

NSAL-70

SLOT DIFFUSER



Description:

Aluminium slot diffuser with movable vanes, set individually for each slot.

Intended use

The NSAL-70 slot diffuser is designed to supply air in rooms requiring high comfort (e.g. offices, public buildings and laboratories). Adapted for installation in ceilings. Recommended installation height from 2.5 to 4 m. The diffuser can be used as an exhaust element.

Design

A slot diffuser with adjustable vanes designed for fixed or variable outputs. Adjustment of the air flow direction is made using a rotary knob (drive wheel) located at each modular steering wheel. Airflow angle is adjustable in the range of 0–180°. The special design allows the maximum use of the Coanda effect. Black vanes as standard.

Standard lengths of the NSAL-70 diffusers are 600, 1,000, 1,200, 1,500, 1,800 and 2,000 mm. On request, it is possible to make a diffuser of any length in the range of 300–2,000 mm.

The width of a single slot is 15 mm. Narrow, flat bezel face. The plenum box is made of galvanized steel sheet with or without insulation. It is possible to install a control damper in the spigots. The front panel are made of anodized aluminium profiles or painted in a RAL9010 colour. On request, it is possible to paint in another RAL colour

Dimensions

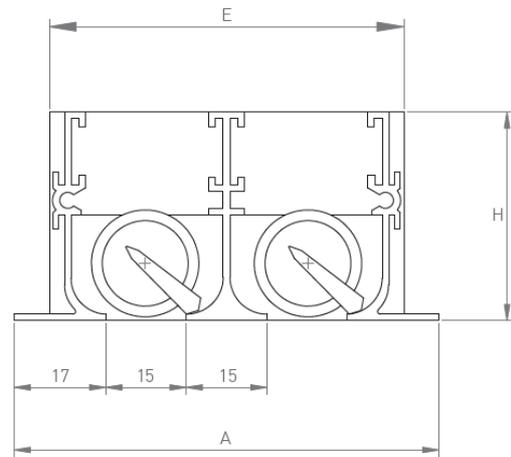


Figure 2. Dimensions of NSAL-70 front panels

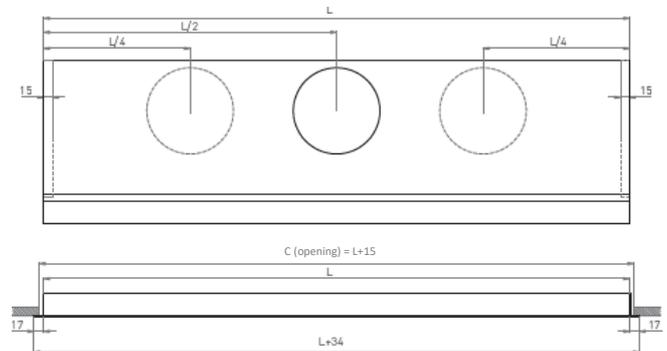


Figure 3. View of the diffuser and the box from the connection side.



Figure 1. Single and continuous construction.

Lk – connection stub length.
Without throttle: 75 mm
With throttle: 100 mm – 140 mm

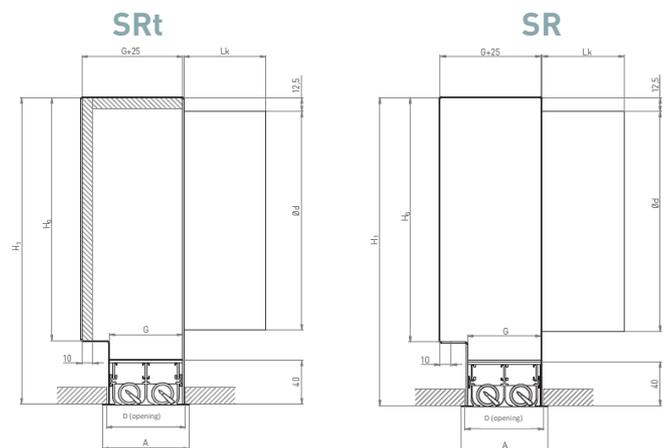


Figure 4. Dimensions of plenum boxes for NSAL-70

AIRFLOW CONTROL AND DISTRIBUTION

AA

AL

RAL



Table 1. Dimensions of the NSAL-70 diffuser and plenum boxes.

Number of slots	A [mm]	E [mm]	H [mm]	D [mm]	G [mm]	H ₁ [mm]	H ₆ [mm]
1	49	36	39	42	37	280	222
2	79	66	39	72	67	280	222
3	109	96	39	102	97	280	222
4	139	126	39	132	127	280	222

For linear installation, the total length of the diffuser is equal to the effective length L

Manufacturing versions

The NSAL-70 slot diffuser can be installed as an independent diffuser or in a continuous linear installation. Additional elements enable corner connections of 300 mm × 300 mm.

Accessories

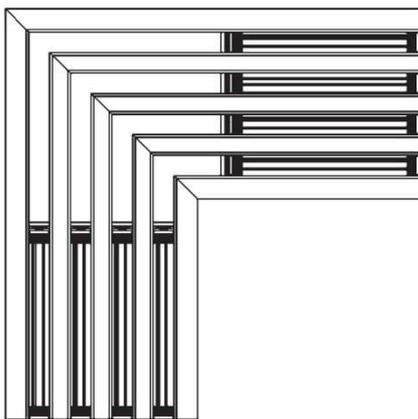


Figure 5. Sketch of the corner connector.



Technical data of the diffusers, including pressure loss, noise level and airflow ranges, is available at smay.eu, in the document Flow Characteristics for Grilles and Diffusers.

Table 2. Number and diameter of connection stubs, ød [mm]

Number of slots	Diffuser length, L [mm]					
	600	1,000	1,200	1,500	1,800	2,000
1	1 × 123	1 × 123	1 × 123	2 × 123	2 × 123	2 × 123
2	1 × 158	1 × 158	1 × 158	2 × 158	2 × 158	2 × 158
3	1 × 198	1 × 198	1 × 198	2 × 198	2 × 198	2 × 198
4	1 × 198	1 × 198	1 × 198	2 × 198	2 × 198	2 × 198

Table 3. Quick selection table for horizontal air supply.

NSAL-70				
Number of slots [pcs.]	Effective length L [mm]	Flow Q [m ³ /h]	Noise power level L _{wa} dB(A)	Pressure loss ΔP [Pa]
1	1,000	40	<20	2
		70	25.2	7
		100	33	15
		130	39	26
		160	43	39
2	1,000	70	<20	2
		110	24	5
		150	31	9
		190	36	14
		230	40	20
3	1,000	100	<20	2
		160	22	4
		220	29	8
		280	35	13
		340	39	20
4	1,000	120	<20	1
		200	22	4
		280	30	7
		360	36	12
		440	41	18

NSAL-70 – Slot diffuser

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

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

NSAL-70 - <W> - <L> - <X> - <M> - <P> - <RAL> / <ADD>

Where:

W	Number of diffuser rows: 1, 2, 3, 4,
L	Diffuser length in mm: 600, 1,000, 1,200, 1,500, 1,800, 2,000
X	Type of diffuser installation*
	None – Single installation
	SK – Inline mounting, outermost element
	WN – Inline mounting, inner element
M	Installation method*
	None – With plenum box
	KM – Using a mounting console (without a plenum box)
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:

Accessories:

Plenum box as per the configuration below:

<SR> <I> - <N> - <Dk> - <R>

Where:

I	Insulation*
	None – No insulation
	t – Insulated
N	Number of connection pipes*
Dk	Connection pipe diameter in mm*
R	Dumper in the connection stub*
	None – No damper
	P – Damper adjusted from outside the box
	Pc – Damper adjustable from the inside boxes (using a tie rod)

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

Order example: **NSAL-70-2-1000-AL9010/SRt-2-123P**



Revit blocks, selection program and approval documents available at www.smay.pl.