NSH

Slot Diffuser

Installation manual

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Version 1.0

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1. INSTALLATION TECHNOLOGY

Before proceeding with the installation of the NSH slot diffuser, it is essential to check both the diffuser and the plenum box, for any damage that may have occurred during transport or storage. Particular attention should be paid to the condition of the vanes, the face panel, and all magnetic mounting components.
The diffuser and plenum box should be protected from dust, debris, and other contaminants until all finishing works within the room have been completed.
The complete assembly (plenum box with diffuser) must be suspended from the ceiling slab or another suitable supporting structure. Alternative mounting methods may be used, provided they comply with accepted engineering practices and ensure adequate load-bearing capacity.
Before commencing installation, carefully read and understand these instructions.

ATTENTION:

a. Install the plenum box with the duct connection facing sideways unless otherwise specified in the ventilation system design.

b. Ventilation ductwork must not impose any load on the plenum box or diffuser. All duct supports and hangers must be designed to carry the full weight of the ductwork independently of the diffuser assembly.

c. It is recommended to install a safety cable between the diffuser and the plenum box to prevent accidental detachment during maintenance or operation.

d. For continuous linear installations, ensure the correct installation sequence of end sections (SK) and intermediate sections (WN) to achieve a uniform appearance without visible gaps between adjoining elements.

e. Do not apply excessive force to the diffuser face panel or vanes. The magnetic mounting system requires only gentle pressure to secure the diffuser to the plenum box.

f. After installation, verify proper magnetic engagement and ensure that the vanes can be adjusted freely through all five operating positions.

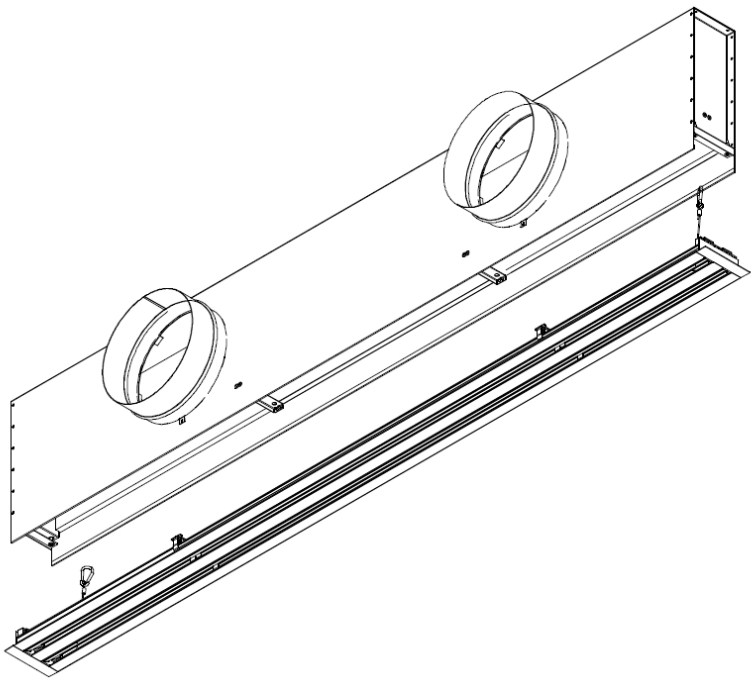

Figure 1. Diffuser NSH with plenum box

2. INSTALLATION TECHNOLOGY – MOUNTING TO THE PLENUM BOX

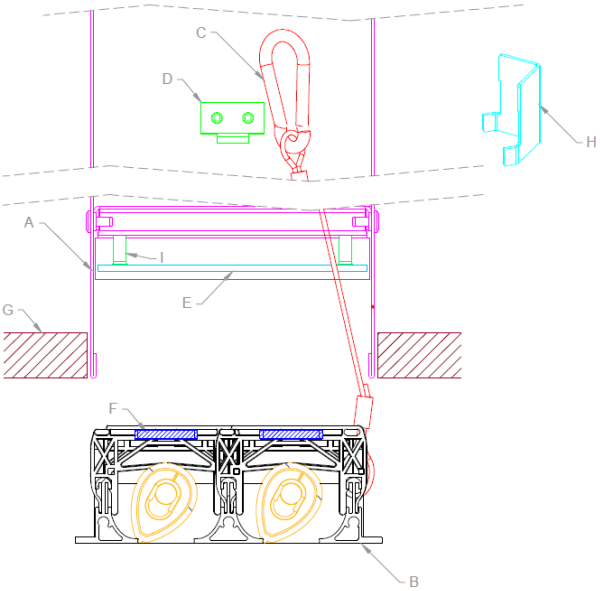

Figure 2. Schematic illustration of NSH to the plenum box

Installation procedure:

- Prepare a mounting opening with dimensions (C+5) x (L+20).
- Suspend the plenum box (A) from the ceiling slab or supporting structure, ensuring a secure and stable installation.
- Using the supplied gauge (H), verify the position of the magnetic connector (E). The connector should be positioned 35.5 mm from the edge of the plenum box. If adjustment is needed, the connector position can be corrected by turning the adjustment screws (I) until the correct height is achieved.
- Attach the safety cable on both sides by connecting the carabiner (C) to the mounting bracket (D).
- Insert the diffuser (B) into the plenum box (A) so that the magnets (F) engage with the magnetic connector (E). Ensure that the diffuser seats evenly along its entire length.
- Adjust the position of the complete assembly relative to the ceiling (G), ensuring proper alignment, level installation, and a clean architectural finish.
- If required, the sides of the plenum box can be sealed at the joint with the diffuser, for example using sealing tape.

ATTENTION:

- If necessary, the adjustment screws (I) may be replaced with longer M4 screws (DIN 965).
- The ceiling (G) is optional and may not be present in all installation configurations

3. INSTALLATION TECHNOLOGY – SCREW MOUNTING TO THE PLENUM BOX

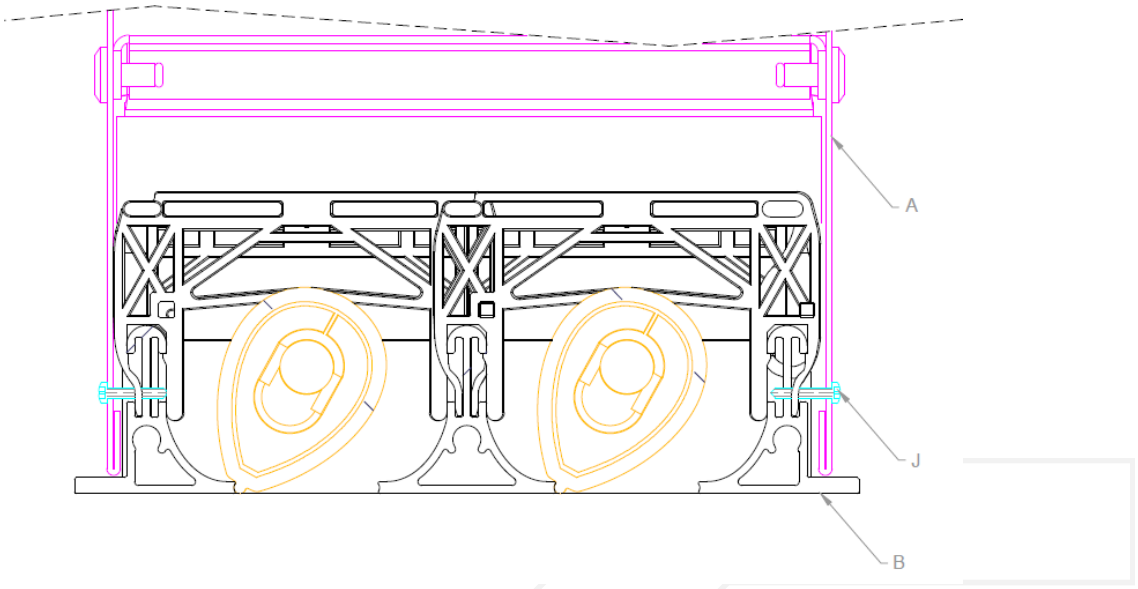

Figure 3. NSH slot diffuser installed to the plenum box with screws.

Where the magnetic fixing system is insufficient or not recommended, the NSH slot diffuser may be fixed to the plenum box using screws driven from the side of the box. Use 2.9 × 13 mm self-tapping screws (J) or equivalent.

Installation procedure:

- Suspend the plenum box (A) from the ceiling slab or supporting structure, ensuring a secure and stable installation.
- Drill pilot holes for the screws (J) in the side walls of the plenum box. The number of holes on each side depends on the length of the box / diffuser assembly. A minimum of two (2) holes per side must be provided. Hole spacing shall comply with the following requirements: first hole max. 150 mm from the edge of the plenum box; subsequent holes at max. 300 mm centres; all holes positioned 15 mm from the lower edge of the plenum box.
- Insert the diffuser (B) into the plenum box (A) and position it in its final alignment.
- Install 2.9 × 13 mm screws, securing the diffuser to the plenum box. Do not overtighten the screws to avoid deformation of the plenum box wall.
- Verify that the screws do not interfere with the vanes and that the vanes operate freely through all five adjustment positions.

ATTENTION:

- Before using longer screws, verify that they do not interfere with the vanes. Excessively long screws may obstruct blade movement and prevent proper adjustment.
- For continuous linear installations, hole spacing shall be measured separately from the edge of each individual diffuser section.

4. INSTALLATION TECHNOLOGY – LINEAR INSTALLATION

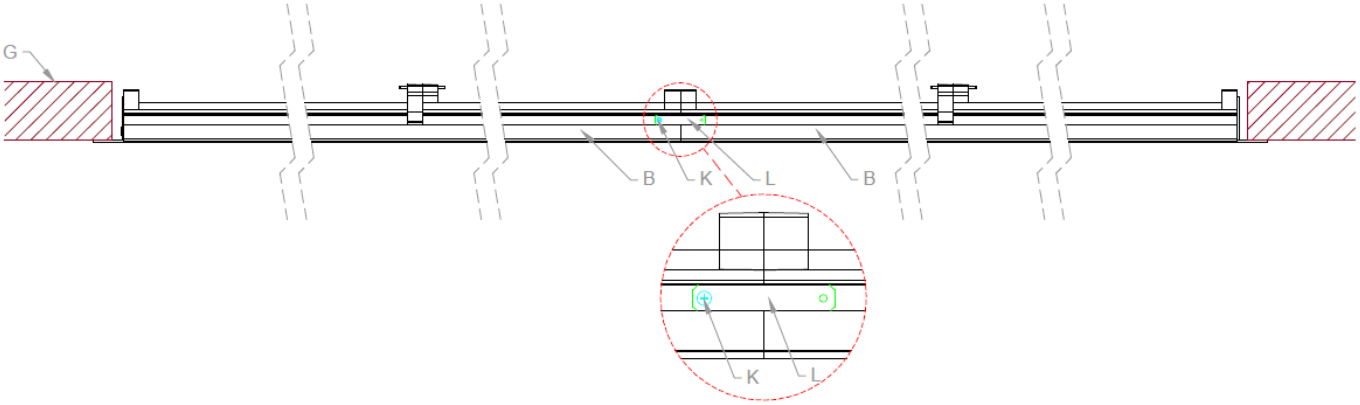

Figure 4. Schematic illustration of NSH continuous linear installation.

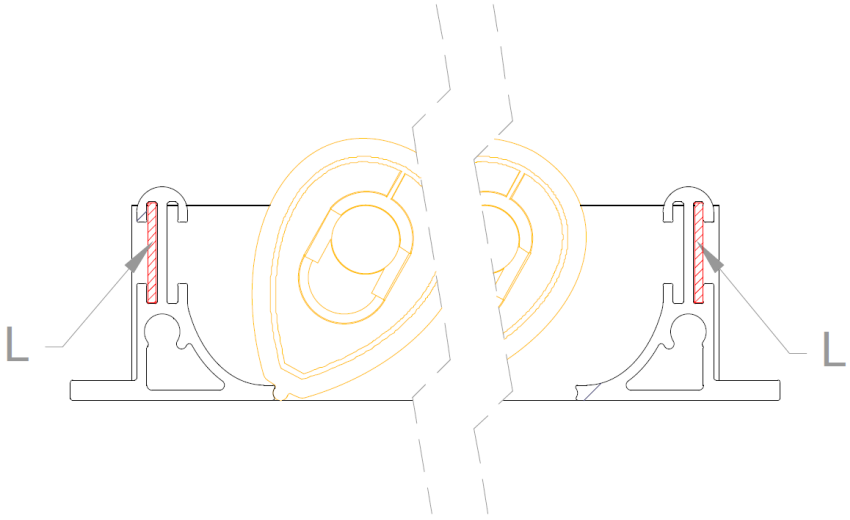

Figure 5. NSH slot diffuser with connectors locations.

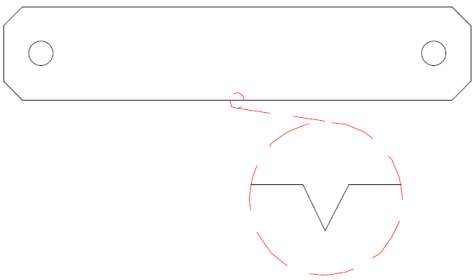

Figure 6. Connector

The NSH slot diffuser can be installed in continuous linear arrangements, creating a uniform and aesthetically pleasing air distribution line. Linear installations consist of end elements (SK) and internal elements (WN). Diffusers intended for linear installations are supplied without a frame on the joining sides, allowing seamless connections without visible gaps between adjacent sections.

Installation procedure:

- Install the plenum boxes for all diffuser sections included in the linear arrangement, maintaining the required spacing in accordance with the project documentation.
- Connect adjacent diffuser sections using the supplied bayonet connectors (L) by inserting the connector into the end profiles of the adjoining diffusers (Fig. 5). The connector ensures proper alignment and stability of the joint. If required, the connector may be secured against movement using a short screw (e.g. screw (J) - 2.9 × 13 mm).
- Install the connected diffuser sections onto the plenum boxes in accordance with the procedure described in Section 2 (mounting to the plenum box).
- Verify the alignment of the entire linear installation. Joints between adjacent diffuser sections should be uniform and free from visible gaps, offsets, or misalignment.

ATTENTION:

- The connector may be additionally secured against movement by installing a short screw through the pre-drilled hole provided in the connector.