Abstract

Design of Automated Filling Coffee Machine

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Coffee is one of the most consumed beverages in Palestine, and is served several times throughout the day. This leads to the consumption of large amounts of coffee powder, the process of preparing coffee in stores needs time, first weighting the coffee beans, then grinding it and finally filling it in its' bag.

However; there are several problems in this field. First, weight inaccuracy of the final product. Second, the problem of manual production process. Finally, time and effort inefficiency. Accordingly, we chose to exploit the developed industrial technology for designing an automated coffee filling machine; to overcome these problems.

We designed a coffee powder filling machine, that fills in plastic bags of different sizes compatible with the weight of the desired product by the customer (250 grams, 500 grams), and then close the bag tightly. In addition, we utilized the solar energy to provide electricity to the machine as an alternative source of electric power. Moreover, our design assists the operator who works on the machine to deal with it easily through automatic control system that depends on the data display screen.