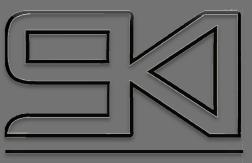
Marching towards Excellence

# S. K. EDUTECH & AGRO INDUSTRIES

Plot No. N-29/2, Akola Growth Centre, IV Phase, M.I.D.C., Akola. – 444 005



<u>CATALOGUE</u>

FULLY PNEUMATIC TRAINER KIT (SKMT-01)

ADVANCE ELECTRO PNEUMATIC TRAINER KIT (SKMT-02)

<u>COMBI PNEUMATIC - ELECTROPNEUMATIC TRAINER</u> <u>KIT (SKMT-03)</u>

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#### S.K.Edutech & Agro Industries offers following models of pneumatic trainer kits------

#### FULLY PNEUMATIC TRAINER KIT(SKMT-01)------

Fully Pneumatic Trainer Kit is designed to train to students with the concept of fully pneumatically operated circuit design. The circuit's works only on air supply. There is no requirement of electrical switching. It does not require electrical connection. All the valves are operated on air pilot signals. The sequential operation of cylinder strokes are controlled by pilot valves which are connected as per circuit diagram. The Students are required to connect air tubes as per the circuit designed for particular sequence with the various methods of fully pneumatic system and operate to get following various circuit design on this trainer kit. This gives hands-on experience to the students and built their confidence level. The Kit consists of mounting board and sturdy base.

The kit will consists of following components-

- Powdered coated Mounting Board which is portable and can be placed on table easily. All pneumatic components are mounted on this board.
- Filter Regulator and Lubricator unit mounted with pressure gauge.
- Slide valve connected with FRL unit.
- 4-way connector.
- Double acting cylinders φ32x stroke 175mmx1/8" port size- 2nos.
- Single acting cylinder φ32x80mm stroke 100mm-1no.
- Both side pilot operated 5/2 way DCV-3 nos.
- Single side pilot operated 5/2 way DCV.
- Push button operated 3/2 way DCV.
- Roller operated 3/2 way valve- 4 nos.
- OR valve.
- Quick exhaust valve.
- PU tube-15 mtrs.
- One Flow control valve mounted on cylinder port.
- Silencers and connectors mounted on cylinders and valves.



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#### Special features of Basic pneumatic trainer Kit-

- The kit is mounted with pneumatic cylinders and valves duly provided with connectors and silencers as per requirement.
- The FRL unit with pressure gauge and 6x4x1/4'' multi distributor is provided.
- The hand slide valve is provided for air flow ON and OFF from air compressor.
- The kit is sturdy and light weight provided with flat base.
- It is portable and can be easily placed on table.
- Tubing will be provided with kit. Just by connecting compressor air tube to FRL unit and making tubing connections as per circuit design the circuits can be operated.
- Kit is ready to use once air connections are made as per circuit.

The pneumatic circuit diagram details will be provided with kit for following circuit design.

The sample fully pneumatic circuits are listed below that can be performed on this SKT-03 kit.

- 1- Design of meter in meter out circuit.
- 2- Design circuit for Single acting Cylinder To and fro single cycle using push button operated 3/2 way DCV.
- 3- Design circuit for Single acting Cylinder To and Fro Auto cycle using pilot operated 5/2 way DCV.
- 4- Design circuit for Single Double acting Cylinder To and Fro Auto cycle.
- 5- Design circuit for Single Double acting Cylinder To and Fro Auto cycle with start bottom option.
- 6- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0.
- 7- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0 with start bottom option.
- 8- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 A0 B0.
- 9- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 A0 B0 with start bottom option.
- 10- More different circuits can be performed with different sequential logic.

NOTE : The Institute has to make provision of Air compressor of their own conduct the above experiment.

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#### ADVANCE ELECTROPNEUMATIC TRAINER KIT(SKMT-02)

Advance Electro-pneumatic Trainer Kit is designed to train the students with the concept of electro-pneumatically operated circuit design. The electro-pneumatic circuits can be performed on this kit. The sequential operation of cylinder strokes is operated with electro-pneumatic circuit as per circuit diagram provided with kit. The Students are required to connect air tubing plus electric connections in electro-pneumatic circuits. This gives hands-on experience to the students and built their confidence level. The Kit consists of mounting board and sturdy base and the pneumatic and electrical components such as air cylinders, FRL unit, solenoid 24V DC operated directional control valves, electrical limit switches ,pilot OR valves and electrical relay box with banana pins and electric power supply unit 24 V DC ,pushbutton switch board and three relays with terminal board.etc.



The kit will consists of following components-

- Powder coated Mounting Board which is portable and can be placed on table easily.
- Filter Regulator and Lubricator unit mounted with pressure gauge.
- Slide valve connected with FRL unit.
- 4-way connector.
- Double acting cylinders φ32x stroke 175mmx1/8" port size- 2nos.

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- Single acting cylinder  $\phi$ 32x80mm stroke 100mm.
- Both side solenoid operated 5/2 way DCV-2nos.
- Roller operated Limit switches
- Single side solenoid operated 5/2 way DCV.
- OR valve.
- Quick exhaust valve.
- PU tube-15 mtrs.
- One Flow control valve mounted on cylinder port.
- Silencers and connectors mounted on cylinders and valves.
- electric power supply unit 24 V DC ,
- push-button 3reley with NO-NC contact---1no.
- Relay switch board and three relays with terminal board- 1 no.etc.

The pneumatic and electro-pneumatic circuit diagram details will be provided with kit for following circuit design. The sample fully pneumatic and electro pneumatic circuits are listed below that can be performed on SKT-02 kit.

Electro-pneumatic circuits-----

- 1. Design of meter in meter out circuit.
- 2. Design of electrical circuit for Single acting Cylinder To and fro single cycle with start button.
- 3. Design of electrical circuit for single acting Cylinder To and Fro Auto cycle using Auto and Manual mode option.
- 4. Design of electrical circuit for Single Double acting Cylinder To and Fro Auto cycle.
- 5. Design of electrical circuit for Single Double acting Cylinder To and Fro Auto cycle with start and stop bottom option.
- 6. Design of electrical circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0 with cycle start and stop option.
- 7. Design of electrical circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0 with Auto and Manual start option.
- 8. Many more different circuits can be performed with different sequential logic.

# NOTE : The Institute has to make provision of Power supply and Air compressor of their own conduct the above experiment.

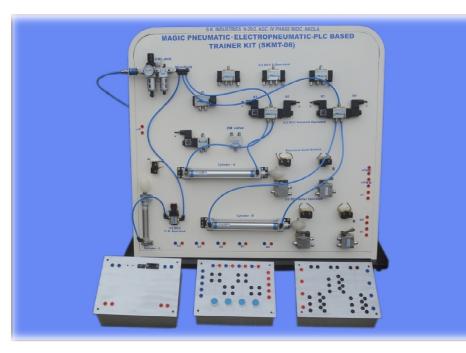
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#### COMBI PNEUMATIC AND ELECTROPNEUMATIC TRAINER KIT(SKMT-03)-------

Combi Pneumatic and Electro-pneumatic Trainer Kit is designed to train the students with the concept of fully pneumatic and electro-pneumatically operated circuit design. The fully pneumatic and electro-pneumatic circuits can be performed on this kit. Both kind of valve i.e. air pilot and solenoid operated valves and electrical limit switches are provided in this kit. The sequential operation of cylinder strokes is operated with both fully pneumatic and electro-pneumatic circuit as per circuit diagram provided with kit. The Students are required to connect air tubes in fully pneumatic circuits and air tubing plus electric connections in electro-pneumatic circuits. This gives hands-on experience to the students and built their confidence level. The Kit consists of mounting board and sturdy base and the pneumatic and electrical components such as air cylinders, FRL unit, pilot and solenoid 24V DC operated directional control valves, roller operated valve ,electrical limit switches ,pilot OR valves and electrical relay box with banana pins and electric power supply unit 24 V DC ,pushbutton switch board and three relays with terminal board.etc. It replaces both Basic Electro-pneumatic Trainer Kit (SKMT-02) and Basic pneumatic trainer kit (SKMT-03), but its only limitation is that at any given time student can perform either fully pneumatic circuits or Electro-



pneumatic sequential circuits.

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The kit will consists of following components-

- Powdered coated Mounting Board which is portable and can be placed on table easily. All pneumatic components are mounted on this board.
- Filter Regulator and Lubricator unit mounted with pressure gauge.
- Slide valve connected with FRL unit.
- 4-way connector.
- Double acting cylinders φ32x stroke 175 mmx1/8" port size- 2nos.
- Single acting cylinder φ32x80mm stroke 100mm.
- Both side solenoid operated 5/2 way DCV-2nos.
- Roller operated electrical Limit switches.
- Single side solenoid operated 5/2 way DCV.
- Both side pilot operated 5/2 way DCV-3 nos.
- Single side pilot operated 5/2 way DCV.
- Push button operated 3/2 way DCV.
- Roller operated 3/2 way valve- 4 nos.
- OR valve.
- Quick exhaust valve.
- PU tube-15 mtrs.
- One Flow control valve mounted on cylinder port.
- Silencers and connectors mounted on cylinders and valves.
- electric power supply unit 24 V DC ,
- Push-button 3reley with NO-NC contact---1no.

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• Relay switch board and three relays with terminal board- 1 no.etc.

Pneumatic and electro-pneumatic circuit diagram details will be provided with kit for following circuit design.

The sample fully pneumatic and electro pneumatic circuits are listed below that can be performed on SKMT-03 kit. Fully pneumatic circuits-----

- 1- Design of meter in meter out circuit.
- 2- Design circuit for Single acting Cylinder To and fro single cycle using push button operated 3/2 way DCV.
- 3- Design circuit for Single acting Cylinder To and Fro Auto cycle using pilot operated 5/2 way DCV.
- 4- Design circuit for Single Double acting Cylinder To and Fro Auto cycle.
- 5- Design circuit for Single Double acting Cylinder To and Fro Auto cycle with start bottom option.
- 6- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0.
- 7- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0 with start bottom option.
- 8- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0 with Auto and Manual start option.
- 9- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 A0 B0.
- 10- Design circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 A0 B0 with start option.

Electro-pneumatic circuits-----

- 11- Design electrical circuit for Single acting Cylinder To and fro single cycle with start button.
- 12- Design electrical circuit for single acting Cylinder To and Fro Auto cycle using Auto and Manual mode option.
- 13- Design electrical circuit for Single Double acting Cylinder To and Fro Auto cycle.
- 14- Design electrical circuit for Single Double acting Cylinder To and Fro Auto cycle with start and stop bottom option.
- 15- Design electrical circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0 with cycle start and stop option.
- 16- Design electrical circuit for Two Double acting Cylinder for Auto cycle having sequence A1 B1 B0 A0 with Auto and Manual start option.

Many more different circuits can be performed with different sequential logic.

## NOTE : The Institute has to make provision of Power supply and Air compressor of their own conduct the above experiment.