

"We are focusing on providing usage training to ease deployment of AQovent™"

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BioSpectrum reached out to Aravind Melligeri, Chairman & CEO, Aequs Inc. to find out more about this innovative product AQovent™.



Aequs, a global precision manufacturing company headquartered in Aequs Special Economic Zone in Belagavi, Karnataka, has recently launched a medical-grade, low-cost, and mass-produced mechanical resuscitator that can provide constant-flow, pressure-cycled ventilation automatically to patients in respiratory distress.

Today, as the country battles the COVID-19 pandemic, this collaboration with the University of Illinois, US was initiated to contest one of the main challenges in the current medical system. The challenge is the extensive reliance on a small segment of suppliers for specialized, proprietary, mass-produced resuscitators. This dependence has created a wide gap in the supply-demand model of these specialty products.

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Edited Excerpts-

What was the reason behind developing this product?

The COVID-19 pandemic outbreak has forced economies across the world to reassess their preparedness, capabilities, and infrastructure for a health crisis of this magnitude. With the number of Covid-19 cases increasing exponentially in India, the pressure on the healthcare infrastructure is snowballing. In the absence of a vaccine, severe shortage of beds, and the sheer population of the country, the need for affordable and easy-to-use resuscitators has become ever so important. While the government encourages indigenous manufacturers to come forward, there is still a disproportionate dependence on specialized, proprietary, and mass-manufactured resuscitators from a small section of suppliers creating a wide gap in the supply-demand model of these specialty products.

Fulfilling our responsibility towards the community, we at Aequs have stepped up to leverage our Aerospace and Consumer Divisions' capabilities in our vertically integrated ecosystem at the Special Economic Zone in Belagavi, Karnataka, to manufacture AQovent™: a medical-grade, low-cost, and oxygen-driven emergency resuscitator that can provide constant-flow, pressure-cycled ventilation automatically to patients in respiratory distress.

How much time was spent on developing it?

The development of AQovent™ took us about 3-4 months. The journey began with an invitation from the University of Illinois, U.S.A., to adopt their concept design for the resuscitator. Aequs' consumer division decided to pursue this invitation, initiated the licensing process, and completed the agreement with the University within 72 hours (3 days) to spur this innovation.

A dedicated team of cross-functional engineers at Aequs pooled in their collective expertise to manufacture AQovent™. This mechanical resuscitator is engineered to suit Indian conditions without compromising its functional integrity, enable the ease of manufacturing and reduce the lead time, thereby making it conducive for mass production.

What is the cost?

AQovent™ is a not for profit undertaking, and we have committed to distribute 2,000 resuscitators to hospitals per month across the state and scale it to 10,000 a month, based on demand. Our initial focus is to make it available at government hospitals, health care centers, and NGOs in Tier II & Tier III markets across Karnataka.

How do you plan to ensure its availability across India?

The design of AQovent™ lends itself to a level of scalability, enabling us to ramp up production to meet the surge in demand, and we can deliver the product across the country. Aequs can manufacture about 10,000 resuscitators a month, but our focus is not restricted to manufacturing but also conducting training workshops in hospitals to ensure appropriate usage.

This is a not-for-profit initiative from Aequs, and we intend to sell these resuscitators through an exclusive distributor directly to medical care centers. We are working with a like-minded distributor in Bangalore who is committed to ensure its availability in remote locations and support the communities with no profit motive.

Have you started receiving orders?

As mentioned, AQovent™ is not intended to be sold for commercial use as it is a non-profit initiative of Aequs. However, the distribution process for these resuscitators is getting initiated across Government Hospitals, Health Authorities, Government e-Sourcing platforms, Ambulance Services, and NGO's in Tier II & Tier III markets across Karnataka.

Do you foresee any challenges in the acceptance of this new product?

Aequs is one of the leading manufacturing partners of global OEMs such as Airbus, Boeing, Collins Aerospace, SAFRAN, among others, specializing in high-level precision engineering and ensures 'zero-defect' product quality. We have leveraged this in-built potential ably in the manufacturing of AQovent™, making it superior quality and safe to use. To ensure readiness

for the market, AQovent™ has undergone multiple rounds of pre-clinical and clinical trials, including endurance, performance, and product calibration testing.

Resultant of cutting-edge technology, the resuscitators are compact and easily deployable for treating patients who are affected by the virus and other respiratory conditions. To further aid the medical community, we are also focusing on providing product functioning and usage training to ease its deployment.

What are the major plans for 2021?

We have leveraged our manufacturing excellence and capabilities, to deliver AQovent™ - a need-based, timely innovation in the market within a short span of time. Given the pandemic background, we will continue to manufacture and distribute the product to address the country's demand for mechanical resuscitators. However, Aequus does not manoeuvre/ directly engage in the medical and healthcare infrastructure or related sectors.