

## Diffusion and Oxidation Furnaces

Fabrication of semiconductor devices relies on the creation of locally doped regions with chemical impurities of a desired concentration to generate carriers, which govern their electronic properties. These locally doped regions are fabricated using the process of diffusion, which are governed by Fick's law. Our tabletop furnaces create chemical impurities by using either spin-on-dopants or process gases. In our lab we use the furnaces to create n-type and p-type impurities and to grow oxide to act as an insulating layer.



Microtherm MT 1300 diffusion furnace.  
Furnace, power supply and temperature control unit encased in a single compact unit.