



HYDRAULIC BENCH with TRANSPARENT COMPONENTS DL 8110ES

THIS TRAINER IS COMPOSED AS FOLLOWS:

- Work bench complete with:
 - Metal working panel fully plastic coated;
panel dimensions: 950 x 1050 mm. With $\varnothing 5$ mm holes every 50mm (horizontally and vertically) for quick clamping of hydraulic components without using additional tools;
 - 4 wheels (the 2 front wheels are lockable);
 - 3 drawers with locking systems with key for storing components;
 - 1 clipboard located on the side of the work bench.

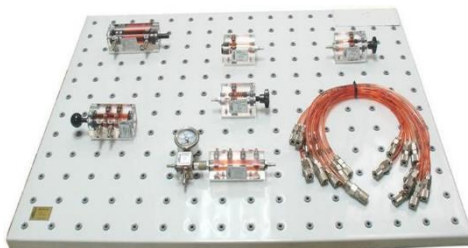


Work Bench



Hydraulic Power Unit

- Movable hydraulic power unit.
This electrically powered hydraulic unit consists of:
 - 6 litres transparent tank;
 - 0.12Kw single-phase motor;
 - extra-silent gear pump, $Q = 0.5$ l/min;
 - pressure relief valve, P_{max} : 10 bar;
 - pressure gauge: 0-16 bar Stop-Start switch;
 - quick fit couplings (1P – 2T);
 - 3m power cable with plug;
 - tap for inserting bubbles into circulating oil circuit;
 - oil can (5 litres) with special red colouring.



Transparent Components

- Transparent components:
 - Double effect cylinder: d/e cylinder $\varnothing 20 \times \varnothing 10 \times 58$ mm.
 - Manually actuated 4/2 distributor: manually actuated, spring return
 - Pressure relief valve: ball valve. Direct control.
 - 3 connection divider with pressure gauge: 0-10 bar pressure gauge. One female + two male's quick fit connectors.
 - Check valve: seat check valve.
 - Flow restrictor: needle flow restrictor, manual regulation.
 - 6 connection divider: 6 male quick-fit self-sealing connectors, size NW4
 - Set of hoses: 6 NW3 x 520 mm length, 4 NW3 x 350 mm length. With quick-fit self-sealing female connectors.
 - Workbook with theory and practices.



TRANSPARENT COMPONENTS ADVANCED LEVEL



DL 8110ES-2

- Pressure relief valve with damping: spool valve with damping 3 way valve. Manual regulation.
- Single effect cylinder: $\varnothing 20 \times \varnothing 10 \times 40$ mm. Spring return.
- Pressure reducing valve: 3 way pressure reducing valve. Direct control. Manual regulation.
- One way flow restrictor: needle valve with by-pass check valve
- Shut off valve: 2/2 valve. Manually actuated.
- Piloted one way restrictor: hydraulically actuated check valve
- Flow control valve with pressure compensation: hydrostatic valve incorporated. Manual regulation.
- 4 connection divider: 3 male + 1 female quick-fit self- sealing connectors.
- Set of hoses: 5 x 520 mm length. With quick-fit self-sealing female connectors.
- Workbook with theory and practices.

TRANSPARENT COMPONENTS ELECTRO-HYDRAULICS



DL 8110ES-EH

- Electrical power supply unit: 220 VAC/24 VDC, I=5 A. Over load and short circuit protection. On/Off switch, On/Off indication lamp, Electronically stabilized, $\varnothing=4$ mm quick connectors, Plastic box with printed transparent cover.
- Control unit: 4 push buttons, 2 green, 1 red, 1 yellow, with 1 normally open + 1 normally closed contacts each. 1 switch with 1 normally open + 1 normally closed contacts. 1 connection / disconnection electronic timer, 0 to 6 seconds regulation. 4 spark suppressing diodes. 4 indicator lights, 2 green, 1 red and 1 yellow. $\varnothing=4$ mm quick connectors. Plastic box with printed transparent cover.
- Relay unit: 3 relay unit with 4 exchanged (switched) contacts each. On/Off light indicator on every relay solenoid. Spark suppressing diode on every solenoid. 6 connection divider for positive voltage. 6 connection divider for negative voltage. $\varnothing=4$ mm quick connectors. Plastic box with printed transparent cover.
- Set of connection cables:
 - 14 blue cables, 500 mm length with $\varnothing 4$ mm male connectors
 - 14 red cables, 500 mm length with $\varnothing 4$ mm male connectors
 - 8 blue cables, 1500 mm length with $\varnothing 4$ mm male connectors
 - 8 red cables, 1500 mm length with $\varnothing 4$ mm male connectors
- Set of 3 connectors for solenoids: 2 grey + 1 black. Including solenoid 2P+G connector, on/off indicator lamp, cable and male. $\varnothing=4$ mm quick connectors.
- 4/2 solenoid valve: Spring return, 24VDC.
- 4/3 solenoid valve: 4/3 valve, spring centered. A, B, P y T closed in central position. 24 VDC solenoids.
- Set of two roller limit switches: 1 normally closed + 1 normally opened contacts. Transparent body. $\varnothing=4$ mm female connectors.
- Workbook with theory and practices.