



HYDRAULIC / ELECTRO HYDRAULIC TRAINER

(Model : XPO- Hydraulics
/ ElectroHydraulics)



Power Pack

SALIENT FEATURES

- ◆ Choice of 2 table top models Hydraulic (Electro) / Pneumatics (Electro) trainer (optionally PLC may be supplied.)
- ◆ Use of aluminium profile grooved plate (CD= 25MM) experiment board. Optionally table with drawers (3 Nos.) to store components when not in use & 4 Nos. of caster wheels.

- ◆ Quick release socket plug arrangement for building circuits, Lighter pneumatic components are mounted using lever operated moulded adapters for quick release & placement.
- ◆ List of components may be modified as per your requirement. Top electrical panel row exists in electro hydraulics / Pneumatic only

Technical Specification

| Item | Hydraulic Trainer | Qty | Electro - Hydraylic Trainer | Qty |
|---|--|---------|--|----------------|
| Oil Distribution and manual controls, gages | Sub plate (1 station manifold) with 4 ports & 2 gauge ports. | 2 | Sub plate (1 station manifold) with 4 ports & gauge ports each equipped with | 2 |
| | Quick Release Male Adaptors | 21 | Quick Release Male Adaptors | 13 |
| | 70 bar Gliserine filled pressure gauges to a and b ports. | 4 | Modular Pressure relief valve (sub plate mounted) with 70 bar Gliserine filled pressure gauges to A & B ports (2 x 2) | 1 |
| Direction Control Element | 4/2 way DC valve lever operated spring return. | 1 | 4/2 way single solenoid 24 VDC spring return | 1 |
| | 4/2 way DC valve, AC 230Vac solenoid operated spring return | 1 | 4/3 way double solenoid 24 VDC spring return | 1 |
| | 4/3 way DC valve, lever operated spring return. | 1 | | |
| | 4/3 way DC valve lever operated detented. | 1 | | |
| Actuating devices (Output) | Single acting cylinder 40mm x 100mm stroke with QR adaptor | 1 | Single acting cylinder 40mmx100mm spring return & QR adaptor | 1 |
| | Double acting cylinder with in line flow control valve 40mm x 100 mm stroke & QR sockets. | 1 | Double acting cylinder with in line flow control valve 40mm x 100 mm stroke & QR sockets. | 1 |
| Connections | A) Flexible hoses, R1 type 1/4" ID with Quick release sockets (one end 90° & other straight) Length 2000mm Length 1200mm | 2 2 | A) Flexible hoses, R1 type 1/4" ID with Quick release sockets (one end 90° & other straight) Length 2000mm Length 1200mm | 2 2 |
| | B) Quick release plugs(M) Quick release sockets(F) | 21 8 | B) Quick release plugs (M) Quick release sockets(F) | 13 8 |
| Electrical Connection | Mains cord for 230 Vac solenoid with stakable connector | 1 | Electrical circuit 4mm Banana Patch cord 1 mtr, 500mm, 100mm | 12 10 10 |
| Resource Panel | NA | - | 24VDC power supply. 8 Relay card PLC interfaceable with NO NC contact & 24Vdc coil, Dual Timer WITH NO-NC contacts or Optionally LG PLC (12 input+ 8 output) with CDP & ladder software. | |
| Power Generation | Power pack (50 bar) consist of : a) Tank 25Ltr. b) Gear Pump 3LPM with ball valve for flow measurement in Beacker (optional), c) Electric motor 0.5 HP 1440 RPM 230VAC, d) Oil Breather Oil level indicator, sunction filter / Stainer, Return line filter, 70 Bar Gage, e) Relief valve. | | | |
| Mechanical Dimension | Anodised sturdy Aluminum profile rack (table top) with groove experiment board (Optinally double sided). Total dimension : 1165 mm (L) x 300 mm (W) x 800mm (H), Aluminum Grooved T bolt Board : L = 107 cm, W = 70 cm. Reclining at 0°, 20°, 30°. Oil Tray (107 cm x 300 cm x 2 cm) Powder coated MS Net Weight : 125 Kg, Gross Weight : 150 Kg. | | | |

Optional Experiments only for Electro-hydraulic Trainer

- 1) Servo position control (Close loop) consisting of CIP panel with servo control using relay control circuit, EMT8 power supply for stroke length display, linear motion (100 mm, stroke) potentiometer (5K) as a position sensor coupled to D.A. cylinder.
- 2) Proportional flow and direction control valve with built in amplifier with $\pm 5V$ I/P voltage to control flow and direction 5K servo pot to sense position coupled to D.A. cylinder, open loop position control, EMT8 panel to display stroke length.
- 3) Proportional flow and direction control valve with amplifier card & LVDT feedback close loop control.