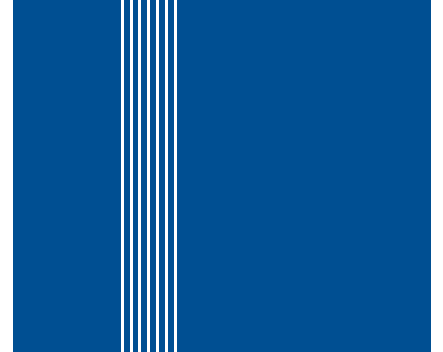


# PRACTICE REPORT 37

Application examples for planners of complex construction projects



**VENTAFLEX®**

More efficiency in air guidance



**New construction of a washing facility for large aircrafts**

You can find more project examples under [www.ventaflex.de](http://www.ventaflex.de)



## 2 x 50.000 m<sup>3</sup>/h top performance for a clean result

Construction of a new hall for the cleaning and maintenance of aircrafts with a length of over 45 m and a wingspan of over 40 m

### Task

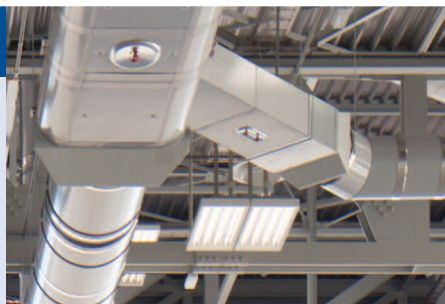
The outer cleaning of large aircrafts produces strongly contaminated exhaust air with high humidity due to cleaning agents. This should be intercepted consistently because of health and environmental reasons by influxing warmed up air at exactly defined points along the aircraft and by aspirating it again near the floor.

The already mentioned cleaning agents as well as material components of the exhaust air apply high standards to the surface of all duct components. Therefore the system must be impervious against chemical influences and resistant against dirt accumulation. A regular cleaning of the ducts is intended according to VDI 6022.

The static of the hall requires special attention – the installations under the roof in a height of up to 22 m are not allowed to exceed a specific weight.

Finally the current and sustainable cost aspects play a role:

The system should offer advantages in acquisition as well as in operation.



### VENTAFLEX® solution

1. Ventilation system, consisting of 2 redundant supply- and exhaust air units in combination with VENTAFLEX® air conduction oval (series 820/1820) and VENTAFLEX® air conduction round (series 580) in a total length of 348 m
2. Use of custom made components: 45° T-pieces with special made square finish for the direct connection of the variable volume flow controller and ceiling diffuser
3. Installation of the exhaust air filters directly in VENTAFLEX® air conduction under the hall roof
4. Hygienic characteristics of the air conduction and light weight were the significant factors for choosing a VENTAFLEX® system
5. Architectural aesthetics of the facility with perfect symmetry

### Advantages due to the VENTAFLEX® system

- + Certified hygiene conformity** of the ducts according to VDI 6022
- + 4 times cost saving** of GRP-material compared to stainless steel solution
- + Individual adaption to the conditions** by special components
- + Reduction of the operating costs** – up to 40 % less energy loss, up to 10 % less pressure loss and up to 99 % less leakage loss
- + Up to 70 % less weight** – important for statics and handling

