

# PRACTICE REPORT 21

Application examples for planners of complex construction projects

**VENTAFLEX®**  
More efficiency in air guidance

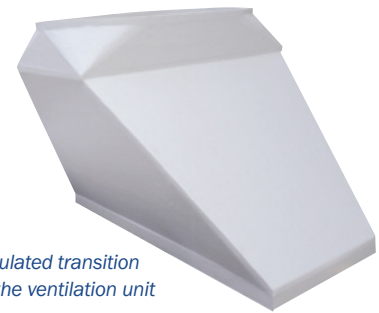


**Pharmaceutical group Berlin: Renovation of ventilation system**

**Application area for VENTAFLEX®:  
Ventilation system for  
challenging statical requirements**

## Pharmaceutical group Berlin: Renovation of ventilation system

Ventilation system for challenging statical requirements  
and air volume up to 45.000 m<sup>3</sup>



Insulated transition  
to the ventilation unit

### Task

The challenge of this project was that great air volumes of up to 45.000 m<sup>3</sup> with an air velocity of 16 m/s had to be realised on a statically limited resilient roof construction with the help of a light ventilation system.

The VENTAFLEX® system fullfills this requirement.

Our system is 70% lighter than comparable insulated air ducts. This feature was the deciding factor for VENTAFLEX® in the supply center in Berlin, next to the further advantage of clearly lower installation times under difficult framework conditions, as well as 40 % less energy loss and longterm resistance due to our GRP top layer.

This construction project was one of our biggest projects with a total of 1.800 m<sup>2</sup> installed duct surface of VENTAFLEX® round and oval ducts.

The building contractor is convinced of our system, so that currently further projects with the VENTAFLEX® system are planned in the corporate group.

### Practice comparison VENTAFLEX® insulated spiral duct

Requirements for an insulated air guidance system:  
Length: 50 m  
Series: 630  
Insulation thickness: 5 cm  
 $\Delta t$ : 20 K

Therefore the following performance has to be applied:

VENTAFLEX® air duct: 900 W  
other duct: 1.430 W

### VENTAFLEX® solution

Due to the VENTAFLEX® oval inside dimension from diameter 1.270 mm on 2.270 mm an impressive picture was the result after completion. The transition to the ventilation units, which were produced as GRP special components, as well as the moulded parts of the same dimension complete the picture.

The installation of the complete system was carried out by the company GaTec, branch office Berlin, as a general contractor. The assembly was performed by an installation team of our representative on-site.

### Advantages due to the VENTAFLEX® system

- + **Certified hygiene conformity** of the ducts according to VDI 6022
- + **Individual adaption to the conditions** by customised production
- + **Saving of time at installation** by planning and pre-installation
- + **Discreet optics** by light grey colouring
- + **Up to 70 % less weight** – important for statics and handling
- + **Reduction of the operating costs** – up to 40 % less energy loss, up to 10 % less pressure loss and up to 99 % less leakage loss

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