SAP E & C BASIC / ADVANCED PNEUMATIC TRAINER
(PRODUCT CODE: SAP –19 / 19A)

BASIC PNEUMATIC TRAINER (SAP-19)

ADVANCED PNEUMATIC TRAINER (SAP-19A)

- The **Basic /Advanced Pneumatic Trainer (SAP – 19 / 19A)** outlines the principles of Pneumatic control Used in Industrial applications. It explains components of Pneumatic control system & their operation.
- The Basic /Advanced Pneumatic Trainer (SAP – 19 / 19A) is capable of being used to demonstrate the design, construction and application of pneumatic components and circuits.
- This Basic /Advanced pneumatic simulator is used for imparting training with a variety of different circuits which covers the basic pneumatic system. The simulator and its accessories are suitable for working at 10 bar pressure.
- This structure will have adequate space for proper orientation of valves and cylinders
- Industrial components are used in the kit so that the students get hands on practical training in using industrial components.
- The simulator will show the application of linear actuator, Rotary actuator, speed control circuits, logic control circuits etc.

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Objectives: -

- Function & identification of Pneumatic components & their symbols.
- Direct and indirect manual controls, stroke dependent controls and pressure dependent controls with Different valves.
- Design & function of Pneumatic System.
- Functional diagrams.
- Application and fault findings of Pneumatic controls.
- To empower students to design their own circuits.
- The Trainer is Modular & Upgradable
- Operation & Instruction Manual provided for Operation ease.

Technical Specification: -

No.	Item Name	Technical Specifications
1	**Pressure Gauge-**	**QTY:** 1 NO, 0-7 Kg/cm^2, connection 3/8" BSP, Dial Size: 100 mm.
2	**Pneumatic Motor-**	**QTY:** 1 NO, Unidirectional, Air pressure: 0-90 psi.
3	**Single Acting Cylinder with spring return-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY: -01 No.:** Design type is Piston Cylinder. Operating Pressure 10 bar. Bore: 25 mm × Stroke: 100mm, Mounting: Foot
4	**Double Acting Cylinder-**	**Make:** JELPC/JANATICS /kushako/Eqvt **QTY: -01 Nos.,** Design – Piston Cylinder. Operating Pressure – 10 bar, Bore: 25 mm × Stroke: - 100mm, Mounting: Foot.
5	**A.F.R. / F.R.L. Unit-**	**Make:** JELPC/JANATICS /kushako/Eqvt **QTY:** -01 No., ¼'', 0-10 Kg/cm^2 with Pressure Gauge.
6	**Hand Lever Operated Valves-**	**Make:** JELPC/JANATICS /kushako/Eqvt **QTY:** -2 Nos each, 5/2 way & 3/2-way, 5/3-way **(SAP 19A)** 1/4'' Connection
7	**Shuttle Valve-**	**Make:** JELPC/ JANATICS /kushako/Eqvt **QTY:** -01 No., OR Valve, ¼" connection.
8	**AND Valve-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No., Dual Pressure Valve, 1/4" connection.
9	**Flow Control Valve-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No., ¼'' (F), Square Body.
10	**Non-Return Valve-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No., ¼'' connection.
11	**Block Manifold-**	**QTY:** -01 No., ¼'', 6 ways.
12	**Plastic Tubing-**	**QTY:** -01 No., PUN 6×0.75, Exterior Diameter-6mm, Interior Dia.- 4mm, Transparent – 10mtrs/Blue-10mtrs.
13	**Push Button Valve (SAP 19A)-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No. each, 5/2-way Valve / 3/2-way Valve, ¼" Connection.
14	**Quick Push-Pull connectors-**	Sufficient shall be supplied for branching of the tubing for making of the circuitry.
15	**Roller Lever Valve (SAP 19A)-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No. each, 5/2-way, 3/2-way Valve, ¼" Connection.
16	**Rotary Disc Valve (SAP 19A)-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No., 4/3-way Valve, ¼" Connection.
17	**Rotameter (SAP 19A)-**	**QTY:** -01 No., ¼" connection.

18	**Pilot Operated Valve (SAP 19A)-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No. each each, 5/3 Spring Centered, 5/2 Spring Returned, 3/2 Pilot Operated.
19	**Palm Operated Valve (SAP 19A)-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No., 3/2-way Valve, ¼" Connection.
20	**Foot Operated Valve (SAP 19A)-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No., 5/2-way Valve, ¼" Connection.
21	**Solenoid Valve (Optional)-**	**Make:** JELPC/ JANATICS / kushako/Eqvt **QTY:** -01 No. each, 5/2 way & 3/2 way, 1/4'' Solenoid Operated.
22	**Air Compressor (Optional)-**	**QTY:** -01 Nos., Tank capacity: 20/24 Liters, Discharge: 2 CFM, MOTOR: 1 H.P./ 2 H.P, 1ϕ, 230 V AC Operated, Working pressure: 5-6 kg/cm^2

Note: We will also provide Sufficient headers, fitted with push on connector and other necessary fittings which would be required to develop the different said pneumatic circuits. Apart from the above we will also supply sintered bronze silencer, push on connector for 6 mm O.D tube, headers fitted with push on connectors and 6 mm O.D nylon tube of adequate length and necessary fitting

Range of experiments:

- Study of Pneumatic Cylinders: Single Acting, Double Acting (linear actuator).
- Study of pneumatic control system
- Study of construction & operation of pneumatic components such as 5/2 Way Hand Lever valve, 3/2 Way Hand Lever valve, etc.
- Study of construction & operation of pneumatic components such as 5/2-way Solenoid valve, 3/2-way valve, pneumatic motor (Rotary actuator) etc.
- Study of AND Valve (Dual Pressure Valve)
- Study of Shuttle Valve (OR Valve)
- Study of operation of Hand Lever Valve (3/2 & 5/3 DCV)
- Study of Flow Control Valve.
- Study of rotary disc operated valve, roller lever valve, pneumatic rotameter.
- Study of pilot operated valves such as 3/2 single pilot operated, 5/2 single pilot, 5/3 pilot operated valve.
- Study of palm operated valve, foot operated valve, push button valve.

Features: -

- Compact Ergonomic Design.
- ISO Symbol for each mounted component
- User Friendly, Self-Explanatory Systems.
- Robust Construction.
- Training Manual, mimic Charts for Operation Ease.
- System Frame with Caster Wheel Arrangement for ease in movement.
- M.S. powder coated cubical plant with standard Instrument Mountings.
- Inbuilt Safety Measures to avoid improper usage.
- PU Tubes and Quick Push-Pull connectors for making connections quick and easily.
- Caster wheel mounted movable frame

System Dimensions- 3 Ft. (L) X 2 Ft. (W) X 4.5 Ft. (H)

Weight: **Approx. 30kg.**

Services Required:

- Electric supply 1ϕ, 230 V AC, 6A, 50 Hz.
- Clean, dry, Compressed air supply at 4-5 Kg/cm².

Note:

All descriptive matter and illustrations are intended to give only a general idea of the equipment Detailed specifications may be altered at the company's discretion without any notice.

Manufactured/Marketed By
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