

## TEMPERATURE CONTROL SYSTEM

MODEL: BSP04



### FEATURES

- Compact and sturdy construction
- Easy and versatile operation
- Self contained system
- Computerised analysis (Optional)
- Incorporates standard industrial components
- Comprehensive instrumentation

### DESCRIPTION

Temperature control system is designed to demonstrate various aspects of control engineering using a temperature controlled system. Hot/cold water passing through heat exchanger is controlled to obtain the temperature control. The system incorporates standard industrial components.

### INSTRUCTION MANUAL

Self-explanatory operating manuals are provided with each system. Detailed theory as well as practical exercises is also included in the manual.

### LIST OF EXPERIMENT

1. Manual two step control
2. Study of P, PI, PD, PID Control <sup>NOTE</sup>
3. Study of sensors
4. Study of Control valves
5. Study of feedback control system
6. Study of E/P Converter

NOTE: If Pneumatic PI controller is ordered supplied in place of electronic PID controller, only PI action can be viewed

### COMPONENTS

1. Sump Tank
2. Hot water tank with heater
3. Pump
4. Heat Exchanger
5. Temperature Sensor Transmitter
6. Control Valve
7. E/P Converter with Filter Regular and Pressure Gauge
8. PID Controller <sup>(NOTE1)</sup>
9. Interface Card and Software <sup>(NOTE1)</sup>

NOTE1: Refer to model selection chart below

### SERVICES REQUIRED

1. Water supply and drainage arrangement
2. Electric supply
3. Compressed air



### MODEL

BSP04 - X - X - X - X			
<b>Process</b>			
Table top	A		
Floor standing	B		
<b>1st Controller</b>			
Electronic PID Controller	1		
PC based	2		
Pneumatic PID Controller	3		
		<b>Optional additional</b>	
		Air compressor	1
		PC	2
		None	0
		<b>2nd Controller</b>	
		Electronic PID	A
		PC based	B
		Pneumatic PID	C
		None	X

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(1) Since research and development is an on-going activity, the specifications mentioned herein are subject to change without notice  
 (2) Photographs are indicative only.