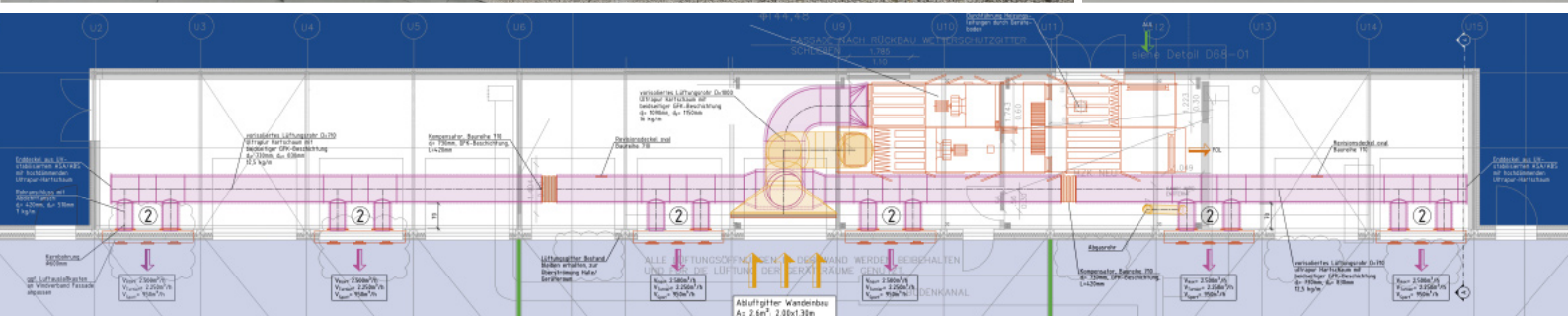


# PRACTICE REPORT 46

Application examples for planners of complex construction projects

**VENTAFLEX®**  
More efficiency in air guidance



## Restoration of a sports hall in Solingen

Application area for VENTAFLEX®:  
Insulated air ducts for weather-resistant  
and energy-saving ventilation solution

## Sporting top-performance with up to 6 x 2.500 m<sup>3</sup>/h fresh supply air volume

Energetic restoration of a building structure from the 1970s  
in accordance with the EnEV

### Task

The Humboldgymnasium in Solingen was founded in 1903 and is located in Solingen-Wald at the urban district border to Ohligs. A triple-size sports hall belongs to the school complex, which is not only used by the students of the Gymnasium, but also by the local sports clubs for their practice hours. The construction year 1976 implies that the construction method of the Humbold-sports hall does not comply with any modern standards, that's why the city of Solingen decided on a fundamental energetic restoration in 2018.

The very vital ventilation system – especially for sports facilities – should not only be particularly energy-saving, but also show an exceptionally well weather resistance, as a sustainable investment.

Because sports halls are no longer just used as pure functional buildings for physical exercise, but have a high public traffic due to league matches and tournaments of the sports clubs, the representativity and thereby the design of the air ducts played an important role. The more so as part of the new technology had to be installed on the washed concrete facade, which was typical for the 70s.

### VENTAFLEX® solution

1. The energy-saving potential of the finished insulated uniquely tight VENTAFLEX® air ducts convinced the planners.
2. The weather resistance of the GRP-material guarantees a long durability and a trouble-free operation of the new system.
3. The system had to be adapted to existing construction conditions. With its great modular combining standard product range and due to a custom made special component for a 2 x 1,3 m big exhaust air grille, the solution of VENTAFLEX® fitted perfectly.
4. With VENTAFLEX® air ducts the Solinger sports hall appears in a new „industrial design“ ... and this with good air for students, teachers, athletes and spectators.



### Advantages due to the VENTAFLEX® system

- + Reduction of the operating costs**
  - up to 40 % less energy loss, up to 10 % less pressure loss
- + Special weather resistance** due to GRP-material
- + Discreet design** due to lightgrey colouring
- + Individual adaption to the conditions** by customised production
- + Up to 70 % less weight** – important for statics and handling
- + Transportation of great air volume** – due to big cross sections

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