



50 to 500°C

# Furnaces

## Low Temperature

- Single Zone
- Aluminium Alloy Block
- Six to 12 Hour Plateau

The Isotech Low Temperature Fixed Point Furnace is designed specifically to realize and maintain the freeze plateaux of Isotech Indium, Tin and Zinc Fixed Point Cells, for calibration of thermometers on the International Temperature Scale of 1990.

The Low Temperature Furnace is a single-zone furnace.

The recommended procedure for establishing a freeze plateau requires operator attention until the plateau is realized. Following that, the Model 17701 Furnace will maintain the indium or the tin plateau, essentially automatically, for a period of 10 to 12 hours and the zinc plateau for 6 to 8 hours.

1. The furnace core, into which the freeze-point cell is inserted, is of aluminium alloy, which provides a very low thermal gradient along the core length. The main furnace heater is of the parallel-tube design as used at NIST. A pre-warming tube is provided.
2. An advanced proportioning electronic control system regulates furnace temperature, using a platinum resistance thermometer as sensing element. The controller may be calibrated in-situ using Freeze Point Cells as references.

Two entirely independent over-temperature safety devices are included. A dedicated (on-off) over-temperature control circuit provides active safety. A fusible link in the main power circuit provides passive safety.

3. The Low Temperature Furnace is completely self-contained, castor mounted and requires no external supplies (except power).



Annealing Adaptor

*Fixed Points of:  
Indium 156.5985°C, Tin  
231.928°C, and Zinc  
419.527°C, 6 to 12 Hours  
Plateau Annealing Adaptor,  
Active and Passive  
Safety Circuits*



Model	ITL-M-17701
Temperature Range	50°C to 500°C
Uncertainty	<1mk (with cells)
Control	0.1°C Resolution
Communications	Included as standard
Power	1.5kW, 108-130 or 208-240VAC, 50/60Hz
Core Size	54.7 x 420mm
Dimensions	Height 960mm Width 600mm Depth 560mm Weight 115kg

### Accessories

- 411-01-11 Annealing Adaptor
- 824-01-00 Fan Assembly

### How to order

ITL-M-17701 Low Temperature Furnace  
Please specify voltage required