

MULTI-PROCESS CONTROL TRAINER

MODEL: BSP03



FEATURES

- Robust and sturdy construction
- Easy and versatile operation
- Self contained system with complete instrumentation
- Pilot plant incorporating standard industrial components
- Demonstrates various control schemes and their tuning
- In-built safety measures to prevent mishandling

DESCRIPTION

A low cost pilot plant with is designed to familiarise students with the control of various parameters like flow, level, temperature and pressure. Various control schemes¹ such as feed back, feed forward and cascade are demonstrated on a single system.

¹ Depends on model select

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

Plotting Control valve characteristics	Feedback Flow control
Feedback Level control	Feedback Temperature control
Feedback Pressure control	Feed forward control ¹
Cascade control ¹	Ratio control ¹
On Off Control of Level	Proportional action
Proportional + Integral action	Proportional + Derivative action
PID tuning	

¹ These are optionally available at extra price.

COMPONENTS

Components	BSP03N	BSP03A	BSP03W
Sump Tank	Yes	Yes	Yes
Hot water tank with heater	Yes	No	No
Hot water geyser	No	No	Yes
Air Heater	No	Yes	No
Level Tank	Yes	Yes	Yes
Pressure Tank	Yes	Yes	Yes
Pump	Yes	Yes	Yes
Heat Exchanger	Yes	No	No
Temperature Sensor Transmitter	Yes	Yes	Yes
Control Valve	Yes	Yes	Yes
E/P Converter with Filter Regular and Pressure Gauge	Yes	Yes	Yes
Flow Sensor Transmitter	Yes	Yes	Yes
Level Sensor Transmitter	Yes	Yes	Yes
Pressure Sensor Transmitter	Yes	Yes	Yes
Heater Controller Unit (HCU)	No	Yes	Yes
Electronic PID Controller ^(OPTIONAL ADDITIONAL)	Yes	Yes	Yes
Interface Card and Software	Yes	Yes	Yes

BSP03N: Medium: Water, Heat Exchanger and control valve for temperature control loop

BSP03A: Medium: Air, Oven and HCU for temperature control loop

BSP03W: Medium: Water, hot water vessel and HCU for temperature control loop

Note: Actual components supplied will be a part (or all) of the components listed above, depending on the model selected

OPTIONAL ADDITIONAL

- Feed-forward control provided
- Cascade control provided
- Ratio control provided
- PC with Colour monitor with Windows with USB Port
- Air compressor
- Electronic PID controller
- Pneumatic PID controller

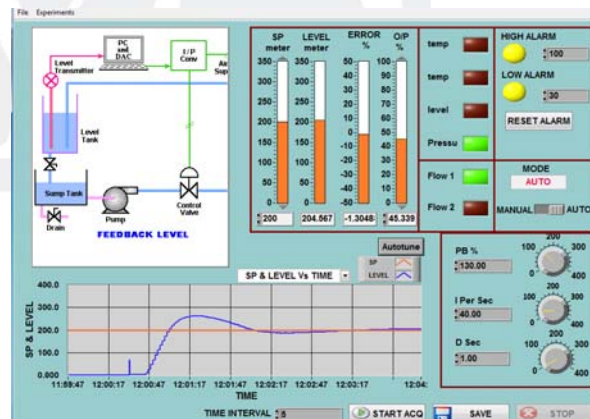
Note : Details of attachments can be made available on request.

SERVICES REQUIRED

1. Electric supply

DIMENSION AND WEIGHT

- Weight: 130 kg
- Dimension: Model: BSP03A
 - Trainer: 1350 mm X 1000 mm X 1850 mm (H)
 - Furnace: 400 mm X 400 mm X 700 mm (H)



NiYo Engineers

Unit 1B, Devgiri Industrial Estate, S. No. 17/1B Plot No. 14, Kothrud, Pune 411 029
INDIA, Tel-91 20 2546 5004, 2546 8051, 2546 7296 Telefax - 91 20 2546 8051
e-mail- sales@niyoindia.com Web: www.niyoindia.com



- (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.