

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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e-ISBN NO 978-967-0033-18-1

First published, 29th September 2023

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PUBLISHED BY:

Universiti Teknologi MARA Cawangan Johor,

Kampus Pasir Gudang,

Jalan Purnama, Bandar Seri Alam,

81750 Masai,

Johor Darul Ta'zim.

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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 140

Manually Operated Onions Grading Machine for the Agricultural Product

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PROJECT DESCRIPTION

Onion grades are determined by various onion sizes. The method of isolating onion size nowadays is quite complicated as it requires a lot of manpower at the same time. This will take more time to isolate the onions. So, this project will help more parties by reducing segregation time and a large amount of manpower. This project requires only a small amount of manpower and is carried out manually only. The method of using this machine is, the user has to insert the onion into the roller and turn the lever on the side of the machine. The onion will fall down according to the size available on the loop. At the end of the process, many onions can be separated into the desired grade based on their size in a short time in large quantities. The target market for this project is a small-scale industry.

Keywords: *Manually operated onion grading, Agricultural product, Small scale industry*

PROTOTYPE



DESIGN PARAMETER

