

**UNIVERSITI TEKNOLOGI MARA  
CAWANGAN JOHOR**

**DESIGN AND FABRICATION OF  
TABLE TOP SANDING MACHINE**

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Dissertation submitted in partial fulfillment  
of the requirements for the degree of  
**Diploma**  
**(Mechanical Engineering)**

**College of Engineering**

**Feb 2023**

## **ABSTRACT**

In carpenting activities such as shaping and finishing wood and other materials , we need to use a machine to speed up the work. The name of the machine is belt sander machine. But to do shaping and finishing wood and other materials for tools that are not large we can use a smaller belt sander machine. This is because the price of a belt sander machine in the market is quite expensive and not affordable with small work to be done. So a smaller belt sander machine that is much cheaper than the market price are very relevan. A little addition by adding other disc sander machine by using the same motor with the belt sander machine and to turn two processes into one machine. The expectation is that the final product accomplishes the goal to be affordable and small with the reasonable speed rate to the requirements.

## **ACKNOWLEDGEMENT**

Firstly, I wish to thank God for giving me the opportunity to embark on my diploma and for completing this long and challenging journey successfully. My gratitude and thanks go to my supervisor, Mr. Aliff Farhan bin Mohd Yamin.

Finally, this dissertation is dedicated to my father and mother for the vision and determination to educate me. This piece of victory is dedicated to both of you. Alhamdulillah.

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# CHAPTER ONE INTRODUCTION

## 1.1 Background of Study

Belt sander is a sandpaper machine that consists of a pair of drums that rotate the tape sandpaper so that it's able to smooth the surface effectively. It is also a machine that has various functions where it facilitates the work of carpentry and is also one of the tools that every carpenter must have. This belt sander machine consists of several components, namely the first sanding belt, dc motor, conveyor roller, workbench, spring, base, speed controller.

Nowadays, more and more belt sander machines are made but not many improvements are made. So, the smaller machine that can reduce the cost is great to produce. By putting a disc sander machine that can be used to make a smooth finishing at the end of sanding process also a great idea to be use. Sander machines play a big role in the manufacture of wooden tools and also metal. So it will be very helpful to those who want to do have a perfect smooth sanding besides being able to save costs from buying a different machine.

## 1.2 Problem Statement

The problem statement for this project is that nowadays, current developments cause more facilities and products that use wood and iron need to use sanding processes, so the use of this machine will be even more widespread. The price for the machine is quiet expensive and it not worth it to buy two different machine to do sanding process despite not worth it to use for smaller product to be done. Other than that, machines that available in the market are heavy and bulky. By downsizing the machine and combining two processes in one machine it will save various costs such as materials used as well as save from buying separate machines.