

## Staircase diffusers



# NSCH

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



### NSCH diffuser ▲

Under the execution with the round frontal panel

NSCH diffusers are designed for the air distribution directly to the people stay zone.

They may be installed vertically or horizontally in step surfaces provided that the possibility of the diffuser mechanical load (e.g. under the armchairs in the auditoria, theatres, concert halls etc.) is eliminated.

The swirl method of air distribution causes the increased induction and fast unification of the air temperature in people stay zone.

The air from the diffuser after encountering the heat source is subject to intrinsic warming up. As a result the thermal air current is created and it carries the warmed air and the contaminations lighter than the air towards the room ceiling. From there the contaminations are removed by means of the separate exhaust ventilation

# NSCH Staircase diffusers

## Execution

NSCH diffusers are equipped with stationary wheels in the circle arrangement, adapted for the swirl air supply. The frontal panel may be round or square. The diffuser is made out of the powder varnished steel in white colour RAL9010. On order, it is possible to varnish with another colour RAL. The diffuser assembling flange is made out of the galvanised steel.

## Execution variants

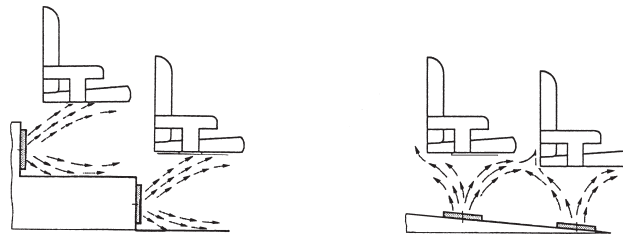
**NSCH-P** – square frontal panel and assembling flange with the screen deflector

**NSCH-R** – round frontal panel and assembling flange with the screen deflector

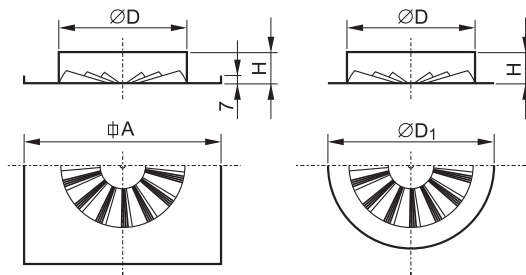
## Operation principle, design guidelines

The air is supplied through the diffuser directly to the near-floor part of people stay zone. Because of the swirl method of air distribution and the air supply with slight effective speed, the air in people stay zone quickly obtains the uniform thermal parameters. Therefore, in the people stay zone there is generated the fresh air layer that is cooler than the air in the room.

The heat sources occurring in this layer cause to create natural thermal air current in which the warmed and contaminated air is carried up towards the ceiling. The secondary air is removed from the ceiling space with the separate exhaust ventilation.



## Dimensions

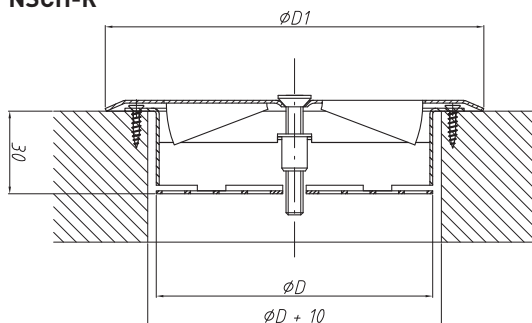


$D_N$	$\varnothing D$	A	$\varnothing D_1$	H
60	57	100	93	30
70	72	110	108	30
80	77	115	113	30
100	97	135	135	30
125	115	150	150	30

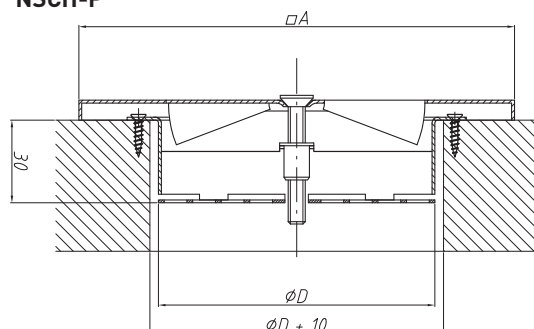
## Assembly

In the assembly hole the assembling flange is installed by means of the tap bolts. The diffuser is mounted to the assembling flange by means of one screw through the hole in the central point of the diffuser.

**NSCH-R**



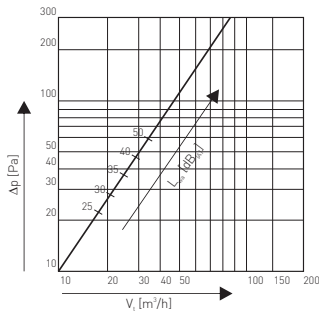
**NSCH-P**



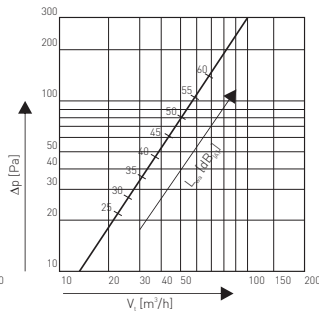
# Selection NSCH



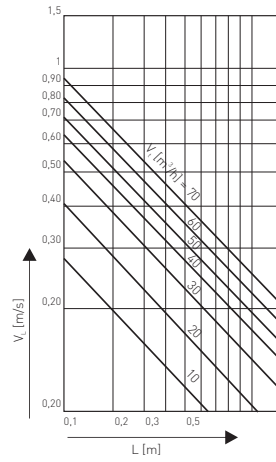
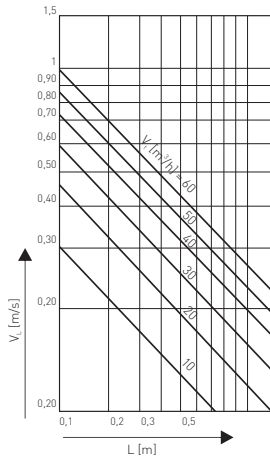
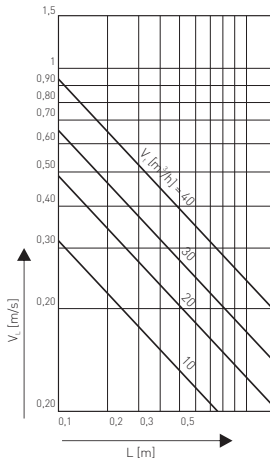
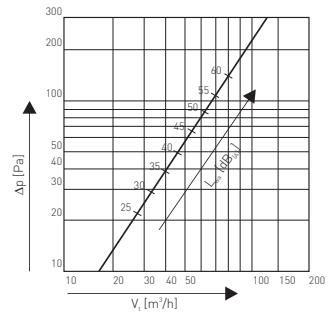
**NSCH 60**



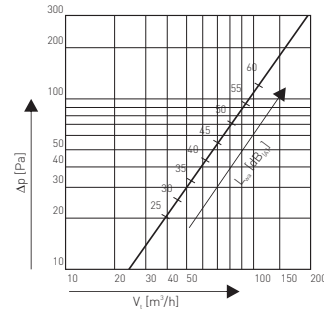
**NSCH 70**



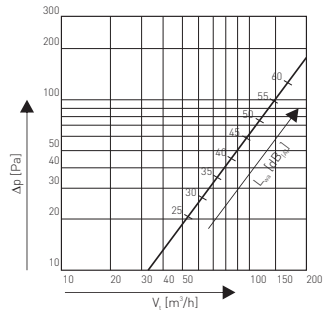
**NSCH 80**



**NSCH 100**



**NSCH 125**



**Oznaczenia:**

$V_t$  [m<sup>3</sup>/h]

total air flow

$\Delta p$  [Pa]

loss of total pressure

$L_w$  [dB<sub>A</sub>]

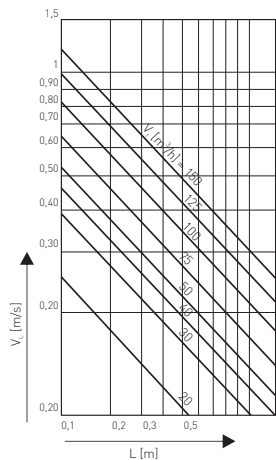
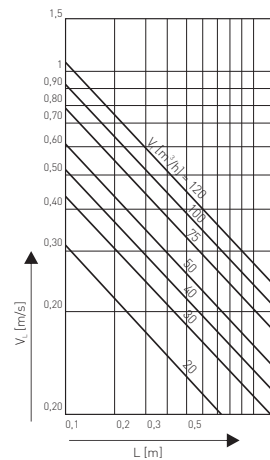
sound intensity level

$V_L$  [m/s]

air speed in the distance L

L [m]

stream range





## Accessories and how to order NSCH

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

**NSCH - <W> - <S> - SL-<RAL>**

Where:

- <W> - execution variant:
  - P – square frontal panel and assembling flange with the screen deflector
  - R – round frontal panel and assembling flange with the deflector
- <S> - diffuser size: 60, 70, 80, 100, 125
- SL** - execution: varnished steel
- <RAL> - colour according to RAL palette \*

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

Example of the order:

**NSCH - R - 70 - SL9010**