HL 710 Planning and set-up of air duct systems

System at original scale, individual set-up

Air duct systems with typical components from ventilation technology: set-up and experiments

The components

Pipe bends

Reduction (left) and connection elements

Branches

Throttle valve (left) and iris diaphragm (right)

Disc valve (left) and slotted vent (right)

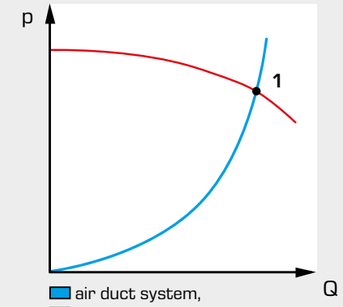
Filter

The experiments

In the air duct system several components with measuring points for pressure measurements are installed. With an inclined tube and a digital manometer the static and dynamic pressure can be measured at these points. This allows a determination of the pressure losses of the individual components in the whole air duct system.

With the anemometer the air velocities and air flows are measured at the outlets of the system. The measured values are used to generate the system and fan characteristics. From the characteristics the operating point is determined.

1 digital manometer, **2** inclined tube manometer, **3** anemometer



air duct system,
fan characteristic;
1 operating point,
p pressure, **Q** flow rate

Measuring points for static and dynamic pressure