Furnaces
Medium Temperature

50 to 700°C

■ Wide Operating Range

■ For Indium, Tin, Zinc and Aluminium Cells

■ Three Zone Design

Whilst heat pipe furnaces offer the ideal environment to melt and freeze ITS-90 Fixed Points the temperature range is limited by fluid that flows inside the pipe. Three zone furnaces can offer wider operating ranges and still meet the requirements for "Optimal Realization of the Defining Points of the ITS-90…" CCT/2000-13. In place of a heat pipe the 17703 Medium Temperature furnace uses top and bottom guard heaters to minimise temperature gradients.

The Model 17703 Furnace can be used with Indium, Tin, Zinc and Aluminium Cells. The substantial furnace core is machined from aluminium bronze.

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.

Fixed Points of: Indium 156.5985°C, Tin 231.928°C, Zinc 419.527°C, and Aluminium 660.323°C Active and Passive Safety Circuits, Equalizing Block for Comparison Calibration
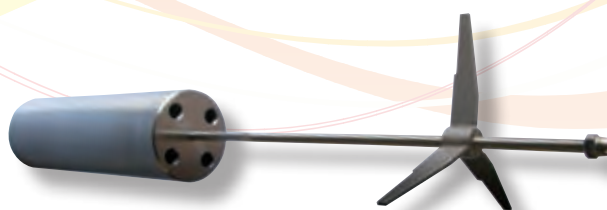
Equalizing Block

Model	ITL-M-17703	
Temperature Range	50°C to 700°C	
Uncertainty	<1mK (with cells)	
Control	0.1°C Resolution. Gain Scheduling Action and Power Feedback	
Interfaces	Ethernet and USB Host	
Core Size	54.7mm x 420mm	
Dimensions	Height - 960mm Width - 600mm Depth - 560mm Weight - 115kg	

Power   3kW, 108-130 or 208-240Vac, 50/60Hz

Accessories
420-02-18 Aluminium Bronze Equalising Block
824-01-00 Fan Assembly (to cool the thermometer handle)
411-01-11B Annealing Adaptor

How to order
ITL-M-17703 Medium Temperature Furnace.
Please specify the voltage required.