

UNIVERSITI TEKNOLOGI MARA

**DESIGN, ANALYSIS AND
FABRICATION OF
CHAPATTI MINI MAKING
MACHINE**

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ABSTRACT

Roti making is frequently regarded as a time-consuming activity due to the level of precision needed to get the desired result. For the making of chapattis, a mini-sized, medium-weight, and portable chapatti mini-making machine was designed and fabricated. This machine has the benefits of functioning under low pressure and being simple to operate. Chapattis of constant thickness and shape can also be produced with this equipment. Although various automatic roti makers are available on the market, there is still a gap in terms of size, price, automation, and ergonomics. If a product can fill these gaps, it has a strong possibility of becoming the next popular household appliance and small business tool.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Roti, commonly known as chapatti, is a form of Indian flatbread. Rotis and chapatis are basic foods in India, and several types of this uncooked wheat flatbread are baked on a steel plate and puffed by briefly coming into contact with a burning flame. A chapati is a flatbread that is hand-rolled with a pin and baked in a pan with oil. Chapati is made by rolling out the dough to a thickness of 1.5 mm and cutting it into 150 mm circles [19]. Baking at a low temperature for a longer time led to a lower chapatti with unsightly grey patches and a tougher texture. [7]. There are several different types of chapatti manufacturing machines available, including completely automatic roti makers and manual hand press chapatti makers. However, household users and individuals who use the machine to start a small business still have some difficulties. The current chapatti-making machine is too large and weighty. Furthermore, due to the use of high-quality materials, a fully automatic roti maker is incredibly costly, and that this sort of roti maker will ensure that the chapatti cooks perfectly and tastes delicious. As a result, the prototype for this project will be compact and simple.

1.2 Problem Statement

The roti-making industry, like chapatti, is growing across the state and has good development. Currently, there are large machines in the industry that work on the making process, such as fully automatic making machines, manual hand press making machines, and more. The difficulties with the listed machines are that high requirements apply to the portability and storage of the machinery [18]. The users need a lot of energy to carry and move the machine, and it takes a very large amount of space to place it. In addition, users need to shape the dough manually by using their hands, which leads to inconsistency and an irregular shape of the dough [1]. These types of machines and manual processes are not suitable for house-kitchen uses and small food businesses.

1.3 Objectives

The main objectives of this project are: