

Design and Development of Commercial Vegetable Cutter for Indian Hotels



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Abstract:

There are large scale and small scale hotels across India providing good hospitality and variety of food which reflects the culture of India. The large scale hotels can afford all kinds of machinery required to maintain their standards of service. The small scale hotels are not strong to afford all the high class machinery. One of the essential machines needed in any hotel kitchen is the vegetable cutter. But these cutters are not economically affordable for the small hotel enterprises. The main aim of this project is to design a compact, functional, safe and easy to use vegetable cutter for small scale hotels.

The first phase of the project started with the research of existing cutters to understand this functioning, reliability, durability and mechanism. Data collection was carried out by adopting methodologies such as literature review, product study, market study and product environment study. Ergonomic studies were conducted for deciding product parameters and user interface. QFD and PDS were derived based on the data analysis. Concepts were generated with respect to the derived PDS and digital modelling was done. Final concept was selected by weighted ranking method.

The analysis revealed that the main requirement of the product was to cut 30-40/kg of vegetables per day to ease the work of chopping vegetables which was earlier tedious and time consuming. A 1:1 prototype model was fabricated to evaluate the final concept and get reviews from the customer.



Various concepts of commercial vegetable cutter



Digital rendering



Working model of vegetable cutter