

MULTI PURPOSE TEACHING FLUME - SMALL SECTION



Experimental capabilities

- Study of an open channel flume
- Study of a sub critical flow
- Study of a super critical flow
- Influence of the inclination of the channel
- Understanding the relationship between water level above the crest of a weir and flow rate over the weir
- Flow rates calculations
- Visualization of flows
- Hydraulic jump
- Applying and understanding Manning's formula

Operating principle

The BCI 050 bench allows the study of flows in open channel. Water is pumped into a water reserve and sent through the open channel.

Users can view the flows in the channel and place obstacles in order to see the impact on the flow.

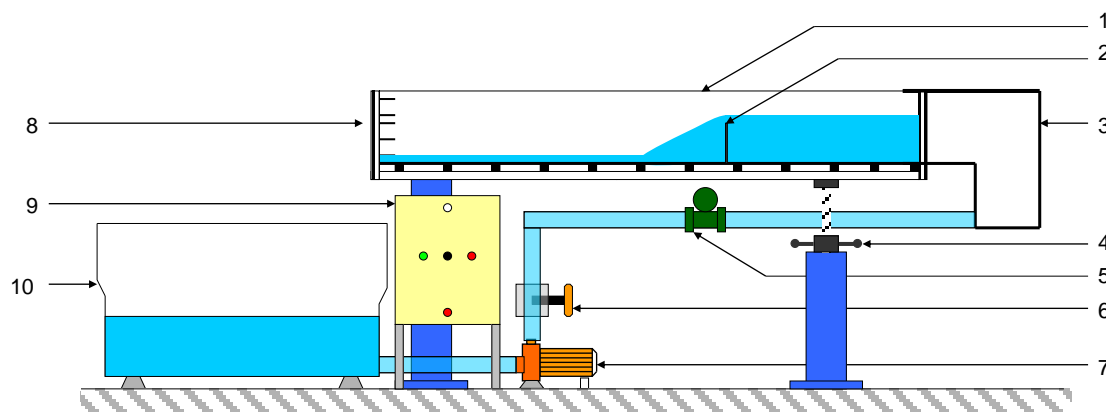
The slope of the channel is adjustable in order to create different types of flow (or torrential or fluvial)

The robust design of this equipment makes it perfectly suited for school use.

Its anodized aluminum structure on wheels makes it very robust as well as a great flexibility of integration into your premises.

The manufacture of this equipment meets the European machine directive

Illustrations



Technical details

1 Open channel flume

Transparent walls
Section: 200 x 80 mm
Length: 2000 mm
Frame made of stainless steel
The flume is equipped with a hooch and point gauge to measure the depth and chronometer

2 Location for weirs

Weirs provided:
- rectangular weir
- triangular weir
- sharp crested weir
- Broad crested weir
Other weirs are offered as options (not supplied)

3 upstream tank

Drainage valve in the lower part
High water level detector

4 Mechanical inclination system

Screw system
Manual operation
A digital sensor indicates the angle of inclination

5 Flowmeter

Electromagnetic flowmeter
Local digital display

6 Manual valve to adjust the flow rate

7 Water pump

Centrifugal pump designed for the flume
The pump speed is controlled by an inverter with manual set point
low flow detector to protect the pump from running dry

8 Outlet flange of the flume

Connection of an additional working section (option)
Possibility to use a gate valve
The water flows directly in the main tank

9 Electrical box including:

A main Switch
An LED voltage presence
A pump switch-on button
A potentiometer to adjust the rotational speed of the pump
An emergency stop button

10 Water min tank 300 L

Fiber tank
Drainage valve in the lower part

BCI050



Services required

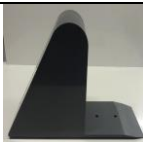




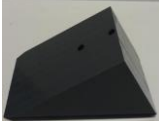

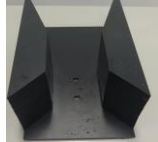
Documentation

- Electrical supply : 230 Vac – 50 Hz – 10 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Water supply : 300L
- Dimensions: (LxWxH mm): 3500 x 800 x 1500
- weight (Kg): 350

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

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

POSSIBLE OPTIONAL ACCESSORIES (not supplied)

BCI 051	Dam spillway	
BCI 052	Sluice gate	
BCI 053	Lateral bridge pier	
BCI 054	Roughened floor	
BCI 050 included	Broad crested weir	
BCI 055	Crump Weir	
BCI 056	Self-regulating Siphon	
BCI 057	Venturi flume	



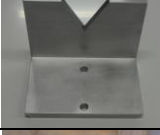



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As part of the continuous improvement of our products, this technical specification may be modified without previous notifying

BCI050



<i>BCI 050 included</i>	<i>Sharp crested weir</i>	
<i>BCI 050 included</i>	<i>Rectangular weir</i>	
<i>BCI 050 included</i>	<i>Triangular weir</i>	
<i>BCI 058</i>	<i>Rectangular bridge pier</i>	
<i>BCI 059</i>	<i>Rounded bridge pier</i>	
<i>BCI 060</i>	<i>Wave generator</i>	
<i>BCI 061</i>	<i>Water velocity meter</i>	