FC50

2.5 METRE FLUME

A 53 mm wide, 2.5 m long flume complete with models and instruments for demonstrating flow around weirs and other objects in an open channel.

SHOWN WITH THE DIGITAL HYDRAULIC BENCH (H1F) – AVAILABLE SEPERATELY

KEY FEATURES

- Inclinable acrylic channel providing maximum flow visualisation
- Inlet includes baffle section to provide steady flow conditions
- Works with TecQuipment's Digital Hydraulic Bench (H1F) for easy installation

Includes:

- Depth gauge
- Pitot tube
- Sharp-crested weir
- Sluice gate
- Drum gate
- Venturi
- Broad-crested weir
- Sharp broad-crested weir
- Crump weir
- Calliper gauge

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TECQUIPMENT

FC50

2.5 METRE FLUME

DESCRIPTION

The apparatus consists of a floor-standing 2.5 metre, 53 mm wide flume, together with various gates, weirs and blocks, enabling the phenomena of flumes to be easily demonstrated and studied. The FC50 is TecQuipment's most compact flume, providing simple installation and flexible storage in the laboratory.

The equipment is designed primarily for use with TecQuipment's Digital Hydraulic Bench (H1F, available separately) which provides the necessary water supply, drain and digital flow-measurement facilities. Alternatively, the customer may arrange their own water supply and flow-measurement facilities, if desired.

The flume can be inclined +2.5% to -0.5% giving a total inclination of 3%.

STANDARD FEATURES

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

LEARNING OUTCOMES

- Study of sluice and drum gates including investigation into hydraulic jump, specific energy and the determination of discharge coefficient
- Study of submerged narrow-crested and crump weirs revealing the relationship between head over a weir and discharge
- Study of a broad-crested weir (by combining the square and radius jump blocks) and the effects of changing the profile of the weir
- Study of uniform flow in an inclined channel with investigations into the Chézy factor and coefficient
- Study of a Venturi flume to indicate the discharge and surface profile, thus the derivation of the discharge coefficient

ESSENTIAL BASE UNIT

- Digital Hydraulic Bench (H1F)

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

ESSENTIAL SERVICES

FLOOR SPACE NEEDED:

4 m x 2 m floor area (includes space for H1F)

The apparatus is for use with the H1F Digital Hydraulic Bench (see separate datasheet for details).

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:

2800 mm long x 1460 mm high x 410 mm wide and

65 kg plus 2 kg for models.

APPROXIMATE PACKED DIMENSIONS AND WEIGHT:

2.26 m^3 and 100 kg

WORKING SECTION:

2500 mm long x 120 mm high x 53 mm wide

SET OF MODELS SUPPLIED:

- Sluice gate
- Drum gate
- Sharp-crested weir
- Crump weir
- Venturi
- Broad-crested weir
- Sharp broad-crested weir

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