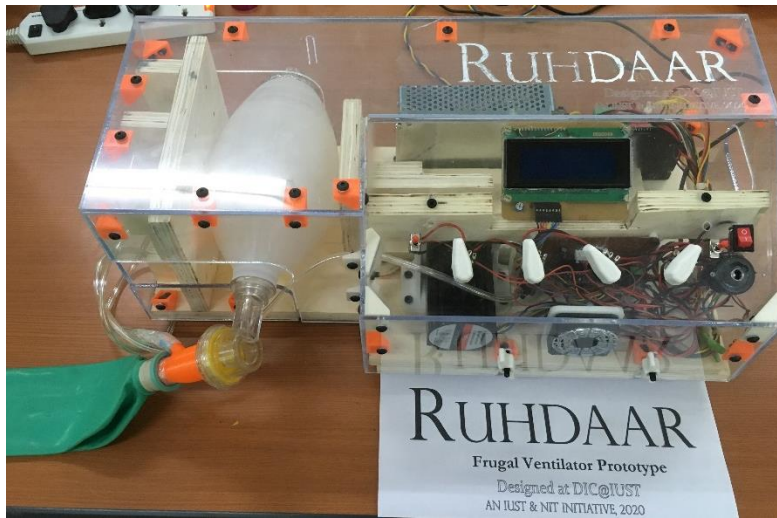


A COLLABORATION PROVEN EFFECTIVE

RUHDAAR: A FRUGAL VENTILATOR FOR PANDEMICS



Amid COVID-19 outbreak and presuming the shortage of ventilators, faculty members at the National Institute of Technology Srinagar in collaboration with the faculty members, innovators and alumni at Design Innovation Centre, IUST developed a frugal ventilator prototype. The prototype named 'RUHDAAR' is essentially a low-cost mechanical ventilator which is targeted for emergency situations or pandemics like COVID-19 only. The prototype was designed and fabricated at Design Innovation Centre, IUST.

The team, duly approved by the heads of the two institutions included Dr. Shahkar Nahvi (Coordinator DIC@IUST), Dr. Saad Parvez (Head IIED Centre at NIT Srinagar), Dr. Majid Hameed Koul (Assistant Professor at Mechanical Engineering, NIT Srinagar), Mr. Peerzada Shoaib (Assistant Professor at IUST), Two IUST alumni namely Mr. Asif Shah (Presently at Symcore Technologies, Bangalore) and Mr. Zulqarnain (Presently pursuing M.Tech at IIT Bombay), Mr. Jawad (Design Fellow, DIC@IUST). In addition to above, Dr. Shabir Hassan from Harvard Medical College, USA was the overseas mentor, while Mr. Abdul Hamid (CEO Rahim Greens) was the industry partner.

At present, the developed prototype ventilator is successfully achieving the desired functionality in the laboratory, however, the same needs rigorous testing and evaluation. Once the same is done and the team is satisfied with the performance from the engineering perspective, the ventilator will require assessment from the medical fraternity.

RUHDAAR is in no way developed to replace the commercial and medical grade ventilators presently used in the hospitals. However, the same has potential for usage in emergency situations and pandemics like COVID-19.

The team is thankful to the authorities at NIT and IUST for lending the support for carrying out this collaborative work in the current pandemic. The collaboration has proven to be successful in achieving this multidisciplinary objective.