

# Multitasks performing machine

**Amit Daspute<sup>1</sup>, Rushikesh Kapse<sup>2</sup>, Shubham Gurule<sup>3</sup>, Kiran Sadgir<sup>4</sup>, Prof. M. A. Deore<sup>5</sup>**

1,2,3,4( Third Year Mechanical Engineering Student, Guru Gobind Singh Polytechnic,MSBTE  
Mumbai, India)

5( Professor, Department of Mechanical Engineering, Guru Gobind Singh Polytechnic, MSBTE  
Mumbai, India)

## ABSTRACT

*The main object of above project is to develop a machine in which we can cut vegetable and boil it in addition to this we add roti Maker machine. This project is develop for food products industries, hotel ,the operation performed and the parts produce should have it minimum possible production cost, and then only industry runs profitability. Market study was directed to the understand the existing methods and numerous vegetable cutting and roti Maker machine study in this market survey.*

**Key words :** *vegetable cutting machine, roti Maker machine, market survey.*

---

## INTRODUCTION

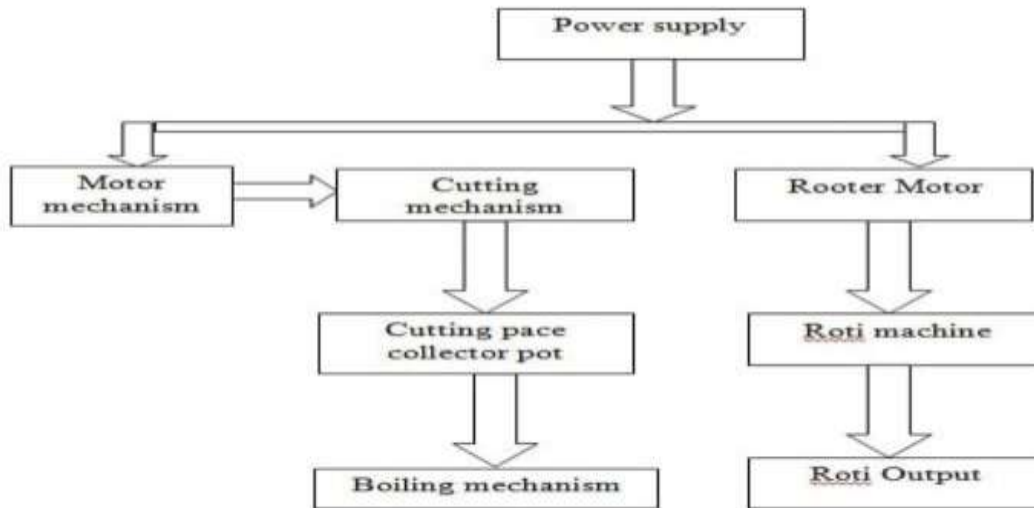
In the fast moving world when everything is automated, even our kitchen is turned to an unmanned atmosphere. Employed people find it tough to cook after a tedious work culture. The automatic vegetable cutter is a Indian manufactured one, currently available in market.The cutter on the concept of 'rotating grid ',the cutting grid is rotating inside a casing.powered by AC motor.

The vegetable are fed via the container arrangement at the top .The cutting grid rotate at high speed which cut the vegetables as they passed through them.the cutting grid are varried according to the need of customer.The shapes of the cut vegetable vary with the change in cutting grid.

The above mentioned cutter has some demerit with the regards to it's operation.First of all the vegetables feeding is not automatic,and a person has to devote his time to feed the vegetable one by one ,till the required quantity is cut. In addition to vegetable cutting machine, we add roti Maker machine as cut vegetable are boiled in that time we used roti Maker machine. The project is semi automatic in which we need some human efforts to perform operation.

## Working

The main objective is to designing and developing of very compact machine. In this machine there are two main system are used roti making machine and vegetable cutting and boiling machine. It includes two motors, the main supply is distributed to this motors. One motor is for grinding to cut the vegetables and then after the cut vegetable are boiled in a device. Second motor is used for mixing roti material. Roti material is pressed and cooked in electric roti maker machine.



### Components required

- 2 motors
- Vegetable grinder
- Boiling machine
- Mixing device
- Roti maker
- DC gear motor

### Literature survey

1) K.Venkateshmurthy Department of Food Engineering, Feb 2008 in International Journal of design and manufacturing Technology. He studied heat transfer equipment for production of Indian traditional foods. In his study he explained about needs of new technology for making chapatti since as traditional staple foods in India, Chapathi stand next only to cooked rice. The successful operation of chapathi making machine depends largely on the kinematics of machines. The heat transfer across the hot plate of the machine such as stainless steel, aluminum plate etc.

2) T. R. Gupta in Imperial Journal of Interdisciplinary Research, page no 1050. He Investigated Specific heat of Indian unleavened flat bread (chapathi) at various stages of cooking. In case a device is made available for

making Chapathi, from dough mixing to baking/frying, would result in reduction in labor and difficult to cater to large number of people in short time in serving Chapathi of uniform quality.

3) Arun Kulamarva in International Journal of Manufacturing, page no 759. He studied some rheological and thermal properties of chapathi. Chapathi is a gluten free cereal and forms the staple diet of a majority of the populations living in the fully-arid tropics dough.

4) N.D. Amos studied compilation of correlation parameters for predicting the enthalpy and thermal conductivity of solid foods within the temperature range of -400C to +400C. He presented thermal conductivity data for 40 foods, enthalpy data for 58 foods and products.

## REQUIREMENT

- Main objective is to build a fast roti maker machine and vegetable cutting and boiling machine which will satisfy the requirements of local mess, hotel's , and restaurants.
- To make semi-automatic device which will be compact in size.
- To build device with economic cost to hotel's and local mess.
- To make a device that will do complete processed of roti maker and vegetable cutting and boiling machine.

## ADVANTAGES

- It reduces the human interference.
- It increases human comfort.
- It is easy to operate and use.
- Less space is required.
- The initial cost is less

## CONCLUSION

This device is best suitable for Hotel's , local mess. This machine meets the requirements of production of roti/ chapatti. It reduces human interference. It will increase human comfort. The working efficiency will be increased. The project has to be designed to perform required task taking minimum time.

## APPLICATION

- Hotel's
- Local mess
- Restaurant
- Local house kitchen.

## REFERENCE

- Indian Standards Institution Vermicelli making IS (1485-1993) vol.6, pp.147-159
- Qarooni J. Flat chapathi technology. International Thomson publishing (1996) vol.7, pp.216-224
- Mahadevan K, Balaveera Reddy K. Design data hand book for mechanical engineers. New Delhi: CBS publishers; 1996.