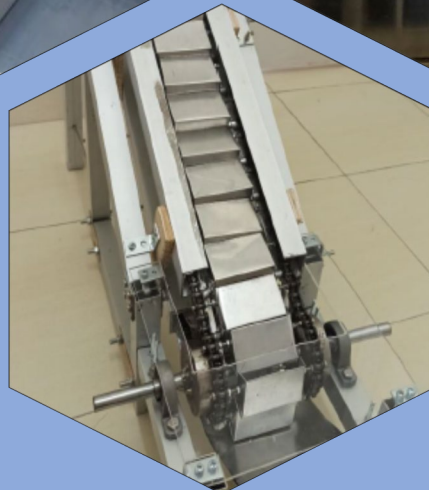
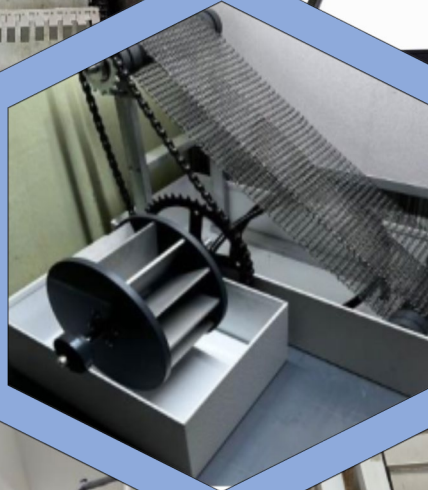


# PROTOTYPE DESIGN COLLECTION

## SERIES 1



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## CHAPTER 19

### Design, Analysis and Fabrication of Multipurpose Kitchen Utensils

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#### PROJECT DESCRIPTION

Nowadays, human life becomes more competitive and faster than previously. Automation brought about by technology has saved human effort and time to a large extent. Manual cutting and slicing of vegetables has proved to be very time consuming, use up lots of human energy, plus is a risky task in human busy life which could lead to unwanted accidents. This project idea aims to solve the issues by providing a unique product called Multipurpose Kitchen Utensils. The product is mainly designed to reduce time, human effort, and utensils during preparing cooking ingredients. Additionally, it can help to prevent accidental injuries plus make chopping and slicing cooking ingredients considerably easier and faster. Its features are fully automated utensils, can be used for multipurpose, changeable stainless steel sharp blade, easily portable, less power consumption, etc. The methodologies used to accomplish this task are product planning, customer needs identifying, product specification, concept designing, sketching designs, product engineering calculation and analysis, cost calculation for the product and fabrication detailing. Finally, the expected result of the study would assist and improve design and fabricate a mechanism that can help people to reduce time, human energy, and utensils during preparing cooking ingredients. Furthermore, it is expected to help prevent people from any unwanted accidents during preparing the cooking ingredients. Apart from that, the effectiveness and critical area of the mechanism design can be analysed. It is assumed that this project will provide 100% result based on target objectives and 80% benefits to end user, either home or professional

**Keywords:** *Multipurpose Kitchen Utensils*

#### PROTOTYPE



DESIGN PARAMETER

BILL OF MATERIALS (BOM)			
Part No.	Part Name	Description	Qty.
1	Body Frame	310mm × 310mm × 390mm	1
2	Back Board	310mm × 5mm × 400mm	1
3	Side Board	100mm × 5mm × 400mm	2
4	Top Board	310mm × 100mm × 5mm	1
5	Front Board	310mm × 5mm × 400mm	1
6	Centre Board	205mm × 5mm × 372mm	1
7	Compartment	100mm × 5mm × 215mm	3
8	Base Board	310mm × 310mm × 5mm	1
9	Container	140mm × 90mm × 105mm	1

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 Group J4EM1105C  
 Approved \_\_\_\_\_ Checked \_\_\_\_\_ Drawn IMAN QISTINA ABD. RAZAK  
 02/02/2021  
 Drawing Title EXPLODED ASSEMBLY OF MULTIPURPOSE KITCHEN UTENSILS  
 Part Name -  
 Part No. -  
 Rev. 0 Scale 1:8 Projection Weight 4.0 kg Sheet 7/8

BILL OF MATERIALS (BOM)			
Part No.	Part Name	Description	Qty.
10	Presser	220mm × 97mm × 20mm	1
11	Hydraulic	97mm × 30mm × 30mm	1
12	Blade Holder	212mm × 20mm × 6mm	2
13	Blade	207mm × 98.2mm × 7mm	1
14	Peeler	210mm × 130mm × 160mm	1

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