

UNIVERSITI TEKNOLOGI MARA

**AUTOMATIC SPINNING CLOTHES
HANGER**

AMMAR SYAKIR BIN ROSMI

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

College of Engineering

Feb 2024

ABSTRACT

An overview of the main features and benefits of the Automatic Spinning Clothes Hanger is provided in this abstract, with a focus on how well it can dry clothes uniformly, cut down on drying time, and improve overall clothing organization. This technology has the potential to make people's everyday routines easier and their interactions with clothing more efficient, which will ultimately lead to a more productive and fulfilling way of life. An innovative approach to drying management, the Automatic Spinning Clothes Hanger comes at a time of rapid technology innovation and growing demands for ease in daily living. This cutting-edge tool promises to transform how people access and arrange their clothes, making the process more effective and user-friendly. People using the Automatic Spinning clothing Hanger can effortlessly dry their clothes faster with a single button push thanks to the motorized spinning mechanism that is controlled by a simple switch. It is adaptable to any home because of its small dimensions and capability to operate with a common balcony.

ACKNOWLEDGEMENT

I would like to express my special gratitude to my supervisor, Mrs. NUR AINI SABRIN BINTI MANSSOR SHUKRI for her time and effort that she provided throughout this project. Your useful advice and suggestions were really helpful to me during project's completion.

I would also like to give special thanks to my mother and my family as a whole for the continues support when taking my research and writing for this project. Your prayer is the force that keeps pushing me forward.

Lastly, I would like to thank God, for helping me through all the difficulties. Without your bless I would not be able to go this far. Alhamdulillah.

TABLE OF CONTENTS

	Page
CONFIRMATION BY SUPERVISOR	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	vii
LIST OF TABLES	viii
LIST OF ABBREVIATIONS	ix
CHAPTER ONE : INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Objectives	2
1.4 Scope of Study	3
1.5 Significance of Study	4
CHAPTER TWO : LITERATURE REVIEW	5
2.1 Benchmarking/Comparison with Available Products	5
2.2 Review of Related Manufacturing Process	9
2.3 Patent and Intellectual Properties	11
2.4 Summary of Literature	13
CHAPTER THREE : METHODOLOGY	14
3.1 Overall Process Flow	14
3.2 Detail Drawing	15
3.3 Engineering Calculation and Analysis	16
3.4 Bill of Materials and Costing	17
3.5 Fabrication Process	18
3.6 Functionality of Prototype	20

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Today, clothes hanger come in various shapes and sizes to accommodate different types of clothes. Some hangers have clips to hold pants or skirts, while others have notches to prevent clothes from slipping off. They have evolved to meet the needs of modern fashion and organization.

As we can see that the weather in Malaysia has changed through the decade, number of rainfall accident on last 2 year in increased since 80s [4]. Back then, the clothes hanger is commonly used when it is invented around late 90s and now, we have a lot of types of clothes hangers that more energy and time efficiency [5].

The aim of this project is to enhance the typical clothes hanger and make it better than before. Through this project, an enhancement and redesigning the automatic hanger will be done by using state-of-art SolidWorks 2023. The newly designed simulator will be fabricated (prototype) as a proof of concept. Analytical and finite element analysis of the critical parts shall be carried out.