

UNIVERSITI TEKNOLOGI MARA

**DESIGN, ANALYSIS AND FABRICATION OF JAM
SPREADER TOASTER**

NIK ABDUL RAHMAN FAHIM BIN NIK OMAR

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

College Of Engineering

February 2023

ABSTRACT

Breakfast is essential and important to ensure that we have enough energy for our daily life routine. No matter how, even if it is only a slice of bread. Sometimes people woke up late and didn't have enough time to prepare breakfast for themselves. Some will buy anything on their way out but most of them won't have the time to do so. What can we do about it? This is where the product comes in. We need something that can help prepare us a simple breakfast easily. Spreading jam manually have become the traditional way, now is the era of automated jam spreading. We just need to place our bread in the toaster, choose our go to jam for the day and we're ready to go. It is easy to use and efficient for daily use. This product have some features which is the jam spreader is automated which you don't have to push any single button to make it work, it comes with several "detachable jam pods" (pods where we will place our jam) so that we won't limit ourselves with just one various of jams instead of all our favourite ones and lastly it is easy to use and wash, it won't be such a nuisance to clean it up. The advantages are it is time efficient for those who are always in a rush in the morning and you don't have to clean it every time you use it.

ACKNOWLEDGEMENT

Firstly, I wish to thank Allah for giving me the opportunity to embark on my diploma and for completing this long and challenging journey successfully. My utmost gratitude and thanks go to my supervisor, Sir Dr Ab Aziz Bin Mohd Yusof.

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.

To all my friends that are helping throughout this journey, I will never forget all of your deeds. Lastly, I want to congratulate myself on being able to complete this journey successfully. Alhamdulillah.

TABLE OF CONTENTS

CONFIRMATION BY SUPERVISOR	I
AUTHOR'S DECLARATION	II
ABSTRACT	III
ACKNOWLEDGEMENT	IV
TABLE OF CONTENTS	V
LIST OF TABLES	VII
LIST OF FIGURES	VIII

CHAPTER ONE : INTRODUCTION

1.0	Background Study	1
1.1	Problem Statement	2
1.2	Objectives	3
1.3	Scope Of Work	4
1.4	Significance Of Study	5

CHAPTER TWO : LITERATURE REVIEW

2.0	Introduction	6
2.1	Toaster	7
2.2	Butter Knife	9
2.3	Patent	11
2.4	Standards	12
2.5	Product Design Specification Based On Literature Review	12

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND STUDY

A toaster is an electric small appliance designed to expose various types of sliced bread to radiant heat, browning the bread so it becomes toast. While a butter knife or what most people would call it as jam spreader. Combining two of these things with engineering concept and modern lifestyle and you will get the jam spreader toaster. The basic concept of the idea is to make an automated jam spreader that works in a detachable jam pods that is easy to use and applicable to all types of age.

The jam spreader toaster is a toaster that have compartments for the detachable jam pods, which enables it to have various of jams as choices and not only one. This product will be a lifesaver at the crucial times where you woke up late for your day but still want to get your breakfast. This product is time efficient and doesn't need you to push any single button as it is automated. It also doesn't need to get clean every time it is used.

The jam spreader toaster have a basic concept of using hydraulic press but in a much more simpler and smaller to fit in the detachable jam pods. It works as to make things easier for people whenever they thought of having a toast as breakfast. Spreading jam is old school and the traditional, automated jam spreader is the new lifestyle.