

# NSAL-72

## SLOT DIFFUSER



### Description:

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

### Intended use

The NSAL-72 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. The adjustment of air flow direction using a sliding vane allows to set the horizontal or vertical direction. The special design allows the maximum use of the Coanda effect.

Standard lengths of the NSAL-72 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, depending on the version, is 18 or 25 mm. The plenum box is made of galvanized steel sheet with or without insulation. It is possible to install a control damper (deflector) in the spigots. The front panel and vanes are made of anodized aluminium profiles or painted in a RAL9010 colour. On request, it is possible to paint the parts in another RAL colour. Black vanes as standard.

The diffuser's design makes it possible to stream the air supply either vertically or horizontally.

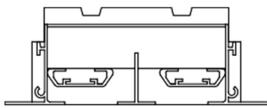


Figure 1. Vanes positioned for the horizontal air supply.

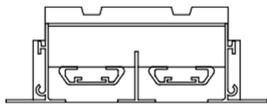


Figure 2. Vanes positioned for vertical air supply.

### Dimensions

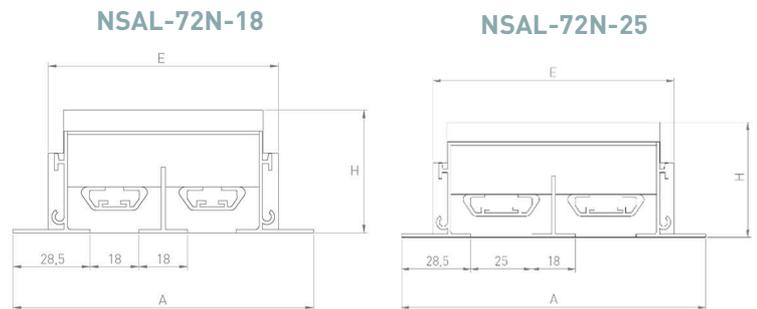


Figure 3. NSAL-72 front panel dimensions.

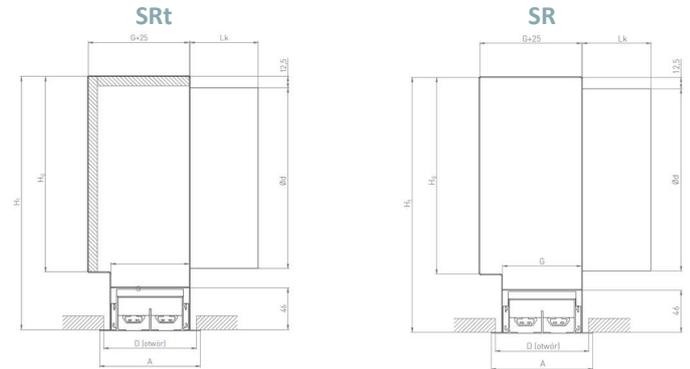


Figure 4. Dimensions of plenum boxes for NSAL-72.

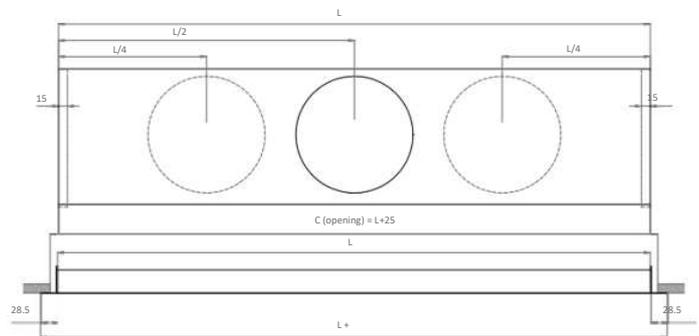


Figure 5. View of the diffuser and the box from the connection side.

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



Table 1. Dimensions of the diffuser and plenum boxes, NSAL-72-18

Number of slots	A [mm]	E [mm]	H [mm]	D [mm]	G [mm]	H <sub>1</sub> [mm]	H <sub>6</sub> [mm]
1	75	49	46	66	50	280	216
2	111	85	46	102	86	280	216
3	147	121	46	138	122	280	216
4	183	157	46	174	158	280	216
5	219	193	46	210	194	280	216
6	255	229	46	246	230	280	216

Table 3. Dimensions of the diffuser and plenum boxes, NSAL-72-25

Number of slots	A [mm]	E [mm]	H [mm]	D [mm]	G [mm]	H <sub>1</sub> [mm]	H <sub>6</sub> [mm]
1	82	56	46	73	57	280	216
2	125	99	46	116	100	280	216
3	168	142	46	159	143	280	216
4	211	185	46	202	186	280	216
5	254	228	46	245	229	280	216
6	297	271	46	288	272	280	216

For linear construction, the length of the front panel is equal to the effective length L.

### Manufacturing versions

- **NSAL-72N** – slot diffuser with movable vanes.
- **NSAL-72NS** – slot diffuser with movable vanes and slot damper.
- **NSAL-72W** – slot diffuser without vanes.

The NSAL-72 slot diffuser can be installed as an independent diffuser or in a continuous linear installation. Each of the above types can be made with a slot width of 25 mm or 18 mm. Additional elements enable corner connections of 300 mm × 300 mm.

Table 2. Table 2. Number and diameter of connection stubs, NSAL-72-18, ød [mm]

Number of slots	Diffuser length, L [mm]					
	600	1000	1200	1500	1800	2000
1	1 × 123	1 × 123	1 × 123	1 × 123	2 × 123	2 × 123
2	1 × 158	1 × 158	1 × 158	1 × 158	2 × 158	2 × 158
3	1 × 198	1 × 198	1 × 198	1 × 198	2 × 198	2 × 198
4	1 × 198	1 × 198	1 × 198	1 × 198	2 × 198	2 × 198
5	1 × 198	1 × 198	1 × 198	1 × 198	2 × 198	2 × 198
6	1 × 198	1 × 198	1 × 198	1 × 198	2 × 198	2 × 198

Table 4. Number and diameter of connection stubs, NSAL-72-25, ød [mm]

Number of slots	Diffuser length, L [mm]					
	600	1000	1200	1500	1800	2000
1	1 × 123	1 × 123	2 × 123	2 × 123	2 × 123	2 × 123
2	1 × 158	1 × 158	2 × 158	2 × 158	2 × 158	2 × 158
3	1 × 198	1 × 198	2 × 198	2 × 198	2 × 198	2 × 198
4	1 × 198	1 × 198	2 × 198	2 × 198	2 × 198	2 × 198
5	1 × 198	1 × 198	2 × 198	2 × 198	2 × 198	2 × 198
6	1 × 198	1 × 198	2 × 198	2 × 198	2 × 198	2 × 198

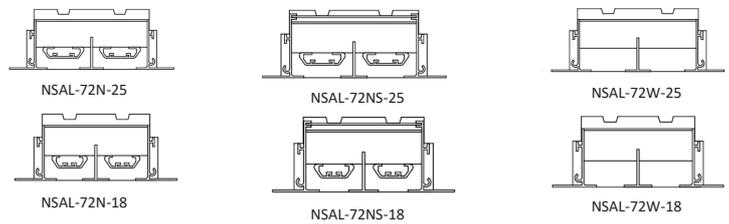


Figure 6. Versions of the NSAL-72 diffuser

Table 5. Quick selection table for horizontal air supply.

Number of slots [pcs.]	Effective length L [mm]	Flow Q [m³/h]	NSAL-72N-18		NSAL-72N-25	
			noise power Lwa dB(A)	pressure loss ΔP [Pa]	noise power Lwa dB(A)	pressure loss ΔP [Pa]
1	1000	70	<20	3	<20	5
		100	23	5	26	11
		130	30	9	32	19
		160	36	14	37	28
		190	40	19	41	40
2	1000	110	<20	2	<20	3
		150	24	4	20	5
		190	30	7	26	8
		230	36	10	31	11
		270	40	14	34	15
3	1000	160	<20	3	<20	2
		220	28	5	20	5
		280	35	8	26	7
		340	40	12	31	11
		400	44	16	35	15
4	1000	200	20	2	<20	2
		280	30	5	<20	4
		360	37	8	26	70
		440	42	12	31	10
		520	47	17	35	14

# NSAL-72 - Slot diffuser

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

NSAL-72 <TYPE> - <S> - <W> - <L> - <X> - <M> - <P> - <RAL> / <ADD>

Where:

<b>TYPE</b>	diffuser type*
	<b>N - Diffuser with movable lamellas</b> NS - Diffuser with movable lamellas and a damper with a gap W - Exhaust air (without lamellas)
<b>S</b>	diffuser slot width in mm: 25, 18
<b>W</b>	number of diffuser rows: 1, 2, 3, 4, 5, 6
<b>L</b>	Diffuser length in mm: 600, 1000, 1200, 1500, 1800, 2000
<b>X</b>	Type of diffuser installation*
	<b>None - Single installation</b> SK - Inline mounting, outermost element WN - Inline mounting, inner element
<b>M</b>	Installation method*
	<b>None - With plenum box</b> KM - Using a mounting console (without a plenum box)
<b>P</b>	Finish*
	<b>AA - Frame made of anodised aluminium, vanes as per description</b> AL - Frame made of painted aluminium, vanes as per description
<b>RAL</b>	colour number as per RAL (for AL finish)
<b>ADD</b>	Specify additional accessories here as follows:

## Accessories:

Plenum box as per the configuration below:

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

Where:

<b>I</b>	Insulation*
	<b>None - No insulation</b> t - Insulated
<b>N</b>	Number of connection pipes*
<b>Dk</b>	Connection pipe diameter in mm*
<b>R</b>	Dumper in the connection stub*
	<b>None - No damper</b> 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

Sample order:

**NSAL-72N-25-4-1000-AL9010/SRt-2-198P**



Revit blocks, selection program and approval documents available at [www.smay.pl](http://www.smay.pl)