

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATION OF
ADJUSTABLE TABLE LIFTER
TRANSPORT USING HYDRAULIC
JACK**

AMY MALISSA BT MOHD SAM

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ABSTRACT

This project is presenting a piece of equipment or a system that uses hydraulic jacks to lift and transport heavy objects or materials, and the adjustable aspect allows you to control the height or position of the lifted load. It is expected to move simply the furniture and heavy appliances from one location to another, allowing to rearrange the furniture. After that, the design of this project also included additional features using hydraulic jacks, it can precisely adjust the height or position of the lifted load. This project discusses about the expected to be easy to maneuver easily, comfortable to use and safer and more secure. In conclusion based on the developed system, authors discussed the advantages and points need to be considered when working on the system.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Nowadays, a heavy object is an item or an entity that is notably heavier than what can be easily lifted, moved, or manipulated by human strength alone. Roughly 21% of workplace injuries are directly linked to manual handling tasks, such as the lifting, carrying, or movement of objects [1]. These incidents are frequently exacerbated by improper lifting methods and insufficient ergonomic practices. It's imperative for consumers to make the safety of manual handling procedures a top priority and to prevent injuries resulting from manual handling.

Next, many claim that the difficulty of carrying heavy object, even with two people, is due to its weight. People's laziness in moving this bulky object for cleaning and interior design will be well-spent. Regarding this issue, it is challenging to carry that heavy furniture to a specific place. In order to help get along with people with their moving problems, I need a mechanism that can move a heavy object to the place where I need it by myself.

So, our current solution is to create a mechanism that can move the bulky goods quickly and is simple to use without using an effective tool or even needing manpower. However, when moving any load, there is always a chance of problem such as the risk of loads slipping on smooth surfaces, suitability only for flat terrain, challenges with maneuvering around corners, limited load capacity, instability in heavy-duty tasks, and a requirement for substantial force to push or pull the trolley [2]. The adjustable lifter transport using a hydraulic jack has become a meaningful way to make life easier by carrying heavy objects such as house furniture, office and other similar things to another place. This will help to reduce the possibility that your move will go smoothly and without incident. All things considered, the adjustable lifter transport using a hydraulic jack can be developed and improved for further enquiries.