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ISOCAL - 6 Range
Oceanus-6

- 50 x 300mm Calibration Volume
- Use with Water and Gallium Fixed Points
- Can also be used as a Dry Block, Liquid Bath...
- -25°C to 140°C

The Oceanus-6^{PLUS} has all the advantages of the Isocal-6 models but with a substantially larger calibration volume, 50mm diameter by 300mm deep. The Oceanus-6 can be used as a Dry Block, a Liquid Bath, a Blackbody Source for infrared thermometers, a Surface Sensor Calibrator and for performance to a few mK (0.001°C) ITS-90 Fixed Points. The Oceanus-6^{PLUS} is available in two models, the BASIC (B) and the SITE (S). The B model includes a sophisticated temperature controller with a dual display for Set Temperature and Dry Block Temperature.

The S model includes a built in digital thermometer to which an external standard thermometer can be connected, for Dry Block use this will give greater accuracy eliminating temperature gradient and loading errors.

For Liquid Bath, Surface Sensor or Blackbody use an external thermometer should always be used - either with the S model or the B model and a separate stand-alone indicator. For Lab use the Oceanus-6^{PLUS} can be used with a laboratory performance temperature indicator such as one of the Isotech True Temperature Indicators with performance, for similar sensors, down to hundredths of a degree. The Oceanus-6^{PLUS} offers unprecedented accuracies of ±0.0002°C (2 Sigma) at the Water triple point and the Gallium melt temperature of 29.7646°C and up to ±0.005°C in the stirred liquid bath option (by comparison).

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

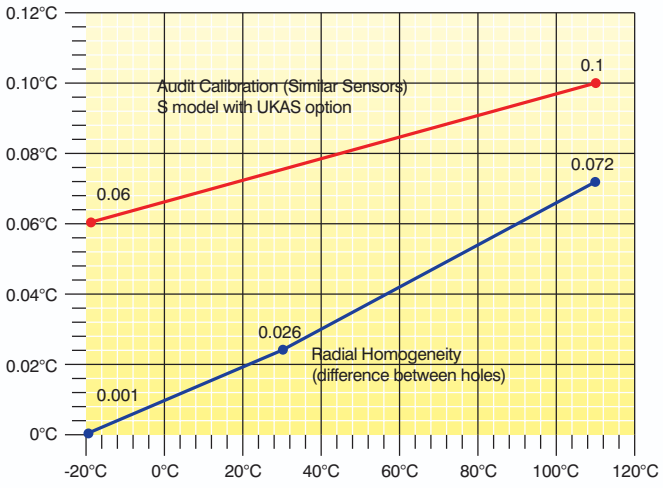
Specification

Model	Oceanus-6
Temperature Range	45°C below ambient to +140°C
Absolute stability over 30 minutes	Dry Block ±0.03°C Stirred Liquid Bath ±0.025°C Ice/Water Bath ±0.001°C Blackbody Source ±0.3°C Surface Sensor Calibrator ±0.5°C ITS-90 Fixed Point ±0.0002°C
Computer Interface	Included with Software
Cools from	20°C to -10°C in 90 minutes
Heats from	-10°C to 80°C in 60 minutes
Calibration volume	50mm diameter by 300mm deep
Standard Insert	6 pockets, all 8.0mm diameter and 250mm deep

Display Resolution	0.01	-19.99 to 99.99 0.1 100.0 to 140.0 PC can display 0.01 across whole range with the software included
Indicator units	°C, °F, K	
Power	108 to 130V (50 / 60 Hz) or 208 to 240V (50 / 60 Hz) 300 Watts	
Dimensions	Height 430mm Width 310mm Depth 300mm	
Weight	17kg	

Isocal-6 Performance and Use

580 Oceanus 6



Calibration and Uncertainty

A certificate, traceable to National Standards, is included as standard. Recommended is an optional UKAS five-point calibration.

The accuracy will depend very much on the mode of use and the types of sensor to be used. Please contact Isotech for tutorials and uncertainty calculations and comprehensive evaluation reports. The 580 Oceanus-6^{PLUS} meet the Calibration Capacity requirements of EURAMET/cg-13/v.01, "Guidelines on the Calibration of Temperature Block Calibrators".

Features (Basic & Site)	Oceanus 6+
Dry Block	✓
Stirred Liquid bath Option	✓
Stirred Ice Bath Operation	✓
Surface Sensor Option	✓
Infrared Calibration Option	✓
ITS-90 Fixed Point Cells	*Water, Gallium*
Additional 8mm Pre-heat Pocket	✓
Configurable Units: °C, °F and K	✓
Supply Voltage Power Correction	✓

Additional Features (Site)	Oceanus 6+
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	✓

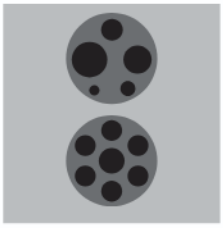
Isocal-6 Ultimate Flexibility - Oceanus

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

1 Metal Block Insert 580-06-03
Standard Insert included

Alternative Inserts

580-06-04 Blank Insert without pockets for local machining. Includes M4 tapped hole for supplied extractor tool.

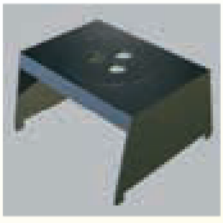


580-06-05 Custom insert. Isotech can provide custom drilled pockets, minimum of 3mm separation between holes. Contact with your requirements.

580-06-06 Adjustable Equalising Block. Six pockets 8mm x 157mm deep.

2 Stirred Liquid Mode with Liquid Container Kit 580-06-07
Allows liquid bath use, includes container, magnetic stirrer, probe guide and sealing cap.

3 Stirred Ice Bath Mode with Liquid Container Kit
Uses same liquid kit to provide 0°C reference as a stirred ice bath

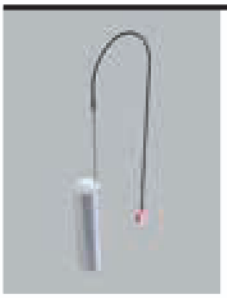


Additional Accessories for use with the above kit

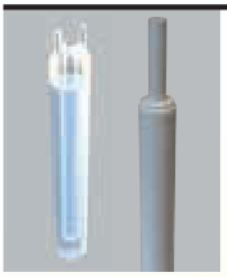
Thermometer Support Kit
580-06-00 Allows three thermometers to be suspended in the bath, including liquid in glass types

C10 Oil
936-06-07 1 Litre (-35°C to +140°C)

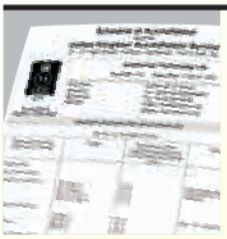
4 Infrared Calibration Mode with Blackbody Target
580-02-12 Use optional Probe **935-14-85** placed in the auxiliary block pocket for use as a reference.



5 Surface Sensor Calibration with Surface Sensor Kit
580-06-08 Includes angled platinum resistance thermometer.



6 ITS-90 Fixed Point Cells
B12/46/210 Water Triple Point Cell
17401 Gallium Cell



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

Standard Probe
935-14-85/DB Platinum Resistance Thermometer for use up to 250°C.
6mm diameter Angled head feature avoids sensors in block.

Carrying Case
931-22-58 Sturdy case accommodates the unit with room for accessories

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