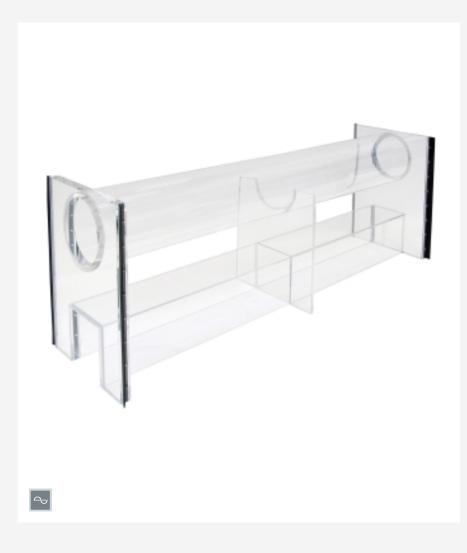


HM 162.45

Culvert



Description

full flow through culvert and partially filled culvert

Culverts are crossing structures in running waters and allow the passage of water. They may be pipes that are laid under a road, allowing the flume to cross.

The culvert may be flowed through partially or in full, depending on the discharge occurring. A partially filled culvert with free surface is treated in the same way as an open channel, while a full flow through culvert corresponds to a pipe flow. By contrast, a full flow through culvert and a culvert in which the inlet is completely submerged are classed as control structures. These result in a limiting of the discharge. There may also be a combination of these two states, so that the culvert is in part fully flowed through and in part partially filled.

The culvert HM 162.45 contains two different cross-sections with the same cross-sectional area. The transparent material allows to observe closely the flow and occuring hydraulic jumps in the culvert. The culvert is fixed in the experimental flume using a clamping device.

Learning objectives/experiments

- behaviour of open channel flow at reduced flow cross-sections
- free and submerged culvert inlet
- culvert outlet with free or submerged discharge
- different shapes of culvert crosssection
 - ▶ rectangular cross-section
 - ▶ circular cross-section

Specification

- [1] culvert for experimental flume HM 162
- [2] transparent channel body made from PMMA
- [3] hollow channel body, fitted with a rectangular and a circular crosssection
- [4] 2 covers to close the unused crosssection
- [5] channel body with sealing lips
- [6] clamping device for mounting the culvert into the experimental flume

Technical data

Culvert cross-sections

- circular, inner diameter: 150mm
- rectangular, WxH: 133x133mm

LxWxH: 1200x320x430mm Weight: approx. 21kg

Scope of delivery

- l culvert
- 1 set of accessories
- 1 manual



HM 162.45

Culvert

Required accessories

HM 162 Experimental flume 309x450mm