



## SECONDARY LOSS OF LOAD



**DL DKL181**

This equipment is suitable for the study of losses and it includes straight sections of piping for the study of primary loss that could occur in the system. The equipment includes also other elements such as elbows of different diameters 90° and 45°, tees, widening, narrowing, various types of valves (as ball, gate, membrane, backstop) with pressure taps upstream and downstream arranged in order to determine loss load produced with different flow rates.

All pressure connections have double sealed quick couplings; the system includes also a differential water manometer and a digital differential pressure gauge for measuring the resulting pressure.

### PERFORMABLE EXPERIMENTS

- Measuring the primary load losses that can occur in a straight PVC pipe with inner diameter 21.2 mm.
- Testing the relation between load losses and the fluid velocity in the pipe.
- Measuring the secondary load losses that can occur in elements such as elbows, tees, and valves, widening, etc.
- Calculating “K” coefficients of loss corresponding to the elements mentioned above.
- Use of different types of gauges:
  - Water column.
  - Electronic differential.

### TECHNICAL DATA

- Aluminum frame with adjustable legs.

Hydraulic circuit:

- 90° elbow  $\varnothing$ 25mm
- 90° elbow  $\varnothing$ 16mm
- 45° elbow  $\varnothing$ 25mm



# FLUID MECHANICS



- 90° curve Ø25mm
- 90° tee Ø25mm
- 45° tee Ø25mm
- Abrupt widening and narrowing 25mm – 50mm
- Smooth widening and narrowing 25mm – 16mm
- Valve
- Ball valve
- Valve
- Check valve
- Straight piping segment Ø25mm

Pressure measurement:

- Water column = 1000mm
- Differential electronic type

## Requirements:

Hydraulic bench DL DKL014 or hydraulic group DL DKL011, not included in this item.