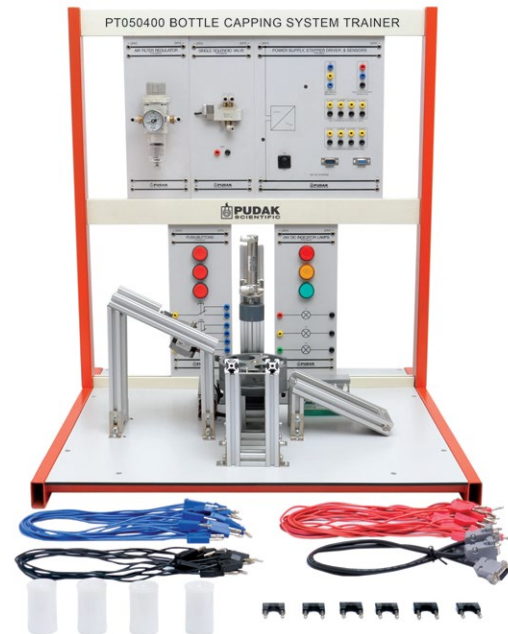


## Features

- The trainer is designed to demonstrate and simulate the operation of bottle capping system.
- The trainer can be used as a PLC application to show PLC interface as the control of production line.
- The trainer is a compact application which combine pneumatic, motion control and PLC sequencing.
- Stepper motor is used to move bottles and caps from assembly line to distribution line
- Double acting cylinder is used to secure caps onto bottles.
- Equipped with limit switch and inductive switch for movement synchronization.
- Can be interfaced with any PLC type.
- All inputs and outputs are equipped with robust 4-mm sockets for easy connection.
- A comprehensive experiment manual book is included to guide students step by step in conducting experiment.

# Bottle Capping System Trainer

PT 050400

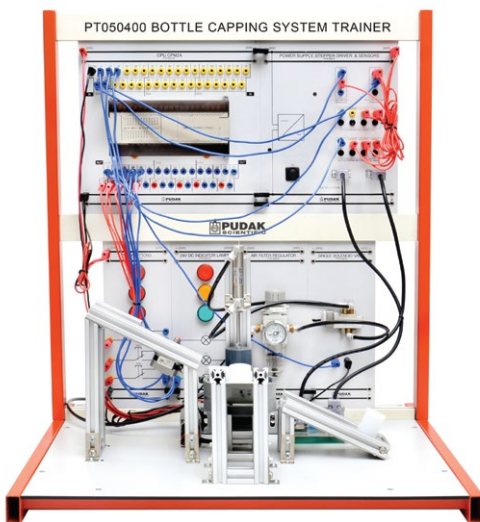


## Covered Topics

- DE11001E Introduction to Bottle Capping system
- DE11002E Motor stepper control
- DE11003E Position Initialization
- DE11004E Cylinder Actuation
- DE11005E Bottle capping system

## Specification

- **Power Supply, Stepper Driver & Sensors**
  - Input voltage : 220 V AC, 50 Hz
  - Output voltage : 24 V DC, 2.1 A
  - Limit switch terminals
  - Inductive proximity terminals
  - Cap stepper motor control driver:
    - Input control (24 V DC): Clock, Direction, Step and enable
  - Bottle stepper motor control driver:
    - Input control (24 V DC): Clock, Direction, Step and enable
  - Sensor socket
  - Stepper motor socket
- **Bottle Capping System**
  - Cap & bottle stepper motors
    - Voltage : 12 V
    - Step angle : 1.8 (200 steps/revolution)
    - Current per phase : 0.4 A
  - Limit switch
    - Type : roller switch
    - Contact : NO, C, NC
  - Inductive proximity switch
    - Voltage : 12 V - 24 V DC
    - Sensing distance : 4 mm + 10%
    - Response frequency : 500 Hz
  - Double acting cylinder
    - Stroke : 45 mm
    - Bore size : 16 mm
    - Operating pressure : 0.05 to 1 MPa
- **Single Solenoid Valve**
  - Type of actuation : 2 position single
  - Internal pilot operating pressure range: 0.15 to 0.7 MPa
  - Coil rate voltage : 24 V DC
  - Indicator : LED



Bottle Capping System Experiment

## Training Panel System

>> Specification Continued

- **Air Filter Regulator**
  - Maximum operating pressure : 1 MPa
  - Set pressure range : 0.05 to 0.7 MPa
  - Drain capacity : 8 cm<sup>3</sup>

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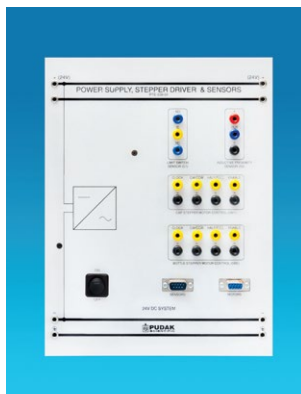
- **Push Buttons**
  - Push buttons : 3 pcs
  - Contact form : SPDT
  - Contact rate : 10 A

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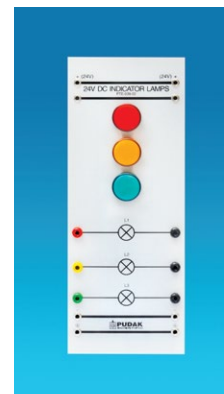
- **Indicator Lamps**
  - Lamps : 3 pcs
  - Voltage : 24 V DC

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- **Accessories**
  - Connecting cables
  - Bottles and caps
  - Silent compressor



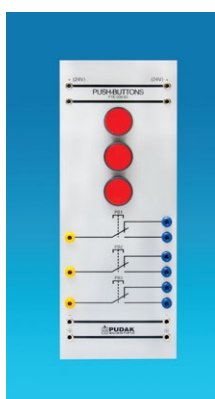
Power Supply, Stepper Driver & Sensors  
PTE-086-01



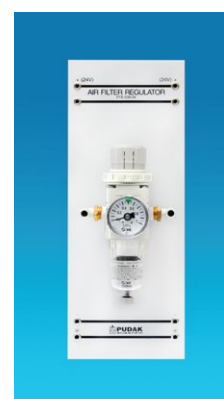
Indicator Lamps  
PTE-086-02

### PT050400 Bottle Capping System Trainer consists of

Cat. No.	Description	Qty.
PT050400	Bottle Capping System Trainer	1 set
PTE-086-01	Power Supply, Stepper Driver & Sensors	1 pc
PTE-086-02	Indicator Lamps	1 pc
PTE-086-03	Push Buttons	1 pc
PTE-086-04	Air Filter Regulator	1 pc
PTE-086-05	Single Solenoid Valve	1 pc
	Bottle with Cap	4 pcs
	Tubes Diameter 6 mm	10 m
	DB9 Motor Connecting Cable	1 pc
	DB9 Sensors Connecting Cable	1 pc
KAL 99/10-050	Connecting Leads 50 cm, Black	25 pcs
KAL 99/20-50	Connecting Leads 50 cm, Red	25 pcs
FLS 20.02/097	Connecting Cross	15 pcs
	Compressor	1 pc
	Experiment Manual Book (For Omron PLC)	1 pc



Push Buttons  
PTE-086-03



Air Filter Regulator  
PTE-086-04



Single Solenoid Valve  
PTE-086-05

### Required Equipment (not included)

Cat. No.	Description	Qty.
PT 970100A	PLC Trainer	1 set
PT 970101A	Advanced PLC Trainer	1 set

or other PLC with specification as below:

- Inputs and outputs should be 24 V DC system.
- Minimum input number : 8 inputs.
- Minimum output number : 6 outputs.

Specifications and illustrations are subject to change without prior notice