

Press Release for immediate publication:

Ansys supports IIT Kanpur incubated Start-up to develop ventilators

CSR Agreement signed to help fight COVID-19 with Nocca V110

April 09, 2020, Kanpur: Ansys, a renowned global engineering simulation company, entered into a CSR agreement with an IIT Kanpur led consortium to assist in the development of Nocca V110 ventilators to fight the COVID-19 outbreak in India. Under the supervision of the IIT Kanpur consortium, NOCCA Robotics Pvt. Ltd, an IITK incubated startup, is developing indigenized rapidly scalable, low-cost invasive ventilators with the aim of promoting healthcare, including preventive health care. Ansys is the first company who has joined forces with the IITK consortium and FIRST, the section 8 company of the Institute that oversees incubation activities of IIT Kanpur, to speed up the development of these ventilators.

Engineers at NOCCA Robotics Pvt. Ltd, have prototypes of a portable machine ready. They are being tested on artificial lungs, a prosthetic device that provides oxygen and removes carbon dioxide from the blood. The machines that can be tested on patients will be out in a matter of days. Once the beta prototype is out, the team targets to produce 30,000 units by May 2020. As a part of their Corporate Social Responsibility initiative, Ansys has come forward by offering a dedicated grant to the project. The grant provided by Ansys will be utilized for procuring materials, testing, trials and other expenses.

Professor Abhay Karandikar, Director, IIT Kanpur, said, "We are very happy to have Ansys on board with us for the development of this indigenous, low-cost ventilator. With their significant funding and technical support to NOCCA Robotics, we are one step closer to bringing this critical device to our healthcare providers. Our gratitude to Ansys for their generous gesture."

Speaking about the CSR agreement, *Mr Rafiq Somani, Area Vice President - India and South Asia Pacific, Ansys, said, "Amidst COVID-19, the global pandemic that we are all facing today, one thing that is constantly worrying the government and the hospitals is ventilator shortage. Our relationship with IITs go a long way and when we were approached to support IIT-Kanpur's start-up in developing an extremely affordable, reliable and completely indigenous invasive ventilator, we were more than happy to help with it. Ansys has always been committed towards Industry-Academia collaborations and we are in this fight together. We hope that our support by being the first company to back the start-up will help in quickly bringing out the Nocca V110 ventilators to serve humanity."*

Nocca Robotics and IIT Kanpur have created a consortium of biomedical engineers, doctors, R&D leaders, supply chain and MedTech businesses to harness their expertise and take the design from the idea to the actual product. The entire project is being coordinated by Prof. Amitabha Bandyopadhyay, Professor-in-Charge, Start-up Innovation & Incubation Center (SIIC), IIT Kanpur.

Nocca V110 is a modular, power efficient invasive ventilator that operates in a pressure-controlled mode and the IOT enabled design allows multiple ventilators to be controlled remotely. Unlike many other research groups and start-ups who are working on developing a non-invasive ventilator, the Nocca team is developing an invasive ventilator at a fraction of the cost proposed by competitors across the world developing similar devices. An invasive ventilator is the most recommended type of ventilator for patients with Acute Respiratory Distress Syndrome (ARDS) thus making it more suitable for the COVID-19 patients for respiratory support. It is perfect for India as it ensures a much safer and easy to manage option for the doctors in the current case of COVID-19 pandemic. Nocca V110 incorporates the expiratory flow filter to prevent the hospital staff and environment from the viral and bacterial load released by the patient. The ventilator can be controlled through a mobile application based on the Android operating system. Through this application, the users, doctors and healthcare professionals, will be able to set and monitor all the information of the ventilator machine. The easy-to-use User Interface ensures that it can be operated by anyone familiar with medical systems.

Thanks to Ansys' quick support, NOCCA Robotics Pvt. Ltd is making prototypes to get this kick-started immediately. It has been strategically designed in a way that it can be manufactured on a large scale at multiple sites using materials easily available with Indian suppliers and manufacturers. It is a modular design that works with both medical airline and oxygen as well as ambient air and oxygen.

About IIT Kanpur

IIT Kanpur, an institute of national importance, was set up in 1959 and is currently celebrating its Diamond Jubilee. The Institute's 40,000+ alumni are experts and visionaries in various fields and many of them occupy leading positions all over the globe. The Institute has a strong focus on research and innovation as is set out in its vision statement "To create, disseminate and translate knowledge in science, engineering and allied disciplines that will best serve the society". The Institute's Startup Innovation & Incubation Center supports startups and encourages the spirit of innovation amongst the students of IIT Kanpur by providing guidance, access to infrastructure facilities and funding.

With over 20 departments and inter-disciplinary programs, IIT Kanpur has a long history of supporting promising research and encourages its faculty and students, to undertake meaningful research and contribute to society.

The faculty members at IIT Kanpur have been recipients of several national and international awards including Padma Shri, Fulkerson Prize, Goedel Prize, Member of US National Academy, Infosys Prize, Humboldt Research Award, Shanti Swarup Bhatnagar Award, TWAS Prize, National J.C. Bose Fellowship, Fellowships of National Academy of Sciences India (NASI), Indian National Science Academy (INSA), Indian Academy of Science (IASc), Indian National Academy of Engineering (INAE),. For more information, visit <https://www.iitk.ac.in>