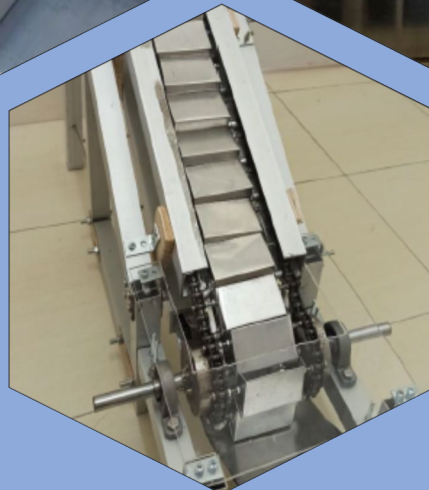
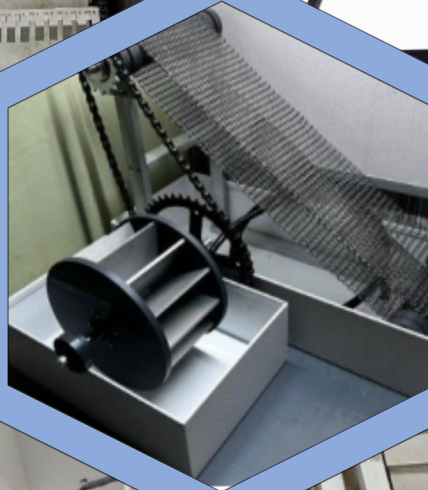


PROTOTYPE DESIGN COLLECTION

SERIES 1



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81750 Masai,
Johor Darul Ta'zim.
Tel: +60 7-381 8493

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CHAPTER 68

Design, Analysis and Fabrication of Wire Cutting Machine

Muhammad Nabil Bin Saeman and Abdul Hadi Abdol Rahim @ Ibrahim

College of Engineering (Mechanical), Universiti Teknologi MARA Johor Branch,
Pasir Gudang Campus, 81750 Masai, Bandar Seri Alam, Johor Darul Ta'zim.
Email: muhamadnabil04@gmail.com

PROJECT DESCRIPTION

Nowadays, most people out there use manual wire cutters to cut wires and use more energy than the automatic wire cutter. Using the manual cutter for a long time, the probability for hand injuries is much higher. This project basically gave an initial theme on how we can approach to solve this kind of problem. In addition to that, a designated automatic wire machine is created which gives more accuracy and reduces the human error, manpower, reliable work done, and saves the wastage of wire. This product can help reduce the time of cutting wires and produce better results. Basically, the function of this wire cutting machine is the same with the manual wire cutter but with different features. Users must put input of number of wires and length of wires that need to be cut. This automatic machine is fully using an electric supply and has microprocessors. It features an LCD display for setup and its operation. Other than that, this machine uses a stepper and servo motor to pull and cut the wire. In conclusion, this wire cutting machine is a time saving product because it can save time from measuring and cutting wires. It also reduces the risk of hand injuries to the user.

Keywords: *Wire cutting machine*

PROTOTYPE



DESIGN PARAMETER

	Cawangan Johor Kampus Pasir Gudang	Drawn By	NABIL	Material : Not Specific	Dwg Title	Assembly drawing	
		Checked By			QTY: 1	Project Title:	Automatic Wire Cutter Machine
		Date			Scale	1:6	DIMENSION: MM

ITEM NO	PART NAME	QUANTITY	SOURCES
1	Wire Roller	1	Standard
2	M20 Hexagonal Nut	2	Standard
3	Roller Holder	2	Manufactured
4	Base	1	Manufactured
5	Cylinder Roller	2	Manufactured
6	Pulley	2	Standard
7	Wire Holder	1	Manufactured
8	Servo Motor	1	Standard
9	Servo Motor Holder	1	Manufactured
10	Cutter	1	Standard
11	Cutter Holder	1	Standard
12	M10 Allen Key Bolt	1	Standard
13	Stepper Motor Holder	1	Standard
14	NEMA 17 Stepper Motor	1	Standard
15	Cutter Wheel	1	Standard
16	Arduino Microcontroller	1	Standard
17	Arduino Casing	1	Standard
18	Number Keypad	1	Standard
19	Panel	1	Manufactured
20	LCD Monitor	1	Standard

	Cawangan Johor Kampus Pasir Gudang	Drawn By	NABIL	Material : Not Specific	Dwg Title	Bill of Material	
		Checked By			QTY: 1	Project Title:	Automatic Wire Cutter Machine
		Date			Scale	1:6	DIMENSION: MM