TROX® TECHNIK
The art of handling air

AIRPORT AIR

Hamburg, Germany

ALL-AIR SYSTEM: MIXED FLOW

Good air quality in a terminal building can be achieved only with a sufficient fresh air flow rate that is based on the number of occupants. With a classic all-air system one would need a specific supply air flow rate of 6.0 to 20.0m³/(h m²). The required temperature is generally provided by the supply air. In the highest areas of the departure and arrival halls, air is usually supplied with either actuator-driven or self-powered jet nozzles.

In functional areas with a clear height of up to 6.0 m, fresh air is supplied with adjustable swirl diffusers or other ceiling diffusers. Mixed flow ventilation means that supply air and room air mix evenly such that a uniform temperature and air distribution is quickly achieved. Sophisticated air terminal devices with specific blade contours ensure that high airflow velocities and temperature differences are quickly reduced.

Variant: Mixed flow ventilation with jet nozzles
Occupied zone: airflow velocity near the ground

- Sitting areas and workstations < 0.2 m/s
- Free jet entry area

(should not be used for workstations) < 0.5 m/s
Supply air temperature – mixed flow 16 to 18 °C
Proportional cooling capacity in case of mixed flow up to 80 W/m²

The stand-alone LON-WA TDC moduleis used for the control of adjustable air terminal devices independent of the temperature; it can be integrated with a central BMS easily and flexibly.

THE ADJUSTABLE TJN

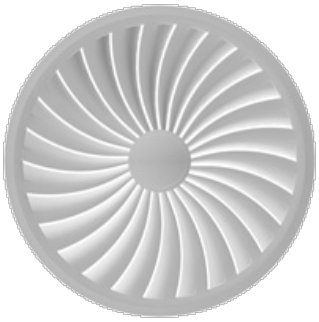
The adjustable TJN jet nozzles are made of high-grade polymer and allow for adapting the supply air flow to different conditions. The enhanced jet nozzles are acoustically optimised and more energy-efficient than similiar products since the actuator is fitted on the outside and does not lead to any additional pressure drop.
20 – 1,000 l/s
72 – 3,600 m³/h
Ø 160 - 400 mm

VDL SWIRL DIFFUSERS

VDL swirl diffusers are suitable for large volume flow rate ranges and can be adjusted mechanically or manually. Blade adjustment allows for optimum ventilation (purging) of the occupied zone while high comfort requirements are met at the same time.

70 – 1,225 l/s
237 – 5,040 m³/h
Ø 315 - 800 mm

AIRNAMIC SWIRL DIFFUSERS

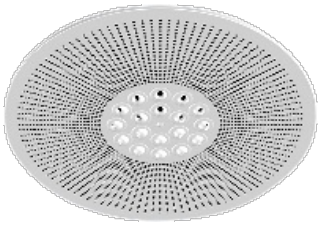


AIRNAMIC swirl diffusers are fitted with innovative air distribution elements that combine an extremely quiet air discharge with the optimum swirl. The most demanding comfort requirements can thus be met, even with very high volume
flow rates.

For rooms of standard height:

40 – 385 l/s
144 – 1,386 m³/h
Ø 400 und 600 mm
□ 300, 600, 625 mm

PASSCLEAN CEILING DIFFUSERS



PASSCLEAN ceiling diffusers are ideal for departure halls with their high passenger volumes. With PASSCLEAN diffusers, contamination of the ceiling is avoided in spite of the high secondary air induction.

111 – 222 l/s
400 – 800 m³/h
Ø 600 mm
□ 800, 825 mm