



# Various methods for 2D visualisation of stream lines with GUNT equipment

# Using a contrast medium

#### HM 153 Visualisation of different flows

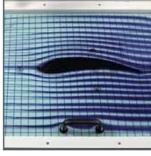
- optimum visibility through transparent, illuminated experiment area
- many interchangeable models, for flow around, through or against
- water supply either through closed water circuit or connection to the laboratory supply



## **HM 152 Potential flow**

- Hele-Shaw cell with screening in the bottom glass panel for optimal observation of the streamlines
- two-dimensional, inviscid potential flows
- influence of sources and sinks on the streamlines
- various models: drag bodies and changes in cross-section





# Using electrolytically generated hydrogen bubbles

## HM 133 Visualisation of flow fields

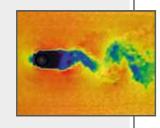
- illuminated test track for optimal observation of the flow conditions
- experiments with low flow velocity for better observation of flow processes
- visualisation of Karman vortices





## HM 132 Vertical visualisation of flow fields

- visualisation of two-dimensional flows
- in conjunction with a special camera (i.e. PCO Pixelfy) and suitable software (i.e. ImageJ): image processing evaluation of the experiments (particle image velocimetry, particle tracking velocimetry)





# **Using fog**

#### HM 226 Wind tunnel for visualisation of streamlines

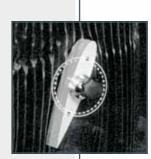
- transparent, illuminated viewing area for optimal observation of streamlines
- streamline field is generated by injecting fog from multiple nozzles
- fog generator is included in the scope of delivery
- various models: drag bodies and changes in cross-section





### HM 225 Aerodynamics trainer

- visualisation of streamlines with the HM 225.08 accessory
- homogeneous flow through flow straightener and carefully shaped nozzle contour
- various models: drag bodies and change in cross-section





### HM 170 Open wind tunnel

- experimental section visible from all sides
- the HM170.52 Fog generator produces highly dense fog, which is injected to the wind tunnel through a lance
- wide range of drag and lift bodies available as options
  To demonstrate two-dimensional phenomena in
  supersonic flow, GUNT provides the HM 172 Supersonic
  wind tunnel.

