



**Students Innovative Project Report**

**DESIGN AND DEVELOPMENT OF MICROCONTROLLER  
BASED AUTOMATIC TENDER COCONUT CUTTING AND  
PUNCHING MACHINE**

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**BONAFIDE CERTIFICATE**

Certified that this project Report Titled “**DESIGN AND DEVELOPMENT OF MICROCONTROLLER BASED AUTOMATIC TENDER COCONUT CUTTING AND PUNCHING MACHINE**” is submitted by **Mr. Perarasan .P , Mr. Sameer Ahamed .H , Mr. Sathya .R** , who carried out the work under our supervision. Certified further that to the best of my knowledge the work reported herein all the guidelines prescribed by the University was followed during and after implementation of the project.

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## **ABSTRACT**

Tender coconut water is get from the green coconuts. Unlike coconut milk, the tender coconut water/juice is fat-free and low in calories. It is also high in electrolytes like potassium and low in sodium. Tender coconut is rich in potassium and hence helps keep the kidneys healthy. It acts as a diuretic to flush extra water out of the body and also prevents kidney stones. Cutting and punching process of this coconut is not very simple and easy for everyone. So that we have designed this project to help a unskilled person to utilize this coconut in frequent basis. This research work includes the study of problems that were faced during the cutting of young coconut in commercial purpose. By studying such problem the need of efficient coconut cutting machine was developed. If the developed machine is commercialize the problem of use of coconut water at hotels and restaurants will get benefited. The purpose of this research is to develop, test, and evaluate the young coconut fruit cutting machine. This research work include the description of such a machine which will not only used to cut the coconut but also can be used to drink coconut water at parks and beaches. Here we used a cutting machine and a cutting tool to cut the coconut where we have to punch. A disc cutter is a specialized, often hand-held, power tool used for cutting hard materials. Pneumatic cylinder is used here to hole the coconut after cutting. Double acting cylinder is used for this procedure. Double-acting cylinders have a port at each end and move the piston forward and back by alternating the port that receives the high-pressure air, necessary when a load must be moved in both directions such as opening and closing a gate. Air pressure is applied alternately to the opposite ends of the piston.

## **CONTENTS**

<b>CHAPTER</b>	<b>TITLE</b>	<b>PAGE NO</b>
1	Introduction	01
2	Literature survey	04
3	Existing System Design	08
4	Proposed system	09
4.1	Ac motor	09
4.2	Scotch yoke mechanism	12
4.3	Punching part	17
5	Hardware Description	26
5.1	Power supply	26
5.2	Transformer	27
5.3	Rectifier	28
5.4	Regulator	31
5.5	Proximity Sensor	33
5.6	IR Sensor	35
5.7	PIC Microcontroller	39
5.8	Relay	60
6	Software description	65
6.1	Mplab Ide Software	65
6.2	Program	66
7	Results and Conclusions	75
8	Future enhancement	78
9	Reference	79

## TABLE OF FIGURES

<b>FIGURE</b>	<b>TITLE</b>	<b>PAGE NO</b>
4.1	Movement of Conductor	9
4.2	Bearing	10
4.3	Scotch yoke mechanism	13
4.4	Example of scotch yoke mechanism(a)	14
4.5	Example of scotch yoke mechanism(b)	15
4.6	Design calculation of scotch yoke mechanism	16
4.7	Block Diagram	24
5.1	Block diagram of regulated power supply system	27
5.2	Transformer symbol	27
5.3	Rectifier	28
5.4	Rectifier output	28
5.5	Output: full-wave varying DC: (using the entire AC wave)	29
5.6	Single diode rectifier	30
5.7	Single diode rectifier Output: halfwave varying DC	30
5.8	Smoothing Curve	30
5.9	Rectifier smoothing output	31
5.10	Regulator	32
5.11	Output: Regulator	33
5.12	Proximity sensor	34
5.13	Circuit design for IR circuit	37
5.14	Pulsed IR Graph -1	38
5.15	Pulsed IR Graph -2	38
5.16	Circuit design for IR circuit-2	39
5.17	PIN Diagram of PIC 16F877	44

5.18	Pin-1 circuit diagram	45
5.19	Pin-14 circuit diagram	47
5.20	Architecture of PIC 16F877	50
5.21	Relay driver	56
5.22	Logic diagram	59
5.23	Relays	60
5.24	Protection diodes for relays	62
7.1	Assembly diagram	76
7.2	Electronic setup	76
6.3	Mechanical setup	77