

**VISVESVARAYA TECHNOLOGICAL
UNIVERSITY,BELAGAVI- 590 018**



AMICRO PROJECTREPORTON

“Double Door Opener Mechanism ”

Submitted By,

SAMEER

SATWIK VIGNESHWAR GUNAGA

TEJASGOWDA M

4AL19ME025

4AL19ME026

4AL19ME029

UndertheGuidance of

Mr. K V Suresh

Associate Professor



**DEPARTMENT OF MECHANICAL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MOODBIDRI-574225, KARNATAKA**

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ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

MIJAR, MOODBIDRI D.K. -574225

KARNATAKA



DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE

This is to certify that the Micro-Project entitled "Double Door Opener Mechanism" has been Successfully Completed

By

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The bonafide students of Department Mechanical Engineering, Alva's Institute of Engineering and Technology, affiliated to VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, during the academic year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of Micro-Project work prescribed for Bachelor of Engineering.

Mr. K V Suresh
Project Guide

H.O.D.
Dept. Of Mechanical Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

ABSTRACT

Many large size entrances in halls, rooms, malls, corridors use double doors. Now like other doors double doors cannot be easily automated since both doors need to be opened at once. Use of 2 motors for each door has 2 problems:

1. Coordinated opening of booth doors
2. High cost of 2x motors

So here we design a solution to this problem using a single motor double door opener mechanism. This mechanism solves both problems as both doors open at the same time in coordination as well as the system is cheaper as only one motor is used.

The motor is integrated with a shaft design which has a linkage mechanism attached to it. The shaft rod of the motor is now connected to 2 different linkages at a perpendicular angle. These two linkage rods are now connected to the doors through a rotating L angle.

Thus then the geared motor shaft rotates the rod drives 2 other connected rods in linkage who in turn open both the doors at the same time and speed. Similarly when motor rotates in opposite direction, both doors close parallelly at same speed.

Thus we successfully design a low cost and well coordinated double door opening and closing mechanism.