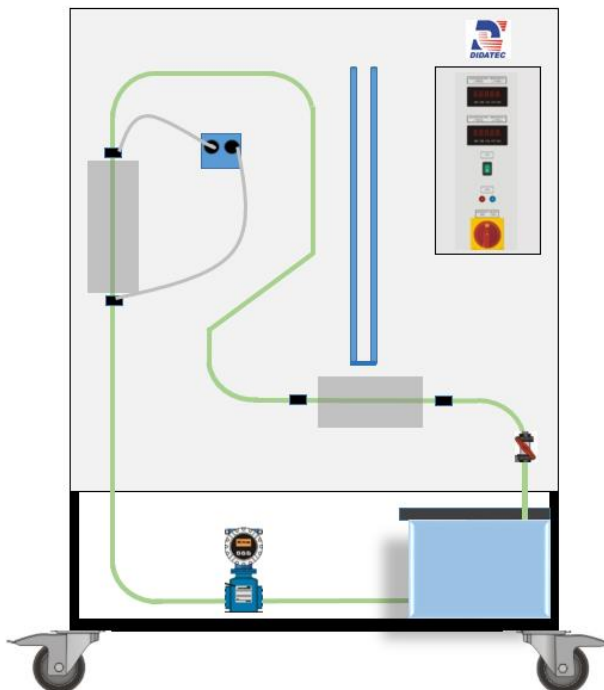


FLOW MEASUREMENT METHODS AND CONDITIONS STUDY UNIT



Experimental capabilities

- Different flow meters and their principles of operation
- Calibration of different flow meters
- Position dependency of flow meters
- Plotting and comparison of pressure loss curves

BMD150



Operating principle

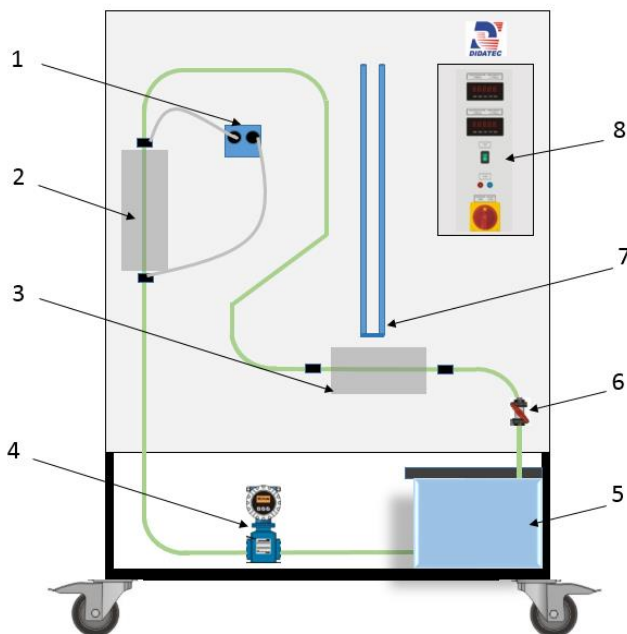
Flow measurement plays a key role in many process-engineering systems. Different flow meters are used for this, depending on the medium and application. The BMD 150 trainer is used to examine different principles of operation of flow meters. The flow meters are available as accessories. Pressure loss curves and accuracies can be compared to determine which flow meter is suitable for which area of application. One horizontally or vertically installed flow meter can be operated in a closed water circuit. The flow rate can be adjusted via a valve. A high-precision electromagnetic flow rate sensor is available as a reference for calibrating the flow meters.

To be able to determine the pressure losses of the various flow meters, the trainer is equipped with two twin tube manometers and a differential pressure sensor. A DC voltage source ensures the power supply to the flow meters if required.

The robust design of this device makes it suitable for use in schools.

The materials used are resistant to corrosion. The manufacture of this equipment complies with the European standard for machinery manufacturing.

Illustrations



Technical details

1. Differential pressure sensor

Range : 0 - 2 bars

2. Vertical measuring location

x2 measuring locations

3. Horizontal measuring location

x2 measuring locations

4. Electromagnetic flow rate sensor

5. Tank with pump

Tank : approx. 55 L

Pump

max flow rate approx. 225 L/min

max head approx. 11 m

6. Valve to adjust flow rate

7. Tube manometers

Range : 0 – 700 mm

8. Switch electrical box

Voltage source : 24 VDC and current : 2,0 A to supply the flow meters with auxiliary power

Included with machine :

- 1 Rotameter
- 1 Venturi effect transparent
- 1 Axial turbine flowmeter
- 1 set of hoses
- 1 set of cables

Services required

- Electrical supply : 230 VAC - 50Hz - 20A
- Water supply : 15 L / min - 3 bars (for tank)
- Water drain: at ground level
- Dimensions: (LxWxH mm): 1800 x 700 x 1900
- weight (Kg): 110

Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Certificate of conformity CE

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

DIDATEC– Zone d'activité du parc – 42490 FRAISSES- FRANCE
Tél. +33(0)4.77.10.10.10 – Fax+33(0)4.77.61.56.49 – www.didatec-technologie.com
email : service_commercial@didatec-technologie.com

Reproduction interdite / copy prohibited– Copyright DIDATEC mars-17- page 2

Dans le cadre de l'amélioration permanente de nos produits, ce descriptif technique est susceptible d'être modifié sans préavis
As part of the continuous improvement of our products, this technical specification may be modified without previous notifying