

HM 150 DIGITAL Digital media in fluid mechanics

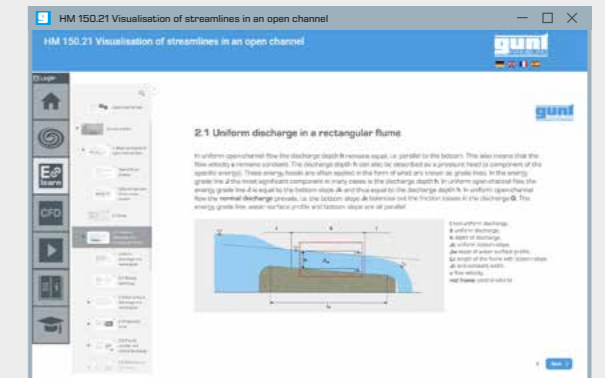
Real experiments – digital media

The HM150 series offers a varied experimental cross-section in the fundamentals of fluid mechanics. The digital teaching-learning concept offers an interaction between real experiments and digital teaching.

The GUNT Science Media Center provides videos to support students in preparing, executing and evaluating experiments. Prepared CFD simulations help to understand the flow behaviour. Worksheets with solutions supplement the teaching material.

E-Learning

- suitable for the topic of the respective experimental unit:
 - ▶ fundamentals of fluid mechanics,
 - ▶ basic knowledge of water turbines or
 - ▶ fundamentals of open-channel flow
- self-directed learning of the theoretical basics independent of time and location

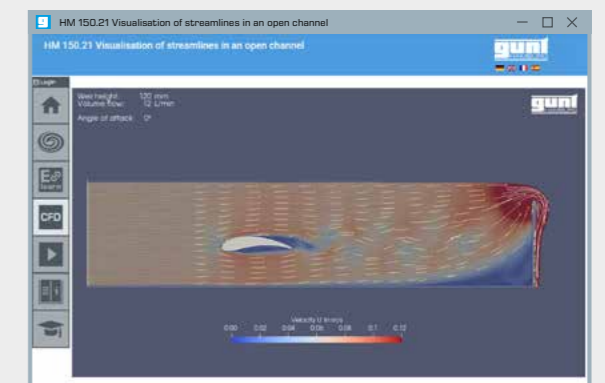


CFD: Computational Fluid Dynamics

In order to perform a virtual analysis of flow behaviour, CFD simulations are often used in practice. Such simulations allow, for example, flow visualisations in areas that cannot be visualised experimentally.

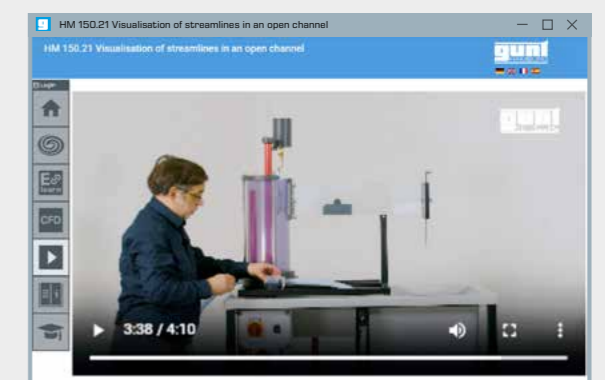
The GUNT Media Centre offers:

- flow visualisations based on CFD calculations
- results of simulations presented in videos or graphics
- basic information on the visualisations



Videos

- fundamentals: theory and principles
- experiment preparation: device set-up, connection...
- experiment execution: procedure in individual steps, operation...
- experiment evaluation: results, calculations, discussion



Manual and digital worksheets

- manual with detailed description of the experimental unit
- assured learning success through digital worksheets
- password-protected solutions
- prepared files for experiment evaluation, e.g. representation of characteristic curves

