

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 107

Design and Fabrication of Agriculture Wheel Pump

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PROJECT DESCRIPTION

The main purpose of producing this product is to enable farmers and gardeners to make the process of spraying waters, pesticides and herbicides to their gardens becomes more effective. It helps the farmers and gardeners work because they no longer need to carry the tank on their back that can cause their back strain and hurt. This product only has to be pushed to forward just like how the trolley function and then it will generate mechanically pump by the set of power transmission part by using shaft, bearings and set of sprockets. Energy to pump the tank pump can be reduced. Next, it also comes with a some of nozzles on the wing. With nozzles on the wing, it can speed up the spraying process as it can spray left and right side at the same time. In conclusion, this product can help farmers gardeners in terms of comfort during spraying, reducing energy to pump tanks, and effectively utilizing spraying time. The expected result for this project is, with this project the farmer will take lees time and energy in spraying process.

Keywords: *Agriculture, Wheel pump*

PROTOTYPE



DESIGN PARAMETER

REVISION RECORD				
FAKULTAIKEAJURUTEDARANMEKANIKAL(FKM) UNIVERSITITEKNOLOGIIMARAKA(LIEM)JOHORE KAMPUSPASIRGUBANG				
GROUP :JAE11104J				
APPROVED :		CHECKED :	DRAW	
DRAWING TITLE : AGRICULTURE WHEEL PUMP				
PART NAME : AGRICULTURE WHEEL PUMP				
PART NO :				
REV.	SCALE :	PROJECTION :	WEIGHT	SHEET