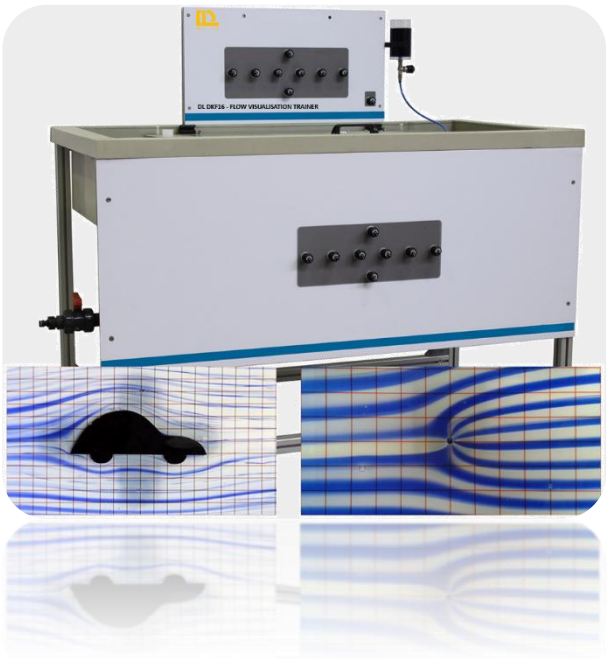
FLUID MECHANICS

FLOW VISUALISATION TRAINER



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This equipment allows us to study the flow behavior through different objects via flow lines, as well as being able to simulate sources and sinks.

Upstream, the ink is supplied via needles that generate current lines. The ink flow is controlled by a ***regulating valve***.

By acting on the needle valves, we can introduce:

- ***sinks*** (points where water exits the stream),
- ***sources*** (points where water enters the stream),
- or a combination of both into the stream.

Different models are supplied with the equipment:

- car profile,
- aerodynamic profile,
- circle,
- rectangle,
- square,
- drop,
- etc.,

with which we can clearly see the flow of current lines passing around them.

TRAINING OBJECTIVES

Study of the flow around different submerged bodies:

- car profile,
- symmetrical aerodynamic profile,
- square,
- drop,
- semicircles,
- triangle.

Ideal flow associated with sinks and sources:

- formation of Rankine half-body,
- formation of a circular Rankine oval,
- flow lines of a doublet,
- overlapping of sinks and sources.

Study of bi-dimensional flow through flow lines.

TECHNICAL DATA

Working area:

- Length: 900 mm,
- Width: 600 mm,
- Distance between plates: 3 mm.

Ink supply:

- Type: acrylic ink,
- Number of lines: 21 ink lines through needles.

Sinks and sources:

- 8 sinks or sources regulated through 2 needle valves each.

Dimensions (LxWxH):

- 1370x712x1345 mm.

Requires water inlet: 20 l/min.

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