

UNIVERSITI TEKNOLOGI MARA



CAWANGAN JOHOR KAMPUS PASIR GUDANG

MEC332 – MECHANICAL ENGINEERING DESIGN
FINAL YEAR PROJECT
INNOVATION OF MECHANICAL HOSE REEL

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Table of Contents

ACKNOWLEDGEMENT	i
ABSTRACT	ii
1.0. PROJECT SCOPE (INTRODUCTION).....	1
1.1. Problem Statement.....	1
1.2. Objectives.....	2
1.2.1. Avoid Tangled Hose	2
1.2.2. Reduce burden to user.....	2
1.2.3. Prevent water hose from damage or leaks.....	2
1.3. Significant of The Projects.....	3
1.3.1. Storing Water Hose Properly	3
1.3.2. Ease the User’s Life	3
1.3.3. Portability.....	3
1.4. Project Management	4
1.4.1. Gantt Chart.....	4
2.0 DESIGN PROBLEM DEFINITION	5
2.1. Market Analysis.....	5
2.1.1. Targeted Market and Estimation of Market Size.....	5
2.1.2. Customer Needs and Identification	6
2.2. Competitive Benchmarking Product.....	12
2.3 Ventilation System	14
2.3.1. Cost	14
2.3.2. Ergonomics.....	14
2.3.3. Quality and Reliability	14
2.3.4. Aesthetic	14
2.3.5. Repairability & Maintenance	15
2.4. Product Design Specification	15
3.0 CONCEPT GENERATION AND SELECTION	17
3.1. Feasible Concept.....	17
3.1.1. Functional Physical Decomposition	17
3.2. Morphological Chart	18
3.2.1. Concept 1	20
3.2.2. Concept 2	21

3.2.3.	Concept 3	22
3.2.4.	Concept 4	23
3.2.5.	Concept 5	24
3.3.	Selection of Final Concept	25
3.3.1	Pugh Chart Analysis.....	25
4.0	EMBODIMENT DESIGN	26
4.1.	Product Architecture.....	26
4.1.1.	Schematic Diagram	27
4.1.2.	Cluster Design	27
4.1.3.	Rough Geometric Layout and Interaction	28
4.2.	Configuration Design	30
4.2.1.	List of Parts by Grouping.....	30
4.2.2.	List of Parts by Grouping.....	31
4.2.3.	Detail Standard Part Selection	32
4.3.	Parametric Design	36
5.0	DETAIL DESIGN	38
5.1.	Engineering Drawing.....	38
5.1.1.	Detail Drawing of Parts	38
5.1.2.	Sub – Assembly Drawing.....	69
5.1.3.	Assembly Drawing.....	72
5.1.4.	Exploded Drawing	79
5.1.5.	Bill of Material (BOM)	86
5.2.	Costing Evaluation.....	88
5.2.1.	Break Even Analysis	88
6.0	MODELLING AND SIMULATION	90
6.1.	Design Analysis: Theoretical Calculation and Simulations	90
6.2.	Result and Discussion.....	94
6.2.1.	Upper Handle Simulation Result.....	94
6.2.2.	Clamp Handle Simulation Result.....	101
6.2.3.	Hose Reel (Body) Simulation Result.....	108
6.2.4.	Wall Mount Simulation Result	115
7.0	PROTOTYPING	125
7.1.	Manufacturing and Fabrication Detail.....	125

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ABSTRACT

Mechanical Hose Reel is an innovation prototype that was inspired by the regular water hose reel. Water hose is one of the common equipment used by the community especially gardeners, families, or car washers where it helps to channel water from one place to another. However, the water hose has limitations such as the limited hose length and requires extra force to untangle the tangling hose. "Mechanical Hose Reel" can prevent tangling water hose problem and water hose damage from any accident such as run over by a car and extreme sunlight exposure which can damage the water hose material. "Mechanical Hose Reel" is different from regular water hose reel because the users can connect their preferred hose (various length and size) to "Mechanical Hose Reel".

"Mechanical Hose Reel" can be used multiple times without hassle due to its retractable mechanism which enables the water hose to roll back in automatically with the assistance of hose guide which ensures the water hose stores inside "Mechanical Hose Reel" neatly. This will reduce the users' energy consumption and saves time. As technology is advancing, the "manual hose reel" is no longer valid in current times. The retractable mechanism is one of the key components of "Mechanical Hose Reel" because the flat spiral spring affects the speed of water hose retraction.