



150 to 1200°C

# Portable Calibration Furnace Pegasus

- 33.5 x 130mm Calibration Volume
- 150 to 1200°C
- High Temperature Portable Calibration Furnace
- PC Interface and Software included

The Pegasus<sup>PLUS</sup>1200 range offers extreme high temperature calibration in an easy to use portable package - ideal for the calibration of high temperature thermocouples. It has been designed for fast heating and finds applications in the glass, electrical power, automotive and material processing industries. A Blackbody target can be added for the calibration of infrared thermometers.

The standard insert has four 8mm pockets 80mm deep. The metal insert is strategically placed beneath 50mm of insulation to provide optimal performance over the radiant temperature range. For larger blocks see the Oberon model. The Pegasus is available in two models, the BASIC (B) and the SITE (S). The B model should be used with an external reference probe and indicator, such as the TTI 7. The thermocouples under test should be calibrated by comparison to the external probe.

The S model includes a built in digital indicator to which an external standard thermometer should be connected, giving greater accuracy eliminating temperature gradient and loading errors. The recommended probe is a platinum Type R thermocouple. The optional Blackbody target is used with a specially angled Type R thermocouple that sits immediately behind the target area.

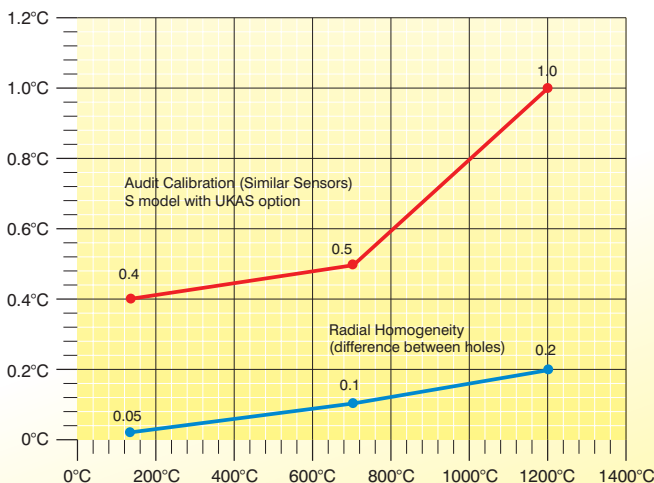
Includes as standard: Windows Software and a Computer Interface. Increased resolution of  $\pm 0.1$  available throughout the range via the PC interface and from 150.0 to 999.9 locally on the autoranging front display. The controller features multi-point block to display correction giving good absolute accuracy.



The S model has universal sensor input allowing Platinum Resistance Thermometers, Thermocouples (Types K, N, R, S, L, B, PL2, T, J and E) along with Linear Process Inputs including 4-20mA current transmitters to be displayed on the inbuilt indicator. The indicator can be programmed with up to five calibration points to provide high accuracy digital probe matching. The indicator and controller are both addressable over the communications link.

The Site model can also be used with the supplied Cal Notepad software to test thermostats.

## Pegasus<sup>PLUS</sup> 1200




### 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 Pegasus<sup>PLUS</sup> 1200 meets the Calibration Capacity requirements of EA I0/13, "EA Guidelines on the Calibration of Temperature Block Calibrators".

<b>Model</b>	<b>Pegasus<sup>PLUS</sup> 1200</b>	
Temperature Range	150°C to 1200°C	
Absolute stability over 30 minutes	At 150°C	±0.1°C
	At 1200°C	±0.2°C
	Blackbody Source	±0.3°C
Cools from 1200°C to 800°C	in 50 minutes*	
1200°C to 200°C	in 180 minutes*	
	*substantially reduced by the cooling adaptor	
Heating Rate	25°C/minute	
Calibration volume	33.5mm diameter by 130mm deep	
Standard Insert	4 pockets, 8.0mm diameter by 80mm deep	
Display Resolution	(0.1) to 999.9 and (1) 1000 to 1200 PC can display 0.1 across whole range with the software included	
Indicator units	°C, °F, K	
Computer Interface	Included with Software	
Voltage	100 to 120V (50 / 60 Hz) or 200 to 240V (50 / 60 Hz)	
Power	800 Watts	
Dimensions	Height 302mm Width 176mm Depth 262mm Weight 13kg	

## Accessories - Pegasus

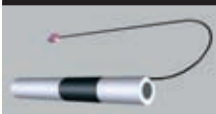


**Metal Block Insert**

**853-06-01** Standard Insert Included  
Four 8mm pockets.  
Pocket depth 80mm + 50mm insulator.  
Effective depth 130mm.

**853-06-02** Blank Insert  
*Insert without pockets for local machining*

**853-06-02b** Custom Insert  
*Contact Isotech with your requirements*



**Blackbody Kit**


**853-06-03** Includes a Blackbody target and Sensor

*The Pegasus 1200 has to be used with the target vertical. The Pegasus 1200R is suitable for horizontal operation.*



**UKAS Calibration (S models only)**

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




**Standard Probe**

**935-14-91** Type R Platinum Thermocouple for use up to 1200°C.



**Air Cooling**

**853-04-02** For use with a compressor this accessory allows air to be blown into the block for rapid cooling.



**Ceramic Insulators**

**853-06-04** Spare insulation pack  
Includes 2 x standard tops and 2 x standard bottoms.



**Carrying Case**

**931-22-64** Purpose designed carrying case. Ideal for storing the calibrator and accessories



**Transit Case**

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

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

# An Introduction to Fast Calibrators

This section focuses on the equipment needed for the rapid checking, testing and calibration of instrumentation and temperature sensors.

Service engineers and those working on site will appreciate the benefits of simple and fast temperature calibration. An engineer forced to carry a calibrator up a ladder or into a confined space will value the handheld QuickCal.

The Products Featured in this section have:

- Outstanding Value
- Compact Size with true handheld models
- Wide Operating Ranges
- Fast Response

## Quick-Cals

There are two Quick-Cal models, handheld, portable and capable of operating from -12°C to 350°C

## Fast-Cals

Fast-Cals work from -35°C to 650°C in three ranges, -35°C to 140°C, 30°C to 350°C and 35°C to 650°C.

During 2004, 20 experienced engineers from many parts of the world specified their ideal products for Industrial Calibration. Fast-Cal realizes their top ten requirements of:

- 1 Rugged
- 2 Lightweight
- 3 Easy to use on site
- 4 Low cost/high benefit ratio,
- 5 Fast response, high stability
- 6 Time saving features
- 7 Multiple sensor testing
- 8 Software
- 9 Modern design
- 10 Compliant with latest regulations.

One model is ideal for the Validation of Washer Disinfectors, Steam Sterilisers and Autoclaves. In place of a removable insert it has a fixed block with pockets for a reference probe and the type of test sensor commonly used in validation applications.

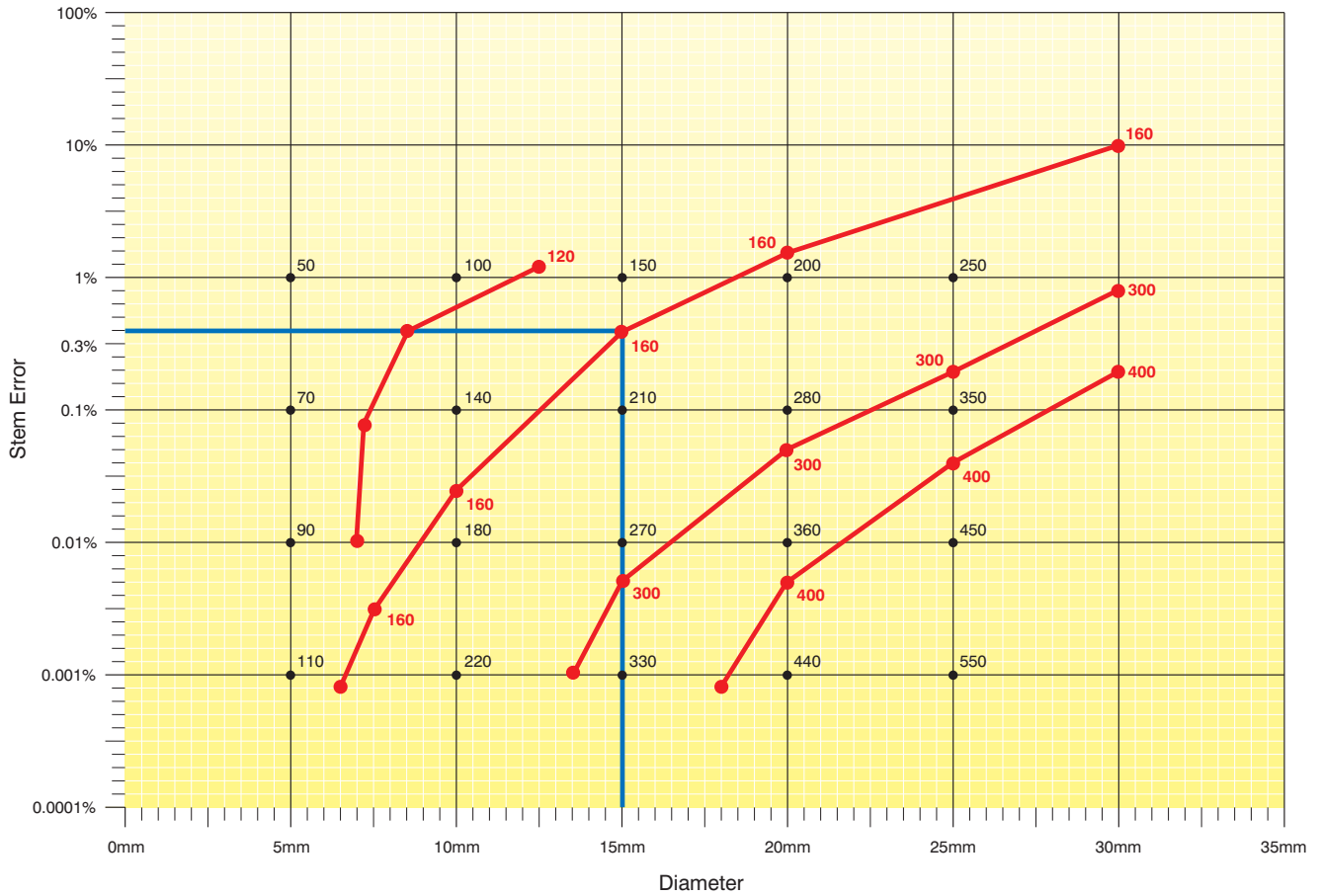


## ■ Immersion depth is very important

When selecting a Dry Block Calibrator depth of immersion is very important. The chart below provides guidance in selecting a bath for immersion depth. Note that sensors with

a long sensing length will require greater immersion. The chart is general and applies equally to all dry blocks - not to a particular model or manufacturer.

**Immersion Depths** for various diameter thermocouples or thermistors in a dry block bath



Example shows 0.3% stem error for a 15mm diameter thermocouple immersed 160mm in a dry block.

**Note 1** For sensors immersed in stirred liquids the diameter of sensor can be doubled, or the minimum depth halved.

**Note 2** The sensing length must be added to the above immersion depth calculation

**N.B.** The above gives a good guide, however each sensor will be slightly different.

For full information on selecting the correct immersion depth for all types of sensors ask for our free 8 page immersion tutorial.