

PR600 Series Heat Pipe Calibration Bath

PANRAN

Panran Measurement & Calibration Technology Co., Ltd.

PANRAN instruments are available in South Africa from Intercal (Pty) Ltd

sales@intercal.co.za

www.intercal.co.za

+27 11 315 432



PR600 series heat pipe thermostatic bath is a new generation of special thermostatic equipment for temperature measurement independently developed and produced by Panran. Based on the heat pipe technology, this series of products have a series of characteristics such as a wide temperature range, a excellent temperature field uniformity, fast temperature heating and cooling, no fumes. They are very suitable for verification and calibration of industrial resistance thermometers, working thermocouple, bimetal thermometers, pressure thermometers and glass thermometers and other temperature instruments.

PANRAN instruments are available in South Africa from Intercal (Pty) Ltd

sales@intercal.co.za

www.intercal.co.za

+27 11 315 432

I. Features

■ Green Environmental Protection, Pollution-free

The medium of the PR600 is sealed in the core of the heat pipe, and the core is subjected to the air tightness test of pressure above 5MPa, so the environmental pollution caused by medium volatilization is avoided in principle.

■ Working Temperature up to 400°C

The working temperature range of the oil bath is (90~300) °C, but considering factors such as medium volatilization, fumes and safety, the upper limit of the temperature in the actual working process generally does not exceed 200°C. And the above working temperature can be extended to 400°C by PR631-400 bath, and a temperature uniformity that is not more than 0.04°C is guaranteed, so the heat pipe calibration bath is very ideal thermostatic equipment when the range within the 200~400°C.

■ No need to Change Medium

After a period of time, the conventional liquid bath need to update the medium in the bath to ensure the functional indicators. The inside of the PR600 series is highly vacuumed, and there is no aging or deterioration of the medium, so there is no need to replace the medium.

■ Excellent Temperature Field Uniformity

As a "superconductor" of heat, the phase change process is the source of power for the medium to circulate inside the heat pipe. The fast internal circulation makes the heat exchange inside the heat pipe very fast, which gives the PR600 series heat pipe products an excellent temperature field uniformity, so even at an operating temperature of 400°C, a temperature field uniformity of no more than 0.04°C can be guaranteed.

■ Resolution of 0.001°C

By using the PR2601 temperature controller, the temperature control resolution of the PR600 series products can reach 0.001°C, and the temperature stability can reach 0.01°C/10 minutes optimally.

■ Powerful Human-computer Interaction Functions

Adopting the powerful human-computer interaction interface, multiple common calibration

PANRAN instruments are available in South Africa from Intercal (Pty) Ltd

sales@intercal.co.za

www.intercal.co.za

+27 11 315 432

points can be preset, and the information such as stability, temperature curve and power curve can be displayed in real time. Through the temperature calibration interface, the device can be traced to any temperature standard.

■ **Suppression of Sudden Change of Grid Voltage**

PR600 series heat pipe calibration bath has the function of grid voltage feedback, which can effectively suppress the temperature control disturbance caused by the sudden change of grid voltage.

■ **Dual over Temperature Protection**

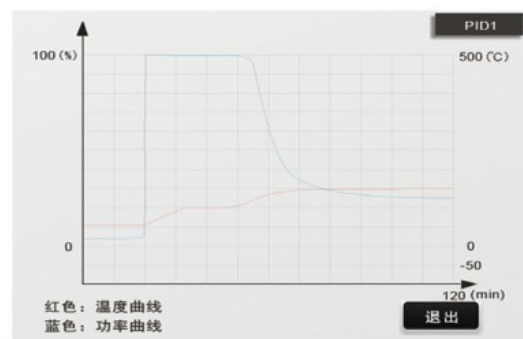
In addition to the over-temperature protection of the main controller, there is also a completely independent temperature monitoring loop in the PR600 series, which makes over-temperature protection be still achieved in case the first-level protection fails.

■ **Simple Structure and Reliable Operation**

The PR600 series, without the need for a mechanical motion unit, relies on the cyclic operation of the medium phase change to improve the reliability of the operation.



▲ Running main interface



▲ Curve interface

II. Product Selection and Technical Parameters

Model	Temperature range(°C)	Temperature field uniformity		Temperature stability (°C/10min)	Effective working depth(mm)	Dimensions (mm)	Weight (kg)	Power (kW)	Optional	
		Horizontal	Vertical							
PR632-400 SN	80~200	0.02	0.03	0.04	100~450	715×650×1015	121	3.3	S: Standard jack F: Non-standard jack	N: No communication C:RS-485
	At 100°C	0.01	0.02	0.03						
	200~400	0.03	0.04	0.04	150~450					
PR631-200 SN	80~200	0.02	0.03	0.04	100~450	615×630×1015	90	1.0		
PR631-400 SN	200~400	0.03	0.04	0.04	150~450	615×630×1015	90	2.3		

PANRAN instruments are available in South Africa from Intercal (Pty) Ltd

sales@intercal.co.za

www.intercal.co.za

+27 11 315 432