This trainer has been designed for the visualization and the study of the phenomenon of water hammer.

It is possible to study the effects on a surge tank where there is a decrease in the over pressure/under pressure generated by the water hammer.

The system is set for the observing and the testing of the pressure increase produced by the variation of the flow rate through a valve: it allows the observation of positive and negative water hammer produced by the sudden shut of a valve.

It is supplied with a computer, a printer and a software for the registration and printing of the results coming from the various practices.

**TRAINING OBJECTIVES**

- Study and visualization of the pressure increase produced by the variation of the flow through a valve.
- Study and visualization of the phenomenon of water hammer produced by the instantaneous closing of a valve.
- Study and visualization of the phenomenon of water hammer produced by the sudden stop of a pump.
- Study and display of the effects on a surge tank in mitigating water hammer.
- Determining the speed of sound through water a pipe.
- Determining the losses in a pipe.

**TECHNICAL DATA**

**PIPES:**
- PVC pipe inner Ø= 28.4 mm, thickness= 1.8 mm and length= 3 m.
- Copper pipe inner Ø= 26 mm, and thickness= 1 mm and length= 3 m.

**PRESSURE TRANSDUCERS**
- 3x absolute pressure transducer 0-10 Bar.
- 2x absolute pressure transducer 0-16 Bar.
- 1x absolute pressure transducer 0-5 Bar.

**COMPUTERIZED SYSTEM**
- Data acquisition module.
- Computer with software included.
- Printer.

**VALVES**
- 1" brass valve.
- Pneumatic quick-closing valve (requires compressed air).

**NOTE:** Valves are interchangeable between the 2 pipes.

**SURGE TANK**
- 1.7 meters surge tank.

Requirements:
- Power supply: 230V/50 Hz.
- Compressed air line or air compressor for the quick closing valve.