

# PROTOTYPE DESIGN COLLECTION

## SERIES 2



# Prototype Design Collection

Series 2



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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 124

### Mechanical Design of Automatic Beach Cleaner

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#### PROJECT DESCRIPTION

The aim for this project is to design the machine that capable to help clean up on the beach more efficiently without using a lot of energy and reduces the cost that is affordable for everyone. The method of operating this machine is pushes and pulls mechanism because it has a wheel. Rather than picking up trash on the beach manually, this machine will pick it up automatically without digging into the sand and collecting one by one the trash that found on the beach. The design of the machine should be suitable on sandy place like on the beach because it has a mechanism that separates the sand and trash. The machine also will be design with the right size.

**Keywords:** *Beach cleaner, Design, Fabrication*

#### PROTOTYPE



**DESIGN PARAMETER**

