Autoclave Portable

An autoclave, a device used for sterilization under high pressure and temperature. Here's some information about the specific model in the image:

- **Type:** It appears to be a vertical autoclave, commonly used in laboratories and healthcare settings.
- **Size:** The chamber size is likely 12x12 inches, as indicated by the model name.
- **Features:**
    - Pressure gauge: Displays the internal pressure during sterilization.
    - Safety valves: Release excess pressure if needed.
    - Temperature control: Manages the internal temperature for sterilization.
    - Drain valve: Allows for draining the water and steam after sterilization.

How it works:

1. The items to be sterilized are placed inside the autoclave chamber.

2. The chamber is sealed and filled with water.
3. The autoclave is heated to a high temperature (typically around 121°C) and pressure (around 15 psi) for a specific duration.
4. The high temperature and pressure kill any microorganisms present on the items.
5. After sterilization, the pressure is released and the items are allowed to cool down.

Uses in a Botany Lab:

Autoclaves are essential for sterilizing various materials used in botany labs, including:

- **Media and reagents:** To ensure they are free from contaminants that could affect plant growth or experiments.
- **Glassware and instruments:** To eliminate any microorganisms that could interfere with experiments or contaminate samples.
- **Soil samples:** To sterilize soil samples before conducting experiments on plant growth or microbial interactions.
- **Plant tissues:** To sterilize plant tissues for tissue culture or grafting procedures.

Overall, an autoclave is a valuable tool for maintaining aseptic conditions and ensuring the reliability of experiments in a botany lab.