

# Product Information Sheet

## Hydraulics Trainer



This STEM learning package has been designed to provide practical real world problem solving tasks and activities within the classroom or lab environment.

The Hydraulics Trainer offers a classroom-based resource for practical investigation of hydraulic components and systems.

The trainer consists of a rig and push fit hydraulic hoses to allow rapid circuit connection and setup. Students can investigate cylinders and valves in a variety of circuit configurations and input pressures.

This trainer includes access to digital curriculum materials including theory and practical learning tasks, as well as tutor support resources.

The trainer can also be used in conjunction with our optional cloud-based software packages, which offers online practical tasks as well as interactive theory presentations, investigations, and assessments, which link directly to the practical activities carried out using this resource.

### Hydraulic Components:

- Pressure Regulator
- Supply Pressure Gauge
- In-line Pressure Gauge
- Flow Meter
- Flow Control Valve
- 2 x Check Valves
- 3 x T-Connectors
- 1 x 5-Port Valve
- Small and Large Double-acting Cylinder
- Hydraulic Pump (Internal)
- Lever Mechanism (1st, 2nd, 3rd order)

### Typical Practical Activities Include:

- Principles of Hydraulics
- Components, Symbols, and Circuits
- Basic Hydraulic Laws
- Actuators
- Levers and Movement
- Valves and Flow Control
- Creating Pressure with Pumps
- Speed Control of Cylinders
- Cylinder Design

### Items Included:

- Hydraulics Unit
- Hydraulic Hose Set
- Lever and Mass Set
- Drip Tray
- Hydraulic Fluid
- Stopwatch
- Disposable Gloves and Paper towels
- Safety Glasses
- Curriculum in Digital Format

### Other Items Required:

- LJ Create Engineering or Technology Content (Optional)
- Computer
- Fluid Power Student Resource Pack 278-01

### General Information:

Power Requirements: 110 – 240V 50-60Hz  
Packed Volume: Approx. 0.21 m<sup>3</sup>  
Packed Weight: Approx. 27 kg

**Order Code: 280-01**

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