

PRACTICE REPORT 50

Application examples for planners of complex construction projects

VENTAFLEX®

More efficiency in air guidance



“Think big” – new construction secondary school Dresden

**Application area for VENTAFLEX®:
Underground air ducts supply class rooms with
fresh air and create a quiet learning atmosphere**

A special location requires special concepts for air supply

Fresh air for an entire school:
VENTAFLEX® air ducts take care of a quiet learning mode – and additionally descreetly do their work in the earth

Task

In order to supply the inhabitants of the northern district and the area of Dresden right of the Elbe with enough places at secondary schools, the new „151 Oberschule“ (in Dresden traditionally all schools are enumerated) is supposed to open in summer 2022. About € 30 Million construction costs are estimated, the construction time is planned quite “ambitiously” with barely 2 years. A total of 670 students are to be taught in the new complex of school building, cafeteria and double size gym.

The location of this construction in the direct neighbourhood of a highly frequented street crossing requires special concepts for noise prevention. That is why it is planned that all classrooms are aligned to the courtyard und a special ventilation concept makes the opening of the windows unnecessary. A solution was looked for, fulfilling different demanding criteria: reliable hygienic air transport in great dimensions – and this preferably space optimized in an underground system: in this case VENTAFLEX® air ducts, as so often, are the best choice without any alternative.

VENTAFLEX® solution

1. Prefabricated components \varnothing 920 with up to 3 m and adjusted length were installed.
2. Next to 4 curves with 90° angles, 2 curves with custom-made dimensions were used.
3. The system obtains perfect tightness by the supplies for underground installation – a combination of the VentaSnap mounting clamp system and special glue. This not only guarantees the economical operation of the system, but also prevents the penetration of germs and contamination: VENTAFLEX® air ducts are hygiene-certified according to VDI 6022.
4. For the transition from outside to inside VENTAFLEX® wall ducts were used and laminated with a waterproof bituminous coat.

Comfortable installation without heavy device – thanks to „lightweight“



Advantages due to the VENTAFLEX® system

- + **Certified hygiene conformity** of the ducts according to VDI 6022
- + **Saving of time at installation** by planning and pre-installation
- + **Individual adaption to the conditions** by customised production
- + **Reduction of the operating costs** – up to 40 % less energy loss, up to 10 % less pressure loss and up to 99 % less leakage loss
- + **Transportation of great amounts of air** – thanks to big cross sections
- + **Tested technology** – handling and installation are self explanatory, accordingly easy to delegate to local specialist companies

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