

# 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 67

### Design and Fabrication of Automatic Can Crusher

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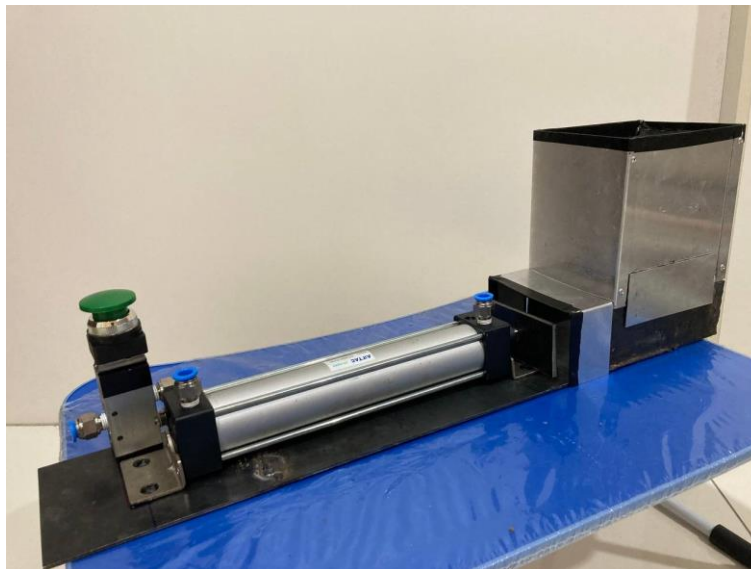
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#### PROJECT DESCRIPTION

Can crushers have been in use for a considerable period, and numerous designs and fabrication methods have been developed over time. This project aims to introduce a new concept of an automatic can crusher capable of crushing two cans simultaneously. Placing one can after another in the machine for crushing can be hazardous for the hands, requiring precise timing. This poses a risk of injury and increases the time required for compression. In this project, the cans are arranged horizontally in a slider and compressed in sequence. An automatic pneumatic piston will crush the cans when users press a button. Once compressed, the cans will fall into a collection box. This machine will significantly reduce the time required for compression and offer a more affordable option compared to market prices.

**Keywords:** *Can crusher, Automatic operation, Pneumatic piston*

#### PROTOTYPE



**DESIGN PARAMETER**

