

SLOT DIFFUSER



Characteristics:

An aluminium slot diffuser with movable vanes made of aluminium or plastic, divided into individually adjusted sections.



version: 21/03/24

Intended use

NSAL slot diffusers are used in systems with constant or variable air volume. High air induction makes the NSAL diffusers capable of operating both in heating and cooling modes.

Design

NSAL diffusers can be made in lengths within the range of 500–2000 mm and they can contain between one to six movable, round air supply (extraction) slots. For NSAL painted white (RAL 9010) or gray (RAL 9003) or anodized diffuser the vanes are made of plastic. For other NSAL colours, the vanes are made of aluminium painted in the colour of the diffuser. On special request, it is also possible to manufacture the aluminium vanes painted in white or grey. The diffuser can be painted in any RAL colour – please consult with your sales representative.

The diffusers can be installed individually or in a linear fashion. NSAL diffusers designed for inline mounting do not have a frame at the side where the diffusers are joined together, which makes it possible to maintain their attractive appearance.

Table 1. Standard dimensions of NSAL diffusers and plenum boxes.

Front panel			Non-insulated box		Insulated box	
A [mm]	E [mm]	H [mm]	C [mm]	H ₁ [mm]	C [mm]	H ₁ [mm]
58	27	32	99	265	129	265
83	52	32	99	265	129	265
108	77	32	147	265	177	265
133	102	32	197	265	224	265
158	127	32	222	265	249	265
183	152	32	247	265	274	265

Dimensions

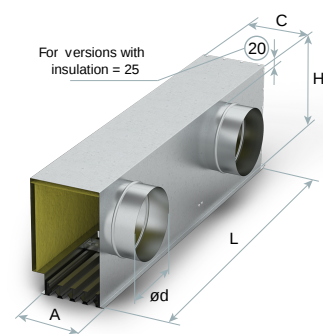


Figure 1. Dimensions of NSAL diffusers with a plenum box.

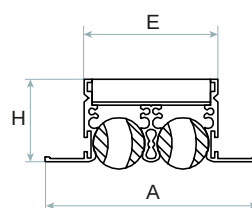


Figure 2. NSAL front panel dimensions.

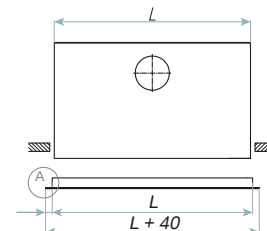


Figure 4. Dimensions of the boxes for inline mounting - Single installation.

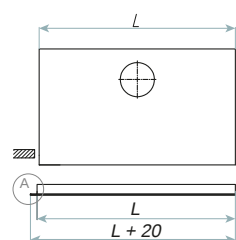


Figure 3. Dimensions of the boxes for inline mounting - SK outermost element.

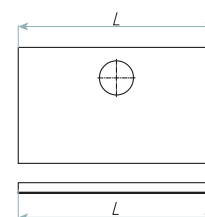


Figure 5. Dimensions of the boxes for inline mounting - WN middle element.

Table 2. Standard quantities and diameters of connection pipes
ød [mm]

Number of slots	Diffuser length L					
	500-700	800-900	1000-1100	1200-1400	1500-1700	1800-2000
1	1x 98	1x 98	2x 98	2x 98	2x 123	2x 123
2	1x 123	1x 123	2x 123	2x 158	2x 158	2x 198
3	1x 158	2x 158	2x 158	2x 198	2x 198	2x 198
4	1x 198	2x 158	2x 198	2x 198	2x 198	2x 198
5	1x 198	2x 158	2x 198	2x 198	2x 198	2x 198
6	1x 198	2x 158	2x 198	2x 198	2x 198	2x 198



In the case of an individual order, the number and diameter of connection pipes may be adapted to the customer's requirements. In the case of a custom length, please consult with your sales representative.

Vane adjustment

The diffuser's design makes it possible to stream the air supply either vertically or horizontally by manually changing the angles of the individual vanes.

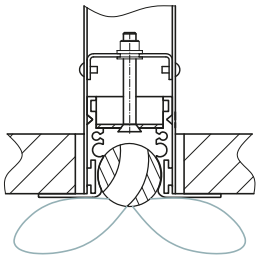


Figure 6. Horizontal air supply profile.

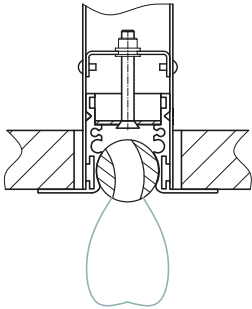


Figure 7. Vertical air supply profile.



The technical data of the diffusers, including pressure drop, noise level and stream ranges, is available at www.smay.eu, in the [Diffuser selection program](#).

Installation

The diffusers may be mounted directly to the ceiling or by means of plenum boxes. Dedicated plenum boxes may be fitted with a control element on the inlet connection pipe. Plenum boxes may be optionally insulated from the inside with a 10 mm thick mat.

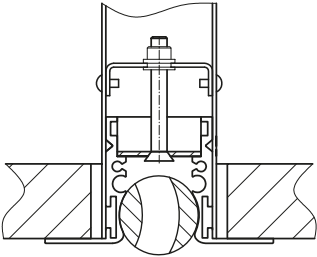


Figure 8. Installation to a plenum box.

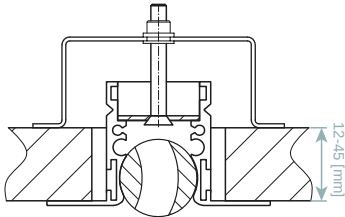


Figure 9. Installation to a baffle by a mounting bracket.

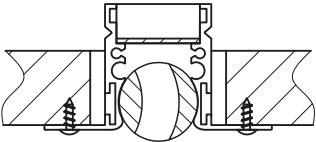


Figure 10. Installation to a baffle by visible screws.

NSAL - Slot diffuser

When ordering, please provide information in accordance with the following pattern:

NSAL-<W>-<L>-<X>-<M>-<P><RAL> / <ADD>

Where:

W	Number of the diffuser slots: 1, 2, 3, 4, 5, 6
L	Diffuser length in mm: 500–2000 (at intervals of 100 mm)
X	Type of diffuser installation* none - To a plenum box SK - Inline mounting, outermost element WN - Inline mounting, inner element
M	Installation method* none - To a plenum box Ks - By means of a mounting bracket Wk - By means of visible screws
P	Finish* AA - Frame made of anodised aluminium, vanes as per description AL - Frame made of painted aluminium, vanes as per description
RAL	colour number as per RAL (for AL finish)
ADD	Specify additional accessories here as follows

Plenum box as per the configuration below:

SR<I>-<N>-<D><R>

Where:

I	Insulation* brak - No insulation t - Insulated
N	Number of connection pipes*
D	Connection pipe diameter in mm*
R	Damper in a connection pipe* none - No damper P - Damper adjusted from outside the box Pc - Damper adjusted from inside the box with a cord Pd - Damper adjusted from inside the box with a lever (for the number of slots $W \geq 3$ only)

* Optional values – if not specified, default values will be used

Sample order:

NSAL-4-1000-AL9010 / SRt-2-198P