



Advisory by ISA to global manufacturers of Ventilators during COVID-19 pandemics

The World Health Organization (WHO) declared the global outbreak of COVID 19 as pandemic on March 11, 2020, and since the discovery of the first case, there are over 2 million confirmed cases globally with over 130,000 deaths. Given the severity and contagiousness of the disease, healthcare workers across the world today are catering to patients that have tested positive for the virus, overstressing medical infrastructure and equipment, alike. According to WHO, 20% of all Covid-19 patients with pre-existing medical conditions have severe reaction to the virus which require to be treated with oxygen therapy or other inpatient interventions such as with ventilators. In many other countries, the outbreak has shown a higher proportion of severe and critical cases, needing more medical equipment like the ventilators. The number of ventilators currently is insufficient. Globally, there has been an upsurge in the demand for ventilator equipment and as a result, ventilator manufacturers have upped their production capacity exponentially to meet the growing demands. Ventilators are thus, a lifesaving equipment for COVID 19 patients. For the ventilators to run smoothly, an uninterrupted and reliable power supply is essential. Barring a few, most countries grapple with an unreliable electric network making their medical infrastructure vulnerable. ISA joins in on the on-going efforts to combat the pandemic and proposes a two-pronged solution to problem of unreliable electric supply for ventilators – a) adoption of a solar kit to power ventilators, and b) retrofit Solar Kits with the already operational ventilators. Ventilators operate on AC and DC power mode consuming roughly 125 watt to 288 watt and 12V to 30V, respectively. The addition of a solar kit, comprising a 2-3 KWp PV array, its own battery storage and an inverter, can provide uninterrupted supply of power to run ventilators. This initiative has the potential to reduce dependence on conventional power for operation of the ventilator. If incorporated during the manufacturing process, the cost of solar kit will not be an additional investment to the consumer. According to the Economic Times, the average cost of a ventilator is about USD 30,000 and the addition of a solar kit would not be more than 7-8 % of the cost of the ventilator. On large scale production the incremental cost can come down to less than 5 %. These minor increases in the cost of a ventilator system is worth the lives saved and in the long run, it will turn out to be cheaper than diesel to run electric generators, and save costs in terms of environmental externalities.

ISA hereby by advice all the global manufacturers of Ventilators to join this noble cause initiated by ISA through usage of Solar Kits for operation of life saving equipment – ventilators.