

# 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 81

### Design and Innovation of The Beach Cleaner

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#### PROJECT DESCRIPTION

The beach is the most popular tourist destination, with both residents and visitors from other countries flocking to it. However, the beach is also a problematic location due to the dumping of waste everywhere, which reduces the tourist attractiveness. This project suggested a method that involves cleaning the beach with a Beach Cleaner powered by human energy. This chore of clearing waste from the beach may be greatly aided by the use of a Beach Cleaner. The Beach Cleaner is made of steel, and using the belt V, as well as the hook that will carry the trash, will move in rhythm with the movement of the pushed tyre, thanks to a gear system mounted on the connecting route on the front tyre. Finally, this Beach Cleaner may assist boost beach prioritisation while also increasing the environmental friendliness of a beach.

**Keywords:** *Beach cleaning, Man-powered*

#### PROTOTYPE



### DESIGN PARAMETER

