Systemair supply- and exhaust diffusers

Systemair develops, manufactures and delivers diffusers and adjustment dampers contribute to a good indoor climat, designed for houses and workplaces.

We have one of Europe’s most modern Development Centres where we are measuring air flow, throw, sound and make full scale tests. Our range of diffusers, grids and dampers are a valuable complement to our broad assortment of fans and heat recovery units.

Sinus, supply diffuser for ceiling assembly. It has a front plate with a number of nozzles, together with a main body plus connection sleeve fitted with a rubber seal tested for air-tightness. The nozzles can be individually set at any angle within 360°, which means that an unlimited number of distribution patterns can be set, also after installation, without affecting noise levels, air volume or pressure drop. The nozzles rounded edges prevent dust from setting and facilitate cleaning.

Sinus should be fitted onto a PER plenum box with removable damper and test points. They can also be connected directly onto a duct (ø125-315) with pop rivets.

When being installed on a rigid ceiling structure, the sides and top of the unit’s main body can be fitted to the structure. When being installed on a suspended ceiling, the Sinus adapter plate, **TPP**, should be used for 600x600 and 625x625.

Standard colour white (RAL 9010-80). The Sinus-A in the 250 and 315 sizes do not need adapter plates for 600x600 grids.

### Sinus A

<table>
<thead>
<tr>
<th>Size</th>
<th>Air flow, 35 dB(A)</th>
<th>with PER open damper</th>
</tr>
</thead>
<tbody>
<tr>
<td>125-L</td>
<td>22 Pa</td>
<td>+PER 100 120 m³/h</td>
</tr>
<tr>
<td>160-L</td>
<td>27 Pa</td>
<td>+PER 125 170 m³/h</td>
</tr>
<tr>
<td>200-L</td>
<td>23 Pa</td>
<td>+PER 160 220 m³/h</td>
</tr>
<tr>
<td>250-L</td>
<td>20 Pa</td>
<td>+PER 200 340 m³/h</td>
</tr>
<tr>
<td>315-L</td>
<td>21 Pa</td>
<td>+PER 250 450 m³/h</td>
</tr>
</tbody>
</table>

**Sizes of hole**
- Sinus A 125: 326 x 326 mm
- Sinus A 160: 326 x 326 mm
- Sinus A 200: 426 x 426 mm
- Sinus A 250: 561 x 561 mm
- Sinus A 315: 561 x 561 mm

### Sinus C

Sinus C, ceiling diffuser is suitable for visible installation, and can be connected directly to the duct using the connection sleeve fitted with a rubber seal tested for air-tightness. The Sinus C consists of a front plate with a number of nozzles combined with a sound-insulated plenum box and damper.

ø100-250, air flow 50-550 m³/h
**Systemair supply-, exhaust- and swirl diffusers**

**TST** a circular supply diffuser. The distribution pattern can be altered and the gap width is adjustable. A shielding device is included which can be used to alter the distribution pattern to a direction (180°) pattern. Should be installed with plenum box PER. 
*Air flow 200-700 m³/h*

**TSK** is a supply diffuser and a perforated version of TST for ceiling installation. The two-part diffuser unit can be adjusted to provide the desired throw. Should be installed with plenum box PER.
*Air flow 100-800 m³/h*

**JSR** is a circular multiple-cone diffuser for supplying air to large areas. It can be installed onto a PER plenum box or a duct with iris damper SPI. This unit can be mounted on either the wall or the ceiling, and is suitable for booth cooled and heated supply air.
*Air flow 300-2500 m³/h*

**Konica** is a supply and exhaust air diffuser for ceiling assembly. It is suitable for offices, shops and similar premises. Can be connected directly to a circular duct by the use of the accessorice Konika bar. It is suitable for both cool and warm air.
*Air flow 150-700 m³/h*

**EFF** is an exhaust device for installation on ceiling or wall. It can also be used for supply air. The device has a lockable central cone which is rotated to adjust the pressure and consequently the air volume.
*Air flow 10-350 m³/h*

**TSP** a perforated, ceiling diffuser complete with plenum box for visible installation. The plenum box is fitted with test points and fibre-free sound isolation.
*Air flow 40-550 m³/h*

**Elegant VT** is specially developed for providing a draught-free air supply from the rear walls of apartments, offices, hotel rooms etc. The diffuser is manufactured from steel and consists of a convex front plate with perforations. With the pressure distribution plate in the back of the diffuser, the air flow can be adjusted by using different number of plastic plugs.
With help of two friction springs in the back, the Elegant VT is easily installed directly into the spiral duct.
*Air flow 10-70 m³/h*

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**Kvadra**, square 4-way ceiling diffuser with connection transition KRC and plenum box PER as accessories.
*Air flow 60-700 m³/h*

**DHD-SQ** is a ceiling swirl diffuser with square front plate and inserted, adjustable air guiding blades in radial arrangement. This diffuser is especially suited from comfort ventilation in rooms with high air exchange rates.
*Air flow 200-2500 m³/h*

**DHD-SR** is a ceiling swirl diffuser with square front plate and adjustable air guiding blades manufactured from steel. To be used with plenum box.
*Air flow 160-250 m³/h*

**OVR, OVE, OVX** are air transfer devices, for installation in all kind of places. They have high sound attenuation.
*Air flow 100-160 m³/h*

**PER** plenum box is used together with air diffusers for pressure reduction, air flow balancing and sound attenuation as well as for measuring and adjusting the air flow. The damper and measuring units are removable.

**PRG** has the same function as plenum box PER but should be used with a grille.
**Sinus B** is a wall-mounted diffuser that combines the functionality of nozzles with high flow capabilities of perforation and appealing design. The result is a performing diffuser very suitable for cooled air; achieves high induction and short throw. Sinus B is available with either rear connection (Sinus BR) or side connection (Sinus BS).

ø100-200, air flow 60-350 m³/h

**Sinus F** is for installation in a suspended cassette ceiling and has exterior dimension 595 x 595 mm and 620 x 620 mm, irrespective of the inlet size. This is specially designed to be directly suspended in the T-bar framework of the ceiling, and it is still possible to remove the diffuser face to access the duct system. The front plate is easy to assemble and hangs from a chain during cleaning and servicing. It is possible to change the front plate in two steps, normal ventilation and if more airflow is needed, it is possible to open the gap. Sinus F is suitable for constant or variable flow. The supply air can be at over- or undertemperature and both horizontal and variable patterns are possible.

ø125-315, air flow 70-470 m³/h.

**Sinus G** will be used for flush mounting in false ceiling. The front plate is easy to assemble and hangs from a chain during cleaning and servicing. The diffuser is a flush model and can be used for heated or cooled air; together with requirement controlled ventilation (VAV), without any draft problems. Maximum temperature difference for cooled air Δt 12K.

ø125-400

**TSO**, a square perforated ceiling diffuser with PER plenum box as an accessory. The distribution pattern can be altered with the SSO shielding accessory to one-, two-, three- or four-way distribution.

ø125-400, air flow 50-1000 m³/h
The SPI is an iris damper for measuring and adjusting the air flow. It has low noise level, centrically-formed air flow and fixed test points for precise measurements. The damper also has an adjustment aperture which can be opened completely, which means there is no need for an access door for cleaning. Available in sizes ø80-630.

**GAG** a supply air grille and has fixed deflectors. It can be mounted into a wall, sill or onto a duct sleeve coupling or PRG plenum box.

**GAR** is an exhaust air grille with fixed deflectors and corresponds to a free area of 90%. The grille is used to evacuate large amounts of air with a minimum pressure drop and has a low sound level. The distribution pattern is easily adjusted by means of the **GSV** grille. The distribution pattern is aligned with the horizontal deflectors while the throw and width of the air stream are adjusted by means of the vertical deflectors.

**Konika-A**, multi cone diffuser for ceiling assembly. The diffuser consist of an external cone and an adjustable double center cone. The double cone can be adjusted for changing of the distribution pattern from horizontal to vertical.

ø160-500, air flow 200-3000 m³/h