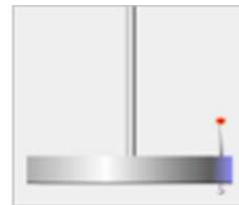


The piston. The volume of gas is changed by using the piston on top of the beaker. The piston can be moved up and down by clicking and dragging. If the volume is held constant by the control box, a clamp will be placed on the piston to prevent its movement.



72.959 Pressure (Pa)

The temperature control. Located at the top of the control box, the temperature control slider is adjusted by clicking and dragging the knob from left to right. Warmer temperatures will turn the coil red, and colder temperatures will turn the coil blue. Celsius is the default unit for temperature, but Kelvin can be selected by clicking the radio button next to the word “Kelvin.”



The molecule control. At the bottom of the control box are two buttons labeled “More” and “Less.” Use these buttons to adjust the number of gas molecules in the beaker. As the number is adjusted, the amount of bouncing molecules in the beaker will change accordingly.



Constants. By default, all variables are free to change as needed to maintain equilibrium. To investigate the ideal gas law further, it may be useful to set one variable to stay constant and watch what happens to the others when change is introduced in the system. There are 4 radio buttons above the control box to allow the student to do just that.

When temperature is selected to remain constant, the coil will maintain the current temperature of the gas no matter what other changes are added, and the temperature slider will be disabled.

When the volume is selected, a clamp will render the piston immobile and keep the volume constant.

Finally, when pressure is selected, a mass will be placed on the piston that will keep the current pressure no matter what happens to the temperature or number of molecules in the beaker. The piston will rise and fall, due to the mass, so that the pressure remains constant.

