

CSIR-CMERI develops new indigenous ventilator

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Researchers at Durgapur-based Central Mechanical Engineering Research Institute (CMERI) have indigenously developed a ventilator amid rising cases of COVID-19.

The new ventilator was unveiled in the presence of Prof. (Dr) Harish Hirani, Director, CSIR-CMERI, and Dr Arunangshu Ganguly, Chairman and Managing Director, Health World Hospitals Pvt Ltd, Durgapur.

“The bellow design, controllers and embedded electronics of this ventilator have all been customised to ensure price efficacy as well as meeting the requirements of the relevant industries. The ventilator has undergone multiple technical and design changes after adopting critical feedbacks from healthcare professionals of the Health World Hospital and Vivekananda Hospital, Durgapur. This ventilator costs around Rs. 80,000-90,000. The ventilator will be further upgraded to meet the requirements of various other patient’s parameters”, said Prof. Hirani.

“The efficacy of a ventilator for a patient is also correlated to the effective response of the attending healthcare personnel. Steadily, the approach of this Institute will be to harness artificial intelligence capabilities to automate the functioning of mechanical ventilators, so that the ventilators automatically respond to the fluctuating variables of a patient”, added Prof. Hirani.

“CSIR-CMERI, in coordination with critical care experts of the Health World Hospitals, have studied and incrementally developed this ventilator”, explained Dr Arunangshu Ganguly. CSIR-CMERI, along with healthcare professionals, can revolutionize the ventilator development capability of the country. This will help in massive substitution of import dollars by strengthening the medical care manufacturing landscape of the country, believe scientists at the institution.

“Since the individual parts of the ventilator can be independently developed by different industries, mass-development of this ventilator will help a broad spectrum of industries. The significantly reduced cost of the ventilators will help the economically marginalised sections of the society the most as well as help further fortify the Government-aided healthcare schemes. This will also help in upgrading the tertiary healthcare infrastructure. We are in conversation with several industries for quick commercialisation of this newly developed ventilator to ensure availability of these ventilators in makeshift hospitals, basic

hospitals, and other healthcare facilities”, said Prof. Hirani.