilize the large stock of off-the-shelf standard component parts such as 3-phase motors.
- Thousands of units can be quickly and easily assembled using ordinary hand tools.

#### Long Term Stockability

- Post COVID-19 units' software can be upgraded at future time of use, no obsolescence.
- Anticipated kit version will allow economically constrained communities to utilize local salvage components and local assembly labor with ordinary hand tools.

**Inexpensive. The Voyager SDV can be manufactured for less than \$1000 per unit.**