

NS9

SWIRL DIFFUSER WITH MOVABLE VANES



Description:

Rectangular or circular steel swirl diffuser with movable plastic vanes.

Intended use

NS9 diffusers are designed for low- and medium-pressure ventilation systems. Movable vanes allow the supply airflow to be shaped as desired to obtain a swirling supply of air. They are particularly recommended for 2.6 to 4 m high rooms, when the difference in temperature between the supply air and the air in the room is up to 10 K. NS9 diffusers may be used in extraction mode.

Design

NS9 diffusers are equipped with plastic vanes that generate a swirling airflow. They are adjustable and can be positioned individually. Normally, the vanes are black. The front panel of the diffuser may be round or square. It is made of powder-coated steel, painted with RAL9010 white paint. Other RAL colours and stainless steel versions are available on request (square panels only). NS9 diffusers may be made in the "Z" supply version (with plastic vanes and a plenum box with a deflector) or as the "A" exhaust version (without vanes and a plenum box without a deflector).

Installation

- **KR1** – Square panel with vanes in a circular arrangement, one bolt positioned centrally (for sizes 310–625)
- **KR4** – Square panel with vanes in a circular arrangement, four screws in the corners (for sizes 310–625)
- **KR8** – Square panel with vanes in a circular arrangement, eight screws in the corners (for size 800)
- **RR1** – Round panel, one bolt positioned centrally
- **KK1** – Square panel with vanes in a square arrangement, one bolt positioned centrally (for sizes 310–625)
- **KK4** – Square panel with vanes in a square arrangement, four screws in the corners (for sizes 310–625)
- **KK8** – Square panel with vanes in a square arrangement, eight screws in the corners (for size 800)

Installation with four or eight screws is recommended for square front panels larger than 500.



The technical data of the diffusers, including pressure drop, noise level and stream ranges, is available at www.smay.eu, in the diffuser selection range.

Dimensions

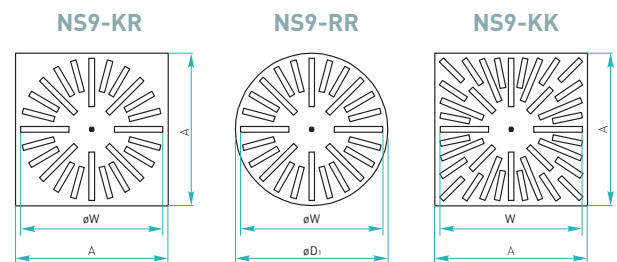


Figure 1. NS9 front panel dimensions.

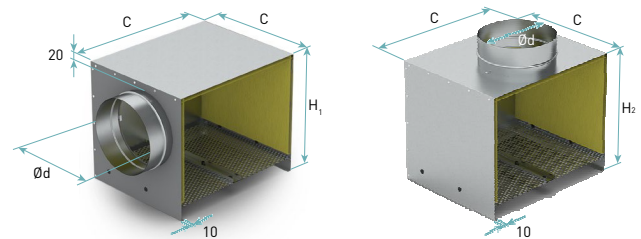


Figure 2. Dimensions of rectangular plenum boxes. SR for NS9-KR and NS9-KK panels

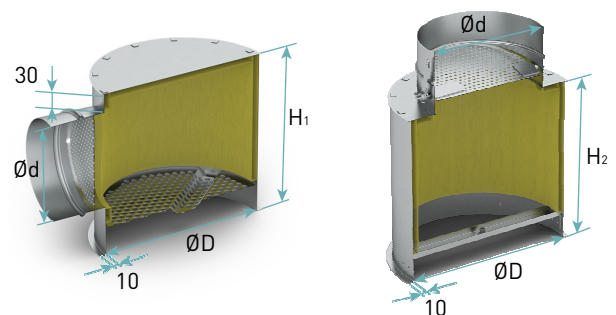


Figure 3. Dimensions of SRR round plenum boxes for NS9-RR panels.

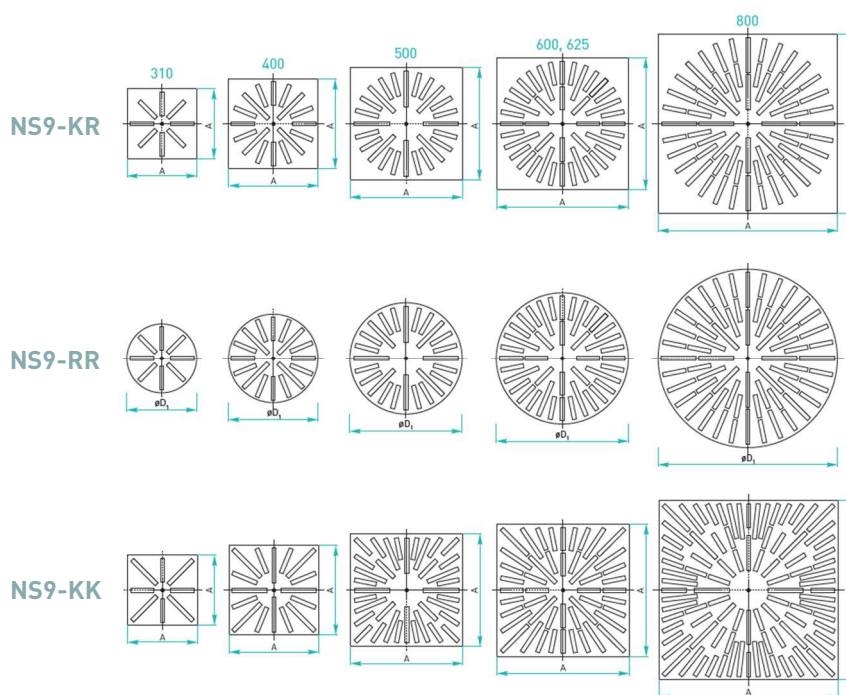
Table 1. Standard dimensions of NS9 diffusers and plenum boxes.

Size	A	ØD ₁	ØW	Ød	C	ØD	H ₁	H ₂
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
310	308	310	262	158	303	270	290	200
400	398	400	352	198	393	370	330	300
500	498	500	452	248	493	470	380	300
600	598	600	552	248	593	570	380	300
625	623	625	552	248	593	570	380	300
800	798	800	752	313	793	770	450	300

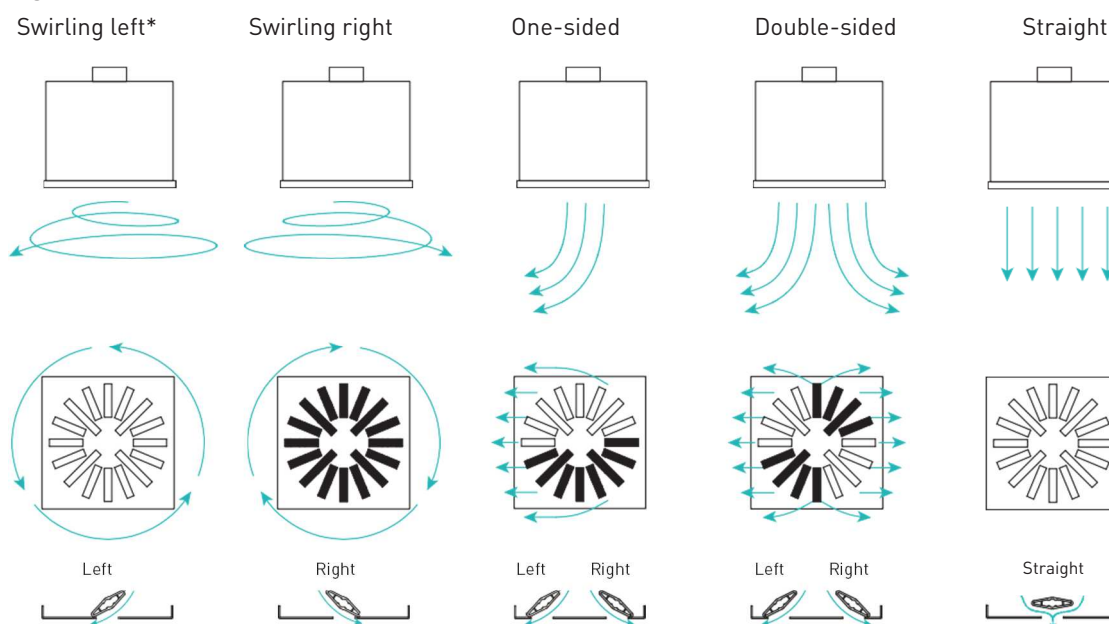
SL SN RAL



NS9 diffuser versions



Vane setting versions



Swirling left is the standard factory setting of the vanes.

NS9 – Swirl diffuser with movable vanes

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

NS9 - <C> - <X> - <W> - <P> <RAL> <KK> / <ADD>

Where:

C	Front panel and the installation method*
	RR1 – Round panel, installation with a single bolt – Square panel with vanes in a square arrangement, installation with one bolt (for sizes 310–625) KK1 – Square panel with vanes in a square arrangement, installation with four screws (for sizes 310–625), KK4 – Square panel with vanes in a square arrangement, installation with eight screws (for size 800) KK8 KR1 – Square panel with vanes in a circular arrangement, installation with one bolt (for sizes 310–625) KR4 – Square panel with vanes in a circular arrangement, installation with four screws (for sizes 310–625) KR8 – Square panel with vanes in a circular arrangement, installation with eight screws (for size 800)
X	Diffuser intended use*
	Z – Air supply (with plastic vanes) A – Exhaust (without plastic vanes)
W	Size: 310, 400, 500, 600, 625, 800
P	Finish*
	SL – Panel made of painted steel, vanes made of plastic – Panel made of stainless steel, grade 1.4301 (304 according to AISI, 0H18N9 according to PN), plastic vanes (for KK and KR square panels only) SN
RAL	colour according to the RAL colour chart*
KK	Vane colour*
	None – Black B – White
ADD	Specify additional accessories here as follows:

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

** For more information on accessories see the accessories sheet Example of product labelling: **NS9-KK4-Z-625-SL9010 / SRts-380-b248P**



- Blocks for REVIT software,
 - selection range and
 - certificates
- are available at www.smay.pl.

Accessories**

Plenum box as per the configuration below:

<TYP> <I> <W> - <H> - <K><D><R> - <P>

Where:

TYPE	Plenum box type
	SR – Rectangular plenum box SRe – Rectangular box, budget version SRR – Round plenum box
I	Insulation*
	None – No insulation t – Insulated
W	Screen deflector*
	None – No deflector (default for exhaust) s – With a deflector (default for supply)
H	Plenum box height in mm*
K	Connection pipe position *
	b – Side g – Top
D	Connection pipe diameter in mm*
R	Damper in a connection pipe*
	None – No damper P – Damper adjusted from outside the box (for SR or SRR only) Pc – Damper adjusted from inside the box with a cord (for SR or SRR only) Pd – Damper adjusted from inside the box with a lever (for SR or SRR without deflector) Pe – Damper adjusted from inside the box with a lever (for SRe without deflector)
P	Design*
	SO – Galvanised steel SN – Stainless steel, grade 1.4301 (304 according to AISI, 0H18N9 according to PN) (for SR only) SM – Stainless steel, grade 1.4404 (316L according to AISI, 0H17N14M2 according to PN) (for SR only)