



125 to 1090°C

Furnaces Dual and Heat Pipe

- Essentially Gradient Free
- Simple to use
- Long Plateau Length

The Furnace Core

A heatpipe provides the ideal conditions for the creation and maintenance of freeze points from ITS-90. The core is essentially free from gradients meeting the recommendations of CCT/2000-13, "Optimal Realization of the Defining Points of the ITS-90..."

The heat pipe is designed so that the inner wall is not subject to thermal expansion stresses from the outer wall before the heat pipe reaches conduction temperature. The working fluid is permanently and safely sealed within the plasma-arc-welded enclosure.

Three temperature ranges are available

- Low Temperature 125°C to 250°C Water
- High Temperature 400°C to 1000°C Potassium
- Very High Temperature 500°C to 1090°C Sodium

An advanced proportional electronic control system with digital filtering controls the furnace temperature. Power feedback is used to stabilise against supply voltage changes.

Two entirely independent over-temperature safety circuits are provided.

Dual Furnaces

In addition to heat pipes described above the Dual Furnaces incorporate a second furnace which, because of its unique design, will safely (and without contamination) pre- and post-condition the thermometers.

To complete the apparatus, a further pre-warming tube (with a temperature approximately equal to that of the heat-pipe) made of a unique and gas-tight material, is provided, together with a storage rack for 4 thermometers.

