

**UNIVERSITI TEKNOLOGI MARA**

**AUTOMATED WRAPPING  
MACHINE**

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## **ABSTRACT**

The wrapping process of the products at Jalen Sdn Bhd factory were processed manually, which is their worker will hold the wrapper and move around the cartons of products to wrap the product one by one. Limitations occurs when the product produced excessively, because it will consume much time and energy to wrap a lot of products without an automated machine. The main objectives of this project are to develop a machine that reduce manpower for wrapping process and to minimize wrapping time. This project consists of designing, measuring, cutting, drilling, joining, support attachment, combining wrapping and body parts, testing and improvising. As a result, this machine can easily move to another pallet and finish wrap a pallet of products faster than we wrap products on pallet manually. The time taken to wrap full products manually is 1minutes, meanwhile time taken to wrap full products with the machine is 0.3 minutes. In conclusion, the objectives for this project achieve successfully as the time saving of 0.7minutes between manual wrap and automatic wrap process, also the machine is easily used to wrap products on pallet.

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# 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>viii</b>
<b>LIST OF FIGURES</b>	<b>ix</b>
<b>LIST OF ABBREVIATIONS</b>	<b>x</b>
<b>CHAPTER ONE : INTRODUCTION</b>	<b>01</b>
1.1 Background of Study	01
1.2 Problem Statement	01
1.3 Objectives	02
1.4 Scope of Study	02
1.5 Significance of Study	03
<b>CHAPTER TWO : LITERATURE REVIEW</b>	<b>04</b>
2.1 Benchmarking/Comparison with Available Products	04
2.2 Related Manufacturing Process	06
2.3 Sustainability/Ergonomic Related Items	08
2.4 Patent and Intellectual Properties	08
2.5 Summary of Literature	10
<b>CHAPTER THREE : METHODOLOGY</b>	<b>12</b>
3.1 Overall Process Flow	12
3.2 Detail Drawing	13
3.3 Engineering Calculation and Analysis	14
3.4 Bill of Materials	16

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

Products that have been manufactured by the factory usually excessive. Those products were produced, need to be packed as one big product. For example, from Jalen Sdn Bhd factory they produce Jalen soy sauce in cartons. The products will be packed in cartons and need to be wrap. To wrap those numerous cartons, they faced difficulties which is it will consume high usage of human energy and large time consumption to wrap those products. For the factory worker to wrap those excessive products manually it will have limits. Nowadays, we can see many machines were built to solve human problems in daily life. Thus, the study was made to help Jalen Sdn Bhd factory to wrap those cartons of products as one wrapped of product. The machine will reduce the energy needed from human or factory operator to wrap those products, so many products can be wrap automatically. In addition, it will also lessen the time consumption to wrap those products with the machine. Therefor the automated product wrap machine is very useful and needed for the factory.

### 1.2 Problem Statement

The wrapping process of the products at Jalen Sdn Bhd factory were processed manually. Their worker will hold the wrapper and move around the cartons of products to wrap the product one by one. Manual process will take times and consume much energy from the worker. Nowadays, there are lot of machines build by the engineer to make life easier. Nevertheless, there are concerns in wrapping large product produced by the factories. Limitations occurs when the product produced excessively. It will consume much time and energy to wrap a lot of products without an automated machine. Development of automated product wrapping machine solves this problem. Hence, by using a pole with a wrapper will replace the human work who need to hold on the wrapper and walk around the product to wrap the product.