



ISOTECH

Pegasus-T

Calibrate Short Sensors
at High Temperatures...

**2020
UPDATES**



A New Solution...

To Calibrate Short Sensors at High Temperatures



Pegasus-T - Special Application

Calibrate Short Sensors at High Temperatures...

The Pegasus 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.

The Pegasus-T is the latest member of the Pegasus family developed for sensors that are simply too short to be calibrated in the Pegasus 4853 or other conventional calibration furnaces.

The advanced control system allows the user to select optimal performance for sensors immersed at 25mm, 35mm or 50mm with three independent control loops. It also has built in over-temperature protection to protect the heater wire from over-temperature thus increasing life expectancy.

■ Immersion Depth

Calibration engineers understand that to get the best accuracy temperature sensors should be immersed deeply into a calibration bath or furnace and compared to a reference thermometer.

■ Calibrate Short Sensors

But how to calibrate very short sensors such as those used in the automotive industry? These sensors are too short to go into conventional furnaces. The Isotech Pegasus Model 4853 has an immersion depth of 130mm which will suit many sensors but what if the sensor is very short, 25mm to 50mm? Large furnaces are unsuitable and calibrating these types of device provides a significant measurement challenge.

■ Dynamic Heating Zone

The new Pegasus-T has been developed for this very challenge and features a dynamic heating zone for short immersion probes providing a calibration source for sensors that are too short for other furnaces. It is being trialled and adopted at a number of customer sites in Europe and Asia and is now released for general sale.



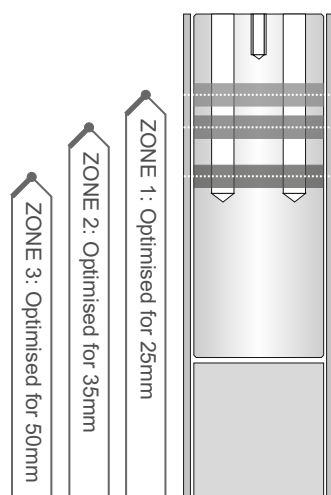
Flexible Operation to Suit Your Sensor Types

Pegasus-T allows you to choose an internal control sensor at the same depth the sensors under test, selecting from three internal noble metal control sensors or using an external control sensor placed at the same depth as the sensor under test.

1

Dynamic Heating Zone

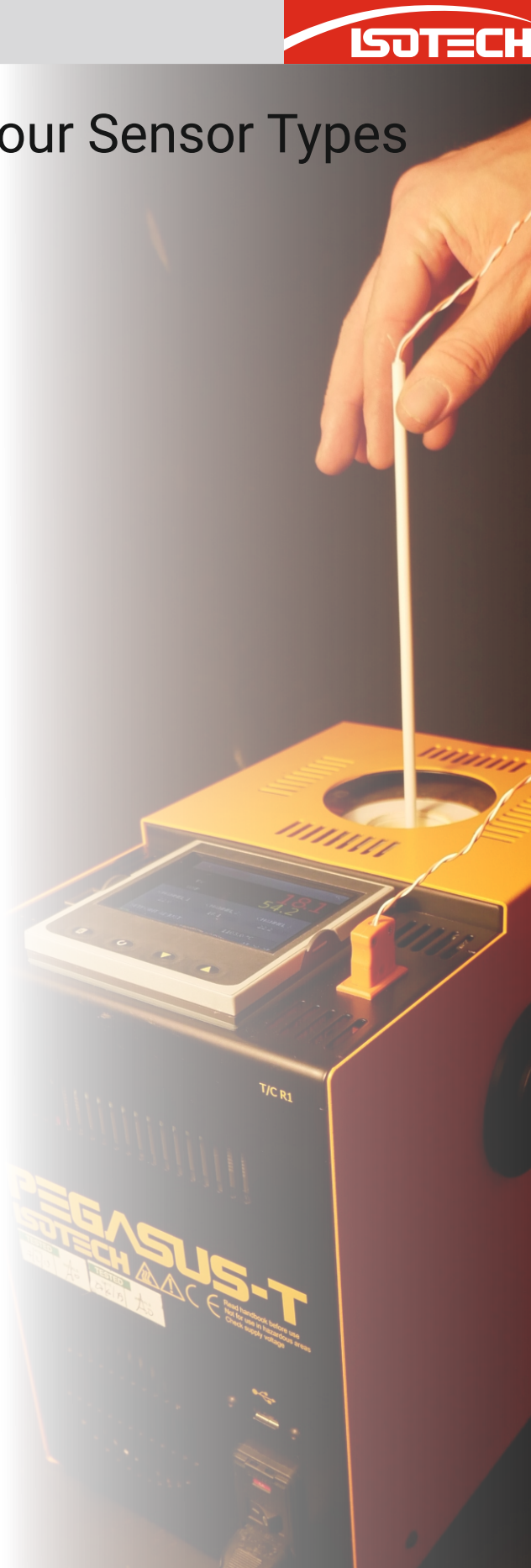
Choose one of three internal thermocouples to optimize performance for different length sensors.



2

Control from an External Sensor

Switch from the internal control sensor to an external Type R thermocouple that can be placed alongside the test sensor.



3

Independent Reference Channel

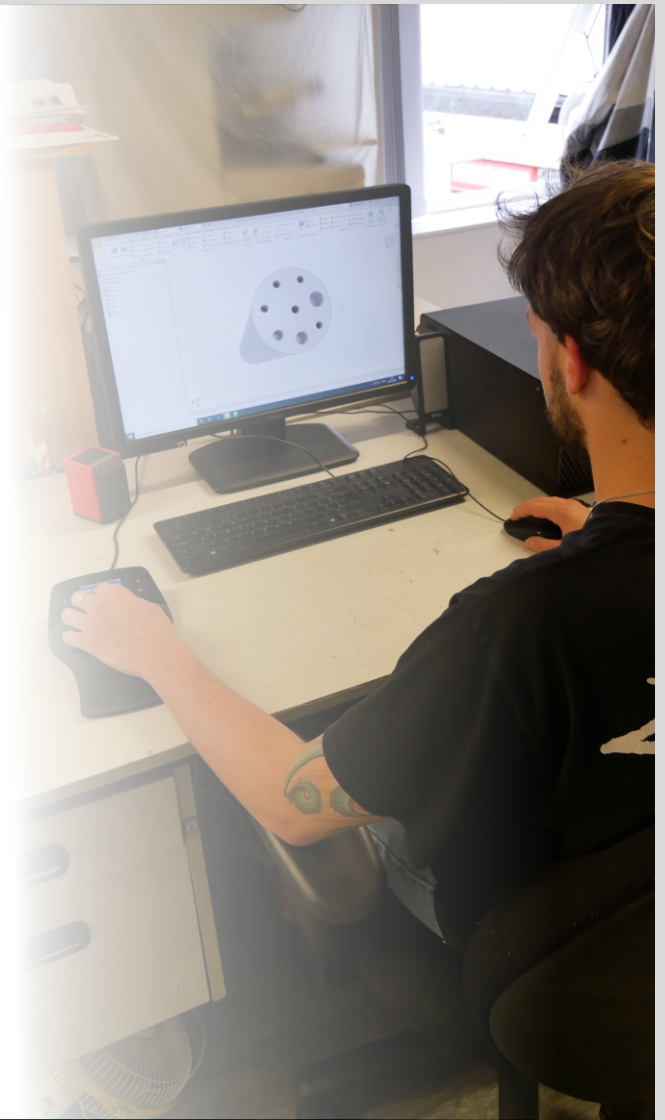
Type R thermocouple input, can be used for external control or with a reference probe for an independent temperature measuring loop, option for UKAS calibration.

Accuracy

With short immersion probes there can be large errors as the sensor cannot be immersed deeply enough to allow it to reach the same temperature as the calibration block and there is a temperature gradient at the edge of the block. Tests show that the Pegasus-T is more useful than alternatives but there will always be a need to experiment and evaluate to determine the uncertainty for the conditions of use. It can be helpful to use a reference sensor of the same type as the units under test.

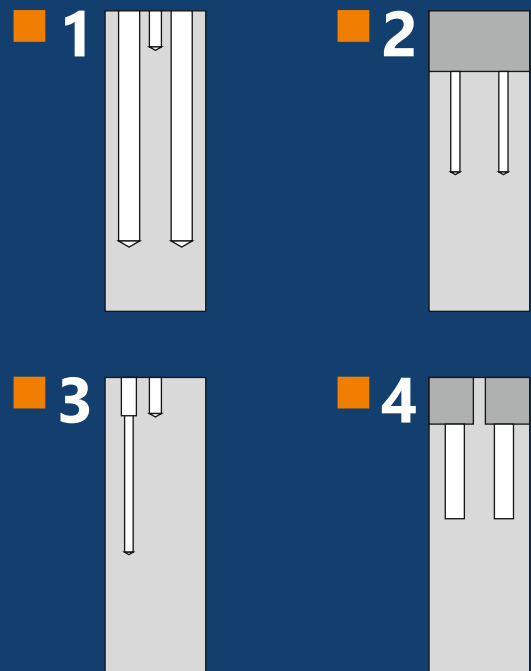
Calibration Blocks

The Pegasus-T is supplied without an insert as most applications will require drilling to suit your requirement. Our CAD Designers can produce designs for your approval before manufacture in our workshop. Alternatively we can provide blank inserts for you to manufacture or a pre-drilled insert with 6 x 5mm pockets, 100mm Deep.



Special Inserts

We can design and manufacture inserts to suit your sensors...



*All inserts shown in half section

Advanced Features

Fully featured high resolution display with advanced control features including multi loop control with autotune, adjustable temperature alarms with control from internal or external thermocouples

Temperature Programmer

- Create, Edit and Store automatic programs for temperature stepping

Reference Channel Input

- Can be used for external control or as a reference input. A Type R Thermocouple, Model 935-14-91 is included with each Pegasus-T

Ethernet Interface

- Free Software, I-Cal Easy Log - web download

Offset Elimination

- Connect the external reference probe and the calibrator can trim the block temperature to remove offsets

USB Port

- Export logged data to a USB Key, controller data is continuously logged



Specifications:

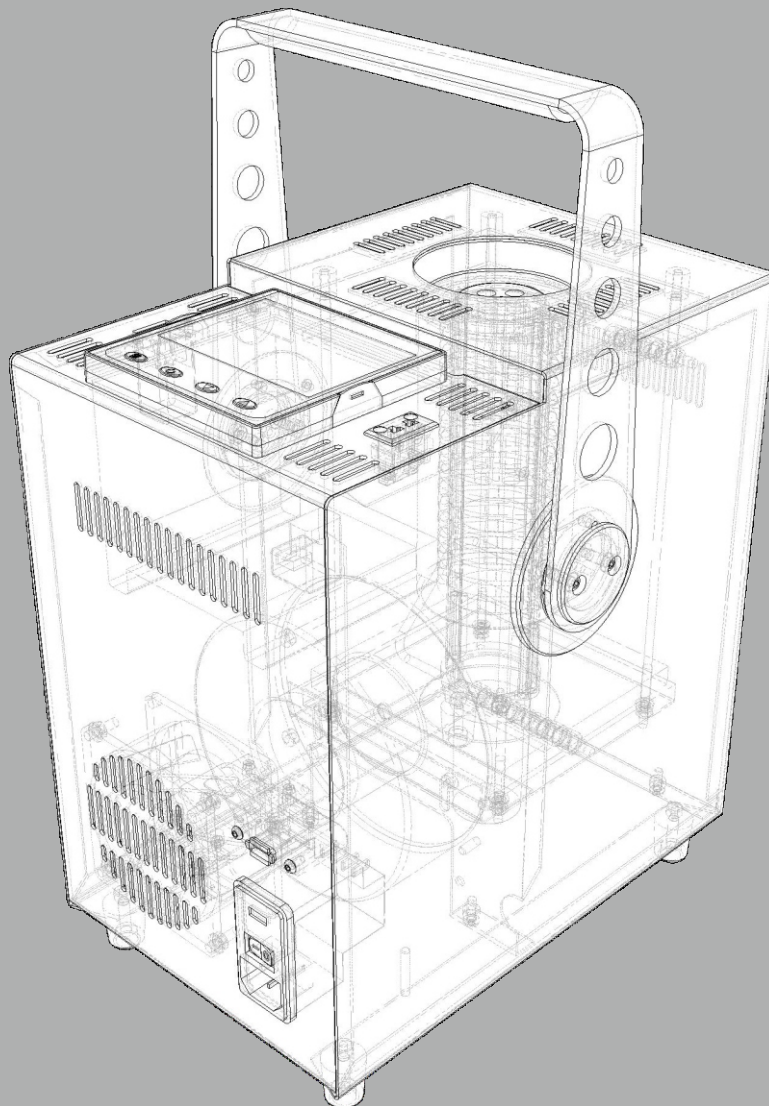
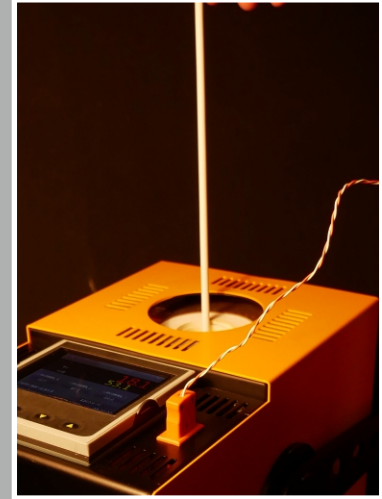
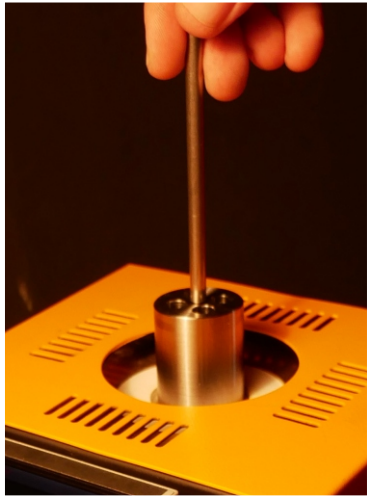
Parameter	Pegasus-T
Temperature Range	150°C to 1100°C
Stability	±0.05°C at 150°C ±0.08°C at 1100°C
Display Resolution	0.1°C over whole range
Cools from 1200°C to 800°C	in 50 Minutes*
1200°C to 200°C	in 180 Minutes*
	*Substantially reduced by using the optional cooling adaptor
Heating Rate	25°C/minute
Calibration Volume	33.5mm Diameter by 100mm Deep
Automatic Temperature Cycling	Yes
PC Interface	Ethernet and USB Host
Independent Reference Channel	Yes: Can be used for external control or as a reference input
Datalogging	Yes: Export to USB
In Built Webserver	Yes
Indicator Units	°C, °F, K
Power	115Vac or 230Vac (50/60 Hz) 800 Watts
Dimensions	302H x 200W x 268D
Weight	13kg

NOTE: Due to our program of continual development and improvement, we reserve the right to amend or alter characteristics and design without prior notice

Cautionary Note: The operating life of the heater will vary with both the maximum operating temperature and the duty cycle. Units being used 24/7 at high temperatures may require a maintenance schedule for heater replacement

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About Us

The world leader in temperature metrology, with over 40 years' experience.

Our clients include the world's leading laboratories including National Laboratories, leading ISO 17025 Accredited Laboratories and users in all industries.



Why Choose Isotech?

- > Innovation - winner of the Queen's Award for Enterprise in the Innovation Category, 2017. 
- > Isotech has solutions for all calibration needs, from Primary Laboratories maintaining National Standards to the needs of field engineers calibrating industrial sensors on site. Isotech is truly "The Source for Calibration Professionals".
- > Global Network - local support. Isotech has over 90 authorized sales agents worldwide! No matter where you are, we can offer local support.
- > The world's leading National Metrology Institutes choose Isotech - shouldn't you?



Temperature Metrology Solutions for:

- > ITS-90 Primary Standards
- > Industrial Sensor Calibration
- > Secondary Temperature Calibration
- > Infrared Thermometers
- > High Accuracy Temperature Measurement
- > Thermocouple Referencing Equipment

ISO 17025 calibration services to the smallest of uncertainties and with international recognition

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