

PROTOTYPE DESIGN COLLECTION

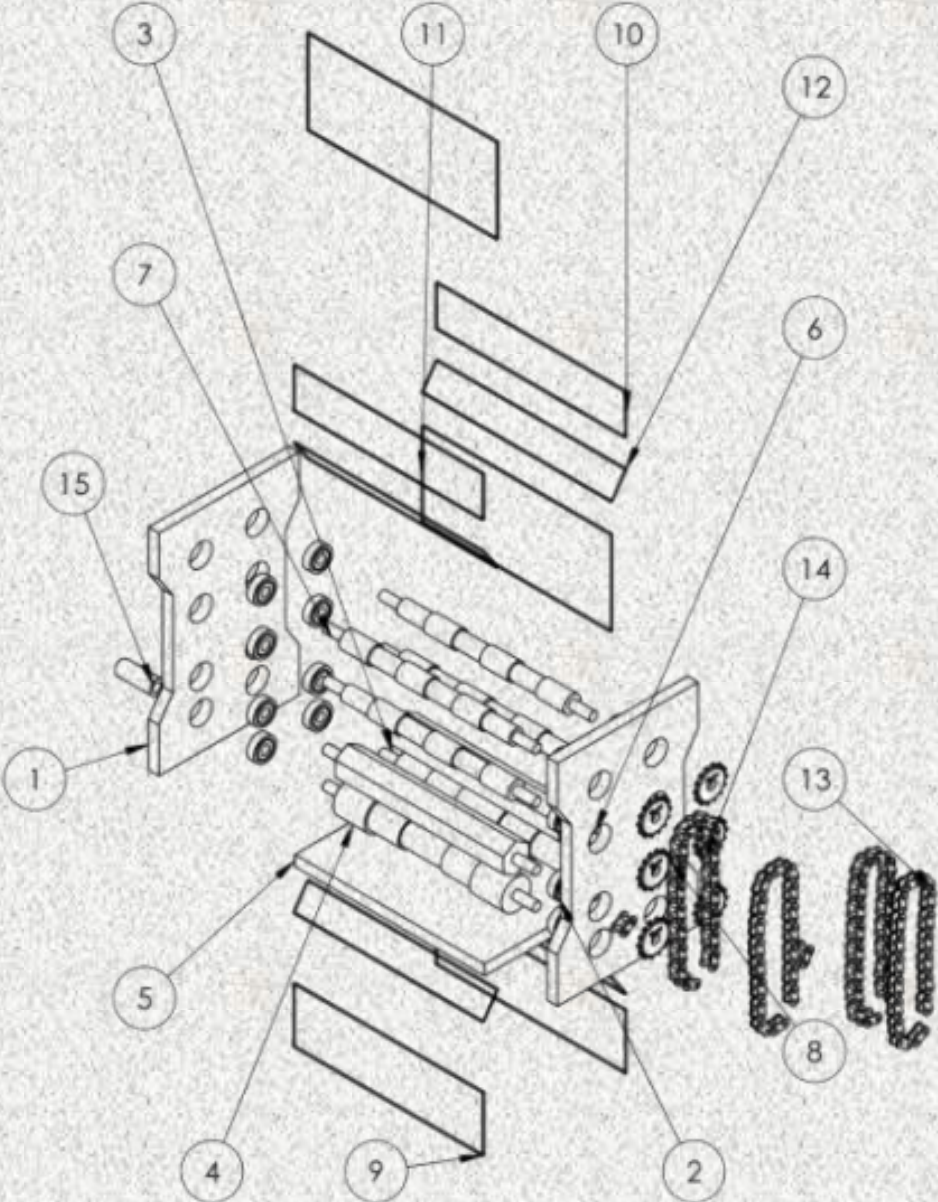
SERIES 4



Universiti Teknologi MARA
Pasir Gudang Campus

Prototype Design Collection

Series 4



Ahmad Najmie Rusli

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FOREWORD

This digital book on Prototype Design Collection Series 4 (PDC Series 4) 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 56

Design and Fabrication of Body Kit Material for Student Formula Racing Car

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PROJECT DESCRIPTION

This project is presenting body kits components that are designed to complement each other and work together as a complete design. The material used for each component should be considered to make sure it is suitable. The material used in a body kit will depend on the specific design and application. The lack of choosing the material that can cause the car has a low durability. It also causes a high-cost maintenance if the material chosen are not suitable for the body kits. The purpose of this product is to construct a solid reasonable and affordable material and to find the most suitable material for the body kits. Some of the most common materials used in body kits include fiberglass, polyurethane, carbon fiber and aluminum. The expectation for this body kit is the success of selecting the material especially in terms of mechanical resistance, easy manufacturing, and durability. In conclusion, a solid, reasonable, and suitable material is produced at the end of the product.

Keywords: *Formula race car, Body kit material*

PROTOTYPE



DESIGN PARAMETER

