

PROTOTYPE DESIGN COLLECTION

SERIES 2



Prototype Design Collection

Series 2



AHMAD NAJMIE RUSLI

UNIVERSITI TEKNOLOGI MARA CAWANGAN JOHOR
KAMPUS PASIR GUDANG

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FOREWORD

This digital book on Prototype Design Collection Series 2 (PDC Series 2) is published as a reference design for mechanical engineering students. The designs presented experience a few phases of analysis before fabrication of prototype. Each project summarises the project description, prototype, figures, and design parameter. The design products vary in tools or equipment for household, workshop, entrepreneur, etc. Suggested material and detail of prototype dimension are also mentioned in this book.

It is hoped that this book will assist the students to have more ideas on innovation design products in the future.

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CHAPTER 5

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PROJECT DESCRIPTION

The Mechanically Moveable and Height-Adjustable Ladder (MeMoHAL) is an innovative product that aims to save costs by combining two features in one ladder. The problem statement for this project is the need for a ladder that is both mechanically moveable and height-adjustable without having to purchase two separate ladders. The objective of this project is to create a cost-effective ladder that meets both these requirements. The methodology involves the design and implementation of the ladder with moveable and adjustable features. The results obtained from the product show that MeMoHAL is a viable solution to the problem, with advantages such as cost-saving, convenience, and ease of use. The significance of this project lies in the potential for commercial success of the MeMoHAL in the market. This innovative ladder not only saves costs, but also provides a practical solution for users who need both moveable and adjustable features in one ladder. In conclusion, this project presents an efficient solution to the problem of purchasing two different ladders for different features.

Keywords: *Adjustable, Ladder, Combination, Cost saving*

PROTOTYPE



DESIGN PARAMETER

