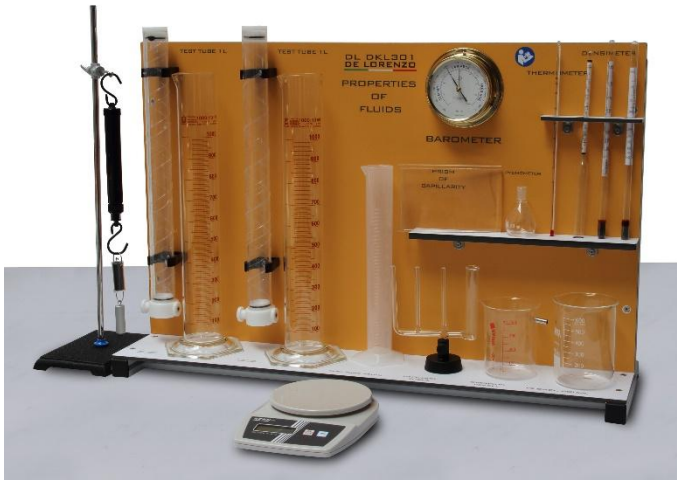




PROPERTIES OF FLUIDS



DL DKL301

Equipment designed for studying the properties of fluids.

Their behavior is described using several physical properties, which are fundamental in fluid mechanics, hydraulics, and engineering applications.

TRAINING OBJECTIVES

- Measurement of densities using Hydrometers.
- Measurement of densities using a Pycnometer.
- Study and demonstration of the capillarity in tubes.
- Study and demonstration of the capillarity between plates.
- Viscosity determination.
- Measure of atmospheric pressure using an aneroid barometer.
- Archimedes' laws.

TECHNICAL DATA

- Aluminum structure with phenolic resin panels.
- Hydrometers:
 - ◆ Density range $0.600 \div 0.700$ with 0.01 scale,
 - ◆ Density range $0.650 \div 1.000$ with 0.005 scale,
 - ◆ Density range $1.000 \div 2.000$ with 0.005 scale.
- Thermometer: from -10°C to $+60^{\circ}\text{C}$.
- Electronic precision balance: $500\text{g} \times 0.1\text{g}$.
- Gay-Lussac Pycnometer: 50ml.
- 600 ml glass.
- 1 liter test tube (glass).
- Falling ball viscometer:
inner $\varnothing = 32\text{mm}$, large = 450mm (x2).
- Steel spheres:
 - ◆ $\varnothing 1.58$ (1/16),
 - ◆ $\varnothing 2$,
 - ◆ $\varnothing 3$,
 - ◆ $\varnothing 3.175$ (3/32).
- Plastic test tube: 250ml.
- Barometer with range $952 \div 1068$ hPa ($714 \div 810$ mm).
- Dynamometer: $1\text{kg} \times 5\text{gr}$.