

# PROTOTYPE DESIGN COLLECTION

## SERIES 2



# Prototype Design Collection

Series 2



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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 91

### Sliding Grinder Table

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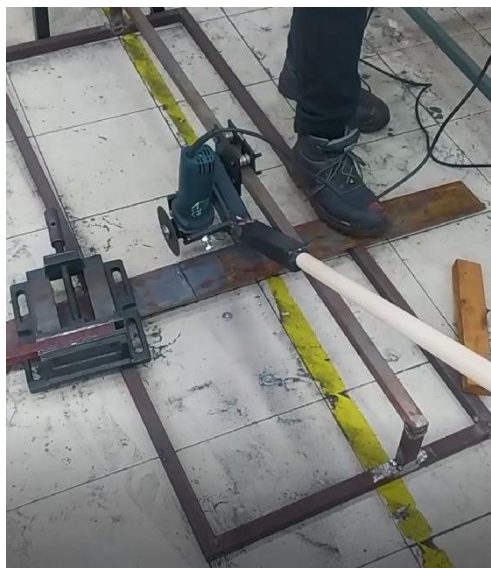
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#### PROJECT DESCRIPTION

Sliding grinder table is a mechanism that can cut and grind metal safely. This mechanism is safer to use compared to the conventional grinder mechanisms. This Sliding grinder table is safe to use as it has a sliding worktable that keeps users' hands away from the cutting and grinding area. Compared to conventional grinder which lack safety which required the user to hold the grinder itself. Using this mechanism, users can grind and cut metal safely. Users can learn to grind and cut the metal easily. This mechanism is made because many of the conventional grinder mechanism users hurt themselves because of lack of safety. So, this sliding grinder table mechanism increases safety and avoids injuries for the users. This Sliding Grinder table mechanism works by combining the conventional grinder mechanism and the sliding table itself. The table can slide back and forth and side to side allowing the user to adjust the blade to the cutting spot of the metal. This mechanism allows the user to cut their metal easily and safely. Lastly the sliding grinder table will make it easier for the users to complete their projects and will increase their safety. This project is expected or able to increase the capability of the conventional angle grinder in safety and user comfort. Then this project can decrease the amount of work time for the users to complete their projects. The product will be more user friendly. The conclusion is this product is used to increase the safety of the conventional angle grinder.

**Keywords:** *Grinder, SME, Innovation*

#### PROTOTYPE



### DESIGN PARAMETER

