ABSTRACT

Is a tool that has two functions, namely as a nebulizer and suction pump. Function of the nebulizer is to make the process of dilution of sputum, where as the function of the suction pump is for suctioning sputum. These tools make use of the air conditioning compressor, where such a device would work interchangeably as needed. There are elections for nebulizer steam velocity, namely Low, Medium and High then the new process will be started by pressing the START button. Suction pump to perform vacuming can work directly without the selection as needed.

Such a device modified from the suction pump that has 2 valve type in compressor, in which the tool is retrieved from the hospital. Muhammadiyah Lamongan, in which the tool can not work Because the compressor suction pump from the dead.

Authors modify this tool by using Microcontroller as control voltage on the driver valve. So that the tool can work interchangeably between the two functions (nebulizer or suction pump).

The Testing is done with a tool to measure and compare the results of the pressure on the manometer and DPM-4 Fluke Biomedical. So we get an average measurement, a low standard deviation and error value.

From the calculation and measurement of pressure exercised 5 times, the data can be obtained error pressure 100 mmHg at 2.5% and 1.05% pressure 200 mmHg and 300 mmHg pressure for 0.8%. And the maximum error is ± 10%, it can be concluded that the modified instrument is feasible to use.

Keywords: Suction Pump, Nebulizer, Compressor