

# The Experimental Charge and Discharge Tanks

## Abstract

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The level of air condition is determined by three things, namely pressure, temperature, and volume of air. High pressure air can be used for specific purposes, such as pneumatic systems and gas-fueled cars. Therefore it is necessary to study the characteristics of charge and discharge air from the tank.

The research method is to remove the high pressure air to the outside air by opening the control valve and pressure tank, or enter the air from a tank into the other tank with the control valve opening and pressure tank. Response variable measured is the time required until the tank pressure down to a charge or a second pressure balanced tank for discharge. Another response is measured flow rate for both experiments.

The results that we obtained is the rate of change of pressure and flow rate for the discharge process is influenced by pressure and open lid while to process charge is influenced by the pressure of the tank I and valve openings.

*Key Words: charge, discharge, flow rate, tanks, high pressure air*