

HYDRAULICS TRAINING SYSTEM



Practical 'Hands ON' training systems for those taking part in
Multi-skilling, Cross-skilling, NVQ or Modern Apprenticeship
Training programmes



MECHATRONICS

The Hydraulics Training System from **MECHATRONICS** is a high quality but low cost mobile laboratory trolley based system that can be used to cover training in hydraulics, electro-hydraulics, proportional hydraulics and even Programmable Logic Control (P.L.C.) of hydraulic systems.



Components are easily and rapidly secured to panel using 1/4 turn fasteners

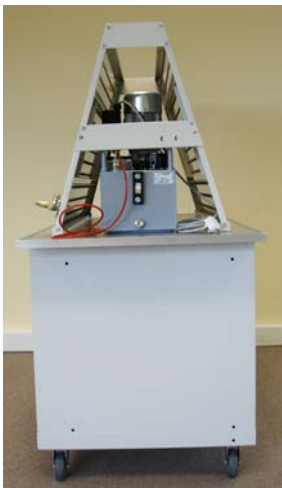
This system can be supplied as either double sided or single sided and comes complete and ready for use, with the relevant Courseware / Teachware supplied (no precious development time needed, as is often the case with others manufacturers).

The system is extremely clean in use, due to the self-sealing, **true 'FLAT-FACE'**, quick-connect couplings used throughout, a 1st for hydraulic training equipment.



Genuine 'FLAT-FACE' couplings used throughout for ease of use and cleanliness

All the components used in the system are genuine industrial items that are widely used in various industries worldwide. The components are quickly and easily mounted on the circuit building panel and secured by means of 1/4 turn fasteners, eliminating the requirement for any tools. The complete assembly, test and disassembly of circuits is therefore rapid, easy and efficient, thus maximising the time available when 'putting the theory into practice'.



Double sided hydraulics laboratory trolley

The components available cover a wide range of actuators, directional, pressure and flow control in hydraulics, electro-hydraulics and proportional hydraulics, more extensive circuits and controls can be built by connecting to the P.L.C. training systems from **MECHATRONICS**. All electrical connections are made via shrouded safety sockets and safety plugs.

Being of modular design the system can be very easily expanded to meet any future needs that arise.



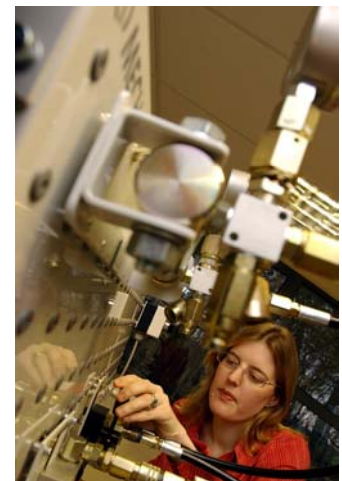
5-drawer (lockable) equipment storage cabinet

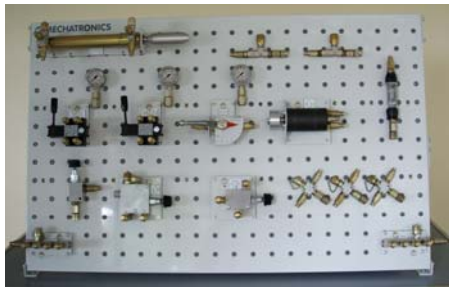
The **MECHATRONICS** Hydraulics Training System is successfully used by numerous colleges, universities and company training centres in the United Kingdom as well as overseas, it being ideally suited to achieve the practical requirements of courses such as City & Guilds, BTEC and SEMTA, amongst others, at minimal capital outlay.



The lockable equipment storage cabinets are extremely durable being heavy-duty, CNC tool cabinets, totally of steel construction (other companies use chipboard office furniture cabinets for low cost).

On the double sided unit, each side is totally independent of the other with its own dedicated power pack, start/stop controls, pressure relief valve etc.. for added safety of the trainees.

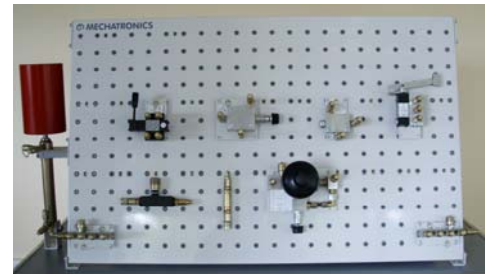




Set of Components – Hydraulics, level 1
(set of hoses not shown but included)

Support Materials available:-

- Exercises/Solutions with Question/Answer Papers:
 - Hydraulics
 - Electro-hydraulics
 - Proportional hydraulics
 - P.L.C.
- OHP Transparencies
- Magnetic Symbols
- Manuals & Textbooks



Set of Components – Hydraulics, level 2

Features:

- Mobile laboratory trolley can be re-located in laboratory (or classroom) when required
- Allows secure storage of components when not in use
- Simple yet secure mounting system
- Easy, quick and clean in use
- Quick, clean and safe plug-in hydraulic couplings and electrical connections
- Choice of hydraulics, electro-hydraulics, proportional hydraulics and/or P.L.C.
- Extremely wide range of components available
- Full range of support materials
- Operates off a standard single phase electrical supply

Advantages:

- Low capital cost
- Genuine industrial components
- Eliminates need for tools
- Replaces permanently mounted components for easily interchangeable items
- Very clean in use, due to genuine 'Flat-Face', quick-connect couplings
- Simple expansion into electro-hydraulic, proportional hydraulic and P.L.C. systems
- Ergonomically pleasing design
- Minimum space required
- Modular – easy to expand
- Supplied complete with 'Collection of Exercises/Solutions with Question/Answer papers'

Benefits:

- Improved quality of training
- Improved appearance
- Create professional image
- Can be used in conjunction with **MECHATRONICS** pneumatic / electro-pneumatic components
- No tools required
- Cost effective system
- Extensive number of exercises possible
- Supplied ready for use (no precious development time required)

Safety:

- Electric motor/s overload protected
- All hydraulic connections made via **true** 'Flat-Face', self-seal, quick-connect couplings
- All electrical connections made via shrouded safety sockets and plugs
- 24V d.c. control voltage used for electro-hydraulics, proportional hydraulics and P.L.C. systems

TECHNICAL SPECIFICATION

Electrical Supply: Hydraulics:

230V a.c. 50Hz or 115V a.c. 60Hz, single phase, overload protected with Start/Stop
 Maximum system pressure – 65 bar
 Hydraulic fluid – HLP/HM 32
 Reservoir capacity – 10 litres useable/power pack (1 on single sided, 2 on double sided unit)
 Flow rate – 4 l/min @ 65 bar
 Valve size – nominal size 3mm (NG3), rated @ 210-315 bar according to component

OTHER PRODUCTS

MECHATRONICS International Ltd are specialist manufacturers of an extensive range of training equipment which includes the following:-

Training Hardware:-

In addition to the Laboratory Trolley based Hydraulics Training System we are also manufacturers of training systems in all of the following subject areas:-

Pneumatics
Electro-pneumatics
Hydraulics (portable systems)
Electro-hydraulics (portable systems)
Proportional hydraulics (portable systems)
Programmable Logic Control (P.L.C.'s)
Mechanical Transmissions
Industrial Handling
CIM / FMS

These systems are modular and available in a wide variety of formats, they are compatible with each other and therefore may be combined together or used individually. All the required hardware from a single component through to complete, very extensive 'Turnkey Systems' can be supplied.

Teachware & Courseware:-

To support the training systems hardware we have developed a full range of Teachware suitable for use by Instructors, Lecturers, Tutors and Teachers.

Courseware suitable for use by students is available in the form of 'Industry Related' practical exercises, supported by question and answer papers, relevant to the exercises, thereby offering a complete structured assessment system. This material is covered by copyright but is supplied with a licence, which allows copying, by the purchaser for training and educational purposes.



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E. & O. E.

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