

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF DESIGNING
AND FABRICATING A COMPACT
DRYING MACHINE**

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ABSTRACT

Since the clothes dryer machine enters the market in Malaysia, only a few people are convinced that it is important in our daily life. The disbelief comes from a few different factors. These factors include the high prices of the machine, the importability of the machine and the high energy consumption of the machine. Thus, this project is done with the objective of designing and fabricating a machine that is not also small, energy efficient, portable, and inexpensive. This machine is aimed towards student and unmarried people that cannot afford a real clothes dryer machine and only need a small amount of load. The machine is designed with the help of the software SOLIDWORKS 2021 and is fabricated with machining processes. The material used also needs to be cheap, light, and durable. The outcome that the machine is able to achieve the objectives stated being smaller than the market designs, portable and cheap to make. The machine is also able to remove moisture from clothing in a short time.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Automatic drying machines have been used in the western part of the world for more than a century now. [1] In this day and age, automatic drying machines have become one of the most important household appliances. The usage of dryer machines has helped people to dry their clothes on a rainy day, bad weather or even when sunny days. They find that drying with these machines is more convenient as you can just dry clothes with a single click of a button. These machines reduce the amount of work that needs to be done. In Malaysia, we are starting to see the amount of household that own a drying machine gradually increasing over the years. One of the main factors is because Malaysia has unpredictable weather conditions. Sometimes, it is raining and sometimes it is hot. [2]

Although, these drying machines aren't cheap, portable and they use a lot of electricity. This is why people are still considering buying a drying machine. The prices of these drying machines are around RM1500 to RM4000 in Malaysia. To some people, the amount of money to buy a drying machine is better invested into groceries, transportation and other more important things. The drying machine is also not portable. This affects the people that often travel. They don't feel the need to own a drying machine as they can just use the drying machines at a laundromat. Lastly, these laundry machines use a lot of electricity. The electricity in Malaysia is more expensive compared to other western countries. These laundry machines are not that energy efficient. Regardless, there are energy efficient models out there at a cost of more money. [3]

By avoiding buying a drying machine for themselves, people need to still do manual labor to dry their clothes. This involves hanging the clothes and collecting the clothes when they are dry. Not only is it more tiring because of the work intensity, but