

# VARIABLE SPEED CONTROL FOR ROTATING BBQ OVEN

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## ABSTRACT

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Variable Speed Control for Rotating BBQ Oven is not a new invention and it has been used to simplify human's life when it comes to grilling or smoking meat. It allows the meat to be grilled and smoked at a constant speed (speed depending on the type and size of meat) so as the heat is spread evenly on the meat as it rotates. This allows the meat to be still tender and juicy after grilling. One set back today is not many rotating BBQ oven (roisserie) is readily available in the market for domestic use. Thus, limiting domestic users to the choice of small BBQ pits which does not include a rotisserie.

Hence the aim of this particular project is to design and create a prototype which its size and dimensions are suitable for domestic use while still retaining its main function of a rotisserie, a grill and a speed control and a gear system. Basically downsizing what a person sees in a restaurant like Kenny Rogers and fitting that in the convenience of your backyard.

Materials used to come out with the prototype includes a table frame, MDF wood slabs, aluminum angle bar, zinc metal sheet, stainless steel rod, zinc metal portable charcoal BBQ pit, a bicycle pedal shaft, bicycle gears, bicycle chain, wheel barrow bearing, 4 pole condenser motor, and a electronic dimmer.

Taking into considerations the design, functionality, gear ratios and motor torque, a simple and humble prototype of a variable speed rotating BBQ oven is created satisfying its objective and principle yet leaving room for minor improvements and extra functionality.