

**SAP E & C BASIC HYDRAULIC TRAINER**  
(PRODUCT CODE: SAP – 38A-I)



The **Basic Hydraulic Trainer (SAP-38A-I)** outlines the basic Principle of Hydraulic Control System, hydraulic Control System Components & its applications.

**BASIC HYDRAULIC TRAINER**

**Technical Specification:-**

No.	Item Name	Technical Specifications
1	Single Acting Cylinder-	Bore: 40 mm × Stroke: 75mm/100mm, Mounting: Foot.
2	Double Acting Cylinder-	Bore: 40 mm × Stroke: -75mm/ 100mm, Mounting: Foot.
3	Directional Control Valves-	4/3 way Hand Lever valve, -1 No. 4/2 way Hand Lever valve, -1 No.
4	Flow Control Valve-	¼" (F), Square Body.
5	Pressure Relief Valve-	¼", 60 Kg/cm <sup>2</sup>
6	Block Manifold-	¼", 4 ways.2No.s
7	Male Connector-	¼" Quick Release Couplings.
8	Hydraulic Hoses-	10 No.s
9	Non Return Valve	1 No. , ¼"
10	Drain Plug-	Magnetic type

11	<b>Pressure Gauge-</b>	100 Kg/cm <sup>2</sup> , Dial Size: 50 mm, Glycerin Filled.
12	<b>Oil Hydraulic power pack-</b>	MS Powder Coated Oil Tank, Capacity: 25 Liters. with Oil Level Indicator, Gear Pump: 3-5 LPM, 20-70 Bar, Breather, Oil filter & suction, <b>Electric Motor:</b> Single Phase, ½ HP/ 1HP, 230VAC / 3φ, ½ HP/ 1 HP, 415V AC with DP Switch/DOL starter
13	<b>Pressure Sequence Valve</b>	¼" (F), Square Body, 60kg/cm <sup>2</sup> .
14	<b>Hydraulic Motor (Optional)-</b>	3 LPM, 1/4"
15	<b>Hydraulic Accumulator (Optional)-</b>	Capacity : 0.075 Liters, mWP bar: 250 bar, Weight: 0.62 Kg, Connection: ½" BSP
16	<b>Needle Valve (Optional)-</b>	1/4", 1 No.
17	<b>Meter-in Circuit &amp; Meter Out Circuit</b>	
18	<b>Bleed-off Circuit</b>	
19	<b>Transverse &amp; Feed Circuit</b>	
20	<b>Pulley Arrangement to carry load applied to the actuator, i.e., Double Acting Cylinder (Optional)</b>	

### Range of experiments:

- ❖ Study of fundamental principles of Hydraulics & its applications.
- ❖ Study of Meter-in Circuit & Meter-out circuit.
- ❖ Study of Bleed-off Circuit.
- ❖ Study of Transverse & Feed Circuit.
- ❖ Study of Speed Control, Pressure Control & Flow Control.
- ❖ Study of Direction Control.
- ❖ Study of Hydraulic valves
- ❖ Study of Hydraulic Actuators.
- ❖ Study of sequencing operation using Pressure Sequence Valve.
- ❖ Study of Hydraulic Power Pack.
- ❖ Study of Hydraulic Accumulator & Hydraulic Motor (Optional).

### Features: -

- ❖ Compact Ergonomic Design.
- ❖ ISO Symbol for each mounted components.
- ❖ User Friendly, Self Explanatory Systems.
- ❖ Leak proof Safety Measures, sturdy piping & Robust Construction.
- ❖ Training Manuals mimic Charts for Operation Ease.
- ❖ System Frame with Caster Wheel Arrangement for ease in movement.
- ❖ Inbuilt Safety Measures to avoid improper usage.
- ❖ Wall mounting assemblies of hydraulic actuator & self-reciprocating cylinder.
- ❖ QRC couplings provided, Tubing for circulation of pressure (Hose Pipe Tubing)
- ❖ Manifold for distribution.
- ❖ Oil Hydraulic power pack for power supply. .
- ❖ Optional component are available to allow fault operation and diagnosis training.
- ❖ Hydraulic motor & Hydraulic Accumulator (Optional).

**System Dimension-** 3.5 Ft. (L) X 2Ft. ((W) X 4.5 Ft (H)

**Services Required:**

- ❖ Electric supply 1 $\phi$  230 V AC / 3 $\phi$  supply of 415 V, 50 Hz suitably used for direct on line starting of an induction motor

**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.



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