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ARCHITECTURAL SOLUTIONS

For projects with challenging requirements

Swegon 

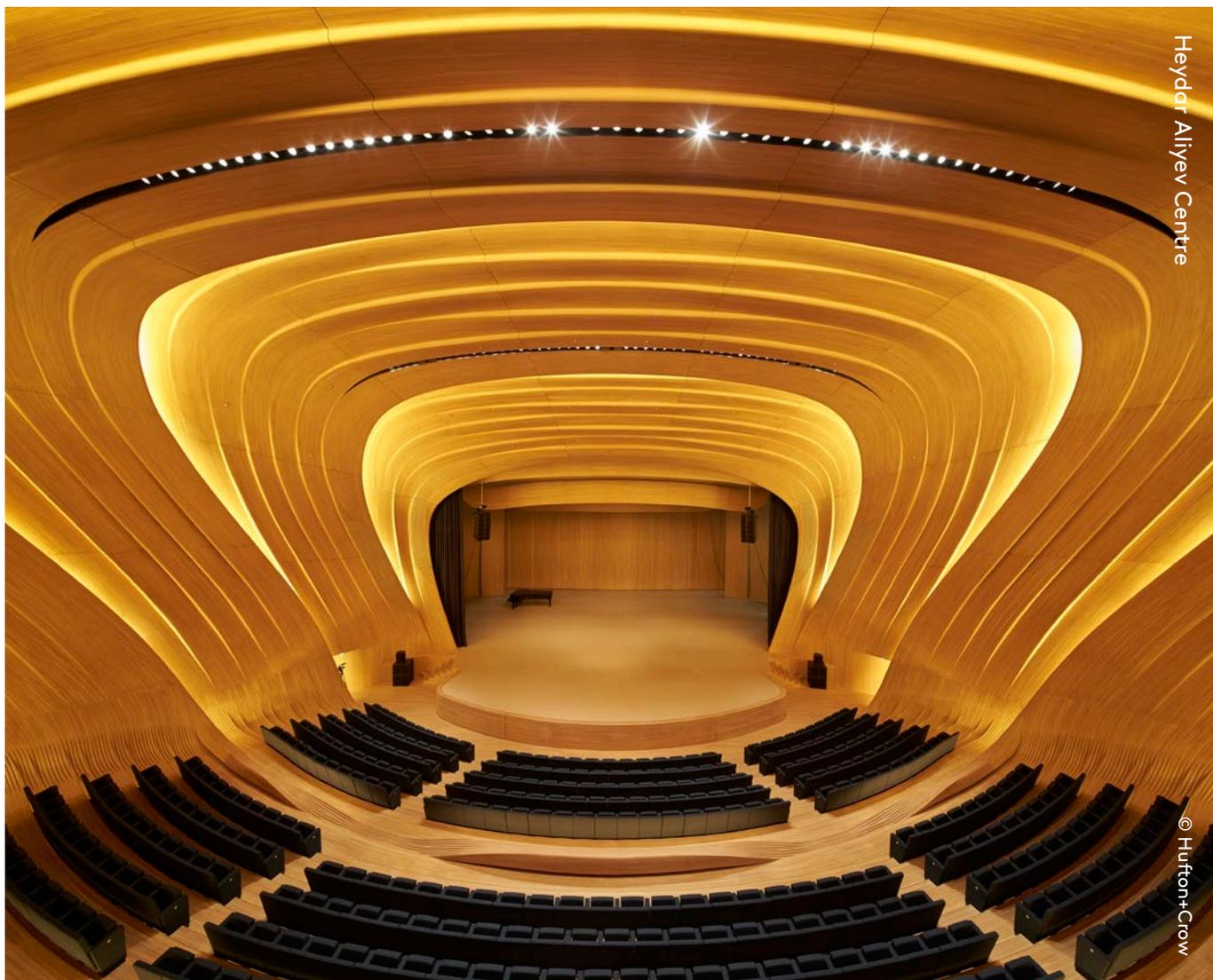
Engineered for extraordinary designs

Some buildings have higher requirements than others due to their advanced architectural designs. These buildings often feature unique and unconventional designs that demand tailored indoor climate solutions. Some environments place demands that go beyond what the standard product range can offer. For such situations, Swegon can deliver customised air diffusers that meet specific requirements and design solutions. We have experience in developing tailored products and solutions for a wide range of challenges, and we help identify the right option for your particular project.

Creating an indoor climate to relax, feel good, or work productively is based on the right selection of ventilation products. Here air diffusers are elementary for low-noise and noticeably pleasant air distribution.

In order to create this -more technically defined- „thermal comfort for people“ in small and large rooms, we have made it our task to advise, design and implement air distribution systems.

In addition to the technical requirements, which form the basis for a productive and healthy indoor climate, we also attach great importance to an appealing design of our products. The appearance of our products is not only formed by the function-related shape, but also by the wishes of the architects, planners and builders.



How Swegon supports your project

- ▶ Consulting and planning for the design and installation of efficient indoor climate solutions.
- ▶ Engineering of tailored solutions, including complete system solutions.
- ▶ Planning and delivery of air and waterborne climate-control systems for comfort and industrial applications.
- ▶ Comprehensive consulting and supply of laboratory solutions.

This brochure provides an overview of Swegon's offerings. We would be happy to present our range of services and products tailored to your project in a personal meeting.



Slot diffusers

Slot diffusers (or linear diffusers) are ideal for installation in walls or ceilings. They produce a mixed ventilation with high induction. With only a few exceptions, the slot diffusers are equipped with adjustable air deflectors of different lengths, through which the air flow and the distribution pattern can be set or adjusted. The induction effect can be significantly increased through diffuser adjustment, which creates many individual jets with multiple discharge directions.

The slot diffuser IBD-S, for example, with its air deflectors offers comparatively high air flows at low noise particularly for the use of shielding window areas etc.

Our product range comprises slot diffusers of different profile widths with one to numerous slots and can be installed as continuous linear arrangements.

Swegon also manufactures curved slot diffusers to meet special architectural requirements.

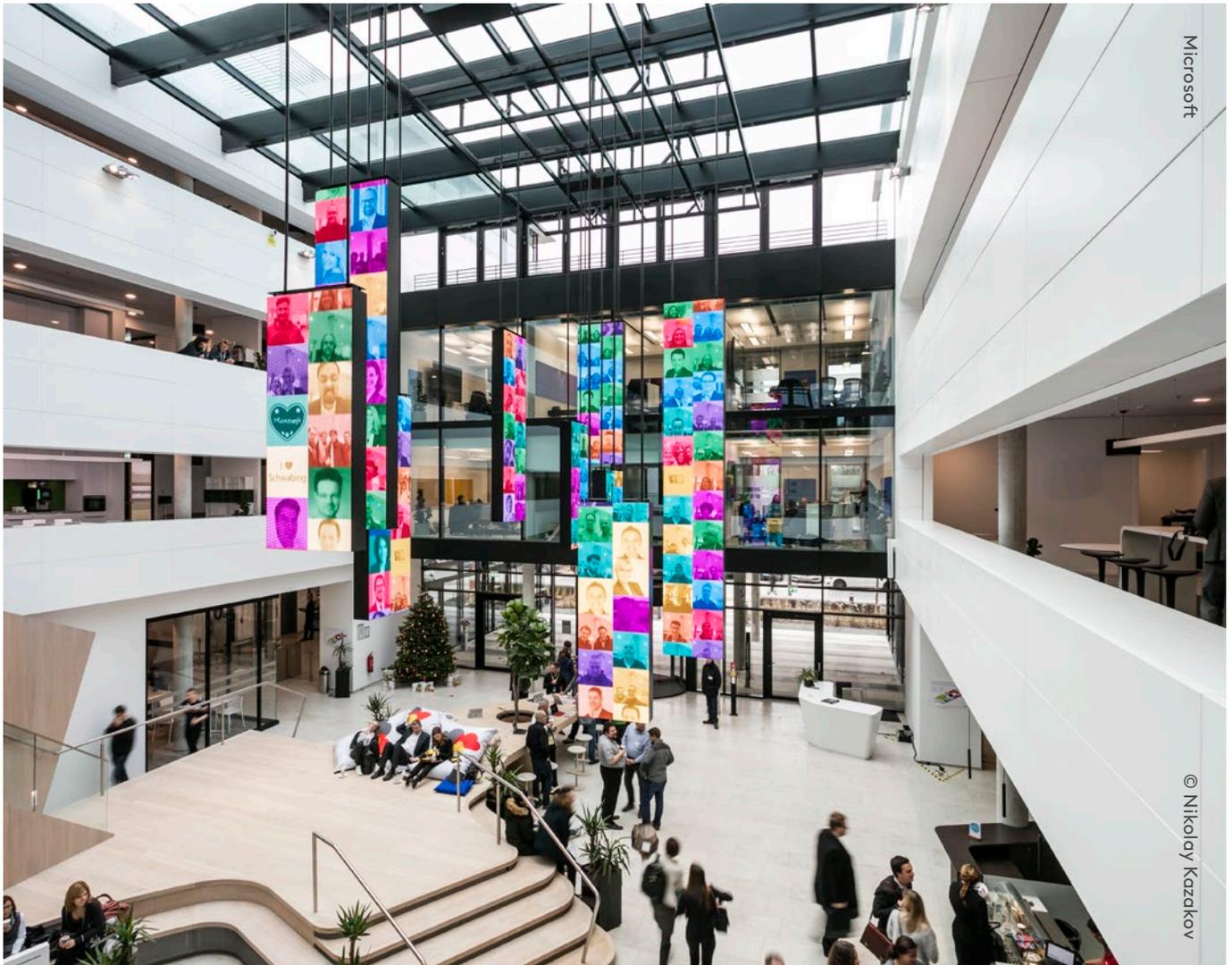
The typical air flow range is between 35 m³/h and 800 m³/h.



Reference case: Bad Alexandersbad, Bavaria

A modern building for wellness and healing

Slot diffuser VZ-41 in a continuous linear arrangement with adjustable air deflectors for individual discharge in an angular freedom of 180°. Profiles made from extruded aluminium (Al Mg Si 0.5), anodised or painted to RAL colours on request; air deflectors made from impact resisting polystyrene, in black or white, other RAL colours on request.



Displacement diffusers

Displacement diffusers, generally mounted at a low level, create a low-turbulence displacement flow of cool air. The heated and partially polluted room air is not mixed with the supply air but is displaced from the occupied zone and „plumes“ to high level, where it is extracted. The diffuser face normally consists of a perforated plate (circular perforation or slot) or strainers/ wires. The finer the perforation, the lower the turbulence.

In particular in the case of narrow or congested room conditions our displacement diffusers provide adjustment of the distribution pattern with the nozzles, individually rotatable, allowing for example lifting and spreading of the air discharge. The even flow through the diffuser face remains unaffected.

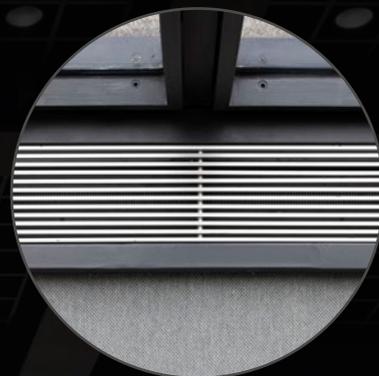
The product range comprises of displacement diffusers in different designs (flat, circular, half-circular, quarter-circular etc.) and sizes, manufactured to requirements.

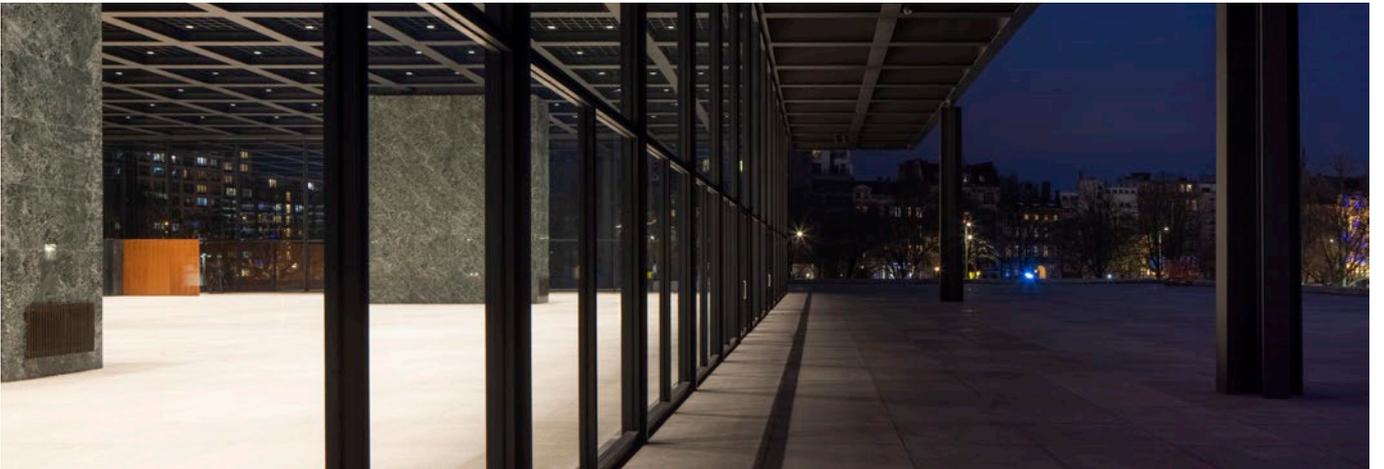
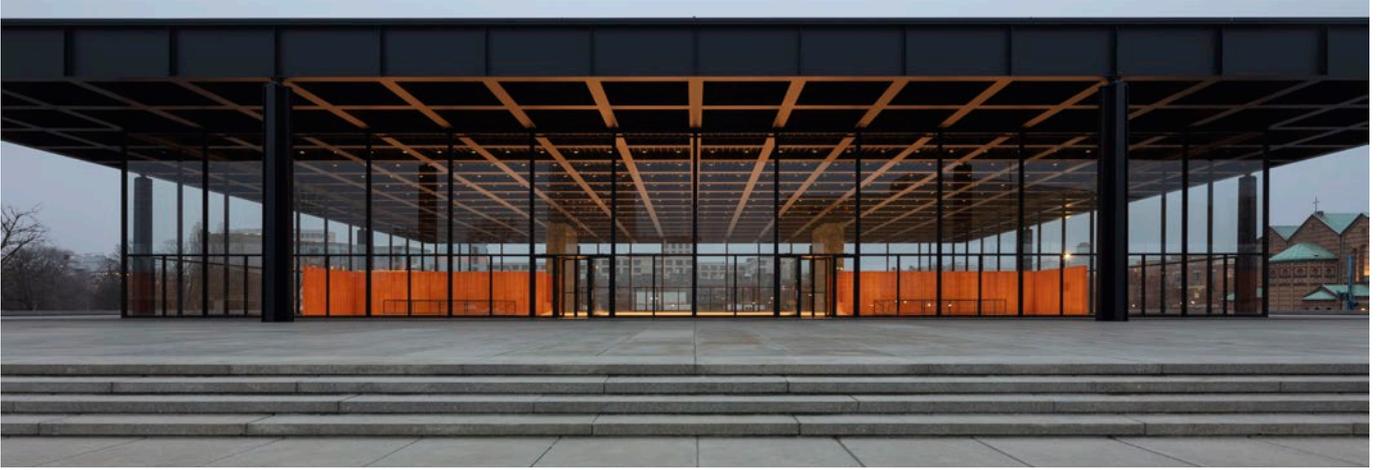
It is possible to adapt the displacement diffuser with diffuser faces made of stone, marble, wood or stainless steel.

Reference case: New National Gallery, Berlin

New and reused products for a listed building

The Neue Nationalgalerie Berlin (NNG), built in 1965-68, was included in the list of monuments of the Land of Berlin. For the renovation of the NNG, Swegon delivered new products and refurbished existing. Primarily, however, we were able to use the know-how and the help of our in-house laboratory to develop a museum-friendly façade covering to prevent cold air from falling through the on-site installed single pane glazing in extreme outside temperatures.







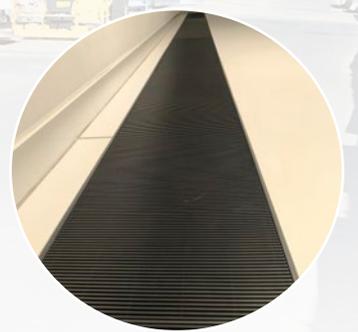
HUMBOLDT FORUM

Reference case: Humboldt Forum, Berlin

Floor convectors in a timeless design

The Humboldt Forum in the Berlin Palace is a museum located in Berlin-Mitte. It was built from 2012 to 2020 according to the plans of the Italian architect Franco Stella and equipped with floor convectors specially developed for the project.

The floor convectors integrated in the museum premises were provided with specially treated DSM structures. Due to the applied poly-spectral oxidation process, the grids appear in a bronze, which offers the viewer an interplay with the spectral colors.



Reference case: Historical Archive of the City of Cologne

100% special designs for a unique project

The new building of the historical archive of the city of Cologne was completed in December 2020.

In the building, archive material from offices, companies, associations and individuals with reference to Cologne is stored.

Duct diffusers, grilles and displacement diffusers were used to provide the building with a great indoor climate.



Decoline

Each environment is a unique combination of style, colour and material. Swegon makes it possible to combine an excellent indoor climate with colour and form. Choose a pattern and let the diffuser stand out or blend in. With Decoline the appearance that is right for environment in which the air diffusers will be installed is chosen. Stone, wood, carbon fibre or metal? With Decoline anything is possible!



Tailor-made solutions

Each project is characterized by its specific conditions, which may require solutions beyond the standard offering. Swegon therefore provides special adaptations that complement our standard range and meet requirements for both function and design.

Through the ability to develop customer-specific perforations, products can be adapted to harmonize with the architecture while maintaining performance and comfort. One example is Halmstad City Library, where displacement diffusers were delivered with perforations in the shape of hearts.

Swegon has extensive experience in developing tailor-made products based on project-specific requirements. For Malmö Live, a diffuser was developed that was integrated directly into the legs of the chairs in a concert hall. The solution allowed for a discreet installation while ensuring the level of comfort that the environment demanded.

These examples illustrate how advanced challenges can be addressed through close collaboration and tailor-made solutions.





Comprehensive expertise for optimised indoor environments

A fundamental element for our successful work in the production and development of ventilation products is our lab in Lingen, Germany, with an integrated, 12 m high lifting ceiling system. Here we can evaluate the performance of our products and simulate customer-specific flow tests in a 1:1 model.

Thanks to the competence and inventiveness of our team as well as the high flexibility in the conception, we offer our customers all possibilities. From the standard individual component to modified ventilation products to complete solutions with project-specific developments.