

KULTURHAUS LUDWIGSFELDE: COMPLEX AIR DUCT IN A CONFINED SPACE



New ventilation system (Total air volume 45,000 m3)

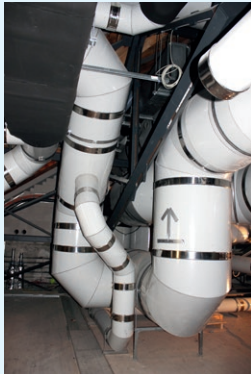


VENTAFLEX®

MORE EFFICIENCY FOR AIR DUCT SYSTEMS



Kulturhaus Ludwigsfelde: New ventilation system with a total air volume of 45,000 m³ in a cold attic of a listed building



The renovation of the cultural centre in Ludwigsfelde placed the highest demands on the architects and contractors. As a so-called „Young Monument“ (the two-storey building was created in the years 1956 to 1958) it should be equipped with a powerful ventilation.

As the installation should not be visible from the outside nor from the hall area, the entire complex piping should be housed in the low roof construction. In conventional constructions with spiral ducting this would exceed the constructive and static limits, and also the budgetary limits would be reached. So it's impossible?

On the contrary: An ideal case for the light weight and economic VENTAFLEX system.

The task

1. New ventilation system with a total air volume of 45,000 m³ (40,000 m³ for heating and cooling and 5,000 m³ for kitchen air extraction)
2. Installation in the smallest space
3. Installation in a cold attic of a listed building – which means the highest requirements on the insulation properties to reduce energy costs.

The VENTAFLEX solution

- ▶ 1. Implementation with VENTAFLEX piping with a diameter of Ø 200 - 1090 mm and lots of special mouldings.
- ▶ 2. The complex custom construction optimally used the air distribution space available. This provided impressive evidence as to the possibilities of the VENTAFLEX system custom adaptation.
- ▶ 3. The decisive factor for the designers was the excellent U value of the pipe

system from only 0.022 W / (m * K) (thermal conductivity group 022). For this purpose, the system reaches the air tightness class D.

Ideal insulation properties, the considerably reduced static load and the optimal infrastructure of the piping makes the VENTAFLEX system the only viable solution, which was implemented by the company Imtech.

Overview of benefits

- **Costs savings** with the materials
- **More installation options** due to the variety of designs
- **Savings in operating costs** (up to 40% less energy loss, up to 10% less pressure loss)
- **Lower installation costs** (up to 60% less installation time)
- **Up to 70% weight reduction** – important for the structural engineering and handling
- **Rapid individual adaptations**



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Further references at www.ventaflex.de

