

HM 163.46

Set of piers, seven profiles



Learning objectives/experiments

- subcritical discharge with little or considerable reduction of cross-section
- supercritical discharge with little or considerable reduction of cross-section
- effect of the pier profile
- backwater upstream of piers
- flow transition at the pier
- effect of angle of attack

Specification

- [1] piers for the experimental flume HM 163
- [2] little or considerable reduction of cross-section caused by piers
- [3] pier profiles: rectangular, circular, square, rounded on one end, rounded on both ends, tapering profile on one end and tapering profile on both ends
- [4] pier holder with clamping device for the mounting of piers into the experimental flume: up to three piers mounted at the same time on nine different positions
- [5] pier holder with angle scale to indicate the angle of attack

Technical data

Piers made of PVC

Angle scale

- $\pm 90^\circ$
- graduation: 15°

LxWxH: 430x110x770mm (total)

Weight: approx. 32kg

Scope of delivery

- 1 set of piers with different profiles
- 1 holder with clamping device
- 1 set of accessories
- 1 manual

Description

■ lateral reduction of cross-section in the flume

Obstacles in flumes reduce the flow cross-section. This may lead to backwaters upstream of the obstacles.

HM 163.46 contains several piers with different profiles typical for bridge piers. The discharge behaviour with little reduction of cross-section is studied with a single pier. Up to three piers mounted at the same time cause a considerable reduction of cross-section.

The effect of the angle of attack can be studied by turning the mounted pier.

A clamping device fixes the pier(s) in the experimental flume. An angle scale indicates the angle between pier nose and flow.