

**UNIVERSITI TEKNOLOGI MARA**

**TEXTURE DOUGH MACHINE**

**MUHAMMAD AFIQ AMSYAR BIN  
MOHAMAD YUSRI**

**DIPLOMA**

**Feb 2023**

## **ABSTRACT**

A dough texture machine is a machine that kneading and spreading a dough mechanically. There are various variants related to this dough machine. However, the use and methods of using it are different in terms of savings and efficiency. The best impact at the end product will conclude the best aspect of item.

But some people need energy and skill to knead the dough traditionally. By using this machine, it can reduce time and even labor in making texture dough. They only need touse the machine in the right way and it will produce the final product as planned. In addition, some additional features are added to the machine for the convenience of the user so that it does not take a long time to spread the dough. My objective in doing this project is to analyze and modify this device and the existing one for daily use based onthe target type of people targeted. In conclusion, I hope my project can help people solve the problem.

## **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. Ahmad Najmie bin Rusli.

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.

# TABLE OF CONTENTS

	<b>Page</b>
<b>CONFIRMATION BY SUPERVISOR</b>	<b>ii</b>
<b>AUTHOR'S DECLARATION</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>xx</b>
<b>LIST OF FIGURES</b>	<b>xx</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xx</b>
<b>CHAPTER ONE : INTRODUCTION</b>	<b>1</b>
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Objectives	3
1.4 Scope of Study	3
1.5 Significance of Study	4
<b>CHAPTER TWO : LITERATURE REVIEW</b>	<b>5</b>
2.1 Benchmarking/Comparison with Available Products	5
2.2 Related Manufacturing Process	9
2.3 Sustainability/Ergonomic Related Items	12
2.4 Patent and Intellectual Properties	12
2.5 Summary of Literature	14
<b>CHAPTER THREE : METHODOLOGY</b>	<b>16</b>
3.1 Overall Process Flow	16
3.2 Detail Drawing	17
3.3 Engineering Calculation and Analysis	23
3.4 Bill of Materials	25

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

The foodservice industry is developing rapidly in global market with a different type of products and concepts. In Malaysia, it can be seen as a vast variety of restaurants which consumers more prefer to dine in at as full-service restaurants, fast food restaurants and fine dining. These trends have created to a stiff competition among entrepreneurs in the Malaysian foodservice industry to ensure sustainability of their business (Othman et al. 2018).

Over the years, the majority of sellers and bakeries have relied on direct hand-to-hand contact with the texture and dough spreading. According to Hasan Polas et al. (2020), advances in science and technology have affected and changed the design of services and products, transforming the attitudes, behavior, and actions dramatically among consumers. If the customer's priorities the size accuracy of each dough to be sold and cooked, the process took a long time. Some of the bakery's methods for cutting dough include rounding it to the desired size, mixes dough by hand, and spending that much time measuring, kneading, and spreading it. A good flatbread has white colour, less dough stickiness, easy to roll, soft pliable texture, soft chewing mouth feel and typical taste and aroma. Major constituents of wheat determining end product quality are proteins and carbohydrates (Chunduri et al. 2020).

There are several factors influence the food consumption. People acknowledge that the cutting process for a single tray of flatbread takes up too much of their time, according to observations and survey results. Milling of soft grains requires less force, thus there is less damaged starch and more intact starch granules, which decreases water absorption during dough making. Hard textured wheat is more suitable for flatbread making while soft textured wheat is more suitable for the preparation of cookies as the intact starch granules impart crunchiness to the final product (Martin et al. 2007). When compared to the traditional approach, this invention will greatly assist merchants in saving time and energy while producing texture dough faster than before. With some