

ISOCAL - 6 Range Europa • Venus • Calisto

- 35 x 160mm Calibration Volume
- The Most Flexible Temperature Calibrator
- S model includes Universal Input Temperature Indicator
- Windows Software and PC Interface

These models will calibrate temperature probes from -45°C to 250°C with unrivalled flexibility. As a traditional Dry Block, several thermometers can be quickly calibrated. Accessories are available to convert to a stirred liquid bath, for surface sensor calibration, to calibrate infrared thermometers and even to use as an ITS-90 Fixed Point System with calibration uncertainties as small as 0.0005°C.

These award winning calibrators are easy to use - see the pictorial guide. For simple tests and checking of probes, these can be compared to the values shown on the advanced digital temperature controller. The SITE model includes an independent temperature indicator which, combined with a reference probe, ensures traceability, best practise, adherence to quality standards and calibration to the smallest of uncertainties. A three point traceable calibration certificate is included as standard with all models.

Isotech is a world leader in temperature calibration, providing many nations with their Primary Standards and operates a full scale UKAS accredited calibration laboratory. UKAS calibration at five points is optional and is provided from our in-house laboratory.

Benefit from our experience and understanding in calibration at all levels, our evaluation reports, our tutorials and uncertainty calculations.

These models meet the calibration capacity requirements of EURAMET/cg-13/v.01, "EA Guidelines on the Calibration of Temperature Block Calibrators, formerly EA10/13.



<http://www.isotech.co.uk/industrial/>



Specification

Model	Europa 6 ^{PLUS}	Venus ^{PLUS}	Calisto ^{PLUS}
Temperature Range	-45°C to 140°C (1)	-35°C to 140°C (2)	30°C to 250°C (3)
Stability	Dry Block: $\pm 0.03^{\circ}\text{C}$, Blackbody: $\pm 0.3^{\circ}\text{C}$, Surface Sensor: $\pm 0.5^{\circ}\text{C}$, Liquid Bath: $\pm 0.025^{\circ}\text{C}$, ITS-90 Cells: $\pm 0.0005^{\circ}\text{C}$, Ice Bath: $\pm 0.001^{\circ}\text{C}$ (not Calisto)		
Accuracy (4)	0.15°C	0.15°C	0.25°C
Uniformity - Between Wells Dry Block Mode (Radial)	<0.008°C	<0.008°C	<0.02°C at 250°C
Uniformity - Radial Liquid Bath Mode	<0.02°C	<0.02°C	<0.011°C at 250°C
Uniformity - Lower 40mm (Axial) Dry Block Mode	<0.040°C	<0.040°C	<0.25°C
Uniformity - Lower 40mm (Axial) As Liquid Bath	<0.026°C	<0.026°C	<0.02°C at 250°C
Heating Time	-30°C to 140°C: 15 Mins	-30°C to 140°C: 15 Mins	25°C to 250°C: 15 Mins
Cooling Time	140°C to 0°C: 15 Mins	140°C to 0°C: 15 Mins	250°C to 30°C: 25 Mins
Insert Diameter	35mm		
Immersion Depth	160mm		
Insert Types	Choice of Three - See Accessories		
PC Interface	Included - Supplied with PC Cable and Software		
Power	300 Watts	150 Watts	300 Watts
Voltage	115Vac or 230 Vac 50/60Hz		
Dimensions	302 x 176 x 262 mm		
Weight	14kg	10.2kg	8kg

(1) In ambient of 20°C: Minimum Temperature is 65°C Below Ambient, Absolute Minimum -55°C

(2) In ambient of 20°C: Minimum Temperature is 55°C Below Ambient, Absolute Minimum -45°C

(3) In ambient of 20°C

(4) Dry Block Mode only: Comparing 4.5mm Well to Controller Display Value.

A three point traceable calibration certificate is included. UKAS calibration options available, contact Isotech for advice and options.

Features (Basic & Site)	Europa 6 ^{PLUS}	Venus ^{PLUS}	Calisto ^{PLUS}
Dry Block	✓	✓	✓
Stirred Liquid Bath Option	✓	✓	✓
Stirred Ice Bath Operation	✓	✓	—
Surface Sensor Option	✓	✓	✓
Infrared Calibration Option	✓	✓	✓
ITS-90 Fixed Point Cells	Mercury, Water, Gallium	Water, Gallium	Gallium
Additional 8mm Pre-heat Pocket	✓	✓	✓
Configurable Units: °C, °F and K	✓	✓	✓
Supply Voltage Power Correction with Digital Filtering	Provides High Stability protecting against noise and supply voltage variation		
Additional Features (Site)			
Independant Temperature indicator	✓	✓	✓
Universal Input Types PT100	✓	✓	✓
Thermocouples Types K,N,R,S,L,PL2,T,J,E	✓	✓	✓
Linear Process Inputs Including 4-20 mA	✓	✓	✓
Stand Alone Thermostat Testing	✓	✓	✓
Thermostat Testing With PC	✓	✓	✓
Five Point Digital Probe Matching	✓	✓	✓
Configurable Units: °C, °F and K	✓	✓	✓

Isocal-6 Ultimate Flexibility - Europa, Venus & Calisto

Calibrate all sensor types - Thermocouples, PRT's, Thermistors, Thermostats, Infrared, Surface Sensors...

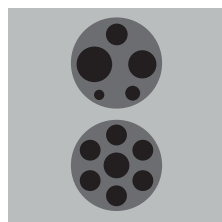


1 Dry Block Mode with Inserts

951-02-15 An Insert is included:
(2 x 4.5mm, 2 x 6.4mm, 1 x 8mm & 1 x 9mm) x 157mm Deep.

All Inserts have a 4mm tapped hole to suit supplied extractor tool.

Alternative Inserts



951-06-07 Standard Insert type B
13mm, 10mm, 8mm, 5mm and 3.5mm dia.
holes, all 157mm deep

951-06-08 Special Insert type C
8mm, 6 x 6.5mm dia.
holes, all 157mm deep

951-02-15A Blank Insert without
pockets for local
machining. Includes M4
tapped hole for supplied
extractor tool.

951-02-15C Custom insert. Isotech
can provide custom
drilled pockets, minimum
of 3mm separation
between holes. Contact
with your requirements.

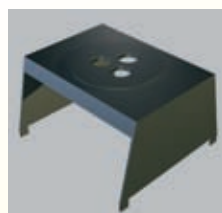


2 Stirred Liquid Mode with Liquid Container Kit

Allows liquid bath use, includes
container, magnetic stirrer, probe guide
and sealing cap. **951-06-01**

3 Stirred Ice Bath Mode with Liquid Container Kit

Uses same liquid kit to provide 0°C
reference as a stirred ice bath (Not
Calisto)



Additional Accessories for use with the above kit

Thermometer Support Kit

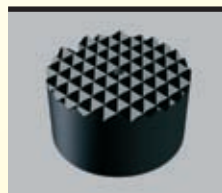
951-06-03 Allows three thermo-
meters to be suspended
in the bath, including
liquid in glass types

Oils

520-05-01 C10 Oil -35°C – 140°C 0.1L

951-06-06 C20 Oil 20°C – 200°C 0.1L

953-04-01 VH Oil 150°C – 250°C 0.1L



4 Infrared Calibration Mode with Blackbody Target

951-06-04 Use optional Probe
935-14-82 placed in the
auxiliary block pocket
for use as a reference.



5 Surface Sensor Calibration with Surface Sensor Kit

951-06-02 Includes angled
platinum resistance
thermometer.



6 ITS-90 Fixed Point Cells

17724M Slim Mercury Cell
(Europa Only).

B8 Water Triple Point Cell
(Venus and Europa)

17401M Slim Gallium Cell (Europa,
Venus and Calisto)



UKAS Calibration

UKAS Calibration available to order,
legally traceable in more than 70
countries.



Standard Probe

935-14-82/DB Platinum Resistance
Thermometer.
4.5mm diameter
Angled head feature
avoids sensors in
block.



Carrying Case

931-22-64 Sturdy case
accommodates the unit
with room for
accessories



Transit Case

931-22-105 Resin case with inline
wheels and pull out
handle. Ideal for
transporting the calibrator.

Note: The Transit Case is suitable for use in Dry Block
Mode, it is not recommended for use with filled
liquid containers as the liquid may spill.

How To Order

Specify Model, Basic or Site, Supply Voltage, Accessories and
if UKAS Calibration is required.