

## HIGH DEMAND FOR AIR REQUIRES THE OPTIMUM AIRFLOW



If rooms are occupied with many people, good air quality requires frequent air changes; this is usually achieved with a classical all-air system.

### **Aerodynamic optimisation.**

Aerodynamically optimised air terminal devices are extremely important. Excellent aerodynamic properties ensure maximum safety and thermal comfort in particular with swirl diffusers since the originally high velocity of the turbulent airflow and the temperature differences are rapidly reduced.

### **Variable demand-based ventilation.**

If very diverse architectural and usage parameters need to be considered in the ventilation and air conditioning design process for a retail space, variable volume flow control is the best solution. This control strategy allows airflows to be variably adapted to fit changing room usage scenarios. The automatic adjustment to changing parameters due to intelligent control and communication systems increases the efficiency of a system considerably.

### **Swirl diffusers for a rapid air change.**

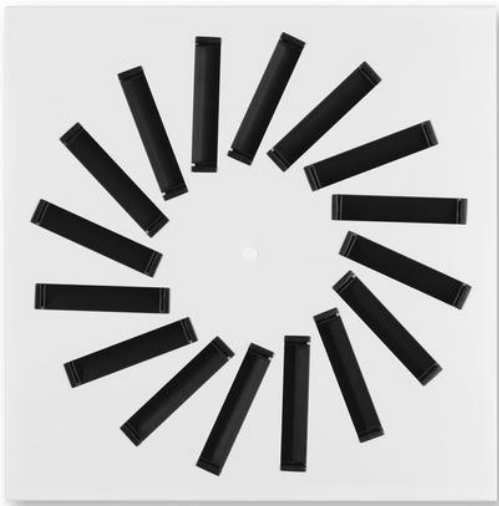
If a rapid air change is required, TROX swirl diffusers are just what is needed. There is hardly any other manufacturer who offers such a wide range of construction variants and attractive designs. Whether installed freely suspended (and with an extended border) or flush with the ceiling, the diffusers always blend in perfectly with the room architecture and offer ideal solutions for both large and small retail spaces.

### **Jet nozzles for high volumes.**

Large and high-ceilinged entrance areas or galleries require air terminal devices that can throw air far into the room. Intelligent control systems ensure that the airflow is quickly adapted to uses of varying intensity and changing climatic conditions. The use of advanced polymer technology opens up entirely new design options. TJN jet nozzles allow for the precise adjustment of the supply air jet to the prevailing room conditions; the nozzles are acoustically optimised and more energy-efficient than

similar products since the actuator is flat and fitted on the outside. Additional pressure losses are avoided.

An innovative option: Due to so-called shape memory alloys the discharge angle of jet nozzles changes based on the supply air temperature, thereby ensuring the comfort criteria in the occupied zone, both in heating and in cooling mode.



### MIXED FLOW

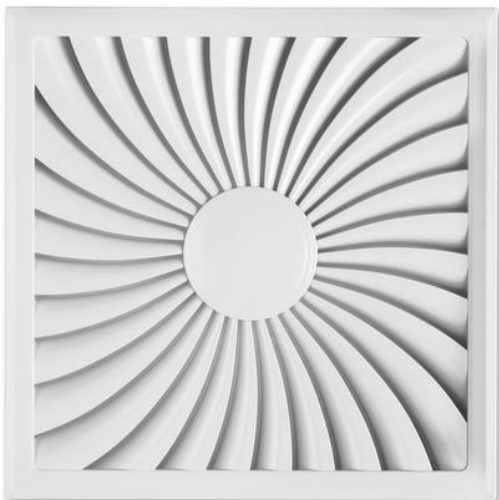
VDW ceiling swirl diffusers for high room air change rates. Supply air and extract air variants for comfort zones

7 - 470 l/s

25 - 1,692 m<sup>3</sup>/h

300, 400, 500, 600, 625, 825 mm

Ø 300, 400, 500, 600, 625 mm



### AIRNAMIC SWIRL DIFFUSERS

Ceiling swirl diffusers with fixed air control blades, for high volume flow rates at low sound power levels and low differential pressure due to innovative polymer technology

13 - 385 l/s  
47 - 1,386 m<sup>3</sup>/h  
300, 600, 625 mm



#### RFD CEILING DIFFUSERS

higher comfort thanks to lower sound power levels  
4 - 330 l/s  
14 - 1,188 m<sup>3</sup>/h  
160, 200, 250, 315, 400



#### TJN JET NOZZLES

throw the air far into the room. They are actuated electronically, manually, or with an

SMA actuator (self-powered).

20 - 1,000 l/s

72 - 3,600 m<sup>3</sup>/h

Ø 160, 200, 250, 315, 400