

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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CHIEF EDITOR:

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CONTENT EDITORS:

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Norhisyam Jenal

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Radzi Abdul Rasih

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Tel: +60 7-381 8493

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 95

Design and Fabrication of Double Automatic Can Crusher

Adib Farhan bin Badrol Isa ¹ and Nurul Hanna binti Mas'aud ^{2*}

^{1,2}*Mechanical Engineering Studies, College of Engineering, Universiti Teknologi MARA
Johor Branch, Pasir Gudang Campus, 81750 Masai, Bandar Seri Alam, Johor Darul Ta'zim.*

**Corresponding author (e-mail): nurul989@uitm.edu.my*

PROJECT DESCRIPTION

The world is getting older nowadays and to protect the world, it is required for all human being too aware about the consumption of raw materials, the energy usage in daily life, and aware about the pollution created every day. One of the alternatives to save material is to recycle. There are a lot of things can be recycled, but this project focusing on recycling a tin or aluminium can. In traditional way, a person needs to use their energy to step on the can to make sure the can is compact. This could lead to an injury for that person, and waste time. Therefore, this project is to design and fabricate a double automatic can crusher. The project is conducted by following these methods, design concept, design selection, and fabrication process. The design process is done by using SolidWorks Software. As the design concept has been finalized, the fabrication process will be conducted. In general, this product is controlled using push start and stop button, and the system is using the Human Machine Interface (HMI). Upon completing the fabrication process, the product will be then tested. It is expected that this product able to crush two can at one time, and the can is compact as per required by the recycling centre.

Keywords: *Recycle, Can crusher, Design, Automatic, Human machine interface*

PROTOTYPE



DESIGN PARAMETER

