

## ABSTRACT

*Radial flux permanent magnet generator is one type of electrical machine that can generate electrical energy that produces alternating current (AC), this generator is commonly called RFPM (Radial Flux Permanent Magnet). This generator generates a magnetic field from the permanent magnet poles located on the rotor so that there is no need for direct current amplification to generate magnetic field lines. In this research, a radial flux permanent magnet generator couple with 72 slots 24 poles will be designed using a brushless DC motor (BLDC) as a power supply to the accumulator. The results of the no-load test were carried out with variations in rotor rotation speed of 250, 500, 750, 1000, 1250 and 1400 RPM with variations in resistive, inductive and resistive-inductive loads to compare the capacity between one generator and two generators. The planned working voltage of the generator is 120-230.7 VAC (phase-neutral). The 1 x 12 coil fabricated coil was tested first before being modified to produce a voltage of 230.7 VAC (phase-neutral) at a speed of 1400 RPM. It is known that the voltage drop on one generator is 130,3 volts with a voltage regulation of 77,05%. Meanwhile, there are two generators with a voltage drop of 125.6 volts with a voltage regulation of .83,67%.*

*Keywords: brushless DC (BLDC), RFPM (Radial Flux Permanent Magnet), permanent magnet, double generator*