

## Media release

### Clinical trials commence today on an Australian designed and manufactured ventilator system that meets the needs of ICU clinicians

Wednesday APRIL 8

#### Summary:

- A team of specialist ICU doctors and engineers have designed and prototyped a mechanical ventilator as a life-saving response to global ventilator shortage caused by the COVID-19 pandemic.
- OzVader commences formal clinical trials today at the Brisbane Prince Charles Hospital medical engineering research facility (MERF).
- Being locally designed and manufactured, the OzVader has real potential to help deal with the COVID-19 pandemic in Australia and countries in our region such as Indonesia, PNG etc.
- Five pilot-production ventilators have been produced and in various stages of clinical validation and testing
- The OzVader team is working with State and Federal teams to secure priority approvals and to commence full scale manufacture.
- This is a true collaboration of Australian medical, engineering and specialty manufacturers

#### Details:

The OzVader is a high featured *air actuated* mechanical ventilator as opposed to the *mechanical actuated* open source ventilator designs commonly seen in the media/press. This is an important distinction, as air actuation gives OzVader precise control over patient side variables such as pressure, breath rate, air flow rate and tidal volume delivery.

**OzVader Founder, Tony Sprague** said it literally began with a text message to a mate out of frustration at the climbing COVID-19 statistics: “*What if we could do something here?*”

*“We want to provide a functional & safe mechanical ventilator to anyone who needs it, wherever they are on the globe. So, our design philosophy was to keep it simple, functional, manufacturable and above all – safe for the patient”* said Tony.

In order to build a mechanical ventilator that delivers specific functionality required by ICU clinicians treating critical COVID-19 patients, expert medical advice was needed.

A medical panel was established early in the project which includes some of Australia’s leading intensive care specialists, anesthetic, respiratory and medical researchers. These doctors represent leading Australian hospitals including The Prince Charles Hospital in Brisbane; and Austin Hospital and Epworth hospitals in Melbourne.

Armed with this specialist on-call medical advisory team, the OzVader engineers have worked around the clock rapidly prototyping, testing, revising and prototyping again.

The team behind OzVader is a group of Brisbane companies that have come together over the last ten days to deliver this life saving solution. Headed by Olitek, other specialty partners have come on-board:

- QUT ARM Hub
- MERF – the Prince Charles Hospital & QUT Medical Engineering Research Facility
- Elexon Electronics
- Narm Rubber.

**James Oliver, Managing Director of Olitek**, said the impetus for the round-the-clock effort was a desire to solve the ventilator crisis.

*“Even though we have moved fast, we have listened to every input from the ICU clinicians and pushed ourselves to get it into our system. For me, I need to know we are delivering a ventilator that I would be comfortable putting my own child on” said James.*

The suite of pressure sensors incorporated into OzVader’s onboard micro-processor constantly monitor and respond to patient side feedback. The computer-controlled electronic air valves can instantly respond to patient triggered alarms if required to ensure patient safety.

While OzVader is a sophisticated rapidly manufactured ventilating system, it is also built tough. Using robust and proven technology and minimal moving parts, the OzVader is designed to work anywhere its needed from Tier 1 ICU wards to remote field hospitals with flexible power & air input options.

*“Pandemic doesn’t give license to build suboptimal things, and rapid doesn’t mean it can’t be elegant and clever” said Tony.*

#### Notes:

- The OzVader ventilator couples with the ubiquitous hospital Bag-Valve-Mask (BVM) respirator bag that exists in every hospital around the world. The unique design means it is BVM supplier agnostic and will work with all BVM bag manufacturers globally.
- Production of the ventilator is scalable and a secure supply chain in place of raw materials. Fall back options are provisioned in the design.
- Priority Fast tracked medical testing is currently in progress.
- Initial discussions with the Federal Health Ministry have commenced.
- A Go-Fund-Me campaign is in place seeking to raise AUD\$500,000 for the manufacture of the first 100 ventilators while TGA approval and government funding support is secured.

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OzVader Mechanical Ventilator



