



50 to 500°C

# Furnaces Low Temperature

- Affordable Single Zone Furnace
- Simple Operation
- For Indium, Tin and Zinc Cells

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 plateau, essentially automatically, for a period of 10 to 12 hours.

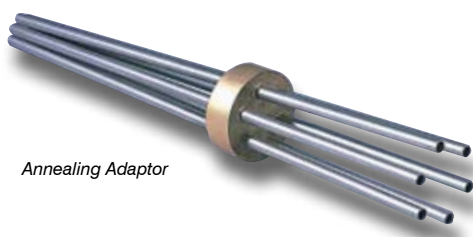
The furnace core, into which the freeze-point cell is inserted, is of aluminium alloy, which provides a very low thermal gradient along the core length. The main furnace heater is of the parallel-tube design as used at NIST. A pre-warming tube is provided.

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.

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

## New Features

The furnace has been upgraded to benefit from the latest technology. Fitted with a crystal clear colour display the furnace is now fully programmable. Programs can be created for the furnace to switch between set temperatures, for example to bring the furnace to the melt or freeze temperature at a desired time, or to lower the furnace temperature after a predetermined time. The PID control parameters are now dynamically optimised at different temperatures optimizing furnace stability. An Ethernet interface allows the furnace temperature to be monitored across a network whilst a USB Interface allows programs to be copied or for the furnace heat up and cool down history to be exported.



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. Power Feedback
Interfaces	Ethernet and USB Host
Core Size	54.7mm x 420mm
Dimensions	Height - 960mm Width - 600mm Depth - 560mm Weight - 115kg
Power	1.5kW, 108-130 or 208-240Vac, 50/60Hz

## Accessories

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

## How to order

ITL-M-17701 Low temperature furnace.  
Please specify voltage required