



**DENVER**  
metrología electrónica, S.L.



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## Description

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Venus 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 additionally includes an in-built temperature digital indicator to which an external temperature sensor can be connected. It ensures traceability, best practise and adherence to quality standards and calibration to the smallest of uncertainties

For dry block use, the unit under test may be compared to the controller value. The use of an external probe connected to the indicator of the Site model which compensates for the temperature gradient and loading errors, is recommended. This gives greater accuracy and traceability meeting the requirements of ISO 9000 and other quality standards.

For liquid bath, surface sensor and blackbody use, an external standard probe should always be used, either with the S models indicator or a separate stand-alone indicator.

For laboratory use, Venus can be used with a laboratory performance temperature indicator.

### Key features:

- Low temperature operation:  $-35^{\circ}\text{C}$  in ambient temperature of  $20^{\circ}\text{C}$
- Use for Fixed Point of Water and Gallium
- Calibration as a liquid bath or a dry block: thermocouples, platinum resistance thermometers, thermistors, liquid in glass, thermostats, semiconductor types

## Specifications

Temperature range	-35°C (Tamb 20°C) to +140°C
Stability as:	±0.03°C
Dry block	±0.3°C
Blackbody	±0.5°C
Surface sensor	±0.025°C
Stirred liquid bath	±0.0005°C
ITS-90 Fixed Point cells	±0.001°C
Ice bath	
Accuracy as dry block	0.15°C
Uniformity:	
Between holes as dry block	< 0.008°C
Radial as liquid bath	< 0.02°C
Lower 40 mm (Axial) as dry block	< 0.04°C
Lower 40 mm (Axial) as liquid bath	< 0.026°C
Heating time	-30°C to 140°C: 15 min
Cooling time	140°C to 0°C: 15 min
Insert diameter	35 mm
Immersion depth	160 mm
Insert types	3 different types

## General specifications

Size	302 x 176 x 262 mm
Weight	10.2 kg
Power supply	115 VAC or 230 VAC (50/60 Hz) 150 Watts
Communication ports	RS 232

## Models and accessories

### Instrument:

VENUS B            Dry block, liquid bath & blackbody source – Basic model

Delivered in standard with:

- Standard insert with 35 mm diameter
- Cal Notepad software
- Serial communication cable
- User manual
- Traceable certificate

VENUS S            Dry block, liquid bath & blackbody source – On Site model

Delivered in standard with:

- Standard insert, diameter: 35 mm
- Cal Notepad software
- Serial communication cable
- User manual
- Traceable certificate
- Built-in digital indicator
- Connector for probe 935-14-82/DB

### Stirred liquid bath / Stirred ice / Water bath:

951-06-01            Stirred liquid container for alcohol, water and oils

951-06-03            Liquid in glass thermometer support kit

### Metal block bath:

951-02-15            Additional standard insert of 6 holes of diameter: 1x 9.5 / 1x 8 / 2x 6.4 / 2x 4.5 mm

Depth: 157 mm

951-02-15a            Blank insert

951-02-15c            Non-standard insert

951-06-07            Alternative insert type B

Hole diameter: 1x 13 mm / 1x 10 mm / 1x 8 mm / 1x 5 mm / 1x 3.5 mm

Depth: 157 mm

951-06-08            Alternative insert type C

Hole diameter: 1x 8 mm / 6x 6.5 mm

Depth: 157 mm

935-14-82/DB      Semi standard platinum resistance thermometer Pt100 class A  
Length: 210 mm, diameter: 4 mm  
Temperature range: -50°C to +250°C  
UKAS              5 Point comparison calibration

### Blackbody source:

951-06-04              Blackbody target

### Surface sensor calibrator:

951-06-02              Surface sensor calibrator kit

### ITS-90 fixed point apparatus:

M 17401M              Slim Gallium Melt Point cell, insulation assembly

B8/30/130              Water triple point cell, container and 3 caps

### Other accessories:

931-22-64              C10 Oil (-35°C to 140°C), 0.1 L required  
932-12-55              Replacement liquid container magnetic followers (Qty 5)  
935-14-83              Replacement surface sensor probe  
951-02-19              Replacement surface sensor insert  
951-02-29              Slim TPW cell container only  
951-02-30              Slim TPW cell container caps only (Qty 3)  
931-22-64              Carrying case

### Packing information:

Size                      302 x 176 x 262 mm

Weight without packing 10.2 kg



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