



Fluid Mechanics

H6

Discharge Over a Notch

For study of weirs as flow regulation and measurement devices



- Portable, corrosion-resistant glass-fibre channel
- Includes one rectangular and two V-shaped notches
- Extra (optional) weirs available for more experiments
- Precise measurement of water level
- Easy operation
- Works with Tecquipment's Gravimetric Hydraulic Bench (H1) for easy installation

- Tecquipment Ltd, Bonsall Street, Long Eaton, Nottingham NG10 2AN, UK
- **T** +44 115 972 2611 • **F** +44 115 973 1520 • **E** info@tecquipment.com • **W** www.tecquipment.com
- An ISO 9001 certified company

H6

Discharge Over a Notch

Description

The Discharge over a Notch apparatus shows clearly the use of weirs as simple flow regulators. It works with and fits on the top of TecEquipment's Gravimetric Hydraulic Bench (H1, available separately).

It allows students to do tests on relationships between upstream water level and weir discharge for various different shaped notches. They can then compare their results with theory.

The equipment is a moulded tank, the middle section of which forms a channel. One end of the tank is wide; the other end is deeper than the rest of the tank. Each weir fits in a sealed groove in the channel section. Plastic materials and corrosion-resistant finishes protect against corrosion.

The hydraulic bench supplies water to the wide end of the tank. Water flows through the channel and over the weir, where the deep tank exit allows students to see the discharge. Students measure the free water surface using an adjustable depth gauge attached to a beam across the channel. The tank outlet fits over the weighing tank of the hydraulic bench (available separately).

The equipment includes two different V-notch weirs and a rectangular notch weir. Other types of weir are available separately (Advanced Set of Weirs, H1D/b).

To do experiments, students regulate the flow using the hydraulic bench. They note the value of discharge and head, and reduce the flow. They repeat the readings for equal decrements in head, until the stream no longer springs clear of the notch. From their results they plot graphs of discharge rate against head, and also the logs of each.

Standard Features

- Supplied with a comprehensive user guide
- Five-year warranty
- Manufactured in accordance with the latest European Union directives

Experiments

Comprehensive study of flow over weirs, including:

- Investigation of head against discharge
- Coefficient of discharge for notches
- Rectangular and different angled V-notches

Essential Base Unit

- Gravimetric Hydraulic Bench (H1)

Recommended Ancillaries

- Advanced Set of Weirs (H1D/b)

Essential Services

Water supply:

From the Gravimetric Hydraulic Bench (H1)

Operating Conditions

Operating environment:

Laboratory

Storage temperature range:

-25°C to +55°C (when packed for transport)

Operating temperature range:

+5°C to +40°C

Operating relative humidity range:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

Specification

Nett dimensions:

920 mm x 620 mm x 520 mm

Packed dimensions:

0.3 m³ and 12 kg

Rectangular notch:

Depth 100 mm, width 30 mm

V notches:

- One of depth 100 mm, notch angle 30°
- One of depth 100 mm, notch angle 90°

Channel dimensions:

Nominally 228 mm x 178 mm x 305 mm

Maximum flow rate (rectangular notch):

62 L.min⁻¹

Accessories (included):

- Silicon grease
- Tubing
- Pipe clips

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infoWERK Medien & Technik GmbH

Martinsbühel 6 / A-6170 Zirl / Austria

Phone: +43 (0) 5238 52099-0 / Fax: +43 (0) 5238 52099-40

E-Mail: info@infowerk.at / Website: infowerk.at

Otto-Dürr-Straße 25

D-70435 Stuttgart, Zuffenhausen/ Germany

Phone: +49 (0) 711 342471-0 / Fax: +49 (0) 711 342471-11

E-Mail: info@de.infowerk.at / Website: infowerk.at