

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF AN
AUTOMATIC PORTABLE
WRAPPING MACHINE**

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ABSTRACT

The Automatic Portable Wrapping Machine seeks to solve important issues facing the packaging industry, including the high price and immobility of conventional wrapping machines. Due to their permanent design and high cost, large wrapping equipment sometimes limits operating flexibility for small-scale businesses. This initiative aims to transform the market by offering a creative, affordable, and easily accessible solution designed for companies with little resources. The machine's design combines mobility, efficiency, and safety by offering customizable choices for wrapping products of different sizes. Its lightweight design makes it simple to move, store, and assemble in a variety of environments. The machine can handle things up to 2 feet by 2 feet by 2 feet and weight up to 10 kg. It is powered by a conventional 220V/50Hz single-phase electric source and has a rotating speed range of 0 to 12 RPM. Important parts that guarantee accuracy and simplicity of use include a voltage regulator for speed adjustment and a pedal system for controlling the spinning table. The Automatic Portable Wrapping Machine enables companies to satisfy the increasing need for technology, optimize resources, and guarantee uniform and secure wrapping by automating labor-intensive packaging processes. This creative and reasonably priced solution is particularly ideal for small businesses, providing them with the versatility and efficiency needed for success in a competitive marketplace. The effort crosses the gap between modern technology and accessibility, marking a major advancement in the transformation of the packaging business.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The requirement for effective wrapping procedures has grown over time. Both people in a variety of industrial sectors and small and medium-sized organizations would greatly benefit from a portable auto wrapping machine. Hand wrapping takes a lot of time, particularly when handling several things. It also puts a lot of physical strain on consumers and increases their risk of injury. The purpose of this project is to design and create a portable device that solves the problems that come with hand wrapping, especially for small- to medium-sized enterprises and individuals. The project name is “Design and Fabrication of Mini Portable Auto Wrapping Machine.” This idea attempts to reduce the financial strain by developing a smaller, more affordable alternative to huge wrapping machines. The project name is “Design and Fabrication of Mini Portable Auto Wrapping Machine.”

1.2 Problem Statement

- Large wrapping machines are expensive, which increases the financial strain on firms and limits their accessibility to small-scale operations with tight budgets.
- Current wrapping equipment is frequently frozen in place, which restricts its applicability in many contexts, places, and limits operational flexibility. Large wrapping machines also have high expenses, which make them expensive for small enterprises.

1.3 Objectives

The main objectives of this project are:

- a) Construct and design a portable, small-sized auto-wrapping machine that is suited for little parcels. The device ought to be portable, and appropriate for