

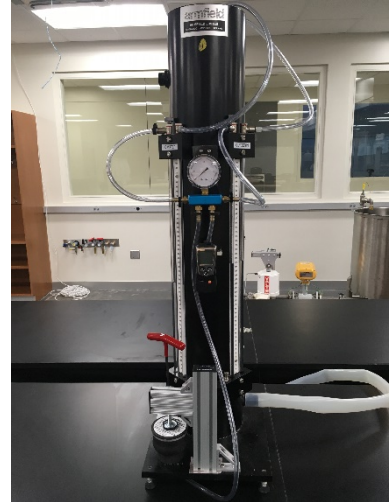
Pressure Measurement Apparatus and Operating Procedures

Objective

The purpose of this apparatus is to help students to understand the working and usefulness of multiple pressure measurement devices.

Apparatus

- 2 manometers, with different density fluids, water in one and glycerin in the other
- 1 digital gauge, for reading the absolute pressure
- 1 analog dial gauge, using a bourdon tube mechanism
- 1 adjustable diaphragm to increase the set pressure
- 2 pressure release knobs, one on the top of each manometer to set the zero for each side
- Drainage tubes for the event that the manometers are over-pressured and fluid overflows



Procedure

- Set the diaphragm to the desired zero point
- Turn on the digital gauge by pressing the power button
- Zero the gauges by opening the pressure release knobs at the top of the manometers
- Read the ambient pressure from the digital gauge (be sure to check the units)
- Tighten the pressure release knobs
- Tighten or loosen the diaphragm to change the pressure applied to the system
- When you have completed your testing, return the diaphragm to the initial zero position, loosen the pressure release knobs and turn off the digital gauge by pressing the power button until the screen goes blank