



30 to 350°C

# Surface Measurement

## Model 944

- Indicates True Surface Temperature
- 30°C to 350°C
- Resolution 0.1°C

The fundamental problem with surface temperature measurement is that it is subject to large stem conduction errors, also because heat conducted from the surface of the hot-plate causes a localised cold spot to be created which means that the temperature indicated by the hot plate is not necessarily the temperature at the point of measurement.

An ideal system would not disturb the heat-flux from the hot-plate.

During 1993 such a system was described (ref. "Progress in Contact Thermometry" 1993 B. D. Foulis) and Isotech have the inventors permission to make and market the device World-wide.

### Principal of Operation

A fine wire type N thermocouple is used as the surface temperature sensor, a second junction 2 to 3mm along the thermocouple, senses the temperature difference due to heat flux along the sensor.

A heater heats the thermocouple stem until the temperature gradient is zero, thus creating a measurement without stem conduction, or disturbance of the hot-plate's surface.

The 944 can be used with the Isotech Small Hot Plate model 983. A traceable calibration certificate is available to order.



Model	944 True Surface Temperature Measurement System	
Temperature Range	30°C to 350°C	
Resolution of display	0.1°C or 0.1°F	
Stability	±1°C	
Accuracy	±2°C with TRACEABLE Certification ±5°C without Certification	
Probe Assembly	Probe Diameter	7.5mm
	Probe Length	150mm
	Lead Length	850mm
Power Supply	100V - 120V, 50 / 60Hz or 200V - 240V, 50 / 60Hz	
Dimensions	Height	90mm
	Width	153mm
	Depth	265mm (excluding plugs)
Weight	4kg	

### How to Order

Model 944 & Probe 935-14-81

Please state supply voltage required

Please state if Calibration is required