

# HM 163.38

## Rake



### Description

#### ■ local losses at a rake

Rakes are used in hydroelectric power plants and in wastewater treatment plants to retain coarse material that may damage the plant. Similar to piers, rakes constrict the flow cross-section possibly leading to backwaters. Depending on the bar spacing, the bar profile and the bar inclination, the backwater may be little or considerable.

The rake HM 163.38 enables to vary the rake flow resistance using different bar profiles and different angles of inclination. Three bar sets with different profiles are included.

### Learning objectives/experiments

- behaviour of open channel flow with reduced flow cross-section
  - ▶ subcritical discharge
  - ▶ supercritical discharge
- determination of loss coefficients
  - ▶ effect of the bar profile
  - ▶ effect of rake inclination
- determination of screen loss coefficients

### Specification

- [1] rake for the experimental flume HM 163
- [2] 3 different bar profiles
- [3] adjustable bar inclination
- [4] rake bar spacing can be changed by removing single bars
- [5] transparent frame with sealing lips

### Technical data

#### Rake

- number of removable bars: 15
- bar inclination: 40°...90°, graduation: 5°

#### Bars

- 3 profiles: rectangular, circular, streamlined body
- bar material: PVC

LxWxH: 450x404x410mm

Weight: approx. 27kg

### Scope of delivery

- 1 frame
- 3 sets of bars
- 1 set of accessories
- 1 manual

# HM 163.38

## Rake

Required accessories

HM 163                    Experimental flume 409x500mm