



SECONDARY LOSS OF LOAD



DL DKL181

This system is appropriate for the study of losses. It has straight sections of piping, for the study of primary loss generated therein. It also has elements such as elbows of different diameters such as 90° and 45°, tees, widening, narrowing, various types of valves (ball, gate, membrane, non-return ...) with upstream and downstream pressure taps arranged for determining loss load between them produced with different flow rates.

All pressure connections have double sealed quick couplings. The trainer has a differential manometer of water (1000mm) and a digital differential pressure gauge for measuring the resulting pressures.

TRAINING OBJECTIVES

- Measuring and testing the primary load losses that occur in a straight PVC pipe with an inner diameter 21.2 mm.
- Test of the relation between load losses and the fluid velocity in the pipe.
- Measuring the secondary load losses that occur in installation elements such as: elbows, tees, and valves, widening etc.
- Calculating coefficients of loss "K" corresponding to the elements above mentioned.
- Usage of different types of gauges:
 - Water column.
 - Differential electronic.

TECHNICAL DATA

- Aluminum frame with adjustable legs in height.

Hydraulic circuit:

- 90° elbow Ø25mm
- 90° elbow Ø16mm
- 45° elbow Ø25mm
- 90° curve Ø25mm
- 90° tee Ø25mm
- 45° tee Ø25mm
- Abrupt widening and narrowing 25mm – 50mm
- Smooth widening and narrowing 25mm – 16mm
- Gate valve
- Ball valve
- Membrane valve
- Non return valve
- Straight piping segment Ø25mm

Pressure measurement:

- Water column gauge de 1000mm
- Differential electronic gauge type



FLUID MECHANICS

Necessary accessory:

DL DKL014 – Hydraulic bench

The basic hydraulic bench is a simple, mobile, self-contained module that allows a supply of "hydraulic energy", i.e. an accurately controlled and measurable flow of water.

It includes two collecting tanks, a centrifugal pump, a flowmeter, a mobile frame work on wheels, a set of valves and piping.

Or DL DKL011 – Hydraulic group

