

PROTOTYPE DESIGN COLLECTION

SERIES 2



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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 4

Development of Innovative Portable Washing Machine

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PROJECT DESCRIPTION

The project focuses on developing a portable washing machine for college students who face challenges in doing their laundry by hand. The absence of a washing machine for students in college can lead to dripping clothes and physical exhaustion, and thus, a portable washing machine that can be operated in their own time is needed. The primary objective of this project is to design a cost-effective prototype that is convenient and mobile. The manufacturing processes involved in creating this prototype, such as welding and sheet metal bending, are explored in this report. The result of this project will be a better quality of life for college students and potentially others who find the prototype useful. The significance of this project lies in its ability to provide a solution for college students who are unable to afford or have access to washing machines. The portable washing machine will improve the lives of college students by saving time and energy while providing convenience and mobility. The prototype will be named ALENTA, and its development will set a new standard for portable washing machines in the market.

Keywords: *Portable, Washing Machine, College students, Energy saving*

PROTOTYPE



DESIGN PARAMETER

