

PROJECT REPORT ON
DESIGN & FABRICATION OF MECHANICAL VENTILATOR

A project report submitted in partial fulfillment of the requirements for the award of the

Degree of

BACHELOR OF TECHNOLOGY

IN

MECHANICAL ENGINEERING

SUBMITTED BY

P.TALUPULA RAO	19815A0356
K.BHARATH VAMSI	19815A0339
CH.RAMESH	19815A03A0
B.SAI KUMAR	19815A0399

Under the esteemed guidance of

Mrs.P.SADHANA M.Tech

Assistant professor

DEPARTMENT OF MECHANICAL ENGINEERING



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

An NACC & N.B.A. Accredited institution, Approved by AICTE, Affiliated to

J.N.T.U Kakinada

2018-2022

AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(APPROVED BY A.I.C.I.T.E AFFILIATED TO JNTU-KAKINADA, A.P)
(ANNAAC&N.B.A ACCREDITED INSTITUTION)


TAMARAM, MAKAVARAPALLEM, VISAKHAPATNAM-531113



DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE

This is certify that the project work entitled “**DESIGN AND FABRICATION OF MECHANICAL VENTILATOR**” is a bonafied record of work done by **P.TALUPULA RAO (19815A0356)**, **K.BHARATH VAMSI (19815A0339)**, **CH RAMESH (19815A03A0)**, **B.SAI KUMAR (19815A0399)** in partial fulfilment of the requirement for the award of Bachelor of technology in **MECHANICAL ENGINEERING** by Jawaharlal Nehru Technological University, Kakinada During the year 2019-2022.


PROJECT GUIDE
P.SADHANA M.Tech


HEAD OF DEPARTMENT
V.HARIKIRAN M.Tech,(Ph.D)

EXTERNALEXAMINER

ABSTRACT

DESIGN AND FABRICATION OF MECHANICAL VENTILATOR

The COVID-19 pandemic disrupted the world in 2020 by spreading at unprecedented rates and causing tens of thousands of fatalities within a few months. The number of deaths dramatically increased in regions where the number of patients in need of hospital care exceeded the availability of care. Many COVID-19 patients experience Acute Respiratory Distress Syndrome (ARDS), a condition that can be treated with mechanical ventilation. In response to the need for mechanical ventilators, designed and tested an emergency ventilator (EV) that can control a patient's peak inspiratory pressure (PIP) and breathing rate, while keeping a positive end expiratory pressure. This project describes the design and prototyping of a low-cost portable mechanical ventilator for use in mass casualty cases and resource-poor environments.



Figure 1: Portable mechanical ventilator