

3/S3
v 3.3 (en)

STAIRCASE SWIRL DIFFUSERS

IR, SDV, DSK



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STAIRCASE SWIRL DIFFUSER - IR

- Staircase diffuser, for ventilation in areas that require high air induction, as well as low air flow velocities and noise levels.
- Made out of steel sheet, standard powder coated RAL 9010.

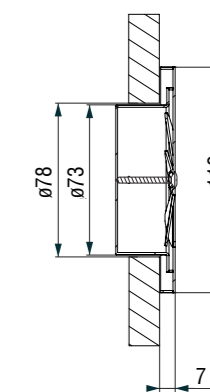
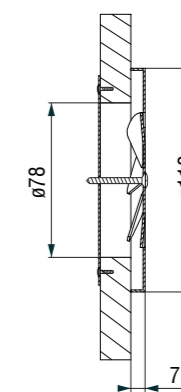
Options

- RAL...

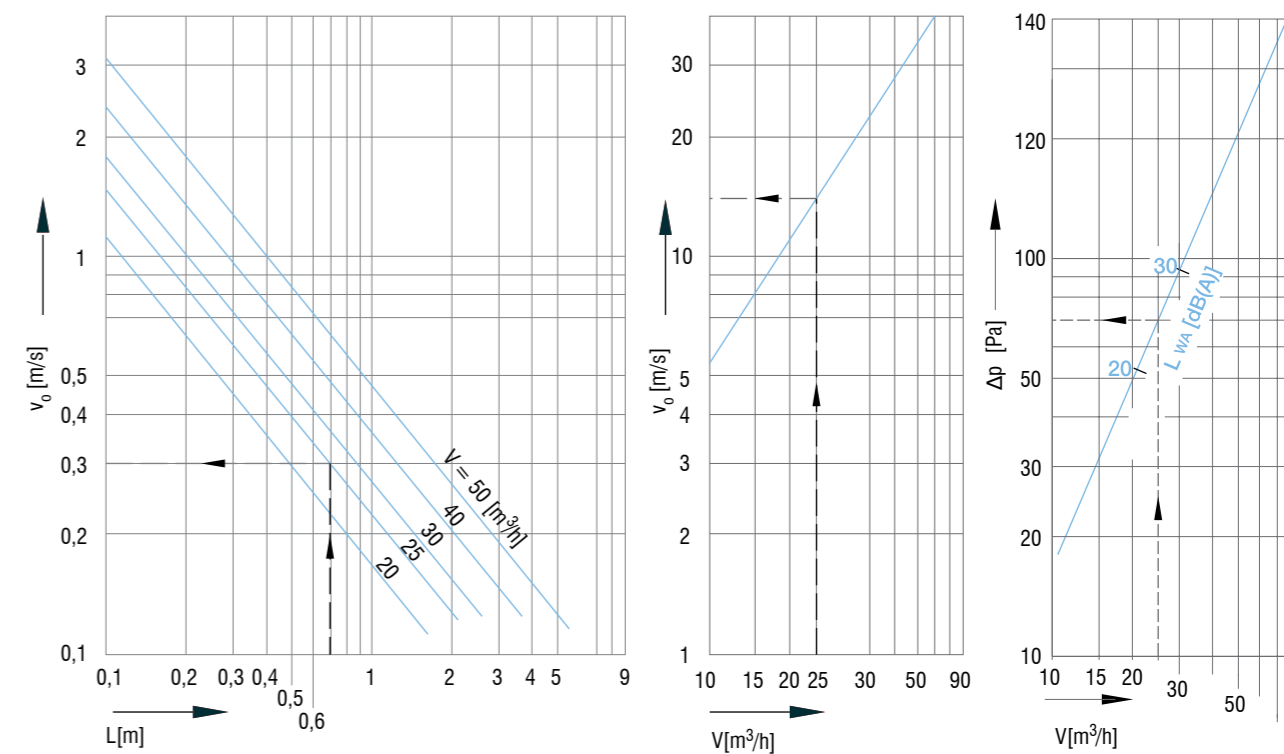
Installation

- with central screw and cross-member (standard)

- with plenum box



Selection diagram



Ordering key

Staircase swirl diffuser **IR - O - T - RAL...**
O - round
K - square
 Connection : **K** - plenum box
T - central screw and cross-member

Definition of symbols:

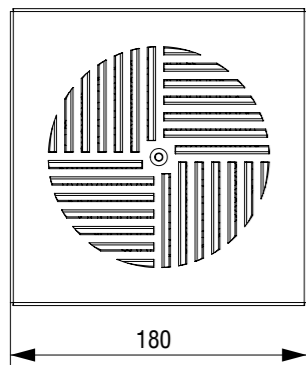
\dot{V}	[m³/h]	- Air flow rate	Δp_t	[Pa]	- Pressure drop
v_k	[m/s]	- Duct velocity	t_p	[°C]	- Room temperature
v_0	[m/s]	- Effective outled velocity	t_s	[°C]	- Supply air temperature
v_L	[m/s]	- Core velocity	Δt_z	[°C]	- ($t_z - t_p$)
L	[m]	- Throw distance			
L_{WA}	[dB(A)]	- Sound power level			
$\alpha = 6^\circ$		- Dissipation angle			
B	[m]	- Jet width			

STAIRCASE SWIRL DIFFUSER - SDV

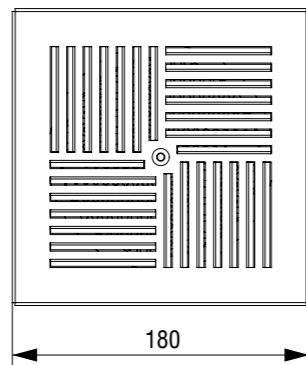
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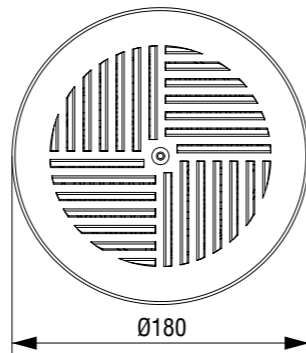
SDV-KO



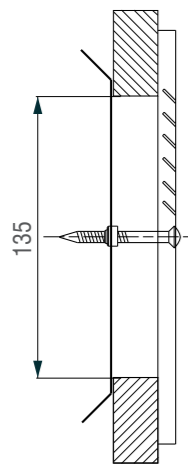
SDV-KK



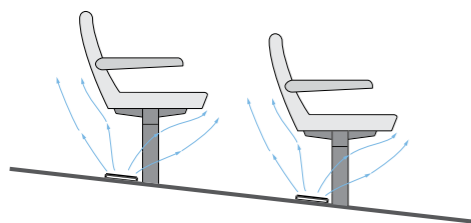
SDV-OO



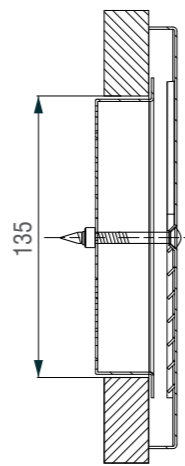
Installation with central screw and cross-member (standard)



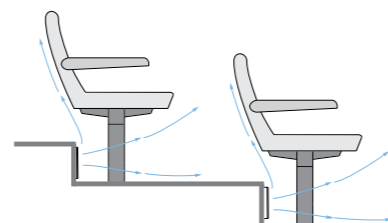
Floor installation



Installation with plenum box



Staircase installation



Ordering key

Staircase swirl diffuser **SDV - OO - K - 180 - RAL...**

KK - square front plate and outlet area

OO - round front plate and outlet area

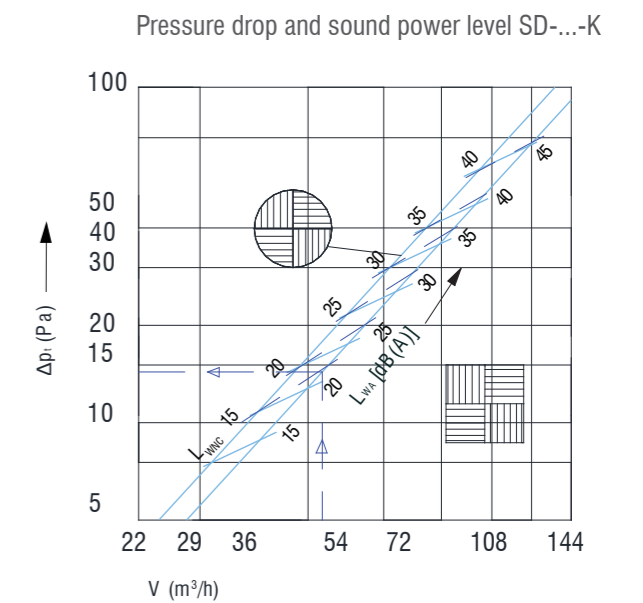
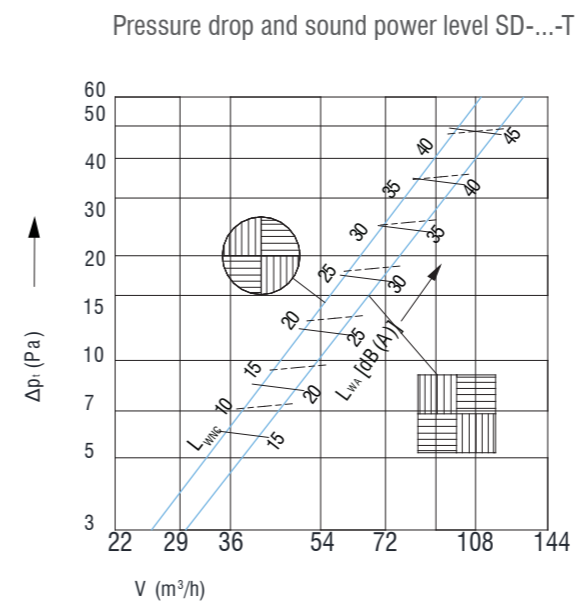
KO - square front plate / round outlet area

Connection to: **K** - plenum box

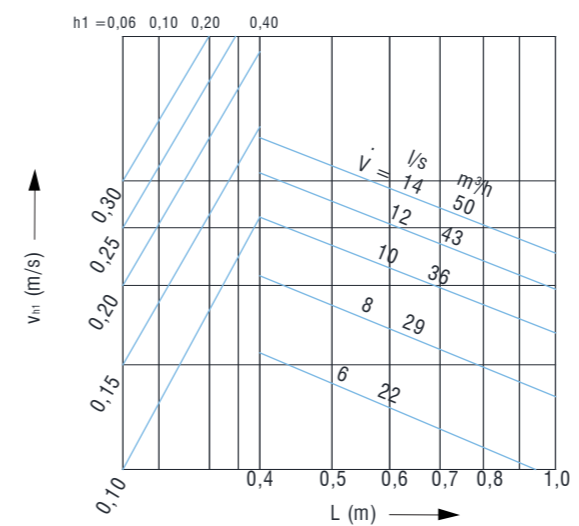
T - cross-member

Size

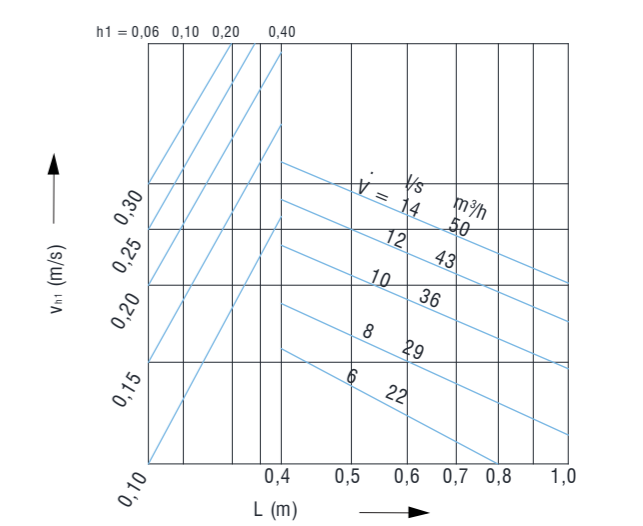
Selection diagrams



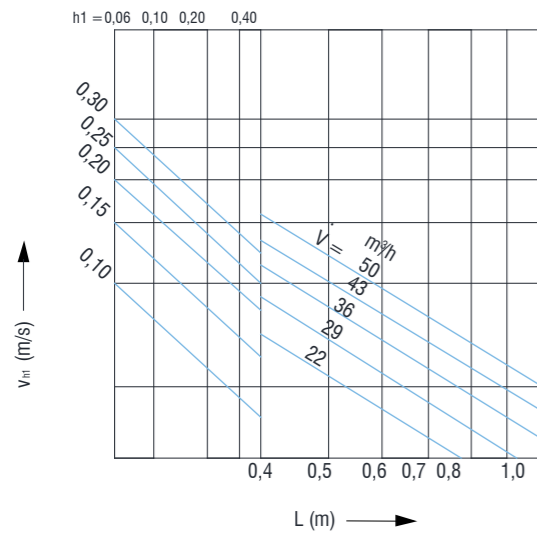
Core velocity, SD-...-KO-T staircase installation



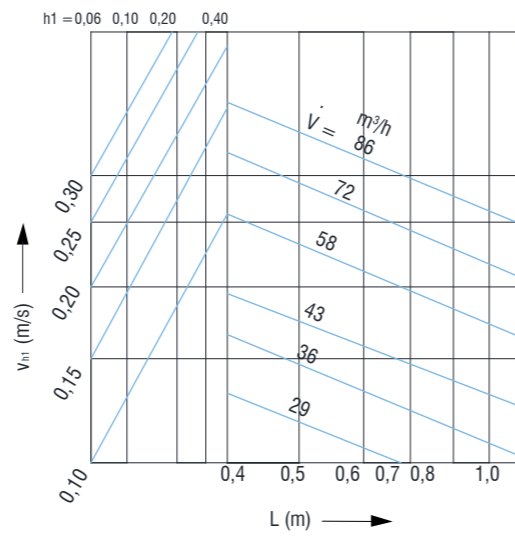
Core velocity, SD-...-KK-T staircase installation



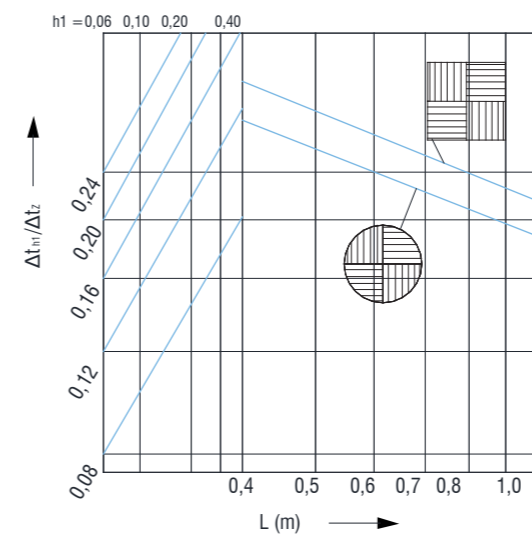
Core velocity, SD-...-KO-T floor installation



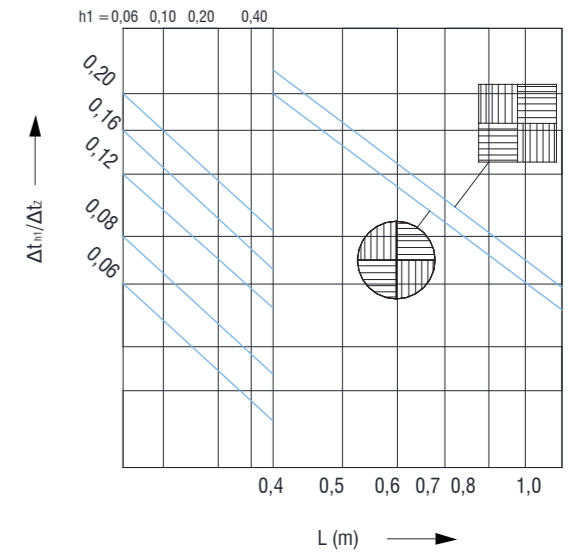
Core velocity, SD-...-OO-K floor installation



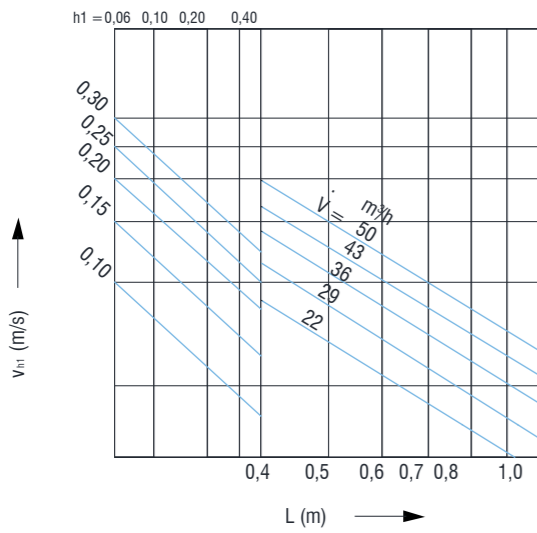
Temperature ratio, SD-...-T staircase installation



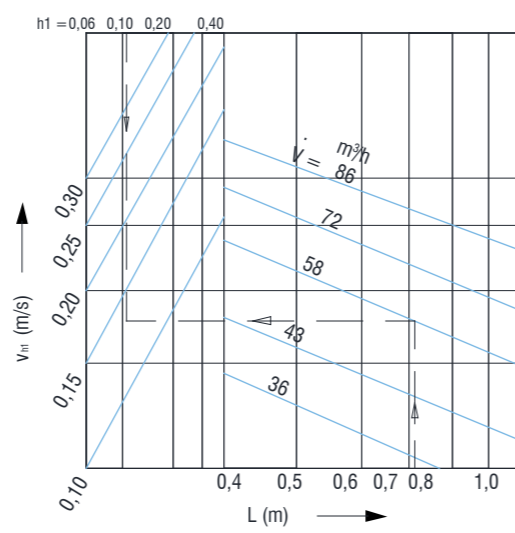
Temperature ratio, SD-...-T floor installation



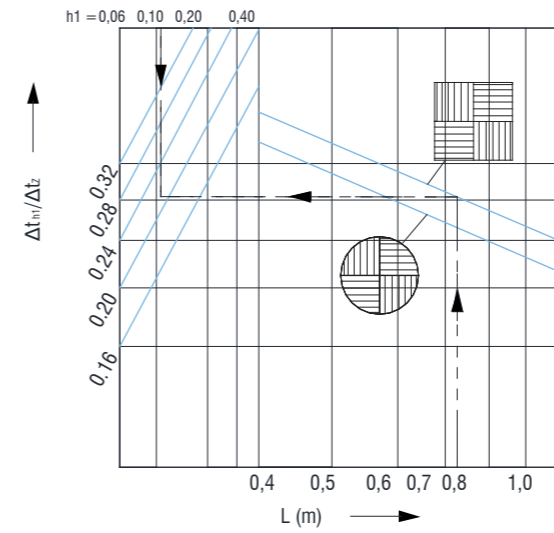
Core velocity, SD-...-KK-T floor installation



Core velocity, SD-...-KK-K staircase installation

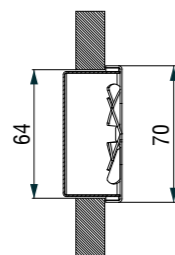
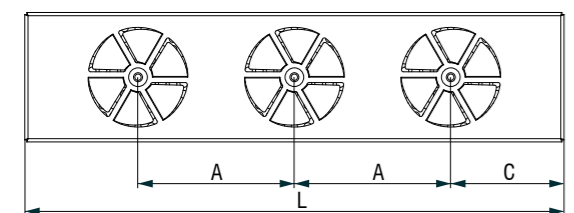
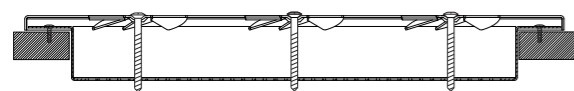


Temperature ratio, SD-...-K staircase installation



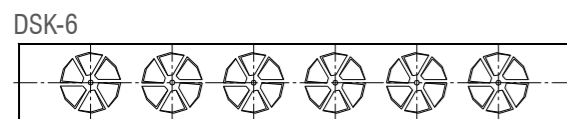
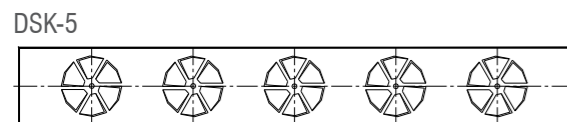
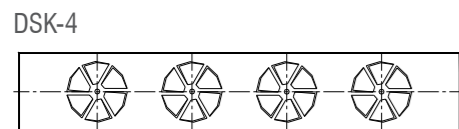
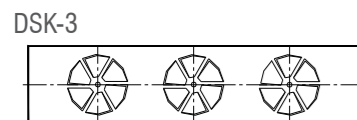
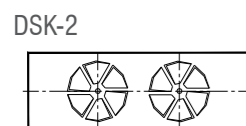
STAIRCASE SWIRL DIFFUSER - DSK

- Used for air supply, where large throw and low noise is required.
- Vertical installation in stairs (not a loading surface)
- Front plate made out of anodized aluminium. Casing made out of galvanized steel sheet.
- Fixing with screws



Dimension	L	C	A
DSK 2	200	63	74
DSK 3	300	63	87
DSK 4	400	71	86
DSK 5	500	66	92
DSK 6	500	65	74

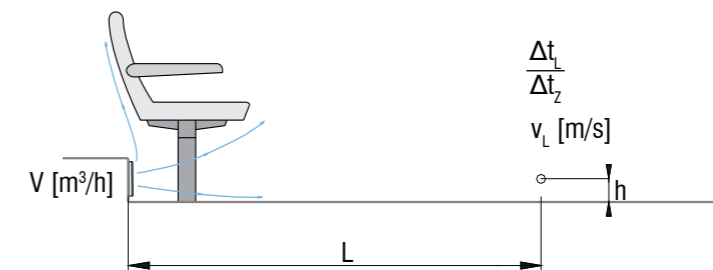
Effective outlet area	
No. of outlet elements	A _{ef} [10 ⁻⁶ m ²]
1	631
2	1262
3	1893
4	2524
5	3155
6	3786



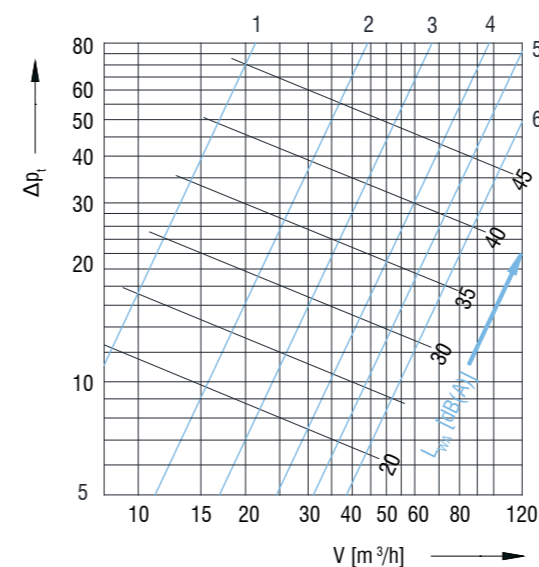
Ordering key:

Staircase swirl diffuser **DSK - 2 - PK - RAL...**
 Type of diffuser
 Plenum box

Air discharge for vertical installation



Pressure drop and sound power level



Core velocity / temperature ratio

