

Product Name :
Multi-Pump Test Rig

Product Code :
NLAB-MECHANICALAB230021



Description :

Multi-Pump Test Rig

Technical Specification :

The used to demonstrate different flow processes at different control structures in the open channel. In the closed channel, pressure components in a pipe are determined. The trainer includes a transparent experimental flume with upper limit, a height-adjustable sill and a closed water circuit. The water level in the experimental section is set with an adjustable plate weir at the water outlet. With a simple alteration, the experimental flume can be used as an open or closed channel.

The water level must be low when investigating the open-channel flow. To conduct the experiment, a weir is attached to the bottom of the channel or the height-adjustable sill is used. Furthermore, the discharge under a gate can also be demonstrated. Various weirs, which can be exchanged quickly and safely, are available as control structures.

When studying the closed channel, the water level needs to be high enough that the entire experimental section is flowed through. In this case the sill is used to change the cross-section flowed through.

The static pressures and the total pressure over the cross-section are detected by measuring tubes. The pressure difference is used to calculate the flow velocity.

FEATURES:

Investigation of flow processes in the open and closed channel

Flow processes in the open channel: gate, sill and various weirs

Closed water circuit with supply tank and pump

Discharge under a gate

Fully flowed through experimental section and change in cross-section over sill for experiments in the closed channel

Transparent measuring tubes for measuring static pressure and total pressure

Discharge under a gate

Hydraulic jump

Closed channel

Pipe flow with constant and variable flow cross- section

Measurement of static pressure and total pressure

Calculation of the flow velocity

SPECIFICATIONS:

Experimental section

Length: 1m

Cross-section W x H : 40x300mm

Supply tank: 70L

Pump

Power consumption: 250W

Max. Flow rate: 150L/min

Max. Head: 7,6m

230V, 50Hz, 1 phase

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