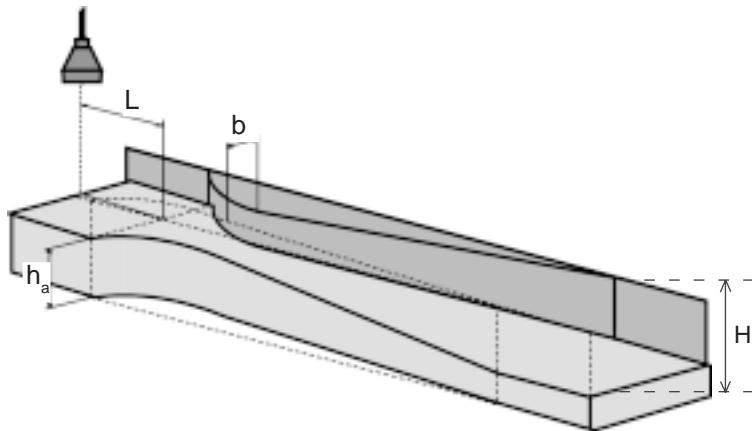


## Khafagi venturi flumes



### Note!

It is very important for the overall measuring accuracy to comply with the installation instructions on the next page.

### General

At free flow, only the level  $h_a$  is measured. The location of the sensor is important and must be carried out as illustrated below. It is important to have a laminar flow (horizontal streaming calm water with no whirls) at the outlet and inlet from the flume, and the outlet must be unobstructed.

The flume must extend upstream at least ten times the width of the inlet section of the flume. On the outlet side the only demand is that the water should run freely.

The flow is calculated from the following formula:

$$Q = 6278 \times b \times h_a^{1.5} + 328 \times h_a^{2.5}$$

where:

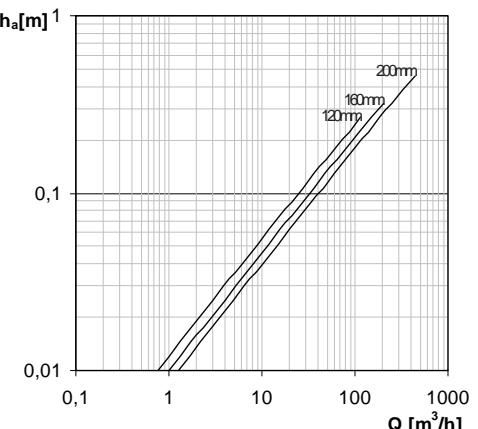
$Q$  = flow in  $[m^3/h]$

$b$  = width in the flume in [m]

$h_a$  = level

$L$  = distance to sensor =  $3 - 4 \times h_{a \text{ max}}$

$H$  = height of the flume



*Q/h diagram for the Khafagi Venturi flumes, the height  $h_a$  is shown as a function of the flow  $Q$ .*

### Specifications

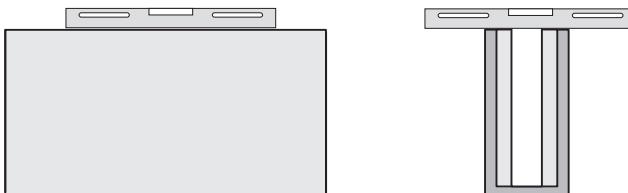
Size	$Q_{\text{MIN}}$	$Q_{\text{MAX}}$	$H_{\text{MAX}}$	Weight
5 inch	120 mm	35 m <sup>3</sup> /h	125 mm	18.6 kg
5 inch	120 mm	Contact	273 mm	28.5 kg
6 inch	160 mm	MJK	267 mm	38.9 kg
8 inch	200 mm		281 mm	54.0 kg
8 inch	200 mm		467 mm	76.0 kg
Material		AISI 316		
pH range		3 - 10 pH		

## Installation Instructions

### Mounting of the flume

The flume is designed to be moulded into concrete. Concrete with a low content of water should be used - a plasticizer can be mixed in.

- 1 Position the flume correctly in relation to the flow direction. Observe the flow direction as indicated with an arrow at the inlet. See also the dimensional illustration below.
- 2 Fix the flume in the shuttering and make sure it is precisely leveled in both directions.



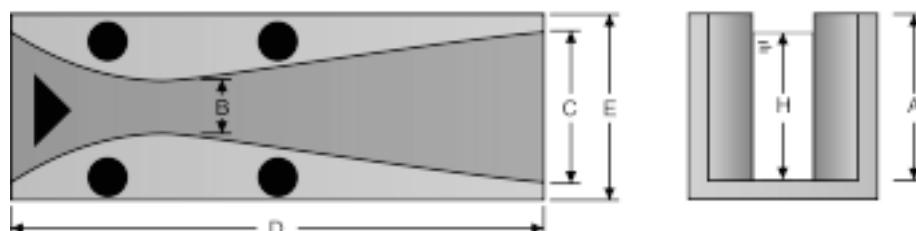
Levelled both laterally and longitudinally!

- 3 Cover inlet and outlet with plywood board or similar and put a piece of wood inside the flume to support its sides.
- 4 Fill concrete into the shuttering until it lies a little higher than the bottom of the flume and vibrate, so that the concrete becomes well distributed under the flume.
- 5 **NB!** Let the concrete harden before filling the sides of the shuttering, so the flume will be firmly secured in the concrete.
- 6 Fill both sides with concrete. **Do not** vibrate the concrete at the sides of the flume!
- 7 A 10 mm elastic infill along both sides of the flume is recommended to prevent water penetration and possible frost fracture.

### Sensor distance

- 7 Mount the sensor bracket so that the sensor will be located at a distance 'L' from the flume throat as explained on the front page.

### Dimensions



Size	A	B	C	D	E
5 inch	150	120	300	1050	400
5 inch	300	120	300	1050	400
6 inch	300	160	400	1400	500
8 inch	320	200	500	1750	600
8 inch	520	200	500	1750	600

All measurements in mm