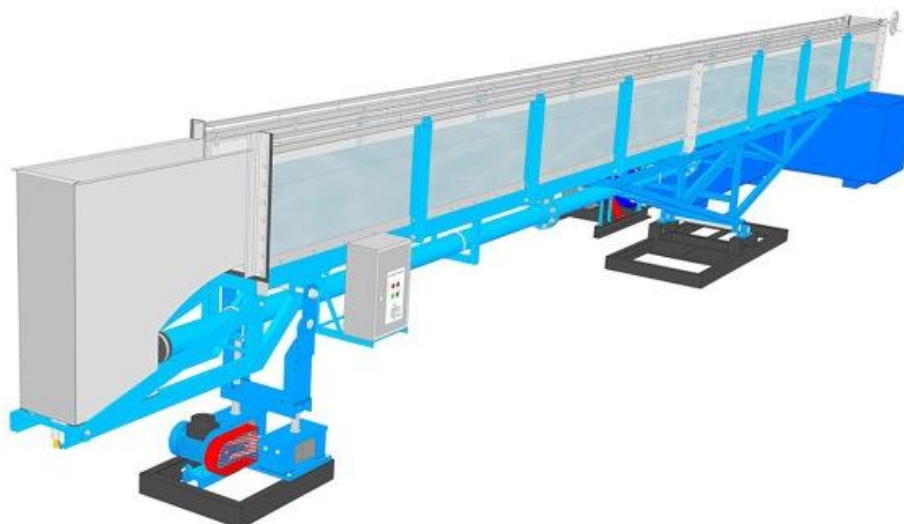


HF 530 TILTING FLOW CHANNEL, 300 mm wide



GENERAL DESCRIPTION:

The channel is designed for studying the hydraulic flow phenomena. It is to be used with optional accessories and models below.

Channel Frame

The channel rests on one fulcrum, one tilting support and 2 tilting supports. The under frame and supports are designed to ensure minimum sagging. Side walls of the channel are supported by side brackets at interval and vertical and side adjustments can be made.

The channel is shipped in sections for a assembly at side.

Slope Adjustment

Slope adjustment is by screw with motor and worm and wheel gear.

Channel Bed

The channel bed is made of stainless steel with screw holes of equal distance along the channel length to hold accessories or models to the channel bed. These holes can also be used for pressure tapping to measure pressure loss along the channel length.

Side Walls

For safety reasons, the side walls are made of tempered glass or clear acrylic. The walls are supported at interval by brackets to ensure that the channel wall is straight and vertical.

Instrument Carriage

Top rails made of stainless steel are attached to the top angle on each wall of the channel. Screws supporting the rails can be adjusted to ensure uniform height and in a straight line. A scale graduated in mm. is attached along the full length of one top angle of the walls. The instrument carriage is manually operated.

Head Tank

The head tank is made of stainless steel with bottom slope to ensure smooth flow into the channel. Perforated plates are also provided in the head tank to further smoothen the flow.

Storage Tank

Fiber glass storage tanks are provided at down stream end of the channel.

Model Installation

A mobile ladder is used.

Circulating Pump

The pump seal is mechanical. A geared butterfly valves is provided for accurate flow control.

Flow measurement

A flow digital display is used for easy observation on flow adjustment. A water meter is available as an option and may be used as a reference for flow display setting later.

Model and Accessories

All accessories and models have side seals to ensure no water seepage or leakage through the sides of the models. A wide variety of models and accessories are available as option.

TYPICAL EXPERIMENTS (With Optional Models and Accessories):

- Flow measurement.
- Hydraulic jump.
- Analysis of model structures.
- Gauging structures.
- Velocity profile.
- Continuity and energy equations.
- Similarity laws.
- Roughened bed characteristics.
- Surge propagation.

TECHNICAL DATA:

- Flume cross section : 300 mm wide, 450 mm high.
- Flume length : 5, 7.5, 10 or 12.5 m (optional).
- Tilting adjustment : -1% to +3%.
- Side walls : Tempered glass.
- Channel bed : Stainless steel.
- Sluice gate : Stainless steel, built-in at down stream end of flume.
- Flow measurement : Flow digital display.
- Power supply : 380 V, 3 Ph, 50 Hz. Other power supply is available on request.

OPTIONAL ACCESSORIES AND MODELS

- Motorized instrument trolley instead of manually operated trolley.
- Small fiber glass tanks connected in series along one side of the channel with checkered plate lid as walk way.
- Flow measuring tank. The graduated tank is on a steel frame on wheels with a trough to take up water from the flume and a pump to return water to the storage tank.
- Water meter.
- Stainless steel hook and point gauge.
- Weirs : V-notch weir, rectangular notch weir, sharp crested weir, broad crested weir, crump weir, trapezoidal weir.
- Ogee weir.
- Dam spillway with different interchangeable downstream sections.
- USBR type 2,3 or 4 energy dissipator.
- Syphon spillway.
- Bridge pier, round or square edge.
- Culvert fittings, round or square edge.
- Vibration pile.
- Venturi flume.
- Parshall flume.
- Submerged orifice.
- Trapezoidal flume.
- Sluice gate.
- Radial gate.
- Pitot tube with manometer board.
- Current meter.
- Lift and drag balance and models, large and small cylinders and an aerofoil section.
- Roughened bed, gravel, sand, or corrugated.
- Sediment transport study system (for large steel storage tank only)
- Wave generator with variable speed geared motor.
- Absorbing beach, plain, roughened, or permeable.
- End tank, stainless steel, at down stream end of flume.
- Checker plate walkaway along one side of the flume.
- Other accessories and models can be supplied on request.