

# 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 1

### An Improvement of Storage Space and Drying Using Shoe Dryer Cabinet

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#### PROJECT DESCRIPTION

This project aims to address the problem of inefficient and inconvenient shoe drying and storage. Conventional methods of drying shoes in the sun or leaving them to air-dry take considerable time and can be affected by unfavorable weather conditions. Additionally, people lack proper storage facilities to keep their shoes dry and free from dirt and dust. To solve these issues, a mobile shoe dryer has been designed to enable people to dry their shoes quickly and conveniently. The dryer is portable and easy to transport, and it is designed to dry shoes within 3 hours, which is much faster than traditional drying methods. The design of the Shoe Dryer Cabinet includes a compact cabinet that is suitable for storing medium-sized shoes. The project's methodology involved research and testing to determine the most effective way to dry shoes quickly and effectively. The product's results indicate that it is an efficient and convenient solution to the problem of shoe drying and storage. The Shoe Dryer Cabinet is a potential commercial success as it provides a solution to a common problem faced by people worldwide. Its significance lies in the fact that it saves time and effort, improves shoe maintenance and hygiene, and promotes the proper storage of shoes.

**Keywords:** *Shoe cabinet, Dryer, Portable*

#### PROTOTYPE



**DESIGN PARAMETER**

