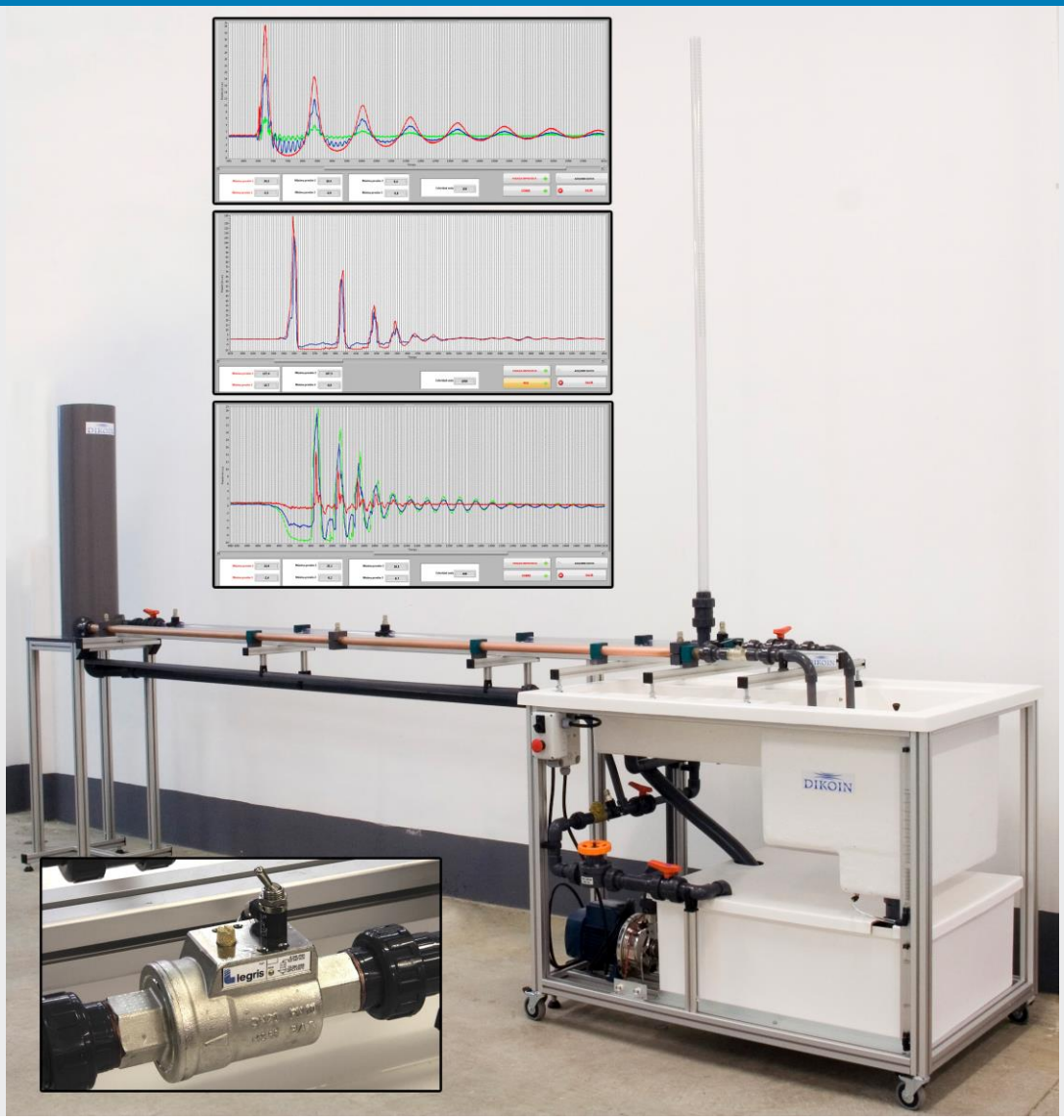
FL 09.1 - WATER HAMMER



This equipment is used to visualize and study the phenomenon of water hammer.

The equipment is designed to study the pressure increase produced by varying the flow through a valve, and to observe the positive and negative water hammer produced because of an instantaneous closure of a valve.

Also, it can be studied the effects of a surge pipe in reducing overpressure / depressure from water hammer.

The data is studied on a LabVIEW software.

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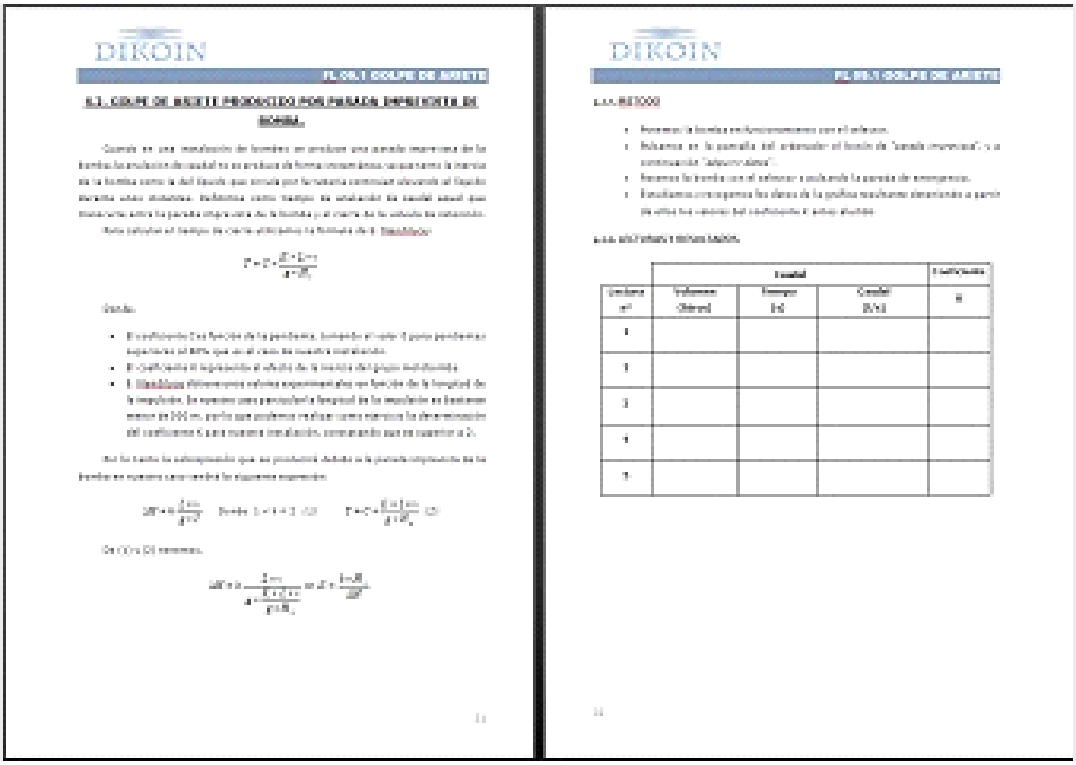
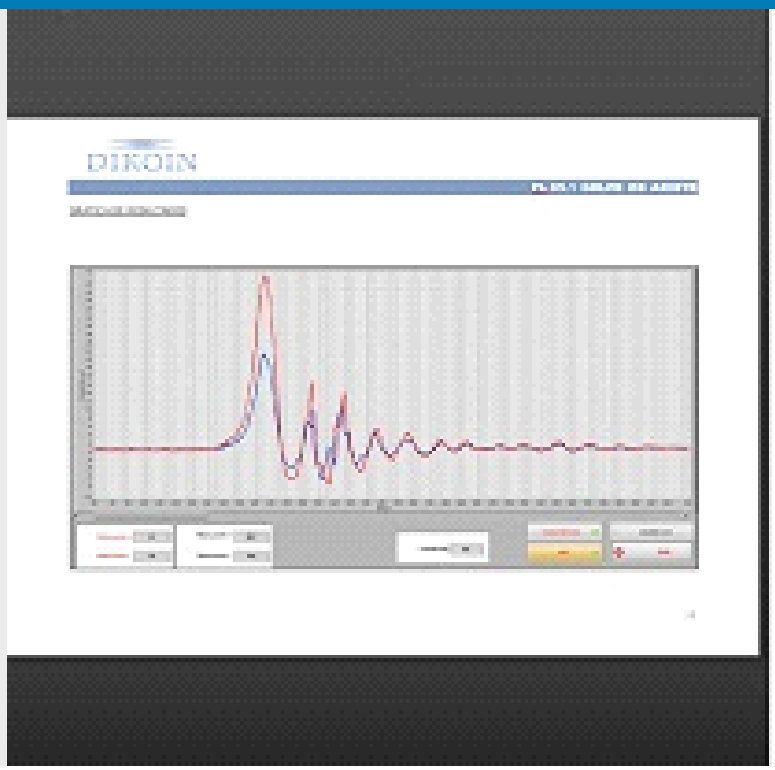
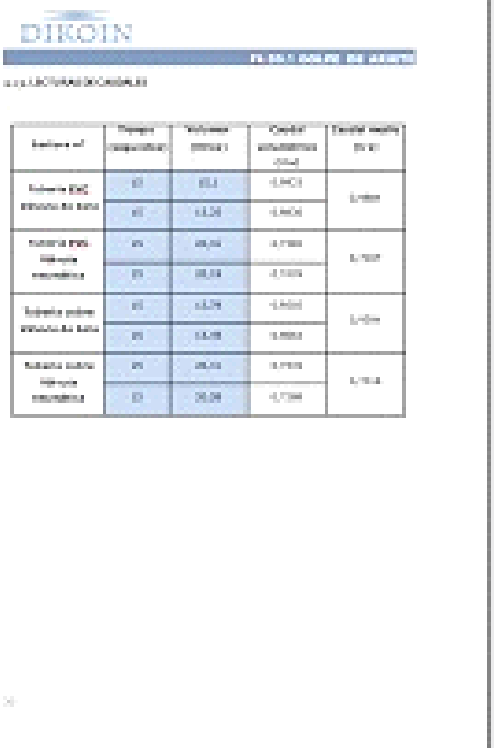
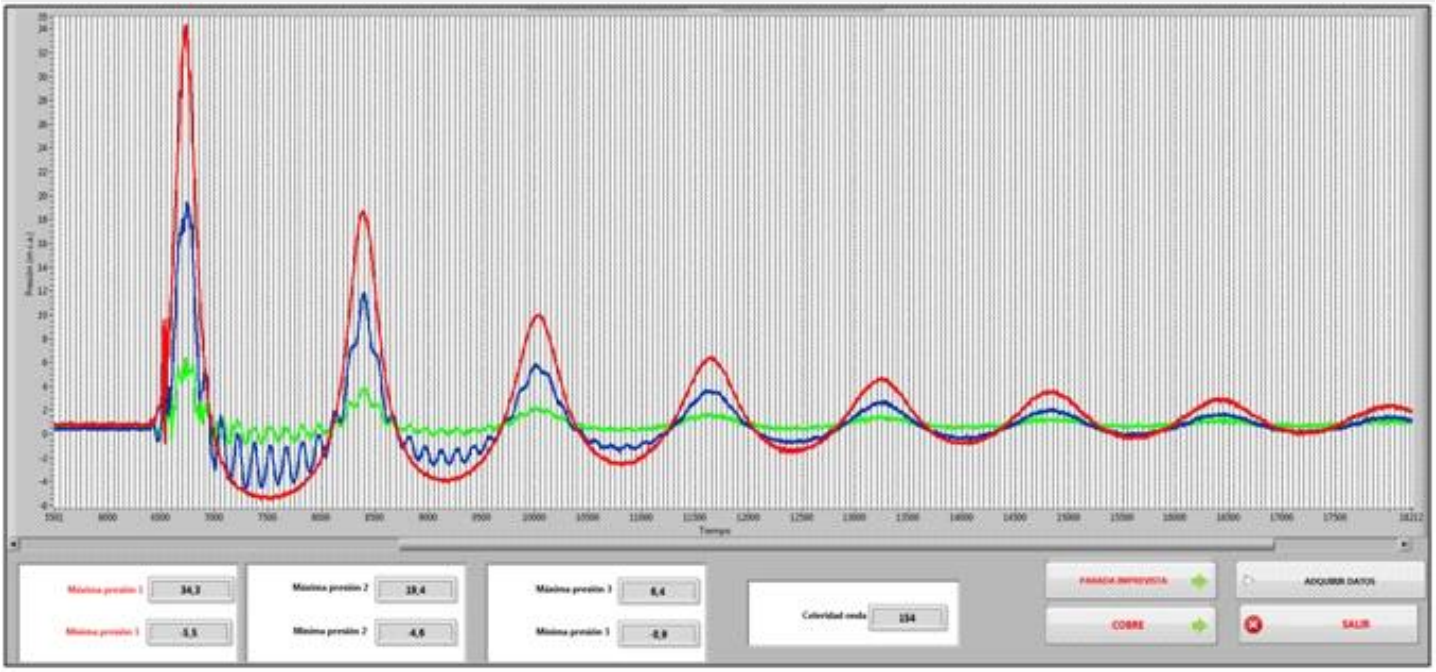
The manual shows clearly and with a lot of images, the hole process to operate the equipment.



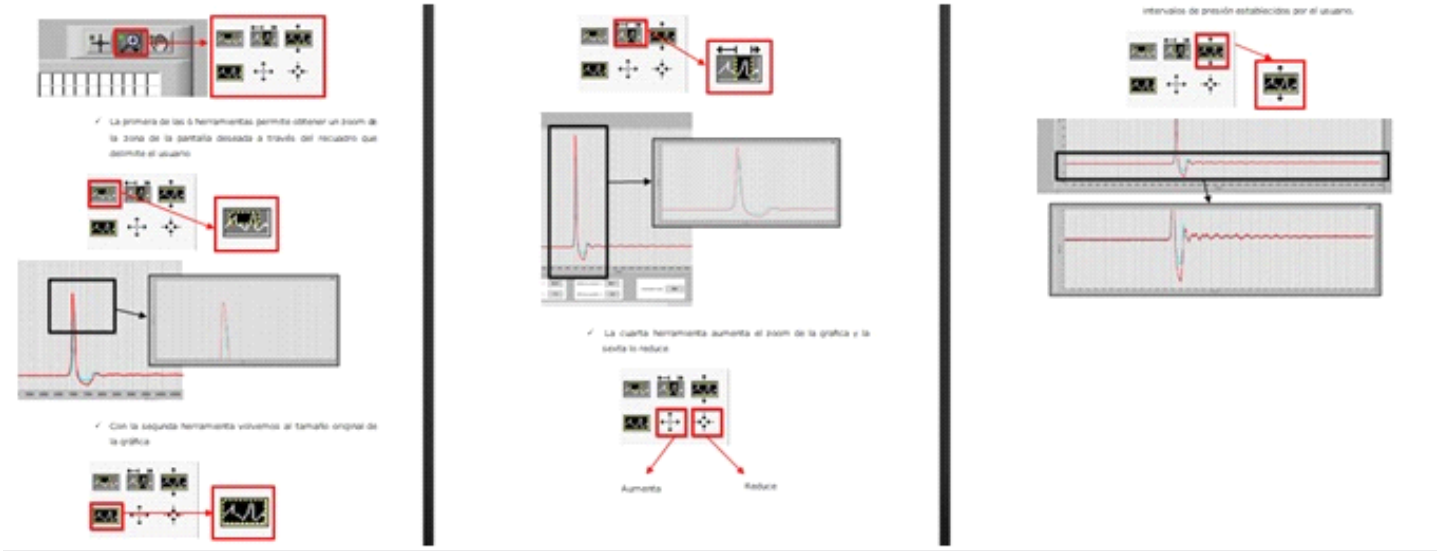
The instruction manual explains and shows all the theoretical foundations, as well as all the mathematic expressions used during the experimentation.







The software is capable of automatically detecting the wave produced by the water hammer, and of showing it centered on the screen.



The software has a full zoom system to view any detail of the graph correctly.

FL 09.1 - WATER HAMMER

Optional Accessory: FL 09.1.VX - QUICK-CLOSING VALVE FOR WATER HAMMER
The quick-closing valve, powered by compressed air, causes an almost instantaneous stop of the water circulation, thus generating the maximum possible water hammer in the line in which it is placed.
NOTE: Requires compressed air line.

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FL 09.1 - WATER HAMMER

AVAILABLE FOR PRACTICE

- Study and display pressure increase produced by varying the flow path through a valve.
- Study and visualization of the phenomenon of water hammer produced by the instantaneous closure of a valve.
- Study and visualization of the phenomenon of water hammer caused by the unexpected shutdown of a pump.
- Study and viewing the effects of a surge tank in the attenuation of water hammer.
- Determining the speed of sound through water in a pipe.
- Determination of head losses in a pipe.

TECHNICAL DATA

PIPES

- PVC pipe inner diameter 28.4 mm. and thickness 1.8 mm. Length 3 m.
- Copper Pipe inner diameter 26 mm. and thickness 1 mm. Length 3 m.

PRESSURE TRANSDUCERS

- 3 x Absolute pressure transducer 0 to 10 bar.
- 2 x Absolute pressure transducer 0 to 16 bar.
- 1 x Absolute pressure transducer 0 to 5 bar.

DATA ACQUISITION MODULE

- Data Acquisition Module with USB connection for use with computer.
- LabWIEW Software

VALVES

- Brass valve 1".
- Ø32mm PVC ball valve.

NOTE: The valves are interchangeable between the 2 pipes.

SURGE PIPE

- 1.7 meter surge pipe.

REQUIREMENTS

- Power supply: 230V/50Hz.
- DIKOIN Hydraulic bench.
- FLZ.T500 ACCESSORY ADAPTER FOR HYDRAULIC BENCH.

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