strulik

Displacement systems

Air diffusion systems

Displacement diffuser NIQ

Displacement diffusers type NIQ – tailor made products in function and design

Application of displacement systems

Comfort conditions
- Offices
- Studios
- Shopping centres
- Theaters
- Computer rooms

Industrial applications
- Assembly halls
- Welding halls
- Printing companies
- Galvanic companies
- Kitchens

Low impulse displacement diffusers type NIQ are designed to be used for supply of air at cooling conditions in air conditioning and ventilation installations.

The best use of displacement diffusion is, where it is not necessary to have a constant temperature throughout the total height of the zone and where it is required to remove air pollutions in a rapid and efficient manner.

Contrary to the conventional mixing air diffusion, which relies on rapid induction and mixing of the air outside of the occupied zone, displacement diffusion projects the supply air directly into the occupied zone at a very low velocity and a temperature lower than the ambient room temperature.

The resultant layer of supply air absorbes heat from the ambient air and local heat sources such as machines and occupants and the resultant change in density causes the air to rise to where relatively high extract can be used. The rising air carries with it pollutants such as very small particles and odours.
With displacement diffusion there is always a supply of new air which has not had the chance to mix with pollutants before entering the occupied zone.

Special applications

Diffusers for standard-application in comfort and industrial areas with temperature differences between supply and room air of 2 to 6 K. Special constructions for higher temperature differences up to 12 K or appliance in cooling and heating mode.

Configuration of forms

Besides the standard forms such as rectangular, semicircular, quartercircular or circular, any form adapted to the installation place or to the function can be supplied.

Tailor made diffusers

Diffusers with special inner devices guarantee equal air distribution over the whole surface. Constructions to placed before walls or to be integrated into walls or furniture. Diffusers built around columns or integrated into the floor as well as round columns to be placed on the floor. Diffusers with fixed or with removable front plates. Front plate fixed with screws or with hidden fixings.

Material and surface

Sheet steel, powdercoated. Stainless steel (1.4301), surface normal, grounded, brushed or glass blasted.

Design of front plate

Perforated plate, one layer, perforations circular or rectangular. Standard perforations or to the design of the architect. Perforated plate in two layers sandwiching a 20 mm layer of black polyurethane foam. Front plate shock proof with reinforcement lattice for applications in schools, sporting halls or air terminals.
Strulik LSE-front plate, consisting of horizontally or vertically arranged 3-edge stainless steel profiles with perforated stainless steel plate behind.

Strulik engineering assistance

To assist design engineers in planning displacement systems a computer program is available for the selection and dimensioning of NIQ diffusers.