

Kinetic Theory



Kinetic Theory – In Motion!

Purpose: Helps to visualize how the macroscopic properties of gases arise from atomic behavior.

This is amusing and fairly instructive. The DC motor jiggles a bunch of steel shot (the higher the voltage, the hotter the shot gas). The jiggling shot in turn produces an average pressure on the Styrofoam piston (equal to the piston's weight) and occupies an average volume V . As " T " is increased, V increases for a constant P . One can change P by removing some of the cardboard rounds.

Note: In principle you can also experiment with changing the number of atoms N , although this is a bit messy – and tedious in front of an audience.

Extra Equipment: 0-6 VDC power supply

Location: Shelf D3