

# OIL-HYDRAULICS STUDENT TRAINER Mod. HST/EV

HY



AUTOMATION TECHNOLOGIES

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26D-E-HY-HST-0

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

The trainer includes an oil-hydraulics station, an electrical control board and measurement instruments. Thanks to connections via quick-connect hoses, students can analyze the components and carry out the exercises explained in the handbook. This equipment is provided with castors.

#### The trainer includes:

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

#### TRAINING PROGRAM:

The program suggests different exercises among which:

- Analysis of the operation of all 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
- Use of an hydraulic accumulator in emergencies

#### 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

- 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 – 435 kg (Hydraulic fluid: 80 kg)
- **Provided panels:** 73 kg
- **Electrical control board:** 60 x 60 x 189 cm – 144 kg
- **Optional rack:** 148 x 59 x 161 cm – 69 kg

**Rack for storing the student trainer modular panels mod. MHST/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 2m<sup>3</sup>/h max

#### OPTIONAL

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

