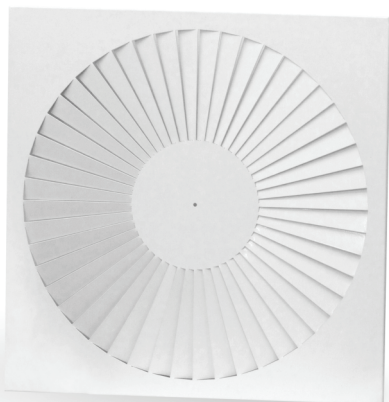


## Swirl diffusers



# NS-4

Hygienic certificates:  
HK/B/1121/02/2007  
HK/B/1121/04/2007



NS-4 are intended for use in ventilation systems for low and medium pressure. Can produce air swirl and are particularly recommended for rooms with a height of 2.6 to 4 [m] of the temperature difference between supply air and room air of up to 10 K.

The diffusers are available with round or square front panel.

◀ **Swirl diffuser NS-4**  
in rectangle finishing.

# Anemostaty wirowe NS-4



## Execution

NS-4 is equipped with fixed blades which produce vortex flow of air. The front panel diffuser can be round or square. NS-4 are made from steel powder coated white RAL 9010. On request, painted a different color RAL and made of stainless steel. Diffusers can be executed in a supply air **Z** or exhaust **A**.

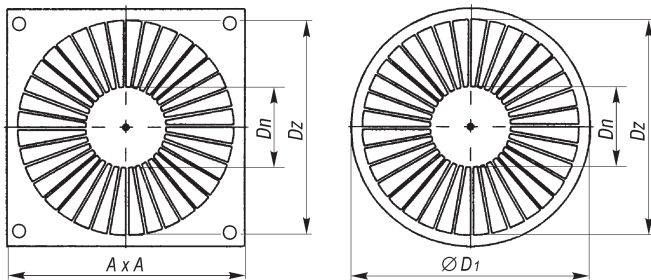
## Assembly

Depending on the type of front panel diffusers can be installed as follows:

- Round panel: **R1** assembly with one screw through the hole at the center of the diffuser
- Square panel: **K1** assembly with one screw through the hole at the center of the diffuser
- Square panel: **K4** mounting with four screws through the holes in the corners of the diffuser

For diffusers with square front panel of size 600, 625, 600D, 625D is recommended for installation of **K4**.

## Front panel dimensions and versions

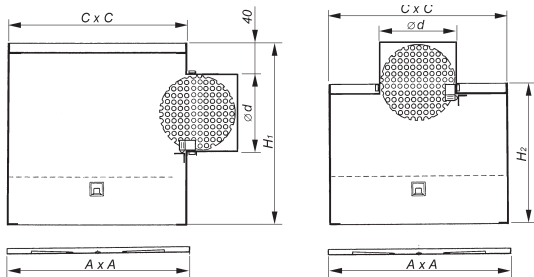


Size	D <sub>n</sub>	D <sub>z</sub>	A	ØD <sub>1</sub>	A <sub>eff</sub>
[mm]	[mm]	[mm]	[mm]	[mm]	m <sup>2</sup>
400	130	350	398	400	0,0138
500	130	350	498	500	0,0138
600	130	350	598	600	0,0138
625	130	350	623	625	0,0138
600D	200	540	598	600	0,0367
625D	200	540	623	625	0,0367

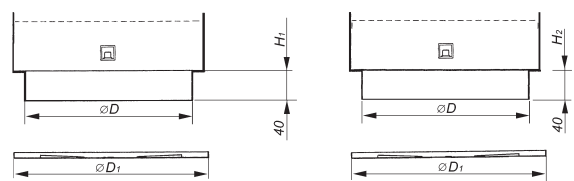
Where: A<sub>eff</sub> - effective area in m<sup>2</sup>

## Dimensions with plenum boxes

NS-4K - square front panel



NS-4R - round front panel

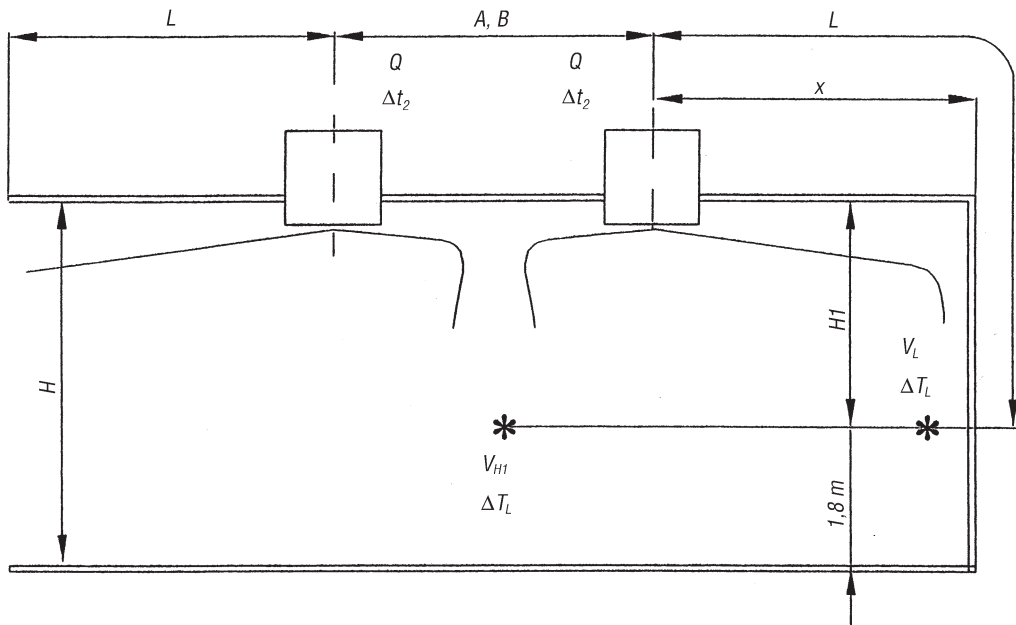


Size	A	ØD <sub>1</sub>	ØD	C	H <sub>1</sub>	H <sub>2</sub>	Ød
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	m <sup>2</sup>
400	398	400	370	390	330	300	198
500	498	500	370	390	330	300	198
600	598	600	370	390	330	300	198
625	623	625	370	390	330	300	198
600D	598	600	560	590	380	300	248
625D	623	625	560	590	380	300	248

## Selection

### Designation:

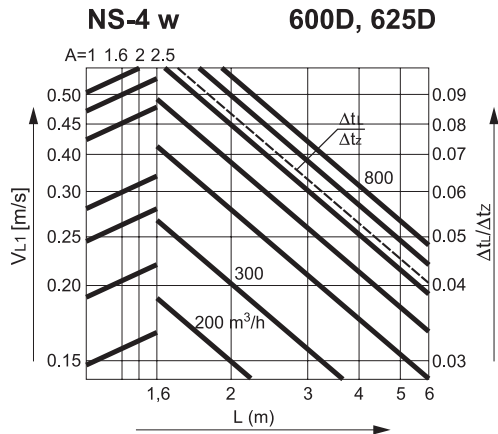
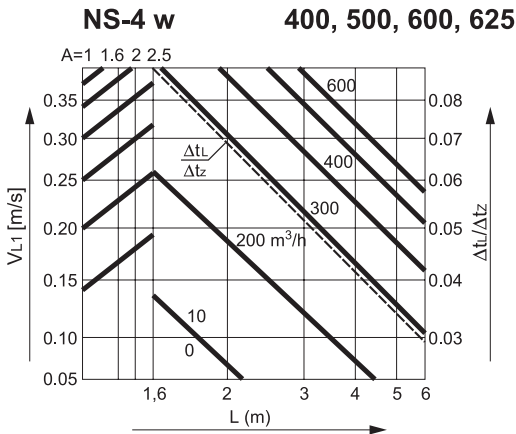
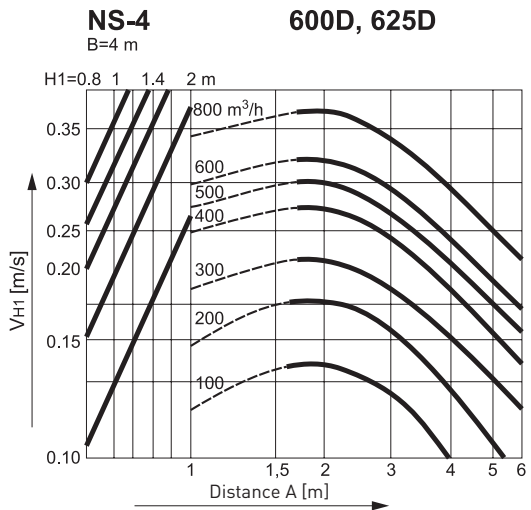
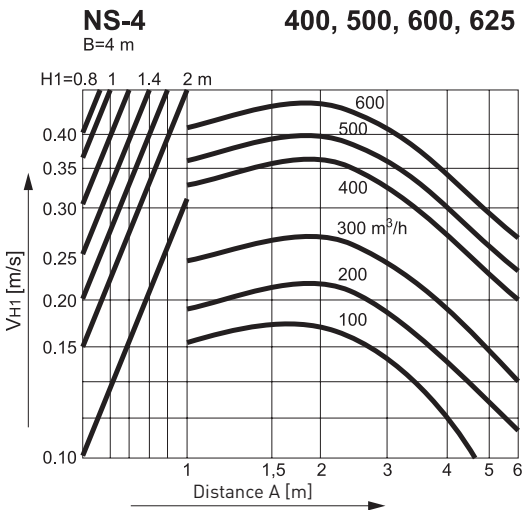
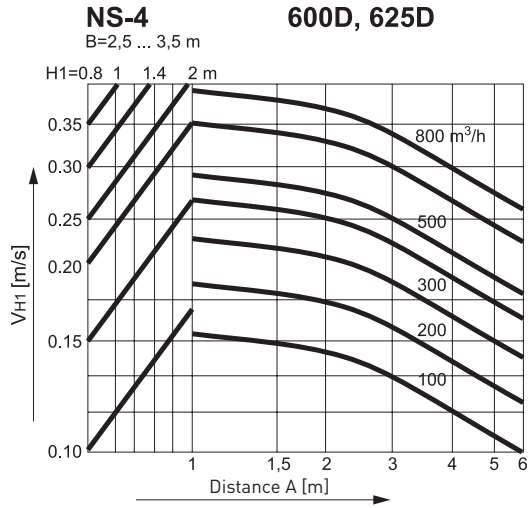
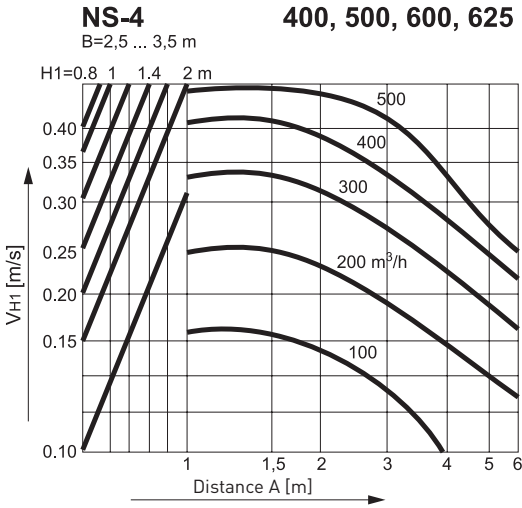
$V_t$ [m <sup>3</sup> /h]	the total air flow
$A, B$ [m]	distance between diffusers
$H_1$ [m]	height from ceiling to occupied zone
$V_{h1}$ [m/s]	average flow velocity at a height $H_1$
$L$ [m]	throw
$V_L$ [m/s]	average flow velocity at a distance $L$
$\Delta t_z$ [K]	air temperature differences
$\Delta t_L$ [K]	air temperature differences at a distance $L$ ,
	where: $L = A/2 + H_1$
	or $L = B/2 + H_1$
	or $L = X + H_1$
$\Delta p$ [Pa]	local pressure loss
$L_w$ [dB <sub>(A)</sub> ]	sound power level
$V_{eff}$ [m/s]	effective flow velocity
$A_{eff}$ [m <sup>2</sup> ]	effective area



# Selection NS-4



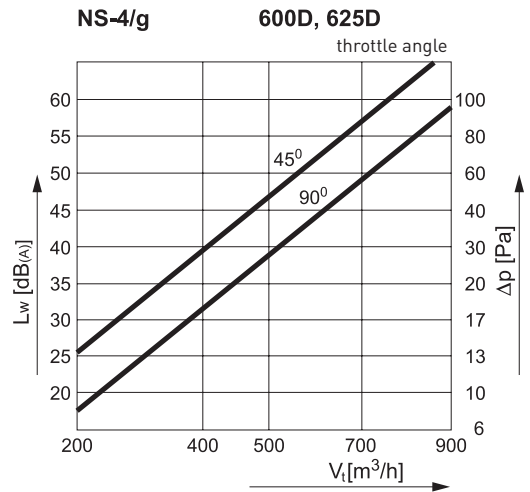
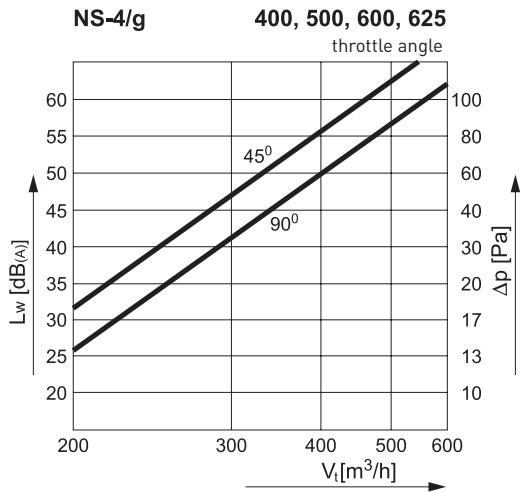
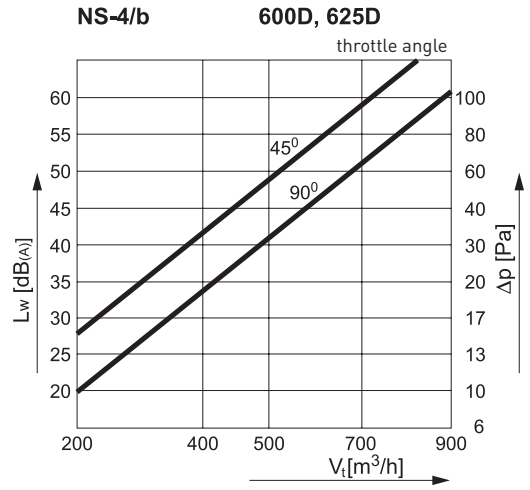
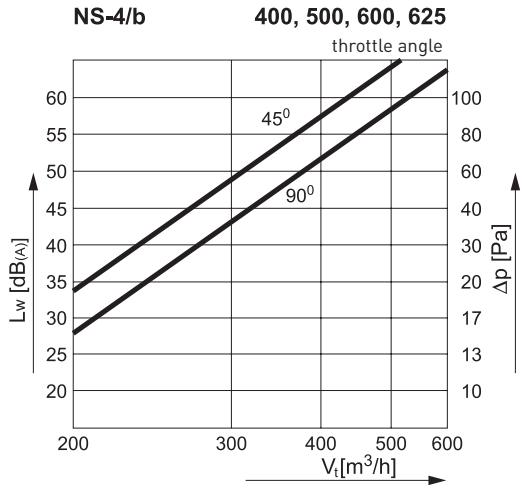
Distribution of air velocity, depending on the flow range



# Selection NS-4



Graphs of pressure loss and acoustic power (throttle opening angle of 90° - open, 45° - half-open).



## Accessories and how to order NS-4



While making the order, it is necessary to provide the information according to the below-mentioned method:

**NS-4 - <C><X> - <W> - <P><RAL> / <ADD>**

Where:

- <C> - front panel version, assembly option: \*
  - R1 – round panel, assembly with one screw
  - K1 – square panel, assembly with one screw**
  - K4 – square panel, assembly with four screws
- <X> - diffuser application: \*
  - Z – supply air**
  - A – exhaust
- <W> - size: 400, 500, 600, 625, 600D, 625D
- <P> - finishing: \*
  - SL - stal lakierowana**
  - SN (1.4301) – stal nierdzewna gat. 1.4301 (304 wg AISI, 0H18N9 wg PN)
  - SN (1.4404) – stal nierdzewna gat. 1.4404 (316L wg AISI, 00H17N14M2 wg PN)
- <RAL> - colour according to RAL palette \*
- <ADD> - here you should determine the additional accessories as below:

Accessories \*\*

<SR><I>-<P>-<H>-<K><D><R> - plenum box according to the configuration as below:

- <I> - insulation:
  - none = no insulation**
  - t = insulated
- <P> - screen deflector: \*
  - none = without deflector (for exhaust by default)
  - s = with deflector (for supply diffuser by default)
- <H> - box height in mm \*
- <K> - position of connector pipe:
  - b = lateral**
  - g = upper
- <D> - connector pipe diameter in mm \*
- <R> - damper in the connector pipe:
  - none = no damper**
  - P = damper with perforated barrier with regulation from outside the box
  - Pc = damper with regulation from inside the box with tendon
  - Pd = damper with regulation from inside the box with lever

\* optional values, when they are not given, the default values shall apply

Example of the order:

**NS-4 – K1Z – 600D – SL9010 / SRts – 430 – b315P**