

OIL-HYDRAULICS PROFESSOR TRAINER Mod. HPT/EV

HY



AUTOMATION TECHNOLOGIES

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26D-E-HY-HPT-0

This system provides the Teacher with the necessary tools to implement a training course on oil-hydraulic and electro-hydraulic automation techniques.

The trainer includes an oil-hydraulic station, an electrical control board and measurement instruments.

Thanks to connections via quick-connect hoses, teachers can analyze the components and carry out the exercises explained in the handbook. This equipment is provided with castors.

The trainer includes:

- Oil-hydraulic station with oil-hydraulic safety devices
- Automatic oil heating and cooling system
- Thermal Magnetic Circuit Breaker T.M.C.B.
- Low voltage electrical control switchboard
- Industrial hydraulic components installed on panels with test points of pressure, quick connectors and symbols
- Measurement instruments for oil pressure, flow and temperature

TRAINING PROGRAM:

The program includes different exercises such as:

- Analysis of the operation of the supplied components
- Determination of the pumps Q-p characteristic
- Hydraulic and electrical control circuit for single- and double-acting cylinder
- Locking of double-acting cylinder
- Speed control with regulator

TECHNICAL SPECIFICATIONS:

Oil-hydraulics station

- Electrical motor power: 1,5 kW - 900 rev/min
- Pump flow 1:1,5 l/min
- Pump flow 2:8,2 l/min
- 2 suction filters
- 2 pressure relief valves
- 2 pressure gauges with cut-off valves
- Max. pressure: 65 bar
- Oil content: 80 l
- Min. and max. oil level indicators
- Oil filling and draining taps
- Oil thermostat and digital thermometer
- Oil heater power: 2 kW
- Water circulation heat exchanger
- Thermostatic cooling valve

Electrical control board

- Earth Leakage Circuit Breaker E.L.C.B.
- 2 automatic switches
- Key-operated main switch
- Self-locking emergency pushbutton
- Signalling lamps
- Run and stop motor pushbuttons
- 2 multi-position switches
- 5 relays and 4 pushbuttons
- Delayed pick-up timer and electrical cables

Oil-hydraulic components modular panels

- 2 pressure relief valves
- Adjustable bidirectional throttle valve
- 2 adjustable one-way throttle valves
- Flow control valve
- 3 check valves
- Pilot control check valve
- 2 shut-off valves
- 3 4/2 single-solenoid valves
- Double-acting cylinder
- Cylinder with negative load and adjustable cushions
- Hydraulic accumulator with safety devices
- 4 pressure gauges
- Tank for flow measurements and flexible hoses with quick acting couplings

Dimensions and Weight:

- **Trainer:** 195 x 73 x 189 cm – 429 kg (Hydraulic fluid: 80 kg)
- **Provided panels:** 88 kg
- **Electrical control board:** 60 x 60 x 189 cm – 144 kg
- **Optional rack:** 168 x 75 x 162 cm – 77 kg

Rack for modular panels mod. MAGZ/EV**REQUIRED****UTILITIES (PROVIDED BY THE CUSTOMER)**

- Electrical power supply: 400 V 50 Hz three-phase
(Other voltage and frequency on request)
- Hydraulic power supply: Water for oil cooling 2m³/h max

OPTIONAL

- Supplementary modular panels mod. SMP-P/EV
- Proportional oil-hydraulics components mod. HPV-P/EV
- Interface board mod. C2-IO/EV
- Rack for modular panels mod. MAGZ/EV

SUGGESTED SOFTWARE:

- Design, simulation and animation software for the study of hydraulics and electro-hydraulics mod. SW-HYD/EV

OR AS AN ALTERNATIVE:

- Design, simulation and animation software for the study of electro-pneumatics & electro oil-hydraulics mod. SW-FLU/EV
- Design, simulation and animation software for industrial automation mod. SW-CAI/EV.

SUPPLIED WITH

**THEORETICAL-EXPERIMENTAL HANDBOOK
WITH INTRODUCTION TO THE EXERCISES**

