



Current flumes

PTV FLUME



Flanders
State of
the Art

Current flumes are used to conduct research on topics such as current patterns, head losses, bed-load transport, stilling basin design, fish passes, flood control areas (FCA), reduced tidal areas (RTA), etc.

Description

A small closed-loop flow flume with maximum visual accessibility for performing optical flow visualization measurements like PTV and PIV.

Key features

The model can be configured as a closed conduit as well as a model with free surface.

The flume is currently equipped with a LaVision MiniShaker for performing 3D PTV time resolved measurements. The optical rail along the flume allows for other setups as well, for example a high speed camera.

Testing possibilities

Both hydraulic optimization of, parts of, hydraulic structures as fundamental research.

Due to the possibility to measure a 3D PTV time resolved flow pattern the model is ideal for validating CFD simulations.

The model can easily be modified to replace the rectangular section by a specific geometry (manifold,...) or by another flume (circular, ...).

Dimensions

- length: 4.0 m;
- width: 0.40 m;
- Height: 0.40 m;
- Discharge: 1.6 l/s till 32 l/s.

