



H6

DISCHARGE OVER A NOTCH

For the study of weirs as flow regulation and measurement devices



SHOWN WITH THE DIGITAL HYDRAULIC BENCH (HIF) - AVAILABLE SEPARATELY

KEY FEATURES

- Portable, corrosion-resistant glass-fibre channel for ease of use and long life
- Includes one rectangular and two V-shaped notches for basic experiments
- Two additional weirs included for more advanced experiments
- Adjustable depth gauge for precise measurement of water level
- Works with TecQuipment's Hydraulic Bench for easy installation

LEARNING OUTCOMES

Comprehensive study of flow over weirs, including:

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

KEY SPECIFICATIONS

- Three basic weirs: Rectangular, 30° and 90° V-notch
- Two advanced weirs: Cipoletti and linear head/flow
- Depth Gauge



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 Digital Hydraulic Bench (H1F, available separately)*.

It allows students to do tests on relationships between upstream water level and weir discharge for 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. Water exits the tank, back into the hydraulic bench.

The equipment includes a basic set of three weirs including two different V-notch weirs and a rectangular notch weir. It also includes an advanced set of two weirs including a Cipoletti (trapezoidal) weir and a linear head/flow weir.

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.

STANDARD FEATURES

- Supplied with a comprehensive user guide
- Five-year warranty
- Manufactured in accordance with the latest European Union directives
- ISO9001 certified manufacturer

ESSENTIAL BASE UNIT

- Digital Hydraulic Bench (H1F)*

*This product will also work with an existing TecEquipment Gravimetric Hydraulic Bench (H1)

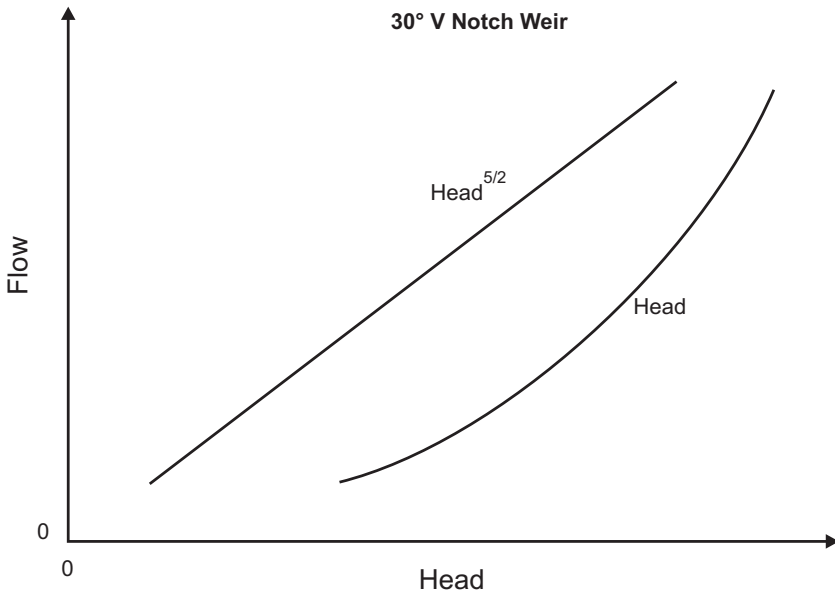
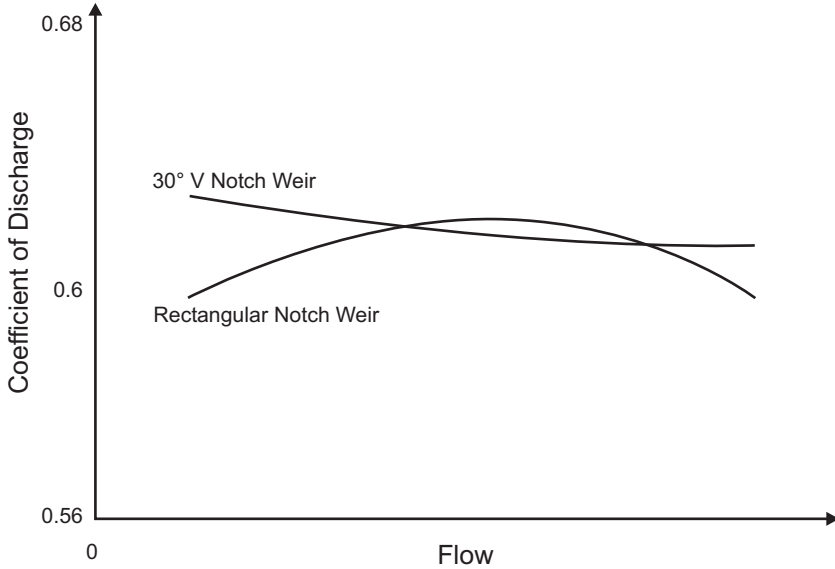


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TYPICAL WORK ASSIGNMENTS

FLOW AND HEAD RELATIONSHIP

This experiment examines the relationship between flow, head and coefficient of discharge for the weirs.



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DETAILED SPECIFICATIONS

TecQuipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

NETT DIMENSIONS AND WEIGHT:

920 mm x 620 mm x 520 mm and 12 kg

APPROXIMATE PACKED DIMENSIONS AND WEIGHT:

0.3 m³ and 15 kg

RECTANGULAR NOTCH WEIR:

Depth 100 mm, width 30 mm

V NOTCH WEIRS:

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

CIPOLETTI NOTCH WEIR:

Depth 100 mm, width at top of notch 30 mm, width at base of notch 25 mm, thickness 3 mm

LINEAR HEAD/FLOW (PROPORTIONAL) NOTCH WEIR:

Thickness 3 mm, depth 88 mm

CHANNEL DIMENSIONS:

Nominally 228 mm x 178 mm x 305 mm

ACCESSORIES (INCLUDED):

- Silicon grease
- Tubing
- Pipe clips

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